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Debt sustainability: towards a history of theory, policy and measurement

A DISSERTATION PRESENTED
BY
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Debt sustainability: towards a history of theory, policy and measurement

ABSTRACT

Since the early 2000s, debt sustainability is assessed by the World Bank and the International Monetary Fund (IMF) through a policy template called Debt Sustainability Analysis (DSA). This thesis examines the origins of Debt Sustainability Analysis (DSA) by identifying specific episodes between the origin of these institutions and the early 2000's when the DSA template was created. The thesis identifies three key factors that led to the development of Debt Sustainability Analysis: developments in theory, policy, and measurement efforts. The thesis examines the rise and fall of different conceptual and operational approaches that try to capture debt repayment difficulties, culminating in the DSA template in the early 2000s. To address how and why DSA developed and gained prominence, the thesis uses a theoretical framework that draws from the history of economics and quantification within the social sciences that views the techniques of economists as historically constituted forms of economic practice. The thesis argues that alongside developments in economic theory, the creation and use of such tools was driven by protracted political disagreement on how to resolve debt crises. The thesis examined the evolution of the politics of knowledge of who decides what can and cannot be paid and how this enabled creditors to prioritise the cost to creditors of restructuring debt over that of failing to restructure the debt to alleviate the situation of debtors. The role and purpose of the DSA template was part of a broader drive to bestow rigour, credibility and legitimacy on the policies and practices of powerful institutions, with the consequence that over time, the conflicts over debt repayment difficulties were increasingly displaced into technical tools.

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ΓΙΑ ΤΗΝ ΜΑΡΙΛΕΝΑ ΔΩΡΟΘΕΑ (1951-2015)

FOR DAVID GRAEBER (1961-2020)

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“If history shows anything, it is that there’s no better way to justify relations founded on violence, to make such relations seem moral, than by re-framing them in the language of debt - above all, because it immediately makes it seem that it’s the victim who’s doing something wrong.”

Graeber (2014, p. 5)

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Introduction

WITH EACH NEW DEBT CRISIS that the world experiences, there is a renewed search for lessons from the past. Yet those who try to draw lessons from past experience tend each time to be confronted with similar disappointments. When the UK Treasury, Bank of England and Foreign and Commonwealth Office commissioned research into the 1980s debt crisis, it was found that “in spite of earlier experiences, few lessons appeared to have been learned” (Eichengreen and Portes, 1995, p. xi). It is an unsurprising if disheartening theme of the study of debt crises that each crisis is handled in ways that exhibit the same ‘ad-hocery’ and failings that generated the controversies of how previous crises were dealt with.

Currently, the COVID-19 pandemic is having severe social, humanitarian, and economic impacts across the globe. Deep recessions, disruption from trade, depreciating currencies combined with increasing health care costs, which in many countries pale in comparison to amounts spent on public debt service Abiy (2020). Millions more are entering into extreme poverty (Alston, 2020), unemployment (ILO, 2020) and risk of famine (WFP, 2020). The impact of the pandemic, limited fiscal space, and the inability of low- and middle-income countries to access liquidity have brought the prospect of a new debt crisis to the centre stage. With Argentina, Lebanon and Zambia defaulting during 2020, and the majority of low-income countries at high risk or in debt distress (Bonizzi et al., 2020), the world risks sliding into a broad-reaching debt crisis. It is no surprise then that achieving debt sustainability is one of the key public policy objectives of our time.

As debt repayment problems worsen, the long-standing weaknesses of addressing sovereign debt crises have reappeared. What happens when countries find themselves facing debt repayment difficulties? Countries face an amalgam of creditors forums and disparate legal environments; they face exclusion from capital markets, risk creditor litigation, and are forced to abandon development plans often alongside contractionary IMF programmes that fail to provide equitable and long-lasting solutions to foreign debt problems (Nations, 2011a). For these reasons debt crises are described as being dealt with in ways that are characterised by “too little, too late”, at great social cost for the debtor country (Barry et al., 2007; Ocampo, 2016). Oftentimes these interventions fail to re-establish debt sustainability (IMF, 2013a). At the core of these processes however lie Debt Sustainability Analysis (DSA), a framework used by the IMF and World Bank to guide their decision-making and judge the balance between adjustment, financing and restructuring (Hagan, 2020).

Despite the voluminous literature on debt sustainability and debt restructuring however, the role of economists and the evolution of economists’ thinking have been neglected. Across time, economists have played different roles in debt crises, lending their expertise for crisis resolution and applying new forms of reasoning to old problems. Economists have an important role as advisers to governments and institutions, as well as defenders or usurpers of extant policy

orthodoxy. Their contributions ebb and flow with the broader tides of the discipline, itself in perpetual flux and controversy. Despite its broad scope, existing literature on the economics of debt sustainability is a-historical, giving little sense of where ideas on debt sustainability came from, how they relate to developments in the discipline overall, and how the economics of debt sustainability and associated policy template developed in light of attempts to address debt crises.

If we take a longer-term view of the difficulties countries have faced servicing foreign debts, looking back over the past two centuries, we find a drastically different set of arrangements and ideas. A history that takes longer-term transformations into account is sorely needed and is the broad context within which the thesis is situated. The thesis examines the rise of economic policy tools alongside political disagreements between debtors and creditors and as part of the broader transformation of how debt crises are dealt with.

More narrowly, the overarching research question is to account for the rise of the Debt Sustainability Analysis (DSA), as the key technical apparatus of debt assessments by the IMF and World Bank. It is addressed through the following main question: What factors led to the rise of the Debt Sustainability Analysis (DSA) in the post-war period? This is broken down into three sub-questions that examine different aspects of this multi-faceted issue organised around questions on theory, policy, and measurement: how did the economics of DSA evolve and how did this relate to developments in the economics discipline? How did political disagreements strengthen the establishment of the DSA? How are measurement (quantification) efforts of debt repayment prospects related to practical and policy considerations?

The theoretical framework used to address the research questions draws from history epistemology and social studies of quantification. These approaches help uncover how and why certain ideas take root, and the political and institutional stakes surrounding the history of economics. As developed in Section 1.5, economist's policy tools and techniques are historically constituted and embedded within a political, social and institutional context. Examining the history of economics as a history of 'practice' (Stapleford, 2017) pries open the role of economists in policy institutions, and drawing from the work of Porter (1995), addresses the political nature through which seemingly technical tools are created.

The core conclusions of this thesis are that the development of the DSA can be understood as part of developments across three main, interlinked factors: developments in theory, policy and measurement.

Through a historical lens rooted in the framework of practice, the DSA emerged as a part of a complex history of economic expertise and a changing relationship between theory and policy, developed both within policy as well as academic institutions. The DSA developed as part of a public rhetoric of scientific expertise, with Debt Sustainability Analysis templates forming part of a broader drive for ‘rigorous’ underpinnings to help the policy of powerful institutions appear as credible and legitimate. This drive for greater credibility needs to be understood as part and parcel of a broader, systematic failure of adequate response to resolving debt crises. Explored across five main chapters covering key milestones from the post-war period to the early 2000s, the thesis builds-up and draws a series of overarching conclusions. The first conclusion is about economic theory. Economists’ thinking on debt repayment problems has changed over time and passed through various stages. As identified and examined in the thesis, these gained prominence chronologically:

1. The Harrod-Domar approach to capital requirements
2. Empirical efforts to identify critical values
3. Dynamic (intertemporal) optimisation view on solvency

This trajectory features a number of recurring and unresolved tensions. The first is about the concept of time, with recurrent debates about whether debt repayment capacity was ultimately determined by short-term issues such as debt-service ratios, or long-run structural changes of a countries’ economy, with important implications for the policy response. This is examined in Chapter 2 and 3. Over time however, and as shown in Chapter 3 and 5, an intertemporal and infinite horizon approach to solvency was developed, altering the conceptualisation of time. In policy terms, this enabled the future (long-run) to be represented by the projected evolution of macroeconomic variables that were used to manage the present. The second recurring tension in economists’ ways of thinking on debt sustainability is between a micro and macro view.

This was reflected in the post-war debate between project finance as opposed to country-wide financing. Project-based loan approval was reliant on comparisons between the cost of borrowing as compared to the rate of return of investments which stumbled upon insurmountable, methodological obstacles that tried to capture social or developmental ‘returns’ at a macro level. In contrast, country-wide or macro approaches to debt repayment prospects were poorly proxied by rule-of-thumb and short-run indicators of repayment capacity such as debt service to export ratio. This prompted a concerted effort into a more rigorous and long-run understanding of macroeconomic determinants of repayment capacity which focused on a structural analysis of debt repayment problems within the developmental process (Chapter 3). Overtime however, a transformation took place across the discipline, with micro tools used in macro settings. Debt repayments by a country or a government were reconceptualised as an agent with an individual budget constraint, which ushered in an intertemporal view of solvency. While not inevitable, this form of economic analysis dove-tailed with the set of arrangements of how crises were addressed which overwhelmingly focused on domestic adjustment as a means to address repayment problems rather than debt relief, or plentiful condition-free, low-cost financing.

Historical epistemology attempts to uncover why different regimes of knowledge were appealing to historical actors at specific moments in time (Düppe, 2011). By drawing out how economic knowledge is historically constituted reveals the value of studying history of economic thought as a history of practice (Stapleford, 2017; Backhouse, 1995). Together with the social studies of quantification, in particular the work of Porter (1995), on the power and role of quantitative methods, we can better explore the consequences of this knowledge, how it was developed and to what use it has been put. Thus, through the framework of historical epistemology and the lens of practice we can draw some conclusions about why and how the aforementioned developments took place.

With this in mind, the second overarching conclusion of the thesis is that the attempts to measure debt repayment prospects cannot be seen as separate from the conflict over how to deal with debt crises. This draws attention to the political and institutional origins of the DSA template. This allows us to study the role of economists and the uses of economics in debt crises.

The thesis argues it was the lack of political agreement about how to resolve debt crises that galvanised a number of specific analytical efforts. First, the growth of international loans prompted a large data collection effort, and the growing repayment difficulties that emerged, prompted quantitative techniques to model the likelihood of debt repayment difficulties, as examined in Chapter 4. Second, the notion of intertemporal debt sustainability marginalised structural and external causes of debt crises and elevated the role of primary balances in restoring debt repayments, as shown in Chapter 5. Within this conceptual framework, any debt can be considered sustainable if sufficient adjustment is undertaken. This complimented the commercial and short-term approach to restructuring and the refusal of creditors to agree to common principles that could guide restructurings with the aim of achieving specific development targets.

Given the lack of an overarching framework to debt crisis resolution, the IMF and World Bank emerged as key actors that developed their technical capacity in debt issues. This served, *inter alia*, to guide their own lending and decision making, to discipline their own staff assessments and to maintain credibility in managing crises, despite repeated failures. The DSA, launched in 2002, was the culmination of a series of efforts to operationalise tools for measuring repayment prospects in the context of debt crises. Without an overarching and commonly agreed framework however the consequence of this development was that under the appearance of theoretical rigour, these tools attempted to displace political conflict over debt crisis, and at the same time, aspired to increase the credibility of powerful institutions. Without the suitable institutional framework and commonly agreed goal for restructuring, the DSA is a regulator between adjustment, financing and restructuring that is ‘malleable’ to each circumstance. In this way, over time, the political conflicts at the heart of debt crises are increasingly mediated through technical templates of the International Monetary Fund’s and World Bank’s DSA.

These overarching conclusions develop through the series of chapters that investigate distinct episodes. Chapter 1 situates the research between two main strands of the literature – on debt restructuring and debt sustainability – examining their key features and pointing out their respective weaknesses. This then motivates the main research question regarding the factors that led to the rise of the Debt Sustainability Analysis. Chapter 1 then lays out the Research

Questions, research methodology and limitations. Subsequently, the thesis examines specific episodes:

TIMELINE 1: *Thesis episodes*

- 1950s-1960s • World Bank historical context (Chapter 2)
- World Bank theoretical context (Chapter 3)
- 1970s • Political conflict and empirical models (Chapter 4)
- 1980s • Theoretical developments through debt crisis (Chapter 5)
- 1990s-2000s • Launching of the DSA (Chapter 6)

Chapter 2 take place during the 1950s and 1960s and examines how the World Bank economists motivated a research effort into analytical underpinnings of debt service capacity. The chapter focuses on the institutional context of this effort, positioning these economists as part of a broader power struggle going on within the institution regarding the role of economists and desired approach to economic analysis of loan-approval. The chapter establishes that World Bank economists worked to provide an economic rationale to loan-giving in order to avoid ad-hocery that governed the growth of international capital flows in the postwar period. Their efforts were largely unsuccessful internally, and their weak social authority within the Bank was mirrored in their weaker epistemic position. While these economists lost the power struggle within the Bank, their work was nevertheless useful in bringing the discussion of repayment capacity into the policy sphere, evidenced by how their work fed into the broad political discussion on debt at the first UN conference on Trade and Development (UNCTAD).

Having established the broad political and institutional context of these economists' work, Chapter 3 focuses on their theoretical contributions. World Bank economists analysed why short-run debt service indicators were not helpful indicators of a country's capacity to repay its foreign loans. They developed instead a long-run framework that focused on ability to

pay rooted in development targets. Their analytical underpinning was a Harrod-Domar growth model in which debt sustainability, as understood today – for the term was not in use at the time – would be violated for long periods until the development process of a higher growth rate and higher investment capacity was completed. What this chapter shows, is that the early thinking on debt repayment prospects was rooted in an analytical framework characterised by the features of postwar Keynesian growth model, identified as Harrod-Domar.¹ What concerns us in this thesis is not the historical emergence or policy use of what was understood as the Harrod-Domar model, but rather, to show that the early thinkers of debt repayment capacity at the World Bank utilised a model closely resembling its core features. As explored in Chapter 3 and 4, central to this model of growth were elements such an accelerator function of investment, a Keynesian savings function, and an estimate of the efficiency of capital - the Incremental Capital Output Ratio. In the policy space, a version of this model was widely used and applied in development programmes and agencies. Positioning their analytical work in the context of academic economists at the time, this chapter subsequently looks at the development of neoclassical growth literature. Few academic economists dealt with international borrowing, and those that did were not concerned with problems of repayment; nevertheless, they laid the analytical foundations of subsequent optimal models of international borrowing that came to the fore in the 1980s.

Chapter 4 picks up from Chapter 3 and charts the developments in the 1970s. The Chapter has two components: first, it examines the political conflicts surrounding the growing debt repayment difficulties and the role of economic analysis within the debate and second, it examines the empirical measurement drive by lending institutions to derive ‘critical thresholds’ after which repayment problems were likely. The chapter shows that as debt problems worsened, the political conflict over resolution on debt repayment difficulty became evermore entrenched. This gave rise to different conceptions of the role of economic analysis and the type of economic analysis that would be needed in calculations around debt repayment prospects. The lack of political agreement as to how to resolve debt crises was accompanied by an increased effort by the

¹What became known as the Harrod-Domar model rested on two separate and distinct contributions by Harrod in 1939 and by Domar in 1946. Historians of economics have started to disentangle the contributions that have since been lumped together, see for instance Boianovsky (2018).

creditors to assess debt repayment capacity through empirical models. The chapter traces the origins of more formal and statistically determined debt repayment models instigated by lending institutions such as the US Export-Import bank. These quantification efforts of creditworthiness focused on short-run approaches to repayment capacity, leaving long-run determinants behind.

Chapter 5 focuses on the 1980s debt crisis and examines the theoretical and operational developments of debt sustainability analysis that the crisis provoked. Chapter 5 has three components: first, it provides the context of core developments within the broad transformations of economics and debates on debts and deficits taking place; second, it examines the analytical content and history of the new literature on the economics of debt sustainability rooted in the inter-temporal framework; and third, it examines how this new theoretical framework gradually became operationalised in only partly through new policy frameworks at the IMF.

The Chapter argues that academic economists addressed the debt crisis head on and produced a series of models that have since been deemed canonical for the period (Abbas et al., 2019). These economists addressed the debt crisis drawing from an eclectic range of theoretical tools and concepts including game theory, contract theory and advances in corporate finance. The new analytical tools to the study of debt repayment prospects focused on the debtor's willingness to pay, moving away from ability to pay of earlier economists. While innovative in several respects, this approach firmly moved away from the external, structural problems debtors face. The chapter contextualises these advancements made in the broader context of economic theory of debts and deficits in the 1970s and 1980s. Lastly, the thesis shows how the new approach to debt sustainability provoked significant changes in operational tools of the IMF including the integration of a forward-looking debt projection exercise. This brought the long-run back into view, although this time reconceptualised through the economics of the intertemporal budget. This new theoretical development inspired policy tools but were only partially embedded in the Fund's operational framework. With the political conflict around debt resolution unresolved, and a debt strategy that produced a lost decade of development, the 1980s was defined by a prolonged gridlock between debtors and creditors with the IMF emerging as the central actor.

Chapter 6 covers the final episode in the development of the current DSA template in 2002. By the time of the 2000s, the rapid expansion of market based, cross-border capital flows transformed the nature of crises and with it, the role of the IMF as crisis manager. In a situation where its lending capacity paled in comparison to the size of private capital flows, the IMF began a process of establishing measurement tools to quantify access to its resources. The chapter has three components: first it examines the definition of operational thresholds of debt sustainability through the debt relief initiatives of the 1990s. These were conceptually in line with the approach to debt repayment developed by the empirical models of the 1970s. Second, it establishes the concurrent development and full operationalisation of the forward-looking framework of debt sustainability in the IMF, that arose from the new perspectives on debt of the 1970s and 1980s. Third, Chapter 6 shows how the rationale for a new policy tool arose from a series of policy blunders driven by concerns about credibility in the public sphere. This final point is developed at length to show that the IMF emerged from the 1980s as a ‘crisis manager’, and later faced repeated policy failures in the 1990s and early 2000s. These policy blunders brought about changes in how the IMF mediated between debtors and creditors, most notably through new methods to regulate its own loan giving process. The chapter argues that the IMF inaugurated DSA as part of an effort to increase the credibility of its programmes and policy advice, attempting to improve the image of its actions by appearing to provide a strengthened economic underpinning to its controversial and contested policy.

*“As studies of past crises are dusted off the shelves
we are reminded that the international financial
community has often preferred to repeat the past
rather than study it”*
Lindert and Morton (1989)

1

Why do we need a history?

1.1 INTRODUCTION

Achieving debt sustainability is one of the key public policy objectives of our time. Sharing the ranks with growth and low inflation, authorities have embedded safeguarding debt sustainability into the heart of the EU’s fiscal legislative effort, the core mandates of multilateral institutions such as the World Bank (WB) and the International Monetary Fund (IMF), and proclaim that our future stability can only be secured through it (Draghi, 2018). But what is debt sustainability and when and how did it become a key macroeconomic policy goal? Numerous authors begin the treacherous task of defining debt sustainability with various disclaimers, such as it be-

ing an analytically ambiguous concept (OHCHR, 2013) and despite being heavily debated in the theoretical and empirical literature it remains hard to pin down in practice (Wyplosz, 2011). Those who attempt to measure debt sustainability also face challenges, likening it to being more of an art than a science (IMF, 2002b; Wallich, 1978). This incertitude is compounded by the frequent reappearances of a ‘state of the art’, whether in Abbas et al. (2019); Burnside (2005); D’Erasmus et al. (2015); Corsetti (2018), with each restatement proliferating new techniques and tools. The contestation over assigning meaning spans not only theoretical and empirical issues, but is at the heart of disagreements over crisis resolution, reflected for instance, in institutional positioning, with the UN OHCHR maintaining that high income (mainly creditor) countries oppose debt sustainability to be seen as a human rights issue (OHCHR, 2013), and UNCTAD arguing that sustainability must be seen in light of long-term development goals such as Agenda 2030 (Nations, 2015), as compared to the IMF and World Bank which maintain a narrow, re-payment view of sustainability.

If it is not for theoretical clarity, ease of measurement or institutional agreement, one wonders how achieving sustainability gained such prominence.¹ To disentangle the dense amalgam of issues, one needs to work towards a history of debt sustainability and study how abstract theory developed, how it was used and in what ways it was operationalised. The overarching research question of the thesis is to account for the factors that led to the rise of the main technical apparatus of debt sustainability assessments by the World Bank and IMF: their template for Debt Sustainability Analysis (DSA).² The research question examines developments in three main factors: developments in theory, policy and measurement. The complex interrelations between theory, policy and measurement is explored in five main chapters of key episodes that led to the creation of the DSA, from the post-war period to the early 2000s. The thesis builds up and draws a series of overarching conclusions.

A history of the DSA can show us how different actors held competing needs for eco-

¹A similar question was posed about the issue of central bank independence in Forder (2005).

²It is important to distinguish between the DSA template and the economics of debt sustainability; the thesis is concerned with the origins of the DSA template, which draws on the broader developments in the discipline and economics of debt sustainability.

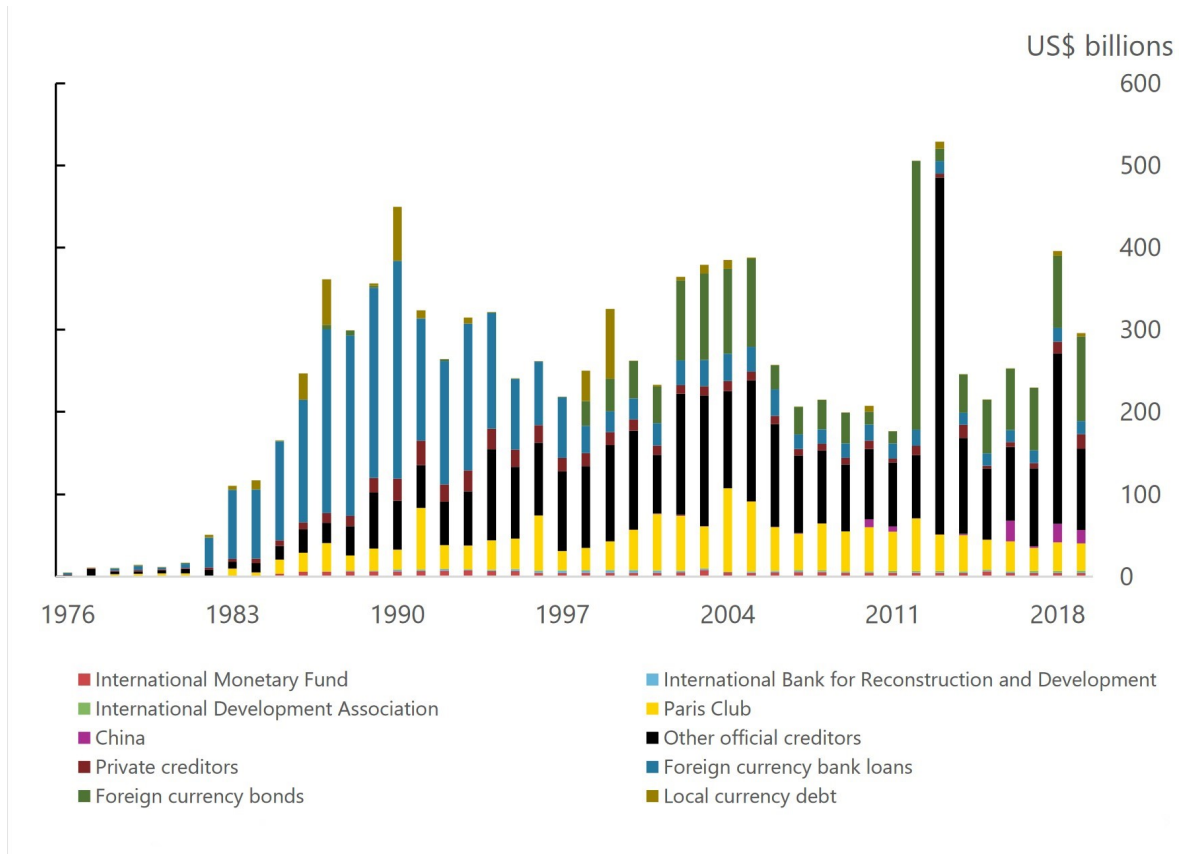
conomic analysis, often reflecting different policy positions around debt crisis. This thesis will argue that a history of the DSA reveals a gradual transformation and displacement of political conflicts of debt crisis into the emergent technical templates. While not inevitable, the technical apparatus reflects and entrenches long known weaknesses of how crises are resolved. Existing literatures on debt restructuring (Section 1.2), and debt sustainability (Section 1.3) do not allow for an adequate account of how economic thinking has changed nor for how to handle the relationship between theory and policy. We will review the debates within the main literature on debt restructuring and debt sustainability, in order to motivate the research question in Section 1.4 and develop the argument for a history of theory, policy and measurement of debt sustainability, that will be addressed using a historical lens rooted in the framework of practice. The theoretical framework is explored in detail in Section 1.5, and the methodology and limitations to the approach adopted are covered in Section 1.6. The chapter closes with a fuller description of the structure of the thesis and arguments in each chapter.

1.2 DEBT RESTRUCTURING

Sovereign debt restructuring can be defined as “an exchange of outstanding sovereign debt instruments, such as loans or bonds, for new debt instruments or cash through a legal process” (Das et al., 2012, p.7).³ The exchange may involve rescheduling, such as lengthening maturities or changing interest rates in ways that may involve relief, as well as debt reductions in the nominal (face) value of the liability. While there is no globally agreed upon definition, sovereign default may cover a number of eventualities, such as a lack of adequate or timely payment of interest or principal or the termination of IMF membership (Beers and de Leon-Manlagnit, 2020; Das et al., 2012). Despite the episodes of default post World War II, shown in Figure 1.1, the recent surge in empirical work on sovereign default emphasises the little systematic and comparative evidence of their characteristics, a gap that recent work aimed to fill (Beers and de Leon-Manlagnit, 2020; Cheng et al., 2016; Cruces and Trebesch, 2013; Das et al., 2012).

³This can be compared to the long history of unilateral suspensions of payments during earlier centuries which resulted in international capital flows breaking down (Suter, 1992; Laskaridis et al., 2020).

Figure 1.1: Total Sovereign Debt in Default, by creditors

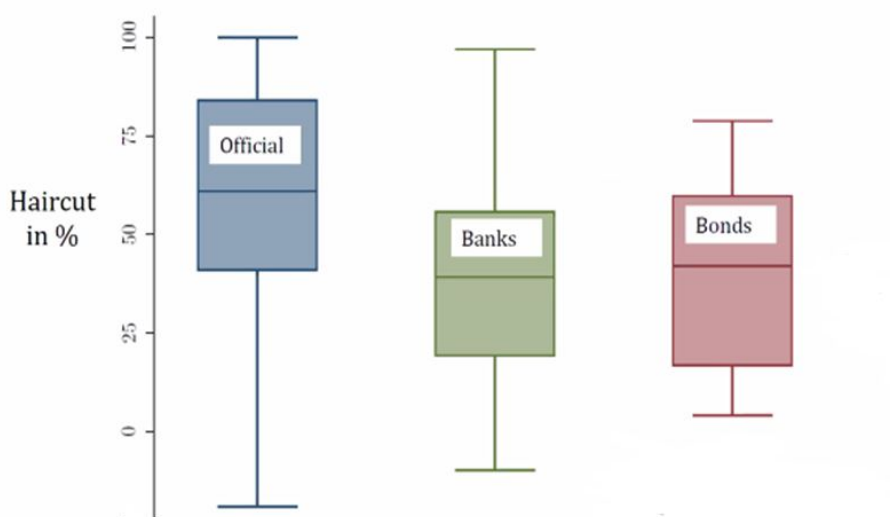


Source: Beers and de Leon-Manlagnit (2020).

Using the structure of a country’s external debt to organise the strands of literature, we can at once show the specific aspects of each category or debt as well as emphasise the fragmented nature of debt restructuring. The external debt covered is shown in Figures 1.3–1.6, which have been adapted from the structure of external debt indicated in World Bank’s manual of International Debt Statistics (World Bank, 2020). Established procedures of how distinct categories of sovereign debt are restructured are the subject of a rich literature. The basic contours of restructuring context and procedures covered concern bilateral debts, commercial bank loans, multilateral debts and bonds. While the main conflict in restructuring is between the creditor and debtor, conflicts between creditors cannot be underestimated as integral to how debt crises are addressed. One of the stylised facts about sovereign debt restructuring, shown in Figure 1.2, is that official creditors have, in general, taken far larger share of the loss of default when com-

pared to private sector creditors, in other words, traditionally, private creditors have free-ridden on official sector losses.

Figure 1.2: Comparative Size of Haircut across Creditors



Source: Schlegl et al. (2016).

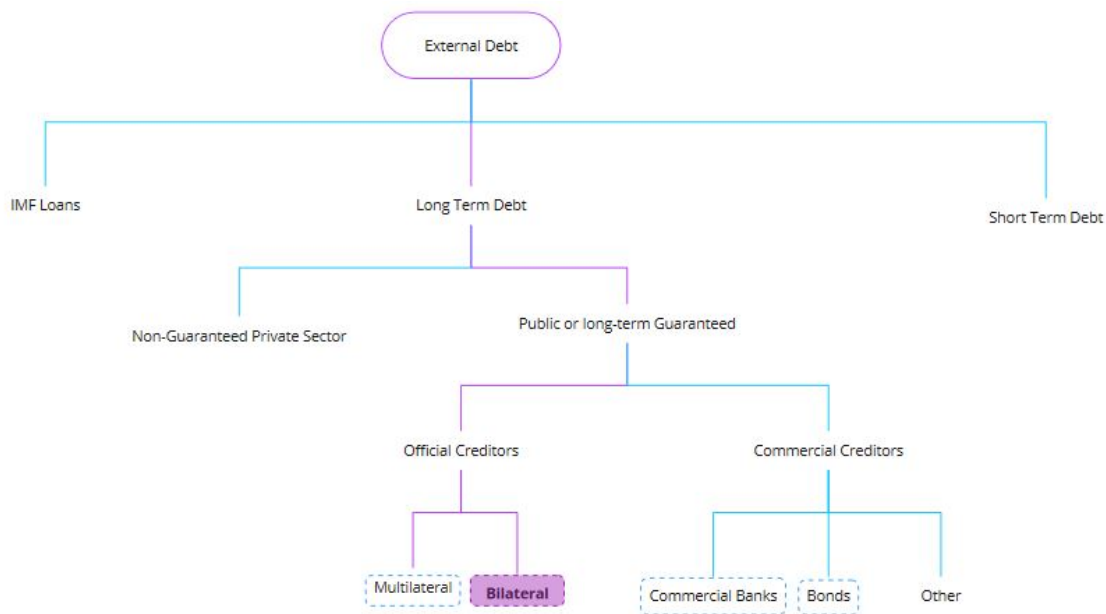
1.2.1 RESTRUCTURING WITH OFFICIAL SECTOR CREDITORS: THE PARIS CLUB

The Paris Club forum developed in the post war period to reschedule official bilateral claims - direct loans from governments and government agencies to another government or public entity, and guaranteed credits that finance creditor country imports – on commercial or softer terms. The Paris Club deals with medium and long-term loans, excluding short-term debt on grounds that its restructuring is typically considered too disruptive.⁴ Figure 1.3 shows the structure of a country’s external debt, with Paris Club restructuring relating to bilateral debts.

The membership of the Paris Club is varied as it meets on a case-by-case basis, for each country whose debts are being rescheduled. While it has a permanent secretariat based in the

⁴Official Development Assistance (ODA) is defined by the OECD as “flows to countries and territories on the DAC List of ODA Recipients and to multilateral development institutions that are: i) provided by official agencies, including state and local governments, or by their executive agencies; and ii) concessional (i.e. grants and soft loans) and administered with the promotion of the economic development and welfare of developing countries as the main objective”(OECD, 2020b).

Figure 1.3: Restructuring in the Paris Club.



Source: Authors' adaptation from World Bank (2020).

French Treasury, each rescheduling negotiation is in itself a 'new club' comprised of OECD members, most often representing the side of the creditor. It has operated as a key instrument for the international financial community, despite lacking attention commensurate to its importance (Callaghy, 2002; Rieffel, 1985).⁵ As of 2019, the Paris Club has concluded 433 negotiations with 90 countries (Club, 2019). As shown in Figure 1.4, numerous countries annually restructure their debts at the Paris Club.

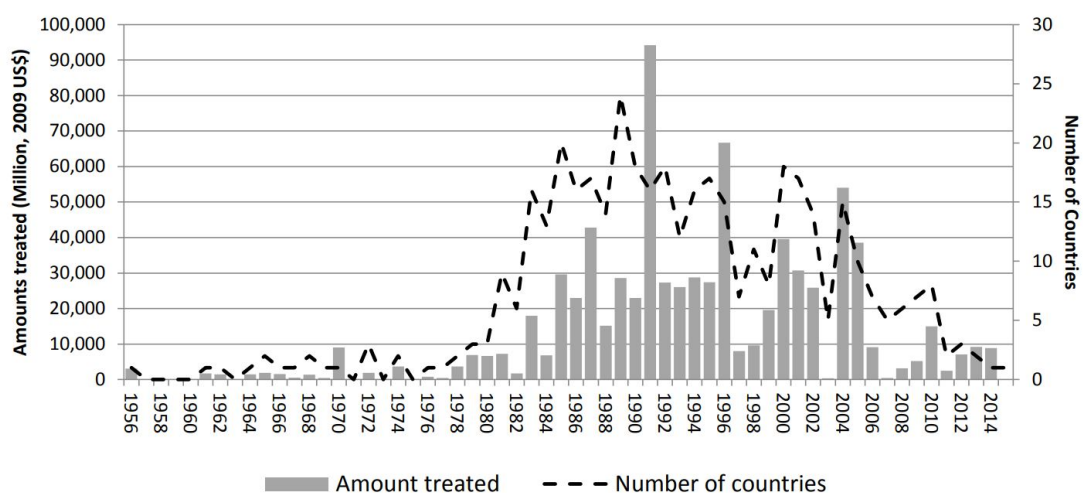
A set of principles gradually evolved that determine how Paris Club negotiations take place, examined in Eichengreen and Portes (1995), Rieffel (1985) and Cheng et al. (2016).⁶ The principle of conditionality is at the core of Paris Club negotiations. The debtor country must have an IMF programme in place for rescheduling to commence. In the late 1970s before the Paris Club began to meet frequently, Rieffel – responsible for Paris Club negotiations in the US Treasury – had argued that several creditor country negotiators seemed to believe that debtors'

⁵Seigny (1990) for instance remarks that the roles that creditor governments have in the Paris Club are the least understood in the international debt regime.

⁶Rieffel explains that principles or basic concepts were adopted in 1980 by UNCTAD resolution (Rieffel, 1985, p. 5 and is developed in Chapter 4).

problems lay beyond their control (Rieffel, 1985). By the mid-1980s, the opposite view prevailed which placed an ever-greater emphasis on debtors' comprehensive overhaul of domestic economic policy. As Chapter 5 explores, this was reflected in the analytical underpinning of debt sustainability which focused predominantly on domestic adjustment as a means to repay debts. The principle of conditionality is implemented through IMF programmes, and acts as a seal of approval that signals that the country is undertaking a programme of reforms. IMF financial programming defines the financing gap that needs to close through adjustment reforms. The second core principle of the Paris Club, 'equitable burden sharing', reflects the idea that relief should be commensurate to each creditors' exposure. A date is decided as the cut-off point and all credits – regardless of the reason they were provided or the terms on which they were lent – are included and rescheduled under identical terms.⁷ The terms of rescheduling in the Paris Club are set through the various 'menus' which overtime offered deeper reschedulings on flows – better interest and grace periods and eventually included operations on the entire stock of debt. An illustration is detailed in Appendix 1.

Figure 1.4: Cumulative Paris Club Treatments



Source: Cheng et al. (2016).

Treating all creditors equally was also cemented through the 'non-discriminatory' princi-

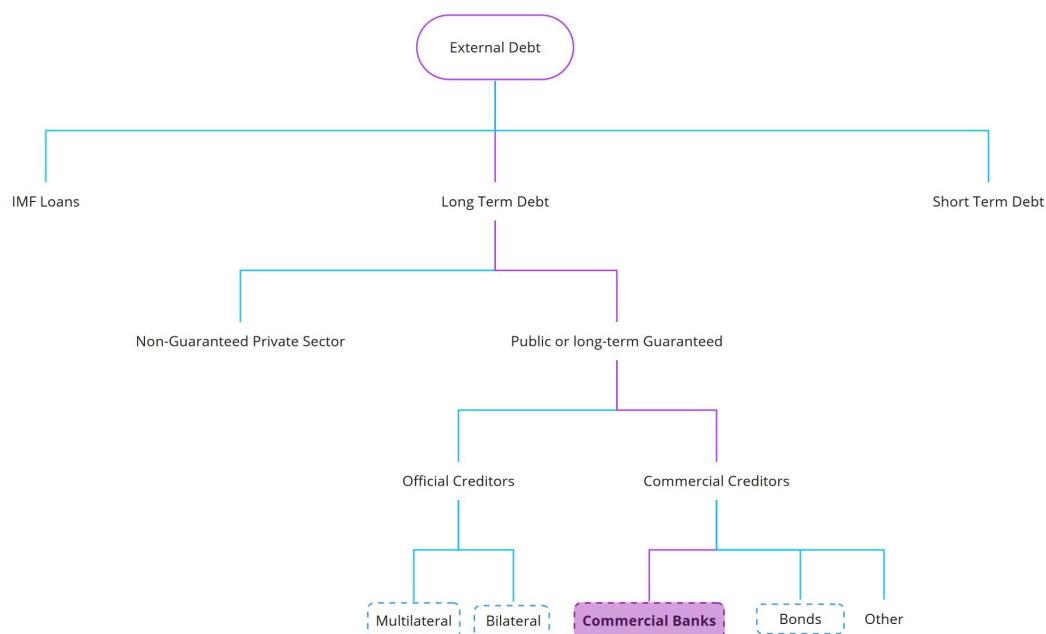
⁷Interest repayments on the rescheduled debt can vary according to concessionality of the loan given. Complications arise though over how to deal with new loans that creditors grant in addition to relief.

ple which precluded debtors from accepting better terms with creditors who abstained from the Paris Club process. This committed the debtor to seek equivalent terms of relief from all its creditors, including private creditors. Prior to the 1970s, commercial loans to developing countries were small and Paris Club negotiations did not consider private sector loans. Within a decade, however, sharing the burden with private creditors posed the biggest conflict among the Paris Club (Rieffel, 1985, p. 13). A country rescheduling its debts with official and private creditors needed to agree with private creditors on the basis of the principle of ‘comparable treatment’. This was a way to pressure private creditors to provide rescheduling on no less favourable terms than those provided by official creditors. These measures of burden sharing were intended to avoid free riding among the creditors, whereby dissident creditors would benefit from consenting creditors’ contribution. Finally, the Paris Club operates on the basis of consensus. This is distinct to the restructurings of private sector loans, commercial bank loans or bonded debts, where majorities of creditors can influence dissenters or decisions are made through voting. The Paris Club does not have a legally enshrined basis and hence the principles are voluntary as there are no means to impose the agreed terms on non-participating creditors. This has led to the long-standing critique that the Paris Club is an illegitimate, creditor-led forum (et Développement, 2020, for instance,) and its function understood as a debt collector (Cheng et al., 2016). This issue currently poses problems for Paris Club creditors given the rise of non-Paris Club creditors. The creditor landscape of developing countries has changed in the last decade Bonizzi et al. (2020, 2019, for further details), and without an obligation to subscribe to established commitments, Paris Club members are concerned (IMF, 2013a). The rise of significant new lenders across the developing world, such as China, India, Kuwait, Saudi Arabia and others which are not part of the Paris Club creates ample opportunities for creditor conflicts and according to the main creditors, encumbers established procedures. Inter-creditor conflict has driven many institutional developments including an alteration of IMF lending policy designed to deal with the rise of non-Paris Club creditors (IMF, 2015). Increased importance of China in development finance (Bunte, 2019), has led to calls to be a responsible and cooperative creditor (Crebo-Rediker, 2018; IMF, 2018; Spink, 2018).

1.2.2 RESTRUCTURING WITH COMMERCIAL BANKS: THE LONDON CLUBS

Repayment difficulties with official creditors were administered through the Paris Club, but by the time of the 1980s debt crisis, numerous countries faced difficulties servicing private creditors (see Figure 1.1). Affected commercial creditors, namely, the banks, formed steering committees not dissimilar to bondholder committees of the nineteenth and early twentieth century. We now turn our attention to restructuring commercial bank debt, shown in Figure 1.5.

Figure 1.5: Restructuring with Commercial Banks



Source: Authors' adaptation from World Bank (2020).

The committees for rescheduling debts extended by commercial banks to the official sector (government, central banks or other public sector institutions) came to be known as London Clubs. The first London Club meeting was held in 1976 with Zaire (Eichengreen and Portes, 1995, p. 59). Eligibility for relief in London Clubs was similar to the Paris Club in requiring the IMF 'seal of approval' as a necessary condition for participating banks.⁸ London Club reschedulings were typically more complicated and took longer to conclude than Paris

⁸ Although, on occasion it has been exempted, as in the case of Peru (1976) and Brazil's Brady's plan.

Club negotiations (McGovern, 2003). Being far more decentralised than the Paris Club, London Clubs lacked any agreed upon procedures to enforce adoption by all creditors (Cosio Pascal, 2010). Syndicated loans were the principal means of lending so it was often the case that many banks could be involved in a restructuring. This resulted in a slow and laborious process along with the risk of blocking minorities. There was however an attempt to include forms of non-discriminatory clauses in order to prevent non complying creditors gain more favourable outcomes than those participating in London Club rescheduling (Eichengreen and Portes, 1995, p. 26). There was no means however of enforcing agreement unanimously, as contracts enshrined that any amendments to the terms of the loan be agreed by each creditor. Sevigny (1990) remarks that in order to move forward with agreements, the support of over 90-95 per cent was required. This support was not always present, and Cosio Pascal (2010) and Garay Salamanca (2010) refer to the political pressure from creditors countries to ensure banks' participation.

Up until the latter half of the 1980s, commercial bank rescheduling would include a promise for new loans as part of their rescheduling agreement. As the debt crisis wore on, the reluctance to provide this grew. While bank balance sheets remained weak, they had little leverage and were pressured into providing new financing. As loan-loss provisions grew, and the Fund's disbursement conditional on banks' decision-making, banks gained an upper hand. Cline (1993) argued that it became easier as time wore on for the banks to "hold multilaterals funds hostage". Ocampo (2016) discusses this evolution as part of a persistence of failures that led to ad-hoc debt initiatives that marked the decade, discussed further in Chapter 5.

The main policy initiatives of the 1980s to address the debt crisis were pursued by US Secretary of the Treasury Baker in 1985 and his successor Brady, in 1989. The progression between the two plans must be understood in light of the growing impatience towards the lack of a resolution. This lack prompted a shift in mid-1980s with regards to the role of the World Bank and IMF. The failures of the initial strategy – austerity and rescheduling – were offloaded to developing countries by means of arguing that debt problems persisted because countries faced 'structural' as opposed to temporary financing problems, and as such, structural reform efforts were required to generate the growth needed to resume payments. This ushered in, from

1985, a far greater role for the World Bank, alongside the IMF, and structural adjustment lending (Garay Salamanca, 2010) and as a result, a large debate on the merits and demerits of conditional lending.

The mishandling of the 1980's debt crisis prompted debtors to organise themselves into a debtors' cartel to counter the banks' cartel, and political leaders in debtor countries insisted that debts be suspended, and moratoriums be granted, as banks refused to advance new loans. Creditors' conditionality included the removal of subsidies leading to rapid rises on essential goods. The social and political cost of conditionality escalated while the debt crisis remained unresolved leading to countless protests and broad social movements (Nkinyangi, 1991; McMichael, 2012; Nelson, 1990; Situmbeko and Zulu, 2004; Boughton, 2001) further explored in Chapter 5. The Brady Plan was designed to break the impasse that hitherto had been reached, which was achieved by reorganising the secondary debt market (Buckley, 1997; Garay Salamanca, 2010; Gelpern, 2016). By devising a series of ways for syndicated loans to be securitised between 1989 and 1995, sixteen countries reached agreements under the Brady Plan (Arslanalp and Henry, 2005) shaping the way in which the emerging markets crises of 1990s would be addressed.

Providing a way for the banks to repair their balance sheets resulted in the creation of a secondary market in syndicated bank debt which created an exit strategy for banks (Garay Salamanca, 2010). Although it took a decade for the banks to be able to deal with debt reductions (Cline, 1995; Gelpern, 2016), even then, there was limited relief provided for the debtors (Ocampo, 2016). This is partly because the guiding principle of how the crisis was dealt with was to contain the risk to financial stability. The approach to debt crisis resolution over the 1980s was driven by a concern for the state of financial systems in G7 countries (Garay Salamanca, 2010; Gelpern, 2016) and in this light, was successful in averting a banking crisis in the United States. However, conditionality and net financial outflows from Latin America contributed to what became known as a 'lost decade' of development (Ocampo, 2014; Devlin, 1989).

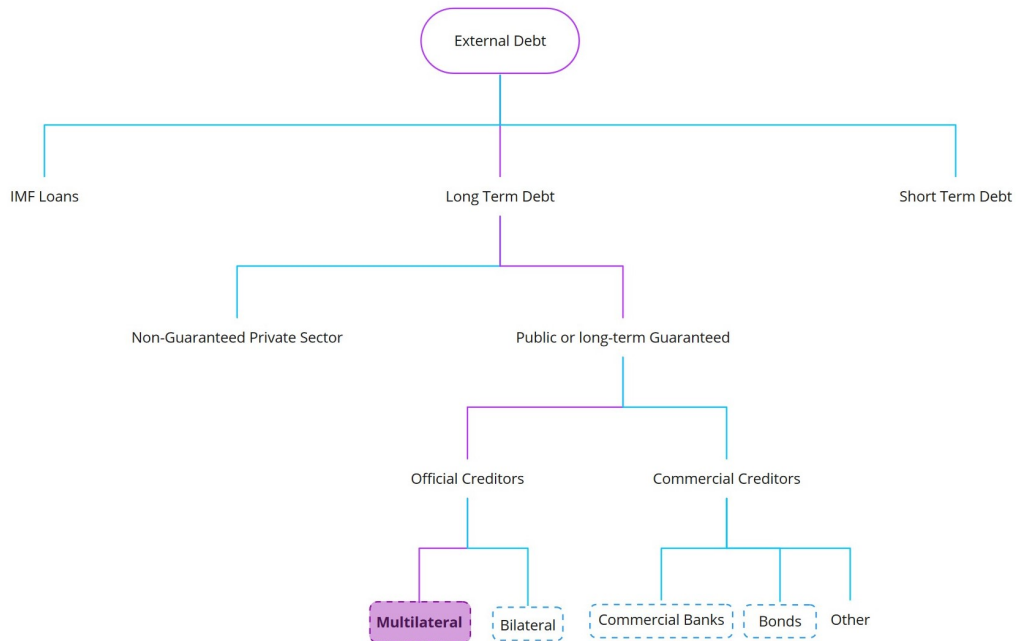
1.2.3 RESTRUCTURING WITH OFFICIAL SECTOR CREDITORS: MULTILATERAL DEBTS

As the 1980s debt crisis unfolded, multilateral development organisations came to acquire a distinct position vis-à-vis debtors when compared to other lenders. The multilaterals provided new loans, often at times when no one else was willing to. Sevigny (1990) explains how the provision of new financing was deemed as providing comparable relief as those creditors which were included in rescheduling. While this resulted in the exclusion of multilateral loans from rescheduling, by the mid-1980s, it also resulted in multilateral holding increasing preferential claims on a country's foreign exchange, considered senior to other creditors. Multilateral debt exclusion was also justified on the grounds that official creditor governments saw it beneficial on the basis of the losses these institutions would incur. The argument, according to Sevigny (1990), was that debtors, being members of the Fund, would benefit from not having to be affected by their losses. In the case of development banks, were multilateral funds to be continuously facing rescheduling, their ability to issue highly rated bonds could suffer, and would be a cost for the creditor countries in providing multilaterals with further financing. Up to the eve of the first initiatives for multilateral rescheduling in the mid 1990s, the IMF and World Bank insisted their preferred creditor status could not be weakened, and that multilateral debts were not a problem (Callaghy, 2002). Multilateral debts in the overall structure of a country's debt can be seen in Figure 1.6.

After much delay and a prolonged political battle, several initiatives were set up to deal with debt towards multilateral institutions. The repeated appearances of countries to the Paris Club initiated a change.⁹ The initial reluctance to reschedule previously rescheduled debts was eased, creditors reluctantly saw that structural adjustment – the strategy they relied on – to deliver debt repayments, was failing. The HIPC Initiative was launched in 1996, followed by the Enhanced HIPC initiative in 1999, and followed by the Multilateral Debt Relief Initiative (MDRI) of 2005 (for details see Teunissen, 2004; Birdsall and Williamson, 2002; Weiss, 2006, 2012; Daseking and Powell, 1999; Lala, 2006; Msutze et al., 2004). Callaghy (2002) describes

⁹The high frequency with which restructurings occur evidence that relief provided is not enough (Guzman et al., 2016).

Figure 1.6: Restructuring Multilateral Debt



Source: Authors’ adaptation from World Bank (2020).

how Paris Club procedures evolved into the HIPC initiative. HIPC inaugurated the first broad reduction of multilateral debt alongside bilateral debts. Importantly, through HIPC, for the first time, debt sustainability indicators were defined and made “explicit and applicable to all members of a specifically demarcated set of countries” for the purposes of relief (Callaghy, 2002, p. 17). Achieving ‘debt sustainability’ was the stated objective of the initiative, and developed alongside the evolution of Paris Club terms (Boote and Thugge, 1997). This notion of sustainability is discussed in Chapter 6. The MDRI initiative of the mid-2000s to cancel low income countries debts followed.

1.2.4 RESTRUCTURING SOVEREIGN BONDS

One of the major outcomes of how the 1980s debt crisis resolution ended was that it kick-started bond financing and buttressed the emerging market bond market in the 1990s. A changing financial world diminished the importance of syndicated loans and the London Clubs. As the

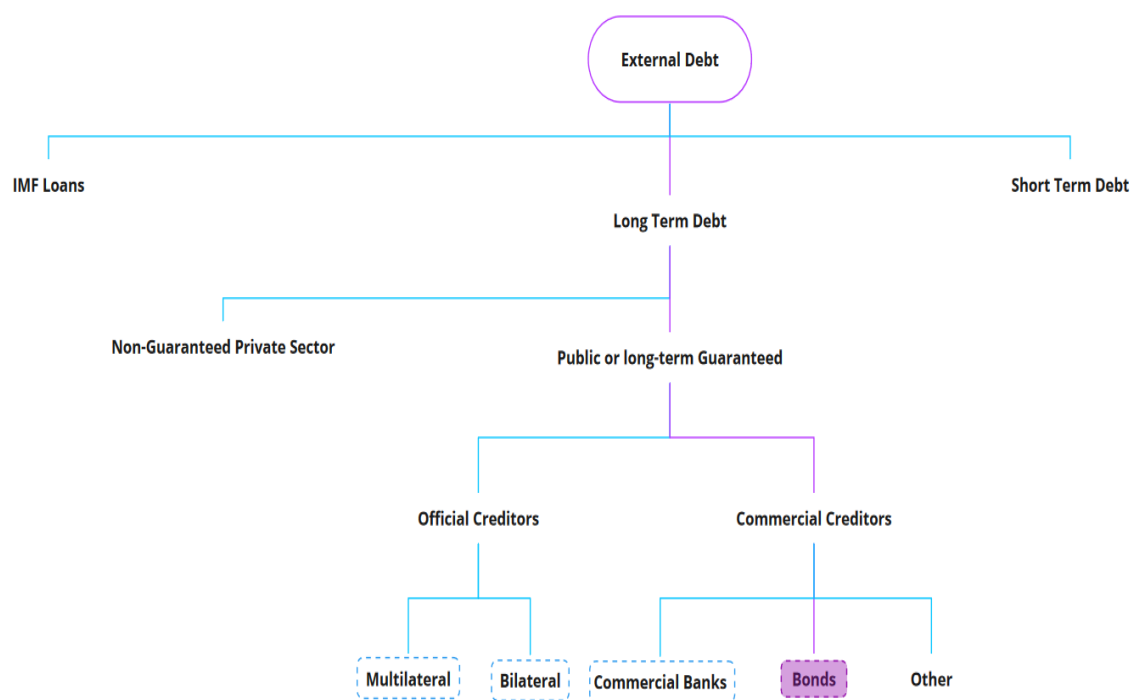
scale of private finance expanded greatly, new waves of sovereign debt problems emerged, such as the capital account crises of the 1990s, such as the Mexican tesobono crisis and the South East Asian crisis. These fundamental changes were instrumental to the development of new tools and techniques of debt repayment prospects. New types of debt repayments problems followed the changing types of capital flows leading to new forms of international debt management. The IMF's policy changed, adopting its "Lending into arrears" framework in 1989, discussed further in Chapter 6 (Ocampo, 2016). The rise of bond financing after the end of the 1980s shifted the debt regime into new procedural directions, as it became apparent that there were fewer established processes as had existed in 1980s in the case of bank loans. The procedural aspects of how debt restructurings took place in the period after the Brady Initiative have been analysed in several works (Bi et al., 2011; Panizza et al., 2009; Setser and Roubini, 2004). Bonds within the overall structure of a country's external debt can be seen in Figure 1.6.

The rise in bond financing created a broad creditor base that was even less coordinated than the bank committees of the 1980s debt crisis. This created a problem of collective action and greater incentives for creditors to free-ride, particularly as any attempts to renegotiate debts, at least under certain legal jurisdictions, required unanimity (Buchheit, 1991, 1998). The emerging market currency crises of the mid 1990s and East Asian crisis of the late 1990s resulted in reschedulings in which large bailouts by the IMF were coupled with maturity extensions to resolve repayment difficulties. These were voluntary, so the new rescheduled bonds had to be sufficiently attractive to induce creditors to participate (Ocampo, 2016). In the distressed debt exchanges of mid 1990s to mid-2000s, maturity extension as opposed to principal write-down was the norm, leading to market-based exchanges that did not actually reduce the debt burdens of countries in crisis (Spiegel, 2010). Rather, an examination into how much investors had been able to recover indicated that despite some investors experiencing short-term losses, returns to investors were high. This period also saw the rise of high profile litigation cases that resulted in holdouts reaping better repayments than those creditors that had participated in previous restructurings, creating perverse incentives in favour of holding out (Bi et al., 2011). Spiegel (2010), among many others, used this evidence to argue why the ad hoc market-based exchanges

cannot provide efficient resolutions of debt crisis.

Sovereign bonds contracts stipulate the terms and conditions of each parties' obligations.¹⁰ The contractual approach to debt restructuring relies on clauses in bond contracts to provide sufficient incentives to efficiently resolve debt repayment difficulties (see Schneider, 2018; Lanau, 2011, for instance). Specific clauses in bond contracts, such as the ones described below, determine how debt restructuring takes place. If debt repayment difficulties arise, these difficulties will be dealt with according to the details of the provisions in the contracts which will constrain the room for manoeuvre and negotiation.

Figure 1.7: Restructuring Sovereign Bonds.



Source: Authors' adaptation from World Bank (2020).

Jurisdiction will define the way creditors and debtors negotiate over any payment dispute. International listings are substantially more cumbersome and detailed than domestic listings, as towards details regarding not only the amount borrowed and coupon paid, but also,

¹⁰Parts of this section have been used as part of a larger research piece available at Bonizzi et al. (2020).

the precise definition of default and the process to follow if any terms of the contract need to change.¹¹ While bonds governed by local law can be amended by simple acts of parliament, and any claims filed in a debtors' courts, with foreign law bonds, a creditor can sue in foreign courts if initial terms of the loan are not met. Foreign law signals assurances towards international lenders that in the eventuality of a dispute, foreign courts may be more likely to uphold creditors rights, where most of the bondholders are likely to be based.¹² Jurisdiction is therefore crucial with regards the degree to which non-cooperative creditors can disrupt an attempt to restructure sovereign bonds (UNCTAD, 2015). Bonds issued on international capital markets are typically governed by English or New York law. The overwhelming majority of low-income country bonds are issued under English law (Bonizzi et al., 2020) and one of the reasons that issuers may be opting for English law as opposed to New York suggested by Olivares-Caminal (2013), is the ruling against Argentina and in favour of holdouts by the US District Court Judge Griesa.

As bonds are traded daily on international exchanges, the owners of a country's debt continuously changes. To coordinate across the disparate number and location sovereign bondholders, clauses, broadly referred to as "Collective Action Clauses" (CACs) define the procedures with which payment terms such as amounts, date due and currency can change. These clauses have developed over time, starting with the securitisation of commercial bank loans offered through the Brady plan in the late 1980s.¹³ Initially, changes to terms were possible by altering each bond series at a time, creating numerous possibilities for non-cooperative creditors to block restructuring arrangements. Recent bond issuances adopt the new generation of CACs,

¹¹The needed details are covered by law. For Eurobonds for instance, see EU Prospectus Directive (Commission Regulation (EC) No 809/2004 of 29 April 2004 implementing Directive 2003/71/EC)

¹²For instance, in 2012, the Hellenic Parliament by simple majority changed the clauses of sovereign bonds governed by domestic law retrofitting "collective action clauses" into the contract to enable their restructuring (Overy, 2012).

¹³Brady Bonds were issued mainly under New York Law and required unanimous consent to be amended. This made Brady bonds hard to restructure as all bondholders of the specific bond series would have to agree (Gelper in Guzman et al., 2016). Prior to 2003, bond restructurings took place through voluntary exchange offers, rather than relying on other means to bind holders to a decision (Das et al., 2012). Matters were slightly different for UK law bonds, which included possibilities to restructure bonds without needing unanimity.

as published by the International Capital Markets Association (ICMA) in 2014 which recommend that in the presence of a super-majority of creditors, restructuring can occur through one vote across many bond series.¹⁴ Even if owners of one bond series blocked a restructuring, if enough holders of other series were in favour, those that disagreed would be bound by the decision. These changes have led those in favour of such contractual clauses to argue that it would be harder for holdouts to block restructuring deals, given the large amounts needed to disrupt an agreement. Difficulties encountered by Argentina's 2020 restructuring indicate however that developments in CACs are not sufficient to reach rapid and comprehensive agreements.

Standard clauses, such as the *pari passu* clause, have since the 2000s been used in vulture fund litigation.¹⁵ According to Gulati and Scott (2013) while present in contracts since the nineteenth century, laying unnoticed as a historical relic for much of the 20th century, this clause has been used by holdouts and interpreted by courts to argue that all creditors – including recalcitrant vulture funds – are to be paid on a pro rata basis even when a restructuring agreement has taken place which gives preference to consenting creditors (Gulati and Scott, 2016). Significant court rulings in favour of the controversial interpretation, such as the *NML vs Argentina* case, led to modifications to the *pari passu* clause, supported by international organisations (IMF, 2015).¹⁶

A number of other clauses determine the details of bond restructurings: such as what constitutes a default, including ceasing one's membership with the IMF, or clauses that weaken sovereign immunity of states when negotiating commercial transactions with creditors. Bonds specify constraints on the collateral a borrower can use (negative pledge clauses), clauses enable creditors to accelerate future payments if the borrower defaults on any other debt instrument (acceleration clauses), and defines the amount of time in which a borrower can rectify repayment

¹⁴See the ICMA site: <https://www.icmagroup.org/resources/Sovereign-Debt-Information/>.

¹⁵The clause is understood to be read as bonds rank *pari passu* (on equal footing) with the sovereigns' other unsecured, and depending on the precise wording, obligations of varied scope.

¹⁶See the International Capital Markets Association group for further information. A recent study – which this research contributed to – found that recent sovereign bond issues by low-income countries largely took a stance to explicitly exclude the obligation to effect ratable payments and in certain cases contained wording so as to explicitly disavow the ratable payments interpretation (Bonizzi et al., 2020).

difficulties (grace period) before a creditor takes legal action.

The gradual evolution of contractual provisions in sovereign bonds are supposed to facilitate a smoother debt restructuring, in the absence of a fully-fledged statutory bankruptcy process. The protracted litigation in Argentina and the Greek debt restructuring experience of 2012 however vindicated the aggressive strategy of a minority of creditors and reminded policy-makers and main creditors to the fact that the contractual framework is not robust. In Argentina the holdouts were able to nullify previous agreements with consenting creditors unless they were paid in full, a ruling that hinged on a new interpretation of the *pari passu* clause (Guzman, 2016; Weidemaier, 2013; Weidemaier and Gelpert, 2014). The Greek case provided no smaller a sense of fury, as despite the contentiousness regarding inter-European bailouts, those funds were used to repay non-consenting holdouts which had acquired blocking positions. Using European and IMF bailout funds to repay recalcitrant creditors while Greece was also formally in payment arrears to the IMF signalled that the system was ineffective, inefficient, uncoordinated, and unfair (Laskaridis, 2014). These failings spurred creditors to pursue broader contractual innovations, to bolster the inefficiencies of this contractual approach.

1.2.5 CROSS-CUTTING PROBLEMS OF DEBT RESTRUCTURING

With each category of debt involving its own procedures, restructuring sovereign debt takes place in a piece meal way, with no overarching established, institutional framework to deal with debt crises, and no mandatory agreed set of principles or guidelines to guide them. As governments seek solutions across the different categories of creditors, cross-cutting problems of debt restructuring come to the surface. The fragmented and creditor-oriented procedures leads to lengthy, costly and insufficient restructuring.

Several studies address the economic and political impacts of default, as default takes its toll on a country's output, trade and domestic politics (Borensztein and Panizza, 2008; Doolley, 2000; Furceri and Zdzienicka, 2011; Bank of Spain and Erce, 2013; Yeyati and Panizza, 2011). Consequently, debt crises and defaults often result in high degrees of political instabil-

ity. The social costs fall disproportionately on the debtor countries and particularly vulnerable and weaker social groups, as explored in several works, not least in Bantekas and Lumina (2019); Economou et al. (2015); Maresso et al. (2015); Schneider (2018); Nations (2011c,b); Bohoslavsky (2016). The insufficiency of relief mechanisms, such as the HIPC Initiatives, point to the arbitrariness of the threshold criteria and the problems that this initiative faced (Birdsall and Williamson, 2002; Nissanke and Ferrarini, 2004; Weiss, 2006, 2012). The narrow focus on sustainability as ‘repayment prospect’ drove many to argue that debt sustainability cannot be divorced from a country’s overall development, as in, for instance, UNCTAD (2009), or that it must be compatible with the state’s ability to fulfil human rights obligations (Bantekas and Lumina, 2019; Bohoslavsky and Černič, 2016; Bohoslavsky and Raffer, 2017) and SDG development targets. This is ever more pressing in light of debts contracted for personal gain or otherwise harmful to the population, giving rise to a broad literature questioning odious and illegitimate debt repayment (Bantekas and Vivien, 2016; Bonilla, 2011; Howse, 2007; King, 2016; Laskaridis et al., 2020; Lienau, 2014; Wong, 2012). The high social costs of debt crisis, intimately related to the fragmented and creditor-oriented institutional procedures, are frequently used to fortify the demand for more efficient and just approaches to resolving debt crises (Ocampo, 2016; Guzman et al., 2016; Stiglitz and Heymann, 2014; Barry et al., 2007). One of the means with which to achieve fairer, faster and more equitable restructuring has been through the long standing attempts to further an overarching institutional solution, equivalent to the establishment of domestic bankruptcy procedures, as proposed by Raffer (1990), with recent discussion in Paulus (2014) and Aggarwal and Weber (2012).

This section provided a review of key issues regarding the procedures associated with different types of restructurings, and the overarching literature that examines the weaknesses for debtors. The literature however does not cover any thoroughgoing analysis of the technical apparatus that guides the different restructurings, any sense of how economic analysis evolved with the changing restructuring regimes, and the evolving history of the economics discipline. This weaknesses motivates the Research Question in Section 1.4, before turning for a review of the second stream of literature the thesis is situated in.

1.3 DEBT SUSTAINABILITY

Economists across institutions have ploughed their efforts into the economics of debt sustainability and tools that assess it, taking the lead from the IMF's Debt Sustainability Analysis (DSA). Through a voluminous and continually expanding literature, policy and applied issues around measurement of debt sustainability are addressed, as are theoretical aspects of the economics of the government budget and a notion of sustainability rooted in solvency. The objective of Section 1.3 is to review the mainstream literature on debt sustainability, to identify and examine the various existent gaps in this literature. The purpose of this section is to show that a historically rooted approach has been neglected. The gaps of this literature are discussed at the end of the section.

1.3.1 THE DEBT SUSTAINABILITY ANALYSIS (DSA) TEMPLATE

The World Bank and IMF developed and routinely use debt sustainability assessment exercises in their work. This began in 2002, when the IMF introduced a debt sustainability analysis (DSA) template into all country reports - as part of Article IV or programme reviews.¹⁷ This was introduced initially for countries predominantly reliant on international capital markets for financing (Market Access Countries, MAC) (IMF, 2002b) but was followed by a Low-Income Country (LIC) framework in 2005. The IMF's MAC DSA was introduced in 2002 and has been revised several times since, most recently released in February 2021, the LIC framework has been revised four times since, and is administered jointly with the World Bank.¹⁸

The two frameworks for assessing debt sustainability share a number of features. The DSA pools together two separate assessments, one on total external debt and the other on public debt. The analytical underpinnings are based on a notion of solvency, understood as arising

¹⁷The IMF produces periodic country reports for countries that are in an IMF programme as well as annually for all its members as part of routine annual surveillance.

¹⁸More information can be found at IMF, DSA for Market Access Countries, available at: <https://www.imf.org/external/pubs/ft/dsa/mac.htm>. In Sub-Saharan Africa, currently only five countries: Botswana, Gabon, Mauritius, Nigeria and South Africa, are assessed through the market access framework. The LIC framework has been revised in 2006, 2009, 2012 and 2017.

from the satisfaction of an inter-temporal budget constraint. The objective of the exercise is to check whether the future path of the debt-to-GDP ratio is on a stable, declining or explosive path. The rationale for looking at the trajectory of the future debt-to-GDP ratio is provided by an intertemporal budget and a view of sustainability rooted in solvency. Both the MAC and the LIC frameworks are organised around a baseline macroeconomic scenario which is used to produce a projected future time path of the annual debt-to-GDP ratio and both stress-test the baseline macroeconomic projections as part of a realism check for underlying optimism (IMF, 2017a). These are set up as excel-based templates which provide a pre-set format for World Bank and IMF staff economists to use.

1.3.2 THEORETICAL UNDERPINNING OF DEBT SUSTAINABILITY ANALYSIS

The policy templates to assess debt sustainability are organised around a notion of sustainability derived from the economics of the intertemporal budget constraint.

This section covers the theoretical underpinnings of debt sustainability and reviews the literature on the economics of debt sustainability in Section 1.3.3 to 1.3.5. This analysis starts from the simplest frameworks for debt sustainability analysis, rather than the multiple technical extensions introduced subsequently.¹⁹ Assessments of debt sustainability begin with the period budget constraint, based on national income identities. The example below uses the government's budget and hence focuses on public debt, but the same analytical principles apply for external debt where the focus would be the country's external account and would include an exchange rate component. See Appendix B for further details.

The period budget:

$$D_t - D_{t-1} = G_t + iD_{t-1} - R_t + OT_t \quad (1.1)$$

Equation (1.1) shows that the change in debt D_t from year to year is the result of current

¹⁹Deterministic DSA as that of IMF (2002) was gradually superseded by stochastic DSAs and subsequent efforts to embed DSA within an optimal debt financing and risk management framework (Athanasopoulou et al., 2018).

government expenditures G_t and nominal interest payments i , less revenues R_t and other transactions, OT_t . Other transactions could refer to non-debt sources of financing, such as seigniorage or privatisation receipts, entered with a negative sign, or asset purchases, such as bank recapitalisations. If OT_t is assumed to be zero, and PB_t the primary balance to be $R_t - G_t$, the flow budget is:

$$D_t = (1 + i)D_{t-1} - PB_t \quad (1.2)$$

Equation (1.2) shows that debt in one period is equal to the previous periods debt, plus the interest paid on it, less the primary balance. If there was a deficit in the previous period, PB_t would be a negative number, D_t would be equal to the previous period debt plus the amount borrowed to cover the deficit. Generalised to show the accumulation of debt in a future period n , the intertemporal budget connects stock of debt in year n with all the flows from the first period. The intertemporal budget constraint is:

$$D_n = (1 + i)^n D_0 - \sum_{j=1}^n (1 + i)^{n-j} PB_j \quad (1.3)$$

D in period n is the result of cumulative debt, interest payments and cumulative sum of primary balances. Rearranging in terms of the first period debt, from the intertemporal budget constraint, we can derive the solvency condition, which is given below in Equation (1.4), when the second term is set to zero.

$$D_0 = \sum_{j=1}^n \left(\frac{1}{(1 + i)} \right)^j PB_j + \left(\frac{1}{(1 + i)} \right)^n D_n \quad (1.4)$$

The period budget constraint is presented in dynamic form and solved through the transversality condition. Debt in the initial period is the discounted sum of all future primary balances and present discounted value of the last period's debt. The last term is the terminal condition, at $t = n$. To ensure solvency, a condition known as the transversality condition needs to be imposed, shown in Equation (1.5). As n approaches infinity, provided that $i > 0$, then $\left(\frac{1}{1+i} < 1 \right)$,

and $\left(\frac{1}{1+i}\right)^n$ approaches zero. So long as D_n – the terminal period debt – does not grow faster than i , the limit of the product shown in Equation (1.5) goes to zero.

$$\lim_{n \rightarrow \infty} \left(\frac{1}{1+i}\right)^n D_n = 0 \quad (1.5)$$

With the second term of equation (1.4) tending to zero, debt is defined as sustainable if today's debt, principal and interest is covered through future surpluses; meaning the theoretical condition of solvency is fulfilled.²⁰ This captures the idea that current debts cannot be greater than what in present value terms all future primary balances must service. Having excluded other sources of financing the deficit (seigniorage for instance), it entrenches the idea that over the infinite time horizon, debts will be repaid through surpluses.

The above analysis is usually conducted in real and in ratio terms within debt sustainability assessments. Comparing the evolution of the debt to a measure of capacity to pay, we can re-write the budget as a share of GDP. With the real growth rate being $g_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ and hence, real output $Y_t = Y_{t-1}(1 + g_t)$ and substituting for r the real rate of interest using the Fischer equation, stated as follows:

$$(1 + i_t) = (1 + \pi_t) \cdot (1 + r_t) \quad (1.6)$$

Moreover, we can utilise the flow budget constraint to express the debt dynamics as in Eq.(1.2) in real terms and as a share of GDP, as:

$$\frac{D_t}{P_t Y_t} = \left[\frac{(1 + i_t)}{(1 + \pi_t)(1 + g_t)} \frac{D_{t-1}}{P_{t-1} Y_{t-1}} \right] - \frac{PB_t}{P_t Y_t} \quad (1.7)$$

Which simplifies to:

$$d_t = \frac{(1 + r_t)}{(1 + g_t)} d_{t-1} - pb_t \quad (1.8)$$

²⁰In this schematic example, and in 'traditional' economics of DSA, expectations are not included, but the presence of notation based on expected future surpluses has been key since contributions by Mendoza and Oviedo (2004).

Equation (1.8) decomposes the factors behind the evolution of the debt ratio into the evolution of the primary balance (second term), as well as the contributions of the growth rate, the interest rate and inflation.²¹ These three elements i , g and π , fall into what can be called automatic debt dynamics, capturing the evolution of debt from period to period that does not arise from primary balances.

Equation (1.8) is the debt-dynamics equation and is the centre piece of DSA templates. The solvency requirements are analytically identical whether referring to public or external debt sustainability so that when discussing the debt of a country or that of a government, sustainability is respectively linked to the evolution of the current account and the evolution of the budget deficit. Sustainability, thus defined, is a forward-looking idea, in which future primary balances matter. Accordingly, the balance (fiscal or non-interest current account) could develop in various ways and remain consistent with the solvency criterion. Within this formal theoretical definition, borrowers with any size of debt could be solvent as long as sufficient primary balances satisfying the solvency criterion can arise at some point in the future. Therefore, as imprinted in the policy tools that measure debt sustainability, one cares to see whether the dynamics of the debt ratio are on a stable, declining or explosive path within a specified time horizon, achieved through equation (1.8). A recent output from a DSA exercise from the LIC framework can be seen in Figure 1.8. The economics of debt sustainability has generated a great literature questioning its theoretical grounds, and with regards to policy implications examined in sections 1.3.3 – 1.3.5.

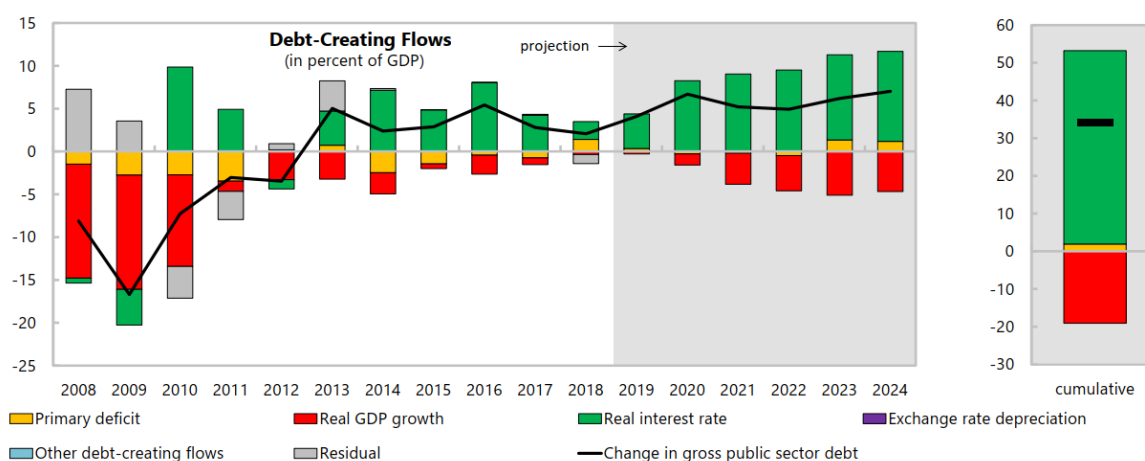
1.3.3 SNOWBALL EFFECT AND STOCK FLOW ADJUSTMENTS (SFA)

A core aspect of the analysis laid out in Section 1.3.2 is the reliance on primary balances in bringing down debts. The role of primary balances to bring down debts is an area of key dispute (Varoufakis, 2018; Skidelsky and Fraccaroli, 2017; Garbellini, 2016; Blyth, 2015; Konzelmann, 2014; Pollin, 2010). The IMF and World Bank place an inordinate focus on conditionality pack-

²¹In the context of external debt, the first term would also include the exchange rate. Appendix 2 contains the full derivation of nominal and real interest rates.

ages that focus on the evolution of the primary balance, especially contractions of domestic demand through fiscal consolidation. This brings a corollary shrinkage of domestic incomes, used to reduce indebtedness and reverse balance of payment deficits (Killick, 1995). This has been criticised for being pro-cyclical and linked to reductions in social expenditure and increases in poverty and inequality (Kentikelenis et al., 2016; Oberdabernig, 2013; Lang, 2020). Significant non-primary balance variables contribute to the evolution of debt growth. The ‘snow-ball effect’ describes the effects of the interest burden on the accumulated debt stock (Martner and Tromben, 2004) which in the IMF’s parlance, is referred to as ‘automatic debt dynamics’. The trajectory of debt-to-GDP using decomposition analysis is shown in Figure 1.9.

Figure 1.8: Lebanon: Public Sector Debt Sustainability (DSA) Analysis



Source: IMF (2019a, p. 37).

Lebanon public DSA from 2019 is shown in Figure 1.9. The primary deficit is a minor driver of increases in debt as a percentage of GDP, while during the global financial crisis, negative growth was the primary driver of debt dynamics. Echoed in the discussion that took place following the 2019 AEA Address by Blanchard (2019), in conditions of the zero lower bound, the transversality constraint is non-binding. As automatic debt dynamics are favourable and the cost of borrowing is lower than the growth rate, deficits need not be a concern for solvency.

The residual or stock flow adjustments (SFA), along with the snowball effect, are an important component of how debt-to-GDP moves through time independently to the primary

balance. SFA is a residual used to capture changes in the debt-to-GDP from period to period that cannot be accounted for by the debt dynamics equation. Large SFAs may occur because of what have been frequently called “skeletons in the closet”, regarding corruption and failures to transparently account for expenditures (Martner and Tromben, 2004; Sturzenegger, 2004). They are often the result of contingent liabilities, such as bank bailouts, causing debt-to-GDP to skyrocket from one year to the next, irrespective of the primary balance. All the while, however, that policy emphasis is overwhelmingly focused on primary balances, creates a contractionary dynamic.²²

The notion of a debt-stabilising-primary-balance highlights these concerns. In several countries where large swings in interest rates, inflation rates and exchange rate valuations may come to dominate debt dynamics, the notion of a debt-stabilising primary balance is unjustified considering how sharply volatile this may be. In a situation of low growth and high interest rates, the size of primary balances needed to stabilise debt are prohibitive. Favero and Giavazzi (2002) show how Brazilian average real interest rates bounced up 6 points within a year, and subsequently fell – volatilities that depended on inflation surges, exchange rate movements (affected by private capital flows (Kaltenbrunner, 2015; Kaltenbrunner and Paineira, 2018)). In Ecuador, the snowball effect of public debt dynamics between 1998 to 2002 was so negative, that the government would need to accumulate close to 17% of GDP in primary balances to reduce the country’s public debt by 5% of GDP.

1.3.4 LEVEL EFFECTS AND THE RELATIONSHIP BETWEEN DEBT, GROWTH AND OTHER VARIABLES

If the trajectory of debt-to-GDP is on a stable and declining path, then it is assumed that the intertemporal budget constraint (ITBC) is automatically met. A hardy perennial in the discussion on debt sustainability is whether level effects matter too: are there absolute levels or proportions of income that matter as well as trajectory? The academic debate on whether and under what

²²The issue around contingent liabilities is cast in the light of the appropriate ‘coverage’ of public sector.

circumstances the level of public or external debt may matter as well as trajectory is still heavily debated. It has cropped up in many variants – from establishing the thresholds for HIPC debt relief to establishing the European Maastricht criteria. Pasinetti (1998) and others criticised the idea of legislating fixed level effects for upper bounds of debt-to-GDP, arguing that level effects do not matter if the debt dynamics are favourable. Pasinetti (2000, p. 514) argued that level effects are manageable when “dynamics of the public debt are under control”.²³ Reinhart and Rogoff’s contributions, on the other hand, spurred a controversial debate by suggesting that above a certain level, debt harms the rate of growth (Reinhart and Rogoff, 2010). Herndon et al. (2014) revealed coding errors, data exclusions and other methodological errors which would otherwise ameliorate their conclusion. The debate raised the question of causation – does high debt cause low growth or vice versa? Empirical work is divided; several studies find no significant causal relationship between level of debt and growth (Chudik et al., 2015; Panizza and Presbitero, 2013; Pescatori et al., 2014), whereas, other studies are supportive of Reinhart and Rogoff’s conclusions (Cecchetti et al., 2011; Kumar and Woo, 2010). The search for level effects is linked to the search for critical values and Early Warning Models, which try to find the macroeconomic scenarios that are likely to trigger debt crises (see Schadler (2016, p. 3). The early history of first generation early warning models are the subject of Chapter 4. This relates to a more general point, that the interaction of variables when conducting DSA, is contested and in general, has been ignored. For instance, initial debt sustainability assessment did not account for how fiscal tightening, or spikes in interest rates could affect the growth rate – as all were deemed independent variables in the debt dynamics equation. Neither does the debt dynamics equation capture the dynamics of a crisis, where a downward spiral of collapsing revenues, ballooning borrowing costs and lack of credit all interact. Recent advances in DSAs methodology has tried to rectify some of these failings (Athanasopoulou et al., 2018; Consiglio and Zenios, 2015; Corsetti, 2018). How to model the economy, and hence feed the baseline into the DSA leads onto another source of contention in performing DSA which is about Projections, Data and Coverage.

²³For empirical criticisms of the no-Ponzi game condition see Azizi et al. (2012). For a theoretical critique see Aspromourgos et al. (2010).

1.3.5 DATA, COVERAGE AND PROJECTIONS

The starting point for the DSA is the underlying macroeconomic baseline scenario. The underlying model that produces the baseline is not, strictly, part of DSA methodology. Within the IMF, the traditional approach relied on calculating the means (averages) of historical data for the main macroeconomic variables and extrapolating them forward. This was despite the importance of variance and covariance of variables with debt defaults most frequent when output fluctuates wildly (IMF, 2002b). Several institutional variations on guidelines for statistical compilations produce different definitions and measurement of debts and deficits in different context, for instance the IMF's Government Finance Statistics as compared to the European definition of Maastricht debt (Martner and Tromben, 2004). A large literature emerged with respect to measuring budget deficits conceptually and empirically, whereby several authors agreed that the right concept is "change in net worth" (Blejer and Cheasty, 1991a,b; Buiters, 1983; Sturzenegger, 2004), but as explained by Blejer and Cheasty there were many difficulties in operationalising such concepts (Blejer and Cheasty, 1991b).

Problems of measurement also appear through problems with transparency in government operations (Kopits and Craig, 1998). In times of crisis, governments often reduce capital investment, postpone needed expenditure (infrastructure, maintenance etc), build-up large arrears with suppliers and public sector employees wages, and front load tax collection, all in order to meet budget targets stipulated in conditionality programmes (see Easterly, 1999). This is also the rationale for the observation by Reinhart and Rogoff (2009), that there is far less evidence on domestic defaults, or on the practices that enable deficits to appear lower at the time that their measurement matters. Intertemporal shifts of budgetary items occur in conditions of extreme liquidity constraints. European governments tried to meet targets in the run up to the Maastricht convergence criteria in a variety of ways (Eichengreen and Wyplosz, 1998), including elaborate window dressing techniques developed by Italy and Greece (Piga, 2001). Deferring necessary payments to maintain the appearance of sustainability is part of the reason why critics of DSAs have long called for broader measures of debt sustainability that focus on spending on

health and education, as these are frequently curtailed to keep up with debt servicing and maintain a false semblance of ‘sustainability’. DSAs do not capture the fact that governments may have long started building up or not servicing domestic liabilities (Bantekas and Lumina, 2019; UNCTAD, 2009).

Projections of underlying macroeconomic variables are a central aspect of DSA. Debt sustainability assessment depends on the projections of future variables. Projections are criticised for being employed in an unduly mechanistic way, with realism tests via stress tests on baseline scenarios, which often do not take into account feedback mechanisms from government responses (Wyplosz, 2007), prompting efforts to incorporate interactions between the macro variables (IMF, 2017). The accuracy of these projections has been long critiqued as being biased and overoptimistic (Guzman, 2016; Genberg et al., 2014; IEO, 2014; Schavey and Beach, 1999). Overoptimistic projections undermine the need for debt relief, as they would suggest a better debt-to-GDP trajectory than is likely to occur, prioritising adjustment while failing to appropriately lessen the debt burden. Sturzenegger (2004), Argentina’s former Central Bank governor, pointed out that the intertemporal dimension of debt sustainability means that key actors and creditors will have different opinions about how future forecasts of growth are likely to evolve. Furthermore, when conditions are rapidly changing, the past is not a good indicator of the future. An important medium-term assumption that needs to be made in DSA is about the future rate of interest. One lays out the repayment schedule of current stocks of debts and must make assumptions about the rate at which governments will access the market when debts mature. If the IMF programme has not restored debt sustainability, the country will graduate from the programme needing to refinance, still in a crisis state. In this case, it is unclear what future rate of interest to use (Martner and Tromben, 2004; Mussa and Masson, 1995). Likewise, debates over the appropriate discount factor plague discussions of market access and low-income country debt, as this choice will affect the calculation of losses in present value terms. In the context of the HIPC framework, present values were used to account for the degree of concessionality implicit in HIPCs’ borrowing, and the choice of discount factor has been extensively criticised (Belloc and Vertova, 2003; Birdsall and Williamson, 2002; Gunter, 2003). In summary, Section

1.3 reviewed the broad array of theoretical, empirical and policy issues relevant to debt sustainability.

1.3.6 CONCLUSION

The discussion on debt sustainability is orientated around numerous theoretical and empirical issues. It is important to note that debt sustainability has generated many opponents, including from social movements and official initiatives around debt cancellation which favoured the notion of illegitimacy over sustainability, arguing that debts that did not serve the people or the public good, ought not to be repaid (Parliament, 2015; Bantekas and Vivien, 2016). Currently, several civil society organisations differentiate themselves from the institutional definitions of sustainability of the Bretton Woods institutions. Alternatives exist, for instance through the integration of soft-law principles, such as the 2015 UN General Assembly's Principles (Li, 2015), into debt sustainability analyses has been argued and promoted broadly (Guzman, 2018); to incorporate future financing gaps arising from meeting Sustainable Development Goals (SDG) expenditures into calculations of debt sustainability (Inter-Agency Task Force on Financing for Development, 2020; UN DESA, 2020); and ensuring debt crises are addressed while respecting human rights obligations, has implications for the conduct of debt sustainability analyses (Bantekas and Lumina, 2019; Lumina, 2013).²⁴

Reviewing the literature however, one fails to gain a sense of where these ideas came from – they are disconnected from the economics discipline and changes in crisis resolution. Thus, this literature leaves one with little insight into the processes through which economics developed and was applied in particular contexts, and evades the varying roles of economists in academia and policy-making institutions.

²⁴See Laskaridis (2021b) for a broader review and argument that any of these alternatives would be an improvement to international debt architecture.

1.4 RESEARCH QUESTIONS

At different times economists have played different roles in analysing debt crises, at lending their expertise for crisis resolution and at applying new forms of reasoning to old problems. Economists have an important role in crises, both as advisers to governments and institutions, or as defenders or usurpers of extant policy orthodoxy. Their contributions ebb and flow with the broader tides of the discipline, itself in perpetual flux. The voluminous literatures on debt restructuring and debt sustainability reviewed in Section 1.2 and 1.3 leave us no nearer to understanding how or why the notion of debt sustainability gained such prominence. We examined core aspects of these existent literature and can deduce some core gaps that help motivate the research questions. From Section 1.2, the literature on restructuring is disconnected from a history of the discipline and the technical apparatus that guide the different restructurings is shielded. Likewise, despite its extensiveness, the literature on the economics of debt sustainability leaves little sense of where the ideas on debt sustainability came from and how they relate to developments in the economics discipline overall. We are left with few in-roads into the highly political process through which particular devices to analyse debt issues were established. We are left with a disconnected sense of the relation between academics and policy economists. We are missing key elements of how abstract theory developed, how was it used and in what ways was it operationalised. A history that takes these transformations into account is sorely needed.

There has been insufficient examination of the technical and material aspect of how repayment prospects are assessed, even though this affects the debt relief given. Given the centrality of DSA in debt restructuring (Hagan, 2020), there is a neglect of in-depth study on its historical origins. The lack of transparency over technical details that pervade the rescheduling process means that there is less scope to scrutinise the broader analytical aspects of the rescheduling process. This can be illustrated using an example from the Paris Club: eligibility for Paris Club rescheduling rests upon an assessment that a country faces an imminent default (Setser and Roubini, 2004; Eichengreen and Portes, 1995). Despite the conveniences afforded to the creditors from outsourcing this calculation to the IMF, none of the authors who review the re-

structuring operations of the Paris Club go into substantial detail about this calculation. We know, from Rieffel (1985) for instance, that the IMF's balance of payment projection for the upcoming year is arranged in terms of sources and uses of foreign exchange, and when uses exceed sources, there is an ex-ante financing gap, imminent default exists, and thus a country is eligible for Paris Club relief. But when Rieffel (1985, p. 5) informs us that the "technique for measuring the financing gap improved significantly in 1978-1984 period", there is no indication of how, why or by whom. There is a dearth of historical evidence on how rescheduled debt service payments lower the use of foreign exchange and how this interacts with IMF programmes closing the financing gap through curtailing the use of foreign exchange by reducing domestic demand. Insufficient analytical attention has been paid to the issue of time horizon. With what analytical tools does one ascertain whether the problem of debt repayment is temporary or permanent? Emphasis has been on short-term issues, but how did the IMF, from its origins in short-term issues develop any expertise on addressing medium-run debt problems?

This lack of transparency over technicalities is symptomatic of a broader characteristic of the two literatures – debt restructuring and debt sustainability – that were briefly reviewed: neglect of a historical approach to economists' practices. While economists are at the core of defining the scope of repayment difficulties, ascertaining repayment prospects, and providing expertise when countries fall into debt service difficulties, existing literature has neglected an examination of how economists developed relevant analyses and analytical tools. The role of economists, or other experts in developing the techniques and approaches for measuring, are tremendously important for the course of negotiations. In what ways have economists' practices affected the core of the conflict between creditors and debtors? Their analytical devices are crucial in determining the outcome between adjustment that falls on the debtor, and the debt relief the creditors provide.

The neglect of the role of economists and evolution of economic thinking on whether a country is or is not able to repay is even more striking if one takes a longer view of the ways with which creditors ascertained repayment prospects in previous centuries. This brings to the fore the role of other factors, such as power relations, conflict and policy issues between creditors and

debtors.

A classic prism through which creditor - debtor conflicts were examined was through the strategic use of foreign finance in Hobson's classic study of imperialism (Hobson, 1902). Britain, the world's largest foreign investor in the nineteenth century, used the control of foreign flows as key instruments in diplomacy (Feis, 1930). How countries accessed European capital markets "was frequently made conditional on the granting of essentially political concessions or pledges" (Angell, 1931). International loans, and hence their repayment was part of imperialistic and colonial projects (Brewer, 1990; Narsey, 2016). Debt repayment problems were assessed and addressed in various ways. Tunçer (2013) examines the 'Black Swan' of the Ottoman Empire and Tooze and Ivanov (2011) examine the 'Black Sheep' of Bulgaria, revisiting the financial supervisory mechanisms that foreign powers imposed over states facing debt repayment difficulties. Following the long-standing lack of payment by Greece on its foreign loans, the port of Piraeus was twice blockaded by the British and French in the 1850s, and the removal of the occupying armies made conditional on the establishment of a financial commission to examine the fiscal state and country's assets (Laskaridis and Syrmaloglou, 2019). Debt repayment prospects were ascertained by the local British plenipotentiary who travelled the country to assess whether the pleas of poverty with which Greece refused repayment held true.

Across the nineteenth and early twentieth century, repayment has been secured by the US through military pressures in Latin America with interventions in Venezuela, Dominican Republic and Haiti among others (Waibel, 2013; Winkler, 1933; Borchard, 1951; Dammers, 1984). Interventions following the defaults in late 1870s led to the establishment of commissions of international financial control elaborated in detail in Tunçer (2015) in the Ottoman Empire, Egypt, Greece and Serbia, which controlled the resources of a country that had fallen foul on its obligations. As analysed in Winkler (1933) credit relations often broke down completely after defaults, and protective measures to secure financial interests of creditors only gradually became organised in the latter half of the 1800s. Organisations that formally represent private creditors only arose in 1868 with the inauguration of the Corporation of Foreign Bondholders of Great Britain. Debt repayment difficulties involved full defaults on foreign bonds. Not infrequently,

debtors successfully unilaterally suspended payments and prevented creditors' from collection (Laskaridis et al., 2020; Roos, 2019).

The historical literature provides a rich insight into the means with which relations were mediated between creditors and debtors, and repayment prospects assessed and payments secured. The conflicts between creditors and debtors are overt. Despite the recurrence of debt repayment difficulties as cyclical and long-term characteristics of the capitalist economy (Suter, 1992), relations between creditors and debtors, in good times and in bad, are permeated not only by concern for economic resources, but also legal and contractual details as well as moral and political dilemmas. Despite the varied forms of this relation, creditor-debtor state relations are fundamentally asymmetric in bargaining power. Power gravitates, Dyson (2014) explains, to countries with the capacity to frame policy issues, coordinate liquidity provision and set normative standards over agendas and policy proposals over which to negotiate with other states. International financial relations, particularly when they do not go as planned, progressed hand in hand with motives of creditors, forcefully revealing the power imbalances and contestation at the core of ascertaining repayment prospects.

The history of DSA needs to be seen as part of a broader transformations of how debt crises are addressed, and how specific tools developed alongside political disagreements between debtors and creditors. This is the central concern of the thesis. It is addressed through the following research question, followed by the framework used to address it.

■ Research Question

What factors led to the rise of the Debt Sustainability Analysis (DSA) in the post-war period?

⇒ Sub-Question 1

How did the economics of DSA evolve and how did this relate to developments in the economics discipline?

⇒ Sub-Question 2

How did political disagreements strengthen the establishment of the DSA?

⇒ Sub-Question 3

How are measurement (quantification) efforts of debt repayment prospects related to practical and policy considerations?

The research sub-questions attempt to examine different aspects of this multi-faceted issue organised around questions on theory, policy, and measurement.

1.5 THEORETICAL FRAMEWORK

The research questions are addressed through a theoretical framework that draws from recent advances in history of economic thought and the social studies of quantification. The thesis takes a historical approach to its subject matter. It understands the tools and techniques of economists as historically constituted and embedded within a political, social and institutional context. Traditional historiography has been caught up in stultifying debates about how ideas evolve and how this evolution ought to be represented. A typical divide has been between those who endeavour to understand economic ideas in their context and place them in their contemporary environment, in contrast to the more frequent but often derided presentism approach which views the past through the lens of the present. This latter view is accused of providing Whiggish interpretations of history, as presentism construes the current state of affairs as the apex of a linear and progressive movement towards ever greater ideas. Presentism thus falls into

various traps: it fantasises of a liberal marketplace of ideas, where ideas dominate over others because they are better. This attempt at refinement is also linked to fact that many past economic ideas are reconstructed by contemporary economists or historians of economics who are trained as economists, with restatements of old ideas into the analytical currency of the day (see Blaug, 2013, for an example). In the context of debt sustainability, this could be seen as part of the continual refinement of the state of the art. In contrast to this, and drawing from the Skinnerian tradition in history of political thought, several scholars took a stance to not account for past intellectual debates using terms that the actors of the time would not have themselves used. In the history of economic thought, this line of work has been pursued by authors like Donald Winch, which provide the rich historical, political and social context for intellectual history (Winch, 2009). Extensive work has been made on documenting doctrinal developments in the history of economic thought, such as Medema's work on the Coase theorem (Medema, 2015), Forder's work on the origins of the idea of central bank independence (Forder, 2005) and Klaes' work on the history of transaction costs and bounded rationality (Klaes, 2000). These studies in recent history of economics provide insightful approaches to conduct conceptual biography. Furthermore, studying the evolution of economic ideas as historically embedded enables one to build narratives. This allows both for an acceptance of multiple histories of economics co-existing, and helps draw out the possibilities that events could have been otherwise (Forget, 2005).²⁵

To understand the factors that led to the development of DSA one needs to examine how economic ideas have influence in the public and policy sphere. Keynes left us with a famous characterisation worth quoting in full: "The ideas of economists and political philosophers, both when they are right and when they are wrong are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back" (Keynes, 1936). He left us however with little concrete insight into how a mere scribbler would be able to enslave those in authority. Some have tried to bring out

²⁵Many thanks to Cleo Chassonnery Zaigouche for helping me clarify this point.

the power of ideas as part of a dialectical relationship within material relations and institutions (Cox, 1982). While studies in ideology were the traditional purview of attempts to examine how ideas guide policy, the prism of ideology drifted out of fashion however as it became associated with crude interpretations of ideas, side-lined by the rise of the realist view, where interests alone guide policy and international organisations. For an elaboration of this discussion as it applies to international relations see Woods (1995) and for older treatments as it applies to economics, see Fine (1981) and McCloskey (1992, 1998).

Broadening out of traditional historiography through examinations of the overall transformations in the economics discipline and economics profession can help provide us with a handle over how ideas are established and have influence in policy settings. Professionalisation in economics greatly increased after World War II – a pivotal moment in the transformation of the discipline (Morgan and Rutherford, 1998b). The US experience set the overall trend of narrowing analytical frameworks in academia, characterised by increased mathematisation and formalism (Blaug, 2003; Dimakou, 2020; Weintraub, 2002). The increased technical nature of economics strengthened its scientific credentials lending it greater authority. As a consequence of this broadening out of historiography, new approaches to the study of the economy came about, such as the growth of “economics as an academic discipline and as a policy science” (Coats, 1984, p.4). This revealed the importance of studying internationalisation and Americanisation of economics after World War II (Coats, 1997), and the consequences this had for employability in international organisations like the International Monetary Fund and World Bank, and development economics and policy more generally (Ascher, 1996). Economics seeped broadly into public administration (Fourcade, 2006, 2009), international organisations (Babb, 2001) and ministries of finance and central banks (Montecinos and Markoff, 2009; Acosta and Cherrier, 2019). The content of economic expertise, and by implication examining the examination of what economists do, is highly conditional on national, cultural and institutional contexts (Fourcade, 2009). Notable studies focused on non-academic environments such as economists in government and international organisations (Coats, 1986, 1984) which crucially influenced the framing and approach of this thesis. Other studies that capture the operational aspect of

economists in policy institutions include Endres and Fleming (2002) and Howson and Winch (2008).

In a comparative study on economists in international organisations, De Vries (1986) – a former official Fund historian – described IMF economists as “powerful and pervasive” (De Vries, 1986), because they are the key experts within the organisation, both generating and operationalising economic knowledge. De Vries concluded that “professional economists, both in the staff and the Executive board, are the key instruments through which the International Monetary Fund develops and implements its policies” (De Vries, 1986, p. 65). Few scholars have however focused on the fabric of such legitimacy within the Fund. Woods (2006) extensively satirizes the IMF for being staffed with economists rather than anthropologists. For Chwieroth (2007), the IMF is analysed from the perspective of epistemic communities, some that allow the formation of an ideational consensus whereby economists agree on market reform programmes. Babb (2001) focused more on the professional training of in-house economists and on the organisational culture of the Fund staff. Their characterisations fit well with the work of Boughton (2001, p. 996), a more recent official historian of the Fund, who depicted the IMF as a “tidy disciplinarian”, “more interested in gaining respect than in being loved”. Although the IMF’s policy design is rooted in economic expertise, the political complexity of IMF’s missions and operations makes the theoretical and policy aspects difficult to disentangle. In that respect, in their comparative study of economists in international organisations Endres and Fleming (2002, p. 5) note that it is “not always possible to separate out the operational from the analytical dimension of work done by economists in international organisations”. This is at least partly due to the conceptual snares that Donald Winch warned about, namely the danger of “an over-optimistic conception of the technocratic status of economics, and a naive view of the processes of political decision-making” (Winch, 1969, p. 19). These insights emphasise the importance for nuanced examination of the evolution of policy, theory and measurement, and careful dissection of how and why economic ideas may have an impact.

In a separate field, the study of social science was influenced by the ‘practice-turn’ drawing on contributions from social theory, for example in Bourdieu (1977) and Foucault (1976),

and developments in Science and Technology Studies, as in the work of Haraway (1998) and Latour (2005). These developments reconceptualised the ‘doing’ of scientists as social actors governed by norms and embedded in social contexts. As explained by Shapin (1994), the factual basis of knowledge and what can credibly be held to be true are deeply embedded within social, moral and cultural norms. Within the history of economics, this was more firmly propelled by Stapleford (2017), who argued for studying the history of economics as a history of practice. Tired with the focus on disembodied ideas and theories, greater attention was put to the material and social culture and context of economists’ ideas (Maas et al., 2011). This enabled the field of history of economics to borrow from history of science and articulate that “Products of science bear the traces of their history” (Maas et al., 2011, p. 635). Charting the relatively recent concern of historians of economics “to the material and social organization of economic research, the skill and craft requisite to modelling and experimenting” (Maas et al., 2011, p. 636) one starts asking whether and how the types of practices change and whether these changes are helpful to understand how economics is used and how economists in policy institutions operate. Looking to Stapleford (2017), studies in history of economic thought(s) are actually studies in objects such as books, documents, notes, lecture materials and so forth. He usefully reminds that the study of research practice in and of itself can help open up why and how ideas catch on. This thesis draws from these insights of studying the environment economists operated in, as well as their ideas, as historically constituted. As such, this dissertation follows the concern of methodologists and epistemologists “with unravelling day to day practises and ways of theorising of economists themselves” (Backhouse, 1995). Drawing from the work of Düppe (2011), this thesis adheres to the purpose of historical epistemology – to provide insights into why this or that regime of knowledge was appealing to historical actors at specific moments in time.

There is a growing interest in documenting the variety of ways in which economics and economists influence policy (Hirschman and Berman, 2014). In their extensive survey, Hirschman and Popp-Berman refer to Ian Hacking’s ‘styles of reasoning’, and the establishment of economic policy devices as part of what enables economists’ to have great influence in the public domain, and gain legitimacy. Economists are creators of “sociotechnical tools” that “produce

information that helps us see the economic world”, and establish “techniques that help with the process of making decisions” (Hirschman and Berman, 2014, p. 782). These insights into the nature of economic expertise move us beyond the study of agents, in this case economists, and towards the examination of techniques, devices and tools that economists use (Eyal, 2013; Fourcade, 2009). By “defining problems and setting agendas”, the influence of economists is greatest, when they “can define some policy question as essentially technical” (Hirschman and Berman, 2014, p. 785).²⁶

Social studies of quantification account for the growth and influence of technical methods, for instance by examining the mismatch between the tools of measurement at any one time and the phenomena one intends to study (Didier, 2020). The sociology of quantification, such as studies by Breslau (2013); Mennicken and Espeland (2019); Didier (2020), are concerned with the effect, performative or otherwise, that quantification in itself produces, whether through new data collections, or new measurement tools. This literature highlights the political nature through which seemingly technical tools are created (Hirschman and Berman, 2014) and one can draw on the idea that economists have influence through the development of their socio-technical devices (Hirschman and Berman, 2014). Rather than having a view of ideas that get applied in practice through a linear process, we need to study the creation of seemingly rigorous tools as part of a complex historical and political process.

Porter observed that the development of ever-more rigorous quantification does not necessarily “grow out of the attempts of powerful insiders to make better decisions, but rather emerged as a strategy of impersonality in response to their exposure to pressures from outside” (Porter, 1995, p. xi). Porter draws out how the creation of quantitative techniques must be seen in the context of broader concerns for credibility and legitimacy in the public domain, greatly shaping this thesis’ view on DSA development. Porter’s work has been referred to in the study of the IMF, as in the works of Chaudhary and Seabrooke (2009); Seabrooke (2012), who examined the way in which the IMF develops technical tools and uses ‘numbers’ in a ‘pragmatic’ way

²⁶See also Gil Eyal (2006).

that suit its agency and objective.²⁷ Barnett and Finnemore (2004) for instance draw on Porter (1995) to examine how expertise, by appearing objective, is a defence to the longstanding accusations towards the Fund's politicised behaviour. A similar argument is made by Best (2006), who interprets the introduction of codes and practices by the IMF as part of an attempt to set universal rules that can be used to justify and explain policies to broader publics. This setting of standards through pre-formatted practices is not neutral. Seabrooke (2012, p. 6) for instance, questions whether the cross-country bench-marking of financial sectors through the use of templates represent "tools of domination in the quest of greater transparency".

Drawing on these literatures helps me interpret the DSA templates as part of a public rhetoric of scientific expertise. Within this framework, and as pursued in this thesis, one can interrogate how expertise is shaped to suit policy makers and to resolve the IMF's legitimisation problems. This interpretive frame opens up the argument that DSA templates are part of a broader drive for 'rigorous' underpinnings to help the policy of powerful institutions appear as credible and legitimate.

1.6 METHODS AND LIMITATIONS TO THE RESEARCH

This thesis chooses a number of episodes to identify the factors that led to the development of DSA. The timeline and topics examined are shown in the Timeline in the introduction. These were chosen in order to draw out the distinct phases of economists' thinking on the subject in the post-war period and up to the launch of the DSA in 2002. The organising principle is the stages of economists' thinking, rather than other milestones in organisational history of the World Bank or IMF. Given the focus on economists' thinking, important links may be under-emphasised, such as broader interactions between the institutions mentioned.

This thesis follows a qualitative approach reliant on traditional textual exegesis to the study of the rise of debt sustainability analysis. To work towards a history of debt sustainability analysis the thesis makes use of primary material with archival work as a key component of the

²⁷Several studies on the IMF, from a variety of frameworks, conclude that there are vast chasms between IMF practice and rhetoric, see (Gabor, 2010; Fine and Hailu, 2000).

research method, with the relationship between policy-making and academic knowledge studied by examining documents. The dissertation relies on extensive archival research covering both institutional papers and economists' personal papers and transcribed oral histories of economists deposited in the archive. Research was conducted in the following archives: IMF, World Bank, UN (New York and Geneva), Economists Paper's archive at Duke University, National Archive at Kew Gardens, Rand Corporation, Franklin D Roosevelt Presidential library. Other significant primary sources were collected through requesting relevant documents and information from participants who were more active in debt debates. At times, I had the opportunity to discuss with participants in these debates, including senior officials.

There are several limitations to the study. A practical limitation concerns the data collection effort regarding access to archival material and collections given their geographical distribution and cost to access them. More substantially, the impacts of colonialism, imperialism and racism on the handling of debt crisis is of crucial relevance to this thesis. Care has been taken to provide an accurate description of the views of protagonists as encountered in the archive, such as developing country representatives in official fora. Representation of marginalised perspectives are expressed where possible through the secondary literature, and as part of the debate within the World Bank, IMF and United Nations on the economics of debt repayment prospects and means to resolve debt crises. There is however greater emphasis on creditor institutions and mainstream thinkers.

2

Calculating Repayment Burdens and the Early Days of Research at the World Bank

THIS CHAPTER DOCUMENTS the emergence of post-war economic thinking on debt repayment, as it occurred within the World Bank. This is one of the steps in the long-term development of the economics of debt sustainability. The role of economists in the World Bank was not always what it is today. Second fiddle to the lawyers and engineers, economists nevertheless instigated postwar economic thinking on debt repayment capacity. While not influential within the World Bank, the main importance was in the broader policy debate on international debt. Section 2.1

covers governance issues in the early days of the World Bank and shows that the World Bank's own uncertain creditworthiness was not separate from its decisions about who to lend to. The World Bank's internal structure reflected the power battles between different departments that left economists in the weaker position. Section 2.2 examines how the aforementioned governance issue was reflected in two distinct viewpoints about the determinants of loan repayments: the viewpoint prevalent in the more powerful loans department favoured a micro and project view of loan repayment whereas the viewpoint prevalent in the weaker research department favoured a broader macro view of loan repayment. Section 2.3 describes in more detail the state of economic knowledge and the protagonists of the research department. Section 2.4 argues that although the economists' view was not prevalent within the World Bank, it was influential in policy circles and broadly reviewed in academic journals. By being called to provide evidence and insights into the first UNCTAD conference by the conference's Secretary General, Raul Prebisch, these World Bank economists were instrumental in progressing an analytically grounded view in loan disbursement and debt repayment prospects of the country as a whole, an issue examined again in Chapter 4. This provided a more rigorous approach to the macro determinants of repayment which were lacking. This view placed debt and debt repayment prospects within the whole context of a country's development and structural change, the detailed theoretical content and context of which is examined in Chapter 3.

2.1 THE EARLY DAYS OF THE INTERNATIONAL BANK

A foundational moment of post-war international financial relations was in 1944, where countries held a war-meeting in New Hampshire to hold the United Nation Monetary and Financial Conference at Bretton Woods, and establish a new multilateral framework for international relations.¹ This led to the establishment of the IMF and International Bank for Reconstruction and

¹Oliver (1971, p.17) notes how serious post-war planning began as soon as Americans were getting drawn into the war. Expert groups under the direction of Viner (University of Chicago) and Hansen (Harvard) formed to give advice to the State Department.

Development (IBRD).² The “extremely ambitious International Bank” was set up to provide long-term loans to increase productive capacity (Harrod, 1951, p. 551). The UN Charter at the United Nations Conference followed a year later, and put the social and economic advancement of all people at its core. Secretary of State, George Marshall, launched the European recovery programme and US President’s Truman’s 1949 inauguration speech encapsulated how international development would fulfil the US’s post-war priorities within the early Cold War climate.

In 1950, the lending of the IBRD amounted to 750 million dollars, of which two-thirds had been lent not for development but for post-war reconstruction.³ In the early 1950s however the World Bank would increasingly shift towards its development mission (Alacevich, 2017).⁴ The policy effort to increase official flows to developing countries grew steadily. Great efforts were made during this period to draw up development plans, with a proliferation of studies on how development goals would be financed. One of the early estimates of such foreign finance needs was made by the UN in 1949 in the so called “Lewis Report”, by a Group of Experts appointed by the UN Secretary General (Nations, 1951). The Expert Group was appointed at the request of the United Nations Economic and Social Council (ECOSOC) of the UN with the aim of pursuing full employment policies in developing countries through broad investment programmes financed through domestic and international funds. Many others studies were to follow which underpinned the main themes of the development thinking at the time: foreign capital inflow was needed to increase domestic capital formation which would then be maintained self-sufficiently (p. 107).⁵

²In the text I use IBRD, International Bank, Bank, and World Bank interchangeably. In time affiliate institutions were created and conglomerated into what is now called the World Bank Group. The International Finance Corporation (IFC) was created in 1957 to support private sector development in developing countries, the International Development Association (IDA) was created as a concessional financing facility in 1961; ICSID, an international arbitration tribunal for the settlement of investment disputes was established in 1966 and MIGA was created in 1988 to provide insurance for international investment.

³World Bank Archive: Folder Title: Records of President Eugene R Black

⁴Oliver (1971, p.38, 42) noted that the Articles of Agreement embrace both reconstruction and development, but that urgent needs of reconstruction ought to be prioritised. The Marshall Plan was crucial in this respect, as it was unlikely the IBRD could have taken on reconstruction on its own.

⁵This was followed by another such study by Rosenstein-Rodan’s capital inflow requirement estimates, published a few years later as Rosenstein-Rodan (1961a), which tried to ascertain the variations of absorptive capacity among developing countries. For insights into the notion of development and

There were numerous issues that needed to be resolved for the Bank to start up and implement the broad charter laid out at Bretton Woods. Set up as a bank to finance reconstruction and development, the details of how its operations would be financed were yet to be ironed out. The initial idea was that the Bank would guarantee the borrowing of countries that faced difficulties in accessing capital markets. Early on however, the US proposed that the Bank raise money funds in its own right to then lend, rather than become a guarantor of loans of uncertain qualities. With foreign direct investment nowhere in sight, the Bank stepped in directly. Financial turbulence and defaults from the 1930s were still in memory, and the chances of the Bank's projects gaining financial support were higher if the Bank was to issue its own securities than if it was to guarantee the securities of governments while its own standing was still unknown. As a nascent institution, this was to be expected. How to set lending rates, how to approve loans, how to ensure repayment would be possible, were all matters that concerned the creators of the IBRD (Oliver, 1971). This was a problem from the very first drafts of its charter: with what yardstick should the Bank determine which borrowers to lend to, if it was not to supply funds at the rate of interest one would otherwise obtain in the market (Oliver, 1971, p. 40). Given the variety of risks each loan would entail, how to set the lending rate? These decisions would have to be politically decided and hence necessitate a greater role for expert advice and judgement.

However, the issue that Keynes was most vocal about was precisely to set the character of the institutions straight right from the start, and to mitigate the political manoeuvring that the institution could be susceptible to. Would the Bretton Woods institutions, as he desired, be free of "the politics of Congress and the nationalistic whispering gallery of the Embassies and Legations" (Harrod, 1951, p. 630). This had important implications for the basis on which loans would be made. Fred Vinson, Secretary of the Treasury and senior US delegate at Bretton Woods, wrote at the time that "the business of the Fund and Bank involves matters of high economic policy" (Vinson, 1946), meaning that the institutions would be something more than pedestrian loan makers. And as matters of hiring those competent to deal with high economic policy go, the question of recruits and staffing the institution was a primary consideration. In underdevelopment see Helleiner (2016) and Escobar (1995).

1946, besides the three key positions of President, Secretary and Treasury, the three main departments were the Legal, Loan and Research Department.⁶ It was envisaged that the Loan department would be staffed with engineers and technical staff and the Research Department with “highly qualified economists and statisticians” (IBRD, 1946, p. 8). The Bank sought people with experience in government-financial matters to take on loan operations, but also lawyers and economists of a practical sort.⁷ As explored below, the division of labour within the Bank determined the role of economists in the early days of the World Bank.

Officially its doors opened for business in June 1946 with the appointment by President Truman of its first president, Eugene Isaac Meyer. Meyer recognised the need for being flexible while matters became organised. Despite being governed by Articles of Agreement, exceptions to these were granted on the basis of the destruction caused by the war. At the first annual meeting, for instance, there were not as many applications for loans for reconstruction as expected, which was attributed to the difficulties of devising long-term plans when still preoccupied with the “mechanics of avoiding starvation” (IBRD, 1946, p. 5). Meyer realised that contrary to the enthusiasm of some strong-minded country representatives, being ready to give out loans would take time. This was not just an issue of the slow start to applications arriving, but also the myriad of internal issues regarding making loans. With many political questions yet to be settled about how the organisation was to function and many more frustrations, Meyer quit, solidifying the feeling that all in all, the IBRD had set off to an inauspicious beginning. The interregnum in the Bank’s leadership came to an end with the election of a new set of senior management: John McCloy became the World Bank’s second President, Robert Garner Vice President and Eugene Black the American executive director, all of who assumed office in March 1947.⁸ That the press reported favourably on the new appointees was important because it signalled that strong standards were being set for World Bank lending, that would be far from political considerations.⁹

⁶Other smaller departments included office and personnel services.

⁷During the 1950s there was an important increase in the size of professional staff at the IBRD, going from 430 in 1951 to 2500 in 1971 (Mason and Asher, 1973, p. 71).

⁸McCloy was a lawyer, industrialist and Assistant Secretary of War during WWII, with educational credentials from Amherst in 1916, and a law degree from Harvard in 1921.

⁹The Wall Street Journal, March 1st, 1947; The American Banker, Vol. CXII No 50, Saturday March

Although the senior members of management were well regarded in the banking community, much was done to signal, as commented on in the press, that these appointments marked the start of a concerted effort to support the bond issues of the nascent institution.¹⁰ As the initial plans for the World Bank to guarantee the loans of borrowers had been abandoned, the nascent institution would have to gain trust to raise money in the capital market.

Robert Garner, the new Vice President, was crucial in shaping the administration. On his arrival he added to the departments, and the IBRD opened offices in New York and Paris to help to raise money on the capital markets by selling the Bank's bonds and in hope to gain the trust of the banking community.¹¹ The new president remarked on the need for a mutually beneficial character of international loans: "There are few things which place a greater strain upon the friendship between nations than international loans which leave behind merely an obligation to repay, without corresponding benefits to those who must bear the burden of repayment" (McCloy, 1947).¹² As loans would be financed, not by drawing on the Bank's capital, but by borrowing in the capital markets, the relevance of its own creditworthiness would not be separate from the far-reaching concern that would begin to preoccupy the World Bank Staff about how to make decisions about who to lend to.¹³ As will be developed in Section 2.2, the Loans departments and the Research department fostered different views for how creditworthiness should be ascertained.

1947.

¹⁰The Wall Street Journal, March 1st, 1947; The American Banker, Vol. CXII No 50, Saturday March 1947.

¹¹It would take time for World Bank officials, beyond top management, to be trusted. As described by the head of research, Leonard Rist: "it's taken quite some time before the boys who were employees of the World Bank were received by the New York Community. At the beginning it was: "The president is all right; the vice-president is all right; but who are these youngsters?" (Rist, 1961, p. 21-22).

¹²He added that: "The people of the borrowing country are apt to regard the lender as a foreign ogre of whom the worst can readily be believed" (McCloy, 1947).

¹³An interview with World Bank economists noted that the intention to operate "on the basis of its own credit standing" and "make sound loans" was in practise hard to distinguish from concerns about absorptive capacity of borrowers (Alter et al., 1961, p. 25).

2.2 CONTRASTING VIEWPOINTS

Loan approval initially required the input of two departments: the Loan department that focused on operational aspects of projects and the Economic department that ascertained broader creditworthiness of the country (Alacevich, 2016, p. 640). A fissure developed between the departments over the meaning of ‘ability to service’ World Bank loans. As explained by Alacevich: “starting in the late 1940s and continuing well into the 1960s, two approaches to creditworthiness could be found within the Bank. One, supported by the top management, assessed the creditworthiness of a country on its ability to pay and eventually get rid of its own debts. Another one, supported especially by the Economic Department, focused instead on creditworthiness as the ability of a country to productively use foreign aid” Alacevich (2016, p. 635). This latter view stood in contrast to the conservative viewpoint promoted by Management, that nothing short of full repayment of debts was expected, which was the view that prevailed. As explained by a Bank economist of the time, “The theory of the Bank was that the Bank did not finance programs; it financed projects, and therefore, each project should be viewed in its own merit. The Bank did not plan to lend X amount to a country. The Bank was a reactive organisation that focused on individual projects, judging them on their own merit within the country’s creditworthiness” (Husain, 1994, p. 8). This meant that the analysis of financial investments in developing countries was divided between the project approach and the country report approach.

The World Bank’s Articles of Agreement specified that the Bank could lend for specific investment projects. The Loans department at this time consisted of technical operations, predominantly engineers needed to evaluate projects, and the loan negotiators, who were concerned with the financial viability of the projects. As recalled by Husain (1994, p. 11) “the Bank’s project concept was fundamentally an engineering concept, which meant it concentrated on bricks and mortar, seasoned with generous amounts of financial analysis, economic analysis, and cost-benefit analysis”. Deciding which loans to provide, relied on evaluating specific projects and ascertaining their financial viability. The methodology was organised around project appraisal methods and cost-benefit analysis. The benefits and costs of a project were transformed into a

common yardstick – if benefits were greater than costs, projects were approved. Calculating the developmental or welfare contributions of projects however stumbled across accounting difficulties regarding project valuation. The varied practices existent across agencies led to scholarly and institutional debate, so that by the 1960s the seminal contribution sponsored by the OECD by Little and Mirrlees on methodologies of project evaluation and social cost benefit analysis tried to set unifying standards (Little and Mirrlees, 1969; Squire and Van Der Tak, 1975). The project approach evaluated specific projects but despite being considered a more rigorous approach, it too came across difficulties of estimating developmental contributions of the project, which needed longer-term judgements about how projects would lead to development. This was deemed to need: “general judgements on behaviour, policies and institutions in the recipient country” (OECD, 1967, p. 16), the focus of country reports.

Country reports were the other main complementary material used in conjunction with project-based analysis. The focus of country reports was the creditworthiness of the country with “some effort to identify major sector problems and to project the future rate of growth and the balance-of-payments outlook for the country and the area” (Alter, 1985, p. 1). The information relevant to compiling country reports would fall on the shoulders of economists initially based within the Economic department, headed by Leonard Rist. Rist however would face obstacles in materialising the vision he had for the department. Rist was one of the people initially head-hunted to staff the nascent institution. A senior banker with the House of Morgan, imprisoned by the Nazis during the war, he was subsequently asked by the French Treasury to go to Bretton Woods as a representative of France, arriving in Washington DC in 1946. Meyer, the first Bank President looking for competent Staff, made Rist quite an offer: “Well, the loan department has already been promised to the Britishers, but what about the economic department? Would you take that?” (Rist, 1961, p. 4). Despite being a banker for many years, Rist accepted and became the first director of economic research, a post he would keep until 1961. Nonetheless, his job as he would later characterise it, was mostly that of a ‘translator’. He knew that as head of research his main role would be to translate between the language of the bankers and that of the economists. The difficulties between the departments and their

respective roles were so great in the early days that they were enough to drive the deputy director of research at the time – the prominent development economist Rosenstein-Rodan – away (Rosenstein-Rodan, 1961b). Rosenstein-Rodan was adamant that the country-level research needed to focus on the process of growth, development and the role of foreign finance, a subject he had pioneered numerous studies into (Rosenstein-Rodan, 1961a, 1943, 1965). Indeed, it was thought that one “can argue that his article of 1943 foreshadowed the establishment of the Bank” (Avramović, 1996, p. 6). Garner, the Bank’s Vice President, came into conflict with Rosenstein-Rodan and his aspiration to develop more academic activities within the research department. Garner “ran the Bank with an iron fist, and he was the project man. So, there was conflict, not between capitalism and socialism but program lending versus project lending...and the Bank remained a project lender exclusively for quite some time” (Avramović, 1996, p. 6). Garner later described a specific kind of economist that was suitable to the Bank’s practical character. “We have not felt that we wanted say, in economic fields, men oriented towards highly technical and academic research type of work. The Bank as an operating institution has never felt that it should try to engage in research in developing economic theories” (Garner, 1961, p. 22). Given a world full of theoretical economics, he saw the Bank’s niche as applying economics to practical problems.

As the World Bank started to organise itself, the role given to the research department was to provide country reports containing key economic information about the country. The research department was seen as the place where relevant information would be collected. These would be used by the loans department in their work determining creditworthiness and assessment of projects. Crossing the divide between research and ‘operations’ (although the department was not formally called that until 1953), was not simple. “The points of view differed rather sharply from bankers, lawyers and operators” (Rosenstein-Rodan, 1961b, p. 6). And as one of the economists of the time noted, “it takes very special attributes to communicate across this frontier” (Guhlati, 1985, p. 12). The “cultural milieu”, as it was described, of those in operations was quite different than that of the researchers (Guhlati, 1985). Whereas subsequent recollections put these difficulties down to personality clashes and jockeying for status, there

is a substantive point as well. Loan officers were concerned with comparing projects to make decisions about which project to fund and hoped for fairly standardised presentation of information. While Rist was keen to develop “some kind of a standard” in economic report writing (Rist, 1961, p. 16), and while the reports “were all aimed at determining creditworthiness” (Rist, 1961, p. 17), he held greater aspirations about the role of research.

The difficulty in translation between departments surfaced early on. Rattled by his colleagues’ attempts to smother what he saw as a creative instinct that he wanted his department to have, he responded quite straightforwardly. If project loans could be decided on documentation as slim as a bond prospectus or other equivalent practices common in banking, then the IBRD’s involvement in the first place was superfluous.¹⁴ Country reports would of course need to present data of the key economic variables. The methodology of country reports however was deemed ad hoc and lacking any overarching framework through which to make sense of the economic activity reported. Prognostications were deemed impressionistic and when quantitative calculations were employed, they often implied serious inconsistencies and implausible conclusions. For instance, it was unclear whether developing countries really lacked absorptive capacity or whether finance providers themselves were too rigid in what they were willing to finance (OECD, 1967, p. 21). Not only were calculations of ascertaining the financing needs of the economy overall very hard (p. 22), it turned out impossible to get project personnel to understand the value of broader input. As recalled by Irving Friedman: “they just found it difficult to think that before a loan was made in the Bank, you first had to have a judgement of the economic situation in the country; that creditworthiness was not just an arithmetic of the earnings to exploit earnings for servicing but was actually a much bigger and deeper concept of the whole economic outlook of the country; of the use of capital, and the kind of results it would produce, both domestically and internationally; and that only an economic analysis could really give you an end judgement on creditworthiness” (Friedman, 1974, p. 36).

Rist wanted to go beyond this because whatever it was that he saw that laid beyond the

¹⁴There is wide-spread evidence of this. The study by Winkler (1933, p.pxvi) on defaults on international debts provokes the docile investor who “failed to appreciate the fact that prospectuses were prepared to sell and not to inform”.

basic data, he thought it crucial in helping the Bank understand the environment into which it was lending. By operating in what he called “the grey zone” – lending to countries unable to access the market but that with IBRD support could – he gave impetus to the very broad consideration of issues that the Bank may need to have to hand to decide which loans to make (Rist, 1961, p. 24). This bore on broader issues regarding the role of Research departments in post-war institutions. Andrew Kamarck, educated at Harvard and who worked at the Federal Reserve during the war and as Secretary of the Treasury on Marshall Plan policies, was another early recruit in the Research department.¹⁵ According to Rist’s later memory, in what was intended as helpful advice, Kamarck’s father in law, Goldenweiser – the long-time director of Research at the Federal Reserve – shared his wise counsel. He suggested to Rist that he read the article he had written during the war that put down the desirable relationship of research to policy. In the view of Goldenweiser, “research was supposed to deal with facts alone, laboriously compiled, noncommittally presented, with interpretation restricted to indicating the technical limitations of the evidence” (Goldenweiser, 1944, p. 1). In light of this doctrine, as he called it, “research in a policy-making body is for the purpose of shaping policy” by which he meant not that policy must always follow research advice, but that “it is the function of the research staff of such an organisation to formulate policy, while the responsibility of the executives of the institution is to adopt or reject it. The executives must choose their research man, must back him while he works with them, and let him go when they can back him no longer” (Goldenweiser, 1944, p. 1). This view of the importance of research staff to policy, while receiving acclaim by his contemporaries (Riefler et al., 1953), presents research staff as being subservient to management in a way that would not do for Rist who seemed to have higher hopes for his department. “I don’t think this is going to prevail here” he insisted, “meanwhile I prefer economics” (Rist, 1961, p. 17). Among the many ways that this preference for economics could have been expressed, Rist took this to quite logical conclusions. With Garner’s approval, he changed the name of his department from Department of Research to Economic Department. Gradually, this Department started to build

¹⁵Much later in life, Kamarck latched onto the growing student movement criticising the economics discipline and published, in 2002, a book (Kamarck, 2002) that according to Sent (2004) presents a terribly crude view of scientific theory and economics in particular.

up expertise in broad views of determinants of a country's debt repayment capacity despite the resistance to initiating this type of analysis within the institution.¹⁶

To go beyond the mere presentations of fact as the basis for loans, Rist opted instead for the dedicated collection of information pursuant to a country's policies which he saw as key to whether a country could repay. The issue facing a country was "problems of policy and not problems of fact" (Rist, 1961, p. 18). If determination of the creditworthiness of a country and thus of the very thing that the IBRD should take into consideration, was to go beyond issues of fact, then his fellow economists in his department would have to figure out what exactly this meant. What he seemed to have in mind is the information that would help form judgements about political aspects of policy and the likely evolutions of social pressures. Rist simultaneously faced his second challenge of translation: "After having eliminated the opposition of those who believed research was limited to statistics gathering, I had a great fight to force my economists to think in social and political terms and to force the others to accept that this was part of the economist's job" (Rist, 1961, p. 20). Rist provided a list of issues he considered important in assessments of a country's creditworthiness which included various psychological factors and a discussion on needing to monitor future patterns of investment as the key to figuring out if the Bank's loans would be repaid. Despite the variety of elements to consider, he concluded that "the methods used by the Economic Department in approaching this problem are not really new", and that "indeed ... the problem is one of judgement and not one of exact formulae."

Discussing countries' policies as important factors to consider in the loan-giving process was initially unfamiliar to the Staff. It meant that economists had to form a view about the developments that could take place in the recipient country in the future. This raised an issue that was more complicated than simply being unfamiliar territory. The issue was whether economists reserved a right to voice their views on the future of a country's policy. It was not clear where the boundary was. Rist supported this by advocating that those who had travelled and seen the countries they were giving loans to, may have something of use to say about 'creditworthiness',

¹⁶As indicated in Mason and Asher (1973, p. 866-876), the way economic research was organised within the organisation changed several times, from Research Department in 1947, to Economic Department and then to Economic Staff in 1952.

which may be about the subject of policy. As for Garner, the economist trying to appraise the economy of a country, beyond being “a soundly trained man in the basic fundamentals of economics”, he must, “to be useful for the Bank able to come out with practical economic answers, not academic ones” (Garner, 1961, p. 23). There was a clear recognition of a dearth of knowledge that could be used to guide policy decisions about lending. As loans would not be set at market rates, the need for greater expertise and economists’ tools to inform judgement emerged.

Several factors prompted the Bank to devote more energy to move beyond debt repayment assessments based on such loose terms and to ones with sounder foundations. There was clear recognition that the state of knowledge on the subject was low and the Bank needed more input on the practical aspects of its operations. Deciding the lending rate was intimately connected to some view of the riskiness of loan and the chances of repayment. The project view did not consider broader issues that could affect loan repayment and whether the country as a whole would generate sufficient foreign exchange. There was a gap to be filled in the weakness of existing tools: country reports relied on the debt-service ratio indicator as an informal guide to evaluate ‘creditworthiness’ but this was widely considered insufficiently useful. As Alacevich (2016, p. 633) notes, “the Economic Department was increasingly criticising this approach to creditworthiness”. This coincided with the fact that the research department was headed by someone who had aspirations to pursue economics in order to help answer questions of development. Paradoxically, although there was a higher level aversion to providing academic answers to things, the search for sounder foundations in assessments of country credit-worthiness led the work in the economic department to take on more of an academic character.

Institutionally, the work by World Bank economists to develop more analytical foundations of debt repayment prospects took place once the internal power struggle of economists had been lost.¹⁷ In what Rist (1961, p. 20) called “the famous fight”, two departments feeding into decision-making over loans proved too difficult to maintain, and in 1952 came the first internal reorganisation of the World Bank, that organised economists by area, and created an ever-bigger

¹⁷This was emphasised during the presentation of the chapter to the 2020 ESHET YSI conference by the discussant, M. Alacevich.

technical operations department. Much of the country report work by economists continued within the area departments, and as explained in Alacevich (2016, p. 641), the economic department was relieved of its operational duties.¹⁸ The efforts of economists within area departments after the 1952 reorganisation were more closely allied to the work of operations, and to the “hard-headed analysis of creditworthiness and the economic merits of projects” that Black and Garner had wanted (Knapp, 1986, p. 2). Economists in area departments moved closer to the work done by operations, getting absorbed with “specific country analysis and project analysis” and “came to a much more sophisticated analysis of the economic rates of returns on projects, which was, of course, something they shared with the project people” (Knapp, 1986, p. 4-5).

What remained of research was renamed the ‘Economic Staff Committee’ whose main purpose was to ensure that the various economic reports prepared within other departments, whose Directors would be unable to follow closely, were broadly consistent and accurate (Rist, 1961, p. 64-5). And thus, what remained was that “the economist clearly was regarded as a person who played the second fiddle”(Husain, 1994, p. 6). Instead, it was the lawyers within the Bank that provided broad counsel. “The economists in the Bank in the Eugene Black period were not very influential. The Economic Staff was really a backwater... I had the impression at that time that the economists were rarely involved in policy work; the lawyers were really much more influential” remarked Guhlati (1985, p. 2) another member of the economists’ team. “It’s extraordinary how in the early days the legal department produced broad concepts and ideas and suggestions, and gradually management began to expect the lawyers to have these ideas rather than the economists”, recalled Larsen, an economist who joined the research department in 1948 (Alter et al., 1961, p. 8).

What remained after the reorganisation, as recalled by Kamarck (1985, p. 4) was that “the Economics Department was shrunk down to a few people working on external debt and a few

¹⁸Rist was adamantly opposed to being taken “out of the direct line of project planning”, which he put down to the American military tradition of separating services from line of command (Rist, 1961, p. 63). For recollections of the distinct work done subsequently by economists within area departments and the economic department see Alter (1985, p. 8)

people working on commodities”. Nevertheless, despite the fact that economists held a weak internal position in the early days of the World Bank, the remainder of this chapter argues that the work done by the economists working on external debt resonated externally with the international policy discussion taking place. This allowed the work that remained in the economic department to continue with a broad, global analysis. Rist encouraged his economists to engage more thoroughly with the economic conditions and policies within a country that may affect debt repayment prospects. Under his watch, this led to important additions to the meagre tools at the disposal of the organisation to illuminate these issues: detailed internationally comparable data, thoroughgoing analysis of the merits and drawbacks of short-run creditworthiness indicators and an economic model. We now turn to the economists whose work shaped the early economics of debt repayment problems.

2.3 DRAGOSLAV AVRAMOVIĆ AND HIS TEAM

When Dragoslav Avramović arrived at the World Bank in 1953, he came with significant experience of requesting foreign assistance for the service of economic development. A Yugoslav from Skopje, who worked at the central bank, Avramović had dealt with the repercussions of the split of Yugoslavia from the Soviet Union over the culmination of the Greek civil war. The country was in search of new sources of foreign assistance, and Avramović was head of the team that prepared the material that would indicate to arriving foreign lenders the financing requirements of the economy. The US was extending credits to the region, and the World Bank’s representatives went to Yugoslavia in 1949. He was a lawyer trained in Belgrade, and after some months at the LSE, arrived at the World Bank in 1953 to join the Department headed by Leonard Rist. Avramović was asked to look into problems of external debt. He later recalls that the instigator of this line of work was in fact Garner, who, as early as 1952, had “Before anybody else...started worrying about the debt problem” (Avramović, 1996, p. 7).¹⁹ Garner, as part of senior management, was part of the discussions of how the IBRD should best set its lending rate. Cognisant

¹⁹From 1948, Rist too was well aware of the dangers that too many loans may bring about (Rist, 1948).

that the core decision with respect to making a loan was a decision about the chances the loan would be repaid, he uttered despondently on the state of knowledge available to help one making such decisions. “It’s a very imprecise exercise” and “many of the factors affecting credit worthiness are not within the control of a country”, referring to the volatilities that developing countries are subject to. Assessing creditworthiness, seemed to amount to not much more than “an educated guess” (Garner, 1961, p. 24).

Over the course of several years a team of collaborators worked with and around Avramović to develop deeper assessments on debt repayment capacity. Three core works emerged from the team: Avramović and Gulhati (1958); Avramović (1960, 1964). The books went into depth about the merits and drawbacks of different measures of debt burdens, and they also developed an important internationally comparable data collection effort.²⁰ The first book was initiated by Rist, who together with Gerald Alter, prompted the study and advised on its course (Avramović and Gulhati, 1958, p. xvi). The first two books are empirical and examine short-run indicators of debt service burdens. The final book in 1964, moves beyond empirical descriptions and develops a model to describe the long-run evolution of debt in the development process. The importance of this final work was described by Husain, one of the collaborators; he stated that before the 1964 book, “a lot of debt work was purely statistical, and this book that I co-authored was the first attempt to look at the whole issue of debt in relation to overall economic development”(Husain, 1994, p. 3). A thorough examination of their theoretical content and context within history of economics is the subject of Chapter 3.

The main collaborators were Philip Hayes, Ravi Guhlati and David Holland - who both started as Avramović’s personal assistants, the latter became economic advisor to the Bank of England, and Shahid Husain, later became Vice President of the World Bank. The two others are Dorene Compton and Hans Wyss.²¹ Ravi Guhlati was one of Avramović’s close collaborators and co-author of two of the books with him. He joined the Bank in 1955, when Eugene Black became the third World Bank President, initially as an assistant to Edgar Malone Hoover,

²⁰These tables are the origins of the current International Debt Statistics database of the World Bank.

²¹No further information could be found for Wyss and Compton.

the Harvard population economist at the Bank, and then as an assistant to Avramović. Guhlati had a long career in the Economic Department where he stayed almost a decade (until 1964) and then moved – like many others – to hands-on work, going on missions. He returned to the economic department in 1972 as Deputy and eventually director in 1973-1976. He stayed in the Bank for another ten years after his position as director of economics, as a chief economist for different regions. In an interview with Robert Oliver he echoed his co-author above, that the 1964 work with Avramović and the team was deeply original and important because “for the first time that I know of, it related the debt issue to the whole process of economic development” (Guhlati, 1985, p. 2).

Husain was one of the first members of IBRD senior management to come from a developing country. He had a tumultuous career before arriving in Washington; he left his degree in science and engineering unfinished to work in a coal mine. On his return, his father introduced him to someone who had just returned from the LSE which sparked his curiosity and he enrolled in economics at Karachi University, and then went on for a three-year programme at the LSE. He spent a year in Oxford, and gradually made his way to the World Bank who hired him as an economist in the Economic Department. When he started, the Director of the research was Avramović (Husain, 1994). Rist had left at this time, and Avramović had assumed interim position. There were sub-units within the Economic Department. It was the Division on Debt which contributed to the analysis of creditworthiness. The division at this time was headed by Philip Hayes, and Avramović asked Husain to go to work with him. While wanting to go beyond educated guesses seemed reasonable, there did not appear to be a strong direction or guidance to the research – a feature that seemed to govern overall research at the IBRD at the time.²² Husain was left to his own devices. The research effort in the 1960s was not so systematic, described as a “hit or miss kind of exercise”. With regards to the work by Avramović, it “was probably done because Avramović was present, and Avramović had a great interest in this... There was no systematic research planning capacity, or financing; and very little evaluation of research or organisation to disseminate the research” (Guhlati, 1985, p. 13). Husain attributed it to one

²²See Alacevich (2008) for a broader interpretation of this.

of his colleagues for relaying to Avramović the development of the analytical framework used in Avramović (1964). “At that time, there was a woman working in that Division who had been my colleague at the London School of Economics. Her name was Doreen Compton” (Husain, 1994, p. 3).

2.4 INTERACTIONS WITH THE UNITED NATIONS AND THE OECD

The work by Avramović and his team may have not influenced the determinants of loan disbursement within the Bank, but their work was influential in broader policy circles. By end of the 1950s, it was clear that the resources the International Bank could mobilise were insufficient to fill all the financing gaps, and the terms of international financial flows had already become too burdensome for certain countries. This led to a doubling of subscribed capital in 1959 and the establishment of the concessional financing arm of the World Bank, the International Development Association (IDA) (see Alder in Bhagwati and Eckhaus, 1972). This was in the context of an escalating Cold War, and liberation struggles taking place across the developing world that led to, in December 1960, the UN General Assembly milestone Resolution calling for the end of colonialism and independence to countries and peoples, that received overwhelming support, except from colonial powers who voted against.²³ Newly independent countries were fighting for their equality within the international economic order formed from the foundations of Bretton Woods. In 1961, the US enacted the Foreign Assistance Act, established the Agency for International Development (USAID) to provide bilateral flows, and US President Kennedy launched the Alliance for Progress, a cooperation agreement with Latin America. The United Nations General Assembly (UN GA) assigned the 1960s as the Development Decade, setting the objective of achieving a growth rate of 5% in developing countries by 1970 (Führer, 1996, p. 13). Another development of this period was the establishment of the OECD that came into operation in September 1961.²⁴ Under the Kennedy administration, the OECD brought together

²³See United Nations (1960).

²⁴The OECD’s precursor organisation was the Organisation for European Economic Cooperation (OEEC), established in 1948 to administer the Marshall Plan (OECD, 2020a).

the main donors of official aid through the establishment of the Development Assistance Committee (DAC) in 1961 along with the policy of the Common Aid Effort in which the growth of commercial as well as concessional flows to developing countries was encouraged (Führer, 1996).

These developments created antagonisms in the international arena and provoked heated debate about the terms of international financial flows and growing debt repayment difficulties. This resulted in calls by developing countries for changes to the rules of the game to enable the achievement of developmental goals. Foreign aid was provided for all sorts of reasons among which military, political and colonial (OECD, 1967, p. 4).²⁵ Writing in the 1960s, Meier observed that “foreign aid has been extended mainly in an ad hoc fashion in response to immediate policy situations and without the opportunity for a substantial amount of prior research. Its practice, however, has suggested several areas of basic research that merit considerably more investigation” (Meier, 1968, p. 528). The state of economic knowledge on calculating the needs of developing countries for external finance was in a poor state as were assessments of repayment prospects.²⁶ The UN was a focal point for drawing in expertise to inform policy discussions, bringing together academic and institutionally-based economists in an attempt to raise developing countries’ bargaining power vis-à-vis high income countries.²⁷ In this period of frequent overlap between economists based in academic institutions and those within policy institutions, IBRD economists maintained intellectual interaction with others outside the World Bank who were also conceptually motivated by the issues of debt and development.

The first such link was associated with the OECD, which pursued its own studies into international capital flows. Calculations of external assistance were based around the target of 5% set by the first UN development decade. Economists across institutions were engaged in ascertaining financing gaps in development. Two main approaches to calculating the size of external finance developed. The first was focused on finding the gaps, either in domestic saving or

²⁵The broadness and controversy around the objectives of foreign aid prompted the adoption by the DAC, in 1969, of the concept of Official Development Assistance (ODA) as distinct from “Other Official Flows” (OOF), in order to isolate official transactions which aim to promote economic and social development of developing countries.

²⁶This was made very clear in the first annual report of the DAC (1962).

²⁷See United Nations Conference on Trade and Development and Secretariat (1985).

in foreign exchange that limited the capital accumulation process. The OECD was a core protagonist in developing this way of thinking. The second main approach was the one pursued by Avramović which focused on the amount of foreign finance needed to achieve a given growth rate. The Development Assistance Committee (DAC) established their own expert group to examine the conceptual aspects of this process, which Husain, a member of Avramović's team had been invited to join. Given the wildly varying amounts indicated by various studies that cropped up, USAID also conducted a comprehensive study which used a variety of approaches, the results of which were set out in the seminal contribution by Chenery and Strout (1966).²⁸ These two, together with Jan Tinbergen, were eminent members of the DAC expert group examining financing gaps in development.

The second such link of IBRD economists was through conferences organised by the UN. The International Economic Association (IEA) was set up in 1950 under the United Nations specialised agency on Educational, Scientific and Cultural matters (UNESCO), and offered economists from different parts of the world to develop mutual understanding and discuss common research fronts. An IEA conference was held in 1961 on the subject of economic development in Latin America (Ellis and Wallich, 1961). Presided over by Howard Ellis, from the University of California Berkeley, the conference brought together academics, like Theodore Schultz from the University of Chicago, development economists like Celso Furtado and Albert Hirschman, and many affiliated to non-academic institutions. Gerald Alter was the only economist there from the International Bank. The paper he presented was a model to identify limitations on external debt service in the long run. This is a seminal paper which Avramović relied on for the basis of the work done in the 1964 book. Alter had developed this model from 1953 (Avramović, 1964) but was only published in 1961 as part of the conference volume (Ellis

²⁸The authors were, respectively, professor of economics at Harvard University, and acting chief of Policy Planning Division in USAID. This paper drew on the work by Robert Dorfman Chenery and Macewan (1966, p. 209), and was initially published in 1965 as an A.I.D Discussion paper (no. 7). Chenery would later join the World Bank and transform its department of economic research. As later recalled by Husain (1994, p. 14): "For the first time in the Bank's history a really outstanding economist, Hollis Chenery, was brought in as the Economic Advisor of the President. An entire economic apparatus developed around Chenery, and that gave very high visibility to economics."

and Wallich, 1961).

The third link was through the establishment of UNCTAD. By the 1960s frustrations in the international landscape from the immediate postwar period burst into the foreground. There was a push from developing countries within the United Nations to initiate a conference on trade and development. When country representatives from Asia, Africa and Latin America met in 1962, declaring the need to have a meeting within the framework of the UN to deal with matters of economic relations between developed and developing countries, the western countries were reluctant. They objected towards giving the UN oversight for matters of trade and development. Nonetheless, major countries agreed to the decision by the Economics and Social Council (ECOSOC) of United Nations to hold such a conference, held in 1964 and marked the beginning the United Nations Conference on Trade and Development (UNCTAD).²⁹ That matters of international trade and development were to be discussed across North and South, was in the words of the UN Secretary General of the time, U Thant, *the* most important decision since the United Nations began (UNCTAD, 1964b). The Secretary General for the Conference, Raul Prebisch, requested assistance from the IBRD to provide material towards the conference on the matter of debt and debt repayment capacity. With their work on debt issues, Avramović and his team were described by Kindleberger as the “leading students” on matters of debt repayment (Kindleberger, 1966, p. 155). Their work mediated between rich and poor countries to help push the agenda against the uncalculated adhocery of foreign aid. The IBRD Staff were also at the service of a request made by the DAC of the OECD in light of the first UNCTAD. The DAC had put in a request to the IBRD to develop a paper on the factors which determine a country’s debt-servicing capacity.³⁰ Therefore, Avramović’s 1964 book was motivated by these two requests by other international organisations. They used these requests as an opportunity to draw together their latest thinking done on the subject. Part of the 1964 book was circulated to the participants of the first UNCTAD conference in Geneva, as were background papers by the

²⁹See Resolution 1785 (XVII) United Nations Conference on Trade and Development, (Assembly, 1962).

³⁰Resolution on the Terms and Conditions of Aid, DAC (63) 10, April 4 1963, and the request by the OECD is mentioned in Guhlati (1985).

DAC expert group (UNCTAD, 1964b).

Prebisch hoped the conference would make progress on numerous issues, including agricultural issues, transfers of technology, restriction on access to western markets, volatility of commodity prices, declining terms of trade, and rising debt obligations. The discussions carried the urgency to minimise instabilities through international financial and monetary coordination. While the increase in capital flows in the post-war period, whether from multilaterals like the International Bank, bilaterally or privately, was welcomed, they brought with them all manner of complications that formed the details of the discussions. This led to a growing need to discuss the terms on which finance was provided and concrete definitions of the limits of external indebtedness.

In the conference committee that dealt with external finance and debt repayments Prebisch pressed participants to reach agreement on principles, despite the numerous sticking points around capital flows. In the report that Prebisch prepared, he described the problem: “Loans and investments for the developing countries have not always been made in reference to their need for resources and in the light of their ability to pay but have often been motivated chiefly by the immediate convenience of the countries exporting capital goods. ... while possibly justified in individual transactions, were not compatible with a cautious estimate of the country’s ability to pay” (UNCTAD, 1964b, p. 46). Prebisch applauded the work done by the IBRD economists, i.e., Avramović and his team, and quoted at length from their findings. He used their findings to highlight the growth of debt and debt servicing difficulties countries were finding themselves in, and used their findings to show that these originated in the onerous terms and conditions of the loans, characterised by short repayments and high interest charges. This evidenced that approvals for loans on a case by case basis were without a view to overall development and debt repayment prospects, leading countries to face difficulties as a whole. The objective was to rationalise the loan giving process. Of the many motions that were put forward by developing countries, developed countries voted down proposals for ceilings on interest rates, or means to subsidise interest payments; developed countries voted against linking repayment proceeds to the purchasing of developing country goods and against terminating tying aid and loans to specific

developed country purchases and services (UNCTAD, 1964b, developed in detail in Chapter 4). However, the main issue on debt that industrialised countries were able to commit to was to lend according to an evaluation of a borrower's repayment capacity. Among the numerous discrete motions put forward for vote, the delegates unanimously agreed on guidelines for international financial cooperation whereby industrialised countries committed to provide aid and loans that specifically "should take into account, in establishing repayment terms and interest rates, the over-all repayment capacity of the borrowing country" (UNCTAD, 1964b, p. 42). There was no real precision during the conference on what exactly this was or how it would be measured, but it is in this light that the work that Avramović did at the time should be appreciated.

The conference helped institutionalise certain commitments that the creditor countries were urged to adhere to. A core principle which came to be accepted was that loans be tailored with a view to the overall "debt servicing capacity" of the borrowing country. While there is no indication that this commitment brought changes to the loan giving process – and as addressed in Chapter 3, it did not – it did however bring to the fore a concerted effort at considering broader aspects of debt burdens in the development process. Country-wide factors that may constrain repayment were traditionally subsidiary to project evaluations, and considered lacking in rigour. The new work done by World Bank economists covered in detail in Chapter 3 helped elevate macro considerations, as their work was founded on a more scientific basis, aided by empirical work and an economic model. The debt repayment model was intended to help secure better outcomes, especially to encourage concessional lending for countries that could not afford commercial loans from the IBRD or other bilateral lenders. The quantitative device was a useful means to press for better reform. By finding its way into policy, this effort provided the institutional base from which subsequent efforts into establishing quantitative criteria for assessing the debt-servicing capacity of individual countries began, which will be the focus of subsequent chapters.

2.5 DISCUSSION AND CONCLUSION

The chapter offered several insights into the early factors that led to the establishment of DSA. The first relates to the role of economists in the World Bank. Existing historical treatment of the World Bank economists is terse. Mason and Asher (1973) undertook the World Bank's first history, and provide us with close to a thousand pages of the origins, nature and function of the institution on the occasion of its first twenty five years. It shifts between historical account and performance evaluation, at times with an unflattering bias in the Bank's favour. Nevertheless, despite an all encompassing coverage, the short historical treatment of the activities of its economists could suggest that economists were not in fact that important until the early 1970s when the prominent economist, Hollis Chenery, arrived to lead economic research. Likewise, Kapur et al. (1997) edited two volumes on the occasion of the Bank's fifty years of operation. As an anniversary edition there was an expected amount of stock-taking and celebratory praise. While a more significant treatment than the previous work is given to the role of the World Bank as an intellectual actor and, as part of this, an evaluation on the role of economists, the verdict is similar, in that in the early days the role of economists within the Bank was small (Kapur et al., 1997, p. 597). In line however with the work of Oliver (1995, 1971, 1975) and the contributions he made to the historical study of economists at the World Bank, this chapter shows that even in the early days the role of economists is mainly underappreciated as opposed to unimportant. World Bank economists working on debt repayment capacity pioneered new techniques to address a familiar set of problems. Economists pursued the issue of external debt even if in a form that had a different character to the force that research assumed after Chenery's arrival in the early 1970s.³¹ By looking into the details of a particular cluster of economists surrounding Avramović, we can see their relations with academia and the influence they had on other institutional and academic actors.

³¹ Robert Oliver, having worked in various capacities in and on the World Bank, in collaboration with Asher, of the Brookings Institute was involved in the two aforementioned official histories. He undertook many interviews with Bank employees that formed an important part of the World Bank's Oral History Project.

Second is the internal conflict in the World Bank surrounding different conceptions of loan repayment prospects rooted in different departments. With the IBRD's focus on evaluating projects, there was push-back to deepen the research on broader development and debt repayment issues by considering the debt repayment prospects of the country as a whole. In other words, there was an internal conflict within the Bank regarding the micro (project) and macro (country) levels. This chapter shows that the analytical effort to understand debt-repayment problems was intertwined with the process of the institution organising itself. The efforts to calculate debt repayment prospects were intimately tied into practical concerns of the institution. As loans would be financed, not by drawing on the Bank's capital, but by borrowing in the capital markets, the relevance of its own creditworthiness would not be separate from how to make decisions about who to lend to. Debt repayment prospects were linked to the Bank developing its own loan approval process and the role of economic research and economists within that. Different views co-existed. The predominant view was an engineering concept, relying on assessments of financial viability of specific projects. The other view, fostered by economists in the research department focused on country-wide determinants of repayments, with the debt-service ratio the most commonly used indicator. While the Bank's loans were being rolled out, the Staff across departments were despondent about the state of knowledge available to ascertain the prospects of repayment, stating this was imprecise, if educated guesswork. The problem was understood as being in need of better judgement rather than prescriptive formulas. Neither option was problem free. Despite being considered more rigorous, project evaluation stumbled across how to quantify developmental contributions of projects. Country reports, on the other hand, relied on the debt-service ratio widely considered insufficiently useful.

Thirdly and institutionally, the work by World Bank economists to develop more analytical foundations of country-wide, debt repayment prospects took place once the internal power struggle of economists had been lost. Despite the fact that economists held a weak internal position in the early days of the World Bank, their work resonated externally with the international policy discussion in the United Nations. Their work was part of a cross-institutional dialogue taking place about the rules of international economic and financial system, and the relations

between global north and south. The IBRD economists built up a recognisable level of expertise that other institutions drew upon, and their work featured in policy negotiations at the UN. Their work was used as the input into the negotiations in the first UNCTAD conference in 1964 where creditor countries committed to provide loans, not just on the basis of project evaluations, but on the basis of an overall sense of a country's repayment capacity. While such commitments did not ensure a solid operationalisation of their ideas, this was crucial in bringing debt repayment capacity into policy debates and solidifying the need for loan provision based on an economic calculus about repayment. The analytical content of this work is the subject of Chapter 3.

Fourthly, this chapter explored the motivations behind which the economics of debt repayment prospects was developed. Cognisant that the core decision with respect to making a loan was a decision about the chances the loan would be repaid, and that much of the international loans had been distributed without such regard, their work helped to provide sounder foundations. In this instance, the analytical foundations were in service of a political effort to use economic expertise in order to protect against uncalculated adhocery of foreign aid and to make a case for protective measures against rising prospects of repayment difficulties. The Chapter showed that given that lending terms were governed by a host of factors, the IBRD required greater technical input for political judgements over who to lend to than was available in the immediate postwar period. This necessitated a greater need for expert judgement and called on particular forms of expertise to aide decision making.

3

World Bank economists in the wider context of the discipline (1950s-1960s)

HOW CAN WE EVALUATE the theoretical contributions made by economists at the World Bank working on debt repayment capacity? This chapter examines their work in detail and contextualises it within the broader discipline. This comparison draws out the different concerns around debt as developed within academic institutions and as compared to the work of institutionally-based economists. Section 3.1 examines the three main contributions made by Avramović and his team, covering empirical work undertaken, the usefulness of short-run, debt service indica-

tors in assessing capacity to repay, and the long-run framework that focused on ability to pay in the context of achieving specific development targets. Their work, rooted in a Harrod-Domar growth model, showed that debt sustainability, as understood today, would be violated for long periods until the development process of higher growth rate and higher investment capacity was completed. More broadly, their work elevated the use of a macro-understanding of debt repayment and showed how these models could be useful in policy-making.¹

Section 3.2 shows how Avramović's work did not develop within a theoretical vacuum but was deeply embedded in the ideas of the time surrounding debt and development. Section 3.2.1 reviews the discussion at the time regarding the role of public debt in the economy, showing that a positive role for debt and deficits was commonplace in analyses of short-run stabilisation, long-run growth and development economics during the 1950s and 1960s. This was however a period of transformation within the economics discipline, and both growth theory and public finance would develop and end up casting the issues of debts and deficits in entirely new light. In section 3.2.2 we examine the rise of two dynamic and optimising analytical structures that would eventually displace the existing analytical bedrock: optimal growth theory and overlapping generations models that came to the fore contemporaneously with the work of Avramović. While not prevalent in the debate on international debt at the time, this form of reasoning would come to the fore in the 1970s and 1980s, and is covered in Chapter 5. This intellectual base had important consequences on the transformation of the economics of 'debt sustainability'. This form of reasoning was to inform the eventual development of the Debt Sustainability Analysis template in Chapter 6.

3.1 THEORETICAL CONTRIBUTIONS OF AVRAMOVIĆ AND HIS TEAM'S WORK

Avramović and his team of collaborators produced three books: Avramović and Gulhati (1958); Avramović (1960, 1964), and their contribution centred on four main issues. The first was the development of internationally comparable data on international capital flows, external debt

¹It is useful to remember the distinction mentioned in Chapter 1 about the history of economics on debt repayment capacity - differently conceived over time, and the history of the template of DSA.

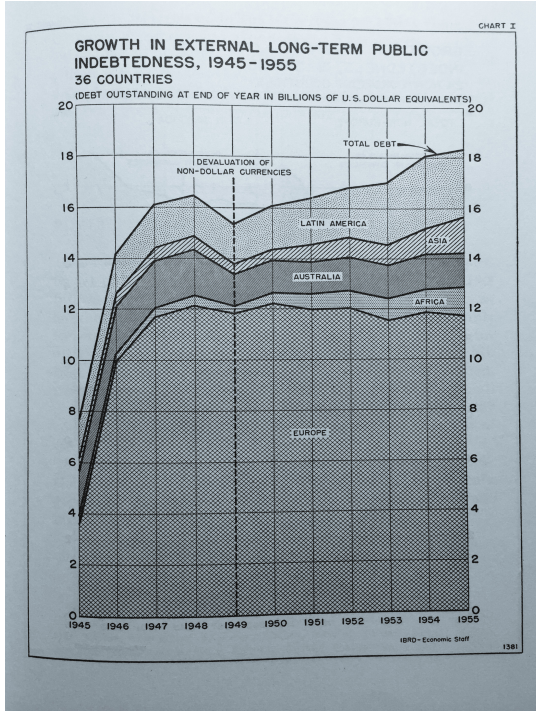
and external debt service of developing countries. The second was an evaluation of short-run factors that affect countries ability to repay debts. They concluded that while useful and widely popular, short-run indicators are incomplete and partial. The third was to incorporate long-run growth and the development process into an assessment of debt repayment prospects. This was an analysis into the measurement of a country's ability as opposed to willingness to pay, which they rendered impossible to capture. Fourth, their work elevated the need for country-wide assessments of repayment prospects to complement more effectively the pre-eminence of project-based evaluations.

The first work, Avramović and Gulhati (1958), was a stock taking exercise for the tenth anniversary of the World Bank. The study, according to the authors, was carried out from "the point of view of a potential creditor" who may want to investigate the potential for extending further loans. The book covers fifty-two countries over the period 1946-1955. It documents the general trends of international capital flows in the postwar period, which consisted of public loans and grants to Western Europe, to Latin America, Asia and Africa, and private capital exports, which consisted mainly of foreign direct investment. The methodological challenges of recording data of capital flows, both with respect to concept and coverage were great. When a similar study had been assigned by UN ECOSOC to the IMF in 1950 with a focus on the repayment capacity of developing countries in servicing foreign investment, the study noted the great difficulties in creating comparable indicators for developing countries (Finch, 1951) and mentioned that historical data were practically non-existent. In order to track the growing phenomenon of international capital flows, Avramović and Gulhati conducted painstaking work in producing comparable data, reinforced the efforts of the World Bank's Debtors Reporting System and constituted the first step in analysing the trends in debtors' repayments.

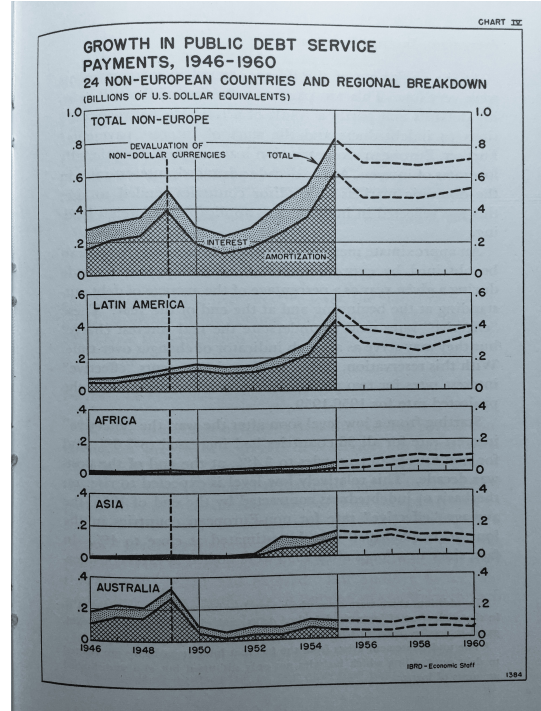
They identified a series of key trends: in earlier periods, such as during the 1920s, private capital exports were largely lent to governments via the capital market, but after World War II, private direct investment was more significant than private lending (p. 13). The primary source of government borrowing however was public agencies, and towards the end of the first decade after the war, from the International Bank (p. 14), which itself relied heavily on borrowing in

Figure 3.1: Growth in External Long-Term Public Indebtedness and Debt Service, 1945-1955

((a)) External public debt, selected countries/regions



((b)) External public debt service, selected countries/regions



Source: Avramović and Gulhati (1958).

capital markets. As shown in Figure 3.1, the aggregate indebtedness of non-European countries (left panel) increased after 1949 and the public debt service payments (right panel) rose steeply after 1950 (Avramović and Gulhati, 1958, p. 29).

For a large group of countries, debt service grew faster than the growth in loans as a result of the resumption of payments on defaulted pre-war bonds (Austria, Chile, Costa Rica, Colombia, Haiti, Thailand, and Peru). Furthermore, a rise in the rate of interest in the post war period was passed onto borrowers, and there was a tendency to borrow on shorter maturities, increasing the rate of repayments (Avramović and Gulhati, 1958, 31). Despite occasional servicing difficulties in the postwar period, in general, “the decade was largely free of defaults on long-term loans” (Avramović and Gulhati, 1958, 30).

Chapter V, ‘Savings and Transfer Aspects of Debt Service’, was the core analytical con-

tribution. The authors aimed to develop initial criteria on how to judge a country's debt service capacity while acknowledging the host of factors which cannot be given quantitative value, such as domestic policy. "While numerous non-economic elements may seriously influence the willingness to service external debt from time to time, the capacity to do so ultimately rests on two economic factors" (Avramović and Gulhati, 1958, p. 57). The two factors that determine ones capacity to service debts were the ability to "do without an amount of domestic income and savings equivalent to the debt service" and the ability of a debtor "to be in a position to convert such segregated savings into the required foreign exchange" (Avramović and Gulhati, 1958, p. 57). Phrased this way, the concept of 'debt-servicing capacity' arises out of the factors in debt repayment that had so preoccupied Keynes, Ohlin, and other participants of the debate on war reparations regarding the ability to save some portion of income and to convert the saving into required foreign exchange.² As that debate had laid things out, the two issues to consider were the budgetary problem of raising the necessary sums domestically, and the transfer problem "of converting the German money so received into foreign currency" (Keynes, 1929, p. 161).

The IBRD authors emphasised the affinity, in theory and practice as they said, of long-term growth in income and internal savings to the ability to increase capacity to transfer the necessary amount abroad. The authors stated that the growth in income and saving were interdependent, and reliant on the growth in foreign trade to earn foreign exchange and finance the necessary imports needed. The argument was that "growth in income and savings and growth in transfer capacity are interdependent in the long run and represent only different aspects of the process of economic growth", nevertheless, in the short run, there may be "discrepancies between growth in income and growth in savings, and between capacity to save and capacity to

²The Versailles Treaty in 1919 imposed reparations on Germany that led Germany to default and France to intervene in the Ruhr in 1923 to force Germany to resume repayments. To resolve the issue, the victors appointed Charles Dawes, an American banker to bring forth a solution, which involved raising a loan for Germany to repay the previous obligations. This failed to settle matters as Germany ran into repayment difficulties once again, leading to the Young Plan, involving yet another loan, this time arranged under the auspices of the Bank for International Settlements, which soon led to yet another default. With the beginning of the Great Depression, President Hoover agreed to a moratorium and eventual suspension of reparations in 1933. Starting in 1929, The *Economic Journal* was filled with discussion on whether Germany would be able to fulfil the conditions stipulated in the Plans.

transfer savings abroad” (Avramović and Gulhati, 1958, p. 58). To examine how debt servicing capacity changed over time, one needed to look at the growth of income and savings as well as developments in foreign trade, the focus of their 1964 book.

The authors were not concerned with whether increased capital flows contributed to the recipients’ growth (Avramović and Gulhati, 1958, p. xiii), but rather, whether increased flows affected the debt servicing capacity of borrowing countries. This was done by examining the growth of indebtedness and debt service across regions, and comparing these to different measures of capacity to pay, such as receipts of exports and gross national product. The aim of the book was to ascertain whether the increase in debt service painstakingly documented in previous chapters corresponded to an increase in the country’s capacity to service its debts. The predominant way this was measured was by expressing service payments as a portion of various variables: national income, savings, governmental revenue and foreign exchange receipts. By examining the trends of a variety of debt-service ratios, they concluded that the most relevant of all these analytically, was the ratio of debt service to foreign exchange receipts. They found it particularly useful in the context of cyclical or other declines in external earnings. “A higher ratio of fixed service commitments to external earnings implies a considerable short-run rigidity in the debtor country’s balance of payments; and the post-war increase in the ratio suggests that this element of rigidity has become more significant. Thus, the ratio draws attention to the phenomena of rigidity and indicates the pressure to which debtor countries may be exposed in periods of downward movements in their foreign exchange earnings” (Avramović and Gulhati, 1958, p. 103).³

For example, in the Great Depression, the average debt-service ratio for many of the Latin American countries that defaulted during this period went from 10% in 1928-1929 to 35% in 1932-1933 (Avramović and Gulhati, 1958, p. 103). Export values collapsed, and in Chile for instance, debt service obligations in absolute terms were greater than the total value of exports all together (Avramović, 1964, p. 46). The authors also looked at the service payments from the

³Previous study on a related issue investigated whether import compression would be able to address the sharp contraction of external receipts. The case-by-case approach, comes down to “Just how far the economy can adjust to an abrupt decline in imports is a matter for special study in each case” (Finch, 1951, p. 72)

perspective of public revenue. “In order that public debt service be paid, it is not only necessary that a part of national income be segregated, but also that the government make a fiscal effort to tap real resources. The incidence of public debt service falls on the current revenue receipts of the government” (Avramović, 1964, p. 84). There is little comparable data in this regard across countries. The book noted however that adjustment of consumption and investment may be required to maintain debt service.

The possible debt problems identified by the authors included a global recession, country-specific balance of payments problems that may lead to a drain of foreign exchange, sudden reductions in capital flows, and fluctuations in export receipts (Avramović, 1964, p. 143). The growth of this rigid component of the balance of payments coupled with a reduction in foreign exchange could be dealt with by relying on reserves, through the curtailment of so-called compressible imports, or by attracting equivalent funding like the IMF’s resources to withstand fluctuations without collapse or default. They concluded however that there was too much uncertainty to be able to say much more on how a country may behave and what compensatory finance would be available in a period of global stress.

This brought them back to the insight that formal economic knowledge was limited. “The capacity (and willingness) to withstand external fluctuations, without an economic collapse and without a default on debt obligations, cannot be analysed in terms of precise statistical magnitudes. Such an analysis inevitably involves qualitative appraisals of politics, institutions and psychological attitudes” (Avramović, 1964, p. 145). They therefore recognise the partial contribution that their analytical tools can offer in analysing debt service problems. The problem of capacity to service debt was posed as being between something one chooses, hence a willingness, and one’s ability. This is important because the authors opine that willingness is not something that can be accurately addressed with economic tools whereas ability is seen as an objective issue which some progress can be made with respect to its measurement. The economists’ approach to debt repayment difficulties is reversed in the 1980s when models of willingness of debt repayment take the centre-stage.

Although not influential within the World Bank, the work produced by Avramović and

his colleagues was not unnoticed by the academic literature. Several book reviews praised it for its detailed presentation of disaggregated country by country level data and a presentation of differentiated patterns of debt accumulation (Benham, 1959; Colm, 1959; Horniker, 1959; Speigel, 1959), while raising other concerns. Gerhard Colm, a Keynesian fiscal expert, advocate of macroeconomic benefits of fiscal spending and chief economist in the US National Planning Association, raised a number of unanswered questions.⁴ He questioned the conclusions regarding the ability to repay the Bank, in particular the difficulties in making transfers that may force countries to lower their economic goals leading to “undesirable economic, social, and political consequences” (Colm, 1959). He pressed for further clarification on the authors’ position on this issue, noting that “as a staff member of the International Bank probably could not explore them. Thus, the study is limited to assembling and analysing statistical estimates in an excellent manner, but other questions need to be discussed before accepting the general conclusion that these countries must face the choice of lowering their economic goals or defaulting on their obligations” (Colm, 1959). Horniker’s also pierced the book’s positive appraisal by pointing out that countries had already begun to face difficulties in debt repayment: Argentina’s first rescheduling with the Paris Club in 1956 and Turkey’s debt moratorium in 1958. With the global recession underway, there were indications that countries were in a worse state than what the Bank appraised (Horniker, 1959). Behrman (1960, p.193) in a similar tone noted that “the statistical data say more than is stated in the text”, and despite the wealth of data and information, important conclusions “are not drawn by the author, probably for “political” reasons”.

The second work – Avramović (1960) – was initially prepared for internal use. It follows from the previous book in trying to evaluate the debt service burden and whether debtors could take on more servicing obligations. The main empirical developments from the previous book were that grant assistance, the main component of economic aid, was overshadowed by the growth in loans, which doubled from 1955 to 1959 (Avramović, 1960, p. 7). During the

⁴Gerhard Colm, arrived in the US as an exile from Germany and helped set up the University in Exile of the New School for Social Research, and between 1946 to 1952 was member of the Council of Economic Advisors (CEA). When he reviewed Avramović’s book in 1959 he had already been expunged from the Council of Economic Advisors and was chief economist in the US National Planning Association.

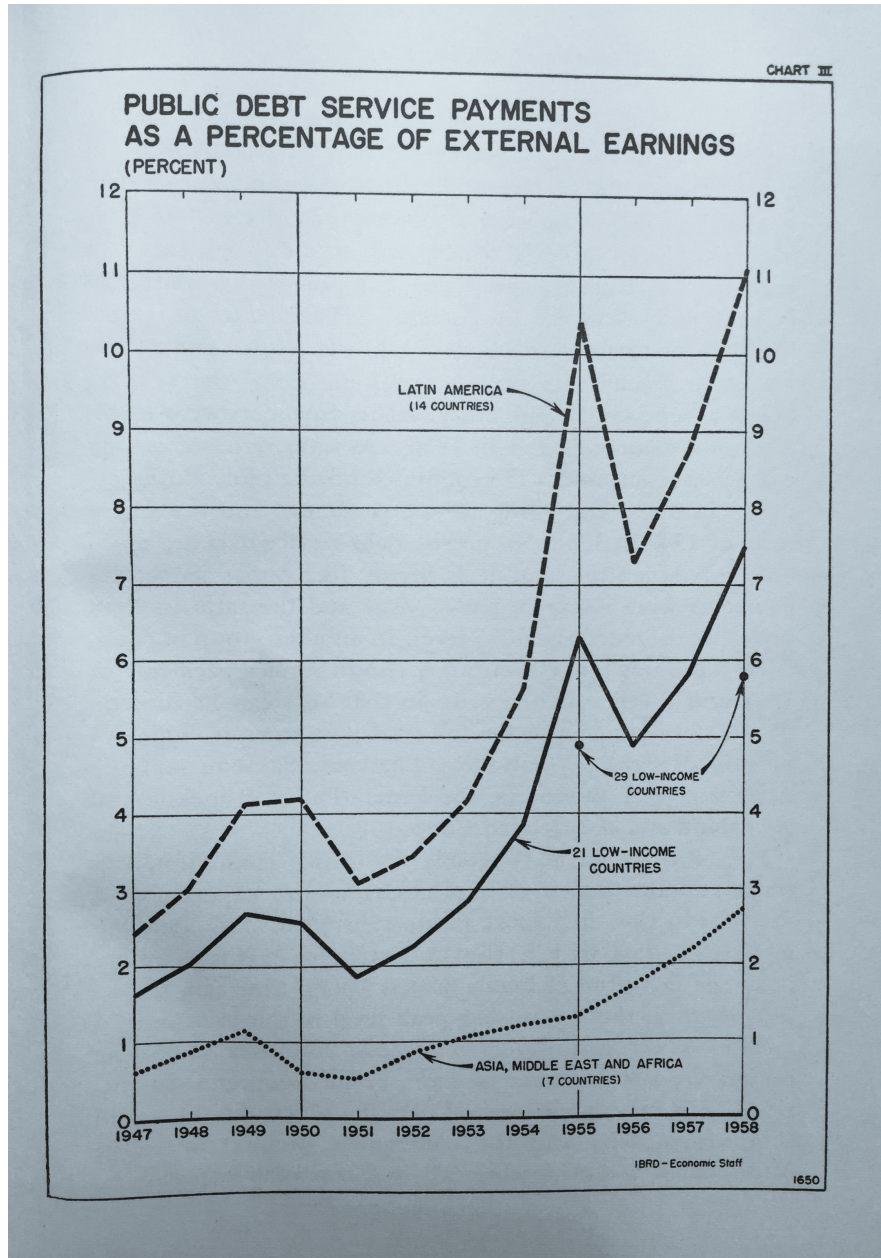
1950s the World Bank's operations grew sharply in non-European countries, associated with an increase in its ability to borrow greater sums on international markets, increasing the amount of funds directed to development. The book noted how US policy shifted, placing less emphasis on grants and more on loans by increasing the lending capacity of the Export-Import Bank, through the International Cooperation Administration, and the establishment of the Development Loan Fund. Funding from Western Europe to developing countries was channelled through the World Bank, particularly through widespread purchasing of World Bank bonds.

The objective of the second book was to update the favourable conclusions reached in the first book by incorporating the effects of the slow-down in growth of world income by the end of the 1950s and how this would affect the ability of countries to service fixed outflows from shrinking inflows of foreign exchange. This change in global conditions makes the authors sensitive to the relevance of cyclical swings in capital movements. The postwar increase of official funds shielded countries from the swings that private flows faced, enabling developing countries to maintain a greater import capacity than what the reduction in export earnings would otherwise signal (p. xiii).⁵ With the memory of the collapse of international capital flows in the 1930s, the authors pointed out the importance of compensatory finance from public sources. The availability of such funds distinguished the fifteen post-war years from earlier periods. The authors argued that the context of the sudden global recession, brought the transfer aspect of debt servicing to the fore, overshadowing all other considerations relevant for long term analysis such as growth of savings and income. Nevertheless, a reviewer of the book commented that the “treatment of the transfer problem is regrettably brief, which cannot be easily reconciled with the admission that during the 2-3 years under examination “the transfer aspect of debt service overshadows all other considerations”” (Holbik, 1961, p. 125). Despite the evidence presented, of dramatically increasing debt-service ratios (Figure 3.2), there is a positive tone, that not all countries face deteriorating service burdens.

Towards the end of the book, the authors noted the structural constraints that develop-

⁵This was in line with Harry Dexter White's original concern in setting up the IBRD: long-term private capital flows reinforce business fluctuations and cannot be relied upon for the steady flow of capital needed for reconstruction and development (Oliver, 1971).

Figure 3.2: Public Debt-Service Payments as a percentage of External Payments



Source: Avramović (1960).

ing countries faced. They noted for instance that export expansion needed lower protectionism from industrialised countries if it were to keep pace with foreign exchange needs of debt servicing. Having said this however, the authors reverted to the all-too-easy trope that one's problems cannot be solved by outsiders, and the solution depends on domestic efforts, policies and institutions conducive to the acceleration of capital accumulation Avramović (1960, p. 59). They concluded that possibilities for more lending are far from exhausted, matching the evident desire by capital exporting countries to "accelerate substantially the flow of capital to low-income countries" Avramović (1960, p. 59), even if this desire was tempered by the provision of concessional loans through the Development Loan Fund in 1957 and IDA in 1960.⁶

The third work, Avramović (1964), is a collected volume that contains contributions from the whole team described in Chapter 2. It covers short term aspects of debt servicing capacity, a thorough-going evaluation of the use of a debt-service ratio, followed by an analytical model on the long-term aspects of debt servicing capacity. The book confronts essentially the same issues as the first: international capital flows had increased greatly since the war in the form of grants, soft and hard loans leading to a rise in the debt service obligations over time. The analytical problem the authors grappled with was the variety of tools available to assess repayment capacity, given the meaninglessness of a growing absolute size of debt service obligations. "To the best of our knowledge, no one has yet succeeded in developing a set of rules which will determine, in a generally acceptable manner, the permissible limit of indebtedness" Avramović (1964, p. 5), not for individuals, nor for firms. For governments the problem is "controversial" Avramović (1964, p. 5), and for external borrowing even more so.

Their epistemological queries are transparent: what possible tools are available, and what are the respective roles of quantitative analysis and judgement in the process of measuring debt repayment prospects. They are confident that economic thinking on the matter is not conclusive and claim that "Many economists would say that the only thing which matters is the relation-

⁶The Development Loan Fund had authority to accept repayment in local currency to avoid dollar debt burdens, and was instrumental in shifting foreign from an aid to a loan basis and increasing incentives for private sector participation. In 1961 it merged with the US Agency for International Development (Fowler, 1962).

ship of total debt service to total product and that the absolute size of either the debt or of the debt service is irrelevant” Avramović (1964, p. 5). Nevertheless, they recognise that the “operational significance [of that statement] is limited”. In fact, they argued that common rules of thumb such as short term indicators of liquidity issues were fundamentally flawed as indicators of repayment capacity for reasons developed below. They examined the various methods to hand for judging the gravity of payment problems that debtors may encounter if external receipts suddenly fall but the repayment of fixed contractual obligations remain Avramović (1964, p. 13).⁷ The authors listed a number of variables grouped by type: fluctuating, offsetting and rigid, which affect debt service capacity in short and medium term, and a number of which are affected by domestic policy of the borrower.⁸ They recognised that a key element of balance of payments vulnerability is the volatility of export earnings that developing countries face.

Diminutions of export earnings could be addressed through foreign exchange or gold reserves, with another rule of thumb indicator of their adequacy set in terms of imports. Having examined the list of relevant variables, the authors moved onto to their full assessment of the merit and drawbacks of the debt-service ratio, indicated by the proportion of foreign exchange earnings on current account that is taken up by public debt service (both interest and amortisation). Intuitively, the higher the ratio, the greater the pressure on the debtor’s economy. Three reasons make for its broad appeal: first, it is easily understandable, debt service against export earnings; second, it is solidly compiled as there is no need for obscure national accounts, with all the guesswork involved in their compilation;⁹ third, even those who are aware of its weaknesses have failed to propound an alternative. Hence, “lending institutions have had to resort to the use of partial indicators – and the debt-service ratio has been a very convenient one” Avramović

⁷There is a close parallel discussion, which the authors acknowledge between this conversation and the one about balance of payments vulnerability and adequacy of reserves more specifically. The authors however focus on the debt service liability component of balance of payment issues.

⁸They included fluctuating variables: exports, capital flows emergency and inflation induced imports; offsetting variables: reserves, compensatory finance, compressible imports; and rigid Variables: minimum tolerable imports, debt service (interest and amortisation) Avramović (1964, p. 13).

⁹Efforts to internationally compare and create national accounts were only solidified in the post war period. International data such as trade and external statistics were of the first to be compiled (Tooze, 2001).

(1964, p. 38). What then, were the problems with its use? The authors stated clearly that when the ratio is high, as it was for several countries at the time of writing, the potential liquidity problems are not hard to identify. But this was not useful for inferring whether upcoming difficulties were likely. "...From the analytical and the operational points of view, more interesting is the question whether a debt-service ratio...may in some way point to the emergence of debt servicing difficulties at some future date; and if such "critical" level of the ratio exists, what is it? Is it 5%, 10% 15% or 20%? And why?" Avramović (1964, p. 39). Comparing the growth of debt repayments with the capacity to service them was called a search for 'permissible limits'. Wrestling with the notion of thresholds, and whether there are sensible limits, or excessive ratios, led to the development of a series of empirical models in the 1970s explored in Chapter 4.

Drawing generalised conclusions was all but impossible, given that conditions differed from country to country and from time to time. Attempts at identifying critical ratios have generally failed.¹⁰ They quoted Mikesell (1962, p. 382) who stated that "History provides little guide for determining the maximum [debt service] ratio which countries can sustain without default or without interference with the transfer of earnings" followed by examples of countries which at one time or another defaulted on obligations at very different levels of debt-service ratio – some can service without a problem while others find themselves in difficulty. What Mikesell called the 'degree of tolerance' was arrived at in the 1930s at the critical ratio at 25 – 30%. The futility of finding a critical ratio boiled down to the exclusion of all the relevant factors that lead to servicing problems, when the ratio combined just two. Given the various practical problems and limitations, the authors wondered why it had been so long-lived. "The use of this concept has been criticised, even by those who have been using it, as an inadequate measure of debt servicing burden. And yet, the ratio has shown strange powers of survival". It was frequently used, and the reason for this, "notwithstanding the limitations set forth" was that it was "a versatile instrument" (Avramović, 1964, p. 38).

Another reason comes down their observation that debt servicing involves both a willing-

¹⁰For instance, the IMF study from the beginning of the 1950s claimed that debt-service ratios were not designed to ask whether debt will be growth enhancing but that nevertheless "no very useful ceiling can be set beyond which the ratio becomes unsafe" (Finch, 1951, p. 70 - 72).

ness to keep paying as well as an ability to do so. “Appraisals of willingness” they proffer, “are a matter of judgement which can be discussed but for which no conclusive proof can be demonstrated”. However, even if it is incomplete, the debt-service ratio is a shorthand indication of the willingness to pay. “The debt service is a continuous charge against this scarce resource [foreign exchange]. It is an indicator, if again an incomplete one, of the strength of the temptation to default. As an indicator of temptation, the debt-service ratio does not explicitly take into account the disadvantages of default...Implicitly, however,...the debt-service ratio is a convenient yardstick of the “sacrifice” or “benefit foregone” of maintaining service” (Avramović, 1964, p. 42). As the debt-service ratio rises, so too does the gain from default. However, the ratio is a cash-flow concept not one of productivity or profitability, and although it may indicate potential for cash squeezes, “it is certainly not an indicator of the ability of the economy to sustain over the long run the debt servicing burden” (Avramović, 1964, p. 43). This effectively rendered the short-run ratios useless in indicating anything about long-run repayment prospects. Concluding that “the significance of the debt-service ratio for long-run analysis of debt servicing capacity is virtually nil” (Avramović, 1964, p. 42), the authors attempted to establish the fundamentals of one’s objective capacity to repay, willingness aside.

It is from the attack on short-term ratios in assessing long-run ability to repay that Avramović and his team defined their core contribution. What really mattered in their view was whether debts were used for productive purposes, invested to grow output and savings, and enhance the economy’s dynamism overall.¹¹ Chapter V ‘The Long-Term Aspect of Debt servicing Capacity’, aimed to “define the conditions under which the economic growth process, which is partly financed by foreign capital borrowed on conventional fixed terms, can succeed” and hence allow for servicing to continue unabated (Avramović, 1964, p. 11).¹² The book developed a theoretical model that stylistically described how a country’s long-run capacity may develop as it moved through stages of being a borrower to finally an exporter of capital. In this sense, it is a

¹¹ A broad review of this approach to financing needs of developing countries can be found in Hentschel (1988).

¹² The authors phrase their objective as trying to replicate whether costs and benefits can be ascertained from the standpoint of the whole economy.

model of structural transformation of an economy, aided by international debt. The core of the growth-cum-debt model is about answering how many years and how much external finance is needed to build up a sufficient savings pool to fund investment and pay down external debt, while achieving a target growth rate for the economy as a whole. Akin to the OECD gap models, its basic premise was that growth in developing countries was encumbered by savings and foreign exchange gaps. However, as we shall see below, it was firmly embedded within the tradition of post war Keynesian growth model associated with the Harrod-Domar framework. Figuring out the limitation of developing countries' absorptive capacity – i.e. the amount of capital inflow that can be used productively, was one approach to assess requirements for external finance. Contrary to models that tried to calculate the size of the gap however such as those reviewed in OECD (1967), the other approach, was to develop a model to ask the question in terms of the amount of external financing needed to meet a specific objective such as sustaining a target growth rate.¹³ Foreign capital is needed to supplement domestic resources, such as savings, to increase capital formation and other types of expenditures key to development, such as spending on education. There is a gap between desirable investment rates and what is available locally to finance it. Foreign capital, however, enables a country to achieve higher rates of investment hence higher rate of income growth.

The model of the economy consists of a small number of equations; it is static, in the sense that none of the parameters change over time. Key components are the accelerator principle for the investment function and a Keynesian variation of the savings function, together with fixed coefficients in production. These elements form the core of the Harrod-Domar growth model, which was broadly used and operationalised in the post war period. With Avramovitz model of debt repayment capacity reliant on these features, his model – and hence the conceptual history of economics of debt repay-ability, was informed and shaped by the framework of Harrod-Domar. One of the determinants of capital inflow is the rate of return – i.e. productivity – of capital, which in macroeconomic terms, is understood as the amount of output generated per amount invested. In turn, this depends on skills, how production is organised and ca-

¹³Further details on the distinction between the approaches can be found in Kregel (2007).

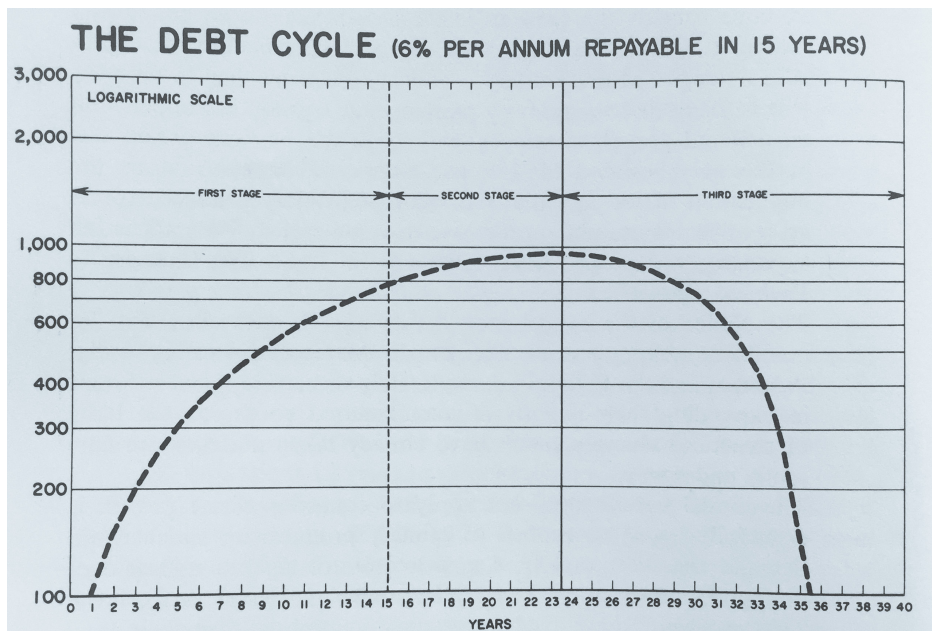
capacity utilisation. To make sense of the efficiency with which resources are used, they make use of the incremental capital output ratio (ICOR), choosing an ICOR of 3:1, indicating that for every unit invested, there is a 0.33 increase of gross income.¹⁴ The ICOR is thought to be one of the fundamental determinants of the rate of economic growth and hence the availability of resources to repay foreign capital. Another key determinant is savings. The savings equation comprises of both an average savings ratio as well as a marginal savings ratio applied to the increment of new output produced in each period. Both, when higher, imply that more saved resources will go into capital accumulation. With the marginal set above the average rate of savings, for every increment in income one saves an extra share and hence the savings function grows faster than investment.¹⁵

The model described the evolution of a country's debt as a function of fixed parameters, such as the growth rate of output, the marginal savings ratio, the ICOR, and initial values, such as output and average savings at time zero. The income growth target followed the policy paradigm of the period, set at 5% which was the growth target in the first development decade agreed by the UN General Assembly. The model set the initial domestic savings rate at 10% of GDP, based on the finding that most of the countries in their sample have such, if not a greater savings rate; marginal savings rate for incremental changes to GDP was set at 20% and remained constant. They begin by assuming zero foreign capital and finally they assume an average interest rate of 6% per annum with an average maturity of 15 years for borrowing. Their numerical example finds that the debt cycle under these assumptions lasts for 36 years, with indebtedness rising for about 25 years. The 36-year cycle was described as "a bridge between poverty and self-sustained growth" (Avramović, 1964, p. 61). As commented on by Rosenstein-Rodan, the idea was not in fact to pay down the debt to zero, but rather, to assess capacity to pay, not "by a static projection of the present situation" but by taking into account "the increase in income and the increase in the rate of savings which will result from the adoption of a soundly conceived devel-

¹⁴Statistical work had yet to determine how ICOR behaves at different stages of development.

¹⁵The logic of this was developed in Rosenstein-Rodan (1961a, p. 108): "A marginal rate which is much higher than the average rate of savings is the main lever of a development program and should be the principal condition of aid to underdeveloped countries."

Figure 3.3: The Debt Cycle Model



Source: Avramović (1964).

opment program” (Rosenstein-Rodan, 1961a, p. 109).

As Figure 3.3 shows, the debt cycle goes through distinct stages. In the first stage, initial output and savings are low, and hence a country needs to borrow to finance investment and meet a target growth rate. In this stage, debt needs to be financed as it grows through a phase that is antithetical to current conceptions of debt sustainability. As capital inflows continue, debt due is paid from new borrowing, external indebtedness increases rapidly, and “the familiar law of compound interest operates in all its force” (Avramović, 1964, p. 54). The second stage of development occurs when domestic savings are sufficiently large to meet additional interest and amortisation payments on accumulated debt. External indebtedness increases, but at a diminishing rate, and more of the interest cost is paid from domestic savings. The apogee of the debt cycle is reached at the end of stage two where borrowing is taken only for rolling over, as debt levels peak and cease to grow. At the third stage, domestic savings cover domestic investment and are large enough to pay interest costs on accumulated debts, which with time, grow to cover all interest payments. At this point, amortisation can commence, debt can be paid down, foreign

capital is repaid, and economic development is maintained (Avramović, 1964, p. 55).¹⁶ In their model it takes 36 years to finance investment from savings and pay down the debt.

This analytical frame cast further doubt on the disconcerting rise of a debt-service ratio which could be less alarming from a long-run perspective. One of the results is that the debt-service ratio may need to rise dangerously high during the cycle. Given the previous thoroughgoing exposition of the drawbacks of using the conventional rule of thumb ratios, the book engaged with the difficulty of finding a short-run critical threshold in light of this long run analysis. The model's debt-service ratio peaks at over 50% in the middle of the debt cycle. However, their model shows that as structural change of the economy takes place, the debt-service ratio will eventually decline. They argue that the rate of growth of production is the only thing that matters, as the "rise and fall of the debt-service ratio are peripheral phenomena to the process of growth and capital accumulation" (Avramović, 1964, p. 67). It is not that the debt-service ratio is useless, but rather that it serves as nothing more than a convenient yardstick for "short term creditworthiness judgements [i.e] of the risk that default may be provoked by liquidity crisis" (Avramović, 1964, p. 67) emphasising the cash-flow squeeze that a country may face. In an interview, Avramović stated that if the relationship between growth and debt went well, "then it did not matter what the debt-service ratio was. What is important is that economic growth accompanied the growth in the debt service" (Avramović, 1996, p. 7). The resulting volume (1964) was in his later eyes described as a "very serious theoretical work" which "developed practical criteria, how to judge the level of indebtedness and apply in our economic model the growth of income and the growth in debt service, the relationship between the two and the problem of compounding interest"; the model was applied to three cases (Avramović, 1996, p. 8).

The authors were however clearly aware of the stylised nature of their model, and claimed "nothing is inevitable or automatic about this progression", as "many things can go wrong", and recognised that the exposition was a great simplification of reality (Avramović, 1964, p. 55-56). While they recognised that the model was simple, although extendable, they stuck to the

¹⁶The authors recognised that they ignored the balance of payments constraint and just assumed exports and imports will adjust to the postulated behaviour of saving and investment (Avramović, 1964, p. 62).

value of their contribution: “we have felt that even a very simple numerical illustration of the growth-cum-debt sequence may throw light on some of the critical problems facing borrowers and the lenders at the present conjecture of economic history” (Avramović, 1964, p. 57). Leaving the first stage however was one of the key problems. High poverty or deteriorating terms of trade (transfer problem) would prevent high marginal savings rate (Avramović, 1964, p. 55). The protectionist measures of the industrialised countries slowed the growth of exports from developing countries especially in light manufacturing. Debt dynamics were described “viciously unmanageable” by definition if “the rate of return on investment is lower than the rate of interest on borrowed capital and if marginal savings rate is low” (Avramović, 1964, p. 55). The model breaks down if return on investment is below cost of borrowing, as investment cannot be financed with the lent funds or domestic savings never grow beyond domestic investment (Avramović, 1964, p. 64). This provided the grounds for an analysis of what was called ‘long haul’ cases – effectively low-income country analysis. Their model showed that where savings were lower, capital inflow may perennially be needed to continue to service outstanding debt, which always increased from capitalised interest. This presented a clear case for easier loan conditions, showing that the terms of the loans matter, and if and when they do, such as in low-income cases, they would appear as increased vulnerabilities in servicing issues.

The books received mixed academic reviews. Mikesell, a participant in the Bretton Woods negotiations, praised the main conclusion of the team’s work: that the standard indicator of creditworthiness, the debt-service ratio, “has severe limitations as an indicator of debt service capacity over the short-run and virtually no significance for long-run analysis of debt servicing capacity” (Mikesell, 1965, p. 556). Furthermore, they were praised not for formulating hard rules or “comprehensive theory”, but rather limiting themselves to creating tools for expert judgement. They “limit their study to a classification and analysis of the factors to be taken into account in judging a country’s capacity to service external debt” (Mikesell, 1965, p. 556). The book also received negative reviews. Public choice theorist Gordon Tullock (1965) from the University of Virginia, saw the book as turning borrowers away from the private market in favour of official sources of funds. “Dr. Avramović and his associates from the International

Bank for Reconstruction and Development have written their book to counter these arguments for relying on the private market.” By stressing the difficulties that may arise from borrowing, Avramović was misleading and hence deterring developing countries from borrowing. To the contrary, Tullock argued, developing countries should rely on the international capital markets that have a greater amount of capital than the IBRD. Another criticism was levied on the deterrent from using policy efforts to repay. Baldwin (1967) appraised the focus on long-term conditions of debt servicing capacity as partly misguided. By focusing on growth models, the book drew attention to the determinants of debt servicing capacity to capital-output ratios and marginal saving ratios which he considered were diversions “from variables over which governments may have considerable control” such as fiscal policies or monetary policies that ought to be used to repay external debt (Baldwin, 1967, p. 664).

When Kindleberger reviewed the work, he extended the critique on the books. While he begun by praising what he called the ‘leading students’ of the time on the limits to the capacity of developing countries to service external debt, he concluded that despite “much useful data...I find the analysis lacking in sharpness and clarity” (Kindleberger, 1966, p. 115). The reasons were about what he saw as misinterpretations by the authors’ of the discussion on the transfer problem. Kindleberger’s critique centres around the issue that the IBRD staff smuggle both the budgetary as well as the transfer issue into the marginal propensity to save. He objected to the labelling of the interest expense that needed to be repaid as saving. “Savings are a residual; debt service is a contractual payment” (Kindleberger, 1966, p. 116). For private enterprises servicing foreign debts, the interest payments are a cost not a saving – they will come out of income. For public interest payments, he calls the revenue raising requirements of bringing up taxes over expenditure as hardly constituting a saving, and more rightly viewed as a “necessary expenditure”. He insisted that the reliance of the IBRD staff’s on the debt-service ratio (calculated against exports) was weak and its use could not be justified just “because it has survived in the literature”, which led him to conclude that “we have not yet achieved a complete and authoritative treatment of the subject” (Kindleberger, 1966, p. 117).

Beyond the merits or drawbacks about the structure of the model, it is Alvin Hanson

that brought to light the importance of developing a model to aide policy-making. Hansen described the study as a search for economic rationales that could guide policy when debt-servicing difficulties arise. The model was useful as it could illustrate that the terms of loans to developing countries were onerous, and that modifications to the terms of capital flows were justified (Hansen, 1966, p. 3). The authors themselves admitted that despite the roughness of the exercise, they saw the development of scenario analysis that the model could fulfil as one of its merits. “We cannot determine the precise time periods... but we can form an impression of the direction.... By varying the values of the critical variables we can form an impression of alternative developments which are possible” (Avramović, 1964). While this form of scenario analysis was the flowering crown of the great macroeconomic models that blossomed in the 1960s, such as through the work of Lawrence Klein or Goldberger (Bodkin et al., 1993), it was not without controversial application in the field of development. Attempts at calculating gaps and absorptive capacity initiated the use of quantitative economic models in the efforts of international agencies to explore relationships between objectives and policy proposals. However, the use of models was contested, and this controversy motivated the OECD to set up an Expert Group in 1967 which contained “sceptics as well as supporters of the use of models”, who published a study: “Quantitative Models as an Aid to Development Assistance Policy” (OECD, 1967, p. 5). Their objective was to ascertain the degree to which analytical techniques could assist in evaluating aid requirements and decision making by development institutions. However, “the use of quantitative models to illuminate decisions in matters of assistance is at a comparatively early stage of development and remains controversial” (OECD, 1967, p. 5). One of the reasons for this that the expert group mentioned, was that while the use of formal models attempted to ostensibly rationalise the loan giving process, it encountered political objections. “Purely economic considerations are evidently not the only ones which determine the volume and distributions of assistance”, which laid beyond the Expert Group (OECD, 1967, p. 4), and would surely hinder a purely economic analysis of size and terms of assistance.

Another implication of Avramović (1964) was that by stepping away from the collection of indicators and data presentation that formed the back-bone of country reports, this work el-

evated the status of how the macro-determinants of debt repayment were formulated, moving beyond the form of data presentation that included the derided debt-service ratio. The authors noted that the model first and foremost disregarded traditional tools of cost-benefit analysis used for project evaluation, as they insisted on the need to analyse on the level of macroeconomic aggregates. The added value as compared to the empirical efforts of their previous books, was that the model was deemed significantly more substantial and useful than simple presentations of data. They argued that only by “relating the relevant variables in some functional pattern, is it possible to deduce, however roughly, the shape of things to come” (p. 64). It is important to note that in post-war period, being a theorist was *the* most prestigious activity for an economist (Backhouse and Cherrier, 2017). The short run indicators were derided precisely because they have no theory guiding them: “The debt-service ratio lacks any theory that would support it as a meaningful indicator of the long-run aspect of debt servicing capacity” (p. 67).¹⁷ Avramović greatly raised the profile of long-term analysis as an important determinant of debt service capacity. His work also elevated a theoretically grounded view of the macro determinants of debt repayment prospects within policy and proposed the use of models to enable better judgement when making policy decisions.

3.2 HISTORICAL AND THEORETICAL CONTEXT OF DEBT REPAYMENT CAPACITY MODELS

3.2.1 BACKGROUND OF KEYNESIAN ECONOMICS AND ITS CHALLENGES

The work by Avramović on the positive role international borrowing could play in the development process developed against the backdrop of Keynesian economics. While there has never been a consensus on the role of public debt in the economy, the Great Depression and the ar-

¹⁷This comparison has important relevance to developments in academia. In 1947 Koopmans (1947) took issue with the empirical work of Burns and Mitchell at the NBER as being “measurement without theory”, by which he meant, that it did not follow the work developed at the Cowles Commission of testing maximisation models against data (Backhouse and Cherrier, 2017). It has not been possible to ascertain whether Avramović and his team were familiar with the Cowles-style empirical work of the 1950s and 1960s.

rival of the *General Theory* in 1936 put the need for intervention in economic affairs to prevent cyclical downturns and promote economic stabilisation firmly into view. Keynesianism brought acceptance to the idea that economies are primarily underutilised, and that debt-financed deficits could yield multiplier effects on aggregate demand, bringing to the fore the efficacy of fiscal policy and debt in short-run stabilisation as well as long-term growth. Discretionary policy could be used to affect aggregate demand, final output and employment, as private demand may not correspond to full employment levels of output.¹⁸ The relative effectiveness of fiscal as opposed to monetary policy was indicated through the widely used IS-LM model, through the respective slopes of the IS and LM curves and their associated crowding out effects.¹⁹ Important arguments were also made about government intervention in the long-run too. Business cycle theory came into its own in the 1930s, where economists took greater interest in studying dynamics and longer-term issues. Early attempts to extend Keynesian thinking into a long-run analysis were formalised by Harrod who developed a model in 1939 in which Keynesian multipliers would exacerbate the economy's deviations from a certain growth rate with the possibility of leading to instability (Thomas, 2014, p. 299). Cycle theories were popular in Harvard, for instance those developed by Lloyd Metzler (1941) and Hansen (1941), which were followed by Domar (1946). Whether in terms of short-run stabilisation or long-run growth and development, the work of postwar Keynesian writers such as Hansen and Greer (1942), Lerner (1943) and Domar (1944), entrenched, broadly speaking, the principle of 'functional' over 'sound' finance.²⁰

The postwar period was also defined by concerns about growth and development. Development economics developed as a branch of economics in the post-war period, closely linked to practical concerns of developing countries experience and the development planning agenda of policy makers; it thrived in the political context of the Cold War. Foreign aid and development policies were incorporated into tools of international foreign relations (Alacevich, 2017) and

¹⁸These issues were developed in Keynes (1936) and Kalecki (1939).

¹⁹For a detailed examination into the long life of IS-LM analysis see De Vroey and Hoover (2004).

²⁰This section provides a broad overview of this literature in order to situate the work done by World Bank economists within a broader framework. It does not intend to provide detailed reviews of theories of debts and deficits which can be found in Dyson (2014); Kaounides and Wood (1992); Salsman (2017); Tanzi and Zee (2011a,b).

were fuelled by rivalry about which of the two economic systems would attract “Third World” followers (Boianovsky and Hoover, 2014). Despite differences, central to the work of development thinkers was that capital accumulation was key to development. The Harrod-Domar model – the bedrock of development economists in the 1950s – was used extensively by development economists and policy makers, and was incorporated into their own planning agendas (Boianovsky, 2018). The broad efforts to calculate the capital inflow needed to finance capital accumulation to meet a needed growth target was first done by Singer (1952) who explored the savings ratio needed to support a given target of economic growth, followed by Prebisch, (1954) and Tinbergen (1958). This effort was praised by the United Nations as being the “most valuable instrument for the analysis and programming of development” (Boianovsky, 2018, p. 488). Furthermore, this preoccupation was mirrored in the post-war aspirations of the IBRD to use international investment to protect against the international business cycle, and much of this theoretical discussion was preoccupied with finding the equilibrium rate of growth which could avoid cyclical fluctuations. Avramović and his team were situated within well-trodden intellectual ground, even if their focus was specifically on the debt servicing capacity of capital inflows. However, just as the role of debt was welcomed as a tool in economic management from a variety of perspectives and techniques (short and long-run, as well as development), it would soon be challenged on a number of different fronts, both in terms of content and technique.

In terms of growth theory, the gradual decline of the Harrod-Domar model came about from the growing doubts about the usefulness and robustness of the model and in particular the usefulness of ICOR (see Leibenstein (1966) discussed in Boianovsky (2018)). This was accompanied by the rise of growth economics at MIT.²¹ While important figures in development economics were based at the MIT’s Center for International Studies (CENIS) such as Rostow (who joined in 1951) and Rosenstein-Rodan (who joined in 1953), it was MIT’s department of Economics that started building-up its strength and reputation, and in the process expanded the field of growth economics. Outside of development institutions, within academia in the 1950s, work on growth was dominated by the “Kingdom of Solovia” with MIT being the “native land

²¹For a review of growth theory at the time see Hahn and Matthews (1964).

of ‘growthmen’” (Boianovsky and Hoover, 2014, p. 198). Domar was recruited to MIT in 1958. This eventually led to the development of optimising growth models in the Ramsey-Cass-Koopman’s tradition, an intellectual base with important consequences on the transformation of the economics of ‘debt sustainability’ which is examined in section 3.2.2 below and in Chapter 5.

In terms of fiscal policy, objections had been aired by fiscal conservatives like Moulton (1943) from 1943 already, but the ‘new orthodoxy’, as Buchanan would call it, would gradually face insurmountable challenges (Buchanan, 1958). In the field of public finance, the Keynesian view was broadly condemned through the debate that broke out in the 1950s and 1960s over the burden of debt and its impact on future generations. The main attack to the Keynesian adherence towards debt-financed fiscal spending would come from Buchanan, soon joined by Musgrave (1959) and Modigliani (1961), who countered the main tenants of Keynesian thinking and argued that debt-financed deficits were in fact a burden on future generations. This debate was taken up through the placement of public finance in a general equilibrium framework. This was through the efforts of Richard Musgrave and the overlapping generations (OLG) models literature, a strand of general equilibrium theory initiated by Allais (1947) and Samuelson (1958) and developed by Cass and Yaari (1965) and Peter Diamond (1965).²²

We mention this to show that in the end, the general equilibrium, optimising framework prevailed, entrenching the ‘sound-finance’ view of fiscal policy and debt through the lens of debt sustainability (analysed in greater detail in Chapter 5). As the rise of the optimising framework ended up being prevalent, the remainder of this chapter traces the origins of optimising international debt models that emerged in the 1960s. It is important to close this section with a reflection on the broader transformation taking place in the discipline. The economics that developed at MIT around growth was part and parcel of the complex transformation taking place in the development of post-war economics (Backhouse and Cherrier, 2017; Boianovsky and Hoover, 2014; Morgan and Rutherford, 1998a). This included the mathematisation of the discipline (Dimakou, 2020; Weintraub, 2002) which was linked to the notable emigration of economists

²²See Malinvaud (1987).

and mathematicians to the US during and after the war (including Musgrave, see Sinn (2009)) and the influence of US defence-institutions on research activities (see Bernstein (1995) and Guglielmo (2008)). Scholars have pointed to the notable divergence between development economics in the post war period and the core of the economics discipline (Alacevich, 2017). Development economists had a professional identity much closer to being an advisor to governments in developing countries, than academic economists did. Nevertheless, despite the ‘academic’ nature of neoclassical growth theory, it is important to note that the roots of this academic work rose out of practical concerns generated by the war effort.

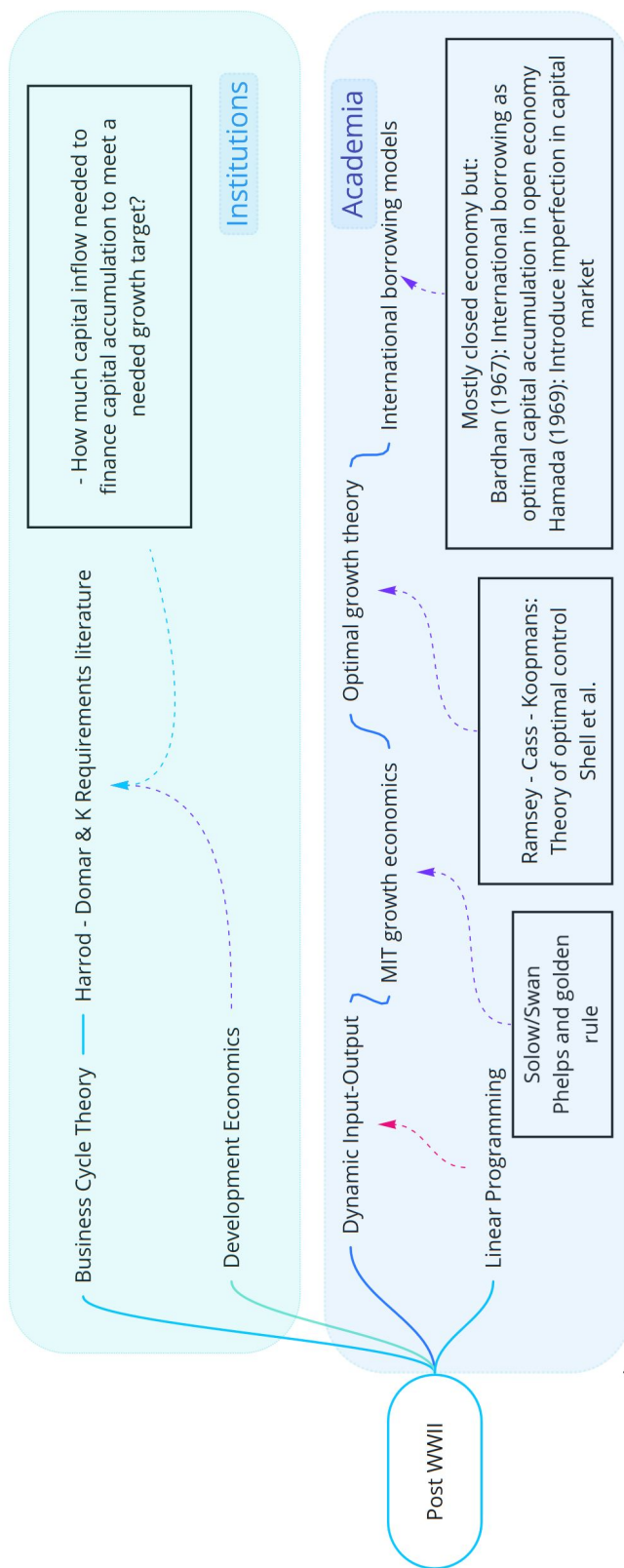
3.2.2 THE TWO ROADS TO OPTIMISING INTERNATIONAL DEBT MODELS

This section provides a review of developments in economic theory that incorporated international borrowing in an optimising framework. Far from exhaustive, the section aims to show the intellectual roots of models that at the time received far less attention than the work of Avramović, and yet paved the way for the optimising approach to international debt eventually prevalent in the 1980s. The section covers two distinct pathways: the development of optimal growth theory in the Ramsey-Cass-Koopmans tradition and the development of overlapping generations (OLG) models with international debt which would form part of the analytical structure of subsequent debates in debts, deficits and default covered in Chapter 5. A stylised depiction of the evolution of theory on international borrowing as developed within the development institutions and academia is shown in Figure 3.4²³

Solow started as a student of Leontief’s working at the Harvard Economic Research Project (HERP) on calculating capital coefficients in Leontief’s Input-Output [I-O] model of national economic structure that was used for wartime mobilisation (Halsmayer, 2014). The aim of the Leontief model was to represent “and possibly organise, production and consumption relations between the different sectors of a national economy” (Thomas, 2014, p. 303). Leontief’s I-O model inspired a line of research, in the work of Dantzig. George Dantzig, the original developer of Linear Programming (LP), developed his work to “automate US Air Force

²³The section relies heavily on the secondary literature of historical work on postwar economics.

Figure 3.4: Evolution of Theory within Academic and Development Institutions: 1945-1969



scheduling” (Thomas, 2014, p. 303). “Once he [Dantzig] established that programs could be represented as a set of linear equations and inequalities, he used his mathematical knowledge of convex sets to develop the “simplex algorithm”... [which could] prescribe an optimally rational solution to the problem. Dantzig’s method quickly proved extremely versatile, where different sets of constraints applied to a program could represent a wide array of possible problems” (Thomas, 2014, p. 303). Dantzig used his advancements in linear programming onto the model that had initially inspired him, through an attempt to integrate Linear Programming with I-O models, that was first aired at the Cowles Commission 1949 ‘Activity Analysis of Production and Allocation’ conference.²⁴ This conference, sponsored by RAND corporation, was about the techniques of allocating limited resources towards desired ends. Many of the papers at the conference, e.g. those by Koopmans, Georgescu-Roegen, Arrow, Samuelson related linear programming to Leontieff’s model (Thomas, 2014). Nevertheless, at the Koopman’s Activity Analysis conference, although Leontieff’s Input-Output analysis was dominant as an approach, its basic concern – the capital structure of the economy, was absent (Halsmayer, 2014).

Solow moved to MIT in the early 1950s and with Samuelson worked on theoretical aspects of dynamic I-O analysis. In 1951, RAND invited Solow to work on “optimisation of Leontieff and other dynamic Input-Output models, including stability of growth systems and optimal capital programming over time” (Halsmayer, 2014). RAND tried to persuade Samuelson to develop his work on LP, even trying to recruit him. It seems that this led Samuelson to undertake “a slow moving project to write a book on the application of LP to economic analysis, which eventually enveloped Solow as well as Robert Dorfman, an economist and [Operations Research] OR theorist at Harvard” (Thomas, 2014, p. 305), appearing a decade after it begun as Dorfman et al. (1958). This line of thinking found application in development issues, most notably in the progress being made in project-appraisal methods pioneered through the work by Little and Mirrlees (1969), mentioned in Chapter 2.²⁵

²⁴In 1948 Koopmans became a Professor in the Department of Economics at the University of Chicago, and was appointed director of research of the Cowles Commission (Halsmayer, 2014). Dorfman was a participant in the Koopmans – Cowles conference on Activity analysis in 1949, and at the time was affiliated with the US Army Operation Research Office (Thomas, 2014, ft. 303)

²⁵In this work, Little and Mirrlees refer to the work of Dorfman, Kantorovic and Koopmans whose

The intellectual origins of what would become Solow's growth model, as told by Halmayer (2014), is that in order to simplify the teaching of these dynamic Input Output models to his students at MIT, Solow decided to narrow things down into a world of one commodity, allowing the detailed sub-industries to melt into a single aggregate industry.²⁶ "Solow collapsed various capital inputs in a single index, resulting in the collapsed production function. That showed output as a function of inputs of labour and 'capital in general'". This aggregate production function, was an entirely different conceptual apparatus – it was, as argued by Halmayer (2014), "a handy artefact".

Solow's growth model contained several weaknesses. Most important was the conclusion that the growth rate does not rely on the savings rate. This "stunning result" that Stiglitz exclaimed (quoted in Boianovsky and Hoover (2014, p. 209) was at complete odds with pre-existing theory rooted in the development thinkers view on development, where savings was key to financing investment, capital accumulation and hence growth, depicted in the works of the World Bank and Harrod-Domar.²⁷ The model's conclusion – that the rate of growth was determined by population growth and exogenous technical change and not the savings rate – helped frame the questions that the next phase of growth theory – optimal growth theory – would ask. Given the exogenous determinants of the growth rate, economists then questioned what the best capital-labour ratio could be. There was a question of how to evaluate policy in a growth model and how to achieve an optimal growth target. Phelps (1961) proposed the "golden rule of growth", as that point where consumption per capital was maximised. The very existence of a capital good enabled the issue of optimal capital-labour ratio to be framed as part of a "trade-off between consumption today and consumption tomorrow over which different preferences are possible. As soon as it was appreciated, it was most naturally an intertemporal utility maximisation problem" (see in Boianovsky and Hoover, 2014, p. 214).

work on shadow prices was foundational to the innovation in their methodology regarding social cost-benefit analysis used to evaluate development projects, mentioned in Chapter 2.

²⁶For the importance of Samuelson in the development of Solow's growth model see Halmayer (2014).

²⁷The second core weakness to the Solovian kingdom was the foray into empirical research – with the famous residual issue (Boianovsky and Hoover, 2014, p. 209).

This was a problem that had already been addressed and solved – not however, within the context of a growth model, but through the work of Frank Ramsey’s 1928 work on optimal saving (Boianovsky and Hoover, 2014), a paper that was well known to Samuelson, Solow and others at MIT (Duarte, 2009). Intertemporal utility maximisation in the context of a growth model was technically challenging, but those challenges were overcome after the translation from Russian of mathematician Pontryagin’s work on optimal control in 1962. The theory of optimal control was incorporated into the work being done at Stanford, by Hirofumi Uzawa and his students: David Cass and Karl Shell, who had also worked with Arrow. The core of optimal growth and capital accumulation was the choice of an optimal savings rate to maximise a discounted consumption path (see Cass, 1965). Ramsay defined the programme of capital accumulation as that which maximises the integral over time of utilities per capita consumption. “Essentially, Ramsay characterised the trajectory of capital accumulation that satisfies Euler’s differential equation and the appropriate boundary conditions” (Shell, 1967, p. v). Using Ramsey’s model and by integrating the theory of optimal control, growth theory shifted into looking at the level of savings that would maximise a central planner’s saving ratio.

These ideas and techniques set the research agenda for the subsequent phase in growth economics. Optimal growth theory was mainly developed by MIT graduates, often supervised by Solow (Boianovsky and Hoover, 2014). During this period, MIT attracted important visitors and new faculty, including Karl Shell, who joined the MIT department in 1964 and remained until 1968 (Boianovsky and Hoover, 2014). Once Shell joined the MIT faculty, he organised a seminar on optimal growth in the 1965-66 academic year which included several presentations by MIT students, the contributions of which were collected into a volume by Shell in Shell (1967). The field of optimal growth theory boomed and would bring about a yet again different view on the role of debt in the economy. Although the issue of macroeconomic policy had been part of Samuelson’s vision in applying neoclassical synthesis to growth models, optimal growth theory mostly did away with issues of policy by focusing overwhelmingly “on the appropriate rates of investment – often with the artificial but convenient invocation of a central planner” (Boianovsky and Hoover, 2014, p. 213).

What role, if any, did international borrowing play in this literature? The models of optimal growth were mostly closed economy models. Conceptions of borrowing within this choice-theoretic framework mainly abstracted from whether it is international or domestic borrowing that was smoothing consumption. In Shell's edited volume (Shell, 1967), the possibility for debt repayment difficulties to occur, in general, did not exist. There were some exceptions though; one model developed the framework of optimal growth to incorporate foreign borrowing and include some notion that possible problems could occur. The chapter by Bardhan (1967) in Shell's compilation, "Optimum Foreign Borrowing", analysed foreign borrowing as an optimisation problem. In the representative agent setting, borrowing was a means to smooth consumption – a notable departure from the previous generation of models, in which the role of external finance was to fund investment and accumulate capital at the macro level. Bardhan's main addition to the literature was that in the context of optimal international borrowing, the rate of interest would increase as the debt stock grew. The implications of the model were based on a facet of restrictive assumptions, acknowledged by Bardhan: the model had one homogeneous commodity, that is both consumable and accumulatable. Borrowing takes place in the context of an imperfect market, therefore, the amount of borrowing affects the rate of interest, meaning that the supply of funds is not infinitely elastic. There are assumptions of full employment, the model includes a production function, a domestic accumulation equation, and a social welfare function with social utility defined as per capita consumption. The core of the model is that foreign borrowing yields some sort of social dis-utility that arises from having foreign capital in one's country. This is explained anecdotally as a form of nationalism, whereby dependence of foreign capital is disliked.

A second paper from this period that looks at international borrowing in an optimal growth framework is by Hamada (1969), a student of James Tobin at Yale who graduated in 1965. He pursued the dynamics of international borrowing as part of a search for the optimal capital accumulation policy of an open economy which faces an imperfect international capital market. In conditions of perfect international capital markets, regardless of the amount borrowed, the assumption about the interest rate is that it is constant. The innovation, as with

Bardhan, was to assume imperfections and thus a rising rate of interest as indebtedness increased – affecting the supply schedule of loanable funds. Whilst highly abstract and far from immediate policy concerns, both these works introduced points that were lacking from Avramović’s work, which had assumed a constant rate of interest irrespective of the amount of borrowing.

Optimal growth theory however was not the only road to bring in international borrowing in a general equilibrium framework. In a parallel but distinct thread, overlapping generation models (OLG) developed as part of the effort to ascertain the impact of debt on long-run welfare effects in the economy. As the debate over Ricardian Equivalence and the role of fiscal policy was taken up in the 1970s and 1980s through the use of OLG models, we will revisit this in Chapter 5. For now, we provide some insights into the structure and origin of this work.

When the time horizons are of different lengths and heterogeneity exists, debt and deficits are hard to model because there is a conflict between complexity of assumptions and tractability of modelling. As more complex assumptions are made (different time horizons, heterogeneity etc), models are harder to set up and solve. In Samuelson’s overlapping generations model (Samuelson, 1958), where agents are continuously being born and dying, the evaluation of social welfare was mathematically difficult. Different routes were attempted in order to get to a representation where it would be mathematically tractable to dissect and analyse the impact of deficits on consumption and output.

Crucial in this respect was the work of Peter Diamond, a student of Solow who joined the MIT faculty in 1966.²⁸ In 1964, Diamond circulated his piece for comment and received broad ranging praise, before its publication as ‘Public Debt in a Neoclassical Growth model’ in the *American Economic Review* in 1965, which was partly the reason he received the Nobel Prize in Economics in 2010. “It’s a damned good piece” exclaimed Samuelson, “one of the most interesting that I have seen in a long time! You are to be congratulated. Not only does it reach

²⁸Diamond was the doctoral student of Solow at MIT, and after joining the MIT faculty in 1966 spent his career there. Earlier, when he wrote “Debt in a neoclassical growth model” (Diamond, 1965), he had just been hired by A. Papandreou as junior faculty member at the University of California Berkeley, Institute of Business and Economic Research. Diamond engaged closely with public finance, teaching it for several years and followed closely the work by Musgrave to put public finance in a general equilibrium context (Prize, 2010).

interesting conclusions on an important topic, but as well it shows a masterly choice of precisely the right amount of simplification and generality” (Samuelson, 1964). Diamond’s model builds on Samuelson’s, but while Samuelson’s results were used to make a point about money in general equilibrium, Diamond used the structure of overlapping generations to reveal the dynamic inefficiencies of general equilibrium. Diamond’s fundamental insight was to show that in OLG models, the steady state equilibrium articulated by Phelps is dynamically inefficient, meaning that the capital stock is greater than the golden rule level.²⁹ Writing his comments to Diamond, Phelps encouraged him to draw this conclusion out: “I think you should also beat your own drum a little over what is your most startling theorem: namely that a laissez-faire economy despite perfect foresight and competitive equilibrium may pursue a dynamically inefficient growth path”. He followed: “Doesn’t this result contradict a lot of classical theorems on the Pareto-optimality of competitive equilibrium?” (Phelps, 1964). The finding by Diamond had profound implications for economic theory, for it meant the first welfare theorem did not hold and that crucially, this inefficiency did not depend on rigidities or imperfections, but rather on the investment-savings schedules deviating from the (Pareto) optimal path, due to agents’ overlapping horizons and incomplete markets these generate. Also distinct to Samuelson’s model, Diamond’s introduced public internal and external debt. The precise welfare properties of the Diamond model would depend on whether the debt was internally or externally held, with the main finding, contrary to the thinking at the time, that internally held debt was slightly worse than that of external debt. While this countered one of the Keynesian core pillars, there were several ways that Diamond explained the implications of different types of government borrowing. The intuition from one of the examples given, was that internal debt raises r because agents funnel their savings into government debt, diverting resources from investment, therefore capital, therefore raising its marginal product (Diamond, 1965, p. 1147). Diamond sent the paper to leading scholars, including David Kopf working at the Research department of the Federal Reserve, who corresponded several times with Diamond over the paper’s content. Kopf had sup-

²⁹This occurs when the rate of growth of the economy is greater than r , the steady-state marginal product of capital, meaning “the economy is consistently investing more than it is earning in profit” or “in the terminology of Phelps (1961), the capital stock exceeds its Golden Rule level” (Abel et al., 1989, p. 1).

ported the efforts of Buchanan to show that debt-financed fiscal spending posed a burden for future generations (Bowen et al., 1960). Kopf remarked that Diamond's conclusions may not hold in models where a more specific foreign capital market had been included and the private sector could access foreign capital markets (Kopf, 1965a).³⁰

The incorporation of international borrowing in intertemporal optimising models through representative agent (Ramsey-Cass-Koopmans) and OLG analytical structures was key to the re-examination of the issue of debt away from core Keynesian insights. This was one of the most important transformations within the broader economics of debt repayment issues, and the one that most heavily imprinted upon the eventual design of DSA template, only inaugurated in 2002 and covered in Chapter 6. Attempts to highlight the positive role of fiscal policy within these analytical structures would be taken up in the 1970s.

3.3 DISCUSSION AND CONCLUSION

This chapter showed the distinct pathways through which scholarship and policy analysed international borrowing and debt issues during the 1950s and 1960s.

Within institutions, Avramović and the economists surrounding him developed internationally comparable empirical work, investigated the merits and drawbacks of the usefulness of short-run debt service indicators in assessing capacity to repay, and developed a novel long-run framework that focused on ability to pay in the context of achieving specific development targets. These economists made detailed investigations into the limits and possible problems of the borrowing process. Their view was that economic science could not offer much with respect to any assessment of a country's willingness to pay, except perhaps for a poor proxy provided by the debt-service ratio. They claimed instead to only be able to offer advancements in measuring a countries' *ability* to repay its foreign debts, ultimately and solely dependent on the long-run growth of income. According to their model, debt sustainability, as understood today, would be violated for long periods until structural transformation of the economy was completed. During

³⁰This exchange with Kopf, took place as Diamond was preparing it for publication for the AER.

the 1950s and 1960s, positive roles for debt and deficits were commonplace in analyses of short-run stabilisation, long-run growth and development economics and so Avramović's work was deeply embedded in the context of the time on issues regarding the positive role of public debt in the economy. With this outlook, their work was crucial in elevating a view of debt repayment that looked at the country as a whole, away from narrow project-based view and showed how these models could be useful in policy-making.

Nevertheless, even their claim to knowledge about ability to pay was limited. The World Bank economists acknowledged the difficult balance between the respective roles of quantitative analysis and judgement in the process of measuring debt repayment prospects. The role of economic knowledge was to create tools for expert judgement, rather than formulate hard rules or "comprehensive theory". While it was claimed that formal models could be used to rationalise the loan-giving process, any analysis purely based on economic considerations would come up against political objections.

The postwar period was one of transformation within the economics discipline, and both growth theory and public finance would cast the issues of debts and deficits in an entirely new light. This is a period in which the economics of debt issues within policy and within scholarship are disjointed. Simultaneous to the work of Avramović were developments in theories of international borrowing in an optimising framework developed in academia. This took place through distinct pathways: the development of optimal growth theory in the Ramsey-Cass-Koopmans tradition and the development of OLG with international debt. The chapter examined the rise of these two dynamic and optimising analytical structures that would eventually displace the existing analytical bedrock. Far from exhaustive, the material covered in the chapter showed the early steps in the development of the economics of debt sustainability that enabled a movement away from a conception for a positive role of fiscal policy in short, long-run and development processes towards a 'sound-finance' view of surpluses needed to pay down debts. These works did not find immediate operationalisation, not least because they were not concerned with problems that may arise in the borrowing process. They were however able to develop the tools to examine marginal costs and benefits to the borrowing process, which would in

later decades form the basis of willingness-to-pay approaches to default.

Despite the progress made on long-run issues of ability to pay, the empirical work by Avramović and his team provided the impetus for a more vigorous investigation in the 1970s in search for ‘permissible’ limits to the borrowing process. These were practical and operational models developed by lending institutions, whose primary concern was the short-run proxies for willingness broadly condemned in Avramović’s work. This empirical effort was pursued with great intensity given the increasing exposures of northern creditors, the debt servicing difficulties that developing countries faced and the growing political conflict over how these should be managed – covered in Chapter 4.

Practitioners of this activity are the first to point out that analysis of country risk is not a science. I hesitate to call it an art; perhaps it may be dignified with the term “craft”

Wallich (1978, p. 15)

4

The 1970s and the underside of temptation: empirical models and political conflicts

THE 1970S WAS A TIME OF TURMOIL. From the first UNCTAD conference, debt and the terms of financial assistance were an integral part of the agenda of developing countries. This chapter captures the changing views around debt repayment problems and the emergent politi-

cal conflict over their resolution. Avramović and his colleagues did not recommend any slowing to the growth of international loans but they did propose substantive reasons to ease the terms of financial assistance and increase the volume of resources. The expansion of international lending in the post war period was greatly affected by the patterns of colonialism and became embedded within the Cold War. This chapter examines the political debate over debt repayment difficulties as it developed within UNCTAD. It captures an ever-growing conflict between debtors and creditors on the loan giving process and how debt problems ought to be addressed. While the role that UNCTAD played in standing on the side of developing countries in debt problems has been noted (UNCTAD, 1985), the role of economic analysis within the political debate has been hitherto side-lined. Hence, while examining the political conflict, this chapter highlights the particular role of economic analysis within the debate, revealing how different policy positions favoured distinct types of economic analysis. The growing exposure of international organisations, private and official sectors of creditor countries towards developing countries, galvanised the empirical measurement effort to guide lenders, who became preoccupied with short-term predictors of default. Throughout the 1970s, across development agencies and private financial institutions, a common effort to ascertain the likelihood of default begun. Searching for the indicators of one's temptation to default however, reflected the growing conflict in policy over debt repayment resolution.

The Chapter is divided into two sections. Section 4.1 covers the political debate as it took place through subsequent UNCTAD conferences and related forums, with an emphasis on the role of economic analysis in the debate. Section 4.2 examines the empirical measurement drive by lending institutions and the work to derive 'critical thresholds' of debt repayment difficulties. Section IV Concludes.

4.1 ESCALATING POLITICAL DISPUTES OVER DEBT REPAYMENT DIFFICULTIES

To examine the discussion on debt at each UNCTAD conference until the 1980s debt crisis, we first provide a synopsis of the overall trajectory of the conferences and parallel forums. We set

the scene by examining the issues raised through the G77 Ministerial statements released prior to the conference and overall remarks on debt by delegates in the plenary. Section 4.1.2 provides a detailed examination of the committee on finance for development – the Third Committee – examining the statements of delegates, proposed resolutions put forward by the Committee and voting patterns on debt-policy proposals.¹

4.1.1 TRAJECTORY AND BROAD OUTCOMES OF POLITICAL DEBATE ON DEBT:

UNCTAD 1964 – 1979

Che Guevara's opening statement in the 1964 UNCTAD conference plenary in Geneva stated that the conference promised much if developing countries were not "lured by the siren song of the vested interests of the developed Powers which exploit their backwardness", and merely asked "for the crumbs from the tables of the mighty of this world" (UNCTAD, 1964b, p. 163). He warned that if developing countries "rest content with agreements that can simply be violated at will by the mighty, our efforts will have been to no avail and the lengthy deliberations at this Conference will result in nothing more than innocuous documents and files for international bureaucracy zealously to guard...And the world will stay as it is" (UNCTAD, 1964b, p. 163). Such were the aspirations and dangers of UNCTAD. For the Group of 77 developing countries (G77), UNCTAD was a means for "a new and just world economic order" to address "the injustice and neglect of centuries" (UNCTAD, 1964b, p. 519-520). The political realities of the cold war era amplified the difficulties of creating a comprehensive forum to address global problems, with the issue of external debt merely one among numerous issues identified.

There was a stark deterioration in the international atmosphere between the first and second conference, held in New Delhi in 1968. Social eruptions of student unrest, civil rights and anti-War movement, May 1968, and political implosion in many Western governments were part

¹ UNCTAD feeds into the UN's General Assembly (GA), and its main body is the Trade and Development Board (TDB). Several committees prepare the work for the TDB. The issue of external indebtedness and debt servicing is discussed predominantly within the Third Committee. This chapter covers only the debt proposals, leaving out other important agreements and developments that took place between each UNCTAD conference. Where relevant, issues on balance of payments ordinarily discussed in different Committees, where directly pertinent to the debt discussion are included.

of growing frustrations and calls for change (Toye, 2014, p. 40). The trading position of developing countries had not improved neither had the flow or terms of resources. Debt servicing problems were increasingly voiced across the UN system: in 1966 the General Assembly (GA) voted on the issue of outflows and endorsed the progress made by ECOSOC on developing measurement techniques for capital flows, including calls to action on committed resources, prevention of debt servicing problems and endorsement of UNCTAD to continue its work on financing for development.² In 1967, in preparation of UNCTAD II, a ministerial meeting of the G77 adopted the Charter of Algiers that promoted a programme of action for drastic amelioration of the terms of assistance, increase in volume and broadening out from project aid into programme aid. On the issue of debt, they demanded the consolidation of debt service burdens into long term obligations at low rates and for countries facing acute debt difficulties to be rescheduled on soft terms (UNCTAD, 1968, p. 431 - 437).

Debt service burdens were one of the ten development problems that UNCTAD II considered. The plenary delegates painted the stark figures of debt: debt-service ratios had risen to 15 percent or at times 20 percent (UNCTAD, 1968, p. 185), absorbing approximately 45 percent of all official bilateral lending (UNCTAD, 1968, p. 185, p. 127). The UNCTAD secretariat estimated this trajectory would lead to zero net lending by 1975 and turn negative thereafter (UNCTAD, 1968, p. 185). Delegates from Madagascar, Ecuador, Togo and Guyana echoed each other's concerns that were the terms of assistance not to change, the least developed would be exporting capital to the richest countries (UNCTAD, 1968, p. 138). The Cuban delegation urged that all dividends, interest and amortisation be suspended until the prices of primary commodities were at a level that could reverse the damage of the past (UNCTAD, 1968, p. 100). Considering that proposals from the first conference had "scarcely materialised" (UNCTAD, 1968, p. 19), and the aims of UNCTAD I were no more than visions – G77 condemned "vague promises and declarations of goodwill" on indebtedness and tying of loans (UNCTAD, 1968,

² ECOSOC promoted further study in ascertaining the process of capital flows and why not enough resources at the needed terms had been provided. See 21st Session of the GA, Resolution 2170 (XXI) adopted on December 6 1966, and ECOSOC resolution 1183 (XLI) of August 5th 1966 (Assembly, 1966).

p. 425). Developed countries were accused of not doing enough to address the debt servicing difficulties developing countries faced and were warned against returning home to face overwhelming debt problems without commitments on specific actions on debt.

When the Secretary General of UNCTAD addressed one of the plenary meetings he reiterated the need to target financial resources for achieving development plans, with debt service rescheduling and reduction of loan-tying essential components: “None of this is new, but since it is unsettled, it is only natural that the second session of the Conference should try to arrive at productive solutions” (UNCTAD, 1968, p. 419). As it turned out however, “The general opinion was that UNCTAD II had been a failure”, and the General Secretary, Raúl Prebisch in his report to U Thant wrote that results were “positive, but extremely limited” (Toye, 2014, p. 50, 41).³

Poor progress on development and especially debt issues was reflected beyond UNCTAD conferences, for instance in the GA (Assembly, 1968). The Commission on International Development was established and published *Partners in Development* after the request by World Bank president McNamara for an examination of the 20 years of development progress (Pearson, 1969). Therein were contained measures to address the debt problem by setting guidelines or principles for reorganisations to avoid repeat rescheduling, and to consider debt relief as a form of aid so that fresh loans could be used to repay debts and avert the need for frequent multilateral rescheduling. In 1970, the objectives of the Second UN Development Decade were laid out in the International Development Strategy, when referred to the flow of financial resources, the debt servicing problems developing countries faced and a vision for improvement in forecasting techniques to forestall debt crisis (Assembly, 1970). In 1971 the GA urged creditors to “give sympathetic consideration” to the requests by developing countries with regards to rescheduling, and called on the IBRD, the IMF and UNCTAD to identify policies needed to avoid debt crises, as well as called for implementation of UNCTAD II’s main debt resolution (Resolution 29 (II), covered in Section 4.1.2, and for borrowers to improve their debt statistics (UN General

³The main achievement of the Delhi Conference was progress on the generalised system of preferences regarding trade.

Assembly, 1971).

By the third UNCTAD Conference held in 1972 in Santiago, the international monetary crisis of 1971 and the so-called Nixon shock, had ended convertibility of the dollar into gold in an attempt to curb inflation in the US. The crisis forced developing countries to “bear the brunt” of the breakdown of Bretton Woods: exchange rate realignments depleted the value of reserves, terms of trade deteriorated and creditors’ currencies appreciated against the dollar which raised the real debt service burden (UNCTAD, 1973c, p. 230). The target of 1% of GNP flow of resources from developed countries had not been achieved, a large portion of financial inflows was being used to service a mounting debt burden, and net transfers had declined further still. The growth of total external indebtedness and cost of debt servicing grew at 14% and 9% respectively which exceeded the rate of growth of developing countries exports or national income. The terms of commercial as well as multilateral loans were hardening and lenders were well aware that competition between creditors produced a tendency for hardening of loan terms (Rubin, 1971). The IBRD president, Robert McNamara, warned at the opening plenary of UNCTAD III that “debt service payments would pre-empt a growing and unacceptably large portion of export earnings”(UNCTAD, 1973a, p. 13), and the Under-Secretary General of ECOSOC warning about growing social and political instability should desired goals not be achieved (UNCTAD, 1973a, p. 21).

When the President of the host country government, Salvadore Allende, welcomed the inaugural ceremony of the conference, he warned about the perils of external indebtedness in the context of a deepening developmental crisis. “External debt, largely contracted in order to offset the damage done by an unfair trade system, to defray the costs of the establishment of foreign enterprises in our territory, to cope with the speculative exploitation of our reserves, constitute one of the chief obstacles to the progress of the third world” (UNCTAD, 1973a, p. 354). Allende, having recently nationalised the iron, steel and coal industries in order to prevent profits from being sent abroad, condemned the history of abundant examples where military or economic coercion had prevented developing countries from the free use of their own resources for their betterment (UNCTAD, 1973a, p. 355). UNCTAD III, like the conferences before, did

not make adequate progress; instead it remitted issues to the Trade and Development Board (TDB), that led to the establishment of an expert group whose final report on external debt problems would feed back into negotiations. The pressing need for action across all development issues resulted in the GA adoption in May 1 1974 of the Declaration on the Establishment of 'A New International Economic Order'. This condemned neo-colonialism as a deterrent to development and aimed to build a new form of international economic relations based on equity, a programme many western countries disapproved of and actively discouraged.⁴

In 1975, the UN GA urged for a conference with donors, creditors and debtors resolve the problem of growing debt burdens. By UNCTAD IV in 1976 there was a need to transform UNCTAD into something more than a debating house or "a pressure house" to that of the "negotiating arm of the United Nations system in the field of trade and development" (Toye, 2014, p. 55). The G77 ministerial meeting in Manila before UNCTAD IV expressed disappointments on lack of progress, arguing that new forms of economic discrimination and coercion including the revival of protectionism brought harm to developing countries. Heavy debt-service payments stemmed from maladjustments in the world economy. There was inadequate balance of payments support, inappropriate terms and volume of longer-term aid, and usurious access to international capital markets. Four demands on debt were made in Manila: more concessional resources from multilaterals; debt relief through waiving or postponement of interest and cancellation of principal on official debt; cancellation and consolidation of commercial debt, rescheduled for at least 25 years with a means to fund short-term debts for least developed countries; and lastly, a conference to implement the principles and guidelines for rescheduling based on the Group of 77 proposal (UNCTAD, 1976a, p. 117).

A new Expert Group on debt was convened to feed into the TDB and discussions at UNCTAD IV. Despite the urgency of mounting problems, commodities dominated the conference (Toye, 2014, p. 55) and UNCTAD IV was remembered as ending in acrimonious bit-

⁴The NIEO vision was laid out in three main documents: 'Declaration on the Establishment of a New International Economic Order', the 'Programme of Action on the Establishment of a New International Economic Order', adopted on May 1 1974, followed by the 'Charter of Economic Rights and Duties of States' (Assembly, 1974b,a,c; NIEO, 1974). The NIEO generated a substantial debate (Abbott, 1978; Arndt, 1982; Grubel, 1978; Helleiner, 1978; Mitchell, 2015; Vanasse, 1988).

terness (Toye, 2014). The debt debate bifurcated into other conferences: it was cast within the context of the North-South dialogue and furthered through the parallel to UNCTAD Conference of International Economic Cooperation (CIEC). The idea that private banks may face difficulties of their own if debt became more of a generalised problem started finding its way into the public debate.⁵ The New York Times reported how the US bank loans to developing countries needed to be interpreted as a foreign policy issue, and the Fed Chairman at the time, Arthur Burns, voiced his concern about US banking activities abroad that could render the international credit structure vulnerable, a view shared by the Governor of the Bank of England.⁶ Several countries after UNCTAD IV faced malpractice from private lenders in rescheduling. Using the examples of Peru (1975) and Zaire (1976), developing countries admonished strict market terms that were intended to avoid a lenient precedent in return for increased net lending by the banks. The whole approach was judged as too limited in its objective: simply “a quick return to creditworthiness”(UNCTAD Secretariat, 1977, p. 6).

UNCTAD V was held in Manila in 1979. In the closing plenary, the G77 wondered whether it was necessary to ask the same question asked after UNCTAD IV, namely what, if anything, had been achieved? There had been complete halting of the progress on the NIEO after UNCTAD IV and structural maladjustments in the world economy were bringing further difficulties. Prior to the conference, the G77 preparatory gathering at Arusha referred specifically to TDB Resolution 165 (S-IX), an important resolution that signalled some progress from previous conferences and is covered in greater detail in Section 4.1.2 (UNCTAD, 1981b). However, for the first time, the issue of economic analysis becomes a serious bone of contention. The

⁵As told by a New York Times article: “Even second- and third-rank American banks, with little experience overseas, raced for the thrills of exotic lending” which was followed by a ‘bad boom’ after the oil price hike and collapse of export prices accelerated debt servicing problems. Given the amount owed to US banks and the profitability this afforded them. “Forty percent of the profits of the top five United States banks last year came from overseas lending” and close to 80% for certain banks, Arthur Burns, the chairman of the Federal Reserve Board was warning Congress about the problem this posed to the US economy. The political dimension was evident: “To meet the bankers’ terms, for example, Peru sold off its state-owned fishing fleet, devalued its currency, and stopped state subsidies for labor”, noting the riots in other countries which followed the removal of subsidies on basic foodstuff (Times, 1977).

⁶The worsening of economic conditions in the 1970s and the impact on debt for developing countries was summarised by UK Prime Minister Edward Heath during the early 1970s in (Heath, 1981).

Arusha programme stated the G77's total disagreement with the way this Resolution framed the issue of "Analysis", that attempted to bifurcate the debt issues facing countries into short and long-term (UNCTAD, 1981b, p. 157). They escalated their demands for progress towards a multilateral framework, by recommending the "establishment of an international debt commission, comprising eminent public figures with recognised knowledge and experience of debt problems and economic development" (UNCTAD, 1981b, p. 157). This commission would work across institutions and be available to assist at debtors' request.

All in all, the trajectory between 1964 and 1979 spanning UNCTAD I and V reveals a progressive exacerbation of debt repayment difficulties, matched by repeat refusals by creditors to adopt any of the resolutions for improvement. The debate between debtors and creditors hardened into detailed examination of malpractice, problems of creditor coordination and the objectives of debt restructuring. Developing countries analysed similarities in the international conditions afflicting them and called for *general* debt relief while creditors saw debt problems largely as balance of payments problems due to domestic mismanagement. As will be examined in the following Section, economic analysis was a crucial element of the debate. The efforts by developing countries to propose resolutions and betterment to the situation was repeatedly refused by creditors.

4.1.2 DETAILED REVIEW OF POLICY PROPOSALS THROUGH UNCTAD I - V

What follows examines the detailed elements of the trajectory described in section 4.1.1, paying attention to the role that economic analysis played within the debate. The milestones of this political conflict that we will examine in greater depth are summarised in Table 4.1 below.

Table 4.1: Timeline of Key Milestones in the Political Debate.

Event	Year	Main Issues	Creditors' Positions
UNCTAD I	1964	Loans to follow repayment capacity Cooperate in rescheduling Long maturities, interest rate ceilings Reduce interest costs	Agreed without dissent 11 Abstentions 9 Against, 11 Abstentions 8 against, 25 Abstentions
UNCTAD II	1968	Improve terms, establish criteria for rescheduling	7 Abstentions
UNCTAD III	1972	Criteria & Guidelines for rescheduling,	14 Against, 7 Abstentions
NIEO	1974	Condemn neo-colonialism	Propose equitable int. relations
UNCTAD IV	1976	Body within UNCTAD machinery	Agreed without dissent
CIEC	1975-77	Progress North-South Dialogue	No consensus
IGE	1977	Guidelines for restructuring	No consensus
UNCTAD V	1980	Debt remitted to TDB	No consensus

4.1.2.1 UNCTAD I: 1964 - GENEVA

A number of debt proposals were tabled at UNCTAD I. Resolution 'A.IV.1 Guidelines for international financial cooperation' laid out a set of overarching guidelines recommending industrialised countries to provide bilateral and multilateral assistance which satisfied certain characteristics. One of these was that the terms of financial assistance should be set according to the repayment capacity of the borrowing country, without a specific commitment as to how exactly this would be calculated (UNCTAD, 1964a). Chapter 2 showed how Avramović's work fed into this work. Another recommendation adopted without dissent concerned the growth of suppliers credit - a form of commercial credit extended to fund creditor exports that were causing problems: 'A.IV.14 Suppliers' credit and credit insurance in development and developing countries' which included a commitment to consider the capacity to repay, and solutions for when

debt servicing difficulties emerged. The proposals on which agreement was reached, were general and non-committal as to precise technique. Several more proposals, including one for long moratorium periods, were described as “no more revolutionary than that of the UNCTAD itself” (UNCTAD, 1964a, p. 194). However, proposals were voted down by creditor countries. Resolution ‘A.IV.5 Problems of debt service in developing countries’ recommended that UN bodies and international financial institutions such as the World Bank and IMF, work with debtors and creditors whenever debt rescheduling is needed. Creditors vociferously disagreed with the possibility of cooperation between creditors, debtors and other bodies in debt resolution for fear of losing control. Debtors were urged to control their balance of payments and creditors countries were urged to increase the volume and improve the terms of financing to minimise debt service problems. This was adopted by 109 votes to none, with 11 abstentions.⁷ The French delegation, one of the abstainers, refused to agree, stating the motion risked institutionalising debt rescheduling arguing for case-by-case, arrived at by each debtor and each creditor (p. 74).

Resolution ‘A.IV.4 Terms of Financing’ addressed the difficulties arising from short repayment dates, high rates of interest and loan tying. By suggesting that creditor countries accept repayment of foreign loans in national currencies, over a longer period, or accept loan consolidation where necessary, Resolution A.IV.4 recommended for more grants instead of loans, a ceiling on interest rates of 3 percent, and for any tied loans to be repaid through debtor-produced commodities and manufactures. During the debate, creditor countries stated that caps on interest rates “did not conform with the principles of financial policy of their countries” and could not accept a general decline, for fear of a reduction of volume of lent funds (UNCTAD, 1964a, p. 182). The Conference adopted this Recommendation by a vote of 81 in favour to 9 against, with 25 abstentions. The countries that voted against were the main creditors and socialist coun-

⁷At UNCTAD conferences, how decisions are made is reaffirmed at the start of each conference and not all votes are recorded by country. Typically, country names are published only if a country representative requests a roll-call for voting on specific proposals, as was the case for certain proposals on debt issues.

tries.⁸ Another Resolution (A.IV.15)⁹ proposed a scheme for lowering the interest cost of loans by means of an interest rebate fund, a scheme an agency designated by the UN would study. A similar set of countries rejected and abstained from this resolution.¹⁰ Explanations for each vote were not provided; the UK – for instance – voted against most recommendations of the Third Committee without comment; in the case of the French delegation: “it did not contemplate participating in the financing of such a fund, if established” (UNCTAD, 1964a, p. 74).

4.1.2.2 UNCTAD II: 1968 - NEW DELHI

The Report of the Third Committee discussed a number of issues to alleviate the problems of external indebtedness. While certain creditors such as Denmark and Sweden appeared to have partly followed the recommendations by the UN GA regarding softer terms and longer repayment periods (Assembly, 1966), most creditor countries' statements did not much more than declare the necessity of linking terms of assistance to debt servicing capacity (Canada) and promised to achieve better financing terms (Germany). Others disagreed with demands that all lending be concessional as the G77 demanded in the Charter of Algiers because some donors themselves felt they were facing constraints in their financing capacity, but importantly, because this would counter the idea “the terms of assistance should vary according to the debt-servicing capacity of each developing country, and for this purpose developing countries could be divided into groups on the basis of their debt servicing capacity” (UNCTAD, 1968, p. 286). While de-

⁸By roll-call vote, voting against were Belgium, Canada, Federal Republic of Germany, Italy, Japan, Netherlands, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America, and the countries that abstained: Australia, Austria, Bulgaria, Belorussian Soviet Socialist Republic, Central African Republic, Czechoslovakia, Denmark, Finland, France, Hungary, Iceland, Ireland, Liechtenstein, Luxembourg, Monaco, Mongolia, New Zealand, Norway, Poland, Portugal, San Marino, South Africa, Sweden, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics (UNCTAD, 1964a, p. 44).

⁹This was titled “Scheme for lowering the interest cost of loans to developing countries by means of an interest rebate fund”.

¹⁰By a roll-call vote, the Conference adopted this recommendation with 82 in favour to 8 against, with 25 abstentions: Voting against: Belgium, Canada, Federal Republic of Germany, Japan, Liechtenstein, Netherlands, United Kingdom of Great Britain and Northern Ireland, United States of America. Abstaining: Australia, Austria, Bulgaria, Byelorussian Soviet Socialist Republic, Cuba, Czechoslovakia, Denmark, Finland, France, Hungary, Iceland, Ireland, Italy, Luxembourg, Mongolia, Norway, Poland, Portugal, San Marino, South Africa, Sweden, Switzerland, Thailand, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics (UNCTAD, 1964a, p. 51).

veloped countries agreed that the terms may have not incorporated longer-term developmental prospects into account, they emphasised that, “the precise causes and cures of the problem varied from one country to another and the problem should be dealt with on a case-by-case basis” (UNCTAD, 1968, p. 287). Suggestions for improvements were made, such as interest rate subsidisation of development loans and the introduction of a *Bisque* clause – a state contingent clause that was part of the loans given by USA and Canada to Great Britain and Northern Ireland in 1945. Importantly, the conference delegated expertise to outside organisations, such as the IMF and IBRD to take on the role of furthering “techniques of lending”. While the proposal submitted suggested that the IBRD should step in to address external debt difficulties, in the meantime, the IMF’s role as a central and mediating actor was gradually emerging (UNCTAD, 1968, p. 404). The statement by the IMF delegate noted that balance of payments problems were exacerbated by debt servicing difficulties, and that its role was critical in assisting both creditors and debtors. The requirements to sustain an adequate rate of growth was part of the discussed proposal, but no agreement about the mechanism to implement this recommendation could be made

The discussion brought into view the need for further study. The Third Committee considered the need for further economic analysis, the need to forestall and forecast debt problems and the importance of technical aspects of debt negotiations. Deepening knowledge on debt servicing capacity was as a prerequisite to improve the techniques of lending and aide the technical aspects of borrowing. This included the technique of how creditors’ raised money on the capital markets and on-lent as aid with subsidised rates. The IBRD was tasked with further study of the postponements or waivers of interest and amortisation in years with low foreign exchange receipts. There was an overarching agreement between developed and developing countries that further study was deemed necessary given the complexity of the “whole question of indebtedness” (UNCTAD, 1968, p. 302). Studies were needed to differentiate between the different types of debt and that could frame the issues within long-term considerations like debt servicing capacity, external trade and growth, as well as the terms and volume of aid. This included preventative measures, whereby “improved arrangements to forecast and forestall debt crises

are clearly desirable” (UNCTAD, 1968, p. 302). Developing countries “favoured the device of an early warning system and also the rescheduling of past debts on terms and conditions which would not interfere with an orderly implementation of development plans” (UNCTAD, 1968, p. 287). Developed countries also “supported the device of an early warning system” calling on the joint reporting systems of the IBRD, OECD and expertise of the IMF (UNCTAD, 1968, p. 287).

Further study of debt problems was seen in aide of the needed establishment of “general criteria” to guide rescheduling. The role of economic analysis was tied into the discussion around institutional arrangements. The institutional setting for dealing with debt repayment difficulties “may require review when the analysis of the problems has proceeded further and [...] arrangements for forecasting situations have been further developed” (UNCTAD, 1968, p. 302). When difficulties arise they should be addressed within the “framework of an appropriate forum, in co-operation with the international institutions concerned”, with agreements to alleviate excessive long-term debt burdens with a view to sustaining economic growth rates (UNCTAD, 1968, p. 302).

The need for further study found itself into the main resolution of the conference dealing with indebtedness: Resolution 29 (II) “Improving the terms and conditions of aid alleviating the problems of external indebtedness”. This was adopted by 63 votes to none, with 7 abstentions (UNCTAD, 1968, p. 40). It stipulated that financial assistance should be focused on grants or be on highly concessional interest rates with long grace and repayment periods. Besides the financing terms however, a substantial portion of the resolution was dedicated to advancing analytical understanding. The Resolution called for further study on “the determinants of debt-servicing capacity, with a view to establishing general criteria for settling terms for countries or groups of countries” (UNCTAD, 1968, p. 40). One issue was about development: “further analysis” on the “whole question of indebtedness”, should not to be “judged in isolation but in relation to the debt-servicing capacity of the country concerned, its external trade and its rate of growth” calling specifically for “improved arrangements to forecast and forestall debt crises” (UNCTAD, 1968, p. 40 - 41). The details of the uses of economic analysis are examined

in depth in Section 4.1.2.6 below.

4.1.2.3 UNCTAD III: 1972 - SANTIAGO

To the usual problems of inadequate terms of loans and insufficient volume of resources, developing countries emphasised the procedural aspects of debt rescheduling. Growing cases of repeat rescheduling indicated that they were ill-conceived. Debt relief needed to be considered in light of overall development plans rather than be confined to exceptional cases. Numerous abusive practices were mentioned, such as charging moratorium interest, the most-favoured creditor nation clause, and the hardening of overall terms (UNCTAD, 1973a, p. 231). In strongest terms yet the need to establish guidelines for rescheduling that safeguarded the equal treatment of countries in similar economic circumstances, was emphasised. The call for guidelines strengthened the need for a concomitant economic and technical analysis as a means to safeguard from political mishandling. Debt rescheduling should rely on economic factors alone, were increasingly vocal in the condemnation of the use of non-economic factors to guide restructurings and the deployment of debt problems to apply political pressures (UNCTAD, 1973a, p. 231), a point raised by Allende and others in the plenary meetings. The views over the usefulness and form of economic analysis was divided. A developed country representatives argued that worsening debt indicators were not in fact a problem as “no absolute value could be attached to various debt indicators” whereas others saw further study a worthwhile activity (UNCTAD, 1973a).

The creditors countered the idea that a study of general characteristics of indebtedness could yield general conclusions, stating that the responsibility for debt problems lay with developing countries themselves. Far from being general, they emphasised that debt problems were isolated cases of a few countries, and given the variety of reasons behind crises, solutions ought to be varied. They vehemently opposed “any suggestion of a generalised approach to debt relief”, not seeing the need to change any aspect of how renegotiations takes place and certainly no need for “the establishment of a special institution to deal with debt problems” (UNCTAD, 1973a, p. 232). The reason given was that institutionalisation would be detrimental to the credit rat-

ing of developing countries and result in decreased financial flows. They maintained that debt relief was for exceptional circumstances, and not a “legitimate form of aid” whereby new inflows could be permitted to refinance debt payments, as developing countries desired. Creditors pledged that their governments would be actively involved if and when the need arose, only on a case-by-case basis. Importantly, private and official debts should be addressed in strictly separate ways. This was in stark contrast to developing countries’ advocacy for a “creation of a special machinery under the auspices of UNCTAD to find practical solutions to debt servicing problems” (UNCTAD, 1973a, p. 231).

The Third Committee discussed Resolution 59 (III) submitted by developing countries, which the conference adopted by 74 votes to 14, with 17 abstentions (UNCTAD, 1973a, p. 89). This resolution attributed the worsening debt problems to hard terms, insufficient official aid, inflation in developed countries and international monetary turbulence. It condemned existing practise of debt rescheduling, which defeated the objective of rescheduling described as nothing more than “to make the debtor solvent and creditworthy”, calling on the need to revise procedural aspects of rescheduling (UNCTAD, 1973a, p. 90). The resolution made strong demands regarding framing: that debt relief was not just for crisis situations but was a general problem; that the practice of charging moratorium interest and most favoured nation clauses should be abolished; that countries in broadly identical situations should be treated the same; and that loan agreements should contain clauses to allow for state-contingent postponement of payments. This framing gave impetus for new criteria, new procedures and new institutions. The Resolution invited the TDB to “create a special body within the machinery of UNCTAD in order to find practical solutions to the debt-servicing problems of the developing countries, including, where necessary, international experts serving in a personal capacity” (UNCTAD, 1973a, p. 90). The Third Committee could not reach any agreement over the draft proposal, and was widely rejected by creditor countries.

All creditors disagreed with an institutional approach to debt crisis resolution. The Danes abstained from voting on the grounds that “debt-relief operations ought to be limited to exceptional cases, that the terms of debt relief should be decided on a case-by-case basis and that the

existing machinery for dealing with debt-relief operations is by and large sufficient” (UNCTAD, 1973a, p. 123). Similarly, the Federal Republic of Germany, could not vote in favour because it disagreed with institutionalising debt rescheduling and disagreed with uniform debt relief terms arguing that “its provisions would eventually lead to an automatic debt-rescheduling procedure” which would reduce borrowers creditworthiness, it was in their interest to maintain the case-by-case approach (UNCTAD, 1973a, p. 123). The UK voted against the Resolution as they did not agree with the institutional arrangements nor the similarity of treatment irrespective of country circumstance (UNCTAD, 1973a, p. 123), adding that it was “highly regrettable that the Conference should have had to consider a text which the developed countries were bound to reject”. The US too voted against, simply because “the resolution lack balance and there are many aspects which the United States cannot support” (UNCTAD, 1973a, p. 275).

The Conference Secretary nevertheless put together the financial implications that would arise from the “creation, within the machinery of UNCTAD, of the special body”. They assumed an institutional mechanism that would involve a meeting of approximately 12 experts to prepare approximately 200 pages, and cost approximately \$46,500 in 1973 (UNCTAD, 1973b, p. 274). This special body within the machinery of UNCTAD was primarily envisaged as an expert group acting in their own capacity, lasting two weeks to find practical solutions to the debt-servicing problems of developing countries and “organize consultations between representatives of developing debtor and developed creditor countries”. While not fully institutionalised, this laid the ground for the establishment of an Independent Expert Group on Debt that would pursue the analysis further (UNCTAD, 1973b, p.424).

4.1.2.4 THE FIRST INTERGOVERNMENTAL GROUP OF EXPERTS (IGE) 1974-5

The ad hoc expert group on debt issues was established in 1974 and held three sessions before preparing its final report in 1975. The final report “contained a set of agreed common elements for consideration in future debt renegotiations, which could provide guidance and contribute to securing equal treatment of debtor countries in similar situations” (UNCTAD, 1985, p.

95). On part of the Expert Group's recommendation, the TDB adopted Resolution 132 (XV), which endorsed many of the Expert Group's findings. It urged developed countries to take action to avoid debt problems, and, that should these occur, "renegotiations should be guided by the common elements identified by the Ad hoc Group of Governmental Experts" despite recommending that a flexible approach be taken if merited (UNCTAD, 1976, p. 200). The resolution called for immediate improvements of existing mechanisms also, such as allowing debtors to request ad hoc meetings for debt problems. The Resolution empowered the Secretary General of UNCTAD to participate in ad hoc arrangements and feed into the discussion of a debtor's situation in the context of its overall development "prior to the debt renegotiations in the usual form" (UNCTAD, 1976, p. 201). This effectively authorised UNCTAD, for the first time, to participate in Paris Club negotiations as an observer, on a similar basis to many other international organisations (UNCTAD, 1985, p. 95).¹¹ From this point on, but significantly in the 1980s, several countries requested assistance from UNCTAD with respect to preparation for Paris Club meetings, and negotiations with private creditors. This led to the establishment of the 'Debt Management and Financial Systems Analysis' (DMFAS) of UNCTAD and a host of technical work into debt management systems and support (Kalderen, 1989; Bank, 1989; UNCTAD, 2021).

4.1.2.5 UNCTAD IV: 1976 - NAIROBI

By 1976 the political debate in UNCTAD's Third Committee took clearer shape along two key themes: debt cancellation for the poorest countries, and, more broadly, development of guidelines for how debt reorganisations ought to be organised henceforth. In Nairobi, these two issues were discussed in two resolutions, largely divided along short- and long-run lines. Both relevant resolutions were adopted, but largely as indicators of political will to continue the discussion in other forums, given that agreement on common actions in any detail could not be found.

¹¹UNCTAD's right to sit in Paris Club negotiations as an observer was not immediately implemented. The Paris Club Secretariat was not aware and refused entry to UNCTAD in Peru's 1978 rescheduling and was only clarified in 1979 (Herman et al., 2010, p. 266).

Debt relief for the poorest was discussed under Resolution 98 (IV) on Least Developed, Developing Island and Land-Locked Countries. Although adopted without dissent, the three key paragraphs [para. 10 (d), para. 10 (e), and para. 10 (f)] which urged developed countries to cancel least developed country debts, give highly concessional terms of relief on other outstanding debts, and convert multilateral loans into highly concessional forms was deferred and remitted to the TDB (UNCTAD, 1977, p. 24).

With regards to long-run issues and establishing principles, Resolution 94 (IV) was adopted by the Conference without dissent in which “governments of the developed countries pledged themselves to respond in a multilateral framework” (UNCTAD, 1977, p. 17). This resolution set a deadline for the end of 1976 to agree to guidelines of debt reorganisation that could guide “future operations relating to debt problems as a bases for dealing flexibility with individual cases”. This Resolution called upon the ministerial session of the TDB in 1977 to review the progress and convene another Intergovernmental Group of Experts that could help with the review (UNCTAD, 1977, p. 17). The Resolution was discussed at the final closing plenary of UNCTAD IV, late one Sunday night. The French representative noted that the importance “of the agreement reached in the text adopted by consensus should not be minimized, because that agreement was the expression of a political will which would provide guidance in the search for the necessary solutions” (UNCTAD, 1976b, p. 198). Even this minimal indication of political will was not shared by all: the United States however, confirmed that the US approach “remained that of engaging in debt rescheduling in the framework of creditor clubs, only where there was some presumption of imminent default” therefore indicating no commitment to any search for guidelines (UNCTAD, 1977, p. 60).

The pressure continued outside UNCTAD. The GA in 1976 (Resolution 31/158) pressed for resolution to debt problems and called on the upcoming Conference on International Economic Co-operation (CIEC) conference to agree on “immediate and generalized debt relief” for the official debts of certain least developed countries. The GA also called “on the reorganization of the entire system of debt renegotiations to give it a developmental rather than a commercial orientation” (Assembly, 1976, p. 67). In doing so, the TDB was pressed to review the status and

discussion in other forums, and to come up with solutions.

4.1.2.6 CONFERENCE ON INTERNATIONAL ECONOMIC CO-OPERATION (CIEC) – OR NORTH-SOUTH CONFERENCE

The Conference on International Economic Co-operation (CIEC) was a forum for progressing matters on the “North-South Dialogue” held in Paris between December 1975 and June 1977.¹² It was a smaller conference than UNCTAD, socialist countries were excluded and only 19 developing countries (the G19) participated. There was enormous political resistance to framing the debt problem as part of North-South dialogue, as explained by the US Treasury Solomon who repeated that there was no debt problem per se, just problems to manage it (Goodman, 1978). As in UNCTAD IV, the debate was split along short- and long-run lines.

Developing and developed countries put forward position papers on short- and long-term issues. On short term issues, the G19 started negotiations with a similar draft to UNCTAD IV, proposing a one-off debt relief on official debt to all least developed countries, conversion of bilateral debts into grants, new financing from multilaterals, a re-computation of outstanding stocks at IDA terms, and consolidation of commercial debts over a minimum of 25 years (G77, 1977). The priority was least developed, land-locked or most seriously affected countries but was suggested this could cover other countries seeking relief too. Sweden put forward the counter proposal which included a political commitment to more ODA, with each creditor seeing for itself what it could or could not do: if debt relief could not be given, then additional ODA, preferably untied should be given (Annex II in Secretariat, 1977, p.2). The CIEC conference did not yield any consensus, instead, the creditor countries offered \$1 billion for certain low-income countries, and made a concession by allowing for the possibility of aid to be provided as debt relief.

The G19 argued that debt reorganisation be intimately tied into the vision for a NIEO and debt restructuring be seen within the context of development targets. The reason they gave

¹²For further information on the CIEC conference, see ODI (1976).

for not restricting debt relief to instances of crisis was that this penalised countries “that have been forced to abort their development programmes in order to service their external debts” and called for action at “an early stage of emerging difficulties” (Annex III in Secretariat, 1977, p. 1). Debt relief, as they argued, needed to incorporate a long-term vision of increase repayment capacity over time. This required a suitable institutional framework to guarantee the equity of creditors and debtors alike, with a commitment from both sides to follow commonly agreed general principles, applicable in all situations.(Annex III in Secretariat, 1977, p. 1). With respect to long-term issues and development of principles of debt rescheduling, there was a need for analysis of the country’s long-term situation, and an analysis that considered goals and strategy while respecting socio-economic objectives.

The G19 argued that the relevant economic analysis needed to include four features: first, long-run capital requirements and debt projections, second, an analysis of causes of debt problems which included international factors and policies of other countries as well as domestic issues; third, a means to ascertain which combination of finance, rescheduling and other policy actions would most quickly achieve the targeted development path (Annex III in Secretariat, 1977, p. 3). The fourth issue was that economic analysis needed an appropriate institutional context for which to “convene, organize and supervise reorganization operations in accordance with internationally agreed principles and procedures” (Annex III in Secretariat, 1977, p. 3). They urged international financial institutions and UNCTAD to work out the details in order to establish the necessary machinery in 1977.

From the creditors’ side, the European Economic Community (EEC) and USA put forward a joint proposal radically opposed to the position of the developing countries, that sharply distinguished between how to handle situations of imminent debt default, from those with longer term debt problems. They therefore proposed different guidelines for the two categories. A situation of imminent default was characterised by the fact that “it cannot be remedied, in the short-term, by appropriate internal and external adjustment measures which the debtor country can realistically be expected to take” (Annex III in Secretariat, 1977, p. 4). With debt rescheduling as a last resort, they repeated the dictum of case-by-case and in creditor clubs, im-

plemented via an IMF programme with a vague promise to take long-term development into account. Their objective was clearly about normalising repayments, rather than development goals. Their approach summarised the de facto creditor consensus that had emerged in the Paris Club: short consolidation periods, exclusion of short term debts, ignoring the entire stock, emphasising inter-creditor equity, and isolating private debt to be addressed separately on terms assumed similar to the official terms (as covered in Chapter 1). As the creditors' view however emphasised that indebtedness per se was not a problem, in the case of long-term problems, they suggested debtors focus on domestic resource mobilisation, while creditors provide financial aid on terms appropriate to the country, and technical advice and assistance for debt management.¹³

Accompanying these policy positions was a concomitant format for economic analysis that differentiated between imminent default and long-run issues. Imminent default cases were to be dealt with as balance of payments problems, relying on short-run calculations of the financing gap estimated by the IMF when arranging its programmes. For longer-term situations, as the country was not facing "imminent default", there was leeway for appropriate adjustment, and so the analysis of the general economic situation of a country for debt reorganisation would include measures of effectiveness of the country's use of both domestic and external resources, monitoring debt accumulation and management, and analysis of estimates of capital requirements and projected availabilities, including whether ODA was in the appropriate form. The IMF would assess the countries policies (exchange rate, fiscal and monetary), and use this analysis so that if development prospects were constrained, donors and the country would urgently meet, possibly through consultative groups or consortia, but on an ad hoc basis. With the IFIs taking the lead, the IBRD was suggested as the institution that would submit a report for all parties to examine. While it was clear that both sides disagreed with one another, there was at least a clarification of the issues that needed consensus before any detailed guidelines could be worked out. An operational system of guidelines could be feasible if there was consensus on the following questions (Secretariat, 1977, p. 9 - 10):

¹³Following TDB Resolution 165 (S-IX) UNCTAD took on the provision of technical expertise during negotiations, and in 1979 extended its first technical assistance project on external debt (Cosio Pascal, 2010).

1. How would debt procedures be instigated, and hence commit the parties involved?
2. What would the goals of the renegotiation process be? If restoring an agreed development path was the goal, guidelines should stipulate concrete quantitative measures.
3. What should the duties and rights of debtors and creditors be and what was the shared responsibility?
4. How could a balanced institutional framework be created to ensure the discussions and analysis was not prejudicial to any participant?

This discussion was not conclusive, but its main themes were taken up by the second Intergovernmental Group of Experts (IGE).

4.1.2.7 THE SECOND INTERGOVERNMENTAL GROUP OF EXPERTS (IGE)

The second Intergovernmental Group of Experts (IGE) was put together to address and progress the elements from UNCTAD IV on which there was insufficient consensus. The IGE elected a representative from Pakistan as its Chairman, a representative from the USSR as its Vice Chairman and a representative from the Federal Republic of Germany as its Rapporteur. There were 26 members represented in the IGE, with an additional 5 members as representatives, including representatives from ECOSOC, IMF, African development Bank, EEC, IADB and OECD. The IGE had before it a document prepared by the UNCTAD secretariat summarising the debt renegotiations that had taken place since UNCTAD IV, framing more forcibly that there was neither any “permanent international institution competent to receive requests for debt relief” nor were there any “internationally-accepted guidelines to guide debt reorganizations” (Secretariat, 1977, p. 5). The UNCTAD secretariat started the second session of the IGE in December 1977, distilling the basic elements of the discussion in the first IGE: setting criteria for debt reorganisation and agreeing objectives would be to the benefit of all, and defining the scope of economic analysis to be carried out was integral to this. The realm of economic analysis seemed to be the arena in which there was at least some consensus, at least insofar that some notion of development

should be incorporated, and should include the factors that impinge upon the ability to service. They discussed how they could conceive of an analysis that could incorporate longer term objectives. They discussed working out concrete aspects of this that would reflect the commonly agreed norms between debtors and creditors, and act as a “model” that could be replicated in other circumstance and serve as a template in future debt renegotiations.

The IGE published its final report on in December 1977, in which there was a close comparison of common elements between debtors and creditors, together with a presentation of divergence. Disagreement remained as to whether to distinguish between cases of countries and what framework and objectives should guide the reorganisation. Experts from developed countries thought that existing mechanisms were adequate and cases arising were resolved satisfactorily. They reiterated the fundamentals of the US/EEC proposal at CIEC, insisting that “what were often referred to as debt problems were really balance-of-payments problems” (of Experts, 1977, p. 7) for which domestic management was partly responsible; and that any generalised debt relief would raise difficulties for others. To the contrary, developing country experts argued that the small diminution in reschedulings of recent years were down to great development sacrifices that were being made to avoid default that dampened the appearance of problems. The “absence of any permanent international institution competent to receive requests for debt relief and the absence of any international accepted guidelines for debt reorganization were all factors leaving developing countries dissatisfied with the existing machinery” (of Experts, 1977, p. 3). Developing countries analysed the deterioration in international conditions and the general negative impact on developing countries, leading them to argue that debt problems had general causes hence needed general solutions. Inappropriate financing; very short maturities creating bunching and liquidity shortages rather than “bad management” were to blame, condemning the rise of strict conditionality.

The IGE’s report was to inform the TDB 9th special session second part in January 1978 and would form part of the follow up from UNCTAD IV’s Resolution 94 (IV). The outcome of the IGE’s work was important contributor to the TDB Resolution 165(S-IX), an important decision (discussed again under UNCTAD V) for it recognised the existence of common

ground on key issues such as creditors responsibility to respond “promptly and constructively, in a multilateral framework” to deal with debt-servicing difficulties of developing countries, including that creditors to retroactively change the terms of past bilateral assistance (or equivalent measures) to improve net flow of resources (UNCTAD, 1978, p. 43). Resolution 165 (S-IX) agreed in March 1978, stated the common aspects and the divergences between creditors and debtors and this included that the debt problems would be considered “in an appropriate multilateral framework consisting of the interested parties, and with the help as appropriate of relevant international institutions to ensure timely action, taking into account the nature of the problem, which may vary from acute balance-of-payments difficulties requiring immediate action to longer term situations relating to structural, financial and transfer-of-resources problems requiring appropriate longer term measures” (UNCTAD, 1978, p. 43). The Resolution also committed action to be taken that was in accordance to the “country’s economic and financial situation and performance”, “its development prospects and capabilities”, and to incorporate the “internationally agreed objectives for the development of developing countries”. The objectives of debt reorganisation were understood by all sides to “protect the interests of both debtors and creditors equitably in the context of international economic co-operation”(UNCTAD, 1978, p. 44-45). How these ideas were to be put into practice so that future restructurings would follow them was to be continued through the work of UNCTAD.

4.1.2.8 UNCTAD V: 1979 - MANILA

During UNCTAD V, the implementation and action pursuant to the TDB Resolution 165(S-IX) were discussed, regarding both Section A, which was about immediate alteration of terms on past loans, and Section B, which was about the guidelines for future renegotiations. Following from Resolution 94 (IV), the issue of debt was taken up in the TDB through Resolution 165 (S-IX), which led to some positive actions by the creditors. For both Section A and Section B of the resolution, the G77 had something to commend about the actions of developed countries. However, with respect to Section A: they deemed implementation was not consistent, and

coverage was selective, urging all creditor countries to take steps immediately. With respect to Section B: the G77 acknowledged their agreement with the procedures and objectives laid out in intergovernmental group of experts (UNCTAD, 1981, 157).

As already highlighted by the efforts of the two IGE, there was complete divergence on the issue of analysis as this arose from a different diagnosis of the problem. Developing countries made their case against the separation of economic issues and fragmented analysis that creditor countries proposed. While both sides understood that structural issues merged with acute balance of payments problems in a crisis, “Nonetheless, experts from developed countries maintained that debt problems were in essence—and self-evidently—either longer term structural problems [or] acute balance-of-payments problems, and that even when they were combined in a particular situation the two aspects could be treated quite separately and independently” (UNCTAD, 1981a, p. 198). Developing country experts disagreed and felt “that it was quite unrealistic to compartmentalize a country’s debt and development problems in such a way” (UNCTAD, 1981a, p. 198). Furthermore, they argued that any means to address balance of payments problems without a view to underlying development issues were bound to fail (UNCTAD, 1981a, p. 198). The different types of analysis bore upon the different institutional setups to address them, and as there no agreement over institutional issues either, there was little progress overall. There was little common ground for both sides to place confidence in any machinery created.

With respect to the expertise: “the institutional arrangements should bring expertise to bear which is respected by all parties and designed to ensure timely action with the assistance of relevant international institutions” (UNCTAD, 1981a, p. 199). One way developing countries proposed this could take place was through the GA, by forming an independent debt commission. There were suggestions as to how the existing creditor clubs could be gradually transformed, into a multilateral mechanism. For instance, one proposal was to enable debtors to choose the chair of the meetings, and rely on UNCTAD or others to help prepare the meetings in such a way so as to indicate how the reorganisation could best serve development goals. At UNCTAD V, the Conference decided to remit to the permanent UNCTAD machinery the

discussion on debt that had been made in the TDB, which was split along short and long-run lines.

The monetary and financial resolutions passed at UNCTAD V were predominantly about aid and ODA commitments rather than specific proposals on debt issues. As stated, on issues of international cooperation, “Agreement on appropriate institutional machinery would make a significant contribution towards fulfilling the intent of Board resolution 165 (STX) and would serve to strengthen the present arrangements for international financial co-operation in an area of increasing importance” (UNCTAD, 1981a, p. 199). Not much progress was made though. On the eve of the debt crisis, persistent attempts for resolution were continually refused by the creditors, with only marginal concessions gained. Thus, by the start of the 1980s, there had already been a fifteen year old battle for better terms to debt resolutions. The creditors refusal was not for lack of not seeing the problem, as the extensive efforts that lenders went to predict repayment difficulties covered in Section 4.2 below will reveal.

4.2 THE RISE OF EMPIRICAL MODELS OF SOVEREIGN RISK ANALYSIS

While in the political debate, there was no agreement on the form or role of economic analysis, creditors across the board agreed that better techniques to guide lending and predict default were needed. Increased lending to developing countries created the impetus to advance techniques to better understand debt repayment difficulties. During the political turmoil described in Section 4.1, a variety of analytical ways to examine a country’s debt developed, each of which faced its respective obstacles. In Section 4.2.1 we examine the new empirical models of the 1970s and in Section 4.2.2 the integration of new techniques by the private financial sector. Finally, in Section 4.2.3, we cover the broad debate between lenders on new economic techniques. Before this however, we will provide a brief overview of the changes underway.

As evidenced in Chapter 2 and 3, Avramović and his team concluded that in the short-run, various factors impinged on the ability to repay debts but that ultimately, in the long run, on domestic savings and growth. Debt financed structural change would gradually increase re-

payment capacity as the country reached its target rate of growth. However, growing question marks over the use of a fixed ICOR that underpinned this line of thinking further undermined this mode of analysis. Likewise, the project-focused view faced its own analytical challenges. The comparison of rates of return with the cost of borrowing faced difficulties when considered at the country level. While this view favoured financing investment over consumption, as development planning models developed, it became clear that development projects had long term, social benefits not amenable to straightforward financial calculation. This formed part of a simmering debate over ‘shadow prices’ (Little and Mirrlees, 1969).¹⁴ There was a growing dissatisfaction with the myriad complications over calculating rates of return, and as explained by Jalan, this led to the interest “of the aid givers in relating terms to debt-servicing capacity has naturally shifted to the overall macro-economic prospects of the borrowing country” (Jalan, 1970, p. 237).

This was part of a notable shift during the 1970s towards looking at debt problems as predominantly short-term, balance of payments problems.¹⁵ This perspective gave easy credence to the view that debt problems arise from debtor mismanagement, and hence are amenable to domestic conditionality. This approach was embedded in the thinking of the IMF, arising from the work of Jacques Polak and the monetary approach to the balance of payments (Polak, 1957). Throughout the 1970s however, it became more closely referred to in debt discussions and was more widely shared. The debt-service ratio was a quick way to ascertain short-run balance of payments pressures and remained in use. Using it to judge repayment capacity despite the known problems discussed in Chapter 3, and to set terms of the loans conflated different aspects of the problem.

During the 1970s, the increasing exposure of northern banks to developing countries stimulated the need for further study and knowledge exchange. Creditors poured efforts into

¹⁴Development planning was the subject of a great number of works: Bhagwati and Eckhaus (1972); Blitzer et al. (1975); Chenery (1971); Dasgupta et al. (1972); Hagen (1963); Squire and Van Der Tak (1975).

¹⁵Balance of payment problems were an concrete component of the World Bank’s early thinking of development loans, and formed part of the early turf wars with the IMF who considered balance of payments strictly its purview (Alacevich, 2016).

the development of analytical techniques. Creditors also converged to discuss legal aspects of international lending and exchange opinions and practices over the technical and legal aspects of borrowing (Rubin, 1971). One observation from 1971 stated that variety of purposes of international lending, but also the multitude of techniques used may prejudice the objective of economic development, raising the importance for coordination. Mayo and Barrett, modellers from the US Export-Import Bank (EXIM) noted that “it is somewhat surprising to find only three major studies which rigorously attempt to apply this principle to the problems of assessing country credit risk” (Mayo and Barrett, 1978, p. 82). Despite the growing alarm that increased exposures to developing countries was posing to regulators, politicians, commercial lenders and security analysts all at once (Goodman, 1978), there was no commonly held view about the relevant economic analysis. This contributed to the view that the state of economic knowledge on the subject needed to improve. As will be described below, despite known problems of relying on short-run indicators, new empirical techniques focused predominantly on short-term indicators of prediction. As argued by Jalan, a member of the Pearson Commission on International Development, using a set of debt indicators to set loan terms suggests “that the developing countries have a debt problem, but in that they have a development problem” (Jalan, 1970, p. 237). The vision for low-return, but long-term financing undermined the rationale of the balance of payments view.

While creditors agreed more analysis was needed, the material presented in Section 4.2 shows that they were in fact broadly worried about a general problem rather than isolated cases as stated in the political debate. All empirical models showed there would be increasing problems ahead. They built up a technical capacity as a protective feature against uncertainty. The empirical effort described here is revelatory both of the growing concern for lenders and simultaneously revealing of the form of technical expertise that developed.

Table 4.2: Timeline of Key Empirical Developments in Country and Sovereign Risk Analysis.

Type	Publication	Institution	Main Issues
Empirical models	Frank & Cline (1971)	US AID	DSR & other short-term factors
	Feder & Just (1976)	Giannini Foundation	DSR & long-term factors
	Mayo & Barrett (1978)	Export-Import Bank	Inflation; not the DSR
Creditors	Survey by EXIM	Banking Sector	Mixture of fully qualitative; structured qualitative; checklist
		World Bank	No set creditworthiness formula, focus on domestic management
		IMF	Balance of payments & adjustment potential
Financial Journals	Euromoney (1978)	Euromoney	Inaugurates Country Risk League Table based on spreads
	Institutional Investor (1979)	Institutional Investor	Country Risk rating based on questionnaire

4.2.1 MEASURING THE TEMPTATION TO DEFAULT

Henry Wallich, a member of the Federal Reserve Board of Governors, addressed a conference focused on analytical techniques of international lending, stating that the analysis of country risk is slippery. “Practitioners of this activity are the first to point out that analysis of country risk is not a science. I hesitate to call it an art; perhaps it may be dignified with the term “craft”” (Wallich, 1978, p. 15). Across a number of lending institutions, the priority shifted to predicting repayment problems and devising techniques useful to policy makers given the growing risks of increased exposures in developing countries. In this period, country- sovereign-political risk and empirical estimates of repayment likelihood were part of a common discussion across private financial actors, regulators and development institutions. Table 4.2 summarises the most important empirical models and elements of this effort that is examined Section 4.2.1.

The first paper to quantify debt repayment difficulties came out of the US development agency. The US AID’s Office of Program and Policy Coordination produced a classified report in 1968 to examine debt servicing problems and how this would affect US policy, which had

started to harden its terms of development assistance after 1964. This was subsequently published as Frank and Cline (1969) and Frank and Cline (1971). The motivation for the paper, as the authors explained, was that “It would be extremely useful for policy makers to have some indication of the difficulties which less developed countries are likely to have in the future” (Frank and Cline, 1971, p. 329). The reason was to enable creditors to judge the likelihood of repayment before lending on hard terms. The authors were colleagues at Princeton and worked together at the USAID’s Summer Research Program. Frank began his career in Kampala as a Lecturer, moving to Yale 1965-67 as an assistant professor and Princeton in 1967. By 1968, he was Assistant Professor of Economics and International Affairs, and worked on development planning with a focus on Sub-Saharan Africa. Since 1966, he had worked as a consultant with USAID Summer Research Program (Frank and Cline, 1971). Cline received his first degree from Princeton (1963), and his PhD from Yale in 1969. At the time of their publication, he was Assistant Professor in Economics at Princeton (1967-1970), and had worked on developing countries, with a focus on land reform. At USAID’s Summer Research Project in 1967, he worked under Thomas Gewecke, a Program Economist at USAID who co-authored the classified report but was not part of the subsequent publications.

The authors hoped to devise “an index or indicator of the likelihood that a less developed country will experience debt servicing difficulties” that should be both simple to construct and be a good predictor of default probabilities (Frank and Cline, 1971, p. 329). They started from the relevant variables that affect debt service that Avramović identified, and decided upon eight relevant variables, including the debt-service ratio, and covered 26 countries over a nine-year period (1960 – 1968). Some of the countries they examined faced debt repayment difficulties and their debts rescheduled during this period.¹⁶ They wanted to determine which of a series of commonly used indicators were better predictors. To do so, they assumed countries belonged to one of two populations: if a critical threshold is surpassed and a country needs rescheduling, the country belonged to a ‘defaulting population’. Their method was a modification of discriminant analysis using a composite index of a vector of observations of debt servicing capacity, trac-

¹⁶ Argentina, Brazil, Chile, Ghana, India, Indonesia, Turkey, and the U.A.R.

ing how each indicator for each country developed. They aimed to find the critical value of this composite index such that if the index was above or below some critical value, the country came from the defaulting or non-defaulting population. Using a Bayesian procedure, they searched for the function such that type I and type II errors were minimised. Their results suggested that three variables were significant at the 5% level: the debt-service ratio, the amortization-to-debt ratio and the imports-to-reserve ratio.

Having identified which variables ‘matter’, the second part of their exercise was to make projections of key variables regarding debt evolution until 1992.¹⁷ The paper concluded that good prediction rates were possible even if reliant on only a few factors. Based on existing trends, they estimated that several countries would seek debt relief, and some would face serious problems as many countries already had favourable terms and so further easing of loan terms would not make much difference (p. 344). Their study was praised as “pioneering” by subsequent analysts, despite several technical weaknesses (Mayo and Barrett, 1978). Gone were the days of only “verbal arguments” (Feder and Just, 1977a) – Frank and Cline were praised as the first to offer a quantitative measure of relative importance of determinants of servicing difficulties (Feder and Just, 1977a, n. 1).

Following in Frank and Cline’s footsteps were Feder and Just (1976-7) who worked together in California, Berkeley and made the next substantial contribution. With a degree from Tel Aviv in Economics and Development Studies, Feder received his PhD in 1976 from Berkeley on the topic of ‘Default Risk Indicators in International Borrowing’ (AEA, 1976).¹⁸ He was engaged in the theoretical literature on international borrowing, that was described in Chapter 3 (Section 3.2.2), as well as in empirical estimations of servicing difficulties.¹⁹ His advisor, Richard

¹⁷They make projections using assumptions on existing compositions of debt as indicated in the IBRD data system, and under a few different scenarios regarding export growth.

¹⁸He started at the World Bank in 1982, spending much of his career there, with an emphasis on agriculture and natural resources.

¹⁹Feder had written a theoretical paper on international borrowing with Uri Regev who worked on Resource Economics. Regev, with a degree from the Hebrew University and PhD from Berkeley in agricultural economics in 1968, focused for a large part of his career on the economics of pest control, but in 1975, they co-authored “International Loans, Direct Foreign Investment, and Optimal Capital Accumulation” (Feder and Regev, 1975) that drew directly from the intellectual tradition of optimal growth-debt models of Bardhan and Hamada (see Section 3.2.2).

Just, was appointed at Berkeley through the Giannini Foundation of Agricultural Economics, himself a student of George Kuznets, brother of the Nobel Laureate (Johnston and McCalla, 2009).²⁰ With a first degree in Statistics, he earned his PhD in agricultural economics in 1972 at Berkeley.

Feder and Just aimed to make methodological improvements to the work by Frank and Cline. They developed the means with which to choose the relevant economic variables needed to identify repayment likelihood of borrowers, They examined countries between 1965 and 1971, and identified 21 observations of default by 11 countries, with default taken to mean any delayed or rescheduled payments on public and publicly guaranteed foreign loans sourced from Bitterman's study (Bittermann, 1973). They used logit analysis, which assumed that a specific event takes places after variables pass certain thresholds, and based on statistical tests, they ascertained which indicators were most relevant. The total number of countries represented in their study accounted for approximately 80% of outstanding developing country debt. To the indicators included in Frank and Cline, they added capital inflows and per capita domestic product. Their results showed six as opposed to three variables as being significant, and to the three in Frank and Cline, were added indicators that showed long-term dynamics such as export growth, per capita income, as well as the capital-inflows-to-debt-service ratio. This result was important for it brought in long-term factors which they argued made their results "consistent with arguments advanced by Avramović (1964) and Mikesell (1962)" (Feder and Just, 1977b, p. 36). In contrast to Frank and Cline, whose findings showed only short-term factors as being relevant, they argued that their estimation tried to capture long term growth, which as Avramović (1964) argued, was the only limiting factor in the long term. When comparing the performance of their model to Frank and Cline's, they found that theirs yielded less errors in a greater number of observations. Feder and Just also created estimates of probability of default based on current economic conditions, stating the importance of their study for the policy of lenders and borrowers.

²⁰The Giannini Foundation was an important site for agricultural economics, resource economics and study of commodities, among other specialisations. It operates across the entire University of California with member departments of agricultural and resource economics from Berkeley and Davis, including non-academic partners and the departments and faculty related to the Environmental and Natural Resources Economics program at Riverside (Johnston and McCalla, 2009, p. 2).

The third main formal econometric model on creditworthiness and default prediction was developed in the US Export and Import Bank (EXIM) by Mayo and Barrett (1978). The model built on the previous two studies but extended the analysis to include more countries over a longer period, incorporating additional variables, and a broader measure of repayment difficulty. Being a lender, they were able to include not just multilateral rescheduling but experience from servicing difficulties on their own claims. They identified 50 variables for 48 countries over 1960-1975, and included debt projections up to 1980. Their dataset included approximately 40000 observations, with the sample covering up to 93 percent of outstanding developing country debt at the time (Mayo and Barrett, 1978).

They redefined the measurement of rescheduling to “include a rescheduling up to five years hence” (Mayo and Barrett, 1978). Their main methodological innovation was to make the model “forward looking” by predicting up to five years in advance. In their study, the dependent variable may take on one of two values depending on whether a rescheduling will occur sometime within five years or not. This really was an early warning model, and as the authors’ argued, possibly the first of its kind. Their forward-looking approach extended “predictive power to a time horizon of five years” which obviated “the need to project or to lag the explanatory variables” as in the previous studies and which they argued could “seriously bias the model results” (Mayo and Barrett, 1978, p. 87,83,86). To be comparable with the other two models, they presented results that included only multilateral rescheduling. The sample for their comparable logit model included 48 countries, 28 instances of rescheduling by 11 countries, 2.5 times the observations in Feder and Just (1977b). They used statistical criteria to choose the variables to estimate the model, seeing whether dropping variables changed the predictive capability of model (summarised on p. 85 Mayo and Barrett, 1978). The six variables chosen for the final re-estimated model were the ratio of debt outstanding to exports, international reserves to imports, imports to GDP, reserve position at the IMF to imports, gross fixed capital formation to GDP, and the percentage change in the consumer price index. Despite the decreasing real value of debts caused by the inflationary period of the 1970s, the model showed that countries would run into trouble, either because of key export price collapse (e.g. with Chile, Peru, Zaire, Zam-

bia mentioned), or because of very low income with long-term debt problems (Bangladesh and Pakistan were identified) and those where economic mismanagement was a problem . In sum, problems were predicted across a range of countries.

One important different with previous models was that they dropped the indicators that had previously been most important: the debt-service variables “because of their poor statistical performance and mixed results over a large number of estimations” (Mayo and Barrett, 1978). Given that the existing literature had described the debt-service ratio as “one of the most common rules of thumb for credit-worthiness evaluation” this was controversial (Feder and Just, 1977a, p. 27). Another important finding which broke from the past, was the inclusion of the inflation rate which ended up being significant: higher domestic inflation meant a likelier debt service difficulty (Mayo and Barrett, 1978, p. 85). Although one of the previous authors, Cline, praised EXIM over the use of logit analysis over his own use of discriminant analysis, he nevertheless held “serious reservations about the exclusion of the debt-service ratio in the EXIM bank model. This has been the single most important explanatory variable in past efforts including the Frank and Cline model” and disagreed with the rationale for its exclusion (Goodman, 1978, p. 99).

All three efforts were motivated to bring results that “are obviously useful” (Feder and Just, 1977a, p. 36) for international financial lenders and were developed in aide of guiding lending. All three models predicted increasing problems on the horizon. As shown in Section 2.1 these empirical efforts were not disclosed as part of the political debate. While the importance of developing models for policy was clearly stated, the knowledge these empirical efforts generated did not convince the creditors to change course with respect to better means to resolve debt crises. For the EXIM bank, the model would directly feed into their lending. All three efforts were motivated to bring results that “are obviously useful” (Mayo and Barrett, 1978, p. 87). This would bring about a broadening of application of these new techniques to assess repayment prospects, and not an abandonment of its qualitative approach completely, but rather an approach that would combine qualitative techniques and econometrics. These studies found broader reach in the 1970s. The Overseas Development Council applied both the Cline and the

Feder and Just model to 1976-77 forecast data for 25 countries. Models were seen as providing “a background” from which further study would be warranted. The different results found by the models shows that the efforts to develop predictive models stumbled across numerous obstacles to do with specification, and would assume certain structural aspects of the world economy to stay the same (Angelini et al., 1979).

Beyond the empirical advances, this section also showed that the development of models could serve very different objectives. For debtors for instance, development of economic models was a means to protect against political man-handling in renegotiations. At the same time, for creditors, models were used to improve decision-making and maintain their room for manoeuvre.

4.2.2 REORIENTATION ACROSS THE FINANCIAL SECTOR

While domestic credit ratings came about at the turn of the twentieth century, it was not until the globalisation of international capital markets in the 1970s that this effort of global ratings expanded (Sylla, 2002). This developed into country or sovereign risk analysis but during the 1970s was common ground across development actors and private finance concerned with repayment prospects. The effort to improve on techniques to guide lending gained pace as private as well as public financial institutions developed in-house ways to assess country-risk and their exposures. Providers to the financial sector such as popular investment magazines also contributed.

A crucial catalyst in furthering the analytical discussions and encouraging the cross-institutional dialogue was EXIM Bank, whose objective was to promote US exports by supplying credits, guarantees and insurance, on hard terms. They had longer experience than private actors in lending to developing countries, even as their exposure, like that of private lenders, increased greatly during the 1970s. Export credits on hard loans were a frequent source of problems developing countries sought solution to as mentioned in UNCTAD discussions (Section 4.1 above). A great effort to reorganise EXIM during the latter half of the 1970s took place with a view to

improving its portfolio and credit exposure analysis. Beginning in 1976, EXIM re-oriented its vision, its practices, and systems in place in order to advance risk management overall.

As no-one really knew how the private banks were evaluating their rapid increase in foreign loans, EXIM Bank actively opened up a common ground for exchange. The Federal Reserve began to conduct investigations into how banks monitored their foreign lending (Sargen, 1977) with the Committee on Foreign Lending of the Federal Reserve System conducting informal surveys in 1977. It found that US banks “are devoting considerable resources to improving their country analysis”(Angelini et al., 1979, p.135), confessing their “own ignorance”, as banking techniques were “not generally known” (Blask, 1978, p. 66). EXIM bank also surveyed 37 commercial banks about the organisation and technical aspects of managing their foreign loan book. It turned out that most banks were actively seeking new techniques for country appraisal.

The results of their survey surprised EXIM: 11% had no procedures in place, and the remaining 89% used a range of techniques, from fully qualitative to formal checklists (Blask, 1978). The qualitative approach relied on a country report which provided an overview of economic and political developments in the country they loaned to. No comparisons or rankings were possible. The most widely used ‘structured qualitative’ approach had a uniform format applied across countries, including specific economic statistics to be compiled; it lent itself to some kind of summary statistic including projection of a future trend and the standardised format facilitated cross country comparisons. The most quantitative approach was the checklist system, used by approximately 14% of banks surveyed. The end result of this approach was an overall assessment of economic performance that was summarised in a single letter or number. The accuracy of the summary score could be evaluated in terms of its performance, even though, only one bank in fact did check its performance. Only one bank was actively experimenting with more advanced quantitative techniques (Blask, 1978, p. 69). EXIM itself, as a follow-up to its survey, took it upon itself to test the banks’ existing system and its own checklist approach to ascertain how effective they had been in predicting cases of default. Out of the seven checklists tested, only one was partially successful, and overall their predictive ability was poor. The reason EXIM cited was that inclusion of criteria and variables was arbitrary, bolstering their view

that empirical studies (examined in Section 4.2.1) which employed “sophisticated mathematical techniques” avoided cherry-picking variables (Blask, 1978, p.69). This is not to say that they ignored the drawbacks of the checklist method, such as the fact that empirical models were “time consuming, expensive, and have their own limitations” (Blask, 1978, p. 69).

The use of these tools varied widely within the banks. Regardless of the method employed, the most common use of these studies was to provide briefings to senior management. They were, in combination with other factors, used to help determine limits on country exposure, but not in terms of hard ceilings. Further still, these methods were not used, in any instance, to set the terms of the loans to match repayment capacity: “none of the banks in the survey use the country evaluation results in determining interest rates” (Blask, 1978, p.70). The rationale provided was that loans, as products tailored to each client, required a unique determination based on a variety of factors. In contrast, EXIM bank incorporated the results of its own model in a far more instrumental way, by using to guide setting of insurance and guarantee fees.

Financial journals, writing for the financial sector, also developed their own techniques. The first popular financial journal to do this was *Euromoney*, which published a simple ranking mechanism in 1978 based on countries’ average weighted spreads presented in an annual country risk league table (Bance, 1978). This credit rating system tried to capture how changing market conditions would be reflected in each country’s spreads. They converted their numerical data into a system of seven stars, covering initially twelve countries, and showed that since 1976, spreads had fallen and maturities increased in a small number of countries. This approach provoked outcry by many of its readers as correspondents objected to its calculation (Heffernan, 1986, p. 31). For instance, a Canadian IMF staffer joked that his country was ranked under others he thought his country’s credit rating far exceeded in the Euromoney system. General outcry prompted *Euromoney* to revise its methods of calculation some years later (in 1982).

Institutional Investor was the second financial press provider to set up a country risk rating table, first compiled in September 1979. This took a different approach to its competitor and used a questionnaire sent to bankers to grade creditworthiness on a scale of zero to ten. “In all, 1010 banks responded to our questionnaire, which was mailed at year-end. ... Bankers were

not permitted to rate their home countries” (Institutional Investor, 1980, p.63). Answers were weighted “using an Institutional Investor formula that properly gives more weight to responses from banks with the largest worldwide lending exposure and the most sophisticated country analysis systems”. Although they praised it for being “the most comprehensive and representative sampling of bankers’ views on country creditworthiness in existence today” this yielded public outcry (Institutional Investor, 1980, p.64). The public was left in the dark about how the weighting took place, it was simply called the ‘banker judgement approach’, but nevertheless, they reported sensationally on what bankers thought. That the United States was not ranked first was called “ratings’ biggest bombshell” and a “telling sign of bankers’ jitters” (Institutional Investor, 1980, p.64). By the third time round, the magazine reported how countries slid up and down the ranks. In September 1980, a short period before the onset of the debt crisis, they reported on Mexico’s oil wealth that “pushed it up three places” and exclaimed, that “the region that can boast the most success stories in the past year undoubtedly is Latin America. Leading the list is Peru, which in the past year improved its rating by nine points, more than any other country”... while also congratulating Argentina and Chile which also rose up their ranking (Investor, 1980, p. 286). This revealed how the short-sighted approach encouraged pro-cyclical lending booms.

The magazines were well aware that “there are, of course, a number of ways to look at the likelihood that a country will default on its debts” (Investor, 1980, p. 282). *Euromoney* attacked *Institutional Investor* arguing that the rating based on the survey is incongruous with the terms the countries commanded in the market. “what bankers do is more significant than what they say”. The debate about methods trickled into the central pages of *Institutional Investor* about the varied viewpoints on how the broader financial community judged the two rankings.

4.2.3 THE 1977 EXIM SPONSORED CONFERENCE

With all these developments taking place, the EXIM Bank sponsored a large Conference on techniques to evaluate developing country debt in April 1977, in between UNCTAD IV and

UNCTAD V. The conference was chaired by Stephen Goodman, the Vice President of Policy Analysis at the EXIM Bank. An economist from Yale, who prior to EXIM directed the Central Intelligence Agency's analytical work in trade and finance (Goodman, 1978, p. 101). The importance placed on this issue was reflected in the conference participants: he gathered representatives from the US Treasury Department (Anthony Solomon), the Board of Governors of the Federal Reserve (Henry Wallich), representatives from private banks, economists developing new quantitative techniques within institutions like the IBRD and the IMF, as well as academic economists working on debt issues, such as Charles Kindleberger and Robert Aliber. There was the feeling, commented on by Cline, that "the amount of quantitative work, especially within the banks, seems to leave something to be desired" (Eccles et al., 1978, p. 98). While each bank must "have its own compass to chart the misty waters of international finance", the president of EXIM bank stated that despite efforts in country risk analysis, "overall the record is spotty". Given the increased exposure "much work needs to be done" (Dubrul, 1978, p. 57 - 58).

The participants debated the relative merits of the quantitative technique. For the bankers, their efforts were motivated by finding ways to distribute risks of the bank on a country-by-country basis. A representative from Morgan Guaranty noted that maximum exposure limits were introduced in the late 1960s, and computer system changes were expensive but underway. While the idea that productivity of investment was the central element that could prevent debt servicing problems from arising, it was thought that there were no good ways to integrate this into a quantitative technique developed by the banks (Thornblade, 1978, p. 73).

Adopting a checklist system was a way to provide "a systematic first step in the process of selective international lending" (Thornblade, 1978, p. 80). What could the checklist approach really achieve? "Its best use is really as an early warning model device on a country by country basis" (Eccles et al., 1978, p. 98). Nevertheless, this too may not be good enough, as the Royal Bank had eliminated their checklist years ago to invest in a broader mathematical model. One of their representatives warned that "before anyone attempts to construct such a model, he should keep in mind that he is embarking upon a very expensive project" mentioning that his bank spent \$100 000 to develop such an analytical tool (Eccles et al., 1978, p. 97-98). Other banks

tracked developments on general measures, like level of development, GDP per capita, growth rates of income or exports, variations in export prices; as well as a measure of the debt burden, the “familiar debt-service ratio”. All these techniques which looked at past indicators were essentially backward looking. The Royal Bank participant mentioned this clearly: “having dealt with creditworthiness for some time ... I am very cool to the checklist approach... the early-warning system leaves me very cool indeed, because it is essentially backward looking” (Eccles et al., 1978, p. 96).

The difficulties discussed were not only methodological. Practical difficulties included access to data. “Perhaps the major area for improvement in creditworthiness analysis today is not in the methodology, but rather in the data base” (Eccles et al., 1978, p. 94). One of the World Bank contributors mentions that most analyses rely on the data collection efforts of the World Bank through its Debtor Reporting System (Saxe, 1978, p. 33). Despite enormous efforts into its improvement and extension, as done by Avramović and his team, the author mentioned that there were significant exclusions that prohibited accurate description. Did the data really reflect the changes taking place? Excluding short-term debt led to great uncertainties. Countries refinanced long term into short term, which would indicate a reduction of long-term debt without any knowledge that another type of debt, short-term, has increased, yielding wildly off-mark conclusions. For this, among other reasons, he insisted that aggregate size on countries’ borrowing is “essentially meaningless concept and number” (Saxe, 1978, p. 35). He also made a point as if to dispel assumptions otherwise, that the debt analysis undertaken by developing countries themselves is “as intelligent” as the sophisticated lenders in developed countries (Saxe, 1978, p. 35).

The World Bank participant clearly stated that the IBRD held “no set formula for creditworthiness analysis”, and procedures were constantly modified. “Our experience that there is no adequate checklist or formula which takes into account all the relevant variables; such techniques can be no more than starting points for country evaluation” (Holsen, 1978, p. 91). With “no substitute for an informed judgement based upon careful analysis of the economic condition and prospects of the borrower” the World Bank participants did not specify particular analytical techniques or tools (Holsen, 1978, p. 93).

One of the factors that fed into deciding the interest rate was the Bank's average costs of borrowing the year before a loan is made (Holsen, 1978, p. 89). The rates of return of projects were not what determined loans, given that many projects did not offer good financial rates of return. Given the difficulty of these calculations, the bank increasingly placed a strong emphasis on inadequate policies and economic management. This came down to "keeping the prices right" (Holsen, 1978, p. 90) as an indication of whether borrowers have the right policies in place. The World Bank saw its role as not simply measuring creditworthiness, but actually having a direct effect on improving creditworthiness through the use of conditionality. "Thus, we are concerned with improving as well as measuring creditworthiness" (Holsen, 1978, p. 93). With debt repayment, according to the World Bank, boiling down to savings, and the ability to transfer them abroad, the data they examined included trends in the global economy, debt evolution and debt service burdens, as well as a judgement on the ability of a country to adjust. "The only thing we can be certain of is that the scenarios in our carefully worked-out projections will be wrong in some important aspects. What then becomes important is the ability of a country to adjust to these unknown future events" (Holsen, 1978, p. 91). "The judgement about management is essential because no lender ... is ever the only lender... although we make quite sophisticated projections as part of our creditworthiness analysis, these have to include assumptions about taking on debt from sources over which we have no control" (Eccles et al., 1978, p. 95) and hence the emphasis was whether borrowers were acquiring new debt in a "responsible manner" (Eccles et al., 1978, p. 95). This brought out the emphasis on "management of the economy" and the need to "get a feel as to whether that country is well managed or not" (Eccles et al., 1978, p. 95). This is because, they argued, "problems of external financial instability often are the result of internal financial instability which sooner or later "spills over" into the balance of payments", and this therefore led them to place a lot of importance on the 'most widely used' indicator which is public-sector deficit as a percentage of GDP (Holsen, 1978, p. 93).

The World Bank boasted about the level of its internal expertise as compared to the private financial sector, which was seen to compensate for the lack of formal method. The World Bank generally dealt with "numbers of economists per country, whereas commercial banks usu-

ally talk of the number of countries per economist” (Eccles et al., 1978, p. 95). Bank loans take years to prepare, as opposed to quickly raised Eurocurrency loans. Country economists monitored the borrower’s position and prospects, other economists specialised in commodity markets, others maintained the debtors reporting system and others still examined the overall loan portfolio of the Bank and the distribution of risks.

The issue of broader policy coordination across actors and the role of the IMF was also discussed. The US Treasury representative stated that the US had already decided on its approach: stabilization and adjustment of international payments bringing down OPEC surpluses, while focusing on adjustment in poorer countries “to lay a basis for later growth” with “official financing on a conditional basis to encourage this adjustment” (p. 30). To do this, the US considered “significant increase in IMF resources, which, if agreed, could be a major support on all of the points I have made.” Overall, the US threw its weight behind the Fund with the US representative saying that they “strongly support the IMF’s efforts in the areas of financing and in the promotion of needed stabilization and adjustment” (Goodman, 1978, p. 30).

The ability of the IMF to judge the “adequacy or appropriateness of fiscal, monetary, and foreign-exchange rate policies, as well as the adequacy or appropriateness of external payment restrictions and other balance of payments policies” and able to do so “technically and nonpolitically”, was a core component of debt management and an important contribution to the decision-making process of private banks (Friedman in Goodman (1978). Irving Friedman, formerly of both the IMF and the World Bank, but now in the senior management of a private bank, urged for coordination with the World Bank which “may be the hardest thing in the world to do” but together would “be better able to judge what is good management (Goodman, 1978, p. 22). Henry Wallich from the Federal Reserve also placed his hopes on better collaboration between the IMF and commercial banks in the future. “The borrowing country should not be able to look to the bank as a means of circumventing the conditionality that the IMF has attempted to establish. The banks, on the other hand, should not look to the IMF as a bail-out from injudicious loans” (p. 17). Other senior bankers commented on how the historical conjecture warranted closer relation between private banks and the IMF. Robert Slighton, Vice President

at Chase Manhattan Bank, formerly a Research Associate at RAND, and intelligent officer for Economics at the CIA and in the Treasury, saw that “The commercial banking system is desirous of cooperating more closely with the IMF than it has in the past. If there is insufficient cooperation, it is not because of an unwillingness of the commercial banks to seek the IMF’s point of view, but, rather, because of the lack of a convenient mechanism for that contact to be made. I am certain that we will see some such mechanism developed in the near future” (Goodman, 1978, p. 49). Shortly after the EXIM Bank Conference in April 1977, the RAND corporation published a survey paper reviewing the state of the art of assessing debt servicing capacity and implications for policy, “as a service to its professional staff” rather than being the product of “fulfilment of Rand’s contracts of grants” (Soesastro, 1977, p.2). What can be drawn from the Conference is that senior members of US economic policy making, commercial banking management, intelligent services and development institutions were actively interested and concerned about the rising vulnerabilities of the growing exposure in developing countries.

4.3 DISCUSSION AND CONCLUSION

The efforts by developing countries to propose resolutions and betterment to the situation were repeatedly refused by creditors. A close examination from UNCTAD I to UNCTAD V and related fora reveal the painstaking and gruelling efforts to alleviate and address debt repayment difficulties, which were met with minimal concessions throughout the fifteen years up to the eve of the 1980s debt crisis. In UNCTAD conferences, debtor countries called for a thorough examination of the causes of debt repayment difficulties and an investigation into how the debt was contracted. Developing countries saw similarities in the international conditions afflicting them, pointing to the external and structural causes of repayment problems. They argued for general debt relief and engaged in a longstanding attempt to establish overarching and commonly agreed guidelines to guide rescheduling. This was a means to safeguard equal treatment of countries in similar economic circumstances. They argued for economic and technical analysis as a means to safeguard from political mishandling and indicated that debt rescheduling should rely on eco-

conomic factors alone condemning the use of non-economic factors to guide restructurings and the deployment of debt problems to apply political pressures.

This chapter however showed the varied use to which economic analysis could be shaped and put and how it related to institutional form of crisis resolution. The role of economic analysis was shaped by the desired format of restructuring of different groups (creditors and debtors). This period saw the emergent routinisation of debt restructuring on a case-by-case basis, mediated through creditor clubs, based on a short-term financing gap calculation by the IMF which fitted a short-leash, liquidity and balance of payments view of repayment problems. Creditors outsourced the relevant economic analysis to be used in restructuring to the IMF, strengthening its role in crisis management. With all the difficulties involved in calculations of capacity to repay, creditors increasingly emphasised debt repayment problems as largely balance of payments problems arising from domestic mismanagement. This placed undue emphasis on internal factors in which the implication of relying on a case-by-case approach was understood as each country faced varying abilities to pay, the flip-side of which was that they faced varying abilities to adjust.²¹

This chapter showed the varying rationales for the use of economic and technical analysis and that the development of models could serve very different objectives. For debtors for instance, development of economic models was a means for equal treatment, while for creditors, models were used to improve their decision-making while maintaining room for manoeuvre. The institutional context for economic analysis was very important: who conducted the analysis and for what purpose. For debtors, the desired economic analysis would reflect shared principles of debt restructuring. The commonly-agreed approach to resolving debt problems would be reflected in a commonly-agreed form of analysis with suggested scenarios to return to a desired development path. A model or template could be developed to be replicated in subsequent renegotiations. This template was meant as an attempt to institutionalise a common response to debt problems, viewed within a broader and longer-term context in which external conditions

²¹ Recall the argument made in Chapter 3 by IMF Staff that the case-by-case approach, comes down to “Just how far the economy can adjust to an abrupt decline in imports is a matter for special study in each case” (Finch, 1951, p. 72).

were crucial. Creditors however were interested in the use of technical tools only insofar as it aided decision-makers' judgement rather than displaced it. Creditors invested in their own predictive technical expertise, grounded in a short-term approach which matched the commercial orientation of renegotiations – a quick return to resuming repayments. This was clear in the discussion around aid-allocation models of the OECD, and in the resistance to adequately tailoring loan terms to repayment capacity.

Even though in the political arena creditors were adamant that problems were negligible and existing mechanisms sufficient – they were evidently broadly concerned about debt repayment difficulties and hence all lending institutions, official and private, begun developing technical capacity in predicting servicing problems. Throughout the 1970s, across development agencies and private financial institutions, a common effort to ascertain the likelihood of default begun. The broad range of technical issues and divergences in the positions held between creditors were not raised in the context of the political debate at UNCTAD. The chapter covered the range of empirical models that the growing exposure of international organisations, private and official sectors of creditor countries, prompted. These were focused largely on short-term predictors of default, largely reliant on indicators that Avramović and his team had argued were ineffective guides for long-term repayment capacity. This empirical measurement effort by lending institutions tried to derive 'critical thresholds' of debt repayment difficulties. The chapter evidences that until 1977 – at best – creditors were in fact entirely unprepared for the expansion of lending underway. The efforts into technical tools revealed their broad anxiety about the possibility of general problems despite their insurances about only isolated cases in the political debate. The technical models showed increasing debt repayment difficulties, and yet, despite their own tools indicating that increasing numbers of countries will face servicing difficulties, creditors refused to act to alleviate or prevent these difficulties. It was also suggested in the face of prediction errors – where problems have been underestimated, it ought to be the debtor who would need to adjust (i.e. to pay) for the errors in prediction.

And here's that huge monster, the National Debt; At which some folks grumble, and worry, and fret; They call it a bubble, the parent of trouble; The source of taxation, the curse of the nation; They say it produces distress and vexation; Gaming, and cheating, and mad speculation...

Annon (1819)

5

The 1980's debt crisis and the new economics of sovereign default

THE 1980S DEBT CRISIS WAS AN AVOIDABLE DEVELOPMENT DISASTER. Debtor countries warned of increasing repayment difficulties since the mid-1960s, proposed numerous policies to avoid and ameliorate servicing problems that were rejected by the creditors. Neither the increasing number of countries facing servicing problems throughout the 1970s, nor the creditors' empirical models that predicted growing problems were sufficient deterrents for creditors to change course. More than 80 reschedulings took place between 1975 and 1983 (Smith and

Cuddington, 1988). Throughout the 1980s, highly indebted middle-income countries transferred a vast amount of resources towards creditor countries, which were nevertheless too small to even cover interest payments due, leaving debts in 1989 roughly 30% higher than they were in 1982 (Husain and Diwan, 1989). This failure is largely attributable to a debt strategy mired in inter-creditor conflict and a lack of adequate resources, governed with a view to protect creditor interests and financial stability in the US. Drawing on well-known aspects of the policy response, whose details and failings are covered extensively in contributions such as Bantekas and Lumina (2019); Barry et al. (2007); Guzman et al. (2016); Marichal (1989); Stiglitz and Heymann (2014), this chapter focuses on a hitherto under-emphasised aspect of the crisis – the evolution of economists’ thinking.¹

The crisis provoked economists working from various intellectual traditions and methodological standpoints. The 1980s marked the beginning of a new academic literature on debt sustainability, which further side-lined the analysis of debt problems through a developmental framework within the economics discipline. It came out of an overall transformation in the discipline and a period of intense debate over debts and deficits in macroeconomics. The new economics on debt sustainability was characterised by optimisation under intertemporal constraints with foreign financing. This followed from the advances that were covered in Chapter 3. Both a theoretical and applied literature, it built on formalisations from general equilibrium, growth theory and importantly, it brought in game theory, and with it concepts of penalties and strategic behaviour in borrowing, lending, and repudiating. This academic literature however only gradually became relevant for policy through its slow integration with debt management tools. As this Chapter will show, while the economics of debt sustainability took shape during this period, the policy framework that would rely on this form of reasoning only begun to be formulated during this period, with the completion of the first forward-looking DSA template inaugurated in 2002 and covered in Chapter 6. As the Chapter will elaborate, the IMF in the

¹The voluminous literature on the 1980s debt crisis has overwhelmingly focused on its causes and policy solutions, see for instance: Milivojević (1985); Kaletsky (1985); Stiles (1991); Lomax (2014); Killick (1995); Claudon (1986); Boughton (2001); Payer (1991); Sachs and Collins (1989); George (1994); Weeks (1989).

1980s begun to integrate a forward-looking approach into its policy framework inspired by the new theoretical works, a process that would be completed with DSA launch in 2002 covered in Chapter 6.

This chapter first examines the various contributing intellectual histories that core models of the 1980s debt crisis drew upon, picking up developments in the broader discipline raised in Chapter 3. Some survey contributions identified the main distinction with past intellectual work as being about optimising behaviour. The purpose of these survey papers is mainly taxonomic rather than historical (for instance McDonald (1982) and Glick and Kharas (1985)). Far from being solely about optimising as opposed to non-optimising, the chapter shows a diverse and complicated history that drew from innovations in growth theory, debates in macroeconomics and incorporation of finance and game theory. The chapter then goes on to show four seminal papers of the 1980s crisis and interrogates their main arguments and mode of reasoning.

This chapter marks the third and key steppingstone in the theoretical factors that led to the emergence of the DSA. The new economics of debt sustainability marked a break from both the long-term non-optimising view of debt repayment capacity (Chapter 3), and from the empirical search for critical thresholds (Chapter 4). While the threshold approach was the first to be operationalised in policy through the sustainability thresholds incorporated in the HIPC framework in the 1990s (Chapter 6), the new intertemporal approach to solvency covered in this chapter, was only gradually applied into policy frameworks, and would become operationalised as part of the new DSA framework in 2002 (Chapter 6), partly replacing the backward-looking threshold approach.

Section 5.1 provides the broad theoretical background, context and key intellectual strands that fed into the development of the core models of the 1980s. Section 5.1 covers the basic contours of the debate on debts and deficits in mainstream macroeconomics, optimal growth economics, international economics and previous models of default. Having covered the basic contours of the evolution of macroeconomic theory, Section 5.2 examines how economists responded to the 1980s debt crisis by looking at some general features of the literature and four canonical models in detail (Eaton and Gersovitz, 1981; Sachs, 1984; Krugman, 1988; Bulow

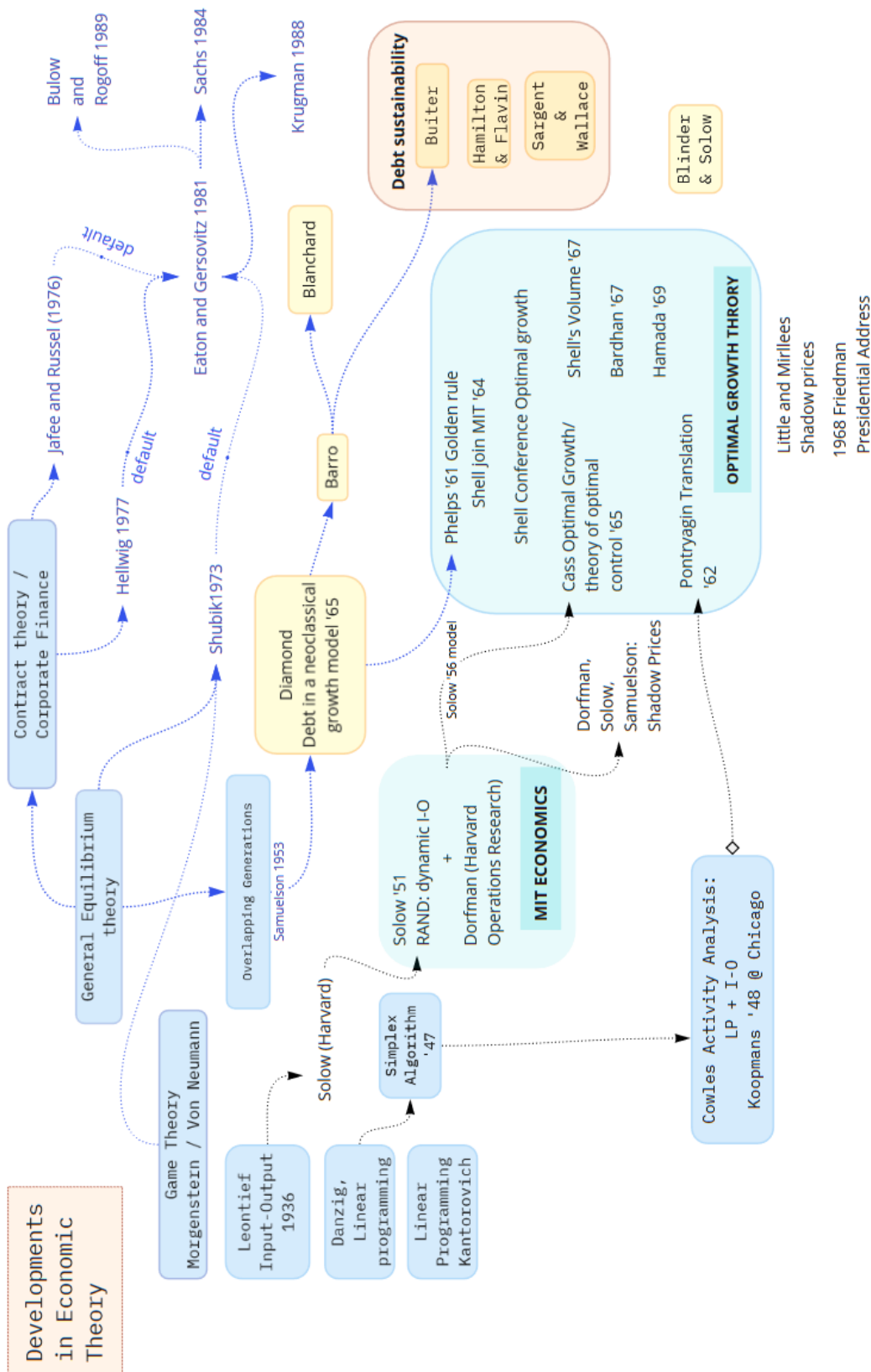
and Rogoff, 1989) that have since defined the economics of sovereign debt. The section identifies what the authors were trying to achieve theoretically and puts them in the context of the overall development covered in Section 5.1. Section 5.3 leaves the academic realm and examines how these theoretical influences were affecting the IMF, who emerged gradually as the key crisis manager and mediator between creditors and debtors. The section shows how the intertemporal forward-looking framework was gradually, if not fully, integrated into the IMF's policy framework.

5.1 THE BACKGROUND TO THE MODELS

The distinctive nature of the canonical 1980s contributions did not come out of nowhere. Rather, the new sovereign debt literature that will be examined in section 5.2 was connected and drew from other intellectual developments. This section argues that three main strands of literatures fed theoretically and methodologically into the new economics of sovereign debt. These were developments in macroeconomics, growth theory and international economics. Previous intellectual threads raised in early Chapters ended up finding greater prominence and bearing on the debt discussion, while previous theoretical frameworks fell into disrepute. First, we examine the demise of Keynesianism and emergence of monetarism and new-classical macroeconomics, through the lens of the Philips curve and the role of monetary policy. Second, we examine the debate of Ricardian equivalence.

A core transformation had taken place in macroeconomics when the debt crisis occurred. An open war had broken out about how to theorise macroeconomic phenomena, meaning aggregate fluctuations or business cycles, and whether these should be rooted in the actions of individual behaviour. This was the debate about whether macroeconomics should be micro-founded, and if so, what kind of microfoundations should it have. This brought about the eventual dominance of New Classical economics. While this was a methodological argument, it was simultaneously an ideological and theoretical debate regarding monetary policy effectiveness, and the corollary policy debate regarding rules and discretion. As developed in Duarte and Lima

Figure 5.1: Evolution of Theory within Academic and Development Institutions: 1950-1990



(2012) and explored in Hoover (2010), Robert Lucas pioneered a form of microfoundations in the 1970s based on forward-looking, optimising individual behaviours inspired by general equilibrium theory and applied it to macroeconomics. This methodological upheaval was weaved into a theoretical debate about inflation and the relative effectiveness of monetary and subsequently fiscal policy. The debate was about the inter-related issues of the output-inflation trade-off, the Philips curve and the notion of money neutrality and defined the core of disagreements in macroeconomics, prompting its evolution through the 1970s and 1980s.

Let us recall that following the contribution by Keynes, it was accepted that private demand may not correspond to full employment levels of output, and that the economy has no means of self-adjusting to bring itself closer to that level.² This brought to the fore, the efficacy of discretionary policy that could be used to affect aggregate demand, final output and employment, as well be beneficial for long run growth (covered briefly in Chapter 3), highlighting the effectiveness of fiscal as opposed to monetary policy (De Vroey and Hoover, 2004). This viewpoint was challenged from a number of different fronts. In the arena of public finance, we mentioned the challenge raised by Buchanan and Richard Musgrave in Chapter 3. In the arena of macroeconomics, the challenge came via the argument about money neutrality. This begun with Milton Friedman and the rise of monetarism, escalated through the contributions made by Robert Lucas in the early 1970s and finalised through the work of Sargent and Wallace (1976) and Sargent and Wallace (1981). This was the period of stagflation, the economic context that shaped the intellectual transformations taking place (De Vroey, 2016; Goutsmedt, 2020).

One of the concerns raised about using deficit spending to bring down unemployment was the inflationary consequences it may bring about. Friedman was instrumental to the revival of this argument, pursued through the lens of the quantity theory of money.³ Friedman argued that the Philips Curve relationship was not a stable exploitable relationship, as suggested in what was interpreted as a policy trade-off in Samuelson and Solow (1960), because the Phillips Curve would shift to adjust to expectations.⁴ He argued that in the long run, the Phillips Curve was

²This was covered in Keynes (1936), but also in Kalecki (1939).

³Key contributions were made with Anna Schwartz (e.g. Friedman and Schwartz (1963)).

⁴For detailed exposition into the paper by Samuelson and Solow see Forder (2010) and Chapter 2 in

vertical, and that any exploitable gains would only occur if inflation was unanticipated. Unemployment could only be decreased below its 'natural rate' for the period in which inflation was unanticipated, and that were one to try to prolong unemployment below the natural rate, expectations would adapt, and maintaining it there would necessitate a forever growing rate of monetary expansion (the accelerationist hypothesis). Friedman's Presidential Address – a much referred to moment of this trajectory – was largely reliant on the expectations argument. Forder (especially in Forder (2019)) has deconstructed this by arguing that the expectations argument was commonplace at the time and the real novelty, may have been the introduction of the Natural Rate Unemployment, meaning the point at which the rate of unemployment corresponds to a constant real wage.⁵

The belief in the so-called classical dichotomy was furthered through the contribution of Lucas. Lucas completed his 'Expectations and the Neutrality of Money' in 1970, published in 1972, a contribution for which he was awarded the Nobel Prize (Lucas, 1995). In this work, Lucas drew from the strand of general equilibrium theory of overlapping generations by Samuelson (1958) and Cass and Yaari (1965) and showed how money neutrality would prevail despite any short-run appearance of monetary stimulus (Lucas, 1995). Following the attack on Keynesian thought from the point of view of money neutrality was furthered through the work by Sargent and Wallace (Sargent and Wallace, 1976, 1981). Sargent and Wallace too wanted to corner the conclusion reached by Milton Friedman and push the argument further to assert that neither in the short run could monetary policy be effective. In their 'unpleasant monetarist arithmetic' paper (Sargent and Wallace, 1981), they argued that although monetary policy was not able to have any effect on real output, unemployment or real rates of returns on securities, there was still a sense, that government "could exert substantial control over the inflation rate, especially in the long run" (Sargent and Wallace, 1981). Furthering the arguments of super-neutrality of money, they reinforced the view that there was little scope for discretionary policy in the short or long-run, on the monetary or fiscal side. This was explained by Tanzi and Zee as: "When fiscal

Forder (2014).

⁵Forder also establishes that the fame of Friedman 1968 was only brought about in time, as part of the broader development of the 'Phillips Curve Myth' (Forder, 2014).

policy dominates monetary policy and the fiscal authority sets its budget independently, because the sale of new bonds is limited, the monetary authority will be forced to create money and tolerate additional inflation because it must finance, through seigniorage, what cannot be financed through the sale of bonds. The end result is that fiscal deficits in the long-run lead to inflation” (Tanzi and Zee, 2011a, p. xxv).

The work of Sargent and Wallace was intimately concerned with how policy should be conducted. In Sargent and Wallace (1976, p. 169), for instance, they start by noting that “it is widely agreed that monetary policy should obey a rule” and the only remaining question of substance in macro was what kind of a rule it should be. The view of super-neutrality of money enhanced the view that monetary policy should not be in the service of financing fiscal requirements and that limiting debt growth should only occur through primary surpluses (Tanner and Ramos, 2002). Kydland and Prescott (1977) brought in the argument, that as agents form rational expectations about the future, optimal outcomes cannot be reached on the basis of planned economic policy.⁶

Fiscal policy too, was subsequently brought into the arena of competing methodological, theoretical and ideological debate. Monetarism’s theoretical reliance on the quantity theory of money, monetary policy neutrality and diminished fiscal multipliers via the Permanent Income Hypothesis, called into doubt the primary Keynesian insight that government spending can alter the aggregate level of employment. The effectiveness that discretionary fiscal policy had on the economy was restated in Blinder and Solow (1973) who sought to detail the positive macroeconomic effects of spending, taxation, the multiplier, and bond-financed spending. Under conditions of full employment, additional government spending could crowd out private spending, leaving the overall level of aggregate income, thus output, unchanged. But, in underemployment economies, where quantities matter more than price effects, the macroeconomic impact of government policy such as expenditures and revenues, became elevated. “The old view that

⁶The discussion on debt sustainability was also taken into the discussion around the credibility of disinflation programmes and the work by Barro and Gordon on rules versus discretion (1983). This cast the discussion around credibility for instance, as whether a hard-nosed government or a looser government will bring higher or lower inflation.

government spending crowded out private spending was banished to the scrapheap of discarded economic doctrines” (Blinder and Solow, 1973, p. 2). They go into depth to conclude that fiscal policy does, in fact, matter. The forceful rise of monetarism however and the emergent changes in the discipline brought about by the rise of New Classical economics, seemed to suggest that perhaps acceptance of Blinder and Solow’s conclusion was pre-mature.

A key moment in the debate on debts and deficits, and ultimately, policy effectiveness, surrounded the argument about Ricardian Equivalence.⁷ Barro (1974) asked whether government bonds are seen as net wealth by the private sector who holds them, at least private agents that are in the same country as the issuing government.⁸ Barro’s thesis of Ricardian Equivalence is that the expectation of future taxes may offset the positive wealth (wealth effect) of bondholders. This result rests heavily on rational expectations: agents will not change consumption patterns today because they rationally expect a future tax rise. But it also relies heavily on the idea that people do not face any liquidity constraints: bond financed deficits that increase subsidies will not be used to finance immediate liquidity constraints people may currently face.⁹ Ultimately, Barro’s conclusion, that there is no strong theoretical reason for assuming government debt is net wealth, is a conclusion that would invalidate the quintessence of Keynesian policy.¹⁰ Understandably, this provoked an intense response by Keynesian economists who sought to subsequently clarify the conditions under which Barro’s conclusion does not hold, all of which generated an extensive as well as controversial debate. Multiple objections were raised against Barro’s argument over time, subsequently summarised in Arestis and Sawyer (2004). At the time, a review and critique of the debt neutrality idea in historical terms was provided by Buiter

⁷Ricardian Equivalence was coined by Buchanan (1976). The term provoked many to jump in and argue that Ricardo would not subscribe to Barro’s thesis (O’Driscoll, 1977; Tsoulfidis, 2007; Theocarakis, 2014) and reviewed in Laskaridis (2020b), a point strongly supported by Buiter and Tobin (1978).

⁸Barro formalised what Buiter and Tobin had argued was the same political message that could be found loosely in Friedman’s popular writing (Buiter and Tobin, 1978).

⁹An example from contemporary circumstance may illustrate this: if the government borrows to finance cash transfers to everyone who is being hard-hit from the economic impact of the pandemic, Barro’s thesis would assume that this money received would not be spent on addressing immediate liquidity needs arising from say loss of work, but that people would refrain from spending in light of a supposed expected future tax rise. An unrealistic situation if liquidity constrained or face insolvency.

¹⁰See Arestis and Sawyer (2004, 2003) for further elaboration of the role of debts and deficits through a traditional Keynesian perspective.

and Tobin (1978), who concluded that the evidence is stacked against Barro's neutrality thesis.¹¹ Tax and debt financing of expenditure are not equivalent on their impacts on private saving and consumption, due to liquidity preference and other nominal frictions.

The heated debate that was taking place led Buiter (1985, p. 97) to remark that "probably more uninformed statements have been made on the issue of public sector debt and deficits than over any other topic in macroeconomics". This was the period where new constructs and developments were laid out, and when theories were put to empirical scrutiny. The issue of sustainability came firmly into view as clarifications on the new 'basic' mechanics of the economics of debts and deficits were laid out. This included the government budget, formulated in the intertemporal framework. One key paper to do this was Buiter's 'Guide to public sector debts and deficits' (Buiter, 1985).¹² This firmly brought the evolution of future fiscal balances into the present period. This was laid out in Chapter 1.

The provocation by Barro's thesis was so great, that economists wanted to test whether a government held Ricardian or non-Ricardian policies, meaning policies that violated a hypothetical notion of an intertemporal budget constraint. This was initially investigated by a pioneering study at the time, Hamilton and Flavin (1985, 1986). The notion of sustainability in terms of present discounted values of future flows created a new challenge for economists to develop empirical methods to test whether a government had violated its intertemporal budget constraint. Although initially formalised as a conceptual device, the intertemporal budget constraint became an empirical question to test the claim of whether government debts were consistent with respect to future surpluses. The tests for solvency of the government's budget constraint, in the words of those that sparked the debate, had "profound implications for macroeconomic theory and practice. With a Keynesian consumption function, an affirmative answer can reverse the traditional conclusion that money-financed deficits are more expansionary than bond-financed deficits (Blinder and Solow, 1974). With a permanent-income consumption function, by con-

¹¹In time, along with theoretical refutations, empirically evidence on Ricardian Equivalence (Cunningham and Vilasuso, 1994) and crowding out was found to be weak (Mahfouz et al., 2002).

¹²This was subsequently followed in 1990 by 'The Sustainability of Fiscal Policy: New Answers to An Old Question' by (Blanchard et al., 1990). A version of the economics of sustainability, is described in Chapter 1 and detailed in Appendix II, was laid out.

trast, it can imply that a bond-financed deficit has no effect on aggregate demand. And if the only politically acceptable means of raising the requisite revenues is by working the printing press, it can imply a strong practical link between budget deficits and inflation, as argued by Sargent (1982) and Sargent and Wallace (1981)” (Hamilton and Flavin, 1986 p. 1).

The economics of debt sustainability focused on whether the government budget had to be balanced in present value terms. This re-orientated fiscal policy back to notion of ‘sound finance’, which was traditionally associated with the idea that deficits are reckless and irresponsible.¹³ The rift that the ascendancy of New Classical Economics prompted was described by Blanchard in 1984: “The perception that deficits may hurt rather than help the recovery is clearly at odds with the traditional view that deficits, although they will in general increase interest rates, will nevertheless increase demand and economic activity. Although no unified or well-articulated “new view” has emerged, challengers of the traditional view insist on the abnormally large size of current deficits. Such deficits, they argue, may be simply unsustainable, a possibility *never considered* by the traditional view” (Blanchard, 1984, p. 1, emphasis added).

A portion of the debate between Keynesians and new-classical macroeconomists like Robert Barro, took place within the analytical frame of overlapping generations models OLG. The International Seminar in Public Economics conference on public debt in 1984, brought together important original contributions on the issue including Blanchard’s and Barro’s papers which were prepared for this conference. As mentioned in Chapter 3, one part of the backlash to Keynesian thinking in the post war period came through the argument that debt financed deficits posed a burden of future generations. This led to the use of OLG models to examine welfare properties of deficits and debt in general equilibrium with different generations, as in Diamond (1965).

In OLG models, there is no aggregate consumption function because agents differ in

¹³The pursuit of balanced budgets, low taxes and low government expenditure came to be encapsulated by the term ‘sound finance’ and dominated the perspective over the role of government expenditure and revenue in the late Victorian period as practised by Gladstone as Chancellor of the Exchequer (Campbell, 2004; Maloney, 2002). It took a long time for sound finance to prevail as the ubiquitous objective to guide and legitimise the role of the state in the economy and to establish and root itself in public policy, see Laskaridis (2020b) for a review.

ages and wealth, hence hold different propensities to consume out of wealth, which makes aggregation impossible (Modigliani, 1966). This problem of aggregation was addressed by Peter Diamond by choosing constant population and age, thus avoiding the need to aggregate. On the other hand, Blanchard solved the aggregation problem using mathematical innovations developed by Menahem Yaari, who had worked closely with David Cass on OLG models (Cass, 1965; Spear and Wright, 1998). The drawback, recognised by Blanchard, was that as behaviour changes across one's life, as established in the work of Modigliani's life cycle theory, capturing differences in propensities to consume across agents and their lifetimes would not be possible. Looking at the economists' work in terms of their modelling contributions allows one to see how their respective positions on debt and deficits could be reached in different analytical frameworks. The challenge that Barro posed was fought on the same turf, in an effort to yield Keynesian-like conclusions.

Both Barro (1974) and Blanchard (1985) models are OLG models. However, serious modelling and tractability problems presented themselves in terms of different time horizons, and heterogeneity. In Barro (1974), the length of the planning horizon is the crucial assumption that enables him to reach his strong conclusion. People behave as if they live forever, compensating for the expected future taxes that the current deficits are assumed to imply. Ricardian equivalence, assuming no market imperfections, holds when agents have infinite planning horizons, or likewise, finite ones that are linked with 'operative' bequests, in which case, the current generation fully takes into account the future tax implications of current government deficits. This form of bequest motive transforms a heterogeneous OLG model to yield the equivalent results that would arise from an infinitely lived representative agent one. It also provides a way to aggregate utility across generations.¹⁴

As a response to this, Blanchard (1985) used the same modelling framework, and developed in greater depth the impact that deficit spending has on savings, and showed how it fundamentally depended on the planning horizon of agents. Blanchard examined dynamic behaviour using agents of different ages which were assigned a probability of death parameter; this was used

¹⁴See Kaounides and Wood (1992).

as a device to measure the length of planning horizon. This was a way to analyse how changing the planning horizon affects debts and deficits. By changing the probability of death, as it approaches zero, one re-enters the Ricardian world of policy neutrality and one gets the infinite horizon as the limiting case, i.e., the Barro story. This was intended to show that Barro's conclusions only hold under very specific circumstances. As described by Tanzi and Zee (2011a, p. xxv), "The contribution of the paper lies in its clear elucidation of the role that planning horizons play in determining fiscal policy effects." Aggregating heterogeneous preferences to a single social welfare function is not straightforward but finding a way to yield something akin to a representative agent world, would make the analysis of debts and deficits much simpler. In this light, instead of the use of bequests, Blanchard, by assuming the probability of death and hence, one's expected life, allowed agents to have different ages, different levels of wealth but same horizon and same propensity to consume.

At the same time, developments within international economics progressed the work on representative agent models with international borrowing. This was also a key strand that helped build the economics of debt sustainability. Chapter 3 examined how conceptions of international borrowing in a choice-theoretic framework emerged from optimal growth theory in the aftermath of Solow's growth model. Bar from a few exceptions, issues of borrowing were about intertemporal consumption smoothing and were entirely domestic focused. Gradually however, optimal growth theory, meaning representative agent models in the Ramsey-Cass-Koopman's tradition, were gradually cast into the open economy setting, and hence was extended to address foreign borrowing. As mentioned in Chapter 3, for Hamada (1969), international borrowing was part of a search for the optimal capital accumulation policy of an open economy which faces an imperfect international capital market. The issue of likelihood of repayment however was incorporated by assuming imperfections and thus a rising rate of interest as indebtedness increases – affecting the supply schedule of loanable funds. Bardhan (1967) was another example. In the 1980s however, the intertemporal view of international borrowing became broadly adopted, in particular through the work of Dornbusch (1980) where external debt was more fully incorporated into the international intertemporal consumption smoothing Ramsey-Cass-Koopmans

framework, with other work that modelled the intertemporal aspects of current account determination including Buiter and Tobin (1978); Obstfeld (1980); Sachs (1981).

Lastly, while all these aforementioned developments contributed to the formation of the economics of sovereign debt and debt sustainability in the 1980s, the missing piece to the puzzle was the issue of default. It was not just that much of the work was domestic, this work did not envisage that much could go wrong with the borrowing process. For all the vehemence about debts and deficits that the debates in macroeconomics generated, default merely lurked in the background – it was not part of the models. The arrival of the new cluster of models described in Section 5.1.2 were genuinely innovative by addressing strategic default, penalties, and sanctions. Prior work in default did exist, but in other fields of economics. Bankruptcy had been traditionally modelled in the domestic economy in the area of corporate finance from the perspective of an individual agent. The issue of default or bankruptcy was brought into these optimising models through the reliance of contract theory and game theory. Seminal papers in this field included Hellwig (1977); Jaffee and Modigliani (1969); Jaffee and Russell (1976); Shubik (1973); Shubik and Wilson (1977).¹⁵

Hellwig, a PhD student of Diamond's at MIT integrated default into his work. Hellwig (1977, p. 1879) described the so-called textbook approach to solvency as when “an agent may finance his current consumption by borrowing as long as the present value of his lifetime consumption does not exceed the present value of his lifetime income.” Precisely the view of ‘sustainability’ on the agent-level, Hellwig assumed decision-making under uncertainty, i.e. before knowing the present value of future income, whereby if a worst-case scenario arose, borrowing would break down. He argued that lenders may be willing to lend as the worst case would not always materialise, and borrowers may want to borrow more because the needs of today may be more important than what happens later. “Both, the lenders and the borrower, are gambling that the worst outcome will not occur” (Hellwig, 1977, p. 1880). In this model, if debt cannot be repaid, the borrower “goes bankrupt and suffers a fixed penalty”. The paper shows a dynam-

¹⁵ Eaton and Gersovitz (1981) noted the work of Jaffee and Modigliani (1969); Jaffee and Russell (1976) and Hellwig (1977).

ically changing debtor-creditor relationship, where lenders lend more than initially thought of as optimal, and borrowers borrow even when they are about to go bankrupt. Similarly, Jaffee examined state-dependent possibilities of default in firm-bank borrowings.

Default decisions had also been modelled drawing on game theory and mathematical institutional economics. Shubik (1973) and Shubik and Wilson (1977) modelled the decision to default as an optimal decision within a heterogeneous agent in a general equilibrium framework. The intuition was that if there was no penalty, no one would extend credit, and if the penalty was infinite, no one would borrow. The challenge was to find the optimal contract, and hence optimal bankruptcy code that would eliminate strategic default but not penalise default due to misfortune. In this line of work penalties applied to those that cannot repay arise as conclusions of strategic market games in the search for optimal bankruptcy regimes. Institutions, such as bankruptcy procedures, emerge as an outcome of this type of modelling, that tried to show that an Arrow-Debreu world is ultimately untenable once some relaxations are made.

5.2 KEY CONTRIBUTIONS IN THE 1980S LITERATURE

Section 5.2.1 presents an overview of the steppingstones and institutional context that defined the new literature, followed by Section 5.2.2 which presents a detailed examination of four theoretical contributions.

5.2.1 OVERVIEW

As economists moved to model foreign governments in international private capital markets, they realised that models based on the domestic economy that used microeconomic concepts, relied on concepts unsuitable for the international context. Negative net worth may make sense where an agent's liabilities are greater than its assets, but its suitability to describe a country was questionable. This new literature would come to dispute the notion that a country's assets could be less than some – however great – amount of a debt liability, rendering the idea that a country could be insolvent implausible (Eaton et al., 1986). Nonpecuniary default penalties or the idea

that capturable collateral exists that would be turned over in the event of default was not transposable from corporate to sovereign levels, despite the various examples of this that periodically occur.¹⁶

The main theorists who addressed the debt crisis, launching the modern economics of sovereign debt, posed the problems of international borrowing in an entirely new framework to their predecessors. The motivating idea behind the theory developed in the 1980s and that has defined the literature ever since was the idea that some sort of a puzzle characterises international lending and borrowing. So prevalent is this narrative even in contemporary debates, that in the words of a contemporary scholar, the puzzle is “so well-rehearsed in the academic literature” that it “no longer strike[s] anyone as weird” (Gelpern, 2016, p. 47).¹⁷ Why do sovereigns repay their debts to foreign creditors, when there is no international bankruptcy mechanism for sovereigns, and as a result no means to discharge a country’s debt or forcefully retrieve claims (as covered in length in Chapter 1). According to key protagonists, economists had yet to find a satisfactory answer to “Why sovereigns repay debts to external creditors” (Bulow and Rogoff, 2015). This question fundamentally transformed the point of view from one that looked at debt repayment difficulties as primarily questions of ability to pay, to one that looked at willingness. The debt-service ratio, as shown in previous chapters, had been used as a shorthand proxy for willingness to pay; economics could not offer anything more precise. With new tools and techniques, the new generation of economists were able to formulate willingness within a new theoretical framework and the ‘pure theory of sovereign lending and country risk’ begun in earnest. Their argument was that “Long before a country’s ability-to-pay would become relevant, its willingness-to-pay constrains its access to credit” (Eaton et al., 1986, p. 29). This was important,

¹⁶ A recent example of this took place in 2012, when the ARA Libertad, an Argentinian navy ship, was seized by creditors while docking in a port in Ghana (Jones and Webber, 2012).

¹⁷ The ‘standard’ narrative is not accepted by all. From an International Political Economy perspective, in the work of Roos (2019), this basic narrative is turned around to ask why do borrowers not default more frequently, developing a theory of structural power of financial system that applies pressure through the withholding of liquidity provision, forcing countries into repayment. Lienau (2014) from a legal perspective, also turns this puzzle around, by probing into the messy details of heterogeneous and complex restructurings, where neither the notion of a ‘sovereign’ is simple – as in cases of regime change – neither do creditors act collectively.

for it subverted the prior preoccupation of the debt repayment capacity literature around capital requirements, structural problems in development and their impact on the ability to pay.

Several explanations to the puzzle relied on modes of reasoning that have not yet been applied to this area of economics. Economists brought in endogenous default penalties and sanctions to argue that concerns about reputation or trade sanctions explain the puzzle. Others moved beyond the borrower and examined the decision making of the creditor, as the decision by the borrower not to pay was often a response to the prior decision by the creditor not to extend further credit. It had been observed that the novelty of these models was that they brought in optimising behaviour and as compared to the previous generation of theorising, as in Glick and Kharas (1986) and McDonald (1982) for instance; however they omitted the more nuanced aspects of method and technique that the new literature instigated. As this chapter shows, besides insights and techniques about strategic behaviour inspired from game theory and from corporate finance, the significant innovation was the centrality of default. Default was understood as a decision by the borrower to abrogate the contractual obligations, and the question arose of how to model that decision. It is this focus that brought default as an equilibrium solution into the modelling strategy, at once integrating breaks with the transversality condition that new classical macro and optimal growth theory assumed. The general theory of credit markets had recently incorporated the economics of information and theory of games. Willingness to pay models focused on the behaviour and on the decisions the borrower makes, which was formulated as a trade-off between the marginal benefit and marginal cost of repayment. The criticism made towards earlier generations of theorists who addressed the limits or difficulties with the borrowing process was that seemingly exogenous variables were, in their view, actually endogenous.

A series of key contributions on debts and deficits in the intertemporal framework laid down the accounting of the government budget. New opportunities drew together a broad array of economists that provided for intellectual engagement and debate. The longstanding International Seminar in Public Economics, which Richard Musgrave presided over, organised a conference on public debt in 1984 in Santa Cruz, co-sponsored with the Bank of Italy. A new

journal, *Economic Policy*, was launched in 1985 and devoted its inaugural issue to fiscal policy. In 1986, Stanford University hosted a conference on the Economics of Public Debt by the International Economics Association, aiming to bridge across the developments taking place in developing and high-income countries. Core topics discussed included issues of sustainability, the relationships between rate of growth and rate of interest, and an applied debated about how to measure deficits and debts. Vast intellectual effort was ploughed into the topic, with contributions piling in to extend, clarify and occasionally obfuscate the issues.

If inflation was the key issue that economists most heavily debated in the 1970s, fiscal policy and debt were the core issue of the 1980s. Table 5.1 shows a sequence of core contributions and activities in the debate on fiscal and debt issues during the 1980s. This short review of contributions and institutional settings for debate, points to some characteristics of this new literature. Many of the papers that ended up defining the literature were made by young economists, within five years of completion of their doctoral studies. The authors represented relatively narrow set of elite institutions (MIT, Yale, Harvard), remarkably distinct to the contributors of the 1950s and 1960s debate on international borrowing. While several contributors were also students at the same time, supervised by the same advisor or colleagues, others, as indicated by participation in common conferences, were part of an integrated intellectual environment. These were predominantly academic economists, again, distinct to contributors of the 1950s and 1960s, and were strongly supported through programmes of the National Bureau of Economic Research (NBER), at the time headed by Harvard economist, Martin Feldstein.¹⁸ This new generation of economists defined this literature by pursuing microfounded models with frictions in international lending. As indicated by the works sponsored by the IMF and World Bank on the debt crisis in Table 5.1, these economists were core participants within the policy–academic dialogue taking place.

¹⁸The NBER was founded in the 1920s largely to provide information about the US economy during the Progressive era’s economic controversies. By the time of the 1980s crisis, Martin Feldstein, recently recipient of the American Economic Association’s John Bates Clark Medal, transformed the scale of its activities, expanding the number of research programmes supported (NBER, 2020).

Table 5.1: 1980 Milestones in Developments in Debt Theory and Policy

<i>Year</i>	<i>Author(s)</i>	<i>Historical milestones</i>
1981	Jonathan Eaton & Mark Gersovitz	Key paper: <i>Debt with potential repudiation</i> ; their first joint paper on international debt was published by Peter Kenen's series in International Finance at Princeton, and their theoretical paper on repudiation was published in <i>The Review of Economic Studies</i> . Gersovitz graduated from Yale 1975, Eaton in 1976, both supervised by James Tobin, and both went on to Princeton. Eaton as Assistant Professor of Economics, and Gersovitz Professor of Economics and International Affairs. Eaton mainly focused on international economics, public finance, and economic theory, while Gersovitz focused mainly on economic development, but also macroeconomic policy and econometrics.
1984	International Seminar in Public Economics	The seminar was founded in 1972 by Richard Musgrave, in order to create an international forum for research in the field of public economics. Executive members included James Buchanan (Virginia Polytechnic Institute) and Alan Peacock (University of York). In 1984 it was held a conference on public debt in Vera-Cruz in conjunction with the Bank of Italy, for which Blanchard (1985) and Barro (1984) were prepared.
1984	Jeffrey Sachs	Key paper: <i>Theoretical issues in international borrowing</i> , was initially prepared for a seminar at El Colegio de Mexico, in 1983. It was also published by Peter Kenen's International Finance series at Princeton. With a PhD from Harvard, supervised by Martin Feldstein, who led the US's National Bureau of Economic Research, Sachs had a long-term engagement with the NBER's research program in International Studies, writing several papers on developing country debt issues.

Table 5.1 – Continued

<i>Year</i>	<i>Contribution</i>	<i>Historical milestones</i>
1984	World Bank Symposium	A large symposium was held in December 1984, bringing together academics, practitioners and policy makers to discuss the debt crisis. They focused extensively on theoretical issues. Conference proceedings were published as Smith & Cuddington (1985) <i>International Debt and Developing Countries</i> , with contributions from R. Cooper, A. Krueger, R. Dornbusch, G. Feder, M. Gersovitz, P. Krugman, J. Sachs, A. Swoboda. The editors, Smith and Cuddington were based at Rice University and Stanford University respectively.
1985	Willem Buiter	Buiter produced the <i>Guide to Public debt and deficits</i> as part of the NBER's research program in Financial Markets and Monetary Economics. He earned his PhD from Yale in 1975, supervised by James Tobin, and was contemporary of Mark Gersovitz.
1985	Inauguration of the Journal of <i>Economic Policy</i>	The journal aimed to provide economic analysis relevant for policy, both for economists to engage with one another and to communicate to policy makers. The Journal held its inaugural meeting in Paris on 20-21 June, 1985. Its inaugural issue (Policy, 1985) contained key contributions such as Buiter (1985).
1985	International Seminar in Macroeconomics (ISOM)	The 8th ISOM focused on the international debt crisis and was held under the auspices of the Bank of France – an active participant in the debt negotiations. The proceedings were published in 1986 as a special issue of the <i>European Economic Review</i> , with an appeal by the governor of the Bank of France at the time, who was also the former head of the Paris Club, and future Managing Director of the IMF, Michel Camdessus, to the creditor and debtor governments to find solutions.

Table 5.1 – Continued

<i>Year</i>	<i>Contribution</i>	<i>Historical milestones</i>
1988	Paul Krugman	Krugman received his PhD from MIT in 1977, supervised by Rudiger Dornbusch. His paper <i>Financing vs Forgiving a Debt Overhang</i> was part of the NBER's research program in International Studies and published in 1988 in the <i>Journal of Development Economics</i> . He published widely on the topic: <i>International debt strategies in an uncertain world</i> was included in the World Bank Cuddington and Smith volume and <i>Prospects for international debt reform</i> as part of UNCTAD's research programme.
1989	Bulow and Rogoff (1989)	Bulow and Rogoff were classmates with Paul Krugman, earning their PhDs at MIT in 1979 and 1980 respectively, with Rogoff also supervised by Rudiger Dornbusch. Their paper <i>Sovereign Debt: Is to forgive to forget?</i> Was published in the <i>The American Economic Review</i> in 1989, followed by their paper <i>Constant Re-contracting model</i> published in the <i>Journal of Political Economy</i> . At the time, Bulow was at the University of Chicago and Rogoff at the University of Wisconsin. This had first appeared in 1986 as part of NBER's research programme in International Studies.
1989	World Bank Symposium	The second World Bank symposium on the developing country debt crisis brought together academics, policy makers and practitioners in international financial institutions. This conference was less focused on theoretical advances and more on policy issues. It was published as <i>Dealing with Debt Crisis</i> , and was edited by Husain, the earlier co-author of the work with Avramović, who was at the time chief of the Debt and International Economics Department at the World Bank, and by Ishac Diwan, an economist in the same department.

Table 5.1 – Continued

<i>Year</i>	<i>Contribution</i>	<i>Historical milestones</i>
1989	Frenkel Jacob, Michael Dooley and Peter Wickham	The IMF pooled together its own contributions to the debt crisis, published as <i>Analytical issues in Debt</i> , showcasing recent analytical thinking in debt at the IMF. This included publications such as Bulow and Rogoff’s Recontracting model. The editors were respectively: Jacob Frenkel, PhD 1970, from the University of Chicago & at the time Research Director at the Fund; Michael Dooley, with a PhD (1971) Pennsylvania State University, who was the Chief of the IMF’s External Adjustment Division and Peter Wickham.

5.2.2 FOUR CANONICAL MODELS

While far from exhaustive, four works have been chosen for they are widely cited both at the time and subsequently as seminal (Abbas et al., 2019; Gelpern, 2016). The authors were core participants of the academic debates, and policy conferences organised by the World Bank and the IMF. A variety of modelling approaches were employed in the ‘canonical’ papers, drawing from an ever-wider range of analytical tools. This section examines each model in detail, comparing salient features and modes of reasoning, closing with a broader discussion. Table 5.2 summarises the four contributions covered drawing out some of the salient characteristics.

Table 5.2: Summary of four canonical 1980's models

<i>Paper</i>	<i>Time horizon</i>	<i>Agent</i>	<i>Relies on</i>
Eaton & Gersovitz (1981)	Infinite	Heterogeneous	Default penalty and repayment function
Sachs (1984)	Infinite	Representative & Heterogeneous	Intertemporal consumption smoothing
Krugman (1988)	Finite	Heterogeneous	Game theory; Non-cooperative solution
Bulow & Rogoff (1989)	Infinite	Heterogeneous	Game theory; Rubinstein's Bargaining

5.2.2.1 EATON & GERSOVITZ (1981)

Debt with Potential Repudiation: Theoretical and Empirical Analysis by Eaton and Gersovitz is frequently acknowledged as the starting point of the 'new' economics on sovereign debt (Abbas et al., 2019; Gelpern, 2016). The bankruptcy literature that existed prior to this had not yet addressed the implications of the developing country debt crisis and the theoretical work on debt repayment problems had not fully incorporated default. Eaton and Gersovitz extended the literature of bankruptcy in domestic financial markets to foreign government borrowing in international capital markets. As there are no relevant bankruptcy laws and "no explicit mechanism deterring a government from repudiating its external debts" (Eaton and Gersovitz, 1981, p. 289), they supported the idea that international debt contracts are unenforceable, and asked why would a sovereign repay. Eaton & Gersovitz (1981) introduce an infinite horizon model, where the borrower is assumed to produce output which is a random variable that takes a range of values. The amount that remains for consumption is output plus borrowing less debt service payments. In order to move beyond the idea of default arising from negative net worth, a notion deemed irrelevant to international borrowing by governments, Eaton and Gersovitz included in the borrower's objective function a disutility that arises from a penalty for defaulting.

Besides the introduction of the penalty, the other important aspect of the model is a repayment function, which indicates how much of the borrowed amount the borrower will service. The borrower's decision is a choice in each period about how much to borrow from the 'available loan amounts', a function of the borrower's income and rate of interest, with the amount that will become available dependant on whether the borrower repays or defaults (Eaton and Gersovitz, 1981, p. 292). If the borrower does not pay, i.e. if debt service payments are less than borrowed amounts, the available loan amounts are zero, which means that a borrower is excluded from future borrowing. The borrower, therefore, has two choices: to repay or to default. If the borrower defaults, the sum of expected utility is output less the penalty imposed for defaulting. Likewise, in the choice to repay, utility is derived from the current period plus a fresh choice about repaying and defaulting in subsequent periods. The model concludes that default is optimal if the value of the default function is greater than the value of the repayment function. The rationale for repayment is that the borrower repays in order to maintain access to international markets, i.e. to preserve reputation for future borrowing and thus, Eaton and Gersovitz established the 'reputational' argument for why sovereign repay.

Following from the core of the model, the paper subsequently develops several examples. First, the model is solved without the possibility of default, in a deterministic way, showing that when there is no uncertainty, there is no default. The possibility of insufficient funds are ruled out and debt sustainability is stated, as always having the funds to pay back. Second, the authors solve the model stochastically – under uncertainty – to allow for the possibility of default. The authors assume the borrowers' future income in any period varies with the same probability. The creditor decides to lend without knowing the future outcome: if the rate of interest is sufficiently high then the creditors will be willing to lend. When there is uncertainty of the borrower's income, the creditor will be willing to extend credit despite the fact that there is a possibility of default, only if, the expected interest rate payment is higher than the expected repayment rate of the borrower. This arises from the assumption about risk neutrality, in that the lender only cares about expected repayment, i.e. the average repayment rate under the high-

and low-income case and not the variance.¹⁹ Hence, the creditor insures against the default risk that the borrower faces, which equivalently, we can interpret to mean that the borrower overpays through the risk premium in good as well as bad times. If the rate of interest is greater than the repayment rate, creditors will extend credit even under a positive probability of default. If debtors have a high income, then it is optimal to repay but if they have a low income they will *choose* to default. Even though the penalty for default is the same whether with a high or low income, the marginal benefit from that extra income is far greater in times of low-income.

Some observations can be made to compare with the insights of Avramović. While the literature broadly acknowledges that high debt burdens and defaulting lead to great socioeconomic costs, the portrayal of a choice of default and a 'benefit' through marginal cost-benefit analysis fails to capture important issues at stake. The marginal view of choice, does away with ability to pay, which examines whether a country has enough resources, sufficient growth and investment. Even though the repayment function is a presumed constant amount of outstanding debt, it is a technically innovative way to allow the introduction of the possibility that not all borrowed amounts will be repaid. However, it is an ad hoc inclusion, and with regards to its claim to superiority over formalisation and endogenisation of key variables that prior theorists had been criticised for. Furthermore, the possibility for an increasing repayment function was ignored. Greater borrowing may eventually increase the amount repaid, if productively invested, which was one of the assumptions made in Avramović's model that relied on the idea that foreign borrowing supplements but also increases domestic savings through growth of income. However, in prior theoretical contributions on the problems of the borrowing process, Avramović included, the spectre of default loomed large but, in the background. This paper was the first to bring the possibility of default as an equilibrium solution in the context of foreign borrowing. Finally, the variation of income in Eaton and Gersovitz is modelled as a stochastic process. This sharply contrasts to the development cycle envisaged by Avramović; the former views the fluctuations leading to default as essentially random, whereas the latter views the reasons for repayment problems as deriving from particular external and domestic constraints facing the economy.

¹⁹By comparison, a risk averse lender would care about smoothing consumption across time *and* states.

5.2.2.2 SACHS (1984)

Sachs (1984) opens his theoretical exposition of the theory of international lending *Theoretical Issues in International Borrowing* with the observation that the history of sovereign default is proof that the model of competitive lending is not how international lending works. The standard competitive model he has in mind assumes that finance is available for all projects with positive present value at the going interest rate, and borrowers simply equate marginal utility of consumption at different points in time – i.e. agents can successfully engage in intertemporal consumption smoothing. However, credit rationing from the work of Stiglitz and Weiss (1981), loss of investor confidence and other such issues, indicated the “large gap between theory and practice” that “has led to a search for new theoretical concepts to explain actual loan behavior” (Sachs, 1984, p. 1). Sachs (1984) starts from the textbook case which rationalises the existence of loans in a representative agent model, with the budget constraint of national wealth, and subsequently introduces a series of refinements and modifications to the basic model. The first ‘friction’ introduced followed Kharas (1981), and refers to government taxation. The second extension gives the borrower the option of repudiation (Sachs, 1984, p. 3). The third extension is to focus on the creditors’ loan-supply functions and the collective action problems between banks that defined the 1980s debt crisis.

The standard international borrowing model is a modification of the Ramsey-Cass-Koopmans model that was introduced in Section 3.2.2. In the simple case, debt servicing ability is understood as having enough discounted disposable income after investment to pay for debt. The output net of investment will be used for debt service and consumption; the bigger the net amount, the more left over for consumption. If indeed there is not much left over, “consumption is zero along the *entire* remaining growth path” (Sachs, 1984, p. 7, italics in original), arguing that one would avoid borrowing the full feasible amount. The solution to the optimisation problem in the infinite horizon case is such that all debts are paid, meaning a transversality condition is met, and all debts are paid from primary balances. From the perspective of a social planner, the optimal plan is that the amount borrowed should be such that the marginal product of capital

equates the cost of capital, regardless of how much consumption there is. The condition that consumption should be smoothed relative to income “when output is low relative to trend and paying back loans, on net, when output is high”, is akin, “on careful interpretation”, to IMF programmes (Sachs, 1984, p. 9). In this respect Sachs interprets the model’s first order condition as making “explicit the IMF dictum to finance temporary shocks but “adjust” to permanent shocks”. This result obtains in a world of no frictions, perfect foresight and without the possibility of default in equilibrium (Sachs, 1984, p. 9).

The first friction introduces taxes. Sachs wanted to show was if a country was “tax constrained”, even productive investment projects may stumble on growing debt-service ratios, arguing that in tax constrained economies, growth rate and level of optimal borrowing will be lower than in less tax-constrained economies. The implication is that a higher tax rate permits one to service higher debts, therefore increase investment and consequently growth (Sachs, 1984, p. 16). An economy cannot borrow for very good projects if it is tax constrained. What Sachs shows is that including the ‘friction’ of taxes, the optimal growth rate and optimal borrowing is smaller than the benchmark case. The implication is that a higher tax rate is compatible with higher debt-servicing ability by the borrower who can therefore increase investment and consequently growth.

The second friction follows Eaton and Gersovitz’s model of repudiation. The benefit of default is the value saved that would have gone to debt service; but modelling the costs of default is more problematic. If a borrower repudiates, output is reduced by a fixed portion, and there is exclusion from further borrowing. The decision to repudiate is based on the following calculus: if a borrower repudiates, they lose a portion of output; if a borrower repays, they are left with their output less the debt service cost. If the consumption level with repudiation is greater than the consumption level by repaying, then the borrower defaults (Sachs, 1984, p. 18). Solving the calculus involves finding the debt level such that the benefit of default is greater than the cost so as to find the credit ceiling after which no credit will be extended.

Similarly to Eaton and Gersovitz, the example with certainty means that the borrower knows the future cash flows, hence the only motive to default is strategic i.e. default does not oc-

cur through a negative shock but only because one can get away with it. Under certainty, higher penalties are needed to avoid repudiation. Under uncertainty however higher penalties are not enough to deter default. The reason is in a bad state of nature, the marginal benefit of default is much greater than the marginal cost, and thus “higher penalties ... do not necessarily reduce the frequency of debt repudiation” (Sachs, 1984, p. 24). The greater the discount factor as compared to world interest rates, the more the country wants to borrow today and likewise, “while higher [penalties] make default more costly, it also makes lenders willing to extend more credit” (Sachs, 1984, p. 24).

Sachs reaches several conclusions. He compared this type of analysis to the project planning analysis that was typical in the thinking of the World Bank, covered in Chapter 3. He notes that in this framework, as Avramović and others such as in the Keynes-Ohlin debate had pointed out, “too little attention is generally given to the domestic budgetary implications of foreign borrowing” (Sachs, 1984, p. 38), and this may explain why his first example is about taxes. With respect to repudiation, Sachs notes that “the loan-supply schedule becomes upward sloping, with eventual credit-rationing” depending on the size of penalty (Sachs, 1984, p. 38). This leads to “inefficient borrowing and investment behavior by the debtor country” (Sachs, 1984, p. 38), but it also leads him to discuss that problems arise with respect to the supply of credit; “individual banks withhold loans because of the fear that other banks will do so as well”, resulting in a liquidity squeeze. Forming binding coalitions, and avoiding collective action problems would lead to better outcomes (Sachs, 1984, p. 38). In this respect, he argues that the IMF’s role is to alleviate the market imperfections he discussed. The conclusion is that “better, empirically oriented dynamic models of international lending are still needed to identify the middle-term prospects for the debts of developing countries” (Sachs, 1984, p. 38).

5.2.2.3 KRUGMAN (1988)

Krugman contextualised his contribution on *Financing vs Forgiven a Debt Overhang* less in terms of an answer to the ‘puzzle’ of why sovereign repay, and more as direct answer to the policy

debate marked by the initiatives by US Treasury Secretaries Baker and Brady. Baker presented his strategy for dealing with the debt crisis at the IMF interim committee meetings in 1985, which while generally acceptable by the Fund (De Vries, 1986), failed to provide long-lasting solutions as banks were hesitant to keep exposing themselves to countries that were unlikely to fully repay. The same countries repeatedly returned both to the IMF for new programmes and the Paris Club for repeated restructurings. The literature on the repudiation model and the credit rationing story did not fully capture the policy debates taking place. Krugman reflected that “somewhat surprisingly, this practical discussion is taking place with little parallel analytical discussion among economists” (Krugman, 1988, p. 1). Krugman argued that closer to reality was that countries faced an inherited debt that could not be serviced except by new borrowing. He defines as a debt overhang the existence of an “‘inherited’ debt sufficiently large that creditors do not expect with confidence to be fully repaid” which “may give creditors an incentive to lend at an expected loss to protect their existing claims” (Krugman, 1988, p. 2). This honed down on the collective action problems among creditors – a core problem in resolving the debt crisis, which had been partly addressed theoretically in one of the examples by Sachs (1984), and examined by Krugman in earlier papers such as in Smith and Cuddington (1988) and in UNCTAD (1987).

Optimising models of sovereign debt contain trade-offs of one kind or another and Krugman’s model was the first to introduce the benefits of debt forgiveness. The paper tries to address the arguments in favour of restructuring as opposed to the tired practice of provision of new money (Krugman, 1988, p. 3). Krugman suggests that a country is like a firm, except for the fact that not all future streams of income are available for debt service, as the maximum resource transfer will be mitigated by the willingness to repay. In the simple example provided, a debt overhang is equivalent to an unsustainable debt, and is present when the “expected present value of potential future resource transfer is less than its debt”, i.e., there is insufficient confidence that a country will find the resources to repay (Krugman, 1988, p. 5). Through the use of backward induction, and in conditions of certainty, the overhang problem is straightforward – “if the country can pay, there will be no liquidity problem. If it cannot, the debt must be written

down at the outset” (Krugman, 1988, p. 7). In conditions of uncertainty however the potential future resource transfer is not known. Under the assumption of risk neutrality, as previously explained, the lender does not care about variance of returns, only expected values, of what a country will be able to repay.

Krugman introduces a game theoretic argument of backward induction to assess whether a liquidity crisis would arise in the first period in conditions of uncertainty. He embeds incentive problems describing the consequences of high and low efforts of adjustment. If there is a default, the creditors will not receive the full amount owed. The incentive effects created is that “creditors have an incentive to lend to the debtor, even at an expected loss, as a way to defend the value of their existing claims” (Krugman, 1988, p. 13). The conclusion is that in the possibility of a state in which the creditors may receive full value, then lenders will always charge the maximum they could get (Krugman, 1988, p. 14). However, the incentive effects on the borrower is such that as the creditors will “want a country to make as much adjustment effort as possible”, if the debt burden is big enough, then “there is no reason for the country to make the adjustment effort, since the reward goes only to the creditors” (Krugman, 1988, p. 14).

The model of debt overhang is a two period model in which the resource transfer possible in the second period is unknown and can take a range of values, as a random variable with an adjustment effort as a choice variable. The borrower’s utility is a function of consumption less the disutility of adjustment, which is assumed to *increase* the future ability to pay. There are two options for payment in the second period: if the good state prevails, then the creditors will receive the amount they lent in the first period, but if not, they will receive the maximum amount possible. The model is set up as a game, in which creditors set the interest rate and debtors decide the adjustment effort. Krugman does not model default per se, but rather, using the spectre of default out of equilibrium, he searches for the interest rate and stock of debt such that a country does not default. He concluded that “the higher the interest rate, the lower the country’s adjustment effort” (Krugman, 1988, p. 20). The rationale of the game is such that the debtor offers an adjustment effort satisfactory to the creditor and likewise the creditor does not charge an exorbitantly high interest rate that would incentivise the debtor to not put the effort in. The

reason is that the higher the rate of interest, the repayment burden is very high, less is left over for the borrower, so, the marginal benefit of the extra effort of adjustment is less than the benefit of making the effort. This yields a trade-off of the two motives for the creditors: the first is the “new money” bias arising from the presence of uncertainty: creditors always have an incentive to charge the highest rate possible as the good state may prevail and they may end up being repaid more than expected. The second incentive is the “debt forgiveness” bias imparted by the problem of incentives for the debtor, meaning “creditors do not want to make the country’s situation too hopeless, or it will have no incentive to improve its ability to repay” (Krugman, 1988, p. 21).

Krugman makes several criticisms of the paper: “it treats the real economy as a “black box” out of which resources are somehow extracted” (Krugman, 1988, p. 22). Perhaps the most interesting and lasting conclusion of Krugman’s model is that he casts doubt on the prevailing view of how to address the debt crisis depends on whether one faces a liquidity or a solvency problem, from which it is assumed that the policy response of either more financing or write-offs respectively would flow. He calls this ‘misleading’ for “there is no such thing as a pure liquidity problem, it must arise out of doubts about solvency” (Krugman, 1988, p. 30). Financing or forgiving the debt overhang does not hinge upon resolving the liquidity versus solvency issue. The policy choice of financing or restructuring debt is not about liquidity or solvency but rather if debt is too large then the debtor has no incentive to pay and creditors do not want to forgive debt unnecessarily. There is no reason to adjust if the debt is too large to repay. This may provide grounds for debt forgiveness, which increases the likelihood to eventual repayment. This is what makes financing or adjustment hard to decide among and in this sense given the difficulty of the settling on the two contrary motives, the resolution may come from state contingent repayments (Krugman, 1988, p. 31). Linking repayment to repayment capacity, such as export revenue, world interest rates or key export commodity prices, which would change the nature of the claims could offer solutions.

5.2.2.4 BULOW & ROGOFF (1989)

The final seminal contribution that we examine is Bulow and Rogoff's "A Constant Recontracting Model of Sovereign Debt".²⁰ In the context of the sovereign debt puzzle, this paper provided the main counter proposal to Eaton and Gersovitz's reputational argument. The authors discuss the salient features of international lending and default which previous models failed to adequately address. Empirically, they argued the reputation argument did not hold, as failure to repay did not forever banish sovereigns from re-borrowing.²¹ The paper challenges Eaton and Gersovitz by arguing that if a country could have income insurance, then the reputational model would unravel (Bulow and Rogoff, 1989, p. 158). The paper identifies the incentives of repayment as the existence of some possible amount of seize-able collateral, the carrot of good reputation and the stick of sanctions (Bulow and Rogoff, 1989, p. 157). Instead, the paper suggests that repudiation's greatest disincentive is trade sanctions and inability to access trade credit. Given this emphasis Bulow and Rogoff model a small open economy that produces traded output that can be stored and is perishable by some constant factor. The trade sanctions are a binary variable in the utility derived from gains from trade, that assumes a value when in default, lowering the value of the domestic maximisation problem. In this respect, this is quite similar to Eaton and Gersovitz. The creditors' objective function contains a portion of trade that can be seized, which however, will not mitigate the full cost of default, since retrieving assets is costly in itself. With respect to modelling, the authors also innovate by coming up with an alternative to the "penalty approach" of Eaton and Gersovitz. Bulow and Rogoff introduce a bargaining process that governs debt rescheduling. They suggest that "the bargaining between debtors and creditors is ongoing, with contracts constantly subject to renegotiation" (Bulow and Rogoff, 1989, p. 156). Their model is a dynamic optimisation model, and the main mechanism is not the utility lost from a penalty but rather, that if things do not go well, there is a bargaining process over the terms of debt restructuring.

²⁰Initially published in 1986 as a working paper.

²¹Several empirical works covered this issue at the time Eichengreen (1987), Lindert and Morton in Sachs and Collins (1989) and for recent evidence see Tomz (2007).

The paper incorporates Rubinstein (1982) to explain the bargaining process that determines the Nash equilibrium solution to the model, assuming equal bargaining power among agents. The problem between the country and the bank is set up as a game in which the solution is defined as being within one of three potential regions, the bargaining region, the autarky and the punishment region, and solution determined by whichever region has the lowest value (Bulow and Rogoff, 1989, p. 166). The bargaining process is such that there are a series of carrots and sticks to the process: for the creditors, while there is a take it or leave possibility, even if sanctions are imposed, they can still only take a portion of a country's exports, and the debtor will still gain something too. The model tries to find how much international trade will take place such that both sides will be willing to partake in trade. If the gains from trade are small, and costs of seizure are high, then debtor's threats become more credible. If the banks have little ability to react in the case of default, then the punishment region is relevant one. Bulow and Rogoff offer a game theoretic solution to debt renegotiation conundrum. In sum, the model establishes that typically, and subject to the model parameters, the borrower opts for repayment to avoid trade sanctions (autarky) or punishment.

5.2.2.5 SUMMARY OF THE CONTRIBUTIONS

The analysis of these four models illustrate the types of analytical arguments and modelling approaches used to dissect the 1980s debt crisis. They incorporated insights from other sub-fields, such as corporate finance, contract and game theory, and identified a series of frictions that corresponded to real-world problems in international lending and addressed issues such as sanctions, penalties and repudiation. The first innovation was the introduction of game-theoretic modes of discovery for solutions. Krugman for instance relied on backward induction, and Rogoff and Bulow relied on bargaining to arrive at the relevant solution. These are strategic considerations by definition.²² These models moved away from the 'perfect' world of Arrow-Debreu introducing incomplete markets (i.e. missing financial markets), where not all risks can be in-

²²See Dimand and Dimand (1996) and Weintraub (1993) for analyses on how game theory rose to prominence.

sured. There is a form of market incompleteness *ex ante*. Default itself is the obvious break from perfection. Bankruptcy costs, such as in Bulow and Rogoff, are also present, in that the creditors face costs and cannot retrieve assets costlessly. The models are mostly not representative agent models – rather they incorporate two agents with distinct definitions of utility maximisation problems – and who face frictions and strategic considerations, with implications for policy. The models contain examples both under certainty or uncertainty, and under risk neutrality assumptions. Furthermore, these models seem to offer more leverage for policy interventions than what the “norm” of the Lucas critique would have implied, and indeed all four contributions make note of ongoing policy options.

Several substantive criticisms can also be raised. These are effectively real models; intertemporal consumption smoothing is a form of real activity. In the taxation example by Sachs, there is no follow-up on the possible role of positive stimulus in averting debt crisis, as may arise from a conception of a demand-driven monetary economy. Common to the models is the thorny issue of how resources are divided between what is available for debt service and what is available for domestic consumption. The models are, in general, driven by the assumption that borrowers will borrow all the amount that is available to them. Although Sachs acknowledges the disutility of adjustment, and Bulow and Rogoff that the objective function of the authorities may not match the people’s, there is an obfuscation of the conflict between adjustment versus default. The models’ treatment of the lack of resources for domestic consumption, where, in the case of zero leftover, the country would starve, are ethically, politically and socially questionable modelling possibilities. Beyond the disregard for the implication of this aspect of the models, this is used in an attempt to explain why countries repay, on the basis of some sort of a cost, whether a penalty of reputation or future market exclusion (in the case of Eaton and Gersovitz) or a sanction (in the case of Bulow and Rogoff) in the case of trade. However, the notion of a benefit of default, from adjustment saved, or debt service payments gained, are far from the reality on the ground of the implication of IMF and World Bank conditionality (see Section 5.3) (Roos, 2019). While the appeal of setting the problem up like this is to offer new ways of looking at the issue, effectively, the more noticeable consequence of the literature is the new arena

for economists, than any profoundly better understanding of the causes of or costs of default. The introduction of incentive problems and strategic considerations are useful, but the models avert divert attention from any of the more critical issues about the causes of the crisis, whether the theory of loan-pushing (Darity, 1985), global instability, protectionism in creditor countries, declining terms of trade and the host of factors that were raised by developing countries explored in Chapter 4. This indicates an impoverished view of a political process, both international and national, that guide the negotiations. The game-theoretic arguments do not capture the power imbalances between the agents confronting their respective 'choices'. It assumes away the structural imbalances that different countries' position in the world economy imply.

5.3 PRACTICAL DEVELOPMENTS AT THE IMF: ENLARGING THE MEDIUM-TERM FRAMEWORK

5.3.1 INTRODUCTION

The basic contours of the role of the Fund in the 1980s debt crisis and its role in debt restructuring have been covered in Chapter 1 and surveyed in several works, more recently, by Hagan (2020) and Sgard (2016).²³ During the 1980s crisis, the IMF's economic analysis and operational tools evolved, and yet the development of its technical expertise has not been sufficiently covered. This section argues that the IMF moved, albeit gradually, with the tide of intellectual developments taking place. The IMF did not have an analytical framework to address debt issues when the 1980s crisis began. The weakness of the short-run balance of payments approach forced it to extend its framework into the medium-run. What comes at first as a minor extension and improvement to its policy framework, ends up being profoundly influential on the Fund's work on debt analysis and its role in sovereign debt restructuring. It is important to foreground the discussion on IMF analytical tools with the impact of the IMF involvement during the 1980s. In this section we broadly explore the ways in which the theoretical developments

²³Its enlarged and evolved role in the international monetary and financial system greatly discussed (for instance in Vasilov (2013)).

covered in Section 5.1 and 5.2, in particular the intertemporal view to debt sustainability, gradually seeped into the IMF's operational framework.

In connection to the modelling of the 1980s crisis, it is worth comparing the view of adjustment as a choice variable disassociated from its social reality. This will cast doubt on the portrayal of adjustment as representing real choices, and but also highlight that the IMF had no analytical expertise to address debt crises, and its policy programmes led to long-lasting development disasters. The growing IMF's involvement in crisis management was accompanied with far reaching conditionality programmes, such as stipulating macro targets, for instance, on fiscal balances, to a perennially growing array of issues which included privatisation of public assets, liberalising trade and product markets, and a host of market reforms (see Babb and Buira, 2004) and Kentikelenis et al. (2016) for a recent review of the evolution of Fund conditionality). The elements of the *modus operandi* was that a country would negotiate a programme with the IMF up to the point of detailing a Letter of Intent (LOI) that showed how a country's financing gap would be closed. This was sufficient to signal the Fund's seal of approval with which the country would subsequently attempt to negotiate with its private creditors.²⁴ Upon announcement of the settlement, the IMF would announce the SBA and begin disbursements (Sgard, 2016, p. 117).²⁵

The depiction of adjustment in Section 5.1 and 5.2 wholly abstracted from the political and social reality entailed, appearing as an innocent choice variable in the models. As raised in Chapter 1, creditors' conditionality included the removal of subsidies leading to rapid rises in prices of essential goods. The social and political cost of conditionality escalated while the debt crisis remained unresolved leading to countless protests and broad social movements (Nkinyangi, 1991; McMichael, 2012; Nelson, 1990; Situmbeko and Zulu, 2004). These broad programmes were rolled out with force during the 1980s as part of the international strategy to deal with the evolving debt crisis discussed in Chapter 4, which was done with great social and political costs

²⁴“This accord typically included a frontloaded capitalization of arrears, a rescheduling of capital amortisation and some ‘new money’” (Sgard, 2016, p. 117)

²⁵The variety and distinctiveness of each arrangement is important. Martin (1991) emphasises the unique political and economic context of each negotiation as being crucial in the kind of bargaining and agreement attained.

(Cornia et al., 1987). Across Latin America and Africa during the 1980s, governments fell frequently while trying to implement IMF programmes or resigned rather than accept them, often amidst severe social unrest with many casualties. Examples include Peru 1980 and 1984, Argentina 1983, and Brazil 1984. In Africa, in 1985, Nyerere President of Tanzania, resigned rather than agree to an IMF programme. Zambia's programme was suspended by its President in 1987 following extensive food riots, which had followed a series of years of escalating dissent towards maize price rises, petrol price rises, and collapsing real incomes (Martin, 1991). In Burkina Faso, military leader and President Thomas Sankara, resisting the IMF programmes called for widespread debt repudiations. In general, youth and unemployed, students, working and professional classes resisted IMF conditionality, such as removal of subsidies on basic foodstuff, and wholesale contractions of public expenditures. The increasing escalation of protests, reaching a peak during the 1980s, were expressions of "collective sense of injustice" (Walton and Ragin, 1990, p. 887). In several cases, these were ignored (Ghana, Madagascar, Mali, Sierra Leone and Sudan (Martin, 1991, p. 70). The hundreds left dead in the Dominican Republic and Venezuela following implementation of IMF policy that led to skyrocketing increases in the price of medicines and basic food stuffs was widely acknowledged as having increased the political pressure to break the political deadlock between US Treasury, US banks, debtors, the IMF, and prompted the Brady Initiative. Venezuela's President linked the deaths and hundreds wounded to the economic measures "imposed by the Government to satisfy its creditors" (Times, 1989). It was against this backdrop, that the IMF gradually begun to consider the issue of debt in a more precise analytical framework.

5.3.2 THE NEW MEDIUM RUN FRAMEWORK

The IMF was initially set up in order to make its resources temporarily available to its members in need of balance of payments support and for maintaining the par value system (for a detailed account see De Vries (1987)).²⁶ Its activities focused on monitoring balance of payments, ex-

²⁶The IMF's senior organ is the Board of Governors, consisting of representatives from each member country, which delegates all but a few responsibilities to the Executive Board. The Executive Board

change rate policies and international liquidity of its members. Following the US suspension of gold convertibility in 1971 and the movement of countries off the adjustable peg system by 1973, the IMF's role evolved into a more general financial crisis manager (Boughton, 2000). The financial turmoil of the 1970s included the breakdown of Bretton Woods, but also the oil price and interest rate increases, which were instrumental in the debt crisis and resultant 'lost decade' of the 1980s. It was during this period, that private capital flows to developing countries greatly expanded – as covered by reference to bank practices in Chapter 4. The changing context of private, market-based financing meant that after the 1980s commenced, the scale of cross-border private lending outpaced the size and scale of IMF resources. This significantly affected IMF practice, in its position vis-a-vis private finance, its management of capital account crises and access policies covered in Chapter 6.

Underpinning the IMF's calculations of adjustment was a monetary model trying to achieve consistency between stipulated policies and planned balance of payments target (Spraos, 1986). External debt was not the traditional or main purview of the Fund, and as such it did not have a thorough analytical framework to deal with debt. Jacques Polak, long-time chief economist (Director of Research) at the IMF and the conceptual architect of financial programming, saw balance of payment problems as arising from excessive domestic credit expansion (Polak, 1957). This provided the rationale of IMF fund programmes to target reductions in domestic credit to restore balance of payment viability. This lent itself to diagnosing problems as arising from excessive domestic expenditure caused by public sector deficits (Easterly, 2006). This position was the same as the one taken by the creditors in the political conference in the 1970s examined in Chapter 4. Performance criteria on programmes would limit the amount of public

represents all 185 member countries by grouping them into 24 constituencies where the voices of the single-country constituencies far outweigh those of the multi-country constituencies. While decisions at the Executive Board are made through a form of mood-sensing as opposed to voting, the relative influence that a country has corresponds to each country's assigned quota – the participation in the IMF's capital – which favours higher income countries and gives effective veto power to the US (Buirra, 2005). A country's quota determines the amount of financial support it is eligible to receive, governed by rules about access limits. As will be developed in subsequent sections and in Chapter 6, extraordinary loans beyond what would be ordinarily be permitted through normal access limits created the need to quantify the criteria with which such access could be given.

sector borrowing from, for instance, the domestic banking sector.

In practice however, as argued by Martin (1991, p. 61), the IMF “calculated an ‘adjustment gap’ for the debtor to fill”, which created pressures to make programmes look better than they were. “The process by which preliminary estimates were turned into ‘final’ figures was astonishingly haphazard” argued Martin (Martin, 1991, p. 62). “There was no rule on whether ‘adjustment gaps’ were finalised and formal approval given before or after other negotiations” (Martin, 1991, p. 63). IMF programmes were riddled with instances of “last-minute juggling of projections”, and avoidance strategies to recalculate adjustment gap that would mean more lending, and various strategies to make arrears to fund seem payable (Martin, 1991, p. 65). Reverse engineering was not uncommon. Rather than the model determine the gap, the calculation would be based on the finance available by the rich members of the Board; oftentimes bringing great rifts between the different departments and parts of the IMF. Given the haphazard background, covered also in Chapter 6, we now turn to the changes underway in the Fund’s policies.

As foreign borrowing became more of a problem, the IMF introduced more explicit conditionality to curtail resources flowing to the public sector, and in the process shaped the structure of external debt. Conditionality on external debt however was not articulated until the eve of the 1980s crisis. Monitoring debt policies explicitly, as part of the Fund’s mandate, was only integrated in 1977 through its legal decisions, and this was only as part of the obligations to monitor exchange rate policies.²⁷ Only in 1979 did the IMF’s guidelines more firmly integrate external debt conditionality. As decided in 1979: “in addition to the usual performance criterion with respect to domestic credit expansion, a performance criterion relating directly to public and publicly-guaranteed foreign borrowing will be used in upper credit tranche arrangements” (IMF, 1979, p. 11). The most frequent way to apply conditionality to external debt was as a ceiling applied to public sector foreign borrowing.²⁸

²⁷Decision No. 5392-(77/63), April 29, 1977 laid out that the IMF’s appraisal of exchange rate policies would be based on developments in balance of payments vis á vis reserves but also external debt ((IMF, 1983a, p. 16).

²⁸During the 1970s (1973 – 1979), the IMF had 53 upper credit tranche programmes with 31 countries. Quantitative ceilings on debt as performance criteria was included in 70% of these programmes, but in other instances, although included in the Letter of Intent, quantitative targets on debt did not make up

The IMF began introducing policy conditionality on external debt much before it had developed an adequate framework to examine it. This expansion of policy conditionality into external debt was analytically at odds with traditional overall balance of payments objectives. As explained by Loser (1977, p. 168), external debt management was about medium-run effects on the economy rather than immediate short-run adjustments on an economy's financial flows. "As a consequence of the different time frameworks for policy formulation, the implications of short-term financial policies for the country's current account may not be consistent with external debt management guidelines which would be appropriate in a medium-term context" (Loser, 1977, p. 1). This led to a series of analytical developments examined below.

In 1983, the Staff proposed to expand the debt analysis that the IMF performs, building a more integrated technical debt management framework into the IMF's traditional balance of payment monitoring. When this new analysis was first introduced, Jacques Polak, remarked in 1983 "that the Executive Board had not discussed the serious general problem of external debt for a long time, and he was glad that the present discussion would not be the last" (IMF, 1983b, p. 11). Despite having incorporated conditionality on external debt, comprehensive surveillance and assessment of external debt was still lacking and the Staff proposed that this would be needed to better inform the Board about balance of payments problems in good time. Therefore, by the time the debt crisis arrived, the IMF's analytical framework was unequipped to handle an assessment of its members' debts. The only element covered was projected debt service payments on existing debt (IMF, 1983a, p. 16). The Staff proposed that "the coverage of external debt matters in Article IV reports be strengthened by including a forward-looking external debt analysis which would form the background against which the staff would report upon and assess the member's intended external debt policies" (IMF, 1983a, p. 16). The proposal was to integrate "a meaningful assessment of the sustainability of the present and possible future external debt situation" which involved studying the medium-term debt-servicing capacity of the economy. The intention of the Staff was to ascertain whether "present and prospective levels of performance criteria (IMF, 1979). Evidence shows the variety of quantitative performance criteria such as ceilings on external arrears, conditionality on medium and long run borrowing that were increasingly present in SBA and Extended facility lending from the late 1970s (Kentikelenis et al., 2016).

external borrowing are sustainable”, drawing from the intertemporal understanding of sustainability that had surfaced in the theoretical literature covered in previous sections (IMF, 1983a, p. 17).

While contributors of the empirical models in Chapter 4 also wanted to form a view on whether the future promised further problems, their method was backward-looking – they would start with an examination of trends of past indicators and cases of default. The gradual introduction of the forward-looking approach would be done through a two-step process: the first step was scenario analysis meaning “a technical analysis of the implications for the future evolution of the debt service burden in the medium term (for example, during the next five years) of alternative paths for the external current account”.²⁹ The second step was about trying to find the balance that would be consistent with some agreed target: this was about finding the conditionality policies that would achieve a current account target consistent with a specific range of debt servicing payments (IMF, 1983a, p. 17). The staff stated that this technical tool has no predictive character but purely analytical “for strengthening the basis of the judgemental elements involved” to be developed alongside country authorities (IMF, 1983a, p. 17). The Staff expressed an interest in creating a tool that could facilitate comparison across countries, that would enable consistent treatments across countries, and would be fairly uniform in terms of presentation and methodology of compilation (IMF, 1983a, p. 17). The proposed new template was called the “medium-term outlook analysis” and is shown in Figure 5.2

Figure 5.2 shows one block identifying the projected debt payments on existing and new borrowing, one block on the balance of payments, and one block on macroeconomic indicators. The proposed block identifies real growth rate of GDP, GNP and domestic expenditure and the ratios of investment and savings to income (GDP or GNP) (IMF, 1983a, p. 50). It does not decompose the evolution of debt dynamics into the constituent parts as shown in Figure 1.9, and differs substantially from the framework introduced in 2002 (covered in Chapter 6). The Staff discussed that economic theory had grown to include “many alternative theoretical approaches to the question of the optimal or sustainable level of foreign borrowing” (IMF, 1983a, p. 18). In

²⁹The proposal fits with existing balance of payments projections undertaken in Article IV reports.

Figure 5.2: Medium-Term Debt Scenario, 1983

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ANNEX B

Illustrative Analysis of Medium-Term Debt Scenario

	Actual	Projected				
	1982	1983	1984	1985	1986	1987
Debt service payments						
a. Payments on existing debt ^{1/}						
Interest ^{2/}						
Amortization						
b. Payments on new borrowings ^{3/}						
Interest						
Amortization						
c. Total (a + b)						
Interest						
Amortization						
d. Total debt service payments/ exports of goods and services						
Balance of payments						
Current account						
Exports of goods and services						
Imports of goods and services; of which:						
Interest payments						
Capital account (net)						
Of which: gross borrowings						
IMF (net)						
Gross reserves (months of imports)						
Other macroeconomic indicators						
Real growth rate (per cent change)						
GDP/GNP						
Domestic expenditure						
Ratios to GDP/GNP (per cent)						
Investment						
Domestic/national savings						
^{1/} If relevant, interest charges and repurchases relating to IMF purchases would be shown separately. ^{2/} Including interest on short-term debt. ^{3/} Terms assumed for interest rates, grace, and repayment periods.						

Source: IMF (1983a).

the Staff's presentation of the new framework, they adopted the view that successful and "sustainable scale of external financing" is about the efficiency of use of foreign savings. They then go on to argue that "it is well recognised that the sustainable level of recourse to foreign savings differs widely among countries" (IMF, 1983a, p. 19). Despite the support for greater reliance on a new technical apparatus, the Staff cautioned that debt appraisals "inevitably involve substantial judgemental elements", and argued against relying "mechanically on one or more debt indicators to provide clear-cut answers" especially given "the sensitivity of any "forward-looking" analysis of the kind described to the particular assumptions employed" (IMF, 1983a, p. 18). This ruled out "any universally applicable formula for judging the sustainability of a particular debt situation" (IMF, 1983a, p. 19).

The response from the Executive Board on the proposal for the forward-looking analysis was overwhelmingly positive, even if several Directors mentioned particular concerns and observations. Their analysis however drew fierce condemnation by Jacques Polak, director of Research. He disagreed with the portrayal of debt sustainability as arising from efficiency of use of foreign savings, a view he felt showed total disregard for the opinion he had hoped would have gained more credence after 40 years of his effort regarding the monetary approach to the balance of payments (IMF, 1983b, p. 12). This disagreement also reflected the issue, raised in Chapter 4, around the turf wars between the IMF and World Bank over the issue of balance of payments problems in policy and analytical terms.³⁰ What had been presented as a breakthrough, received cool reception by the head of research; about the medium-run framework, Polak went to say that "The importance claimed for that fairly routine analysis did seem to have been somewhat overstated" (IMF, 1983b, p. 12).

³⁰See the discussion around the marriage model and adjustment with growth paper (Khan et al., 1990; Polak, 1990), and the discussion around the coordination problems between the World Bank and the IMF (Polak, 1994).

5.3.3 THE EMERGENT ROLE OF THE MEDIUM-RUN FRAMEWORK FOR THE FUND

Initially the IMF was not a leading part of debt rescheduling, but it was increasingly “assuming a growing role in facilitating discussions between debtor countries and creditors” (IMF, 1983b, p. 21). The political conflict described in Chapter 4, whereby creditors refused to channel meaningful solutions to debt problems through UNCTAD and the UN system was part of the strengthening of the IMF’s role in debt restructuring. We have covered in Chapter 1 and 4 that by the 1980s the practice of debt restructuring had acquired some routinised features even though they inadequately safeguarded the interests of debtors. The IMF supported the basic contours of the approach but nevertheless sought to clarify its role and policies vis-a-vis the debt crisis.

As Fund programmes became a core pre-requisite for rescheduling in other fora to commence (Paris Club and bank advisory committees), the intermediary position of the Fund made apparent the difficulty of both sequencing and timing between IMF programme and the commitments made by banks to keep financing the country. It was the Fund’s role to cajole the banks to keep lending into an ex ante financing gap. As described in Executive Board meetings, “by dint of considerable prodding” the IMF had tried to ensure bank exposure would be kept up (IMF, 1983b, p. 12). But this, as Polak noted in the Board meeting, could not be a long-term IMF activity. It was only because the IMF “exercised the full weight of its moral suasion” (IMF, 1983b, p. 16) to get the banks to increase net exposure and hence “put its prestige on the line, exposing the institution to strong criticism” if programmes failed (IMF, 1983b, p. 16). Operationally the IMF had to satisfy the requirement that the country has an IMF programme in place before seeking Paris Club relief, which was itself a requirement to seek an IMF programme. Described as a chicken and egg problem, it nevertheless insisted to keep the link between rescheduling agreements and adjustment through an IMF programme. As one Director remarked, “There might be no single best way of dealing with that problem, which was probably unavoidable” (IMF, 1983b, p. 37).

While it was the usual practice for banks to insist upon rescheduling on no less than mar-

ket terms, the Fund could help to avert situations in which banks dictated those terms, particularly as debt restructuring was usually accompanied by fresh resources from the Fund under financial programs designed in part to ensure the repayment of external debt. However, he shared the staff's view that "no attempt should be made to formalize the role of the Fund in debt rescheduling exercises or to establish precise policies and guidelines in that respect" (IMF, 1983b, p. 25). How to avoid being dictated to by private and bilateral creditors was far from clear. If official and private creditors did not provide sufficient relief, then the Fund would be in a position to impose further adjustment or provide "additional exceptional assistance", meaning loans greater than what a country would be ordinarily eligible to receive under normal access limits. In Chapter 6 we will see how in order to avoid being held hostage by the bank's and its own powerful shareholders' demands, the IMF formalised how this exceptional access developed as part and parcel of the launch of its DSA tool in 2002.

Given the need to individually negotiate programmes and cajole bankers for specific programmes, the IMF took on a "more direct coordinating role ... whose leadership had proved effective in helping to design" overall financing plan for the members concerned (IMF, 1983b, p.31). One director noted how "It was legitimate and useful to study the lessons of past experience, but he would advocate strongly that the Fund avoid over-theorising and over-institutionalising to remain able to deal flexibly with the problems of the future"(IMF, 1983b, p.32). The overall insistence on a case by case approach meant that there would be no general political solution to the debt crisis, but only individualised actions. The lack of a general and overarching approach to solving the debt crisis gave more power and centrality to Fund. In the second Board meeting to discuss the Fund's involvement in the debt crisis, it was applauded that the "Fund had helped to arrange on a country-by-country basis" various reschedulings, and "in so doing, it had carefully avoided any approach based on general schemes" (IMF, 1983c, p.38). What the Board was expressing was the desire for the Fund to keep facilitating short-term rescheduling but retain independence from the negotiations. It favoured the case-by-case approach, and wanted to avoid any general policy considerations (IMF, 1983b). In this way the Fund started carving its role as a mediator, between debtors and creditors, while becoming a growing creditor itself. Although

its centrality to the process was becoming increasingly evident, it did not want to formalise any aspect of this role. One of the reasons, frequently mentioned by the Directors, was the importance of the Fund to remain neutral. This signalled a call for caution. While it had opened up the desired communication channel with the commercial banks (as hoped – see Section 4.2.3), the establishment of the banks lobby group, the International Institute of Finance in 1983 – though not yet operational – (IMF, 1983c, p.51), would enable the IMF to have a closer sense of how banks were lending to countries, but also could create possibilities for conflicts of interest. The IMF found itself explicitly discussing how it could act “to avoid any appearance of favouring any particular outside institution. It was absolutely essential that the Fund’s independence or its position of trust with member governments not be prejudiced” (IMF, 1983b, p.37). The Fund needed “to avoid any suspicion that information provided on a confidential basis might fall into the hands of the international banking community” (IMF, 1983c, p.35). Developing its technical capacity was part of this process.

The development of the IMF’s analytical approach dove-tailed with the restructuring approach taken. Rescheduling relied on IMF programmes organised around short-term financing gaps, and Paris Club offered only short consolidation periods. As was becoming increasingly apparent though, this resulted in inadequate and insufficient resolutions which required, a medium- or long-run view. Executive Board Directors expressed a discomfort with the prevailing institutional arrangements – the existing framework was not able to come to medium-term solutions. The IMF staff took the view that “repeated applications to the Paris Club for debt restructuring eventually results in a de facto medium-term restructuring” but several Directors disagreed insisting that this was not the best way of addressing “a basically unsustainable medium-term situations” (IMF, 1983b, p.15). Given the problems of Paris Club Rescheduling discussed in Chapter 1 and 4, such as the exclusion of previously rescheduled debt, limited the benefits from further Paris Club rescheduling. As the discussion at the Board indicated, it was apparent that countries seeking these restructurings were doing so on terms that “could fairly be described as onerous” (IMF, 1983b, p.15). Despite the centrality that the Fund had assumed, it was not always clear to all the directors that IMF had the required legitimacy in this domain.

As one Director stated, debt servicing problems were actually structural problems of a country's development, which meant that far more than short-term balance of payments financing was needed. "Against that background, it was perhaps necessary for the Fund to ask itself to what extent policy measures directed in the main at dealing with temporary balance of payments deficits could be relied upon to provide solutions to the structural problems of low-income countries" (IMF, 1983b, p. 33).

On a practical side, the IMF navigated its awkward role by strengthening its technical capacity. The purpose of this new technical framework would be to "help the Fund, in consultation with the member, to arrive at a considered and balanced assessment of the member's policies in this area" (IMF, 1983a, p. 19). The role of this new technical analysis was to mediate the policy-setting of countries as part of their adjustment plans. As stated, the provision of "an explicit forward-looking framework, prepared in close consultation with the authorities" (IMF, 1983a, p. 19) would be used to review a country's external debt policy. The Staff would use the framework to press authorities into whether their policy were consistent with the "maintenance or achievement of a sustainable external debt position" (IMF, 1983a, p. 19). The Staff would appraise the situation, comment on the views of the authorities, and would be used as a basis for the Executive board discussion, along with discussion on conditionality to close the financing gap (IMF, 1983a, p. 19).

The ex-ante financing gap in programme design left the calculation between what could be financed and would rely on domestic adjustment to the whims of uncertain outcomes of official relief negotiation and collective action problems between banks.³¹ This practical difficulty of programme design when faced with identifiable ex ante financing gaps and uncertain negotiation outcomes between creditors and debtors elevated the importance of the role of future scenario analysis, even though it was said, that this scenario analysis was in no way to predetermine the outcome of the rescheduling process. Clarifying and formalising scenario analysis would lay down the trade-off more clearly. It would frame the choice confronting debtors in terms of amounts of additional adjustment needed to close whatever further finance was not secured.

³¹Several studies point to how these delays are detrimental to the debtor (Pitchford and Wright, 2012).

The way to apply conditionality in conditions of such uncertainty was still undefined, as the Directors discussed that performance criteria should rely only on the portion of the programme for which any outstanding negotiations with private creditors would not be affected. Nevertheless, inclusions of conditionality on external debt limits was welcomed and furthered by all.

Up until 1989, if a country had fallen into arrears, and there was no rescheduling or capitalisation arranged, the IMF would not make loans available. This meant that both the banks could reject the IMF agreed programme and that the IMF could refuse the agreed settlement deemed too small (see Sgard (2016) for full details). With the Stand-By Agreement (SBA) being the cornerstone vehicle that enabled all these agreements to take place, any discussion on arrears would inevitably be about a financing gap, which was part of the discussion about the SBA and Letter of Intent (LOI). “Thus, the policy towards arrears became in practice the conduit that brought the general issue of debt restructuring into the squared structure of the SBA” (Sgard, 2016, p. 111).

The difficulties of collective action between the debtors, creditors and the IMF were thus underpinned by the traditional IMF policy stance prohibiting it to lend to countries that were in arrears with other creditors. This policy dates to the 1970s and was originally applied to arrears that emerged from exchange restrictions (Simpson, 2006, p. 10) but in 1980 was extended to include arrears from sovereign default (Boughton, 2001; Sgard, 2016; Simpson, 2006). This meant that the IMF could not lend into a situation where the debtor had lapsed into arrears with private creditors. When the IMF’s persuasive power over the banks weakened as the banks’ balance sheets strengthened, this policy changed. The prohibition of the IMF lending if a country had fallen into arrears, meant that private creditors were given “the power to exercise a veto over IMF lending, since they knew that the debtor country would not have access to IMF support unless it could reach an agreement with them first” (Simpson, 2006, p. 11), leading to “exaggerated burden” on debtors despite their adjustment efforts. This resulted to a debt strategy that amounted to “too much adjustment and too little debt relief” (Simpson, 2006, p. 11). With the IMF exhausting its ability to strong-arm new net lending by the banks, the policies about how the IMF could make its resources available in the context of new debt crises begun to change again, and is

the subject of Chapter 6.

5.4 DISCUSSION AND CONCLUSION

This chapter examined theoretical innovations in the field of debt sustainability during the 1980s and examined this in parallel to the operational tools for debt developed in the Fund. Several conclusions can be drawn from this analysis. With regards to economic theory, the chapter showed the new approaches and techniques that economists used to address the 1980s crisis. They found new opportunities to interact and engage across fields and from different methodological starting points. At least with respect to the work on debt and debt sustainability, this chapter suggests that the boundaries between what we would call public finance, micro, macro, growth theory and international economics were changing. This can be illustrated in the following example. In one of the letters by David Kopf to Peter Diamond in 1964, Kopf remarks with respect to Diamond's model to say "Finally, may I warn you, that while "growthmen" may find your paper casual reading, my experience with economists of a public finance point of view leads me to suspect that most readers will find your paper very rough going, but, may I add, well worth the effort" (Kopf, 1965b). This seems to be in sharp contrast to the situation by the time of the 1980s. By the time of the conference on public debt in the 1980s, Arrow and Boskin's introductory proceedings, suggests that contributors across areas would be conversant in each others approach (Arrow and Boskin, 1988). This may have more to do with training (Frey et al., 1993; Little, 2020; Bayer and Rouse, 2016). The result was a nascent field of new formulations of economics of debt, default and sustainability, taking place in criss-crossing interactions.

Up until the 1980s debt crisis, debt repudiation and difficulties in debt servicing was predominantly the purview of those addressing developing country issues, exemplified in the work of economists discussed in Chapter 2, 3 and 4. One possibility for the neglect of debt problems beyond this circle of economists may be that with the memory of the spate of defaults of the 1930s safely in the past, the core of economic analysis assumed away many of the problems that could lead to a default. The core of economic theory has traditionally adopted a Western-centric

view, predominantly focused on debtors' problems, to the neglect of structural problems of development, lack of control of one's currency, or the problems of integration into the global economy. Concerns for sustainability and fiscal issues, followed the preoccupation with monetary problems as the breakdown of Bretton Woods contained unknown prospects of 'unconstrained' growth of fiat money. The stagflation of the 1970s combined with the breakdown of Bretton Woods, and the liberalisation of the money supply could be a likely candidate for why efforts were ploughed into inflationary problems. The debates on debts and deficits in the US and the project of furthering European integration on the other, illustrated the American and European focus of the debate, largely about how to restrain or not the printing press. Despite the doomsday scenarios that the authors admonishing fiscal deficits feared, the spectre of repayment difficulty was not in the core of formal arguments.

In the 1980s, increased formalisation bore upon the forms that arguments took. A consequence was that the new economists who addressed the issues of debt used new techniques that ended up moving the focus away from problems of development and structural change. The notion of the long-run itself was being reconceptualised as intertemporal maximisation whether in a growth context (like Diamond (1965)) or not (like Eaton and Gersovitz (1981) for instance). The conceptualisation of debt problems within an optimisation framework, deracinated debt problems from an analysis that examined long-run and external issues. Issues of power imbalances in the global economy were formulated through game theory. As mentioned in Chapter 2 and 3, up until the 1980s, all economics could offer in terms of a view on whether a country could repay, was on a country's objective ability to pay, with Avramović stating that there was no scientific basis for studying the willingness to keep repaying. But all this changed in the 1980s. Creditors were preoccupied with developing techniques predicting the likelihood of repayment (Chapter 4) amidst a general dissatisfaction with existing techniques to guide their lending. But they had also forcefully interpreted debt problems as primarily balance of payments problems arising from domestic mismanagement.

In the new theoretical literature of the 1980s, the debt repayment problem was portrayed as a debtors' choice between adjustment and default, with adjustment portrayed as a solution.

The focus on debt sustainability and hence the ability to generate future surpluses neglected the ability to provide basic services. This analytically supported the view that creditors held: debtors experienced problems because of their own failings. These models were divorced from any analysis of how contraction of domestic income could worsen the debt problem. Regressive and punitive conditionality measures were not resoundingly rejected. The focus on adjustment as the primary means to resolving debt crisis was already embedded in the creditors' strict adherence to IMF programmes and case-by-case approach. The new economics of debt sustainability around the economics of the government budget had at its core a concern on whether budgets were balanced over the infinite time horizon solidifying the "sound finance" view. This emphasised austerity and adjustment and was antithetical to the economic analysis that developing countries advocated for. As shown in Chapter 4 included creditors' policies for their debt problems, and scenario analysis to understand which combination of financing and rescheduling would bring them to a desired growth path. In the framework of the economics of debt sustainability however, long-run positive impacts that deficits could play on growth itself were neglected.

The unresolved political conflict of the 1970s ended up funnelling the IMF into a crucial role during the 1980s debt crisis, which necessitated an extension of its operational framework. The chapter showed how the IMF got involved in the debt crisis without having a suitable framework to address it. Incorporating conditionalities (performance criteria) on external debt begun from the 1970s, but only in 1983 was the traditionally short-run analytical framework extended to a forward-looking medium run analysis. The forward looking analytical approach was an acknowledgement that short-term financing gap assessments were unable to address problems of external debt, and at the same time, the new approach cohered with the established mode of restructuring centred on case-by-case and domestic adjustment and strongly resonated with the developments in economic theory. This extension into medium run analysis was not rooted in a formal notion of sustainability at this point.

There is power that comes with being in the role of providing economic analysis, and that power was not indisputable at the Board. Polak questioned the Staff's analytical view on sus-

tainability and Board members questioned whether the IMF had the required expertise and legitimacy to address long-term structural problems of countries. It is also clear, that the role of providing economic analysis is intertwined with a premium on appearing objective, neutral and establishing an authoritative analytical perspective on the issue. Hence, the Fund examined how to keep confidentiality of its members and at the same time benefit from the channel of communication that had opened-up with the banks. The technical apparatus was discussed as an instrument in negotiations that partakes in the conflict between creditors and debtors. It was seen as providing an arms-length framework for which to portray the difficult choices ahead. As several subsequent contributions noted, is that institutions which are themselves creditors and whose extensive reforms have made matters worse, are not neutral arbitrators of the process (Lumina, 2013). This chapter shows the developments that were crucial in the building up to the DSA. Chapter 6 examines the genesis of the DSA template.

Interpreting debt sustainability analysis is “still more of an art than a science, with a large element of judgement required”

IMF (2003b, p. 40).

6

More of an art than a science: the IMF’s Debt Sustainability Analysis and the making of a public tool

AS THIS CHAPTER WILL SHOW, there was “nothing inevitable about the emergence of the IMF as the main forum for dealing with sovereign debt problems” (Sgard, 2016, p. 107). Up until 1989, if a country had fallen into arrears, with no rescheduling or capitalisation arranged from

the banks, the IMF would not make its resources available. While this summarised the IMF's approach through 109 debt restructurings between 41 debtors and their private creditors (Sgard, 2016, p. 104), these were due a change after the Brady Initiative was launched in 1989. Political movements by debtors, numerous initiatives for collective coordination (Roett, 1985), widespread protest and dissent against externally imposed conditionality, was coupled with the growing strength of private creditors. The IMF increasingly witnessed how holdouts and creditor collective action were increasingly becoming problematic (Sgard, 2016, p. 123). The IMF made the decision to shelve the 1980s practice and in 1989 introduced its Lending into Arrears (LIA) policy (See Sgard (2016) and Hagan (2020)). The LIA policy has since defined the role of the IMF in debt restructuring. Under the initial LIA, even if a country and its private creditors have not yet fully reached an agreement, Fund's resources can be used, including for operations that could finance upfront costs for banks' participation enabling them to get their loans off their books. Thus, after the 1980s crisis, new techniques and policies for assessing sustainability were established.

This chapter brings together the culmination of the different developments in analytical techniques of debt sustainability, and how these manifested themselves in policy frameworks. During the 1990s, there were two, parallel broad views on sustainability being explored by the World Bank and IMF. One was the threshold approach to debt sustainability, which identified situations in which current capacity to service debts had been lost, and attempted to restore it by providing debt relief up to a threshold decided. The answer to whether a country's debts were or were not sustainable was a simple yes or no, adduced by the threshold categories. As argued in this chapter, the backward threshold approach to debt sustainability was the first to become operationalised through the eligibility criteria of HIPC. The forward-looking approach to sustainability, whose emergence was examined in Chapter 5 would become fully operational as a policy tool in 2002 through the DSA. This forward-looking approach brought adjustment, both in the present and in the future, as the key behind whether debts were or were not payable. Sustainability became about the future, and expectations based of future trajectories. While various analytical techniques were broadly concerned with debt repayment problems, covered in

the chapters from the 1950s through to the early 2000s, what imprinted upon the design of the Debt Sustainability Analysis template, which only came into being in 2002, was the result of a specific theoretical interpretation and lineage.

Both of these views about the economics of debt sustainability informed policy templates. Yet for reasons we will see in this chapter, the eventual approach to dominate was the forward-looking framework and this chapter will examine the factors that led to the establishment of the DSA policy template. This led to the Debt Sustainability Analysis template still in use today that prioritises a narrow economic focus on whether countries can repay, that is driven by the importance of generating primary balances. What this has allowed is for debts to be labelled 'sustainable' unduly, even in contexts where states are deprived of needed resources to fulfil basic protection and promotion of human rights. The notion of debt sustainability embedded within the template, is perfectly compatible with a the context of chronic underfunding of essential services, leaving populations vulnerable to lack of housing, water and sanitation. The Covid-19 pandemic exposed how debt sustainability as understood by the templates may be compatible with diversion of funds to creditors, leaving countries spending more on debt service than health expenditure.¹ As this chapter will show, the DSA template was a self-servicing creation, exposing creditors to conflict of interest as they are the assessors and important creditors at the same time.

This chapter begins with an examination of the notion of debt sustainability that was operationalised through the debt relief initiatives of the 1990s (Section 6.1). This relied on the threshold approach that derived from the empirical models of the 1970s, examined in Chapter 4. Section 6.2 focuses on how the 1990s brought new waves of emerging markets crisis which ushered in new means to regulate access to IMF resources. The rise of bond financing and widespread growth of securitisation strengthened the hand of creditors, and the scale of financing outpaced what the IMF could keep up with. As the creditor landscape had started to shift, the IMF sought to re-position itself in the effort to address debt crises. To deal with the changing circumstances of financing, the IMF designed a new access policy conditional on an assessment of debt sus-

¹For a more detailed investigation into the implications of debt and the Covid-19 pandemic see Laskaridis (2021b,a); Stubbs et al. (2021).

tainability. Section 6.3 examines the forward-looking framework of debt sustainability which established the DSA template in 2002. The Section focuses on analytical foundations and a series of tensions and contradictions that arise from the efforts to implement the new framework in practice. Using the detail of the discussions at the Executive Board, Section 6.4 develops how the DSA arose from a series of policy blunders and was driven by concerns about credibility in the public sphere. Section 6.5 moves to the introduction of the LIC framework in 2005.²

6.1 MOVING GOALPOSTS AND CHANGING AMBITIONS

While the Brady Initiative partially relieved the crisis in middle-income countries, the policy response to low-income countries was grossly delayed. The first operational criteria for debt sustainability was instituted through the Highly Indebted Poor Country Initiative (HIPC) in 1996, followed from ever-deeper rescheduling through the Paris Club (Chapter 1 and Appendix 1). The HIPC Initiative was the first attempt to articulate a quantitative criterion for deciding when a country's debts were not sustainable, and on this basis, deciding the amount of debt relief needed. The details of the HIPC initiative, its overall design and effectiveness have been analysed critically in numerous works (Arnone et al., 2008; Birdsall and Williamson, 2002; Boote and Thugge, 1997; Gunter, 2003; Lala, 2006; Mustapha and Prizzon, 2017; Teunissen, 2004). This section examines the underlying analytical approach to HIPC, as it drew upon previous empirical efforts.

The HIPC initiative was launched on the basis of critical thresholds that acted as qualifying criteria for which countries would be eligible for relief. The objective of the Initiative was to bring countries' debt indicators below the critical values. Countries whose debts in any one of the values was above the respective threshold, was deemed unsustainable. The approach to debt sustainability incorporated into the HIPC framework drew from the work that had been developed in the vein of the debt capacity literature (Avramović, 1964) and subsequently the empirical models deriving from it (for instance, Feder and Just (1977b)). The empirical mod-

²The work in this chapter has been published as Laskaridis (2020a).

els covered in Chapter 4 represented a search for critical values as predictive attempts to enable lenders to better ascertain the chances of debt servicing problems arising. Yet, the search for a value after which problems may arise would become associated with the debt sustainability criteria for low income countries. Chapter 4 showed these models were largely developed by lending institutions, such as US AID and the Export Import bank. While the World Bank did not use such a model to set its lending terms, it did begin - in the late 1980s - classifying countries into different groups according to level of indebtedness, severely or moderately indebted, middle- or low-income countries (Hjertholm, 2001). Looking at several indicators and classifying countries according to thresholds, the World Bank suggested that countries with deteriorated indicators, would be more likely to face debt problems. The methodology was continuously evolving. Indicators were dropped, new values were decided, and countries were re-classified. In 1992-3, the World Bank introduced present values of debt service to better account for the concessional nature of many developing countries debt and therefore the cash-flow burden that it creates. This had followed on from a study in 1989 where sustainability was thought to be lacking if 3 out of 4 indicators were breached (Hjertholm, 2001). Those indicators were dropped to two, and their calculation updated, in 1992-3, where sustainability was said to be breached if only one of two indicators was breached.

Prior to its launch, the group of qualifying countries faced weak economic growth, with more than half spending more than 20 percent of government revenue on debt service, and some countries, such as Nicaragua and Zambia, spending half of the aid received on debt payments (Callaghy, 2002). The failures of HIPC I, launched in 1996, included conditions for relief that were too burdensome and the relief offered insufficient. HIPC II, launched in 1999, lowered the threshold criteria and dropped one of the indicators. Eligibility for HIPC debt relief passes through several stages. The country must be IDA-only, must be under an adjustment programme and must show that traditional debt relief mechanisms through the Paris Club still render its debt unsustainable. HIPC debt relief is determined through a debt sustainability analysis conducted by the IMF, World Bank and in agreement with the country's authorities. If after receiving Naples Terms treatment, meaning, 67% stock reduction through the Paris Club, the

country faced debt burdens above those indicated in Table 6.1, the country may be deemed eligible for HIPC relief (Martin and Johnson, 2001). The changes showed in Table 6.1 were a clear indication of the changing goals of debt sustainability.

Table 6.1: Comparison of Debt Sustainability Thresholds

<i>Indicator</i>	<i>HIPC I</i>	<i>HIPC II</i>
PV Debt-to-exports	< 200 - 250 %	<150%
PV Debt-to-revenue	< 280%	<250%

Source:IMF and Bank (2001).³

While some studies offered some support for the empirical conclusions, this was not the case with all indicators. HIPC’s export targets had been addressed through some empirical studies (Cohen, 1996) but the World Bank and IMF admitted that they were “not aware of any firm analytical basis” for the fiscal target (in Hjertholm (2001, p. 23)). This was no different to the predicament that past efforts faced: the choice and meaning of the indicators was elusive. The models of the 1970s, such as those of Frank and Cline (1971), or Feder and Just (1977b), used different methodologies and focused on different indicators. Similarly, in HIPC, indicators were chosen arbitrarily, were entirely dependent on the sample and chosen time period, and were not tied to development outcomes. As these ‘rule of thumb’ indicators gained a clearer policy significance however, the moving goals posts of sustainability became ever-clearer. Between HIPC I and HIPC II, indicators changed, some were dropped, and critical values altered.

The details of how the World Bank calculations of the debt indicator approach morphed into sustainability criteria is documented by Hjertholm (2001, 2003). He showed the discordance between implementing what had been conceived as ‘switching values’ and the device used to determine the amounts of debt relief needed. The upper bound of the ratio’s value –

³In order for countries to qualify under the fiscal window, additional threshold criteria must be met. Furthermore, targets, are also set for debt-service to exports, which should be below 15-20% by completion point.

the point after which it was very likely a country would face difficulties, was operationalised as a lower bound – the point under which a countries' indicators that were greater than the threshold would be reduced to. "The export-related sustainability targets adopted were not originally perceived as "targets", but as switching values, above which the average (but fictitious) country typically had debt-service problems... They were not as such devised for determining how much debt relief each of these countries would need in order to reach manageable debt levels, but they have so been applied under the HIPC Initiative" (Hjertholm, 2001, p. 83).

The debt relief initiative provoked immense political backlash, and criticisms remained despite the lowering of the values in HIPC II. Overall, the reductions were considered too small, too conditional on onerous and misguided programmes in which creditors arbitrated over losses for which they were responsible (Birdsall and Williamson, 2002). Using the same criteria across countries assumed that debt problems were time and place invariant. This was even more notable given the extreme values assumed by a sub-set of countries, for instance Sudan, Guinea-Bissau, Mozambique, whose debt-to-export ratios were above 1000 percent as exports had completely collapsed which significantly skewed the critical threshold (Hjertholm, 2001). Even with a fraction of this ratio, these countries would still face debt problems, but the average value for all would have been much lower.

Ill-defined thresholds were one aspect of the eligibility criteria's harshness. The lengthy and highly conditional policy programmes that countries needed to abide by was another. Focusing on reinstating repayment capacity revealed the creditors' leivitous approach to development problems. This led to a restatement of the effort to link assessments of repayment prospects to outcomes, and to be cast in light of developmental challenges. A large policy and academic effort developed to highlight once again the insufficient progress in meeting development goals that were further demoted through the inadequacy of debt relief arrangements. The discontent towards this process was heavily mobilised through the work of a broad international network of NGOs which popularised a moral discourse around Third World debts, and with the launch of HIPC, formed the Jubilee 2000 coalition in favour of blanket debt reductions (see Callaghy (2002) for a summary). Concessions were made to these pressures, as HIPC II was designed to

be more aligned with the Millennium Development Goals, and the insufficiency of these led to the MDRI in 2005. A notion of debt sustainability that included development goals was clearly reminiscent of the long-standing attempts to frame debt repayment problems in the context of long-term development targets (Chapter 4).

Along with the discussion of the failures of the HIPC initiative, the question of how to analytically ground a view of what reduction is needed remained unanswered. Critics emphasised the responsibility of creditors in generating unsustainable debts, and tried to find means to share the cost of debt crisis. By emphasising the diversion of scarce resources to debt servicing, many efforts to calculate the minimum affordable level of debt service (Birdsall and Williamson, 2002), leading to alternative measures of debt sustainability. Together with the development-angle, a rights-based angle was developed, with numerous efforts made to highlight how being in a debt trap reduced available resources for basic services, with heavy debt burdens closely linked to inability to achieve immediate improvement in living conditions (Megliani, 2018; Bantekas and Lumina, 2019).⁴

To summarise, the HIPC criteria were the first to operationalise and institutionalise definitions of debt sustainability for the purpose of policy. HIPC inaugurated a ‘rules-based’ debt relief framework with restoration of debt sustainability the explicit objective of debt relief operations (IMF, 2019b). The rules-based framework to sustainability brought with it a lot of controversy regarding the changing goals and measures of debt sustainability. It also sharply contrasted with the ideas of creating tools that allowed room for manoeuvre and expert judgement. The approach of the HIPC threshold analysis would remain relevant and embedded in the low-income country framework as will be discussed in section 6.6.

⁴This led to the establishment of the human rights framework to external debt and the gradual development of soft law principles for debt restructuring (Lumina, 2013).

6.2 THE IMF AND CAPITAL ACCOUNT CRISES

6.2.1 NEW CRISES, NEW DEBATES

No sooner had the Brady plan and other exit strategies from the 1980s crisis been implemented, widespread capital account liberalisation brought countries back into difficulties. Through a series of capital account crises during the 1990s, the IMF role in debt restructuring evolved again, with the scale of financing involved in capital account crises far exceeding the size of previous loans. As mentioned already, by the 1980s, the scale of cross-border private financial flows far exceeded the lending capacity of the IMF.

The loan in Mexico (1994-1995) followed the Tesobono 'Tequilla' crisis, and the handling of the South East Asian crisis in the 1990s were key markers of IMF changing role in the context of capital account crises. Accused of financing capital flight, and through a host of policy blunders, the IMF's reputation was fragilised. Hastily drafted draconian policy programmes (as in South Korea), the figure of Managing Director Michel Camdessus looming over Indonesia's military leader and President, Suharto, while he signed a loan agreement, coupled with a narrative of the crisis later dubbed the 'discursive demolition' (Hall, 2003) of the Asian state-oriented development model, were, like previous crises, followed by growing poverty and civil unrest. The IMF was accused of bullying its members and of being secretive (Driscoll and Clark, 2003) as well as being ideologically driven and ultimately undemocratic (Stiglitz, 2002).

Russia defaulted in 1998 amidst an IMF programme, and in 2001, the IMF decided to further increase Argentina's already exceptionally large programme whilst the economy deteriorated amidst people's seething fury. Economists in the Fund were divided given the whimsical credulity in the projected debt dynamics on which this decision was based (Blustein, 2006; IEO, 2004). These had assumed sustainability where none was forthcoming, as Argentina's subsequent deposit freeze, default on its debt and abandonment of the fixed exchange indicated. The IMF's reputational costs only multiplied.

By the early 2000s these crises brought to the foreground an intense debate regarding cri-

sis resolution and international financial architecture. There were several sides of this debate, and while we will not revisit the details here, suffice to note that whether the IMF should take on the full role of being an international lender of last resort, as advocated by Fischer (1999) was central. These events generated a political desire inside the Fund not only to address the weak analysis that loan-giving relied on, but also to introduce policies to constrain large loans. This reinvigorated the debate on the ways in which countries are given access to IMF resources, prompting the IMF to reconsider the criteria a country needed to fulfil in order to receive extraordinarily large access to its resources. In the early 2000s, the IMF reconfigured the bar of exceptional access to standards that included a more rigorous assessment of debt sustainability. This could, in principle, provide grounds for the IMF to withhold financing absent of strong assurances of sustainability, and pressurise private creditors to accept reductions in their claims. In 2001, in the context of these debates, the first Deputy Managing Director Anne Krueger put forward a proposal of how countries' debts could be reorganised when they are deemed unsustainable (Krueger, 2001). Although this proposal was defeated, the creation of the DSA was intimately linked to this reconfiguration of the IMF's role in crises.

The creation of the DSA was also part of the crises of the late 1990s and early 2000 brought political changes. They forced the IMF to address demands for openness, transparency and accountability. The task went to the External Relations Department, whose rationale was to respond to a broader public making demands upon it and whose strategy was to try to educate the public so that its actions were better understood. For instance, the Public Information Notices (PINS) were inaugurated in 1997 in response to the East Asian crisis (IMF, 2001). The staff issued public summaries of the agreements between countries and the Fund, and offered the details of the IMF's assessment of members' policies to public scrutiny, and thus professional exposure to its policy advice (Soederberg, 2001). In response to the criticisms over its handling of the crises in Russia and Argentina, the IMF established the Independent Evaluation Office (IEO) to strengthen its external credibility (IEO, 2002). The same year, it allowed external access to a broad range of documents.

6.2.2 DEBT SUSTAINABILITY ANALYSIS TO REGULATE ACCESS TO RESOURCES

In 2002 the IMF reviewed its exceptional access policy. The need to review it was driven by a number of concerns, including, in the Fund's own words, that "the potential availability of exceptionally large access from the Fund may add to moral hazard in the system. It may make private creditors insufficiently attentive to the inherent riskiness of their investments. This may make for less efficient markets and less efficient pricing of risk." (IMF, 2002a, p. 6). The reorganisation of the exceptional access policy occurred in light of the fact that both Russia and Argentina, shortly after having augmentations (i.e. increases) on their Fund programmes approved, defaulted.

The failures of IMF's policy advice and lending provoked an internal investigation, which concluded that the decision to augment the Argentinian programme in 2001 was not grounded in serious economic analysis. This prompted the rethinking of access to IMF resources with a view to defining more precisely the circumstances under which accessing funds over the normal limits would be granted.⁵ Prior to this, loans greater than what would ordinarily be justified were simply "exceptional", without any formal specification by the Board about what this meant. This made the Fund "more vulnerable to pressure to provide exceptional access even when prospects for success are quite poor and debt burden of the sovereign is likely to be unsustainable" (IEO, 2016, p. 18). The revised policy laid out four explicit criteria to guide approval of exceptional access to Fund resources, one of which, in the initial wording, was "a rigorous and systematic analysis indicat[ing] that there is a high probability that debt will remain sustainable" (IMF, 2002d).

In the Executive Board meeting that discussed the new criteria to guide lending, the Acting Chair, Anne Krueger, summed up the rationale that the DSA tool would quantify the second criteria and "raise the burden of proof" that the new guidelines necessitated: "In discussing the aforementioned criteria, Directors emphasized in particular the importance of rigorous debt sustainability analyses to support requests for exceptional access" (Krueger in IMF, 2002c, p.

⁵There is a similarity to the efforts made by lending institutions to develop empirical methods to guide lending covered in Chapter 4.

159). Board members strongly supported the introduction of a robust DSA as a qualification of the exceptional access criteria: “Debt sustainability assessments should play a crucial role in restricting exceptional access to truly exceptional cases, as well as in making it clear when required that drastic measures such as debt restructuring are necessary to help avoid prolonged Fund lending that is undesirable” (Yagi and Miyoshi in IMF, 2002c, p. 121).

The reasons for this were both to “strengthen accountability and ownership” but also to necessitate “a more systematic analysis of a country’s capacity to repay the Fund, which would be closely linked with debt sustainability analyses” (Lundsager and Baukol in IMF (2002c, p. 115)). If exceptional finance combined with domestic adjustment as stipulated in an IMF programme could not guarantee debt sustainability in the medium term with a high probability, then a debt restructuring would be needed. Bischofberger, the Executive Director for Germany, made it clear that if the sustainability condition is not met, then the onus ought to be on private creditors accepting a reorganisation of their claims. Hence, he joked that “while staff seems to assume that ‘Capital Account Crisis plus Assumed Debt Sustainability justifies Exceptional Access’, we would argue that ‘Capital Account Crisis plus Uncertain Debt Sustainability requires Debt Restructuring’” IMF (2002c, p. 109).

Although the new methodology that was being developed at the Fund was deemed crucial in determining access levels and whether the repayment of the Fund was being jeopardised, there was no full faith in the newly developed methodology either. Some Directors noted that “we are afraid that we are still far away from having an adequate analysis of debt sustainability. The 2002 DSA methodology that was approved by the Board recently to assess sustainability (SM/02/166) is a step in the right direction, but it is still work in progress” (Oyarzabal and Beauregard, 2002, p. 3). While the discussion about the introduction of the template emphasised the supremacy of judgement over strict quantification, the same could not be said for the rationale for introducing the template in the first place which was intricately tied into providing a means to quantify the exceptional access criteria requiring a rigorous analysis that showed that debt was sustainable with a high probability.

With the discussion as to how to resolve crisis unresolved, and the IMF having enabled

creditors to flee unscathed, started to focus more concretely on how to regulate loan approval. Should the Fund lend, even in exceptional amounts, pushing a country through adjustment, and bailing out private creditors, or should programmes be approved only if private sector contributes (Hagan, 2020)? With what framework could the Fund make such decisions? Would a formal, rules-based framework, that was clearly defined *ex ante* be used to guide procedures? This was embodied in the view to establish a statutory mechanism as voiced by Krueger for a formal statutory and rule-bound process be created to guide sovereign debt restructuring (Paulus, 2014; Bohoslavsky and Raffer, 2017)).

This resonated with the political debates mentioned in Chapter 5. A formal institutional view could curb large bailouts, which had come to be broadly seen as encouraging reckless lending, and provoking creditor moral hazard, a view reflected in the damning report of the Melzter Commission established in 1998 (Helms et al., 2000). As recounted by Hagan (2020), the quantitative, rule bound approach was not relied on. Instead, what was relied on was a tool, in the form of a template, that would be used to find the balance between austerity that lay just shy of default. In summary, the Lending into Arrears policy enabled the IMF to lower the costs of participation in debt restructuring by the private sector. The capital account crises of the 1990s enabled the IMF to also finance the private sectors' capital outflow, further shielding the costs of private sector participation in debt restructuring. With its own loans over-exposed and reputation bruised however, it sought to create an intermediate device, the DSA template, to better regulate its own loan approval and to mediate more formally between the private sector and debtor country. The next sections turn to the details of this newly developed policy tool.

6.3 THE DSA TEMPLATE

6.3.1 THE ANALYTICAL RATIONALE

It was in this context that the IMF introduced a new framework to monitor the debt sustainability of its members with market-access. IMF (2002b) and IMF (2003b) proposed to introduce debt sustainability analyses into all country reports. Having a way to form an opinion on

whether a country's debt will be repaid was key to the design of Fund's programmes. Following the South East Asian crisis, and the defaults in Russia and Argentina, the staff understood that judgements over loan size and repayment required a more rigorous and scientific basis. The DSA template was a means to attempt to provide the needed rigour.

We introduced the DSA policy template in Chapter 1 and will examine it in greater detail. The template is organised around an externally provided macroeconomic baseline, which is used to produce a projected future time path of the annual debt-to-GDP ratio. The details of the underlying macro-framework that produce the baseline are not published in the DSA analysis. Rather, the DSA focuses on the debt-to-GDP ratio as a product of the evolution of the deficit, growth rate, interest rate, inflation and exchange rate (see Figure 1.9). The results are used to check whether the future path of the debt ratio is on a stable, declining or explosive path. The rationale for looking at the trajectory of the future debt-to-GDP ratio is provided by the economics of the intertemporal government budget discussed in detail in Chapter 1. This represents the fruition of the trajectory charted in previous chapters, that was operationalised for the first time through the DSA template.

As explained in Chapter 1, assessments of debt sustainability begin with the period government budget based on national income identities, which can be generalised to show the accumulation of debt in a future period, so that the intertemporal budget connects stock of debt in year n with all the flows from the first period. We can utilise the flow budget constraint to express the debt dynamics in real terms and as a share of GDP, as:

$$\frac{D_t}{P_t Y_t} = \left[\frac{(1 + i_t)}{(1 + \pi_t)(1 + g_t)} \frac{D_{t-1}}{P_{t-1} Y_{t-1}} \right] - \frac{PB_t}{P_t Y_t} \quad (6.1)$$

Which simplifies to:

$$d_t = \frac{(1 + r_t)}{(1 + g_t)} d_{t-1} - pb_t \quad (6.2)$$

What this tells us is that the evolution of the debt to GDP ratio can be decomposed into the following factors: the evolution of the primary balance (second term), the growth rate, the

interest rate and inflation. In the context of external debt, the first term would also include the exchange rate. The elements of i , g and π , fall into what can be called automatic debt dynamics, capturing the evolution of debt from period to period that does not arise from primary balances.

This debt-dynamics equation is the centre piece of DSA templates. What it means to have a sustainable debt under this prism, is to 'fulfil' solvency requirements, which are analytically identical whether referring to public or external debt sustainability. When discussing the debt of a country or that of a government, sustainability is respectively linked to the evolution of the current account and the evolution of the budget deficit. Sustainability, thus defined, is a forward-looking idea, in which future primary balances matter. Accordingly, the balance (fiscal or non-interest current account) could develop in various ways and remain consistent with the solvency criterion. Within this formal theoretical definition, borrowers with any size of debt could be solvent as long as sufficient primary balances satisfying the solvency criterion can arise at some point in the future. Therefore, as imprinted in the policy tools that measure debt sustainability, one cares to see whether the dynamics of the debt ratio are on a stable, declining or explosive path within a specified time horizon. Recall Figure 1.8 in Chapter 1 for how the debt decomposition is shown in the DSA.

The debt is defined as sustainable if it fulfils a theoretical condition of solvency, that is, where expected future surpluses cover current debt. This captures the idea that current debts cannot be greater than what in present value terms all future primary balances must service.

Sustainability, thus defined, is a forward-looking idea, in which future primary balances matter. It rests at its core on the ability of a government to create surpluses to repay debts, forming a narrow 'economistic' view. Accordingly, the balance (fiscal or non-interest current account) could develop in various ways and remain consistent with the solvency criterion. Therefore, within this formal definition, borrowers with any size of debt could be solvent as long as sufficient primary balances satisfying the solvency criterion arise at some point in the future.

Imprinted on the design of the template was an important analytical innovation. The approach that had hitherto been used in practice and that was the basis of the threshold approach, based on what had happened in the past. The new DSA template brought about an

analysis that emphasised a forward-looking assessment. This was the outcome of the conceptual framework discussed in Chapter 5, that transformed the economics of debt repayment difficulties and reinstated the 'balanced-budget' orientation to debt analysis.

The policy implementation of this analytical rationale however, presented difficulties. The Fund's measurement of debt sustainability was framed by concerns of the Fund to provide its resources under adequate safeguards (i.e. conditionality) through its loan programmes and their repayment. The proposed policy template was to rest upon the debt dynamics equation to trace the future time path of the debt-to-GDP ratio over a specified time horizon. Initially, the suggested time horizon was for a minimum of five years, although this has since changed. The link to the theoretical rationale was that if the debt-to-GDP ratio was on a stable or declining path within the specific time horizon, the solvency criterion would be met.

The template was made available to country desk teams as an Excel file and remains to this day organised around two core sections with examples detailed below. The primary section of the template lays out a baseline medium-term scenario of the evolution of the debt ratio. This was done using a set of assumptions about underlying macroeconomic variables which are compiled by the country desk economists. These are shown in Figure 6.1: Line 1 shows the projected path of the debt ratio, with changes in external debt referenced in Line 2, as a result of the summation of the next lines. Stock-flow adjustments are indicated in the Residual indicated in Line 10.

Medium-term projections of a country's balance of payments and fiscal situation, although a long-time staple of IMF policy work, are conducted in a decentralised way. While the World Economic Outlook (WEO) is purported to produce a globally consistent projection, such was not the case of the individual country projections (IMF, 2002b). These were produced by teams of economists working at the country or regional level who relied on local information, without a unified homogenous approach to making projections across countries, and where the underlying macro-framework is concealed from the public eye. While this enabled projections to be tailored to data availability across a great diversity of countries, there had been within and beyond the IMF a long-standing concern that some of these assumptions and projections

Figure 6.1: External Debt Sustainability Analysis in Mexico's 2003 Article IV Consultation

	Actual			Projections					
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Baseline scenario									
1 External debt	28.4	27.3	27.9	30.2	30.2	30.0	29.9	29.6	28.1
2 Change in external debt	-8.5	-1.1	0.6	2.3	-0.1	-0.2	-0.1	-0.3	-1.5
3 Identified external debt-creating flows (4+5+6)	-5.1	-2.3	-0.3	1.2	-0.4	-0.2	-0.3	-0.4	-0.4
4 Current account deficit, excluding interest payments	0.7	0.9	0.5	0.6	0.9	0.9	0.7	0.7	0.8
5 Net non-debt creating capital inflows (negative)	-1.8	-3.2	-1.8	-1.6	-1.7	-1.7	-1.7	-1.7	-1.7
6 Automatic debt dynamics	-4.0	0.1	1.0	2.3	0.4	0.6	0.7	0.6	0.5
7 Contribution from nominal interest rate	2.3	2.0	1.7	1.7	1.8	2.1	2.3	2.3	2.3
8 Contribution from real GDP growth	-2.0	0.1	-0.2	-0.4	-1.0	-1.1	-1.1	-1.2	-1.3
9 Contribution from price and exchange rate changes	-4.3	-2.0	-0.4	1.0	-0.3	-0.5	-0.5	-0.5	-0.5
10 Residual, incl. change in gross foreign assets (2-3)	-3.5	1.2	0.9	1.1	0.3	0.1	0.2	0.2	-1.1
Key Macroeconomic and External Assumptions									
Real GDP growth (in percent)	6.6	-0.5	0.9	1.5	3.5	3.8	4.0	4.3	4.5
Exchange rate appreciation (US dollar value of local currency, change in perc	1.1	1.2	-3.3	-8.4	-1.8	-1.5	-1.5	-1.5	-1.5
GDP deflator in US dollars (change in percent)	13.2	7.9	1.2	-4.4	0.9	1.5	1.5	1.5	1.5
Nominal external interest rate (in percent)	7.6	7.7	6.3	5.8	6.0	7.4	8.0	8.0	8.2
Growth of exports (US dollar terms, in percent)	21.3	-4.2	0.6	3.0	5.5	7.8	9.3	9.0	8.4
Growth of imports (US dollar terms, in percent)	22.6	-198.6	-0.7	3.1	7.9	9.7	9.0	8.5	8.7

Source: IMF (2004).

were biased. It was this bias that could enable less scrutiny over loan approval and bad policy advice. The new framework proposed a way for baseline macroeconomic projections to remain autonomously compiled by each country's desk team, as previously, but introduced two novelties.

The first was to make explicit the underlying macroeconomic assumptions on which IMF policy were grounded, while not revealing the way they were made nor proposing to homogenise the way projections were made across country desks. The second was to evaluate those underlying assumptions, by testing the sensitivity of the projected path to them. Figure 6.2 illustrates sensitivity tests to the key parameters of the baseline. These tests are conducted by setting key parameters to historical averages, and by shocking the macro variables separately and combined, by sizes that have been differently calibrated over time. For instance, instead of using assumptions of the baseline, the assumption could be that policy remains unchanged, by setting values to historical averages (Figure 6.2, Line 1), or that the country experiences a one-time depreciation shock (Figure 6.2, Line 7). This was done with the purpose of identifying possible underlying optimism in the baseline projection.

The rationale for this approach was to create a standardised template in which specifications such as the chosen length of time horizons, the type and size of shocks, and the calibration of the realism tests were homogenised. This would enable the practice of measuring debt sustainability and therefore the results of the exercises, to be comparable across countries. Finally, the information was presented in tables (such as Figure 6.1 and 6.2) and/or in figures comparing the evolution of debt ratio for various specifications as in Figure 6.3.

6.3.2 THE ACADEMIC-TO-POLICY TENSION

The fundamental concerns about this new attempt by the IMF to measure debt sustainability are detailed in a flourishing academic and policy literature covered largely in Chapter 1. These contributions emphasise the difficulty of adequately capturing a country's ability to repay, one that is conditional upon a wider array of factors than the few macro variables included in the

Figure 6.2: Stress Tests for External Debt Ratio in Mexico's 2003 Article IV Consultation

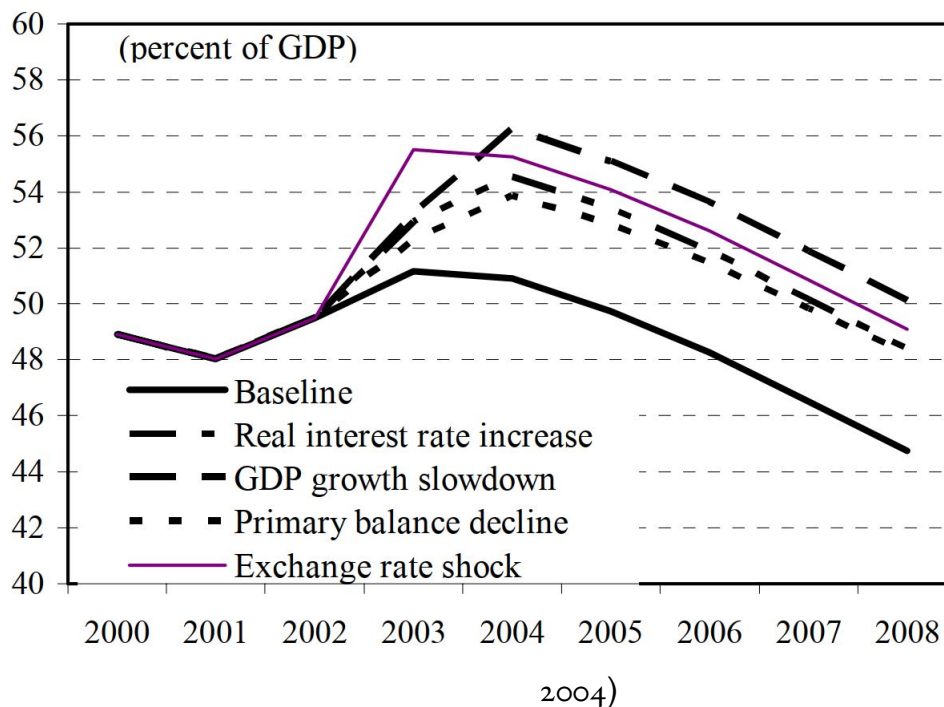
II. Stress Tests for External Debt Ratio									
1. Real GDP growth, nominal interest rate, non-interest current account, and non-debt inflows are assumed to be at historical average; real GDP deflator assumed zero. 1/	27.9	28.4	28.3	28.0	27.8	27.5	26.0		
2. Nominal interest rate is at historical average plus two standard deviations in 2003 and 2004 1/	27.9	31.1	32.0	31.8	31.7	31.5	30.1		
3. Real GDP growth is at historical average minus two standard deviations in 2003 and 2004 1/	27.9	31.5	33.5	33.4	33.4	33.1	31.7		
4. Change in US dollar GDP deflator is at historical average minus two standard deviations in 2003 and 2004. 1/	27.9	30.4	32.3	32.2	32.1	31.9	30.4		
5. Non-interest current account is at historical average minus two standard deviations in 2003 and 2004 1/	27.9	30.8	31.1	30.9	30.8	30.5	29.1		
6. Combination of 2-5 using one standard deviation shocks. 1/	27.9	30.1	31.7	31.6	31.5	31.2	29.8		
7. One time 30 percent nominal depreciation in 2003	27.9	38.7	38.7	38.7	38.8	38.7	37.4		

Source: Mexican authorities; and Fund staff estimates.

1/ Average for the last five years is used as the historical average for the simulations.

Source: IMF (2004).

Figure 6.3: Visual representation of an early DSA template output



Source: (IMF, 2004)

DSA. For instance, the DSA did not incorporate the volatility of commodity prices, a key determinant of export earnings which determine part of debt repayment abilities. The DSA did not indicate the overall composition of a country's capital flows, even though short-term portfolio flows raise the danger of 'sudden stops' and currency crises. Other concerns included the lack of emphasis on contingent liabilities, in particular bank liabilities or other private debt bubbles that oftentimes end up being treated as fiscal problems. The accounting of government or country-level assets and the broader balance sheet was another criticism, as was the interaction between variables in debt dynamics (these and many more are raised in Chapter 1 and are reviewed in Wyplosz (2007, 2011); UNCTAD (2009); Guzman and Heymann (2015); Bonizzi et al. (2019); Nissanke and Ferrarini (2004)).

Importantly, the way the debt dynamic equation is laid out conceals important drivers of debt dynamics which has grown into a great heavy literature summarised in Chapter 1. The 'economistic' view of debt sustainability that underpins the policy template, has been criticised on grounds that it relies too heavily on the primary balances, ignoring the snow-ball effect –

meaning the non-primary balance reasons for the evolution of debt to GDP. These can be unfavourable debt dynamics such as a negative interest rate- growth rate differential, or stock flow adjustments arising out contingent liabilities. The over-emphasis on the role of primary balances in changing debt dynamics undermines the alternative routes to financing deficits such as seigniorage. Along with the composition of capital flows, control or not of one's currency in the overall integration in the global economy, is critical. This also forms the crux of the criticism towards the DSA from social angles, that the DSA is focused on a narrow commercial understanding to what can be paid, with nothing preventing a labelling of sustainability in the context where a country is prioritising debt service over being able to provide basic protection and promotion of human rights. The DSA is part of loan approval process that is symptomatic of unequal power between debtors and creditors, which highlights the politics of knowledge of who decides what can and cannot be paid. It enables creditors to prioritize the cost of restructuring debt over that of failing to restructure the debt to alleviate the situation of debtors. As the debate summarised in Chapter 1 showed, the empirical issues relating to debt sustainability in practice are heavily contested, indicated by the large literature that emerged with respect to measuring budget deficits conceptually and empirically.

The remaining sections of the Chapter focus on the Executive Board discussion of the context of launching of the DSA. Examining the discussions at the Board level reveals tensions and difficulties of applying theory in practice, as well as highlights inconsistencies and disagreements within the IMF regarding the proper role of the tool.

The inherent uncertainty surrounding projections and the practical limitations created by data constraints lead Executive Directors to issue a chorus of warning towards the staff to proceed "with extreme care" (Portugal, 2002, p. 1). The focus on the trajectory of the debt to GDP ratio was criticised as insufficient to assess liquidity burdens of debt service that a country may face: the template does not capture the volatilities that export earnings or government revenue are exposed to. The choice of time horizon over which sustainability is judged was deemed too short, yet lengthened horizons could misrepresent structural change that countries may be experiencing. The Board also pointed that the template said little about how to interpret the

starting level or finishing level of the debt ratio. Whether the IMF should develop and include in its template specific threshold figures that would warn of a danger zone being entered into was heavily debated. Developing a formal benchmark would somewhat automate the point at which sustainability was breached. The staff (IMF, 2002b) asked for the Board's opinion in a carefully curated way that enabled a clear response: should they continue to bring all relevant information into one place (as proposed) or take a different approach and try to generate an index that "would largely remove the need for judgement"? (IMF, 2002b, p. 40). Framed as it was, the suggestion was unsurprisingly rejected: Directors unanimously stressed that sustainability assessments were always a matter of judgement. Callaghan stated that "the idea of an indicative threshold or composite indicator of debt sustainability is at odds with the thrust of the paper [IMF, 2002]" (Callaghan, 2002, p. 5). Attempts to compare the future trajectory of the debt-to-GDP ratio to a highly arbitrary rule of thumb, indicating a "danger level", were judged illogical (Portugal, 2002, p. 3). This implicitly involved a rejection of the rules-bound approach to debt sustainability of HIPC, discussed in Section 6.2.

However, the application of a theoretical notion of solvency to a policy template raises more fundamental issues. Solvency is deemed a theoretically clear idea, but it is difficult to quantify and usefully measure. To operationalise the notion of debt sustainability and make it useful for the IMF's loan programmes, practical assessments or "pragmatic" assessments, as the IMF calls them, are required. The reason why the IMF begrudges the abstract formal definition of debt sustainability, calling it "precise" but "unobservable" is that it is quite simply possible to postpone generating primary surpluses to cover initial levels of debt far into the future: "The theoretical concept of sustainability based on solvency is problematic because it does not impose specific constraints on debt and deficits at any point in time ... any level of debt and deficits could be compatible with the present-value budget constraint" (Akyüz, 2007, p. 3). This has implications for the time-horizon of the assessment and reveals a tension between theoretical and pragmatic analysis. On the one hand, analytical sustainability brings in the intertemporal and infinite time horizon into view. On the other hand, pragmatic needs of measuring sustainability are about adjustment programmes of set length – an SBA programme of three years whose

repayment may stretch out over up to 8 years for instance – which needs to be compatible with IMF policy requiring sustainability which would need to see a ‘sustainable’ trajectory within the programme period, which re-orientates the focus back on the short-term.

The difficulty in translating the solvency criterion from theoretical to pragmatic terms is evident in IMF statements. For instance, in IMF (2002b, p. 3), judgements about debt sustainability are in fact about “whether a country’s debt can be serviced without an unrealistically large future correction in the balance of income and expenditure”. Further on, it reads: “It is difficult to assess the feasibility of the primary surplus consistent with debt sustainability without first specifying the tax and expenditure measures that would be needed to achieve it, and judging whether these measures are sustainable over time, both technically and politically” (IMF, 2002b, p. 20). The tension of moving between analytical notions of sustainability and operational ones are also evident by the interpretation in IMF work. As covered in Section 1.3.2), positive debt dynamics make the transversality condition of solvency non-binding. Yet, this does not affect the emphasis of the IMF’s programmes on adjustment.

Hence, far from theoretical clarity, the notion of debt sustainability is framed in terms of “social and political” feasibility of the stipulated adjustment plans (IMF, 2002b, p. 5). The evaluation of whether an adjustment path is considered to be too politically or socially unfeasible is wholly controversial, and the role of the Fund in determining it contested. This was wholly evident in Chapter 5 through the social consequences of adjustment programmes in the 1980s (Cornia et al., 1987). Bar the litmus test of social implosion, the IMF does not come up with a means to judge whether a future correction will be unrealistic and hence to accurately assess debt sustainability. Debt sustainability in practice therefore is not determined by the economics of the present value budget constraint, but rather by the cautious balance of finding the adjustment path that lies just shy of preferring default and halting debt service: “Solvency needs to be viewed in relation to the adjustment path that is not only economically feasible, but also socially and politically acceptable such that default is not a preferred option” (IMF, 2002b, p. 5).

Being a creditor itself, often the only one willing to supply funds in a crisis granting it the status of preferred creditor over other creditors, undermines the IMF’s neutrality in measure-

ment (Lumina, 2013). The stated objective of seeking further scientific rigour to underpin policy actions while wholly side-stepping the social and political implications of debt sustainability measurement is contradictory. It also firmly reconfigures debt sustainability as a political notion grounded upon the conflict between creditors and debtors. This is important in the context of the IMF wanting to If the debt-to-GDP path is on an upward or explosive trend, this would put pressure on the IMF to mediate with private creditors, who, if defaulted upon, would not receive full repayment. As there is no explicit rationale for the Fund's view on whether an adjustment path is considered to be too politically or socially unfeasible, the other indication that it relies on is based on the comparison with the costs of a debt restructuring—choosing adjustment over collision with other creditors. In the words of the IMF: “In principle, assessing whether bringing down debt ratios through a primary adjustment is too costly requires looking at the alternative by evaluating the costs of bringing down debt ratios through debt restructuring” (IMF, 2011, p. 6).

The difficulty of defining a practical solvency criterion was confronted head-on, with the Executive Board members calling it “an imprecise concept” (Callaghan, 2002, p. 4) and acknowledging the “difficulty of clean distinctions between liquidity and solvency” (Lundsager and Ralyea, 2002, p. .1) As the Board members acknowledged that debt sustainability is “theoretically clear but practically ambiguous” (Padoan and Bossone, 2002, p. 4), the discussions at the Executive Board reveal the difficulty of actually grounding IMF policy work in academic theory. In the words of two Directors, they “would be hard pressed to explain how the framework would feed into the judgement of what is a politically and socially feasible adjustment effort” a core aspect of the IMF's pragmatic definition of debt sustainability (Zoccali and Maino, 2002, p.3). Despite technical improvements, outputs from templates alone could not determine sustainability, resulting in a mixed reception by the Board. As one of the Board directors put it, “while not a breakthrough of mythical proportions, the proposal strikes me as plain common sense” (Wijnholds, 2002, p. 1).

6.4 DISCIPLINING THE STAFF EXPERTS THROUGH PUBLIC SCRUTINY

The 2002 introduction of the template was meant to mitigate the ad-hocness and undue optimism with which some country desks pursued their assessments enabling programme approval without adequate economic rationale. Although the IMF tried to redress problems of credibility through greater transparency by making known on what basis decisions were made, the way macro variables were constructed remained concealed. This left ample discretion still available for each country desk to make projections and hence model the economy, in whatever way it deemed appropriate, rather than imposing a common way to generate the underlying projections.

As mentioned in Chapter 1 projections of underlying macroeconomic variables are a central aspect of DSA. Debt sustainability assessment depends on the projections of future variables. Projections are criticised for being employed in an unduly mechanistic way, with realism tests via stress tests on baseline scenarios, which often do not take into account feedback mechanisms from government responses (Wyplosz, 2007), prompting efforts to incorporate interactions between the macro variables (IMF, 2017). The accuracy of these projections has been long critiqued as being biased and overoptimistic (Guzman, 2016; Genberg et al., 2014; IEO, 2014; Schavey and Beach, 1999). Overoptimistic projections undermine the need for debt relief, as they would suggest a better debt-to-GDP trajectory than is likely to occur, prioritising adjustment while failing to appropriately lessen the debt burden.

Discussions at the Board swarmed around the cumbersome fact that the Fund's baseline was inaccurate, and Directors expressed concern that the IMF's projections were not taken seriously in the eyes of the public: "Given that debt sustainability assessments are central to key Fund decisions in program contexts, ... it is important *that they be viewed* as being based on solid judgements and are reasonably credible" (Shalan and Farid, 2002, p. 1; emphasis added).

Board members appeared confused as to how those projections were crafted, and what their relationship was to WEO projections. One member explained: "the paper confirms that there is a clear bias towards over optimism in the projections, either because of a bias in the

WEO projections, or because of a bias in the policy assumptions underlying the baseline scenario. If the WEO projections are biased towards over-optimistic debt projections, it is not only a problem for the debt sustainability assessments, but even more so for the credibility of the Fund's projections in general" (Egilsson in IMF, 2003a, p. 74).

Faced with a general unwillingness to delve into the sources of possible systematic biases, the Board attempted to reduce them. One suggestion was "to include explanations in staff reports of why the most recent forecasts were faulty" (Jacklin and Dohlman in IMF, 2003a, p. 55). This was deemed "useful as a disciplining device, though ... is not likely to eliminate systematic bias in projections" (Jacklin and Dohlman in IMF, 2003a, p. 55). Another suggestion was to include scenarios that would capture how staff projections differ from consensus forecasts (Martí in IMF, 2003a). The problem "with over-optimism is not one of making mistakes, but rather that of not learning from them". Directors noted (Padoan and Bossone, 2002, p. 3). As another Directors' statement puts it: "The goal of the exercise is to [make] it more difficult to justify programs where there is insufficient adjustment or staff use unrealistic assumptions to make programs appear 'sustainable'" (Lundsager and Ralyea, 2002, p. 1). The US Director, who represents the most powerful country within the Fund, explicitly argued that publication of the DSA outputs would enhance the "discipline imparted by the framework" (Lundsager and Ralyea, 2002, p. 1). This view was shared: publication would mean that "there are improved incentives on the Executive Board not to support a program that appears to have a limited chance of success" (Callaghan, 2002, p. 5). The publication of the template was therefore seen not only as a way to make the staff more accountable to the Board, but also, as the Members argued, to make the whole institution more accountable to whoever would be affected by its policy decisions: "sustainability assessment in the public domain is in everyone's best interest, especially the country's," one Director claimed (Bennett, 2002, p. 2).

The role of the public was crucial—the Board seemed to believe that IMF expertise may be somehow disciplined by being made public. The IMF surreptitiously used the public to provide the appearance of rigour and to enhance its external credibility. "A program's credibility may be enhanced if it is apparent that the Fund has considered a range of potential outcomes

when making its decision” (Callaghan, 2002, p. 5). Nevertheless, the IMF staff described the interpretation of the debt sustainability outputs as “still more of an art than a science, with a large element of judgement required” (IMF, 2003b, p. 40). The art of the debt sustainability exercise far dominated any discussion of its scientific basis at the Board level.

The DSA was revised between 2002 and 2003 by introducing two new scenarios: a “no policy change” scenario and a historical scenario as well as an indication of the debt stabilizing primary balance. The template was tailored so that the economic reasoning that arises can yield specific and desired results. For instance, the template output could yield a sustainable trajectory by being predicated on dramatic fiscal adjustments and optimistic assumptions about growth. As part of the dialogue with country authorities, the template outputs could be used to pressure a country into adopting policies to compress demand and reduce incomes. Were the DSA output to suggest unsustainability, it would mean that an IMF programme was ill-defined, as domestic adjustment and IMF financing could not guarantee repayment of IMF resources, and would require an alternative course of action. If debt cannot be made sustainable through adjustment, the pressure would be on creditors to accept a restructuring of their contracts.

With this in mind, one of the Directors remarked: “Our goal should be to ensure that the authorities face the right incentives when confronted with very high debt burdens” (Bennett in IMF, 2003a, p. 9). When the Board discussed the addition of more scenario analysis, the rationale was that these “could provide more persuasive arguments for the need to adjust policies” (Portugal and Tombini in IMF, 2003a, p. 25). To achieve this, Directors remarked that the staff needed to explain the objective of the template, its mechanics, and proposed refinements more clearly. Communication was key for soliciting the desired changes, for making it more likely that the new template can leverage policy response: Better technical understanding by the authorities should not only lead to improved scenario identification and analysis but also, and perhaps more importantly, enhanced ownership of the courses of action that such scenarios may prompt (Callaghan and Amador in IMF, 2003a). The importance of the DSA template was also as a communication tool, “increasing the authorities’ receptivity to the findings of these analyses” (Callaghan and Amador in IMF, 2003a, p. 18). In particular, the introduction of a “no policy

change” scenario was deemed “helpful as it quantifies the cost in terms of indebtedness of failing to carry out the measures contained in the baseline” (Martí IMF, 2003a, p. 72). One Director admitted that “one country of my constituency recently made successful use of a ‘no policy change’ scenario to win public support for the introduction of some unpopular fiscal reforms” (Kiekens in IMF, 2003a, p. 78). The introduction of the historical scenario compared the adjustment plans with past experiences of the country, in response to the concern that the 2003 version of the template still yielded results “that may be too extreme or unrealistic, and thus not worthy of a policy response” (Callaghan and Amador in IMF, 2003a, p. 18). The ability of a table, which shows the future time path of a variable, to prompt current policy change when there is only a small chance of the time path occurring is limited. Nevertheless, this trajectory about the future would put pressure to act in the present. Improving this was part of a broader methodological discussion into new methodologies that would assign specific probabilities to the likelihood of scenarios developing.

The disputatious aspect of the Board was most obvious in the dilemma over whether the DSA’s results should be published. Opinions broadly fell within two main groups: one that saw publication as a means to enhance the credibility of the Fund via greater transparency, and another that saw publication as exposing the Fund. These opinions were underpinned by diverging views of the “public” that the publication was aimed at. A public which could react positively to publication, and thus come closer to the Fund’s view, was financial market participants: “in a capital market crisis, what matters is not the Fund’s assessment, but what the markets think about sustainability. The best chance of the markets sharing the Fund’s view is if as much information as possible which underlines the decision is made available” (Callaghan, 2002, p. 4).

In particular, releasing the information could reduce market participants’ monitoring costs (Yagi and Toyama, 2002). Publication was vociferously opposed by those Directors who believed that the operational value of the exercise was internal decision guidance about how to use the IMF’s resources and ascertain repayment prospects (Shalan and Farid, EBM 02/7). Representing the views of several directors, one mentioned: “The new framework does not in itself provide sufficient grounds to ‘elevate’ the status of our debt sustainability assessments by mak-

ing them public” (Shaalan and Farid, 2002, p. 1). This was because of the confidential nature of the information that the IMF is privy to, itself a product of the ‘special’ role of the IMF in the international financial architecture.

The ‘public’ was also summoned by those Directors who warned against publication because of a “risk of a considerable misinterpretation by the public” (Al-Turki, 2002, p. 2). Accepting that there may be reasons to keep certain elements confidential, for example information on the financial sector, “the information should be provided to the Board through a separate channel” to the published version (Wijnholds, 2002, p. 3). Such a view was in keeping with the IMF’s overall transparency policy which enabled members to request suppression of sensitive economic information. Would “the market” even “understand accurately the meaning of the analytical result?” some Board members worried (Yagi and Toyama, 2002, p. 4). Concerns were also raised regarding “some country authorities’ limited analytical capabilities to fully understand and make use of the results of the debt sustainability analysis” (IMF, 2003a, p. 81), to which another Director responded with a proposal to send technical assistance to those authorities. This prompted further discussion on how to improve the readability of the set of tables and graphs that presented the results. Visual representation was seen as a “translation” for public use. Finally, some directors judged publication premature and suggested to wait and see. Various provisos and middle grounds were put forward, such as making publication voluntary or only partly publishing the results but not their underlying assumptions. It was decided to publish a selection of results for a year, as an experiment. After positive feedback, in 2003, quite the contrary, having been relegated to an annex in staff Reports, the main lament in this meeting was that the assessments were not public enough. Few however saw publication as inherently good. The sentiment that publication can “encourage open debate” was mentioned by one (Isleifsson and Fidjestol, 2002, p. 2) and that publication might be good because it may genuinely make “known risks that would make debts unsustainable” was only mentioned in one statement (Yagi and Toyama, 2002, p. 3).

Given the origins of the template, the discussion about publication was also related to the outcome of other Fund policy developments, specifically, the proposal by Krueger to establish a

sovereign debt restructuring mechanism (SDRM). One Director mentions that “the introduction of an SDRM would strengthen the case for publication” (Yagi and Toyama, 2002, p. 4). Had the discussion in the Fund about a SDRM been fruitful, the DSA may have been destined for a far more pivotal role; if a SDRM was in place, the analysis of the newly proposed DSA template “would indicate whether an application of a debtor country to activate the SDRM is justified” claimed Wijnholds (2002, p. 2). In that case, DSA analysis could be used more directly to effect private sector involvement by indicating how much debt had to be reduced for it to be brought to levels deemed sustainable and what the expected contribution of private sector creditors to that reduction would be. The DSA was understood as important not only as a means to guide IMF policy, but to define the “need—and scope—of private sector involvement” (Von Kleist and Fabig IMF, 2003a, p. 44). Though the idea for a SDRM was formally dropped in 2003 at the IMF Ministerial meeting, the life of the DSA continued with the focus on domestic contraction and surplus generation for debt repayment fortified. The DSA thus emerged not as a hard rule, that could enforce private creditor to bear the costs, but rather as a softer device, whose incentives towards overoptimism were mitigated only by being made public. Scientific scrutiny of how Fund economists model watch economy would remain impossible. The consequence of this was the creation of a DSA template still openly amenable to overoptimism – a covert means to reduce relief needed and bring greater costs in the end for the debtor.

6.5 CONVERGENCE TO A NEW NORM: THE LOW-INCOME COUNTRY FRAMEWORK

Following the creation of the 2002 MAC DSA prompted the IMF and the World Bank to introduce a new low-income country tool for debt sustainability that would inform aid policies and debt sustainability. The LIC DSF was introduced in 2005 and brought in the forward-looking approach of the MAC DSA, retaining however elements of the threshold approach in order to create some standardisation across countries. The empirical literature on debt distress and early warning models was reinvigorated with the efforts to tie debt sustainability to the quality of a country's institutions, (Kraay and Nehru, 2006) and the association of relevant thresholds to the

CPIA index (see Van Waeyenberge (2007) for a full review).

The basic framework, introduced in 2005 and revised four times since, pools together two separate assessments like the MAC DSA: one on total external debt and the other on public debt. Similarly, the framework relies on projections of key economic variables, as well as the choice of time horizon and discount rate, which in the last IMF review was kept at 5 per cent for all low-income countries (IMF, 2017a). Whereas over an infinite time horizon all debts could be solvent, over a shorter time horizon this may not be the case and therefore liquidity indicators are monitored. These are based on several measures of debt-service ratios, which capture the availability of liquid financial resources to face maturing commitments (IMF, 2013b). The DSF assesses the value of such indicators against indicative thresholds regarding both solvency and liquidity criteria. These are contingent on several variables, the most important of which has traditionally been the institutional quality of the country, as measured by the Country Policy Institutional Assessment (CPIA). This comparison may result in debt indicators falling above or below the indicative thresholds under baseline or stress-test scenarios.

The LIC framework yields a comparison between indicators and benchmarks that results in a risk rating dependent on breaches under baseline or stress-test scenarios. Whether a country is given a low, moderate or high indicator is the most important outcome of the process, as the external risk rating has operational significance since it is formally used by the World Bank and IMF to help determine lending policies for low-income countries. The result of this process provides a risk signal that categorises countries as facing a low, moderate or high risk of debt distress derived from any breaches to the thresholds.⁶

Of the various outputs, the most important result is the external risk rating, which is assigned by comparing projected evolution of the external debt indicators that relate to public and publicly guaranteed debt under baseline and stress-test scenarios to respective thresholds, which are dependent primarily on the debt-carrying capacity assigned under the CPIA. The key indicator in the DSF, the external risk rating, although emergent from an analysis which in-

⁶Note however that the study by Lang and Presbitero (2018) shows that the actual use in practice of the risk of debt distress indicators may differ from those implied by the framework for political reasons.

cludes external debt and private non-guaranteed (PNG) external debt, is informed solely from the PPG external debt, with the reason given that historically this was the largest source of external risk (IMF, 2013b; Bonizzi et al., 2019). An additional risk rating, the overall risk rating, is also produced to capture risks related to private external or public domestic debt, an innovation welcomed by many civil society organisations (CSOs, 2016), which however, has no formal operational significance for lending and policy prescriptions and has been only sporadically used since its inclusion (IMF, 2017).

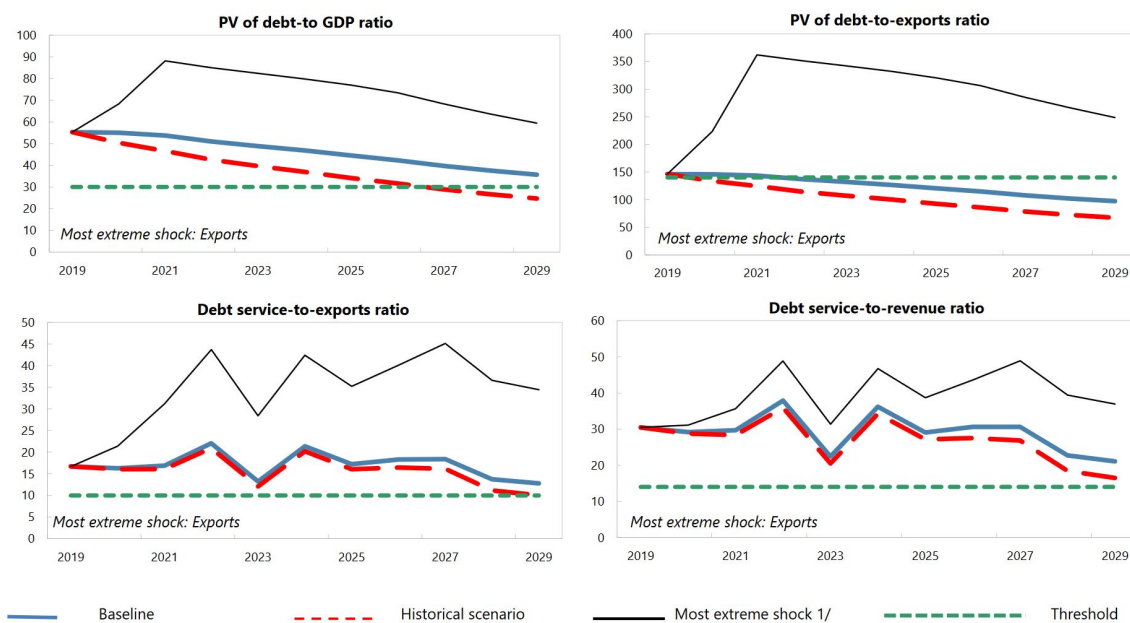
The literature surrounding these tools covers a range of theoretical and empirical issues, criticising the MAC and LIC templates for their assumptions, inputs and mechanisms employed. In the case of the LIC framework, critics have questioned the robustness and legitimacy of the CPIA to classify countries' debt-carrying capacity (Nissanke and Ferrarini, 2004; Van Waeyenberge, 2007). The recent inclusion of more country-specific variables in the underlying methodology that generates the risk rating — as opposed to relying on the broad averages of low-income countries has raised concerns about usability (Martin, 2015), and the IMF (2017) notes such variables were only sparsely used since the last review. Critics also note that assessments of debt sustainability ignore whether resources can reach the tradable goods sector to earn needed foreign exchange, as most developing countries' debt are denominated in foreign currency. Ignoring the foreign exchange constraint as mentioned in several contributions such as Birdsall and Williamson (2002); Daseking and Powell (1999); Goldstein (2003), indicate that currency mismatches are not well-accounted for. Furthermore, contingent liabilities arising from private sector borrowing frequently impact public finances, making the reliance on PPG external debt less meaningful (Bonizzi et al., 2019). Most importantly, in practice, this tool has had limited ability to predict actual debt problems (CSOs, 2016, p. 7). Of the countries that experienced debt distress over the past few years, in only a few cases was the relevant debt distress indicator high in the year preceding the debt distress event (CSOs, 2016).

One possible change to address such failings is the more generalised introduction of a probabilistic approach (Berg et al., 2014) partially included for borderline cases after the DSF's 2012 review (IMF, 2013b). While not impermeable to criticism as the latest rounds of revisions

show (CSOs, 2016; IMF, 2016, 2017) the LIC framework remains insufficiently equipped to tackle operationally the changing contemporary reality of many low-income countries' debt sustainability. One of the reasons for this relates to the global liquidity cycle which determines the “ease of international financing in the international financial system” (Bank for International Settlements, 2015, p. 3) linked to the leverage and risk appetite of global investors and banks (Akyüz, 2017; Bonizzi et al., 2019; UNCTAD, 2019). These concerns have prompted some change, for instance, a new tool to detect vulnerability arising from market financing conditions that may worsen roll-over risk in countries where short-term debt maturities increase market exposure. However, once again, the ultimate classification of the external risk rating is not informed by these benchmarks, but only supports better judgement of the risks a country faces (Bonizzi et al., 2019, 2020).

An example of a recent template output can be found in Figure 6.4.

Figure 6.4: Zambia's External Public and Publicly Guaranteed Debt Sustainability Analysis, 2019



Source: World Bank and IMF (2019, p. 9)

6.6 DISCUSSION AND CONCLUSION

This chapter culminates in the creation of the current template for Debt Sustainability Analysis. It shows us the analytical rational underpinning the two templates currently in use and where they came from. The chapter shows the distinct analytical trajectories - rooted in the threshold approach from the empirical models of the 1970s, to generate at first the HIPC criteria of debt sustainability, and subsequently the thresholds for the LIC framework, and rooted in the forward looking optimisation models emerging in the 1980s. Ultimately these various trajectories have contributed to the creation of the two templates, where in the case of the LIC framework, combines both the forward looking approach with specific threshold criteria.

In discussing the emergence of the DSA, this chapter shows how the notion of sustainability embedded within the framework reflects the view that primary balances are what are needed for debt repayment, banishing the long-term development view of debt repayment capacity fostered in the work of the World Bank. In addition to the extensive economic critique to the economics of debt sustainability discussed in Chapter 1 are a series of further concerns. Instead, the DSA has focused on a narrow economic approach to understanding ability to repay, that ignores the ability to sustain financing of longer term development goals. It embeds a notion of sustainability that is entirely compatible with debt servicing that leave a country unable to fulfil basic funding of essential services. This Chapter shows that the historical origin and initial design means that despite the gradual reviews of the templates since their establishment documented in this Chapter, they remain riddled with conflict of interest, given the unequal governance structure and being assessors ascertaining the financing envelope and needed relief while also important creditors themselves. Thus the Debt Sustainability Analysis templates of the Bretton Woods institutions do not incorporate social or environmental considerations, are not consistent with long-term expenditures for financing sustainable development goals and is not compatible with a notion of debt repayment capacity that incorporates the fulfilment of basic human rights.

Through the framework of examining the history of debt sustainability in practice, the

chapter showed how IMF officials created a template in a particular way to enable the exercise of judgement over hard rules, enabling the Fund to remain adaptable to different circumstances. It also reveals the lack of confidence in the tool, given the broad acceptance of the known weaknesses and inability to adequately ascertain when a debt is or is not sustainable. Going through with the template is dependent not on its theoretical or empirical relevance, but rather on the political function it played for the institution: quantifying access to its own resources in order to curtail large loans following tarnished reputation.

This chapter details the immediate context in which the DSA emerged, closely aligned to a growing technocratic approach that enabled the IMF to address its policy blunders as its role in crisis management grew. This chapter showed the creation of the IMF's DSA template as the development of a socio-technical tool to guide decision-making of the IMF. The introduction of the template was part of a broad effort to redress policy blunders and improve appearance in the public sphere. The chapter established that analytical issues are not free from political interpretation when put to operational use. Although important, as it embeds surplus generation for debt repayment, the theoretical underpinnings in the end are secondary in the context of IMF DSA. Despite the ostensible academic clarity, the need for pragmatic definitions muddies the process of measuring debt sustainability in practice. A pragmatic definition of debt sustainability rests upon a notion of politically and socially feasible adjustment and the technical tool provides little means to assess it. The key driver of establishing the DSA was the political decision to curtail access to extraordinary IMF loans through the introduction of a seemingly rigorous process to guide policy action. This reveals a tense amalgam of the technocratic and political dimensions of IMF work, overshadowed by an attempt to resolve credibility problems. Coming to these conclusions is possible by moving beyond the economic literature on debt sustainability critiques, and by utilising a historical framework rooted in the study of economists' practices.

The pre-formatted framework for analysis can be interpreted as a disciplinary activity to tame country desk teams to be more accountable for what they do. Introducing the template was part of an institutional curb to the tendency of producing biased analyses and a means to discipline IMF experts. In this respect, the theoretical underpinnings of the framework were less

important than public perceptions in driving the analytical approach. The template attempts to resolve legitimacy problems by revealing the numbers on which decisions are made but providing little insight into how those numbers arose. This allowed continued room for reliance on overoptimism, and hence placement of the burden of adjustment on the debtor. The use of collective authorship of staff documents enhances the credibility of expertise and elicits desirable responses from the Board by framing requests for feedback in specific ways and developing scenarios to encourage policy response.

7

Conclusion

The thesis examined a history of DSA showing how abstract theory developed, how it was used and in what ways it was operationalised. A broad framework of historical epistemology was used to examine the complexity of factors that led to the development of contemporary DSA. Through this framework, the thesis showed how and why different regimes of knowledge were appealing to different historical actors at different moments in time (Düppe, 2011). The overlapping ideas on debt repayment prospects indicate how economic knowledge is developed by specific actors and shaped by particular institutional contexts and hence is historically constituted in each moment. This reflects the study of history of economic thought as a history of practice (Stapleford, 2017; Backhouse, 1995). This thesis examined the changing theoretical

tides, focusing on studying specific contexts in which ideas are developed and made operational. Exploring the consequences and uses of economics by different actors, emphasises the power that comes with devising economic policy tools and rationale behind the need for these to inspire a sense of rigour and neutrality (Porter, 1995).

As the opening epigraph in Chapter 1 indicated, David Graeber was among those who exposed how debt is effective at shrouding historical relations of dependence and unequal power relations. Time and time again, he argued, relations of violence reframed in the language of debt have the immediate effect of making the one in the weaker position appear in the wrong. International loans were part of colonial projects, and repayment difficulties generated conflicts between creditors and debtors that resulted in direct foreign supervisory mechanisms and military interference, but it was not infrequent that debtors successfully suspended payments and prevented debt collection. More recently, global inequalities in international debt have been explored through the prism of neo-colonialism and the rise and dominance of financialisation, where unequal debt relations arise from structural constraints to development and being in a subordinate position vis-a-vis a core. Debt repayment problems emerge from development constraints, themselves products of colonial pasts, and much less from what the core of the debt sustainability analysis concludes about domestic mismanagement of public finances. As covered in the thesis, this relates to entrenched institutional failures about how debt crises are addressed, as when debt repayment problems arise, countries face an amalgam of creditors' forums, disparate legal environments, exclusion from capital markets, and risk creditor litigation, while being forced to abandon development plans, often alongside contractionary IMF programs that fail to provide equitable and long-lasting solutions to debt problems, weakening a state's ability to protect vulnerable populations.

It is within this context that the thesis examined the emergence and rise to prominence of the DSA. The thesis concludes that the historical origin of the DSA is part of a loan approval process that is symptomatic of unequal power between debtors and creditors. Through the framework of history of economics as a history of practice, the thesis examined the evolution of the politics of knowledge of who decides what can and cannot be paid and how this enabled

creditors to prioritize the cost of restructuring debt over that of failing to restructure the debt to alleviate the situation of debtors.

The factors that led to the rise of DSA are complex and the result of simultaneous developments in theory, policy and measurement. Explored across five main chapters covering key milestones from the post-war period to the early 2000s, the thesis draws a series of overarching conclusions. The theoretical trajectory that led to the DSA passed through a series of phases: a Harrod-Domar approach to capital requirements, a backward-looking view of sustainability that relied on empirical efforts to identify critical values after which repayment difficulties would arise, and a forward-looking view of sustainability rooted in the idea of solvency, influenced by intertemporal models of optimisation. These theoretical phases were intertwined with the need for better loan-approval processes by creditors as they increased their exposures to developing countries. The thesis showed that these theoretical developments are inextricably linked to the institutional context of addressing debt crisis, and that the approach to measuring debt sustainability is derivative of a long-standing refusal by creditors to agree to mutually-agreed principles for debt restructuring. The DSA is reflective of the distinct milestones over the decades seeking a suitable institutional framework for debt crisis resolution and a concomitant economic analysis. The rest of the conclusion develops these points in greater detail.

In the postwar era, the growth of international capital flows was driven by a host of factors with little regard for overall ability to repay. The search for analytical foundations of the loan-giving process was in service of an effort to use economic expertise to protect against uncalculated adhocery of foreign aid. In policy terms, this was used to make a case for more appropriate and all-together softer loan terms. During the 1950s and 1960s, the World Bank was a protagonist in developing comparable international debt data and progressing the understanding on debt repayment difficulties. Its analytical work was intimately tied to practical concerns of the institution, whereby the relevance of its own creditworthiness was not separate from its decisions about who to lend to.

Different views on ascertaining debt repayment prospects co-existed and hierarchies of expertise were mapped across the institution. The view that prevailed was an engineering con-

cept, reliant on assessments of financial viability of specific projects, located within the more powerful Loans departments. The institutionally weaker position, held by economists within the Research department, focused on country-wide determinants of repayment, with the debt-service ratio the most commonly used indicator. The merits of using indicators and rules-of-thumb were debated, and a search for better macroeconomic understanding of the debt repayment process was furthered, but only once the economists had lost the internal power struggle. World Bank economists set about to find advancements in measuring a countries' objective ability to repay its foreign debts, which they argued was ultimately and solely dependent on long-run growth of income. In their view, the successful repayment of debts in the long-run required structural change, with importers of capital significantly expanding their productive capacity and growth. Thus, early economics of "debt sustainability" involved a violation of the intertemporal budget constraint until structural transformation of the economy was completed.

This work was crucial in elevating a formal model of debt repayment that looked at the country as a whole, away from what was derided as "theory-less" indicators and the micro project-based view. Despite World Bank economists' internally weaker position, Avramović and his team built up a recognisable level of expertise on debt issues that other institutions drew upon. Their work became an input into the policy negotiations at the first UNCTAD conference that sought to redress unjust and unequal international economic and financial relations, encouraging a view that loan terms ought to be rationalised and tailored to a country's debt repayment prospects.

Throughout the 1950s and 1960s, economists in academic institutions incorporated issues of international borrowing in new analytical frames. The postwar transformation of the economics discipline would cast debts and deficits in an entirely new light. The optimising framework engulfed issues of international borrowing within the context of a representative agent in the Ramsey-Cass-Koopmans tradition and of heterogeneous agent models of overlapping generations. The rise of these dynamic and optimising analytical tools would eventually displace the analytical bedrock which saw a positive role of fiscal policy in short-run stabilisation and long-run growth and development. Theoretically, although these optimising approaches

foregrounded the idea of surpluses needed to pay down debts, they did not find any immediate operationalisation in policy.

The development of analytical tools by economists in policy institutions was accompanied by epistemological questions regarding the use of economics, and the respective roles of quantitative analysis and judgement in the process of measuring debt repayment prospects. World Bank economists claimed that assessments of a country's willingness to pay were out of reach from what economics could helpfully inform. Only knowledge about a country's ability to pay was possible, though for this too, there were doubts about what economic science could really offer. In the academic optimising models however, repayment was cast as an issue of choice, with marginal costs and benefits of the borrowing process highlighted, which would in later decades form the basis of the willingness-to-pay approaches to default.

The thesis documented how economic analysis cannot be separated from its institutional context. The long-term development of DSA was intricately connected to developments in policy. As examined in Chapter 4, the routinisation of debt restructuring on a case-by-case basis as mediated through creditor clubs led to long-standing conflict over an overarching approach to debt crisis. Improvements regarding how repayment problems should be resolved when they arise, were repeatedly refused by creditors, with only marginal concessions made, and the overall policy preference by creditors did not significantly change over time. Studying the evolution of this political conflict reveals that the desired form of economic analysis was split along policy lines. The role of economic analysis was shaped by the desired format of restructuring. For debtors, development of economic models could potentially safeguard equal treatment of countries in similar economic circumstances, and technical or strictly economic analysis could safeguard from political mishandling. Use of models could encourage that debt rescheduling should rely on economic factors alone condemning the use of non-economic factors to guide restructurings or the deployment of debt problems to apply political pressures. For debtors, the desired economic analysis would reflect shared principles of debt restructuring, with a commonly-agreed approach to resolving debt problems reflecting scenarios that could deliver the quickest return to a desired development path. Creditors increasingly argued that repayment problems were mere

reflections of debtors' balance of payments problems arising out of domestic mismanagement. For the purpose of addressing repayment problems, interpreted only as countries facing imminent default, the only valid calculation was the short-run financing gap calculation developed by the IMF, rooted in a short-term approach. The granting of relief only to the very poorest of countries excluded rescheduling based on need and matched the commercial orientation of renegotiations of a quick return to resuming repayments.

At the same time, although creditors argued that problems were negligible and existing mechanisms sufficient, they were concerned about debt repayment difficulties. All lending institutions – official and private – began developing technical capacity in predicting servicing problems. Creditors were technically unprepared for the expansion of lending underway, and the efforts made during the 1970s to develop technical tools revealed a broad anxiety about the possibility of general problems in debt servicing arising, despite their insistence on the isolated nature of cases in the political debate. Creditors invested in economic models to improve decision-making and maintain room for manoeuvre, whereby technical tools would aide decision-makers' judgement rather than displace it. The thesis examined the range of empirical models prompted by the growing exposure of lenders, whose aim was to ascertain the likelihood of default. These were predominantly focused on short-term predictors of default, and largely reliant on indicators which World Bank economists had argued were ineffective guides for ascertaining long-term repayment capacity. In the 1970s, a series of creditors' empirical models showed that increasing numbers of countries would face debt-servicing difficulties. Nevertheless, creditors refused to act to alleviate or prevent these difficulties, suggesting that if debt problems were underestimated, the debtor who would pay, through adjustment, for any errors in prediction.

The 1980s debt crisis brought about a change in how debt repayment problems were theorised. When the new generation of economists addressed the debt crisis, they moved attention away from problems of development and structural change. This brought out a tension in economists' thinking regarding the short and long run. The notion of the long-run itself was reconceptualised as intertemporal maximisation in a static or growth context. Contrary to the economists of the 1950s and 1960s, for whom all economics could offer was an indication of

the objective ability of a country to repay its foreign loans, there was no scientific basis for studying the willingness, the new work on debt sidelined ability in favour of a theory of choice. This was part of the changing boundaries between what we would call public finance, micro, macro, growth theory and international economics, with far greater dialogue between economists conversant in varied empirical and theoretical techniques. The development of the economics of debt sustainability was rooted in the ability to generate future surpluses which built-in a neglect of external causes of debt crises as well as a neglect of the ability to provide basic services. One of the consequences of this thinking was that it supported the policy view that debtors experienced problems because of their own failings. The new economics of debt sustainability centred on the government budget was focused on whether budgets are balanced over the infinite time horizon, solidifying a 'sound finance' view, emphasising austerity and adjustment and was antithetical to the economic analysis that developing countries advocated.

The series of repeatedly missed opportunities to establish principles of debt restructurings and the unresolved political conflict of the 1970s ended up funnelling the IMF into a central role during the 1980s debt crisis. The overall insistence on a case-by-case approach meant that there would be no general political solution to the debt crisis. The lack of a general and overarching approach to solving the debt crisis gave more power and centrality to Fund which necessitated an extension of its operational framework. The IMF was initially involved in the debt crisis without having a suitable framework to address it. Only in 1983 was the traditionally short-run analytical framework extended to a forward-looking medium-run analysis, in an implicit acknowledgement that short-term financing gap assessments that all debt reschedulings relied on, were unable to address problems of external debt. While not strictly embodying the notion of an intertemporal budget constraint, the gradual integration of the medium-run framework was a crucial milestone in the development of the DSA that drew inspiration from new theoretical work.

Across the thesis we examined competing views on debt repayment prospects and measurement, with the authority of providing economic analysis continually disputed, the source of numerous conflicts. There is power that comes with being in the role of providing economic analysis, and that power was not indisputable within the Fund. Chapter 5 interrogated the inter-

nal disputes about whether the IMF had the requisite expertise and legitimacy to address long-term structural problems of countries. Providing economic analysis was intertwined with a premium on appearing objective, neutral and establishing an authoritative analytical perspective on the issue. The IMF viewed its role as an impartial arbitrator in the conflict between creditors and debtors, providing an arms-length framework for which to portray the difficult choices ahead. This was part of an effort to develop technical expertise that would simultaneously upkeep the case-by-case approach and avoid over-theorising or over-institutionalising, thus allowing the Fund's role to remain flexible.

The thesis comes to a close with the immediate factors that led to the development of the DSA. The first institutionalised policy definition of debt sustainability came into existence through the eligibility criteria of the HIPC framework in the 1990s. The analytical underpinning of this approach to debt sustainability was the backward looking empirical effort to derive 'critical thresholds' of debt repayment difficulties, covered in Chapter 4. HIPC highlighted the shifting goalposts and changing ambitions of what constituted a sustainable debt, and the drawbacks of hard-rules of sustainability too clear. Across time, economists emphasised the use of judgement over hard rules. Economists acknowledged the difficult balance between the respective roles of quantitative analysis and judgement in the process of measuring a country's ability to repay. At different times however the reflection regarding the creation of tools for expert judgement differed. In the case of Avramović it was clearly a sense of limitation towards what formal models could help illuminate. In the case of the IMF's DSA it was clearly a desire to instate a semblance of rigour through a rigorous-appearing technical template, that could alleviate a bruised reputation, yet remain tied to case-by-case approach to restructuring, giving room to remain flexible.

The project-view to loan-approval relied on calculations of return of investments being greater than the cost of borrowing, and had been deemed ineffective at approving development projects and country-wide assessments. With time however, the budget constraint view would too rely on a notion of a rate of return (growth) as compared to cost of borrowing (rate of interest). This partially reflected the dominance within the discipline of the programme of microe-

conomic foundations to macroeconomics, it is also revealing of inconsistencies when moving between analytical issues and their applicability in practice. For despite the great appeal to the IMF of the notion of sustainability rooted in solvency, it nevertheless sidelines implications that this framework could have - such as potential for debt-financed expenditures to be beneficial to growth, and positive debt-dynamics that would make the transversality condition non-binding. The focus on adjustment as the ultimate repayment of debt, embedded in IMF programmes and evidenced to its approach even during the COVID-19 pandemic reveal a chasm between theory and policy-in-practice.

The first operationalisation of the intertemporal view to debt sustainability came with the creation of the IMF's DSA template in 2002, the latest socio-technical tool to guide decision-making of the IMF. The key driver of the DSA was the political decision to curtail access to extraordinarily large IMF loans through the introduction of a seemingly rigorous process to guide internal decision making. This was part of a broad effort to redress policy blunders and improve appearance in the public sphere. The DSA embedded surplus generation for debt repayment, but despite ostensible academic clarity, the need for pragmatic definitions muddied the process of measuring debt sustainability in practice. This relied on a definition of debt sustainability that rested upon a notion of politically and socially feasible adjustment. The technical tool of the DSA provided no means however to assess the feasibility of an adjustment programme. The thesis examined how the history of the templates have generated assessments of debt sustainability that are narrowly economic, focusing on understandings of repayment capacity that ignore the ability to sustain financing of longer term development goals, embedding a notion of sustainability that is entirely compatible with debt servicing that leave a country unable to fulfil basic funding of essential services.

Moreover, the thesis examined how analytical issues around debt sustainability are not free from political interpretation when put to operational use. By documenting and examining the historical emergence of the template, this chapter showed how the DSA is part of loan approval process that is symptomatic of unequal power between debtors and creditors, highlighting the broader politics of knowledge of who decides what can and cannot be paid. This

template then enables creditors to prioritize the cost of restructuring debt over that of failing to restructure the debt to alleviate the situation of debtors. The DSA is the product of a long-standing struggle to seek better and fairer resolutions to debt crises. While not inevitable, the technical apparatus reflects and entrenches long-known weaknesses of how crises are resolved. The growing importance of the template at the core of debt crisis resolution, reveals a gradual transformation and displacement of political conflicts of debt crisis into the emergent technical templates. This reveals a tense amalgam of the technocratic and political dimensions of IMF work, overshadowed by an attempt to resolve credibility problems. There is not much on offer however as to how revealing numbers and introducing prefabricated routines for economists can absolve the Fund from long standing legitimacy issues arising from its governance structure and the nature of its policy advice.

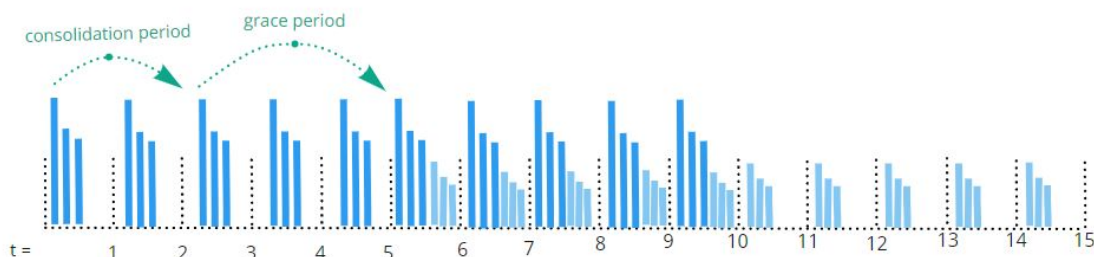


Paris Club Terms

Table A.1: Summary of Paris Club Arrangements

<i>Arrangement</i>	<i>Year</i>	<i>No. of countries</i>
Classic Terms	1956	60
Toronto Terms	1988	20
Houston	1990	20
London	1991	23
Naples	1994	36
Lyon	1996	5
Cologne	1999	36

Figure A.1: Illustration of a stylised example of rescheduling



A.1 OVERVIEW

To illustrate how rescheduling takes place we can use the following stylised example. Let us assume a country has three sets of debt-service payments due in each period from today to $t = 10$, ignoring amortisation for the moment, and rescheduling takes place at \hat{t} .

A.2 EXAMPLE UNDER CLASSIC TERMS

To illustrate the forms of rescheduling within the Paris Club, we will assume an original debt at a particular time $t \in \{0, \dots, T\}$

$$D_t = \sum_{t=0}^T \left[\frac{c_t}{(1+r_t)^t} + \frac{F_t}{(1+r_t)^T} \right] \quad (\text{A.1})$$

Where c_t is the corresponding coupon at time t , r_t the appropriate market interest rate and F_t is the face value of the loan.

Under “classic” rescheduling terms, at time $0 < \hat{t} < T$, the payoffs are transformed:

$$D_t = \left[\frac{\hat{c}}{(1+r_{\hat{t}+2})^{\hat{t}+2}} \right] + \sum_{t=\hat{t}+2}^T \left[\frac{c_t}{(1+r_t)^t} + \frac{F_T}{(1+r_t)^T} \right] \quad (\text{A.2})$$

where, $\hat{c} = c_{\hat{t}-1} \cdot (1+\hat{r})^2 + c_{\hat{t}} \cdot (1+\hat{r})$

At $\hat{t} + 2$ the debtor pays the consolidated obligations, plus what was initially owed under

the original contract. Thereafter, contractual obligations would remain as before rescheduling, providing only minimal breathing space, as indicated in the illustration.

The period between \hat{t} to $\hat{t} + 2$ is referred to as the consolidation period whereby the consolidated obligations are associated with a “market” interest rate \hat{r} . The “Classic” terms alter only marginally the original debt contract. With progressive terms and menus under the Paris Club, alterations to the rate of interest, depending on the original concessionality of the loan, progressively offered improved terms on flow rescheduling, before also including the entire stock of debt. For further details of the operations of the Paris Club see Club (2019).

B

Debt Sustainability

B.1 DETAILED BREAKDOWN

The example below expands on the material covered in Chapter 1. It uses the government's budget and hence focuses on public debt, but the same analytical principles apply for external debt where the focus would be the country's external account.

The period budget:

$$D_t - D_{t-1} = G_t + (i \cdot D_{t-1}) - R_t + OT_t \quad (\text{B.1})$$

Equation B.1 shows that the change in debt D from year to year is the result of current

government expenditures G and interest payments i , less revenues R and other transactions, OT . Without a time-script on i , we assume a flat term structure of interest rates. Other transactions OT , could refer to non-debt sources of financing, such as seigniorage or privatisation receipts, entered with a negative sign; or asset purchases, such as bank recapitalisations. If OT is assumed to be zero, with PB the primary balance, the flow budget is:

$$D_t = (1 + i) \cdot D_{t-1} - PB_t \quad (\text{B.2})$$

Equation B.2 shows that debt in one period is equal to the previous periods' debt, plus the interest paid on it, less the primary balance. A deficit in the previous period, PB_t would be a negative number and hence D_t would be the previous period debt plus the amount borrowed to cover the deficit. Generalised to show the accumulation of debt in the nth period, the intertemporal budget connects stock of debt in year n with all the flows from the first period. The intertemporal budget constraint is:

$$D_n = (1 + i)^n \cdot D_0 - \sum_{j=1}^n (1 + i)^{n-j} \cdot PB_j \quad (\text{B.3})$$

D in the nth period is the result of cumulative debt and interest payments and cumulative primary balances. From the intertemporal budget constraint, we can derive the solvency condition.

$$D_0 = \sum_{j=1}^n \left(\frac{1}{(1 + i)} \right)^j \cdot PB_j + \left(\frac{1}{(1 + i)} \right)^n \cdot D_n \quad (\text{B.4})$$

The period budget constraint is laid out in dynamic form and solved through the transversality condition. Debt in the initial period is the discounted sum of all primary balances and discounted accumulated debts. The last term is the terminal condition, at $t = n$. As n approaches infinity $\left(\frac{1}{1+i} \right)^n$ approaches zero:

$$\lim_{n \rightarrow \infty} \left(\frac{1}{(1 + i)} \right)^n \cdot D_n = 0 \quad (\text{B.5})$$

With the second term of equation (B.4) tending to zero, the debt is defined as sustainable if today's debt, principal and interest is covered through future surpluses; meaning if the theoretical condition of solvency is fulfilled.¹ This captures the idea that current debts cannot be greater than what in present value terms all future primary balances must service. Having excluded other sources of financing the deficit (seigniorage for instance), it entrenches the idea that over the infinite time horizon, debts will be repaid through surpluses.

Comparing the evolution of the debt to a measure of capacity to pay, we can re-write the budget as a proportion of GDP. With the growth rate being $g_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ and hence, $Y_t = Y_{t-1}(1 + g_t)$ and substituting for r the real rate of interest using:

$$(1 + i_t) = (1 + \pi_t)(1 + r_t) \quad (\text{B.6})$$

where d_t is debt-to-GDP, which evolves from the previous year. Dividing the flow budget by GDP:

$$\frac{D_t}{P_t Y_t} = \left[\frac{(1 + i_t)}{(1 + \pi_t)(1 + g_t)} \frac{D_{t-1}}{P_{t-1} Y_{t-1}} \right] - \frac{PB_t}{P_t Y_t} \quad (\text{B.7})$$

Which simplifies to:

$$d_t = \frac{(1 + r)}{(1 + g)} d_{t-1} - pb_t \quad (\text{B.8})$$

The debt-to-GDP ratio can be decomposed as a product of the evolution of the deficit, but also the growth rate, the interest rate, and inflation and in the context of external debt, the exchange rate.

These points would all fall into what is called automatic debt dynamics, capturing the evolution of debt from period to period that does not arise from primary balances. We can call $\frac{(1+r)}{(1+g)} = \varphi$ where φ = automatic debt dynamics – changes to debt that do not rely on the primary

¹In this example, and in 'traditional' economics of DSA, expectations are not included, but the presence of notation based on expected future surpluses has been key since contributions by Mendoza and Oviedo (2004).

balance.

Subtracting d_{t-1} from both sides:

$$d_t - d_{t-1} = \frac{r_t - g_t}{(1 + g_t)} d_{t-1} - pb_t \quad (\text{B.9})$$

The change in debt-to-GDP depends on φ and primary balances.

1. Favourable: $r < g \rightarrow (r - g)$ term and d_{t-1} negative coefficient, hence $(d_t - d_{t-1}) < 0$
2. Unfavourable: $g < r \rightarrow (r - g)$ term and d_{t-1} positive coefficient, hence $(d_t - d_{t-1}) > 0$

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THIS THESIS was written in partial fulfilment of the requirements for the degree of doctor of philosophy in the subject of Economics from SOAS University of London. SOAS University of London is the leading Higher Education institution in Europe specialising in the study of Asia, Africa and the Near and Middle East. The illustration above shows the ten leaves that make up the SOAS tree to be representative of our regions of expertise. They are from a variety of habitats and environments and were selected in consultation with academics and regional specialists across the School.