

The Challenges International Banking Standards Pose for Peripheral Developing Countries

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Introduction

The effective regulation of banks in peripheral developing countries is vitally important, just as it is in advanced and emerging economies. But regulators are charged with supervising financial sectors that differ in important ways to those of large industrialized economies like the US and EU, and even large emerging economies like China, India, and Brazil. This chapter explains how the regulatory context differs and why these differences pose specific challenges for regulators in low and lower-middle income countries in deciding whether, and how much, of the latest set of international standards to adopt.

This chapter provides an overview of financial sectors in peripheral developing countries, highlighting the ways in which they differ from financial sectors in countries with more industrialised economies. It provides a brief overview of the genesis and evolution of international banking standards, setting out the criticisms that have been levelled against their use in more advanced economies, before explaining why implementation challenges are acute in many peripheral developing countries, particularly low-income countries. The chapter then analyses patterns of Basel implementation around the world, situating the responses of regulators in our case studies, within these broader trends.

As this chapter shows, although Basel standards are commonly referred to as ‘international best practice’ or ‘the gold standard’ there is surprisingly little evidence to support this claim. While it is important to have minimum standards for the regulation of the world’s largest internationally active banks to prevent a regulatory race to the bottom and ensure global financial stability, there is very little evidence that the principles and standards that emanate from the Basel Committee are an effective basis for banking regulation in low and lower-middle income countries. As one well-regarded team of experts states ‘While many countries have followed the Basel guidelines and strengthened capital regulations

and empowered supervisory agencies to a greater degree, existing evidence does not suggest that this will improve banking-system stability, enhance the efficiency of intermediation, or reduce corruption in lending⁷ (Barth et al., 2012).

As international banking standards are soft law (Brummer, 2012) and non-member countries are under no formal obligation to adopt them, it is puzzling that regulators in many countries outside of the Basel Committee are adopting them. In Chapter 3 we explain how international and domestic politics help address this puzzle.

Regulating finance in peripheral developing countries

Financial sectors in low- and lower-middle-income countries differ in important ways from financial sectors in more industrialised economies. A striking feature of financial sectors in low- and lower-middle-income countries is that they are typically much smaller relative to the overall economy than in more developed economies. The size of the financial sector in the economy is commonly assessed by looking at the level of domestic credit to the private sector relative to GDP. On this measure, the size of the financial sector in high-income countries is, on average, almost eight times larger than in low-income countries, and three times larger than in lower-middle-income countries (Table 2.1).

Financial sectors in low- and lower-middle-income countries are dominated overwhelmingly by banks. In low- and lower-middle-income countries banks provide almost all of the credit to the private sector, while in high-income countries banks provide just over half of credit, with a variety of non-bank financial institutions providing the rest (Table 2.1). Related to this, stock markets are much less developed. It is only as countries develop and financial sectors deepen that domestic private bond markets and stock markets grow, followed by the expansion of mutual funds and pension funds (Sahay et al., 2015).

Another difference is in the level of access to financial services (Table 2.1). Fewer than one in five households in African countries have access to any formal banking service—savings, payments, or credit (Beck et al., 2009). Of course, inclusion can be a double-edged sword, and financial exploitation is a common feature of life for many low-income households, so expanded access is no guarantee of increased welfare (Dymski, 2007).

The differing nature of financial sectors between countries in the core and peripheral developing countries results in different policy priorities and regulations. This is vitally important to acknowledge as it helps explain why international standards designed by regulators from advanced economies are often poor fit for low- and lower-middle-income countries.

Table 2.1 Cross-country variation in financial sectors (by income category)

Income category	Domestic credit to private sector (% of GDP)	Share of total domestic credit to private sector from banks (% of total)	Market capitalization of listed domestic companies (% of GDP)	Commercial bank branches (per 100,000 adults)	Automated teller machines (ATMs) (per 100,000 adults)
High	143	58	118	20	66
Upper-Middle	108	98	58	15	50
Lower-Middle	42	98	53	8	18
Low	18	100	NA	3	4

Source: Extracted from World Development Indicators database, World Bank (2017), five-year averages (2013–17)

For financial sector regulators in the core of the global financial system, the primary challenge is to reduce excessive risk-taking and high levels of leverage in their largest banks which makes them a source of instability. These banks are highly complex and opaque, and, rather than intermediating funds, their income is largely derived from trading assets and selling complex financial products. This is reflected in the balance sheets of the largest US and UK banks, where derivatives account for 30 to 40 per cent of assets (Buckley, 2016). These institutions are radically different in nature to local community banks, whose primary function is to mobilize savings and convert them into loans to firms and households. As we discuss below, Basel standards have become increasingly focused on the important task of regulating risk-taking in the world's largest banks. As a result, the standards have become less relevant for the regulation of the traditional commercial banks that dominate the financial sectors in most, although not all, peripheral developing countries. Many African financial systems are smaller than a mid-sized bank in continental Europe, with total assets often less than US\$1 billion (Beck et al., 2009).

Financial stability is also an important policy objective for regulators in peripheral developing countries, but the sources of instability differ. At the level of individual domestic banks with relatively straightforward business models, sources of fragility stem from 'traditional' problems such as the under-reporting of non-performing loans, related-party lending, and obtaining an operating license on a fraudulent basis. These challenges are addressed in the Basel Core Principles rather than the most recent iterations of Basel II and III standards, which is why many international policymakers encourage regulators in peripheral developing countries to focus first and foremost on compliance with these principles.

At the systemic level, interconnectedness with global finance is a major source of financial instability in peripheral developing countries. As recent studies have shown, changing patterns of demand for capital in the core of the global financial system have a dramatic impact on the flows of capital to and from the periphery (Akyuz, 2010; Bauerle Danzman et al., 2017; Rey, 2015). A pressing question for regulators in developing countries is how best to use regulatory instruments, such as capital controls, to reduce these sources of financial instability that come from abroad (see for example Griffith-Jones et al., 2012; Gallagher, 2015; Grabel, 2017). Yet these sources of instability are not fully addressed in the Basel framework.

For policymakers in peripheral developing countries, financial stability is not the only policy priority; they also look to expand credit provision to the real economy, and to expand access to financial services. In many low- and lower-middle-income developing countries, a major problem is not that banks are taking too much risk but rather that they are taking on too little risk, investing in high-yielding, risk-free, government securities rather than lending to the private sector. Analysis in twenty-one countries in Sub-Saharan Africa revealed that government securities averaged 21 per cent of bank balance sheets in 2017 (Bodo, 2019). In some countries, including Angola, Burundi, and Sierra Leone, the levels were well above 30 per cent (IMF, 2018, p. 9). In such places, lending to governments has become central to banks' business strategies, rather than intermediating funds between depositors and private firms. Even where banks do lend to the private sector it doesn't always go to the most productive sectors. In many countries, banks have redirected credit away from production to trade and consumer financing, fuelling credit-financed consumption booms (Chandrasekhar, 2007).

Regulations are an important mechanism for shaping the incentives that banks face, and hence the purposes to which credit is channelled in the economy. Relatively minor changes such as adjusting loan classification and capital requirements so as not to bias against agricultural or loans to small- and medium-sized enterprises can be important (Beck et al., 2009). National development banks and activist financial policies can play a useful active role in directing finance towards productive sectors (Griffith-Jones and Ocampo, 2018). Yet the mandate of the Basel Committee and the standards it designs focus exclusively on financial stability and do not consider other regulatory objectives like improving access to credit for the productive economy or financial inclusion (Jones and Knaack, 2019).

More broadly, while policymakers in many developing countries are looking to find ways to expand and deepen the financial services sector, in many advanced economies there is a consensus that the financial sector is too big, heightening the risks of financial crises and attendant costs, and acting as a drag on economic growth (Arcand et al., 2012; Sahay et al., 2015).

Basel standards: a good ‘fit’ for peripheral developing countries?

Given the differing priorities between regulators from major industrialised countries and their counterparts in low- and lower-middle income countries, we can start to understand why international standards might be ill-suited for low and lower-middle income countries. We now turn to examine in more detail the mismatch between international banking standards and the regulation that is needed in peripheral developing countries.

The genesis of Basel standards lies in the costly failure of an internationally active bank in 1974, which prompted the central bank governors of the Group of Ten (G10) countries to create the Basel Committee on Banking Supervision. In its forty-plus-year history, the Basel Committee has formulated a series of cross-border prudential rules that are designed to enhance financial stability worldwide. Basel standards are part of a wider suite of international soft law standards and norms, which are not legally binding and do not have formal enforcement mechanisms. While most pronounced in international finance, international soft law standards have proliferated in many issue areas over the past two decades and they increasingly shape national regulations across the world (Brummer, 2010; Newman and Posner, 2018).

In this section we examine the various elements of the Basel framework in turn: the Basel Core Principles and the three iterations of prudential regulatory standards (Basel I, II, and III). For each, we explain what they are designed to do and the main criticisms levelled against them, focusing on those most pertinent to low- and lower-middle-income countries.

Basel Core Principles: rationale and criticisms

The Basel Core Principles for Effective Banking Supervision (hereafter ‘Basel Core Principles’) were issued by the Basel Committee in 1997 and have been widely adopted. The twenty-nine Basel Core Principles cover central aspects of what the Basel Committee believes to be an effective supervisory system, including supervisory powers, the need for early intervention, and bank compliance (Basel Committee on Banking Supervision, 2012).

The Basel Core Principles are designed to be a flexible, globally applicable standard, with assessment criteria designed to accommodate a diverse range of banking systems. They take a proportional approach, which allows assessments of compliance with the Core Principles that are commensurate with the risk profile and systemic importance of a broad spectrum of banks (from large internationally active banks to small, non-complex deposit-taking institutions) (Basel Committee on Banking Supervision, 2012). The Basel Core Principles focus on the overall quality and approach of supervisors, and while they are quite prescriptive, they still provide national regulators with considerable discretion. For instance, they

require that the bank supervisor ‘sets prudent and appropriate capital adequacy requirements’ but they explicitly state that these do not need to be based on Basel standards, although for internationally active banks, capital requirements must be ‘not less than the applicable Basel standards’ (Principle 16).

Although compatible with a wide range of regulatory approaches, the Basel Core Principles are only designed to assess the *safety and stability* of the banking sector. They do not evaluate supervisors or regulations against other policy objectives such as financial sector deepening or financial inclusion. Moreover, state intervention in credit allocation is perceived as problematic: policy-directed lending and the general use of financial intermediaries as instruments of government policy are identified as distorting market signals and impeding effective supervision (Basel Committee on Banking Supervision, 2012). In line with the underlying market-based approach to credit allocation, the Basel Core Principles expect the institutions charged with responsibility for bank supervision to have operational independence, so they are free from political interference, and have the relevant legal powers to ensure compliance (Basel Committee on Banking Supervision, 2012). Thus, while the Basel Core Principles are generally applicable in countries where governments pursue market-based credit allocation, they are much less relevant to countries pursuing policies of policy-directed credit, including the types of financial sector policies used by many of the East Asian tiger economies, which some governments in low- and lower-middle-income countries are looking to emulate.

The Basel Core Principles have become the *de facto* minimum standard for the sound prudential regulation and supervision of banks and banking systems around the world. In the wake of the East Asian financial crisis of 1997, the IMF and World Bank started to include the Basel Core Principles in their regular Financial Sector Assessment Programmes (FSAPs). Yet, despite their widespread acceptance as the international benchmark for evaluating bank supervision, there is surprisingly little evidence that compliance with the Basel Core Principles actually improves the financial stability or the wider performance of the banking system (Ayadi et al., 2015; Das et al., 2005; Demirgüç-Kunt and Detragiache, 2010; Podpiera, 2004; Sundararajan et al., 2001). The paucity of evidence supporting the Basel Core Principles has led several leading experts to question the desirability of the Basel Committee’s approach to banking supervision (Ayadi et al., 2015; Barth et al., 2006; Demirgüç-Kunt and Detragiache, 2010).

Basel I: Rationale and criticisms

Alongside the Basel Core Principles, the Basel Committee has issued a series of minimum standards for capital adequacy regulations. The Basel Accord on the International Convergence of Capital Measures and Capital Standards (Basel I)

was agreed in 1988 (Basel Committee on Banking Supervision, 1988). While some scholars argue that Basel I standards were designed to provide the public good of financial stability (Kapstein, 1989), others argue that Basel I standards were motivated by a redistributive logic amidst fierce competition between banks in the United States and Japan (Chey, 2014; Drezner, 2007; Oatley and Nabors, 1998; Simmons, 2001).

The key idea behind capital adequacy requirements for banks, including Basel I, is to ensure that each bank finances a minimum portion of its loan portfolio with shareholders' equity (capital) rather than debt. The basic business model of a commercial bank is to take on liabilities by way of short-term debt provided by retail depositors and the wholesale money markets and use them to make medium- and long-term loans to businesses and households. This is an important social function as banks, particularly in developing countries, can help channel credit to productive economy. Yet it also exposes banks to risks. A bank may mis-judge the creditworthiness of its borrowers (credit risk) or an unexpected withdrawal of funds by short-term lenders, which exhausts its liquid assets (Armour et al., 2016, p. 290).

Capital requirements are the standard regulatory mechanisms for addressing these risks: the higher the level of a bank's capital (shareholders' equity), the less the risk of balance sheet insolvency, because any losses the bank incurs on its assets will first fall on its shareholders (Armour et al., 2016, p. 290). Thus 'leverage'—the ratio of the bank's debt funding to its funding through equity or capital—is always a central issue in regulation. The more equity, the safer the bank, but a bank funded entirely by equity would achieve no transformation (Armour et al., 2016, p. 291). Capital requirements place a restriction on a bank's leverage, constraining the extent to which a bank can finance itself through debt, but aim to do so without quashing the bank's incentive to engage in maturity transformation and lending to the productive economy.

Basel I focused on requiring banks to hold capital against *credit risk*, the risk that borrowers will not repay. In recognition that some assets are riskier than others, the Basel Committee agreed that the level of capital that banks were required to hold would be risk-weighted, so that higher amounts of capital would be held against riskier assets. Rather than calculate the credit risk associated with each asset on the bank's balance sheet, Basel I simply categorized assets into five groups, and assigned risk weights ranging from 0 to 100 per cent. For instance, cash and gold held in the bank is risk-free and attracted a risk weight of 0 per cent, residential mortgages attracted a risk weight of 50 per cent, and loans to firms attracted risk weights of 100 per cent. Overall, Basel I required banks to finance at least 8 per cent of their total risk-weighted assets with capital.

Within a few years of Basel I being issued, there were calls for its reform. A key criticism was that the standards only focused on credit risk. With the expansion

of the investment banking activities of large banks, it became clear that *trading risk* (the risk that securities banks hold, for market making or proprietary trading, suffer a decline in market value) was an important source of fragility. In 1996, the 'market risk amendment' to Basel I was designed to bring trading risks explicitly within the Basel framework (Basel Committee on Banking Supervision, 1996). As large banks became more complex, the risk of employee fraud rose, prompting calls for *operational risk* (the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events) to be incorporated too. Critics further argued that the five categories for establishing credit risk were too crude. Basel I did not sufficiently differentiate between assets and it did not cover all types of assets (Blundell-Wignall and Atkinson, 2010). For instance, risk weights did not differentiate between loans made to small, risky firms and large, highly rated multinationals (Barth et al., 2006). The shortcomings of Basel I led to the negotiation of Basel II standards.

Basel II: Rationale and criticisms

Basel II was agreed in 2004, after several years of intense negotiations in the Basel Committee and heavy lobbying by large banks (Lall, 2012; e.g. Tarullo, 2008; Young, 2012). Under Basel II, the Basel Committee kept several basic parameters of Basel I in place, including the definitions of eligible capital and the 8 per cent minimum capital adequacy requirement. But they made several dramatic changes, including to the system for risk-weighting assets. Crucially, under Basel II, responsibility for risk-weighting and risk assessment was moved from regulators to credit ratings agencies and banks. The market risk amendment of 1996 introduced the principle that, subject to supervisory permission, banks could do the risk-weighting on the basis of their own historical data relating to losses and on the basis of their own evaluation models. This permission was extended to the assessment of credit risk and operational risk assessment in Basel II.

Basel II sets out nine different approaches for risk-weighting and risk assessment (Table 2.2). These can be divided into two general types. Under the 'standardized approaches' the key parameters for assessing risk are either given to banks by the supervisor or generated by third parties (private credit rating agencies or export credit agencies) (Powell, 2004). These include the *simplified-standardized approach* for assessing credit risk; the *standardized approach* for assessing credit risk; the *basic indicator approach* and *standardized approach* for assessing operational risk; and the *standardized approach* for assessing market risk.

The remaining four approaches allow banks to use their own internal models for evaluating the riskiness of assets and assigning risk weights. There are two IRB

Table 2.2 Capital adequacy requirements under Basel II

Credit risk		Operational risk		Market risk				
Simplified-standardized approach	Standardized approach	Foundation-internal ratings-based-approach	Advanced-internal ratings-based-approach	Basic indicator approach	Standardized approach	Advanced measurement approach	Standardized measurement method	Internal models approach

approaches for assessing credit risk. Under the *foundation IRB approach* banks are allowed to estimate probabilities of default for each borrower, while under the *advanced IRB approach* banks also estimate other parameters, such as loss given default and exposure at default. For operational risk there is the *advanced measurement approach* and for market risk there is the *internal models approach*.

In addition to revised capital adequacy requirements (Pillar 1), Basel II introduced a supervisory review process that built on and integrated many of the Basel Core Principles (Pillar 2). It also introduced financial disclosure requirements that require banks to disclose their financial condition and risk-management processes to investors, in order to improve market discipline (Pillar 3).

General criticisms of Basel II

Basel II has been widely criticized for dramatically increasing the complexity of the regulatory framework and exacerbating many of the risks leading up to the global financial crisis.

The most controversial aspect of Basel II was the introduction of internal model-based approaches, which has been likened to ‘allowing banks to mark their own examination papers’ (Haldane cited in Parliamentary Commission on Banking Standards, 2013, p. 119). These approaches were enthusiastically embraced by large banks, as the costs of compliance were marginal (they already had sophisticated in-house systems for assessing risk) and they enabled the banks to hold lower levels of capital than they would have under the standardized approaches. The system worked poorly in the run-up to the 2008 crisis, especially for the risk-weighting of items on the trading book. The risk weights that banks assigned to their assets, and hence the amount of regulatory capital they needed to hold declined, at the same time as the risk profile of their investments dramatically increased. As many critics argued, the fatal flaw was to shift responsibility for assigning risk weights from regulators to banks, enabling the banks to calibrate the models to their advantage (Admati, 2016; Bayoumi, 2017; Haldane, 2013; Lall, 2012; Persaud, 2013; Tarullo, 2008; Underhill and Zhang, 2008).

The reliance of standardized approaches on external credit ratings agencies (e.g. Moody’s, Standard and Poor’s) was also criticized for leading to mechanistic reliance on ratings by market participants, resulting in insufficient due diligence and poor risk management on the part of lenders and investors. In addition, under Basel II, loans to highly rated clients attracted lower capital charges, which negatively affected the many small banks and small corporate clients with low or no ratings, even though they were not necessarily riskier, and were certainly less significant in systemic terms (Underhill and Zhang, 2008). The implementation of Basel II can thus reduce the scale of lending to (low or unrated) small- and medium-sized enterprises.

A further problem with Basel II is that its more market-sensitive risk measurements can exacerbate financial cycles (Persaud, 2013; Repullo and Suarez, 2008). While banking regulation should act as a check on the financial cycle, the switch to a 'risk-sensitive' approach amplified the global financial crisis (Persaud, 2013, p. 61).

Specific challenges for developing countries

Beyond these general criticisms, Basel II poses specific challenges for regulators and banks in developing countries. An immediate challenge arises from the sheer complexity of the Basel II standards. Supervisory capacity is a particularly acute constraint in developing countries, and can be a major deterrent to moving from relatively simple compliance-based supervision under Basel I to risk-based supervision under Basel II (Beck, 2011; Fuchs et al., 2013; Gottschalk, 2010; Griffith-Jones and Gottschalk, 2016). To effectively supervise the standardized approach to credit risk for instance, supervisors face the additional tasks of monitoring credit rating agencies and the appropriate use of their ratings by banks. In a survey conducted by the Financial Stability Board, national supervisors from emerging and developing countries cited a shortage of high-quality human resources as the most important constraint to the implementation of Basel II and III (FSB, 2013). Where supervisory resources are particularly constrained, implementing a simpler regulatory framework may lead to more effective banking supervision.

Regulators in some emerging countries seek to implement internal ratings-based approaches, hoping to improve banks' own internal risk management (Powell, 2004). However, supervisors run the risk that banks will use their comparative advantage over supervisors in resources, expertise, and experience to calibrate the models to their advantage, as they have in more developed countries. Full compliance with the internal model-based approaches relies on highly skilled regulators using judgement and discretion, thereby placing an even bigger onus on regulators to be independent, immune from lawsuits, and willing to challenge the well connected (Calice, 2010; Murinde and Mlambo, 2010).

Recognizing that not all banks (or regulators) have the capacity to use internal models, the Basel Committee provides national authorities with a range of different options to consider when implementing the standards. In many Basel member countries only the largest banks are authorized to use internal models (Castro Carvalho et al., 2017). The simplified-standardized approach was specifically introduced for regulators in developing countries in recognition of the additional resource constraints they face. However, as a World Bank report notes, for small and lower-income countries, the full range of options proposed by the Basel Committee is not properly thought through, resulting in the adoption of overly complex regulations for their level of economic and financial development (World Bank, 2012).

Weaknesses in financial sector infrastructure, particularly gaps in the availability of credit ratings and credit information, can also frustrate efforts to implement Basel II. Many countries outside the Basel Committee do not have national ratings agencies and the penetration of global ratings agencies is limited to the largest corporations (Murinde, 2012). The development of a local credit ratings industry is not straightforward—as well as effective reporting and corporate governance frameworks for companies, it requires strong accounting and external auditing rules, credit bureaus, and the efficient and compliant collection and sharing of borrowers' data (Stephanou and Mendoza, 2005). Where credit ratings are not available the standardized approach can still be used for assessing credit risk, but the risk weights applied to bank assets are very similar to Basel I, undermining the incentive for regulators to move from Basel I to Basel II.

The absence of external credit ratings may also impede implementation of the internal model-based approaches to assessing credit risk under Basel II. Although banks use their own internal models to generate credit ratings under these approaches, supervisors need to validate these models, and they commonly benchmark the ratings generated by banks against those generated by external ratings agencies in order to do so. Where the market or external ratings are shallow, validation becomes harder.

Basel II aims to encourage market discipline as a 'counterweight' to the increased discretion accorded to banks in the estimation of their own capital requirements. However, it is only likely to be useful in countries where banks are publicly listed and capital markets are sufficiently deep and liquid for the market to act as a source of discipline (Powell, 2004). As we have seen above, capital markets are in their infancy in many low- and lower-middle-income countries.

Basel III: Rationale and criticisms

The global financial crisis prompted soul-searching among regulators and led many regulators and experts to call for a major overhaul of international banking standards.

Designed in the wake of the crisis, Basel III seeks to correct many of the deficiencies in Basel II, but many argue it doesn't go far enough. While some aspects of Basel III have been welcomed by regulators from developing countries, particularly the greater emphasis on systemic sources of risk, Basel III is even more complex and challenging to implement than Basel II. Basel II revises capital standards and introduces new liquidity standards (Table 2.3). While an improvement on Basel II, the overall level of capital banks are required to hold still falls far below the minimum levels recommended by many experts, as we discuss below.

Table 2.3 Key components of Basel III

Microprudential		Macroprudential						
Capital requirements		Liquidity requirements						
Definition of Capital	Capital Conservation Buffer	Risk Coverage for Counterparty Credit Risk	Leverage Ratio	Liquidity Coverage Ratio	Net Stable Funding Ratio	Countercyclical Buffer	Domestic Systemically Important Banks	Global Systemically Important Banks

Under Basel III, the basic capital requirement remains 8 per cent of risk-weighted assets, but stricter rules are introduced on the eligibility of capital instruments that can be included (*definition of capital*)¹ and new capital buffers are designed to make banks hold higher levels of capital. The *capital conservation buffer* (2.5 per cent of risk-weighted assets) applies to all banks all of the time and is designed to ensure that banks build up capital buffers outside periods of stress.²

While the capital conservation buffer is microprudential in nature as it seeks to improve the stability of individual banks, the other buffers are macroprudential as they aim to reduce systemic risk. The *countercyclical buffer* allows regulators to increase capital requirements by a further 2.5 per cent of risk-weighted assets when they judge credit growth to result in an unacceptable build-up of system-wide risk. Finally, the additional buffers apply to *global systemically important banks* (G-SIBs) and *domestic systemically important banks* (D-SIBs). This buffer varies between 1 per cent and 3.5 per cent of risk-weighted assets for G-SIBs while national regulators determine the size of the buffer for D-SIBs (Basel Committee on Banking Supervision, 2013a).³

Basel III also introduces measures to strengthen the capital requirements for trading risk, specifically for the counterparty credit exposures arising from banks' derivatives, repurchase, and securities-financing activities (*counterparty credit risk*).⁴ A flaw in Basel II had been to assume that the securities held by banks would be traded in deep and liquid markets, so any potential loss the bank faced from holding securities assets on its books was temporary. The global financial crisis showed that this was not the case for many assets on bank trading books, and banks were exposed to the risk of default by the counterparty. While a welcome addition to Basel III, many argue that the methods for assessing counterparty credit risk remain problematic (Armour et al., 2016, p. 298).

Given all the challenges with accurately assigning risk weights, Basel III introduces a simple *leverage ratio* of capital to non-risk-weighted assets to act as a 'back-stop' to the risk-based capital framework (Basel Committee on Banking

¹ The Basel minimum capital requirement comprises two main components: shareholders' equity (called 'core equity Tier 1 capital' or CET1 in the Basel nomenclature). Under Basel I and II, only one-quarter of the 8 per cent (i.e. 2 per cent) had to be contributed through CET1. Under Basel III, that increases to 4.5 per cent (Basel Committee on Banking Supervision, 2010). Under Basel II, the remainder of the 8 per cent capital could be shareholders' equity or subordinated debt. The inclusion of subordinated debt has been heavily criticized as it does not improve the ratio of shareholder equity to assets. The use of subordinated debt is not removed in Basel III, although its use is restricted (Armour et al., 2016, p. 305).

² While banks can draw on this buffer, they face restrictions on pay-outs to shareholders and employees.

³ Overall, then, Basel III raises the CET1 requirement from 2 per cent to 7 per cent (4.5 per cent minimum CET1 plus 2.5 per cent capital conservation buffer) for all banks, and up to 13 per cent for G-SIBs, plus an additional 2.5 per cent if an asset bubble is developing (the countercyclical buffer).

⁴ These were introduced under Basel 2.5, and modified under Basel III.

Supervision, 2010). However as it is set at only 3 per cent of assets, it has been criticized for being ‘dangerously low’ (Admati, 2016; Admati and Hellwig, 2014).

Basel III also introduced liquidity standards for the first time. The objective of the *liquidity coverage ratio* (LCR) is to ensure that banks have an adequate stock of assets that can be converted easily into cash to meet their liquidity needs in a thirty-day stress scenario (Basel Committee on Banking Supervision, 2013b). The *net stable funding ratio* (NSFR) is a longer-term measure to reduce the likelihood that disruptions to a bank’s regular sources of funding will erode its liquidity position in a way that would increase the risk of its failure (Basel Committee on Banking Supervision, 2014).

General criticisms of Basel III

Basel III is a clear improvement over its predecessors, as it requires banks to hold more, higher-quality capital and introduces macroprudential standards that address systemic risks in the financial sector. Yet many argue that the changes fall far short of what is needed. The vice-chair of the US Federal Deposit Insurance Corporation (FDIC) called Basel III a ‘well-intended illusion’ (T.M. Hoenig, 2013).

A major flaw is that Basel III continues to allow banks to use complex, potentially flawed, and gameable internal models (Admati, 2016; Haldane, 2013; T. Hoenig, 2013; Kashyap et al., 2008; Romano, 2014; Tarullo, 2008).⁵ It also continues to rely on the assessments of credit rating agencies, despite a wealth of evidence that these are often an unreliable assessment of risk. Attempts by the Basel Committee to reduce the reliance on credit rating agencies have been dropped following intense lobbying by banks and credit ratings agencies (Binham, 2015).

A further problem for Basel III, and indeed for its predecessors, is that regulatory capital ratios are based primarily on accounting conventions that can be quite arbitrary and vary by jurisdictions. Balance sheet disclosures tend to obscure significant exposures to risk, allowing much risk to lurk ‘off balance sheet’, and to manipulate the disclosures, particularly since auditors are subject to their own conflicts of interest and are unlikely to challenge managers (Admati, 2016).

Overall, then, leading financial sector experts agree that while Basel III makes modest improvements on Basel II, it fails to address the sources of financial instability and has done little to avert future crises. Basel III is still based on a system of risk-weighting which arguably distorts bank portfolios away from business lending and towards government lending and other investments (Admati, 2016). Many argue that much simpler metrics, including leverage ratios

⁵ The Basel Committee has acknowledged that banks’ internal models can be deeply flawed and has introduced a common ‘output floor’ for risk estimates (Basel Committee on Banking Supervision, 2016; Maxwell and Smith-Meyer, 2017). Basel III also tightens some input estimates for modelling, and removes the internal ratings-based approach for operational risk entirely (Coen, 2017).

that require banks to hold higher levels of equity, are more effective forms of regulation (Haldane, 2013).

Specific challenges for developing countries

Over and above these concerns with the efficacy of Basel III standards for regulating the world's largest banks, regulators of low- and lower-middle-income countries face specific challenges in implementing Basel III.

Basel III adds a further layer of complexity and compliance costs, exacerbating the implementation challenges associated with Basel II (as an indication, Basel I was thirty pages long and the full compendium of Basel III standards runs to more than 1800 pages). Some elements of Basel III are relatively straightforward to implement, including the new definitions of capital, the capital conservation buffer, the simple leverage ratio, and the standard for domestic systemically important banks. Others are more challenging, including the macroprudential elements.

The introduction of macroprudential standards is generally welcomed by regulators from developing countries. However, macroprudential standards under Basel III need to be adapted to reflect the main sources of systemic risk in many developing countries, which often stem from external macroeconomic shocks including fluctuations in commodity prices, volatile capital flows, and a high level of interconnectedness among banks (Gottschalk, 2016, p. 61; Kasekende et al., 2012; Repullo and Saurina, 2011). Many developing countries already impose some form of liquidity requirements. However, Basel III liquidity standards are calculated on more sophisticated methodologies than for most other Basel standards and the assumptions underpinning them do not always hold in countries with less-mature financial markets and banking systems, so the standards need to be modified to suit the local contexts (Beck, 2011; Ferreira et al. 2019; Fuchs et al., 2013; Gobat et al., 2014).

The implementation of Basel III is likely to be impeded by a paucity of credit information as macroprudential standards require regulators to obtain a more comprehensive picture of interconnected risks in the financial sector. Credit registry data is important for evaluating the systemic importance of financial institutions, which is vital for establishing which banks should be subject to additional capital buffers (the D-SIB standard). Such data is also important for making decisions about countercyclical buffers (World Bank, 2012). Regulators may not have the powers or resources to implement macroprudential elements of Basel III. In many countries, national authorities lack dedicated units for conducting macroprudential surveillance, and even where they do exist they often face many practical challenges, including gathering data and specifying models to be used in stress-testing (Murinde, 2012; Ferreira et al. 2019). While there are good arguments for strengthening regulatory authorities, moves to do so may generate opposition, as we discuss in Chapter 3.

More generally, there are concerns that Basel III further increases the incentives of banks to direct credit away from productive sectors of the economy that are key for inclusive economic development (Beck, 2018; Bodo, 2019; Gobat et al., 2014; Rojas-Suarez and Muhammad, 2018). Implementation of such complex standards may also take scarce resources away from other priority tasks of the regulatory agency (Griffith-Jones and Gottschalk, 2016; Barth and Caprio, 2018). Implementation of Basel II/III does not necessarily address underlying weaknesses in the regulatory system or the political entrenchment of vested interests and, where regulators are under-resourced, can open up more opportunities for banks to evade regulations. In sum, the global standards embody a complex financial regulatory regime, not necessarily a strong one (Basel Consultative Group, 2014; Powell, 2004).

How peripheral countries are responding to Basel II and III

So how are peripheral developing countries responding to international standards? How much of the Basel framework are they implementing?

Given the deep-seated challenges facing Basel standards, even in countries that are members of the Basel Committee, regulators rarely apply the full suite of Basel standards to all banks. Regulators from countries on the Basel Committee typically adopt a proportional approach, only applying the full suite of Basel standards to large internationally active banks, with balance sheets of more than US\$20–30 billion (Castro Carvalho et al., 2017). In the United States, small banks with less than US\$500 million in assets are exempt from Basel III and are regulated under standards similar to Basel I (Masera, 2014). In Brazil, the central bank has divided banks into five different categories, and only applies the Basel III framework to the six largest internationally active banks, with more than US\$10 billion in assets abroad. Similarly, in Hong Kong, the regulator allows banks with total assets of less than US\$10 billion and a simple and straightforward business model to hold capital against credit risk in accordance with a modified version of Basel I, while banks with small trading books are exempted from the Basel market risk capital framework (Castro Carvalho et al., 2017).

For developing countries, Barth and Caprio (2018) argue that the Basel approach is too cumbersome and costly for countries with small financial sectors, particularly countries with banking systems with total assets of less than US\$10 billion. Meanwhile, the Financial Stability Board, World Bank, and IMF explicitly advise countries with limited international financial exposure and supervisory capacity constraints to ‘first focus on reforms to ensure compliance with the Basel Core Principles and only move to the more advanced capital standards at a pace tailored to their circumstances’ (FSB et al., 2011, p. 7).

As we show in this section, the Basel framework is being widely applied and regulators outside of the Basel Committee vary rarely implement regulations that are not based on the Basel framework in some way. However, implementation is highly selective, with regulators implementing some elements and not others, and there is a high level of variation across countries.

Patterns of Basel implementation

Data on the implementation of the Basel framework is patchy for countries outside of the Basel Committee. The available data suggests that compliance with the Basel Core Principles varies tremendously across countries and are generally correlated with levels of economic development. A study based on 137 Financial Sector Assessment Programme reports between 2000 and 2004 showed that compliance rates averaged 89 per cent in high-income countries, 64 per cent in upper-middle-income countries, 54 per cent in lower-middle-income countries, and 52 per cent in low-income countries (IMF, 2008). More recent analysis of compliance across seventeen African countries based on Financial Sector Assessment Programme reports between 2007 and 2012 revealed variation even among countries at similar levels of development. Three of the seventeen African countries had compliance rates with Basel Core Principles of less than 50 per cent; a further eight had compliance rates between 50 and 80 per cent; while six had compliance rates above 80 per cent (Marchettini et al., 2015, p. 28).

With regards to the implementation of Basel I, II, and III, there is also substantial variation. Basel I standards spread rapidly around the world and within ten years were being implemented by more than one hundred countries outside of the Basel Committee (Quillin, 2008; Stephanou and Mendoza, 2005; Tarullo, 2008). A recent survey of regulators in one hundred countries outside of the Basel Committee shows that Basel I is still the basis for national regulations in many countries: of the one hundred countries, sixty had national regulations based on Basel I, while ten had national regulations based on Basel II, and thirty on Basel III (Hohl et al., 2018).

Another survey, conducted by the Financial Stability Institute (FSI) in 2015 provides the most detailed data we have on Basel II and III implementation in countries outside of the Basel Committee.⁶ It provides insights into which elements of Basel II and III are being implemented and identifies countries where

⁶ This survey covers a similar number of countries to Hohl et al. (2018) but is not directly comparable as it covers a different set of countries and uses a different set of criteria for differentiating between countries.

preparations are underway but implementation is yet to happen.⁷ Regulators in ninety of the one hundred responding jurisdictions stated that they were either implementing at least one component of Basel II or had taken steps to do so, including drafting new rules. Only ten reported that they had not taken any steps to implement Basel II. Similarly, eighty-one of the one hundred responding jurisdictions reported that they were implementing at least one component of Basel III, or had taken steps to do so, leaving only seventeen that had not begun the implementation process.

The FSI data from 2015 reveals some regional variations. The highest implementation is in Middle Eastern and North African countries, where all twelve of the reporting jurisdictions were implementing at least one element of Basel II, and nine were adopting at least one component of Basel III. Latin America and the Caribbean had the lowest levels of adoption, with only thirteen of twenty-eight responding countries implementing at least one component of Basel II, and only five implementing at least one component of Basel III. These trends broadly correspond to the trends reported in the survey by Hohl et al. (2018, p. 8).

A striking insight from the FSI survey data is that while many countries are converging on international standards, regulators are taking a highly selective approach to implementation. As at 2015, the one hundred countries responding to the FSI survey were implementing an average of four of the ten components of Basel II and one of the eight components of Basel III. As we might expect, the extent of implementation is correlated with income levels (Figure 2.1). On average, regulators in high-income countries outside of the Basel Committee were implementing double the number of components of the Basel II compared to their counterparts in low- and lower-middle-income countries.

Jones and Zeitz (2017) used the FSI data to analyse the adoption of Basel II and found a robust and positive correlation between a country's financial sector development and the extent of Basel II adoption. This suggests that regulators' decisions are strongly influenced by the suitability of the Basel standards to their country's level of financial sector development. Yet, even among high-income countries where implementation levels were highest, regulators were implementing just under half of the components of Basel II, ten years after the standard had been agreed by the Basel Committee.

⁷ For Basel II the survey examines ten subcomponents: (1) standardized approach to credit risk; (2) foundation-internal ratings-based approach to credit risk; (3) advanced-internal ratings-based approach to credit risk; (4) basic indicator approach to operational risk; (5) standardized approach to operational risk; (6) advanced measurement approach to operational risk; (7) standardized measurement method for market risk; (8) internal models approach to market risk; (9) Pillar 2 (Supervision); (10) Pillar 3 (Market Discipline). For Basel III the survey covers eight subcomponents: (1) liquidity coverage ratio; (2) definition of capital; (3) risk coverage (for counterparty credit risk); (4) capital conservation buffer; (5) counter-cyclical capital buffer; (6) leverage ratio; (7) domestic-systemically important banks; (8) global-systemically important banks.

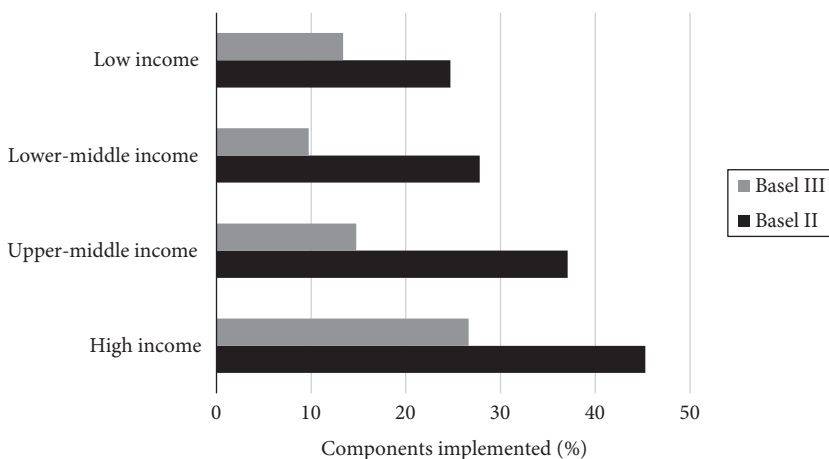


Figure 2.1 Implementation of Basel II and III by income category (countries outside of the Basel Committee).

Source: Data from FSI Survey (2015). Income categories are according to World Bank classifications for the same year

Which components of Basel II and III are being adopted?

Disaggregating the FSI data provides insights into the specific components of Basel II and III that are most and least likely to be adopted by regulators outside of the Basel Committee.

With regards to Basel II, regulators are more likely to adopt standards for credit risk and operational risk than market risk (Figure 2.2). This stands to reason, as many peripheral countries have banks with very small trading books. Relatively few jurisdictions allow banks to use the heavily criticised internal model-based approaches. Regulators in fifty-nine jurisdictions required banks to assess credit risk according to the standardized approach and, of these, only seventeen authorized banks to use internal model-based approaches. Interestingly, the number of countries using internal model-based approaches did not increase between 2010 and 2015, possibly reflecting the criticism attributed to these approaches in the wake of the 2008 financial crisis.

As Basel III was relatively new at the time of the 2015 FSI survey, it is harder to discern trends. However, the data indicates that the more familiar microprudential components of Basel III were being implemented more frequently than the newer macroprudential components (Figure 2.3).

Among the microprudential elements of Basel III, thirty-four of the one hundred jurisdictions responding to the survey had adopted the new definitions of capital and twenty-four had adopted the capital conservation buffer. These components were a modification of Basel II and relatively straightforward to implement. The new Basel III standards for assessing counterparty credit risk had only

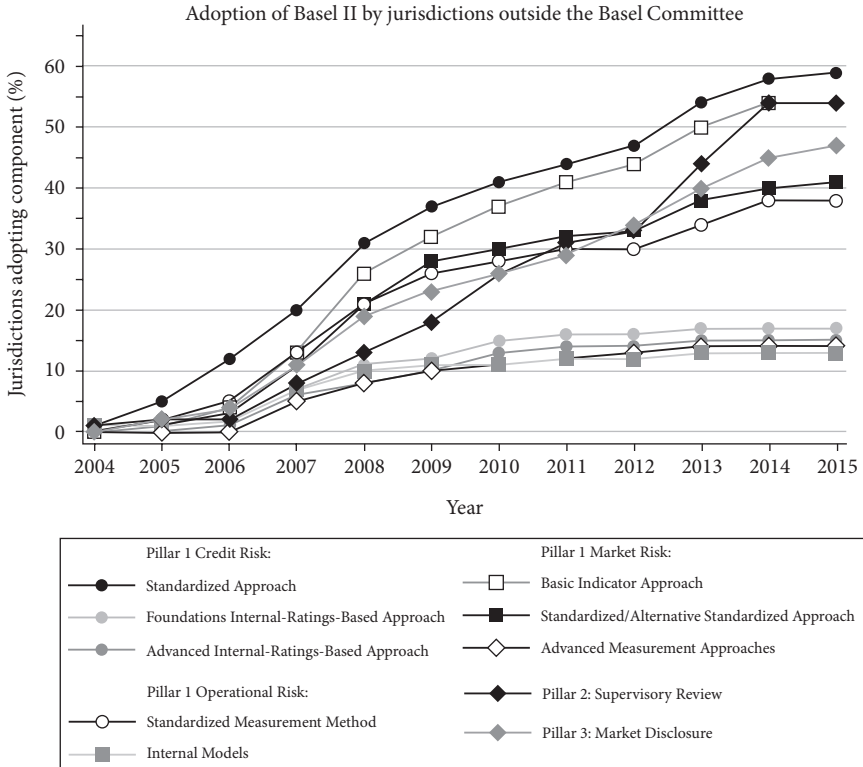


Figure 2.2 Which components of Basel II are being implemented?

Source: Data from FSI Survey (2015)

been implemented by ten jurisdictions, presumably reflecting the small size of trading books in banks in many peripheral countries. The 2015 data shows a relatively rapid take-up of the leverage ratio, the ‘back-stop’ to risk-weighted capital measures, which had been adopted by thirteen of the forty-one jurisdictions, even though it was only introduced in 2018. Hohl et al. (2018) find similar trends, with regulators in countries outside of the Basel Committee prioritizing the implementation of the Basel III definitions of capital and related capital buffers (Hohl et al., 2018, p. 11).

Although liquidity standards were a new addition to the Basel framework, the 2015 and 2018 data shows that regulators have moved relatively quickly to implement the liquidity coverage ratio (Hohl et al., 2018, p. 12). This may reflect the fact that many countries already had domestic quantitative liquidity rules well before their introduction in the Basel framework, making it relatively straightforward to implement. Regulators proceeding far more slowly in adopting the net stable funding ratio, probably because it is challenging to implement

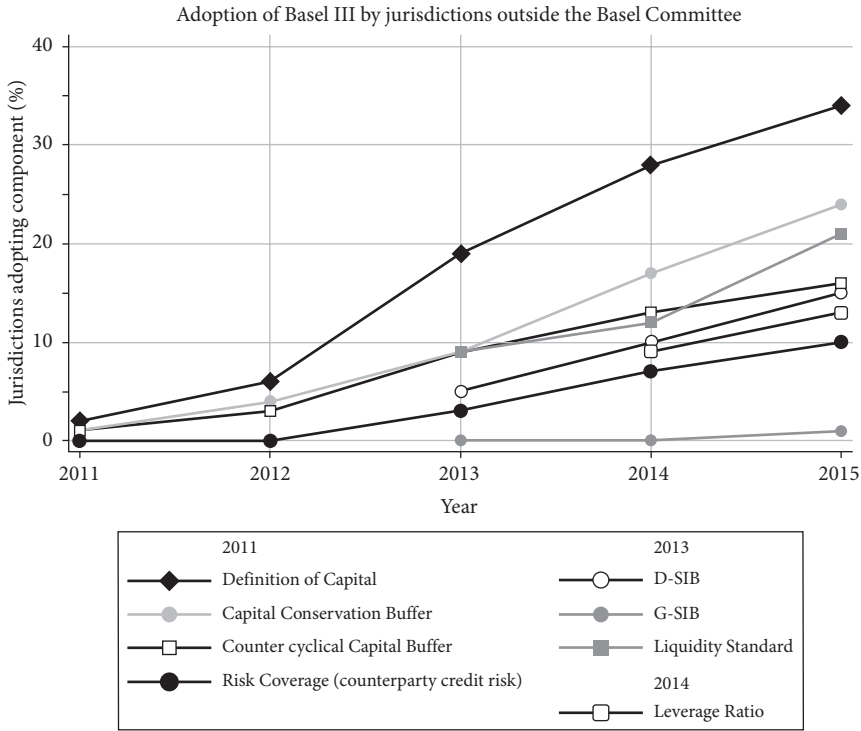


Figure 2.3 Which components of Basel III are being implemented?

Source: Data from FSI Survey (2015)

in countries that do not have well-developed capital markets, leaving fewer options for banks to source the term funding needed to comply with the standard (Hohl et al., 2018, p. 10).

Recent reports show that, in addition to taking a highly selective approach, regulators use other strategies to modify the standards to better fit their local context. Regulators have often made overall capital requirements more stringent than Basel standards. They have also relaxed rules in other areas where, in their view, the adoption of applicable Basel standards may not be warranted based on the risk profile or business model of banks in their jurisdictions. Specific examples of modifications to Basel standards include (Castro Carvalho et al., 2017; Hohl et al., 2018):

- raising minimum risk-weighted capital requirements above 8 per cent
- exempting banks with small trading books from market risk and counterparty credit risk requirements and simplifying risk calculations (e.g. only considering foreign exchange rate risks in market risk calculations)

- exempting small banks from capital charges for operational risk
- regulating large commercial banks according to Basel III risk-based capital requirements, but applying Basel I to small banks and/or specialized banks (e.g. development finance banks)
- exempting some banks from liquidity standards (e.g. development finance institutions)
- imposing leverage requirements that are higher than the Basel III requirement of 3 per cent.

Our case studies

This section provides an overview of the varying responses to Basel standards among our eleven case study countries and regions, and highlights the key attributes of their financial sectors, noting the ways in which they differ. In doing so it provides a context for the analysis of Basel convergence and divergence in subsequent chapters.

Varying responses to Basel standards

There is a striking variation among our case study countries in their responses to the Basel framework. There is limited public data on compliance with Basel Core Principles. A study of Financial Sector Assessment Programme reports between 2007 and 2012 covers seven of our case study countries and reveals substantial variation. Among the seven countries, two had compliance rates with Basel Core Principles of less than 50 per cent (Angola and Ghana); a further three had compliance rates between 50 and 80 per cent (Kenya, Nigeria, and WAEMU); while two had compliance rates above 80 per cent (Rwanda and Tanzania) (Marchettini et al., 2015, p. 28).

While Ethiopia remains on Basel I, regulators in the other case study countries and regions have opted to implement components of the more complex and recent Basel II and III (Table 2.4). Ethiopia aside, all are implementing components of Basel II and, with the further exceptions of Vietnam and Angola, they are also implementing components of Basel III. While no regulator has implemented all eighteen of the key components of Basel II and III, Pakistan comes close, as regulators have implemented fourteen. At the other end of the spectrum, regulators in Vietnam have only implemented three.

Regulators have tended to implement the less complex elements of Basel II and III, in line with the broad trends established above. Among the ten countries and regions implementing Basel II, all regulators have implemented the standardized

Table 2.4 How extensively are case study countries implementing Basel II and III? (January 2019)

Country	Number of Components Implemented		
	Basel II (out of 10)	Basel III (out of 8)	Total
Pakistan	9	5	14
WAEMU	5	5	10
Rwanda	5	4	9
Ghana	3	5	8
Tanzania	5	3	8
Kenya	5	2	7
Nigeria	5	1	6
Bolivia	3	2	5
Angola	5	0	5
Vietnam	3	0	3
Ethiopia	0	0	0

approaches to credit risk, and, with the additional exception of Bolivia, they have also implemented the standardized approaches to operational and market risk. Only Pakistan has authorized the use of internal models. Regulators in all countries except Ghana and Ethiopia have implemented the supervisory review process introduced under Basel II, which built on and integrated many of the Basel Core Principles (Pillar 2). The same group of regulators have also introduced financial disclosure requirements, which require banks to disclose their financial condition and risk-management processes to investors, in order to improve market discipline (Pillar 3).

There is more variation in the implementation of Basel III (Table 2.5). Among the eight countries and regions implementing aspects of Basel III, seven have implemented the revised definitions of capital, six have implemented capital conservation buffers, and five have implemented the leverage ratio. Three countries have implemented requirements for domestic systemically important banks, while two have implemented the countercyclical buffer, and two have implemented liquidity requirements.

Do financial sector differences explain responses?

We might reasonably expect variation across our case studies in their responses to Basel standards to be the result of differing levels of financial sector development. Yet, analysis of the key financial sector attributes across our case study countries suggests this is not the case. There is no obvious correlation between the level of financial sector development and the extent of the Basel framework that is being adopted.

Table 2.5 Which components of Basel III are case study countries implementing? (January 2019)

Microprudential		Macprudential						
Capital requirements		Liquidity requirements						
Definition of Capital	Capital Conservation Buffer	Risk Coverage for Counterparty Credit Risk	Leverage Ratio	Liquidity Coverage Ratio	Net Stable Funding Ratio	Countercyclical Buffer	Domestic Systemically Important Banks	Global Systemically Important Banks
Bolivia, Ghana, Kenya, Pakistan, Rwanda, Tanzania, WAEMU	Ghana, Kenya, Pakistan, Rwanda, Tanzania, WAEMU	-	Ghana, Pakistan, Rwanda, Tanzania, WAEMU	Pakistan, WAEMU	Pakistan, WAEMU	Bolivia, Ghana	Ghana, Nigeria, Rwanda	-

Our case study countries differ markedly (Table 2.6). A first striking difference is in the level of general economic development and the size of their economies. Per capital incomes range from Angola with a GNI per capita of over US\$4,000 per year to Ethiopia and Burkina Faso where it is just over US\$400. Our cases include relatively large countries like Nigeria with a total GDP of US\$472 billion, and Rwanda with a GDP of just US\$8 billion.

The size of the financial sector varies from US\$233bn in liquid assets in Vietnam to only US\$4bn in Burkina Faso and US\$1bn in Rwanda. Relative to the size of the economy, the financial sector is smallest in Tanzania, Ghana, Nigeria, and Pakistan, which all have domestic credit to private sector as a share of GDP below 20 per cent, and largest in Bolivia, Kenya, and Vietnam, where it ranges from 30 per cent to 113 per cent. Vietnam stands out as having a very large financial sector in absolute terms and relative to its economy.

Financial sectors in all our case study countries and regions are overwhelmingly bank dominated, with banks providing almost all of the credit to the private sector. Data on the size of stock markets is patchy, but the available data shows that stock markets remain in their infancy in Tanzania, Ghana, Nigeria, and Bolivia (total stock market capitalization of less than 20 per cent of GDP), although they play more of a role in Pakistan, Kenya, and Vietnam (between 20 per cent and 30 per cent of GDP).

Looking more closely at the nature of the banking sector, there is a striking difference in ownership patterns. While there is no foreign ownership of banks in Ethiopia, all banks in Burkina Faso are foreign owned. Aside from these extremes, Ghana, Angola, Pakistan, and Tanzania have substantial levels of foreign ownership, while levels are lower in Vietnam, Rwanda, Bolivia, Nigeria, and Kenya. While banks provide substantial amounts of credit to government and state-owned enterprises, levels also vary, from a high equivalent to 26 per cent of GDP in Pakistan, to a low of only 1 per cent in Bolivia.

The health of the banking sector soundness also varies markedly. The ratio of capital to assets ranges from a low of just over 7 per cent in Bolivia to a high of more than 14 per cent in Ghana, Kenya, and Rwanda.⁸ Levels of non-performing loans also vary, and do not necessarily correlate with levels of capitalization. While banks in Bolivia hold relatively little capital, they also have very few non-performing loans (less than 2 per cent of loans). Conversely, banks in Ghana hold relatively high levels of capital but they also have the highest levels of non-performing loans (over 15 per cent of loans).

Finally, our case study countries and regions vary in terms of citizens' access to formal financial services. The number of bank branches and ATMs per people is highest in Bolivia, where there are more than twelve branches and thirty-seven

⁸ The bank capital to assets ratio measures total regulatory capital (Tier 1, 2, and 3) against total assets (not risk-weighted).

Table 2.6 Attributes of financial sectors in case study countries

Country	Income category	Per capita GNI (US\$, Atlas method)	Total GDP (US\$ billions)	Size of financial sector (US\$bn of liquid assets)	Domestic private credit to sector (% of GDP)	Share of total domestic private credit to private total)	Stock market capitalizn (% of GDP)	Foreign bank ownership (% assets owned by foreign banks)	Credit to government and state-owned enterprises to GDP (%)	Bank capital to assets ratio (%)	Bank non-performing loans to total gross loans (%)	Commercial bank branches (per 100,000 adults)	Automated teller machines (ATMs) (per 100,000 adults)
Angola	LMIC	4,332	124	41	20	100	-	54	16	8.6	9.6	10.3	18
Bolivia	LMIC	2,940	34	21	57	88	16	16	1	7.1	1.6	12.6	37
Nigeria	LMIC	2,632	472	88	14	100	11	19	6	10.0	7.8	5.1	16
Vietnam	LMIC	1,948	196	233	113	100	28	5	16	8.3	2.5	3.7	23
Ghana	LMIC	1,902	56	12	14	100	7	69	11	14.0	15.4	6.9	10
Pakistan	LMIC	1,452	266	99	16	100	25	52	26	8.4	11.0	10.0	9
Kenya	LMIC	1,312	66	24	32	100	25	36	13	15.5	7.1	5.5	10
Tanzania	LIC	896	48	10	14	100	4	47	6	11.4	8.3	2.4	6
Rwanda	LIC	706	8	1	21	95	-	13	4	15.6	6.3	6.0	5
Burkina Faso	LIC	640	12	4	28	100	-	100	7	-	-	2.8	3
(WAEMU)													
Ethiopia	LIC	604	64	-	-	100	-	0	-	-	-	2.9	0

Notes: Because of missing data, data is averaged over five-year period (2013–17). In the few cases where data is missing for all five years, the last available data point is used (from 2011 or 2012). We use Burkina Faso as an illustration of the financial sectors in the WAEMU region, as it was a focal country for our WAEMU case study.

Source: Extracted from World Development Indicators Database, World Bank (2017)

ATMs per 100,000 people, and lowest in Burkina Faso, where there are only three bank branches and three ATMs per 100,000 people.

What is striking about these trends is that it is hard to argue that the extent of Basel adoption maps onto levels of financial sector development. On many of these measures, Pakistan has a relatively developed financial sector and, as we might expect, a relatively high level of Basel implementation. At the other end of the spectrum, Ethiopia has a low level of financial sector development and is the case study with the lowest level of Basel implementation. Yet WAEMU and Rwanda, which have the smallest, and in many ways the least developed, financial sectors, have relatively high levels of Basel adoption. Conversely, Vietnam, Angola, and Nigeria have financial sectors that are among the most developed in our sample, yet relatively high levels of Basel adoption. As we show in the remainder of this volume, it is only by studying the political economy dynamics within countries that we can explain variation in the implementation of international banking standards.

Conclusion: why do regulators on the periphery differ in their responses to Basel standards?

In this chapter we have argued that the regulatory context in low- and lower-middle-income countries differs in important ways from the context in more advanced countries. For this reason, international banking standards, designed in standard-setting bodies heavily dominated by regulators from advanced economies, are ill suited in many ways to the regulatory needs of low- and lower-middle-income countries. Over time this gap has widened as regulators on the Basel Committee have sought to address the ever-more complex activities of the world's largest banks.

We have shown how, despite the manifold criticisms levelled against Basel standards, particularly Basel II and III, they are still being implemented by regulators across the world. Regulators have not adopted the standards in their entirety: implementation is usually highly selective, with regulators choosing to adopt only some components of the standards and taking steps to modify the standards to suit their local contexts. Yet levels of implementation, including among low- and lower-middle-income countries, are higher than appears warranted on the basis of expert opinion about the merits and demerits of the standards. Moreover, there is substantial variation in responses to Basel standards across low- and lower-middle-income countries, which is difficult to attribute to differences in their financial sectors.

Why is it that regulators in many low- and lower-middle-income countries are opting to converge on international banking standards? And why do some regulators opt to converge on international standards but others opt to diverge? In

Chapter 3 we set out a framework to account for this variation, identifying the specific factors that drive regulatory convergence and divergence among peripheral developing countries.

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