WPS8300

Policy Research Working Paper 8300

Cross-Border Spillover Effects of the G20 Financial Regulatory Reforms

Results from a Pilot Survey

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WORLD BANK GROUP
Finance, Competitiveness and Innovation Global Practice Group
January 2018

Policy Research Working Paper 8300

Abstract

In 2009, the G20 embarked on an ambitious financial regulatory reform agenda to address the fault lines that caused the global financial crisis. Although the global benefits are expected to outweigh the overall costs, these reforms could produce cross-border adverse spillover effects to individual emerging markets and developing economies that are not required to implement the reforms themselves, but are affected by their implementation elsewhere. To improve the evidence base on such potential adverse impacts, the World Bank has undertaken qualitative surveys of senior officials at regulatory agencies, local banks, and global banks that are active in seven emerging markets and developing economies. While important caveats prevent the formulation of definitive conclusions, the survey finds that banks and regulators routinely have different perspectives on the impacts. Most banks claim adverse effects on financial products, services, and markets; regulators broadly expect the effects to be positive over the longer term, but some recognize they may be negative during the transition phase. Regulators tend to agree that the (potential for) spillover impacts demand stronger home-host coordination, impose a higher supervisory burden, and require a stronger role for the international community to monitor and evaluate the impacts. The findings also emphasize the need for regulatory consistency within and between jurisdictions to ensure a level playing field. Taken together, more work remains to better understand the nature of these spillover effects, how they shape the provision of commercial financing to meet developmental objectives, and what action can be taken to mitigate any adverse impacts.

This paper is a product of the Finance, Competitiveness and Innovation Global Practice Group. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at efeijen@worldbank.org.

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JEL: G15, G18, G2, G21, G28
Keywords: Financial reforms, Financial supervision and regulation, Basel III.

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Acknowledgements

We would like to thank the following colleagues for discussions and suggestions: Laura Ard, Pierre-Laurent Chatain, Mariano Cortes, Aurora Ferrari, Mario Guadamillas, Syed Mehdi Hassan, Andy Jobst, Joaquim Levy, Sam Maimbo, Yira Mascaro, Zafer Mustafaoglu, Alfonso Garcia Mora, Ceyla Pazarbasioglu, Jean Pesme, and Luisa Zanforlin (all World Bank); Michaela Erbenova and her team (International Monetary Fund); and Thorsten Beck (Cass Business School).

In addition to their suggestions, we would like to thank the following colleagues for their help in liaising with the authorities and country offices: Elisabetta Capannelli, Natalie Nicolaou, Aurora Ferrari and Mario Guadamillas (Romania); Leyla Castillo, Eva Gutierrez, and Zafer Mustafaoglu (Colombia and Peru); Valeriya Goffe, Mehnaz Safavian, and Jamie Seward, and Alejandro de la Campa (Kenya and Tanzania); Gabriel Sensenbrenner and Jean Pesme (Morocco); Marius Vismantas, Shah Nur Quayyum, and Niraj Verma (Bangladesh).

We are also thankful to our regulatory counterparts for their responses to the survey and follow up discussions:

- **Morocco** (Bank Al Maghrib): Hiba Zahoui (Head of Banking Supervision Department) and Hicham Chmanti Houari (Head of Banking Regulation)
- **Tanzania** (Bank of Tanzania): Augustino Hotay (Manager, Licensing, Policy and Operations Review)
- **Bangladesh** (Bangladesh Bank): Dipti Rani Hazra (Joint Director, Banking Regulation and Policy Department)
- **Peru** (Superintendency of Banking, Insurance and Pension Funds): Michel Canta (Advisor to the Superintendent)
- **Colombia** (Financial Superintendency of Colombia): Ángela Angulo (Advisor, Research and Development Department)
- **Romania** (National Bank of Romania): Liviu Voinea (Deputy Governor)
- **Kenya** (Central Bank of Kenya): Matu Mugo (Assistant Director, Bank Supervision Department)

1. Summary of Findings

In 2009, the G20 embarked on an ambitious financial regulatory reform agenda to address the fault lines that caused the global financial crisis. While the global benefits are expected to outweigh the costs, the impact may differ across countries, particularly for emerging markets and developing economies (EMDEs) that have sizeable financing gaps to fund development needs and that rely on commercial financing sources since their socio-economic progress remains constrained by shallow, bank-centric financial systems, limited fiscal space, and weak institutional capacity.

Specifically, the reforms may produce cross-border spillover effects to individual EMDEs that are not required to implement the reforms themselves (specifically non-G20/FSB EMDEs), but are affected by their implementation elsewhere. For example, such an EMDE may face a disproportionate tightening or outright reduction of a range of local and cross-border financial activities provided by a foreign bank whose home jurisdiction is implementing the reforms.

To improve the evidence base on these potential spillovers, the World Bank has undertaken surveys of senior officials at regulatory agencies, local banks and global banks that are active in seven non-G20/FSB EMDEs. In particular, the surveys focused on the impact of the regulatory reforms relating to bank resilience (Basel III), the additional requirements on global systemically important banks (G-SIBs), and "over the counter" (OTC) derivatives.

Overall, the findings from the surveys should be interpreted with caution and regarded as preliminary, as important caveats apply related both to the survey (e.g. sample size and lack of quantitative evidence) and to the difficulty in interpreting results, including separating the unintended and intended consequences of the G20 regulatory reforms; disentangling the impact of regulatory reform from other factors; distinguishing between short-term adjustment costs and longer-term stability benefits; and interpreting response variation between the impact of spillover effects rather than the impact of the local implementation of G20 regulatory reforms.

With these caveats in mind, the surveys' findings show that regulators broadly expect the effects of regulatory reforms to be positive over the longer term while recognizing they may be negative during the transition phase. Respondents, however, anecdotally report exceptions in some of their jurisdictions, including upward pressures on borrowing costs for non-financial corporates; adverse impacts on trade credit, cross-border bank credit funding and correspondent banking activity; and a higher cost and reduced availability of government financing. Moreover, regulators tend to agree that (potential) spillover effects require stronger home-host coordination and entail a higher supervisory burden. While most regulators state that they can deal with any adverse spillovers, they also suggest that the international community should enhance its support, and they request greater technical assistance, capacity building and the exchange of experiences relating to the reforms.

Global and local banks are decisively less sanguine about the reform spillovers than the regulators. Both local and global banks claim a wide range of adverse spillover effects, predominantly driven by the impact of higher capital and liquidity standards on a range of services such as infrastructure finance, syndicated lending, corporate credit, SME credit, trade credit, and sovereign and corporate debt markets. Global banks highlight that reforms raise their cost of doing business in EMDEs. In this context, local banks state that they benefit from a reduction in competition from foreign banks, although some are concerned about the implications for financial stability and the difficulty to fill the void the foreign banks' exit leaves behind. An overarching theme that underpins the responses of local and global banks is that both call for regulatory consistency – banks claim that gaps and incongruent approaches regarding the treatment of local and foreign banks across and within jurisdictions are an important amplifier of adverse impacts.

In conclusion, some of the findings suggest that the reforms may carry unintended economic and social spillover costs for individual EMDEs. In addition, while it is challenging to generalize, such costs may be higher in EMDEs that have, inter alia, higher supervisory and institutional constraints, shallower financial sectors, and higher dependence on foreign banks or other sources of foreign funding. More work therefore remains to better understand the nature of these spillover effects, how they shape the provision of commercial financing to meet developmental objectives, and what action can be taken to mitigate any adverse impacts.

2. Introduction

The G20 reform agenda

In the wake of the global financial crisis, the G20 embarked on an ambitious financial regulatory reform agenda to address the fault lines that caused the crisis and build a safer, more resilient global financial system that better serves the real economy while preserving its open and integrated structure.

This reform agenda has been coordinated through the Financial Stability Board (FSB) and involved significant work by the three main international regulatory standard-setters in banking, insurance and securities.[1] Most of this work has focused on four core areas:[2]

1. **Making financial institutions more resilient** by lowering the probability and cost of failure through higher capital levels, limitations on leverage, more liquidity, improved risk governance and culture, and risk-adjusted remuneration incentives;
2. **Ending "too-big-to-fail"** through enhanced resilience, more intensive supervision and more effective resolution of systemically important financial institutions (SIFIs);
3. **Addressing "shadow banking" risks**, by regulating non-bank credit intermediation, limiting the interconnectedness between banks and other parts of the financial system, and analyzing potential risks to financial stability posed by asset management activities and financial technology developments; and
4. **Making derivatives markets safer**, through reporting of all over-the-counter (OTC) derivatives transactions to trade repositories; central clearing and, where appropriate, trading on exchanges or electronic trading platforms of standardised OTC derivatives; and higher capital and margin requirements for non-centrally cleared derivatives.

The global benefits of the reform agenda are expected to significantly outweigh the economic costs. However, the costs and benefits of the G20 reforms may differ across countries, particularly for EMDEs. Therefore, as the design and implementation (in particular in FSB-member countries) of the reforms nears completion, it becomes increasingly important to

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[1] The Basel Committee on Banking Supervision, the International Association of Insurance Supervisors and the International Organization of Securities Commissions.

[2] Also see the FSB's annual reports to the G20 (e.g., FSB (August 2016)).

monitor and evaluate any unintended consequences. Even though the reforms are not applied locally in many EMDEs, their implementation in one jurisdiction can trigger cross-border *spillover* effects to EMDEs. For example, an EMDE may host an international bank whose home jurisdiction is implementing the reforms. Or a bank, corporate or sovereign entity in an EMDE can be affected through cross-border financial linkages.

Given their lower stages of economic and financial sector development as well as capacity constraints, EMDEs could be particularly affected with little ability to mitigate the impacts. Moreover, many EMDEs face significant infrastructure and SME financing gaps[3] which could become more challenging to address if the reforms adversely affect the cost or provision of commercial financing sources and instruments.

For example, infrastructure finance, identified as a key challenge for EMDEs, could be adversely affected by a larger emphasis on a standardized approach which may not properly account for inherent risk mitigating factors of the project such as its ring-fenced structure or the lender's access to the project's cash flows or assets. In addition, a reliance on external credit ratings to calculate risk weights may affect entities in EMDEs that are less likely to be externally rated or have an insufficient history to calculate reliable default probabilities. The reforms may also lead to higher hedging costs that may pose an additional impediment to the availability of longer-term finance.

[3] The annual infrastructure financing gap in developing economies is estimated at $2.5 trillion (UNCTAD, 2014), while the financing gap for formal and informal SMEs in developing economies could be as high as $2.1-2.6 trillion (IFC, 2013).

Box 1. Financial Stability Board and the Evaluation of Reform Impacts

Evaluating and reporting on the effects of the G20 reforms figures prominently on the FSB's agenda, including for EMDEs, but with a focus on G20/FSB members.

Ex-ante impact studies

To calibrate key individual reforms, ex-ante impact studies were undertaken to estimate the macro-economic impacts[4]. The estimates suggested net benefits of the reforms when comparing the gains from the reduction of the likelihood and severity of financial crises versus the output costs of higher lending rates.

Monitoring the reform effects on EMDEs

In addition, a report prepared jointly by a task force of the FSB, IMF, and WB was first published in November 2011 highlighting potential challenges to EMDEs from the emerging international financial reforms (FSB, IMF, WB (2011)). The first FSB report on the potential unintended consequences of the G20 reforms in EMDEs was prepared in 2012 in collaboration with the IMF and the World Bank based on a survey to regulators (FSB, June 2012). It was followed up by two FSB monitoring notes (Sep 2013 and Nov 2014), based on inputs from FSB work streams and Regional Consultative Groups (RCGs) as well as the international standard setting bodies (SSBs) and international financial institutions (IFIs) (including the World Bank). Since 2015, the FSB has published an annual report to the G20 on the implementation and effects of reforms that includes a discussion on the impacts of reforms on G20/FSB EMDEs. The FSB has also published a review of the effectiveness and broader effects of the OTC derivatives markets reforms and found that changes in other jurisdictions have affected the markets of some EMDEs, such as the location of trading and the impact of overseas margin requirements (FSB, June 2017).

Post-implementation evaluation

The FSB, in collaboration with sectoral standard setters, is also in the early stages of evaluating the post-implementation effects of G20 reforms, including whether the reforms are working together as intended, and of identifying any regulatory gaps, remaining or emerging risks and potential material unintended consequences (FSB, July 2017). Preliminary post-implementation analysis—which also focuses on G20/FSB economies—indicates that the reforms have enhanced financial sector resilience and hence the system's ability to absorb shocks and support growth, but much work remains to fully assess the impacts.

[4] See, for example, Box 1 in Annex 1 of the 2015 FSB annual report (FSB, November 2015).

Surveys for regulators, local banks and global banks

Objective and respondents

Currently, evidence of the reform spillover impacts on (non-G20) EMDEs remains mostly anecdotal, reflecting, inter alia, the ongoing implementation and adjustment and challenges in separating the effects of reforms from broader post-crisis developments. In this context, one global bank respondent commented that:

> *"A comprehensive assessment of the aggregate impact of the various reforms is challenging and ongoing; the adjustment of business models and plans is likely to take another 5-10 years."*

To help fill a gap in the monitoring of the impact of regulatory reforms on EMDEs, particularly those that are not a member of the Financial Stability Board or any of the standard setting bodies, and to provide a more granular understanding of the scale and drivers of spillover effects and the capacity to deal with them, the World Bank has undertaken a survey of senior regulators and bankers. The surveys were designed to cover a wide range of topics, and are not well suited to provide in-depth technical answers and solutions.

The surveys were also intended to complement the continuing FSB impact monitoring and evaluation work (Box 1) as well as the work conducted in the FSB Regional Consultative Groups. In doing so, the World Bank aims to bring to the attention of the international community the perspectives of those of its member countries that are not members of the FSB and therefore have not been part of FSB deliberations.[5]

The exercise targeted seven countries that were selected on the basis of the size of their cross-border activities, geographic dispersion and diverse characteristics of their financial sectors: Bangladesh, Colombia, Kenya, Morocco, Peru, Romania, and Tanzania. Separate surveys were sent to senior officials at supervisory agencies, selected local banks (29 in total, including a few local affiliates of internationally active banks), and to the head offices of six global banks

[5] Note that a subset of non-G20/FSB EMDEs are involved through the FSB's Regional Consultative Groups.

with a significant footprint in EMDEs and who are active in the selected countries. Tables 1 and 2 give an overview of the respondents.

Table 1 - Regulatory respondents (inputs received)

Region	Countries
Sub-Saharan Africa	Kenya, Tanzania
Middle East and North Africa	Morocco
Eastern Europe and Central Asia	Romania
Latin America and the Caribbean	Peru, Colombia
South Asia	Bangladesh

Table 2 - Local and global bank respondents (inputs received)

Country	Name of banks
Bangladesh (6)	Prime Bank Limited, Islami Bank Bangladesh Limited, Eastern Bank Limited, Sonali Bank Limited, BRAC Bank Limited, Standard Chartered Bank
Colombia (4)	Bancolombia S.A., Banco de Bogota SA, BBVA Colombia SA, Banco Davivienda
Morocco (4)	Attijariwafa Bank, Banque Marocaine du Commerce Extérieur, Crédit Populaire du Maroc, Citibank Maghreb
Peru (1)	Banco de Credito del Peru
Romania (2)	Raiffeisen Bank, BRD-Groupe Societe Generale
Tanzania (3)	National Microfinance Bank Plc, National Bank of Commerce Limited, Citibank (Tanzania) Limited
Global banks (4)	Bank of Nova Scotia, BBVA, Santander, Standard Chartered Bank

Scope of the surveys

The surveys focused primarily on the impact on EMDEs of the implementation by other (non-EMDE) jurisdictions of the regulatory reforms relating to resilience, the additional requirements on global systemically important banks (G-SIBs), and derivatives. These initiatives include in particular:

- The Basel III capital framework for banks (Basel Committee, June 2011), including higher minimum capital requirements based on higher quality capital (equity and retained earnings rather than subordinated debt); the introduction of conservation, countercyclical and systemic risk capital buffers; higher capital requirements against counterparty credit risk and securitizations; and a minimum leverage ratio (based on the total on- and off-balance sheet exposures of a bank without adjustment for risk).
- Higher capital requirements on market risk (Basel Committee, January 2016).
- The Basel III minimum liquidity ratios - a Liquidity Coverage Ratio (Basel Committee, January 2013) that requires banks to hold sufficient high quality liquid assets[6] to meet a withdrawal of retail and wholesale deposits over a 30-day stress period; and a Net Stable Funding Ratio (Basel Committee, October 2014) that requires banks to fund themselves with sufficient long-term liabilities (equity, debt and other long-term liabilities) to match the maturity of their assets.
- Additional requirements for G-SIBs (FSB, September 2013), extended to domestic systemically important banks or D-SIBs in many countries, in the form of capital buffer surcharges; more intensive supervision; and recovery and resolution planning (including requirements on these banks to hold "total loss absorbing capacity" (TLAC) in the form of regulatory capital and additional subordinated debt with a remaining maturity of more than one year, which could be "bailed-in" (written down or converted into equity) in the event of a bank being placed into resolution).
- Measures to shift "over the counter" (OTC) derivatives from bilateral agreements between two banks into standardized contracts that are margined and cleared through central counterparties, thereby shifting counterparty risk to a central clearing house.

In addition, although not finalized at the time the surveys were undertaken, banks may already have been considering their responses to proposals from the Basel Committee for higher capital requirements (for many banks) on credit risk (Basel Committee, December 2015) and operational risk (Basel Committee, March 2016a), and for an "output floor" (Basel Committee,

[6] E.g. cash, reserves at the central bank, government bonds and other high quality securities.

March 2016b) to limit the extent to which banks can use internal models to drive capital requirements below the requirements that would apply under the standardized approaches to credit and market risk.[7]

Structure of the surveys

All three surveys to regulators, local banks, and global banks were similarly structured and covered questions regarding: (i) impacts on the overall development and deepening of the domestic (host) financial sector, (ii) impacts on domestic financial markets, and products and services, particularly those that are relevant for development (e.g. infrastructure and SME finance), and (iii) impacts on international market conditions for domestic borrowers or issuers. The regulatory survey included two additional categories: (iv) supervisory capacity to mitigate any adverse impacts, and (v) the role of the international community. Most of the questions were posed as multiple choice with an option for respondents to provide a short commentary to motivate or illustrate their responses.

3. Potential Adverse Impacts of the G20 Financial Reforms on EMDEs: An Analytical Framework

The G20 regulatory reforms were intended primarily to make the financial system safer, and to enable failing banks to be resolved in a more orderly manner without cost to the taxpayer. The intention was to make banks more risk-averse, strengthen their balance sheets, and constrain leverage in the financial system. Equally, however, these reforms may give rise to a range of (largely unintended) consequences that have an impact on EMDEs, including in particular on long-term infrastructure financing, borrowing by corporates and sovereigns, and foreign exchange and interest rate hedging transactions. Four potential sources of potential adverse impacts on EMDEs are considered below.

[7] These new standards were finalized by the Basel Committee in December 2017 (Basel Committee, December 2017a).

Higher bank operating costs across the board, including in EMDEs

The reforms may make it more expensive for some banks to operate, which may lead to increases in the cost of bank products and services for their borrowers and customers, including those in EMDEs. Moreover, many EMDEs depend on bank financing, with limited alternative channels such as capital markets. These EMDEs may therefore be more exposed to increases in the cost, or reductions in the availability, of bank lending and other bank products and services.

On the liabilities side of a bank's balance sheet the regulatory requirements to meet higher capital, leverage and liquidity standards may require banks to raise more funding from more expensive sources of funding (equity, subordinated debt instruments and other long-term debt) and correspondingly less from retail deposits and short-term wholesale deposits, thereby potentially increasing the overall cost of a bank's liabilities.[8] These liability costs are likely to be reinforced for G-SIBs because they are subject to additional capital buffers and requirements to hold sufficient TLAC.[9] Many countries are also applying similar additional requirements to their domestic systemically important banks (D-SIBs), which may also operate internationally.

On the assets side of a bank's balance sheet the most direct impact on a bank's revenues is through the requirement under the Liquidity Coverage Ratio to hold a minimum amount of high quality liquid assets. These assets generally offer lower yields than other assets.

In addition, higher capital requirements on market risk and structural reform initiatives implemented independently by FSB members (such as the "Volcker rule" in the US, the ring-fencing of retail banking activities in the UK and the ring-fencing of trading activities in France

[8] There may be some offsetting effects, in particular if a bank is perceived to be safer as a result of meeting higher regulatory requirements, and depositors and investors are willing to fund the bank at a lower rate of interest or return on capital. But this is unlikely to leave the overall cost of a bank's funding unchanged, in part because retail depositors are protected by deposit insurance and may be less sensitive to changes in the probability of a bank failing.

[9] This requires most G-SIBs to raise medium-term subordinated debt in addition to regulatory capital requirements, such that a G-SIB's overall TLAC is at least 16 percent of its risk-weighted assets by 2019, and 18 percent from 2022 (FSB, November 2015).

and Germany) could increase the cost and reduce the volume of banks' market-making and trading activities, including in local EMDE capital markets and in the trading of EMDE government and corporate securities in international capital markets.[10] This may have adverse implications for funding costs and contribute to market illiquidity, segmentation, and higher volatility. Meanwhile, the OTC derivatives reforms may increase net hedging costs (BIS, August 2013).[11] There may even be a potential "cliff edge" effect, whereby reduced trading activity by foreign banks in EMDE local capital and other financial markets has a disproportionate negative impact on these markets that are relatively small and at an early stage of development.

Potentially disproportionate cost of financial services, particularly for EMDEs

The reforms may increase the cost of some bank products and services by more than others. This may have a disproportionate impact on EMDEs. The main reforms likely to have a disproportionate impact on EMDEs relate to: (i) market risks, whereby the revised market risk framework agreed by the Basel Committee in January 2016 imposes substantially higher risk weights on market risk,[12] in particular under the standardized approach which is more likely to be applied to EMDE securities given that they are less liquid, and on trading in non-investment grade securities that carry higher default risk charges (including equities); (ii) securitizations, making it more expensive for banks to securitize their assets and to hold securitizations

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[10] There is evidence that banks have reduced their trading books in response to higher market risk capital requirements and related regulatory and supervisory pressures and that this has adversely impacted market liquidity in markets such as for corporate bonds (IMF, 2015).

[11] The report stated that "Indirect clearing can allow access to Central Counterparties (CCPs) for smaller market participants who are unable to meet CCP direct membership criteria. Although clients could avoid the large fixed costs involved in direct clearing, they may face higher margin requirements and clearing fees imposed by the direct clearing member compared to those imposed by the CCP on the direct clearers themselves. These higher costs may deter socially valuable hedging". However, the study estimated that the overall costs were significantly outweighed by the benefits.

[12] The increase appears to be driven by the standardized approach. The latest Basel Committee Basel III monitoring exercise shows that had the revised market risk framework been applied at end-December 2016 then G-SIBs would have faced a 51 percent (weighted average) increase in their capital requirements for market risk. The positions of individual banks are widely dispersed, with the largest increase for a G-SIB being a 184 percent increase in market risk capital requirements, and the largest reduction for a G-SIB being 37 percent. See Basel Committee, September 2017.

originated by other banks (Basel Committee, July 2016); (iii) counterparty credit risk, whereby banks take on exposures (usually to other banks) through financial transactions such as derivatives and sale and repurchase agreements (Basel Committee, April 2014); (iv) capital and margin requirements on exposures through non-centrally cleared derivatives (Basel Committee and IOSCO, March 2015); and (v) liquidity, where the Net Stable Funding Ratio (NSFR) makes it more expensive for a bank to make longer-term (more than one-year maturity) loans, because these have to be matched by more stable – generally longer-term and more expensive – funding.

In addition, the capital and liquidity frameworks are applied differently across jurisdictions. For example, a foreign bank may be subject to higher risk weightings (in particular for sovereign and central bank exposures within an EMDE) at a group consolidated level than at the level of its EMDE subsidiary. Similarly, there may be differences at subsidiary and group consolidated levels in terms of which assets qualify as high-quality liquid assets for the purpose of meeting the Liquidity Coverage Ratio (LCR). This may discourage banks from holding EMDE assets, with a detrimental impact on EMDE sovereign debt issuance and trading. This in turn may pose challenges for broader capital and money market development.

While beyond the scope of this paper, other developments may also have a disproportionate impact on EMDEs, including the tougher approach to anti-money laundering, the application of sanction regimes and a tougher approach to counter-terrorist financing more generally. The FSB is already undertaking a major study of why many foreign banks have pulled back sharply from correspondent banking and of what might be done to mitigate this (FSB, December 2016). In addition, the World Bank conducted a global survey in 2015 to gather data on the extent and drivers of termination of correspondent accounts and banking services to money remitters,[13] and ongoing work is aimed at collecting more information on possible knock-on effects of de-risking on emerging markets located in different regions, including in Africa, the Middle East, Latin America and South-east Asia.

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[13] See World Bank (2015).

Potentially disproportionate impact of new standards on credit risk and the output floor[14]

The disproportionate impact on EMDEs may be reinforced by the new Basel Committee standards on credit risk and the output floor. There will be long phasing-in periods for most of these proposals, but their impact may be more immediate as banks consider their desired "steady state" positions and as market analysts ask how well banks would be capitalized once the revisions are fully phased in. These impacts can be split into three components.

(a) The output floor. The Basel Committee is introducing a 72.5 percent floor on the extent to which a bank's total risk weighted exposures (including credit and market risk exposures calculated under internal modeling approaches) can diverge from what the bank's total risk weighted exposures would be under the standardized approaches. Although not applied at an individual exposure basis, the largest impact of this floor will be where a bank's internal model-based risk weightings are significantly lower than the standardized risk weightings. This could include high quality corporate (including SMEs) and infrastructure financing.

(b) Constraints on the use of internal ratings-based (IRB) approaches. The new standards:

- Remove the IRB option for equities;
- Remove the advanced IRB option for exposures to banks and to other financial institutions, and to corporates with annual revenues above €500 million; and
- Impose Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) floors for remaining corporate (foundation) and retail (advanced) IRB approaches.

For EMDE borrowers the largest impact here could be that the advanced IRB approach could be used for exposures to a local subsidiary of a large corporate. The Basel Committee retained the use of IRB approaches for specialized lending, including infrastructure finance.

[14] These standards were still under deliberation when the surveys were undertaken, but have since been finalized (Basel Committee, December 2017a).

(c) Revisions to the standardized approach to credit risk. This approach will remain primarily ratings-based, in particular for exposures to banks and corporates. But where ratings are not available (as for most borrowers in many EMDEs):

- Exposures to banks will be allocated to buckets (with a 40, 75, and 150 percent risk weighting, respectively) depending on criteria for the creditworthiness of the counterparty;
- Exposures to corporates will be risk weighted at 100 percent (except where the corporate is "investment grade" (65 percent), an SME (85 percent), or an SME in the retail exposure class (75 percent));
- Exposures to object and commodity finance will be risk weighted at 100 percent;
- Exposures to project finance will be risk weighted at 130 percent in the pre-operational phase, and 100 percent in the operational phase (this may be reduced to 80 percent for high quality project finance); and
- Acquisition, development and construction loans will be risk weighted at 150 percent, or at 100 percent if sufficient pre-sale or pre-lease contracts are in place.

There will also be a currency mismatch multiplier of 1.5, to be applied to the risk weight for unhedged retail and residential real estate lending, up to a maximum risk weight of 150 percent.

Trade finance will continue to be risk weighed at 20 percent (for short-term self-liquidating trade letters of credit arising from the movement of goods), although for other types of less than one-year maturity commitments the risk weight will increase from 20 percent to 40 percent.[15]

The risk weighting of exposures to sovereigns, public sector entities and central banks remains unchanged for now, although the Basel Committee has issued a Discussion Paper on this (Basel Committee, December 2017b).

For EMDE financing the main potential adverse impacts of these revisions to the standardized approach to credit risk could include: (i) the substantially higher risk weightings on exposures

[15] This also reads across to the credit conversion factors (CCFs) used in the calculation of off-balance sheet exposures for the leverage ratio.

to unrated banks and corporates (including an unrated local subsidiary of a multinational corporation, irrespective of its own credit quality or degree of parental support), which could include some types of financing used to support trade; (ii) the currency mismatch add-on (either directly or by forcing borrowers or lenders to take out hedging products that have become more expensive as a result of the OTC derivatives reforms); and (iii) the treatment of specialized lending.

Impact from foreign banks' strategic reviews of their business lines and geographies

Foreign banks have been reviewing the lines of business and geographies in which they want to remain active, in response to both the impact of regulatory reforms and other considerations such as a re-evaluation of strategy and risk appetite, the perceived riskiness and profitability of different business lines and geographies, and management and control stretch. Recovery and resolution planning may also force a re-evaluation of foreign banks' EMDE country operations, where these operations pose a risk to the implementation of recovery and resolution plans or where foreign banks are not prepared to hold sufficient loss absorbing capacity in EMDEs. Foreign banks may therefore seek to streamline their operations in EMDEs so that it is easier for them to sell, exit or support these operations in the event that the banking group faced financial difficulties.

Many foreign banks have reduced their international activities by more than their home market business (e.g. De Haas and Van Horen, 2013). In some cases, foreign banks have withdrawn from all or a significant part of their activities in (or the cross-border provision to) a host country. Examples include the reduction in the number of countries where G-SIBs such as Citigroup and HSBC[16] operate; and a reduction in the presence of western European banks in some eastern European countries (e.g. De Haas et al, 2012). This could have a significant impact on EMDEs where foreign banks play a large role in supporting the domestic corporate

[16] HSBC exited from 15 countries, reducing the number of countries in which it operated from 87 to 73, between 2011 and 2015, and exited from whole lines of business in 10 more countries. http://www.hsbc.com/investor-relations/events-and-presentations/investor-update-2015.

and infrastructure sectors, with an adverse impact not only on financing flows but also on competition, innovation, knowledge transfer and financial stability.

Foreign banks may also respond to greater "localization" measures by EMDEs, including where EMDEs require foreign banks to operate through subsidiaries (rather than branches) and to hold additional local capital, internal and external loss absorbing capacity, and liquidity. The effectiveness of home/host cooperation in both supervisory and resolution (crisis management group) colleges is likely to be an important factor in determining the extent to which a host EMDE country feels able to rely on a parent foreign bank and on its home country regulator(s) to look after the interests of the foreign bank's presence in an EMDE, both in normal times and when recovery and resolution plans are implemented.

Equally, there may be some offset here through a range of "second round effects" as EMDE banks and financial markets adjust to the actions of foreign banks. There has already been a degree of substitution in some EMDEs as local or regionally-based players take up at least some of the business previously undertaken by foreign banks.

The extent to which EMDE countries themselves implement at least some of the G20 regulatory reforms may reinforce the overall impact of regulatory reform through the application of tougher requirements on local banks' lending and trading activities.

4. Key Findings from the Surveys

Caveats

Overall, the findings from the surveys should be interpreted with caution and regarded as preliminary. First, the findings are based on a diverse, but small country sample. Second, in interpreting the results, it is important to note that it is difficult to: (i) separate the unintended and intended consequences of G20 regulatory reforms; (ii) disentangle the impact of regulatory reform from other factors (for example economic conditions and global liquidity and financial market conditions); (iii) distinguish between short-term adjustment costs and longer-term stability benefits; and (iv) interpret some variation in how far respondents confined themselves to the impact of spillover effects rather than the impact of the local implementation of (some or all) G20 regulatory reforms. Third, none of the survey respondents provided quantitative evidence to support their perception-based magnitude of the spillover effects.

The findings suggest mixed results from the responses of the three targeted groups (i.e. the supervisory agencies, local banks and global banks). There is considerable variation within countries – between the regulatory authorities and the banks, and across the local banks. There is also considerable variation across countries in the sample. These variations may reflect (at least in part) the different business activities of different banks (both within and across countries).

Most survey questions were presented as multiple choice with the option for respondents to provide additional commentary or examples. Interestingly, while local and global banks regularly exercised this option to support their views, regulators rarely did. Throughout the presentation of the key findings below we include anonymous statements of the respondents to illustrate the issues. The quotations are verbatim and, in a few cases, only minimally edited for clarity, brevity and confidentiality.

Overall impacts of the reforms

Regulators

Considering each of the reforms individually, the majority of the regulators generally believe that they do not generate any spillover impacts at all - positive or negative - on the financial and real sectors in their jurisdiction (Table 3). However, three regulators identified the risk-based capital reforms as having a moderate impact, of which two deemed these impacts to be positive and one negative. Three regulators also assess the measures dealing with systemically important banks as having an impact – one deemed them to be moderately positive, one moderately negative and one regulator did not know.

Table 3 – Regulatory respondents: Any spillovers of the individual reforms

Regarding the following G20 financial regulatory reforms, do you have a reasonable indication that there are any actual or expected positive or negative cross-border spillover impacts on your jurisdiction due to the adoption of these reforms in other jurisdictions (i.e. effects on financial intermediation, financial stability, and the real economy)?

N = 7	Yes	No impact at all	Don’t know
Risk-based capital reforms	3	4	0
Leverage Ratio	1	4	2
Liquidity measures	2	5	0
Measures dealing with systemically important banks	3	4	0
OTC derivatives reforms	2	5	0
Other G20 financial regulatory reforms	0	6	1

We also asked regulators to evaluate the combined impact of the G20 reform spillovers on their jurisdictions to capture both the net sum of their individual effects and the interaction effects between reforms. In terms of these combined impacts, four regulators indicated that they are positive in the longer term, while the same number of regulators point to negative spillovers during the implementation and adjustment phase (Table 4). Only one regulatory respondent expects the reforms to have adverse effects in the longer term.

Table 4 – Regulatory respondents: Net spillovers of the combined reforms

Regarding the overall impact of all agreed G20 regulatory reforms combined, do you have reasonable indication that there are any actual or expected net positive or net negative cross-border spillover impacts on your jurisdiction due to the adoption of these reforms in other jurisdictions (i.e. effects on financial intermediation, financial stability, and the real economy)?

N = 7	During implementation and adjustment	In the longer term
Highly positive	0	1
Moderately positive	1	3
No impact at all	1	0
Moderately negative	4	1
Highly negative	0	0
Don’t know	0	1
No response	1	1

Consistent with these findings, virtually all regulators also indicated that they were not concerned about any detrimental reform spillovers on financial market development and structure, including competition, foreign bank deleveraging, equity markets, corporate and sovereign debt markets, non-bank financial institutions, the migration of credit intermediation outside the regular banking system, and digital financial services.

Banks

In contrast to the regulators, local banks are roughly split between positive and moderately negative spillover effects (Table 5). This assessment applies to the net impact on the overall development and deepening of the domestic financial sector, and to whether domestic banks will be put at a disadvantage as compared to foreign banks.

Table 5 - Local bank respondents: Net spillovers of the combined reforms

In conclusion, regarding the overall impact of reforms, what do you think is, or is expected to be, the net impact of their adoption in other jurisdictions on the overall development and deepening of the domestic financial sector?

N = 20	**Highly negative**	**Moderately negative**	**No impact at all**	**Moderately positive**	**Highly positive**
	2	6	0	11	1

A few local banks commented that the reforms will lead to better financial development and stability outcomes in their jurisdictions, for example:

> *"Better regulation and practices will contribute to a more solid and resilient financial system."*

> *"[The reforms will generally lead to] increased resilience of credit institution[s] and less contagion risk. Increased customer confidence in financial institutions which they perceive to be more regulated than before, thus safer."*

Some local bank respondents noted specifically that they may benefit from a retrenchment of foreign banks:

"Business costs will increase for foreign banks. As a result, the domestic financial sector will enjoy the comparative advantages and benefits."

"Domestically owned banks have no restrictions on sovereign limits. They also have lower regulatory costs and faster decision making."

Table 6 – Local banks: Adverse reform spillovers affecting financial sector structure and development

Please indicate the reform areas where you have a reasonable indication that their adoption in other jurisdictions has already had, or is expected to have, a significant adverse impact on the activity in and development of the domestic financial sector (you can select more than one reform area).

N = 20	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Foreign financial institutions' participation in local markets (e.g. withdrawal or deleveraging)	13	4	7	6	4	1	5	1
Overall competition in the financial sector	12	6	13	8	3	1	6	0
Shadow banking (i.e. the rise of potentially risky credit intermediation outside of the regular banking system)	5	2	5	2	1	0	8	4
Non-bank financial institutions such as insurance companies, pension funds, and mutual funds (e.g. size, stability, pricing, product offering, and efficiency of these sectors)	5	2	4	2	0	0	7	7

However, other local banks pointed out that although less competition from foreign banks might be advantageous to their businesses, this may represent an adverse impact overall. Fourteen local banks saw deleveraging by, or a withdrawal of, foreign financial institutions as an adverse spillover effect, mostly due to liquidity and risk-based capital reforms (Table 6). Local banks are not necessarily able to fill the gap foreign banks leave behind:

> *"Having different rules under which banks operate will in turn reduce the share of foreign banks in the local business creating a stronger oligopolistic structure limiting the development of the financial system, and also inducing lower health standards for the system."*

> *"Domestic banks do not have the product capability and lack [access to] foreign currency liquidity."*

Local banks tend to agree with regulators that the rise of credit intermediation outside the regular banking system or adverse impacts on the non-bank financial sector are of lesser concern (Table 6).

The seven local affiliates of global banks - five of which are part of a G-SIB or a foreign D-SIB - are roughly split between seeing no impact at all or a negative spillover impact of the risk-based capital reforms, the leverage ratio, and the liquidity measures due to their implementation at the parent level.

Specific impacts on financial services and market conditions

Regulators

Regulators generally indicate they have not observed and do not expect to observe many specific adverse spillovers. None of the regulators are concerned about detrimental impacts on mortgages and housing finance, SME credit, agricultural credit, consumer credit, or Islamic finance (Table 7). Similarly, regulators are generally sanguine about any negative impacts on domestic money, deposit or foreign exchange markets, or on payment and settlement systems. Furthermore, they are generally not concerned about domestic or international credit and funding conditions for banks, non-bank financial institutions, non-financial corporates, and the sovereign in their jurisdiction. Only one regulator is concerned about a tightening of financial conditions for important infrastructure and other long-term development needs (in terms of prices, volumes, maturities or collateral requirements) as a result of adverse spillover effects (Table 8).

Table 7 – Regulators: Adverse reform spillovers on specific financial services

Please select one or more reform areas where you have a reasonable indication that their adoption by other jurisdictions has already or is expected to result in significantly lower availability and/or higher cost to the real sector provided by the domestic financial sector of the following specific financial services.

N = 7	**Risk-based capital reforms**	**Leverage ratio**	**Liquidity measures**	**Measures dealing with systemically important banks**	**Measures dealing with OTC derivatives**	**Any other G20 reform**	**No Significant Impact of any reform**	**Don't know**
Mortgages or housing finance	0	0	0	0	0	0	7	0
SME credit	0	0	0	0	0	0	7	0
Agricultural credit	0	0	0	0	0	0	7	0
Consumer credit	0	0	0	0	0	0	7	0
Trade credit	1	0	0	0	0	0	6	0
Islamic finance	0	0	0	0	0	0	5	2
Foreign currency markets	1	0	1	0	0	0	6	0
Hedging and risk management products and services	1	0	1	0	1	0	5	0
Remittances services	0	0	0	1	0	0	5	1

Table 8 – Regulators: Adverse reform spillovers to fund longer-term development needs

Please select one or more reform areas where you have a reasonable indication that their adoption by other jurisdictions has already or is expected to have the following significant adverse cross-border spillovers in your jurisdiction on financial conditions to fund critical infrastructural and other longer-term development needs (e.g. long-term finance, syndicated lending, project bonds from private sources domestic/foreign).

N = 7	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Higher prices	1	0	0	1	0	0	5	0
Lower volumes	0	0	1	1	0	0	5	0
Shorter maturities	0	0	0	0	0	0	5	0
Higher compliance costs	1	1	1	0	1	0	3	1
Higher collateral requirements	0	0	0	0	0	0	6	0

There are however some very specific exceptions to this general picture. In Peru, the regulatory authority identifies adverse impacts arising from the G20 regulatory reforms on OTC derivatives, causing the subsidiary of a foreign bank to have to post initial margins at a central clearing counterparty in another country, and a possible increase in borrowing costs for non-financial corporates in international capital markets. In Tanzania the regulator notes the closure of correspondent banking accounts of several local banks, with an adverse impact on international payments and remittances. In Colombia the regulator observes a higher cost and reduced availability of government financing in both domestic and international markets as a result of the reforms relating to capital, liquidity and G-SIBs (in part reflecting the higher risk weights on sovereign debt applied at a consolidated level on foreign banks); and adverse impacts on other domestic and international debt and other funding markets, international hedging markets, and cross-border bank credit funding. In Morocco the regulator notes adverse impacts on trade credit, cross-border bank credit funding, foreign currency markets and hedging products and services, tighter conditions in other international funding markets, and reduced access to foreign correspondent banking services.

Banks

Global banks and the large majority of local banks identify a much wider range of adverse impacts on specific products, services, and markets and regard these impacts as being more severe than do the regulatory authorities. Banks claim that these impacts are predominantly driven by capital and liquidity measures, but also by the leverage ratio and OTC derivative reforms.

The adverse impacts cited most often by the banks are:

- ***Higher prices, lower volumes and activity, and fewer participants in the domestic provision of specific financial services and products, including for long-term investment purposes***, mainly driven by capital reforms. Local banks and global banks mostly state that risk-based capital and liquidity measures (and capital surcharges on G-SIBs) have had an adverse impact on intra-group funding (capital and liquidity) and foreign long-term funding, including an adverse impact on the cost and availability of infrastructure and other long-term investment and project financing (Tables 9 and 10). One local bank respondent remarked that:

> *"As international banks are not willing to lend money to long-term projects (i.e. infrastructure), local banks have filled that gap. In that sense, the price of loans has been higher considering the cost of funding of local entities."*

Global and local banks also observe significant adverse impacts of risk-based capital reforms and liquidity measures (and for G-SIBs the measures applied to systemically important banks) on almost all other types of domestically offered financing and other services for EMDE borrowers (in the case of global banks both through their local subsidiaries or branches and cross-border), including trade credit; syndicated lending; lending to local banks; consumer, mortgage, corporate and SME credit; and foreign currency lending. Most respondents indicated that Islamic finance is not affected or that they did not know. Banks provided a similar motivation for their answers as this local bank respondent:

> *"Availability and cost of financing could be negatively impacted by higher / more stringent capital adequacy and liquidity requirements, as assets in higher risk jurisdictions would require more capital and more liabilities, negatively affecting return on capital."*

Table 9 – Local banks: Adverse reform spillovers affecting domestic financial products and services provided by your bank

Please indicate the regulatory reforms which contributed to a significant reduction or tightening of your institution's activities in emerging markets and developing economies (EMDEs), particularly those that are jurisdictions not required to implement the reforms (you can select more than one reform area).

N = 20	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Infrastructure finance and other forms of long-term investment financing	13	6	9	5	2	1	5	1
Syndicated lending	10	8	6	4	2	1	8	1
Consumer credit	8	9	7	3	2	1	9	1
Mortgages or Housing finance	9	9	7	4	2	1	8	1
Corporate credit	16	14	9	4	3	1	3	1
SME credit	9	8	7	4	2	0	6	2
Trade credit for SMEs	6	5	5	3	2	1	8	2
Trade credit for other companies	9	7	5	4	2	2	7	1
Agricultural credit	5	4	6	2	2	0	10	3
Islamic finance	1	2	3	1	0	1	8	**9**
Foreign currency lending	13	5	12	5	3	2	2	**1**
Hedging and risk management products and services	8	3	8	5	8	1	4	1
Corresponding banking services provided by foreign banks in your jurisdiction	11	5	10	7	3	2	6	1
Remittances services provided by foreign banks in your jurisdiction	6	4	6	5	2	3	7	4

Table 10 – Global banks: Adverse reform spillovers affecting the financial products and services provided by your bank to the local market in EMDEs

Please indicate the regulatory reforms which contributed to a significant reduction or tightening of your institution's activities in emerging markets and developing economies (EMDEs), particularly those that are jurisdictions not required to implement the reforms (you can select more than one reform area).

N = 4	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Infrastructure finance and other forms of long-term investment financing	3	1	1	2	0	0	1	0
Syndicated lending	4	1	1	2	0	0	0	0
Consumer credit	3	0	0	1	0	0	1	0
Mortgages or Housing finance	3	0	0	1	0	0	1	0
Corporate credit	4	1	1	2	0	0	0	0
SME credit	4	0	1	2	0	0	0	0
Trade credit for SMEs	4	2	2	2	1	0	0	0
Trade credit for other companies	4	2	2	2	1	0	0	0
Agricultural credit	1	0	1	1	0	0	1	2
Islamic finance	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
Foreign currency lending	**4**	**0**	**1**	**2**	**1**	**0**	**0**	**0**
Hedging and risk management products and services	3	0	0	1	3	1	1	0
Correspondent banking services	0	0	0	1	0	2	1	0
Remittances services	0	0	0	0	0	2	2	0

Higher prices, lower volumes and activity, and shorter maturities in sovereign, corporate debt and wholesale money markets. A majority of the surveyed local banks identify significant adverse impacts on domestic and international market conditions from liquidity measures and (to a lesser extent) from risk-based capital reforms (Tables 11 and 12). Liquidity measures have had an adverse impact on domestic money markets and domestic and international wholesale funding markets, and on corporate debt markets to a lesser extent. Risk-based capital measures have primarily had an impact on corporate debt markets, and on wholesale funding markets to a lesser extent. One specific identified driver here is that foreign banks may be discouraged from holding EMDE assets (including sovereign and central bank exposures) because these are treated less favorably by regulators (i.e. higher risk weightings and a less favorable treatment as high-quality assets in the Liquidity Coverage Ratio) at a group consolidated level than under local regulations in EMDEs. This may discourage foreign banks from trading and market making in sovereign and/or corporate bonds issued by local borrowers, in both domestic and international markets. Global banks concur with local banks -- at least three respondents pointed to adverse spillovers on sovereign debt, foreign currency, and wholesale funding markets, mostly as a result of risk-based capital reforms and liquidity measures (Table 13). Overall, local and global banks do not appear much concerned about adverse spillovers to host equity markets.

Table 11 – Local banks: Adverse reform spillovers affecting domestic financial market conditions

Please indicate the reform areas where you have a reasonable indication that their adoption in other jurisdictions has already had, or is expected to have, a significant adverse impact on the activity in and development of the domestic financial sector (you can select more than one reform area).

N = 20	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Money markets	5	5	14	3	5	1	5	1
Foreign currency markets	8	5	7	2	7	1	4	3
Retail funding markets	7	6	9	2	0	1	8	1
Wholesale funding markets	10	6	14	4	2	1	3	1
Corporate debt markets (e.g. pricing, depth, issuance, and liquidity) (e.g. due to reluctance of foreign banks to underwrite new local issuance)	13	8	12	4	2	1	6	0
Sovereign debt markets (e.g. pricing, depth, issuance, and liquidity) (e.g. due to reluctance of foreign banks to hold local bonds)	8	6	8	4	2	1	8	2
Equity markets (e.g. depth, issuance, and liquidity)	6	5	7	3	1	1	6	4

Table 12 – Local banks: Adverse reform spillovers affecting international market conditions for domestic financial sector

Please indicate the regulatory reforms which contributed to a significant reduction or tightening of your institution's activities in emerging markets and developing economies (EMDEs), particularly those that are jurisdictions not required to implement the reforms (you can select more than one reform area).

N = 20	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Foreign term funding specifically for long-term investment purposes (e.g. infrastructure and project finance)	13	7	11	5	2	1	3	1
Intra-group liquidity management	5	4	12	4	2	1	5	2
Intra-group capital management	13	4	5	5	2	1	5	1
Cross-border bank credit funding	13	5	8	6	2	0	4	2
Other funding activities in international markets	12	6	9	7	3	1	2	4
Trading and market making in international markets of sovereign and/or corporate bonds issues by your jurisdiction	11	5	8	5	3	1	4	4
International hedging markets	8	7	8	6	7	1	3	3
Correspondent banking services directly with large international banks overseas	11	8	11	5	4	2	5	1
Remittances services directly with large international banks overseas	7	4	9	4	3	3	7	3
Access to cross-border re-insurance	4	3	4	4	1	1	4	11

Table 13 – Global banks: Adverse reform spillovers affecting participation of branches and subsidiaries in local markets of EMDEs

Please indicate the regulatory reforms which contributed to a significant reduction or tightening of your institution's activities in emerging markets and developing economies (EMDEs), particularly those that are jurisdictions not required to implement the reforms (you can select more than one reform area).

N = 4	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
Sovereign debt markets	2	1	1	1	0	1	1	0
Corporate debt markets	2	0	0	0	0	1	2	0
Equity markets	1	0	0	0	0	0	3	0
Money markets	1	0	0	0	0	0	2	1
Foreign currency markets	1	0	1	0	2	1	1	0
Retail funding markets	1	0	1	0	0	0	2	0
Wholesale funding markets	3	1	2	0	0	0	1	0

- ***Tighter conditions for hedging instruments.*** Some respondents suggest that measures relating to OTC derivatives - including requirements for higher capital on non-centrally cleared derivatives, posting additional margins for OTC derivatives and additional clearing fees to process transactions - have made derivative transactions significantly more expensive. A majority of global and local banks indicated in particular both OTC derivative reforms as well as risk-based capital reforms as having adverse implications for hedging and risk management products and services (Tables 9 and 10).[17] Two regulators also echo the concerns of banks regarding adverse spillovers to hedging markets (Table 7). One global bank respondent mentioned that:

> *"There is an increasing segmentation between on-shore and off-shore OTC markets in some jurisdictions."*

The availability of risk-sharing and risk-transfer instruments and mechanisms can be particularly important for infrastructure and project finance. Considering these responses, it is important to understand better the interactions between the different reforms such as on OTC derivatives and risk-based capital, and the extent to which they may impede funding for longer-term financing needs critical for economic development.

[17] According to a recent FSB report, there is only limited evidence on the impact of the OTC derivative markets reforms on the ability or readiness of end users to hedge their financial risks and that the different legal regimes will likely have an effect on such impact (FSB, June 2017).

- ***The withdrawal from, or reduced activity in, EMDE markets by some foreign banks.*** The G20 reforms relating to risk-based capital, liquidity and G-SIB regulatory reforms (capital surcharges, enhanced supervision and recovery and resolution planning), together in some cases with greater 'localization' measures by local regulators, have been a factor in foreign banks reviewing the extent of their participation in local markets, with a subsequent impact on the overall level of competition in the local financial sector. As one global bank respondent put it:

  > *"Ring-fencing strongly amplifies the [adverse spillover] effects because it puts stringent extra conditions on foreign financial institutions giving them the incentive to scale down their local participation or even withdraw from any given country."*

  The global bank respondents identify that they have pulled back to some extent from the provision of finance to EMDEs (through local subsidiaries and branches, and/or cross-border) because of the higher costs of complying with capital, liquidity and G-SIB regulations at a consolidated group level, irrespective of whether the host country has implemented international standards (with a particularly strong effect where a host country borrower is unrated). As discussed, local bank respondents hold an overwhelmingly similar view that foreign banks will diminish their host activities (14 out of 20, with risk-based capital reforms mentioned most often (Table 6)). Regarding adverse impacts on direct cross-border activities, one global bank commented that:

  > *"Direct cross-border activities have become more expensive to the group because we have to comply with regulation at the consolidated level, regardless of whether the country of the subsidiary adopted international standards."*

  Some global bank respondents also mention the impact of the revised treatment in Basel III of a bank's minority interest in subsidiaries, and the impact of the activation of counter-cyclical capital buffers in some jurisdictions.

Table 14 – Global banks: Adverse reform spillovers affecting cross-border lending directly to local entities in EMDEs

Please indicate the regulatory reforms which contributed to a significant reduction or tightening of your institution's activities in emerging markets and developing economies (EMDEs), particularly those that are jurisdictions not required to implement the reforms (you can select more than one reform area).

N = 4	Risk-based capital reforms	Leverage ratio	Liquidity measures	Measures dealing with systemically important banks	Measures dealing with OTC derivatives	Any other G20 financial reform	No Significant Impact of any reform	Don't know
For local long-term investment purposes	3	1	2	2	0	0	1	0
To local banks	3	1	2	2	0	0	1	0
To local non-financial corporates	4	1	2	2	0	0	0	0
To the local sovereign	2	1	2	1	0	0	2	0

Other G20 reforms have had an adverse impact on correspondent banking and remittances services provided by foreign banks in the local jurisdiction and by large international banks overseas. Enhanced know-your-customer, anti-money laundering and counter-terrorist financing requirements were all mentioned by many local banks and global banks as contributing to the adverse impact on correspondent banking and remittance services.

Home-host coordination and supervisory capacity

Regulators all agree that their past and continuing efforts to upgrade their regulatory frameworks have facilitated coordination with home regulators as well as their effectiveness to supervise foreign banks. Yet, they are roughly split on whether current home-host arrangements are sufficient to deal with any adverse reform spillovers and some indicate a higher overall supervisory burden.

Although most regulators agree that home supervisors understand the spillover impacts on their financial systems, lead the effort to enhance coordination, and ensure the host is involved in supervisory colleges, they also indicate room for improvement in various areas (Table 15). For example, most regulators complain about weak communication by home supervisors of their reform implementation plans, and weak coordination in the areas of crisis management (i.e. the involvement of host authorities in Crisis Management Groups and information sharing on how a G-SIB or foreign D-SIB might be resolved across jurisdictions). One global bank respondent remarked that:

> *"Inadequate supervisory cooperation between home and host regulators [in some jurisdictions] is leading to fragmented oversight approaches of G-SIBs and D-SIBs."*

Finally, not a single regulator believes that they do not have the ability to mitigate risks and adverse impacts, pointing to their robust legal and supervisory frameworks, although three expressed some doubt about the sufficiency of supervisory resources. As a result, only two regulators indicated they are taking any specific measures to deal with the spillovers.

Role of the international community

Notwithstanding their generally optimistic view on the reforms, all regulators stated that the international community should enhance its support to deal with potential reform spillovers (Table 15). They call for an enhancement of the role of the international community in the monitoring, analysis, and impact evaluation of cross-border spillover effects; greater international awareness of potential cross-border spillover effects on EMDEs; and for standard setting bodies to give greater consideration to the EMDE perspective when formulating and calibrating reforms. A global bank respondent mentioned that:

> *"It is important that the needs of financial systems in emerging markets are taken into account in regulation."*

Similarly, a local bank respondent remarked:

> *"As market development varies among developing countries, the regulations must not be asymmetric and must allow for customization in the domestic markets."*

Regulators also request greater assistance from the international community in enhancing the available suite of financial services (for example, lending, investments, grants and risk mitigation instruments) and improving technical assistance, capacity building and the exchange of experiences (Table 16).

Table 15 – Regulators: Home-host arrangements and adverse reform spillovers

Home-host coordination is sufficient regarding the implementation of the reforms in home jurisdictions which may induce adverse cross-border spillovers in your jurisdiction (i.e. financial intermediation, financial stability, and the real economy). In particular, do you agree with the following statements?

N = 7	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know	No response
Home supervisors understand and recognize the cross-border impacts on the financial system in your jurisdiction	0	4	1	0	1	1
Home supervisors communicate their reform implementation plans on a timely basis	0	2	4	0	0	1
Home supervisors lead the effort to enhance coordination and respond to legitimate information requests	0	5	1	0	0	1
Home supervisors help avoid redundant and uncoordinated approval and validation work	0	1	3	0	2	1
Home supervisors ensure your jurisdiction is adequately involved in supervisory colleges of foreign banks which have a systemic presence in your jurisdiction	2	2	2	0	0	1
Home supervisors ensure your jurisdiction is adequately involved in crisis management activities related to foreign banks which have a systemic presence in your jurisdiction (e.g. part of Crisis Management Group, involved in recovery and resolution plans)	0	1	5	0	0	1
The outcomes of having multiple home supervisors that are implementing reforms are consistent and synchronized – as such they do not distort the market and the supervisory process in your jurisdiction	0	3	2	0	1	1
Home supervisors have informed your jurisdictions of which liabilities of their G-SIBs/foreign D-SIBs they consider bail-in able in your jurisdiction	0	0	4	2	0	1
Home supervisors have proposed a Memorandum of Understanding (MoU) on exchange of information during crisis times	1	1	2	2	0	1
Home supervisors have proposed a MoU for the resolution of their G-SIBs/foreign D-SIBs in your jurisdiction.	0	1	3	2	0	1

Table 16 – Regulators: Role of the international community and adverse reform spillovers

What can the international community do going forward to ensure reform cross-border spillovers are adequately taken into account and can be dealt with effectively in terms of Analysis and Awareness?

N = 7	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know	No response
Strengthen monitoring, analysis, and impact evaluation of cross-border spillover effects	3	4	0	0	0	0
Raise more international awareness of potential cross-border spillover effects	3	4	0	0	0	
Raise more awareness at standard setting bodies of the need to differentiate and recalibrate agreed G20 regulatory reforms for activities of particular importance in emerging markets and developing economies	3	3	0	0	1	0
Better communicate regarding the ways the international community can help to monitor and mitigate cross-border spillover impacts (e.g. services, products, policy dialogue)	2	5	0	0	0	0
Encourage the dialogue between your jurisdiction, home jurisdictions, and/or standard setting bodies	4	2	0	0	0	1

What can the international community do going forward to ensure reform cross-border spillovers are adequately taken into account and can be dealt with effectively in terms of Assistance?

N = 7	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Enhance the available suite of financial services (e.g. lending, investments, grants, risk mitigation instruments)	1	5	0	0	1
Improve technical assistance, capacity building, and exchange of experiences	4	3	0	0	0

Overarching theme: The need for regulatory consistency

An important overarching theme that emerged from the feedback of both local and global banks that motivated many of their responses is the need for regulatory consistency within and between jurisdictions. As two local banks put it:

> *"Banking businesses require cross-border regulatory coherence to ensure stability. For example, disparities in capital, liquidity and OTC derivatives regulations can have repercussions beyond borders."*

> *"Differences in the standards of capital and liquidity measures between local and foreign banks give rise to a less competitive market, and in part greater risks for the domestic financial system."*

All but two regulators claim that they are already operating or moving towards a Basel II/II.5/III regulatory regime. Regulators unanimously agree that this facilitates the activities and supervision of foreign banks in their jurisdiction, including home-host supervisory coordination. However, while some banks - both local and global - acknowledge that the jurisdictions in which they operate are narrowing the gap between the local regulatory framework and Basel II/II.5/III, important differences persist. Both local and global banks point out that different standards for local and global banks within a jurisdiction as well as an inconsistent domestic implementation of reforms contribute to an unlevel playing field that may reduce competition, raise prices, reduce volumes, induce market segmentation, and even create stability risks. For example, global banks noted that their local affiliates do not necessarily receive similar supervisory treatment compared to domestic banks in host jurisdictions:

> *"Regulations are not homogenous in all jurisdictions. Subsidiaries of international banks are subject to regulations that local competitors do not have to comply with (i.e. clearing)."*

> *"The lack of supervisory equivalence is affecting us in countries like […], with a penalty on the risk weight of the local sovereign exposure, due to [home] regulation."*

"[A smaller gap between the local regulatory framework and Basel III] will create a more level playing field with domestic banks."

One global bank respondent further highlighted that inconsistencies between the reforms themselves exacerbate an unlevel playing field with local banks:

"There has been a large set of regulatory reforms. Some of them are not fully coherent, overlaps occur. A holistic review of the regulatory landscape is needed. There is an impact on the competitiveness of global bank subsidiaries versus local banks."

Global banks also indicate that navigating this complex landscape between jurisdictions from the group's perspective is challenging. One respondent highlighted that:

"The complexity of ensuring compliance with the G20 reforms as implemented globally, regionally and nationally for an internationally-active bank cannot be understated. Whilst we appreciate the need for many of the reforms and are generally supportive of them, the inconsistencies in their national implementation create tensions within a banking group, e.g. in the allocation of regulatory capital."

According to the G-SIBs among the global banks respondents, the capital surcharges and resolution requirements applied to G-SIBs contribute to adverse impacts on specific financial conditions and services. G-SIB respondents remarked that:

"Local funding is positive, but issuance of capital instruments by our local subsidiaries are not recognized at the consolidated level, unless they comply with [home] legislation. Local investors would not buy that debt."

"TLAC for international banks is detrimental to the level playing field with domestic banks."

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Appendix 1. Core Components of the G20 Financial Regulatory Reform Agenda[18]

Reform measure	Main features
Risk-based capital reforms	The implementation of major risk-based capital reforms comprising stricter definition of capital, broader risk coverage (e.g. securitizations, counterparty risk, market risk), and the introduction of countercyclical and conservation buffers has gathered momentum as the final capital rules are in force in many countries. For the purpose of the survey, the capital reforms in which to focus the responses are: • Basel 2.5 capital framework, which is the international capital standard created in 2009 improving specially the measurement of market risk of Basel II. • Basel III capital framework, which is the international capital standard created in 2010 that includes modifications to previous capital definitions, explicit capital buffer standards and revisions to counterparty credit capital standards. Many countries have started the process of phasing in the countercyclical and conservation buffers beginning from January 2016 to end-December 2018. *Reference:* *Basel III: A global regulatory framework for more resilient banks and banking systems (BCBS, June 2011 and updates)* *Ninth progress report on adoption of the Basel regulatory framework (BCBS, Oct 2015)* http://www.bis.org/bcbs/publ/d338.pdf
Leverage ratio	The leverage ratio (LR) is non-risk-weighted measure of banks' tier 1 capital to total on- and off-balance sheet exposures introduced as part of Basel III framework to reduce excessive leverage in the financial system in the aftermath of the global financial crisis. Many jurisdictions started monitoring their banks 'compliance with an initial minimum LR of 3 per cent from 1 January 2014. Beginning 1 January 2015, banks also started disseminating publicly their consolidated LR. *Reference:* *Basel III leverage ratio framework and disclosure requirements (BCBS, Jan 2014)* *Ninth progress report on adoption of the Basel regulatory framework (BCBS, Oct 2015)* *http://www.bis.org/bcbs/publ/d338.pdf*
Liquidity measures	The liquidity coverage ratio (LCR) and Net Stable Funding Ratio (NSFR) formed an essential part of key reforms introduced in Basel III framework to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector. The LCR promotes the short-term resilience of banks' liquidity risk profile while the NSFR requires banks to maintain a stable funding profile in relation to on- and off-balance sheet exposures. The implementation of liquidity measures has reached significant milestones, as a growing number of banks are already meeting or exceeding the fully phased-in minimum requirement for LCR in many jurisdictions where the final rules are active. The NFSR will become effective in 2018. *Reference:*

[18] For

	Basel III: The LCR and liquidity risk monitoring tools (BCBS, Jan 2013) *Basel III: Net Stable Funding Ratio (BCBS, Oct 2014)* *Ninth progress report on adoption of the Basel regulatory framework (BCBS, Oct 2015)*
Systemically important institutions & resolution reforms	The TBTF reform agenda consists of three elements: (1) additional resolution requirements for G-SIFIs; (2) higher loss absorbency capacity for these institutions; and (3) more intensive supervision. To address the specific cross-border stability challenges posed by too-big to fail banks, the frameworks on the assessment methodology for Global and Domestic Systemically Important Banks (G-SIBs and D-SIBs) were created in 2011 and 2012. While the G-SIB framework is intended to limit negative externalities on the global financial system, the D-SIB framework is best understood as taking a complementary perspective on the impact that the distress or failure of banks (including international banks) will have on the domestic economy. The FSB publishes every year a list with the entities identified as G-SIBs and these institutions are subject to additional requirements regarding loss absorbency, supervisory intensity, effective resolution, and financial market infrastructure. Currently all G-SIBS have plans and crisis management groups (CMGs) in place. D-SIBs are identified by each of the national authorities following the FSB framework. In this case, it is just a minimum framework consistent with the G-SIB framework and it can be enhanced at discretion of the authority by adding details and tailoring to needs. *Reference:* *G-SIB: updated assessment methodology and the higher loss absorbency requirement (BCBS, Jul 2013)* *A framework for dealing with domestic systemically important banks (BCBS, Oct 2012)* *The Key Attributes of Effective Resolution Regimes for Financial Institutions (FSB, Oct 2011, 2014 update)* *Removing Remaining Obstacles to Resolvability: Report to the G20 on progress in resolution (FSB Nov 2015)*
OTC derivatives	To improve transparency, mitigate systemic risk, and protect against market abuse, the reforms of over-the-counter derivatives markets focus on measures such as trade reporting, central clearing of standardized contracts, and more stringent capital and margining requirements for non-centrally cleared derivatives. *Reference:* *Implementing OTC Derivatives Market Reforms (FSB, Oct 2010)* *Ninth Progress Report on Implementation of OTC Derivatives Market Reforms (FSB, Jul 2015)*
Other G20 reforms	For an overview of these reforms, please see, for example, annex 3 of the FSB report *Implementation and effects of the G20 financial regulatory reforms: Report of the Financial Stability Board to G20 Leaders* (Nov 2015).

Appendix 2. Country Profiles

Bangladesh

Both the regulator and the local banks agree that the G20 reforms have positive impacts on the economy. However, they have contrasting views on the impacts on the real sector.

Key takeaways: The Bangladesh Bank (BB) indicates that the implementation of G20 reforms is going to have moderately positive impacts during the implementation and adjustment phase and highly positive impacts in the long term. Local banks also concur with the BB indicating that the adoption of the G20 reforms is going to have a moderately positive net impact on the domestic financial sector. While the BB does not see any adverse significant impacts of reforms on the domestic banking sector, the banks are more pessimistic. For instance, most banks indicate that the adoption of risk-based capital reforms may have significant adverse impacts on infrastructure financing and corporate credit, while the adoption of liquidity measures may have significant adverse impacts on intragroup financing. According to the banks, the reforms may have contributed to the slowdown in credit growth in Bangladesh, although the main causes of the deceleration remain the slowdown in exports and demand for credit. In contrast, the BB indicates that credit conditions for the private sector and real economy are not affected by recent financial regulatory reforms in G20 countries, but acknowledges that risk-based capital reforms, the leverage ratio and liquidity measures may increase compliance costs to meet the reform requirements for long-term development finance. Most banks also indicate that the adoption of G20 reforms may have affected the recovery of stock markets following the 2010/12 crash, and that the reforms may have adversely impacted the funding conditions in international capital markets. Finally, the BB indicates that home-host communication needs improvement, particularly in the areas of crisis management and bank resolution.

Financial system features: Bangladesh's financial system is relatively large, with assets equivalent to 180 percent of GDP. About two-thirds of financial system assets are owned by local banks while foreign banks have only a small presence (with assets representing less that 5 percent of the total assets of the sector). The rest of the financial system comprises private pension funds, insurance companies, mutual funds and trust companies. Bangladesh has implemented several aspects of Basel III, including the definition of capital, capital conservation buffer, the leverage ratio and liquidity standard measures, and is ahead of other countries in South Asia. However, it has yet to implement the countercyclical buffers and capital surcharges for D-SIBs. Domestic capital markets remain relatively shallow.

Colombia

Both regulators and local banks agree that aspects of the G20 reforms have negative impacts on the economy. Colombia has adopted some features of Basel III, which may have amplified the effects of the reforms.

Key takeaways: The Colombian Superintendence (CO) indicates that the spillover impacts of the reforms will be moderately negative both during the implementation phase and in the long run – a view shared by the banks. All banks agreed that the adoption of G20 reforms, in particular risk-based capital reforms and the leverage ratio, have adverse impacts on infrastructure financing, mortgage or housing financing and corporate and SME credit. According to the banks, the reforms may have contributed to the slowdown in credit growth. In contrast, the CO does not expect any adverse impacts on credit growth but acknowledges that measures dealing with systemically important banks, risk-based capital reforms, and liquidity measures may affect long-term investment finance. However, both the CO and most banks have also observed a reduction in the availability of cross-border funding of banks in the domestic and internal capital markets. In addition, most banks report adverse impacts in their correspondence banking business**.** Most banks also observe significant adverse impacts on corporate, sovereign, and equity debt markets. However, the CO expects that the OTC derivative reforms will have a positive impact on Colombia, despite the need for banks in Colombia to hold capital for non-centrally cleared derivatives. Finally, the CO finds that home-host coordination is appropriate.

Financial system features: Colombia's financial system is relatively large with total assets equivalent to 162 percent of GDP. The financial system is dominated by complex local financial conglomerates and banking groups, which hold around three-quarters of the banking sector's assets. The remaining assets are owned by foreign banks. Colombian banking groups have expanded their operations in 21 countries in the region with assets representing 29 percent of total home financial system assets. The rest of the financial system comprises private pension funds, insurance companies, trust companies, and brokers. Since the 1990 financial crisis, Colombia has tightened its financial regulation and recently implemented several aspects of Basel III. The Colombian authorities have implemented their own version of countercyclical buffers and macroprudential policy measures are in place.

Kenya

Regulators do not expect any impacts from the G20 reforms.

Survey results summary. The Central Bank of Kenya (CBK) does not expect any significant adverse impact due to the implementation of G20 regulatory reforms in other jurisdictions on its own financial system. The CBK expects a moderately positive impact from the adoption of G20 reforms. Finally, the CBK also indicates that home-host communication could be improved, particularly in the areas of crisis management and bank resolution.

Financial system features: The banking system in Kenya is dominated mainly by private and public domestic banks with a share of total assets of about 65 percent. Kenyan banks have expanded in East Africa where they have built significant operations in Uganda, Tanzania, Rwanda, Burundi and South Sudan. Foreign banks also have a significant presence in Kenya. The current total assets of banks represent 56 percent of the total assets of the financial system, or the equivalent of 57 percent of GDP. The rest of the financial system comprises private pension funds (13 percent of GDP), insurance companies (8 percent) and mutual funds. The debt market consists mainly of public sector bonds and is relatively small. Kenyan banks remain on Basel I, although some aspects of Basel II and III have been incorporated.

Morocco

Both regulators and local banks expect positive impacts of the reform and agree that there will be limited impacts on the real sector.

Key takeaways: The Bank Al-Maghrib (BAM) indicates that the implementation of G20 reforms is going to have moderately negative impacts during the implementation and adjustment phase, and a moderately positive impact in the long term. Commercial banks also concur with the BAM, citing that the G20 reforms have a net positive effect on the financial sector. Both BAM and the banks see limited impacts due to the adoption of risk-based capital and liquidity measures on the banking sector. However, they observe adverse impacts on correspondent banking business and the availability of cross-border funding specifically for long-term investment purposes. Despite slow credit growth, most banks do not expect significant adverse impacts of the financial regulatory reforms on credit in domestic markets. BAM also does not expect major constraints on credit availability due to the implementation of reforms with a few exceptions: risk-based capital reforms and liquidity measures may result in lower availability and/or higher costs of hedging and risk management products and services and trade finance. Most banks do not observe any significant impact on equity markets. Finally, the BAM also indicates that home-host communication needs improvement, particularly in the areas of crisis management and bank resolution.

Financial system features: Morocco's financial system is relatively large with total assets equivalent to 175 percent of GDP. About two-thirds of financial system assets belong to banks, while the rest of the financial system includes pension funds (14 percent), mutual funds (16 percent), and insurance firms (5 percent). The banking sector is dominated by domestic banks, but seven foreign banks, mainly from France, hold 17 percent of total bank assets. The three largest Moroccan banks have built up significant presences in Africa, mainly through acquisitions, and African assets represent currently 20 percent of their total assets. BAM prescribes higher minimum capital requirements than Basel III, tighter single exposure limits, and 100 percent risk-weights on exposures denominated in local currency. Compared to other countries in the region, it has made good progress in implementing Basel III. Issuance of debt securities by private and public entities has been increasing throughout the last years.

Peru

The regulator and the banks have different opinions on the long-term impacts of the reforms but both agree that the reforms will adversely impact capital markets.

Key takeaways: Peru's Superintendence of Banking, Insurance and Pension Funds (SBIPF) indicates that the implementation of the G20 reforms would have moderately negative impacts on its economy during the implementation and adjustment phase, but a positive impact in the long term. Overall the SBIF does not see any major adverse impact from the implementation of G20 regulatory reforms, mainly because Peru significantly tightened its regulatory practice in the late 1990s after a severe financial crisis in Latin America. However, the SBIPF is concerned that the adoption of risk-based capital measures could have adverse impacts on the development of the non-financial corporate sector and that the risk-based capital reforms and measures dealing with systemically important banks will raise the cost of cross-border funding of banks in international capital markets. In addition, the SBIPF expects that the implementation of measures dealing with OTC derivatives will increase the costs of hedging in the capital market. Finally, the SBIPF states that there is a significant need for further cross-border coordination and information sharing, and that capacity building needs to be strengthened on bank resolution, recovery and crisis management.

Financial system features: Peru's financial system is relatively small with total assets equivalent to 69 percent of GDP. Total assets of the banking sector represent 54 percent of GDP. About half of the banking system is owned by foreign entities of which two are designated as D-SIBs by their home supervisors. The remaining assets are held by only five private domestic banks. The rest of the financial system comprises private pension funds (21 percent of GDP), insurance companies (6 percent of GDP) and mutual funds (3 percent of GDP). Peru has implemented some aspects of Basel III, namely LCR liquidity standards, countercyclical and conservation buffers and capital surcharges for D-SIBs, but it has yet to upgrade capital definition. Capital markets are shallow and illiquid. The most underdeveloped parts of the markets are equity and derivatives markets. Equity market capitalization is relatively low.

Romania

The regulators expect positive impacts of the reforms. However, the two local bank respondents are undecided. Despite the significant presence of foreign banks, both regulators and local banks observe limited impacts of the reforms on the financial system.

Key takeaways: Although total assets in the Romanian banking system are majority owned by foreign banks, the National Bank of Romania (NBR) expects a moderately positive impact in the long-term from all reforms implemented in other jurisdictions. However, the two surveyed commercial banks have opposing views on the net effects of the reforms, with one bank indicating moderately negative and the other reporting moderately positive effects.[19] Both the NBR and the two surveyed banks also do not see any significant impact of G20 reforms on the broader financial systems.

Financial system features: Romania has one of the lowest levels of financial intermediation in the European Union. Romania's financial system is relatively small with total assets equivalent to 74 percent of GDP. About 80 percent of assets of the financial system belong to commercial banks, while the remaining assets of the financial system are held by private pension funds, insurance companies, mutual funds, and trust companies. Romania has a low and declining banking sector penetration, with bank assets at 52 percent of GDP in 2016, down from 66 percent in 2009. The banking sector in Romania is predominantly owned by foreign banks (91 percent of total bank assets, including foreign branches).[20] One contributing factor to the declining banking assets is that subsidiaries and branches of foreign banks, which hold most total assets in the system, have reduced their reliance on parent banking funding since the 2008/09 crisis. The state-owned banks hold most of the remaining bank assets (about 8 percent). As a member of the European Union, Romania is currently implementing Basel III. The NBR has also recently introduced capital conservation and countercyclical capital buffers (although the latter is not yet operational), and capital surcharges for D-SIBs.

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[19] It should be noted that the two surveyed banks are large foreign-owned banks, and the survey did not include a domestically owned bank.

[20] However, this includes Banca Transilvania (with a 13.1 percent market share), which is publicly listed and does not belong to a foreign-owned banking group even though it is domestically managed.

Tanzania

Both the regulator and local banks expect positive reform impacts. Banks raise more concerns about adverse impacts than the regulators. Both are concerned about the impact on remittances and correspondence banking.

Key takeaways: The Bank of Tanzania (BOT) expects that the spillover impacts of the reforms will be moderately negative during the implementation and adjustment phases, but in the long-term the impact will be moderately positive. Most commercial banks also concurred with the BOT as they indicate that the reforms are going to have moderately to very positive impacts. Both the BOT and commercial banks agree that the implementation of G20 reforms has adversely impacted the remittance business as well as domestic money and foreign exchange markets, but they have different views on the impacts on lending conditions. The BOT does not observe significant adverse impacts on domestic lending conditions. Nevertheless, most banks indicate that the risk-based capital reforms, the leverage ratio, and liquidity measures have adverse impacts on infrastructure lending, syndicated lending, consumer credit, mortgage or housing finance, corporate credit, and trade finance. Further, BOT does not expect any significant adverse impacts of the G20 financial reforms on financial markets in Tanzania. Banks however are more pessimistic and expect lower volumes and fewer participants on equity markets, and higher prices, lower volumes, and shorter maturities on corporate debt markets.

Financial system features: The financial system in Tanzania is relatively small (around 45 percent of GDP). Banks holds approximately 70 percent of total assets of the financial system while the rest of the financial system mainly comprises pension funds (26 percent of GDP), but also insurance companies, mutual funds, and trust companies. Foreign banks have a significant presence.[21] As of end 2016, they hold approximately 44 percent of the total assets of the banking system, while the remaining assets are held by the local public and private banks. Out of the 30 foreign banks operating in Tanzania, three are subsidiaries of G-SIBs with combined assets of 10 percent. Banking activities are also largely concentrated with the three

[21] Note that the government owns a significant share of some of these banks.

largest banks accounting for 43 percent of total assets. Like most countries in the region, the BOT has yet to adopt the Basel III framework. The standardized approach of Basel II for market risks and the modified basic indicator approach for operational risks have been implemented in 2009 and 2017, respectively. As of end 2016, the minimum capital adequacy ratios remained at 10 percent and 12 percent respectively for core and total capital. A capital conservation buffer introduced in 2014 became effective in August 2017.