FINANCIAL STABILITY BOARD

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Financial regulatory factors affecting the availability of long-term investment finance

Report to G20 Finance Ministers and Central Bank Governors

Executive Summary

The most important contribution of financial regulatory reforms to LT investment finance is to promote a safer, sounder and therefore more resilient financial system. If implemented in timely and consistent manner, these reforms will help rebuild confidence in the global financial system, which will enhance its ability to intermediate financial flows through the cycle and for different investment horizons. For this reason, the G20 regulatory reform programme is supportive of LT investment and economic growth.

FSB members have identified a number of regulatory reforms that may affect LT finance. These include Basel III, over-the-counter (OTC) derivatives market reforms, and the regulatory and accounting framework for different types of institutional investors. Many of these reforms are still in the process of policy development or at an early stage of implementation. The regulatory community is vigilant to avoid material unintended consequences and to analyse potential impacts prior to finalisation of the reforms.

The reforms do not specifically target LT finance. For example, Basel III neither introduces higher risk weights nor requires matched funding on bank exposures with maturities of over one year. However, the reforms do alter the incentives of different types of financial institutions to participate in this market as well as the costs of different types of transactions. As the balance of incentives changes, institutional investors – which are the most natural providers of LT finance in the financial system – will need to assume a greater role in this market. Anecdotal evidence suggests that this process is underway, but it can take time and is not uniform across different financial market segments or regions. An important issue going forward is whether the regulatory framework enables non-bank providers of LT finance, particularly institutional investors, to step up their involvement in this market.

The FSB can contribute to future G20 work on LT investment finance by:

- Monitoring the effect of financial reforms on an on-going basis to identify any factors that may disproportionally impact the provision of LT finance so that they can be addressed;
- Working with relevant parties to identify regulatory factors that may impede the effectiveness and efficiency of financial markets and non-bank institutions in the provision of LT finance, without compromising financial stability objectives; and
- Working with other relevant international organisations to promote the development of domestic contractual savings and the capacity of financial systems to intermediate them, particularly in emerging market and developing economies (EMDEs).

1. Introduction

At the meeting of the G20 Ministers and Governors in November 2012, the FSB was asked to undertake diagnostic work, together with other relevant international organisations (IOs), to assess factors affecting long-term (LT) investment financing in order to provide a sound basis for any future G20 work in this area. In the division of labour amongst the IOs, the FSB is focusing on financial regulatory factors affecting the availability, cost, time horizon and other terms of LT finance; other IOs are covering different dimensions of this topic.[1]

For the purpose of this note and to be consistent with the definition used by other IOs involved in this project, LT finance is defined as maturities of financing in excess of five years, including sources of financing that have no specific maturity (e.g. equities). LT investment finance is commonly defined as resources that support LT investment in the productive capacity of an economy. This includes: (i) public and private infrastructure; (ii) equipment and software; (iii) education and research and development (R&D); (iv) new housing and real estate development; and (v) construction of oil, gas and energy facilities. These investments tend to be less liquid, have maturities that extend beyond the business cycle, and are more exposed to changes in credit quality and inflation expectations rather than short-term market volatility.

The G20 request is motivated by concerns about inadequate resources being channelled to growth-enhancing LT financing projects in the post-crisis environment. The drivers of these concerns include the strains on government budgets and the weakened banking system, which make both sectors less able to support LT investment finance at a time when, in the face of weak global demand, LT investment is likely to be more critical for sustaining long term growth. Some of the stylized facts cited in support of these concerns are the reduced fiscal space available to support investment projects; the reduction in the amount and tenor of corporate lending by some (mostly European) banks; the retreat of some banks from cross-border lending, including from certain specialized LT finance segments (e.g. aircraft, shipping and energy lending); and the existence of large corporate cash surpluses in some jurisdictions that are not being invested. However, this picture is not uniform as there have been large volumes of LT non-financial corporate debt issuance globally; the share of outstanding LT bank loans to firms and households in the euro area has not declined since 2007; and LT finance does not seem to have been affected in some regions or markets.[2]

This note is based on the input provided by FSB members (including IOs and standard-setting bodies), interviews with market participants, and the review of recent literature.

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[1] The other IOs are focusing on the following issues: the IMF is preparing a note on the role of international capital markets (including bank flows) and foreign direct investment in LT finance; the World Bank is preparing notes on the roles of local currency bond markets and official sources of non-concessional financing in LT finance, as well as on post-crisis financing developments, deleveraging, identifying non-financial factors that undermine the willingness of LT investors to finance investment projects, and identifying recent trends in the demand for LT investment finance; and the OECD is preparing notes on the roles of institutional investors, corporate finance and commercial banks in providing LT financing for growth and development as well as on structural impediments in advanced and emerging market economies to the provision of LT financing.

[2] For example, while LT syndicated bank lending to EMDEs dropped significantly in the aftermath of the financial crisis, global LT bond issuance (particularly by EMDEs) has increased sharply. Global public equity issuance in the form of initial public offerings has remained subdued in recent years, even though the relative share of funds raised by companies located in EMDEs has expanded significantly.

The financial regulatory factors that are covered include both internationally agreed reforms and other national/regional policy measures in FSB member jurisdictions. In most cases, the reforms are at a relatively early phase of implementation and their impact at this stage is overshadowed by broader post-crisis developments affecting the provision of overall finance, so the findings and conclusions in this note are tentative.

The note is structured as follows. The second section describes the role of the financial system in LT finance provision, including the way that financial regulation may influence this role. The third section focuses on those reforms identified by FSB members as potentially affecting LT finance. The final section summarises the main findings and suggests possible future areas of work to address the issues identified in the note.

2. Role of the financial system in LT finance

The financial system intermediates savings to, and facilitates the management of risks that arise in, the financing of LT investment. Funds originate from various internal and external sources (domestic and foreign households, corporations, and governments) and financial system participants (banks, institutional investors etc.) help to intermediate some of those flows to end users via a variety of instruments (loans, bonds, equities etc.) and services (origination, structuring, underwriting etc.). Investment finance can take place both by providing funds to specific projects and by providing general purpose financing. The other main role of the financial system is to provide risk management services that, by hedging specific types of risk, allow LT investments to take place.

Within the financial system, banks have generally been the primary providers of LT finance, with capital markets being another important intermediation mechanism. LT investments stem from a mix of self-financing (through current earnings and savings) and capital raised through the financial system. Banks have typically provided a substantial portion of external finance by drawing on their informational advantages, expertise in credit origination, experience in monitoring loans and investments, and (at least before the crisis) low-cost access to wholesale funding. Bond and equity financing by institutional and other investors (see below) via capital markets is another important form of financial intermediation in many countries; debt market instruments often have a longer tenor than bank loans.[3]

The ability of the financial system in a given jurisdiction to provide LT finance is influenced by a variety of structural factors. These include the model of economic development that has been adopted (state-led vs. market/private-sector led), the institutional mix of financial market participants (such as the existence of dedicated development financial institutions or other types of non-bank financial institutions), the state of development of domestic capital markets etc. Other factors – such as macroeconomic performance, property rights and the rule of law, the extent to which the jurisdiction is commodity-rich or domestic savings-poor, demographics etc. – are also important determinants of domestic and foreign investors' willingness and ability to provide LT finance in that jurisdiction.

[3] For example, according to report on "Long-term Finance and Economic Growth" by the Group of Thirty (forthcoming), commercial bank loan maturities average only 2.8 years in emerging economies compared to 4.2 years in developed economies. These tenors are shorter than investment-grade or high-yield bond maturities in both developed economies (8.0 years and 7.7 years respectively) and in emerging markets (6.0 years and 6.9 years respectively).

Conjunctural or cyclical factors have an important bearing on the demand for, and supply of, LT investment finance. In the current environment, strained fiscal positions limit government financing of LT investment, while uncertainty associated with weak global growth and the longer term macroeconomic policy outlook is discouraging corporate investment in spite of sizeable corporate cash holdings and the low interest rate environment. In the euro area, sovereign debt and currency concerns have adversely affected the capacity of the financial system to intermediate LT investment flows, particularly on a cross-border basis. Meanwhile, the on-going financial sector deleveraging process, the shrinkage of the wholesale dollar funding market, and the retreat of some major European banks from certain global financial market segments, have impacted cross-border bank lending, particularly in EMDEs.[4]

3. Financial regulatory factors affecting LT finance

The global regulatory reform programme aims to create a safer, sounder and thus more resilient financial system. If implemented in timely and consistent manner, these reforms will help rebuild confidence in the global financial system. Confidence has a large bearing on the financial system's capacity to intermediate financial flows through the cycle and for different investment horizons. For this reason, the G20 regulatory reform programme is supportive of LT investment and economic growth.

Financial regulation (and its reform) influences both the level and distribution of LT finance provided by the financial system. For example, prudential regulation seeks to ensure that the maturity mismatch and leverage risks that accumulate on bank balance sheets as part of the financial intermediation process are adequately covered by capital and liquidity buffers. The buffers increase the resiliency of these institutions and contribute to the internalisation of the risks they pose to the broader financial system (which were not properly priced or regulated prior to the crisis), but may also increase the costs of intermediation for users of their services, thereby affecting the quantity of loans demanded. Ideally, financial regulation should not distort incentives in favour of certain types of market participants or sectors, but rather seek to better align providers and users of finance in accordance with their respective investment horizons and risk-bearing capacity.

FSB members have identified a number of internationally agreed post-crisis regulatory reforms and other national or regional policy measures that may affect LT finance. These cover a broad range of topics at different stages of policy development and implementation. They include Basel III; OTC derivatives market reforms; and the regulatory and accounting framework for different types of institutional investors. Some other internationally agreed reforms – accounting rules for banks, policy measures for globally systemically important financial institutions (G-SIFIs), and policy recommendations to strengthen the oversight and regulation of the shadow banking system – have also been noted in this context even though they are still in the policy development stage.

In considering the impact of these reforms on LT finance, it is important to distinguish between transitional and permanent effects as well as the type of market or region that may be affected. In particular, the short term adjustment costs are generally easier to identify

4 See, for example, "The euro-area crisis and cross-border bank lending to emerging markets" by Avdjiev et al (BIS Quarterly Review, December 2012, http://www.bis.org/publ/qtrpdf/r_qt1212f.pdf).

but often rely on a static, partial equilibrium framework that does not take account of the dynamic general equilibrium process of market adjustment. In contrast to these potential transition costs, the long-term benefits of reforms tend to be understated because, being dependent on a counterfactual, they are more difficult to quantify. Moreover, the effects of reforms will differ across markets and regions given the different starting positions as well as the scope for substitution of financial providers and instruments. Finally, it is important to recognise that pre-crisis models and levels of financing were unsustainable and should not be the appropriate benchmark for assessing the impact of reforms on the availability and cost of LT finance.

3.1 Basel III

Basel III is a comprehensive set of policy measures designed to strengthen the regulation, supervision and risk management of the banking sector in response to the financial crisis. The main objective of the reforms is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, thus reducing the risk of spillover from the financial sector to the real economy. The key elements of Basel III are: (1) the strengthening of the regulatory capital framework by raising the quantity and quality of the capital base, enhancing risk coverage, supplementing the risk-based capital requirement with a leverage ratio backstop, and promoting the conservation of capital and reducing procyclicality via additional capital buffers; and (2) the introduction of two minimum global liquidity standards.[5]

The Basel III reform package does not specifically target long-term bank finance, although it may affect it. Basel III neither introduces higher risk weights nor requires matched funding on bank exposures with maturities of over one year. However, the combined effect of the reforms will be to increase the amount of regulatory capital for such transactions and to dampen the scale of maturity transformation risks they carry on their balance sheet (Box 1). In response to these regulatory requirements, the cost of LT bank lending may increase or its supply (and tenor) may decrease. In addition, if the bank uses OTC derivatives to hedge the risks associated with the LT exposure, then those transactions will be subject to additional capital and possibly margining requirements under Basel III (see section below). The overall effect will vary depending on a number of factors, such as the specific characteristics and location of the transaction as well as the presence of alternative funding sources in different market segments.

[5] See http://www.bis.org/bcbs/basel3.htm.

Box 1. Example of the Impact of Basel III on a LT Corporate Loan

The capital treatment of a LT corporate loan under pillar 1 of Basel II depends on a number of parameters reflecting the credit risk measurement approach used by the bank:

- standardised approach – external credit rating of borrower and use of any credit risk mitigants in the transaction (e.g. development bank or export credit agency guarantees); or
- internal ratings based (IRB) approach – bank estimates of risk parameters (i.e. PD, LGD, EAD, effective maturity) using different formulae depending on the asset class (i.e. standard corporate vs. SME vs. so-called "specialized lending"[6] etc.)

The risk weights and formulae under Basel III for this type of banking book transaction remain unchanged. However, there will be an increase in both the quality (definition) and level of minimum regulatory capital requirements, which will raise the amount of regulatory capital that a bank needs to allocate for loans. These transactions will also be subject to a leverage ratio that will supplement and act as a backstop to the risk-based capital requirements. These changes affect the required regulatory capital for all types of bank lending, including LT corporate loans.

In addition, two new minimum funding liquidity standards are introduced under Basel III:

- Liquidity Coverage Ratio (LCR) – Its objective is to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient unencumbered high quality liquid assets (HQLA) to survive an acute stress scenario of cash outflows lasting for one month. In the LCR formula, 50% of all corporate loans maturing within 30 calendar days are included in the cash inflow, i.e. banks are assumed to roll over 50% of those loans in a stress period.

- Net Stable Funding Ratio (NSFR) – Its objective is to promote resilience over a one year time horizon by creating additional incentives for a bank to fund its activities with more stable sources of funding on an on-going structural basis. In the NSFR formula, loans (excluding mortgages) with a maturity greater than 1 year are assigned a 100% required stable funding factor, implying that they require stable funding (i.e. bank equity and liabilities such as deposits and wholesale borrowing) greater than 1 year.

There is no direct effect on the LT corporate loan from the introduction of the LCR (unless the loan is close to repayment). However, the bank may be incentivized to hold other types of more liquid assets that are treated more favourably under the HQLA definition (e.g. sovereign bonds) in order to meet the LCR requirement. In the case of the NSFR, if the LT corporate loan is funded via short-term deposits or other liabilities (that are regularly rolled over), there is a maturity mismatch that will need to be covered by lengthening the term of funding and/or by reducing the maturity of the loan. However, the NSFR allows for considerable maturity transformation since a LT loan can be fully funded with bank liabilities of 1 year or greater.

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6 This includes project finance, object finance, commodities finance, income-producing real estate, and high-volatility commercial real estate.

At this stage, it is too early to assess the actual impact of Basel III on the availability of bank-provided LT investment financing; implementation of the overall package has just begun and will not be completed before end-2018. In addition, the calibration of some of the elements of Basel III – such as the NSFR and the leverage ratio – has not yet been finalised.[7] The long phase-in period, the on-going implementation monitoring and, in certain cases, the flexibility to adjust rules during the observation period are intended to address concerns about major unintended consequences from the introduction of Basel III. However, a number of studies have shown that the net long-term benefits of Basel III significantly outweigh the costs.[8] The main benefits stem from a lower probability of banking crises (and associated output losses) and from a reduction in the amplitude of fluctuations in output during non-crisis periods.

3.2 OTC derivatives market reforms

Hedging of major risks (commodity, interest rate, exchange rate and credit) through OTC derivatives contracts as well as other financial instruments can support the viability of LT investment finance. This is because the existence of these instruments allows the 'parcelling' of different types of risk to those parties that are better positioned to manage them, thereby facilitating the execution of a LT finance transactions. OTC derivatives reforms will likely affect the ability of 'sponsors' or capital providers to hedge the various components of risk associated with providing long-term loans and investments, and thus influence the supply (cost and availability) of LT finance for commercial end-users.

G20 jurisdictions have committed to a package of reforms to OTC derivatives markets in order to improve transparency, mitigate systemic risk and protect against market abuse. Under this package, all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties; OTC derivative contracts should be reported to trade repositories; and non-centrally cleared contracts should be subject to higher capital requirements.[9] To assist in meeting the central clearing objectives, the G20 has also called for the development of standards on margining for non-centrally cleared OTC derivatives.[10] To implement this package, international policy recommendations and national measures are being developed.

The timing of implementation varies across jurisdictions. In particular, some jurisdictions have already begun imposing mandatory obligations, while others are still establishing their broad regulatory frameworks.[11] Reporting to trade repositories applies to all OTC derivatives

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[7] The BCBS revised the LCR in January 2013 by incorporating an expansion in the range of assets eligible as HQLA and some refinements to the assumed inflow and outflow rates to better reflect actual experience in times of stress. In addition, the Basel Committee has agreed a revised timetable for phase-in of the standard and additional text to give effect to the Committee's intention for the stock of liquid assets to be used in times of stress. The Basel Committee will now focus on the review of the NSFR. See http://www.bis.org/press/p130106.htm.

[8] See, for example, "An assessment of the long-term economic impact of stronger capital and liquidity requirements" by the Basel Committee (August 2010, http://www.financialstabilityboard.org/publications/r_100818a.pdf), and "Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements – Final Report" by the Macroeconomic Assessment Group (December 2010, http://www.bis.org/publ/othp12.pdf).

[9] See http://www.g20.org/load/780988012.

[10] See http://www.g20.org/load/780986775.

[11] The FSB has regularly reported on jurisdictions' progress in implementing the G20 commitments. The most recent report was published in October 2012; see http://www.financialstabilityboard.org/publications/r_121031a.pdf.

transactions, while central clearing requirements apply, for the most part, to financial institutions that are active in OTC derivatives markets, with non-financial participants (at least below a certain size) generally excluded from central clearing obligations.

Certain aspects of Basel III will also directly affect banks operating in OTC derivatives markets. In particular, a new ‘credit valuation adjustment’ (CVA) capital charge has been introduced for bilateral derivatives exposures.[12] This reflects the experience of the crisis that counterparty risks arising from bilateral derivatives exposures were being undercapitalised. While this capital charge will increase the costs to banks of undertaking bilateral derivatives transactions, it is intended to ensure that potential losses are appropriately capitalised. For centrally cleared transactions, there is no CVA capital requirement. There is likely to be a much smaller counterparty credit risk charge for exposures to the default of the central counterparty (CCP) than for a bilaterally cleared transaction. Reforms to capital requirements therefore strengthen the incentive for banks to centrally clear OTC derivatives transactions, where possible.

The effects of these reforms on the provision of LT finance are difficult to quantify at this stage as some of the relevant standards are still under development. The reforms imply additional costs through new capital and margining requirements, particularly for non-centrally cleared transactions, as well as compliance costs (Box 2). These directly measurable costs need to be set against the broader reductions in costs and increased robustness of markets through the targeted improvement in market functioning. However, the reforms have not yet been finalised, so their full effect will take some time to be felt across global OTC derivatives markets. A particular example is international standards for bilateral margining requirements: once the standards are finalised later this year, there will be more information on the magnitude and scope of the requirements (including a potential threshold for the size of exposures before collateralisation applies) from which to evaluate the potential impact on LT finance.

While the largest impact of the reforms will be on the financial institutions most active in OTC derivatives markets, non-financial users are likely to be directly and indirectly affected. Finance providers who are lenders or derivatives counterparties to end-users are likely to be affected by the reforms to the extent that they use derivatives to hedge their own exposures, though the likely effect of this on the provision of LT finance is unclear. Where risks associated with providing funding or hedging can be hedged through standardised contracts that are centrally cleared, the capital and margin requirements will be lower than for bilaterally cleared transactions. In addition, greater standardisation, central clearing and use of organised trading platforms should help improve the depth, liquidity and price efficiency of OTC derivatives markets.[13] But for portions of the market that are not standardised and for which central clearing is not available (which may be the case for customised long-term hedges of investment financing transactions), the additional capital and margin requirements faced by intermediaries are likely to raise the cost and may reduce the availability of derivatives contracts. In such cases, intermediaries and end-users may instead resort to more standardised contracts for hedging purposes, which have greater liquidity but may be less

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[12] The CVA represents the change in the probability of loss due to a change in a counterparty’s creditworthiness.

[13] The development of CCPs to date suggests that, once reforms are fully in place, a larger proportion of the interest rate and credit derivatives market may be centrally cleared than is the case for commodity derivatives.

exact and of a shorter-duration. Some costs relating to additional reporting and other compliance requirements may also be passed through to end-users.

Work is currently taking place to analyse the incentives for central clearing associated with proposed capital and margining requirements. The FSB is also considering a broader macroeconomic assessment of the collective impact of the various regulatory reforms that directly impact OTC derivatives markets. This should include an analysis of the impact on end-users of OTC derivatives for hedging risks related to financing of the real economy.

Box 2. Example of the Impact of the Reforms on an OTC Derivatives Transaction

A firm proposes to build a power plant in country X, receiving revenue denominated in the local currency. To finance the construction, the firm arranges a 10-year loan denominated in USD from a syndicate group of lenders. The firm is exposed to a number of risks, which it may hedge using derivatives markets. The firm's swap counterparties and lenders may also employ derivatives to hedge associated risks.

- The firm may be exposed to long-term fluctuations in the energy price, which could be hedged through a long-term commodity (electricity price) derivative.
- The firm is exposed to currency and interest rate risk from the USD funding source, which it may hedge through a long-term cross-currency interest rate swap.
- For each of these transactions, the firm's derivative counterparties may look to offset the resultant exposure by hedging with other counterparties.
- Lenders to the firm may wish to hedge the credit risk of the loan by using credit derivatives.

If the firm is subject to margining or central clearing requirements (for instance, because it is a derivatives market participant on a scale above a threshold set for exemption of non-financial firms), it will face the need to post initial and variation margin (for which purpose it must have eligible collateral available) or the need to arrange direct or indirect participation in a CCP.

If the firm is exempt from central clearing or margin requirements, the only direct requirement under the OTC derivatives reforms may be for the derivatives transactions to be reported to a trade repository; this will likely be undertaken by the dealer it uses as its derivatives counterparty.

There will be impacts on the firm's swap counterparties and lenders as a result of the various OTC derivatives reforms, with the potential that some of the additional costs may be passed on to the firm.

- If the firm's derivatives are not centrally cleared, the swap counterparty will face a higher capital charge (under Basel III) for that derivative. In addition, if the derivative counterparty chooses to hedge the resulting exposure through additional OTC derivatives transactions, there will either be centrally cleared or face additional costs for bilateral clearing.
- To the extent that the combined effect of Basel III and other international and national derivatives market reforms improve the transparency, liquidity and resilience of markets, this would lead to reductions in transaction costs for hedging transactions to offset the direct transactions costs mentioned above.

3.3 Regulatory and accounting framework for institutional investors

Institutional investors – such as insurance companies, mutual funds, endowments and pension funds – are suitable providers of LT investment capital and funding in the financial system. Their long investment horizons allow them to take advantage of long-term risk and illiquidity premia. They are also able to behave in a patient, counter-cyclical manner, making the most of low valuations to seek attractive investment opportunities. The need for diversification and the search for yield given the low interest rate environment have driven their expansion into alternative investments in recent years, including certain types of LT finance. Other types of institutional investors – such as private equity, sovereign wealth funds, and dedicated infrastructure funds – have also emerged as providers of LT capital (see below).

Institutional investors are obliged to meet a variety of prudential regulations and to comply with accounting standards. On the regulatory side, investment choices may be constrained by the need to meet prudential limits. For example, ceilings on certain types of investments (such as equity or non-liquid/marketable debt) apply to pension funds in some European countries, and are relatively common in emerging and developing market economies. Solvency rules for insurers and pension funds are not uniform globally, but recent reforms have generally moved such investors to apply fair (market) value to their balance sheet. Some European countries have moved towards a system of risk-based solvency regulation, where funding requirements are linked to the risk faced by the institution, while accounting rules for valuing assets and liabilities have also affected these investors (Box 3).

While these regulations strive to ensure that institutional investors are able to meet their obligations, they may have influenced investment behaviour and constrained the long-term outlook of those investors. On the one hand, the measures have been associated with investors matching assets and liabilities more closely, and moving to lower-risk, fixed-term assets (e.g. sovereign bonds) that provide a long-term return that better matches the expected cash flows of the insurance contract or pension liability. In addition, there has been an on-going movement away from defined benefit to defined contribution pension funds as greater transparency and better data on longevity have clarified the costs of providing the benefit. These changes were already underway before the financial crisis, and are in some ways a reaction to better understanding of risk and greater transparency of reporting. On the other hand, to the extent that the regulations use short horizons for assessing solvency or apply different methods of fair valuing the assets and liabilities, thereby creating excessive volatility in financial statements, they may promote myopic behaviour and impinge on the ability of those investors to participate in certain LT asset classes.[14] The standard-setters are continuing to work on this issue, both in the context of the development of these standards and as part of the wider reassessment of the conceptual framework for financial reporting. However, it is important to note that other financial market developments – such as the increasing use of short-term benchmarks for performance measurement, risk management, reporting and compensation – may also have contributed to an excessive focus on short-term returns.[15]

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[14] See "Fixed income strategies of insurance companies and pension funds" by the CGFS (July 2011, No. 44, http://www.bis.org/publ/cgfs44.pdf), "Promoting Longer-Term Investment by Institutional Investors: Selected Issues and Policies" by Della Croce et al (OECD Financial Market Trends Vol. 2011/1, http://dx.doi.org/10.1787/19952872), and "The Effect of Solvency Regulation and Accounting Standards on Long-Term Investing" by Severinson and Yermo (November 2012, OECD Working Papers on Finance, Insurance and Private Pensions No. 30, http://dx.doi.org/10.1787/5k8xd1nm3d9n-en).

[15] See, for example, "The Kay Review of UK Equity Markets and Long-Term Decision Making – Final Report" (July 2012, http://webarchive.nationalarchives.gov.uk/20121205150610/http://www.bis.gov.uk/assets/biscore/business-law/docs/k/12-917-kay-review-of-equity-markets-final-report.pdf).

Box 3. Examples of specific regulations affecting institutional investors

Accounting rules for insurers

Insurance companies that use IFRS for their consolidated accounts are required to apply IAS39/IFRS9 to their financial assets and IFRS4 to their insurance contracts; the latter is a temporary transitional standard and the final version will not come into force until 1 January 2018 at the earliest (US GAAP has similar standards). Both standards will require market consistent valuations techniques to be applied, where appropriate, to reach a form of fair value or (in the case of insurance contracts) current value, which is felt to provide a better measure of the risks of the contract and the future cash flows of the assets than amortised cost (although some financial assets that have fixed cash flows may still be at amortised cost). These techniques, which are intended to foster consistency and transparency in the accounting treatment of insurers, may also introduce volatility to their financial statements (income statement and/or balance sheet) – for example, due to the differing valuation of assets and liabilities – and may therefore influence investment behaviour.

Accounting rules for pension liabilities of companies

Pension funds per se are outside the scope of IFRS/US GAAP and so accounting issues are not relevant. However, companies that offer defined benefit pensions schemes are obliged to calculate the present value of the future pension obligations (discounted using the rate of return on a AA-rated corporate bond) and subtract it from the current fair value of the scheme’s assets to determine a net asset or (more often) liability that is recognised on the company’s balance sheet. There are two relevant issues here: (1) as the liabilities are discounted using a AA-rated corporate bond, there is a tendency to match the risk by investing in bonds rather than equities; and (2) the standard’s requirement to offset current asset values against long-term liability values can cause volatility that companies may seek to mitigate by investing in lower-risk, less volatile assets. This is not a new issue – the standard has been in operation for about eight years – and it has, together with other factors (e.g. updated mortality tables), prompted many companies to move away from defined benefit schemes.

Solvency II

At the European Union (EU) level, the new prudential rules of the Solvency II Directive will require insurers to hold assets to cover the nature and duration of their liabilities. Its aim is to ensure the financial soundness of insurance undertakings, and in particular to ensure that they can survive difficult periods. Solvency II will introduce an economic risk-based solvency standard under which insurers will be charged with capital requirements proportional to the creditworthiness and duration mismatch of instruments held on their balance sheet.[16] The European Commission has requested the European Insurance and Occupational Pensions Authority (EIOPA) to examine whether the detailed calibration of capital requirements for investments in certain assets under the Solvency II regime (particularly for infrastructure financing, project bonds and SME financing) should be adjusted to ensure there are no undue obstacles to long-term financing.

[16] See http://ec.europa.eu/internal_market/insurance/solvency/future/index_en.htm.

3.4 Other reforms

Accounting reforms for banks

The most relevant accounting reform for banks will be on the impairment of loans and receivables. Both the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) are proposing a forward-looking model whereby expected losses are recognised on a loan or other financial asset measured at amortised cost (as opposed to solely after a loss event has been identified), although their approaches differ.[17] The two Boards will be consulting on their proposals during 2013.

Both models will give rise to bank loan loss provisions that are larger and recognised more quickly than the current incurred loss model, but this is an intended effect that has been requested by G20 Leaders and the regulatory community in response to the crisis. While the standards are still under development, it is likely that there will be higher levels than currently of so-called "day 1"[18] loan loss provisions under both proposals. This treatment is consistent with the April 2009 call by the G20 Leaders to "strengthen accounting recognition of loan-loss provisions by incorporating a broader range of credit information", and it is expected to increase the transparency and comparability of banks' financial reporting for stakeholders. The earlier recognition of losses may increase the interest rate charged for certain types of higher-risk loans, but it will reduce incentives for banks to take excessive risks and to overstate the value of their assets, thereby mitigating procyclicality**.**

Policy measures for G-SIFIs

Policy measures for G-SIFIs intend to address the "too-big-to-fail" problem, although they may affect the provision of LT finance by these firms. The G20 Leaders in the Cannes Summit endorsed a set of policy measures designed to address the systemic and moral hazard risks associated with SIFIs.[19] These measures include a new international standard for national resolution regimes[20], resolution planning and higher loss absorbency requirements for G-SIFIs, and more intensive supervision of all SIFIs. The requirements for globally systemically important banks (G-SIBs) will be phased in by 2019, while the policy framework for non-bank G-SIFIs is still under development. The effect of higher loss absorbency requirements on the provision of LT finance by G-SIBs (and potentially by globally systemically important insurers) is qualitatively similar to Basel III.[21] More effective

[17] The IASB has proposed a three-bucket model that classifies loans according to their level of potential impairment, i.e. full provision for loans that are impaired; lifetime expected loss provisions for loan portfolios where there is evidence of latent losses; and provision for expected losses over a twelve month time horizon where there is no current evidence of impairment. The proposed FASB model requires full expected losses to be provided over the life of the loan for all loans (and full provision where the loan is impaired).

[18] Financial assets are initially recorded in accounts at fair value, which is usually the par value of a loan (i.e. the contractual cash flows discounted at the effective interest rate on the loan). Under the expected loss proposals, the loan will be initially recorded at the present value of the expected cash flows, which can be less than the par value – in those circumstances a loss will be recognized on day 1 of the transaction.

[19] See "Reducing the moral hazard posed by systemically important financial institutions" by the FSB (20 October 2010, http://www.financialstabilityboard.org/publications/r_101111a.pdf).

[20] See "Key Attributes of Effective Resolution Regimes for Financial Institutions" by the FSB (October 2011, http://www.financialstabilityboard.org/publications/r_111104cc.pdf).

[21] See "Policy Measures to Address Systemically Important Financial Institutions" by the FSB (4 November 2011, http://www.financialstabilityboard.org/publications/r_111104bb.pdf).

resolution tools to address TBTF, notably the 'bailing-in' of debt holders of failing banks under enhanced national resolution regimes, are expected to increase these banks' cost of funding as previously socialised risk is transferred back to bank creditors. As in the case of Basel III, the G-SIFI reforms do not specifically target LT finance. Their implementation is expected to address incentive distortions by reducing the implicit subsidy on the cost of capital and thereby lessen the need for public bail-outs to prevent disorderly failure of firms that, because of their size, complexity and systemic interconnectedness, would cause significant disruption to the wider financial system and economic activity.

Shadow banking

The shadow banking system can broadly be defined as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system".[22] It is conducted through (for example) securitisation or securities lending activities and involves various types of institutions, including investment and money market funds, structured finance vehicles, finance and trust companies etc. The shadow banking system represents an important provider of financing in several FSB member jurisdictions.[23] Such intermediation was highly volatile in the past but, if appropriately conducted, it can provide a valuable alternative to bank funding, including by filling some gaps left by the potential retrenchment of bank lending in certain regions or business lines.

The on-going shadow banking reforms aim to promote prudent financial intermediation and thereby contribute to more sustainable non-bank financing, including for LT investments. In particular, the objective of strengthening the oversight and regulation of this sector is to address, in a proportionate manner, bank-like liquidity and maturity transformation risks to financial stability, while not inhibiting sustainable non-bank financing models that do not pose such risks. Since policy development is on-going in this area, it is too early to assess the effects of these reforms, including on LT financing.[24]

4. Conclusion and next steps

It is still early days in the global regulatory reform process. Many of the reforms are in the process of policy development or at an early stage of implementation. However, the regulatory community has analysed potential impacts prior to finalisation of the reforms and is vigilant to avoid material unintended consequences. The long observation and implementation periods are designed to adjust the policy frameworks, if needed, in the face of material unintended consequences.

There is little tangible evidence to suggest that global financial regulatory reforms have significantly contributed to current LT financing concerns, although on-going monitoring is needed. It is difficult to separate the effects of regulatory reforms on LT

[22] See "Shadow Banking: Strengthening Oversight and Regulation" by the FSB (27 October 2011, available at http://www.financialstabilityboard.org/publications/r_111027a.pdf).

[23] According to the "Global Shadow Banking Monitoring Report 2012" by the FSB (18 November 2012, available at http://www.financialstabilityboard.org/publications/r_121118c.pdf), the size of the global shadow banking system reached US$67 trillion in 2011 and comprised 25% of total financial intermediation; four-fifths of the reported shadow banking assets originated in the United States, the Eurozone, and the United Kingdom.

[24] See "An Integrated Overview of Policy Recommendations" on Strengthening Oversight and Regulation of Shadow Banking by the FSB (18 November 2012, http://www.financialstabilityboard.org/publications/r_121118.pdf).

finance from broader post-crisis developments affecting the financial system, but conjunctural factors other than financial regulation are particularly important given the current market environment. The effects will also differ significantly across jurisdictions and market segments depending on their particular characteristics, such as the origin and circumstances of the banks providing cross-border lending. Nonetheless, there is concern by some EMDEs that the reforms may exacerbate deleveraging and increase the costs for global banks operating in host jurisdictions, thereby reducing domestic credit (including for LT finance) and financial market liquidity; some of these jurisdictions may lack private sector options to replace this financing gap, at least in the short term.[25] ***Monitoring the effect of regulatory reforms on an on-going basis will facilitate the identification of any factors that may disproportionally impact the provision of LT finance so that they can be addressed***.[26]

While the reform process is still at an early stage, the direction is unambiguous and intended. The most important contribution of financial reforms to LT investment finance is to promote a more resilient and stable financial system. The reforms are intended to be proportionate to risks and are not designed to encourage particular types of finance at the expense of financial stability. Many financial institutions were over-leveraged and had engaged in excessive maturity mismatching prior to the crisis, and are currently working to strengthen their balance sheets and adjust their business models. These are intended changes that aim to return to more prudent business practices and smooth the provision of LT finance over economic and financial cycles, even if they may result in, for example, lower access to credit or higher loan spreads during boom times.

Although the reforms are not specifically targeting LT investment finance, they do alter the incentives of different types of financial institutions to participate in this market. As previously mentioned, the reforms introduce stricter prudential requirements for all types of lending and not solely for LT finance. However, to the extent that new regulation reduces the incentives for funding long-term assets with short-term liabilities by banks, some change to the structure and composition of such financing might be expected. Greater reliance on equity finance may also be a desirable effect of this change as there has arguably been excessive use of debt to finance LT projects whose payoff and risk characteristics are more equity-like. As the balance of incentives changes, long-term institutional investors will need to assume a greater role in funding long-term assets. This would be desirable from a financial stability perspective as the financial system would become inherently less fragile.

An important issue going forward is whether non-bank providers of LT finance, particularly institutional investors, can step up their involvement in this market. Anecdotal evidence suggests that this process is underway in some market segments (e.g. infrastructure finance), but it can take time and is not uniform across different segments or regions. As noted in the preceding section, the regulation of these types of investors may need closer study to ensure their effectiveness and efficiency in playing this role prudently, without compromising financial stability objectives. The FSB and its member institutions are already

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[25] See the FSB report on "Identifying the Effect of Regulatory Reforms on Emerging Markets and Developing Economies" (June 2012, http://www.financialstabilityboard.org/publications/r_120619e.pdf).

[26] In response to the request by G20 Leaders at the Los Cabos Summit, the FSB has already established a process, in consultation with standard-setting bodies and international financial institutions, for the monitoring, analysis and reporting of material unintended consequences of agreed reforms in EMDEs and of measures taken to address them.

contributing to this effort via *inter alia* enhancing risk disclosures by financial institutions, undertaking measures to reduce undue reliance on credit rating agency ratings, encouraging the adoption of international financial standards and continuing work to achieve a single set of high-quality accounting standards, promoting cross-border supervisory cooperation, and supporting prudent financial intermediation by non-bank financial institutions. However, more can potentially be done to assess the impact of changes in financial market structures and trading practices on LT capital raising, to overcome existing information asymmetries and improve the contractual environment for investors in LT transactions, to promote LT investment horizons by institutional investors, to identify ways to expand access to capital markets for non-financial firms, to avoid the inconsistent implementation of internationally agreed reforms that may give rise to uncertainty by market participants, and to promote greater use of sound and sustainable securitisation structures as a tool for LT financing.[27] ***An FSB workshop, bringing together relevant parties (national authorities, standard-setters, IOs, institutional investors), may be a helpful first step to identify regulatory initiatives to foster LT investment finance***.

From a longer-term perspective, promoting the development of domestic contractual savings and the capacity of domestic financial systems to intermediate them will foster more and less volatile LT finance, particularly in EMDEs. The presence of market participants with different horizons and risk preferences is an important contributor to financial stability and it also helps promote efficient resource allocation by reducing over-reliance on the banking sector or on foreign sources of finance for the mobilisation of savings and financial intermediation. However, developing domestic non-bank financial institutions and capital markets is a long-term process that requires proper planning and commitment as well as appropriate prioritization and sequencing. The development of capital markets requires a number of important building blocks, such as strengthening the legal and regulatory framework; developing short-term money and government securities markets and instruments to hedge exchange rate risk; expanding the domestic investor base; strengthening market infrastructure; and promoting local currency corporate bond markets.[28] ***The FSB, working through its Regional Consultative Groups and in collaboration with relevant IOs (e.g. IMF, World Bank, OECD), can contribute to the on-going work on this topic***.

[27] See, for example, "Long-term Finance and Economic Growth" by the Group of Thirty (forthcoming). The notes prepared by other IOs on this topic also identify potential areas for follow-up work.

[28] See the FSB report on "Financial Stability Issues in Emerging Market and Developing Economies" (October 2011, http://www.financialstabilityboard.org/publications/r_111019.pdf).