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# Long-term Finance *and* Economic Growth



30

Group of Thirty

Working Group on Long-term Finance

The views expressed in this report are those of the Working Group on Long-term Finance and do not necessarily represent the views of the individual members of the Group of Thirty.

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# **Long-term Finance** *and* **Economic Growth**



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# Abbreviations

FDI	foreign direct investment
G20	Group of Twenty
G30	Group of Thirty
GDP	gross domestic product
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
NFC	nonfinancial corporation
OECD	Organisation for Economic Co-operation and Development
PPP	public-private partnership
R&D	research and development
SWF	sovereign wealth fund

# Glossary

**Basel III** is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision, and risk management of the banking sector. Key components are the standards for bank capital and liquidity framework that will be phased in between 2013 and 2018.

**B20** (Business 20), which is part of the G20 Summit, is a forum in which international business leaders and business organizations share their views and develop and issue recommendations to address current international economic issues. Members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, the European Union, and Spain (observer).

**Capital markets** refers to the part of the financial system where securities such as debt and equity are issued and traded for the purpose of medium- to long-term financing.

**Commercial real estate and other structures** includes new housing units and commercial real estate, industrial buildings, and hospitals. These are recorded as construction cost. The term also includes major renovations, reconstruction, and enlargements of existing assets. It excludes sales of land or existing properties and ordinary repairs and renovations.

**Defined-benefit pension plan** is one in which an employee's benefits during retirement depend on a pre-defined formula based on the employee's earnings history, tenure, and age. The benefits are independent of investment returns in the fund, and the fund's investments are managed by professional investment officers.

**Defined-contribution pension plan** is one in which an employee's benefits during retirement depend on the contributions made to the fund, and on the investment performance of the assets in his or her account. A key feature of most defined-contribution plans is that the plan participants can select the asset allocation.

**Education** includes spending on education-related expenses, most of which goes to school operating expenses (including teacher salaries) and books. It does not include investment in school buildings.

**Equipment and software** includes investment in fixed assets that are not structures. It mainly includes industrial machinery, IT equipment, and any assets that are used in a manufacturing process or service offering.

**External financing** is the provision of capital from outside investors to corporations, households, and governments (for example, via bank loans or capital markets).

**Financial system** is defined as the interconnected web of financial institutions, markets, instruments, and regulators that facilitates the matching of savers and borrowers.

*Financing* is the provision of capital to corporations, households, and governments for the purposes of investment.

*Infrastructure* includes investment in structures for transport (for example, railways, airports, roads), telecommunications, power and water supply, and education.

*Internal financing* is the use of corporation's retained earnings or a household's savings to fund investment, otherwise known as self-financing.

*Long-term finance/long-term financing* are used interchangeably in this report. They refer to the provision of long-dated funds to pay for capital-intensive undertakings that have multiyear payback periods.

*Long-term investment* is spending on the tangible and intangible assets that can expand the productive capacity of an economy. We start with the definition of gross national investment provided by the national accounts. This includes residential real estate, commercial real estate and other structures, equipment and software, infrastructure, education, and research and development. We exclude financing

for consumption smoothing, financial institutions, and liquidity or payments. We also exclude spending on consumer durables, working capital, or inventory. We do not impose a precise time horizon on long-term investment; typically, these investments would be in assets that have a use over many years.

*Research and development (R&D)* includes current spending on innovation-related activities, such as basic research, applied research, and experimental development.

*Residential real estate* includes the construction of new residential buildings and major renovations of existing buildings. It excludes any price increases of existing buildings.

*Solvency II* is a set of regulatory proposals for the European insurance industry, designed to revise European-Union-wide capital requirements and risk management standards.

*Sovereign wealth fund (SWF)* is a state-owned investment fund composed of financial assets, whose institutional structure and governance may vary by country.

# Foreword

The Group of Thirty's (G30's) mission is to deepen understanding of international economic and financial issues, to explore the international repercussions of decisions taken in the public and private sectors, and to examine the choices available to market practitioners and policy makers. The G30 engages the financial community, its public and private sectors, and the regulators and the regulated, through identifying major issues of substantial concern yet to be addressed effectively by other global bodies. The G30 has been impacting the policy debate in this manner since 1978, and we expect that this study, "Long-term Finance and Economic Growth," will once again meaningfully add to the global financial policy-making process.

In March 2012, the G30 launched the Working Group on Long-term Finance composed of almost two-thirds of the G30 membership, augmented by a number of external leading figures from the financial sector. The project was launched after the G30 identified an issue of major concern to both the public and private actors following the financial crisis: the efficient provision of a level of long-term finance sufficient to support expected sustainable economic growth in advanced and emerging economies. Flows of long-term finance via various routes are crucial to bring about sustainable economic growth and job creation.

The report seeks to quantify future financing needs and identify the barriers that may hinder the supply of long-term financing, possibly undermining future economic growth. To that end, the report promulgates four principles that should govern the provision of long-term finance:

1. The financial system should channel savings from households and corporations into an adequate supply of financing with long maturities to meet the growing investment needs of the real economy.
2. Long-term finance should be supplied by entities with committed long-term horizons.
3. A broad spectrum of financial instruments should be available to support long-term investment.
4. An efficient global financial system should promote economic growth through stable cross-border flows of long-term finance, supported by appropriate global regulation.

As with all G30 work products, this report is not an abstract exercise; rather, it is operational. It contains a series of practical recommendations for global and national actors and policy makers that would, if acted upon, help create a system of long-term finance that more closely matches these principles.

The G30 report makes clear that supporting long-term economic development is one of the fundamental purposes of global financial markets. We hope that the recommendations in this report, which detail a wide array of possible responses, will help foster the creation of a more efficient system of long-term finance capable of delivering on that promise.

We wish to thank Guillermo Ortiz, Chairman of the Working Group on Long-term Finance, and the members of the Steering Committee, Tharman Shanmugaratnam, Adair Turner, and Axel Weber, all of whom are members of the G30; and to recognize the work of the rest of the Working Group, whose names are listed on pages 11 and 12.



Jacob A. Frenkel  
*Chairman of the Board of Trustees  
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Jean-Claude Trichet  
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We would like to thank the members of the Working Group on Long-term Finance, who guided our work at every stage and added their unique insight. The intellectual firepower repeatedly brought to bear by the twenty members of the Working Group on Long-term Finance on this important subject was remarkable and essential to the project's success.

No study of this magnitude can be accomplished without the committed effort of a strong team. The G30 extends its deep appreciation to McKinsey Global Institute (MGI) for their hard work under tight deadlines. We particularly thank project director Charles Roxburgh, who was supported by a team including Susan Lund, Toos Daruvala, Elizabeth Foote, and Georg Hartmann. MGI carried out the core research and drafted analyses. The Working Group on Long-term Finance drew upon this research and analysis in both its discussions, assessment, and to reach its final recommendations and conclusions.

Finally, the coordination of this project and many aspects of project management, working group logistics, and report production had their center at the offices of the G30. This project could not have been completed without the efforts of Executive Director Stuart Mackintosh, and his team including Meg Doherty and Corinne Tomasi.



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# Executive Summary

Growth and job creation require long-term investment in the assets that expand the productive capacity of a modern economy, such as infrastructure, factories and equipment, new housing and commercial buildings, education, and research and development (R&D). Efficiently and seamlessly matching global savings with long-term investment opportunities is a core function of the financial system—but questions loom about whether the supply of financing will be adequate to meet the world's needs.

To understand the scale of future demand, we examined nine economies<sup>1</sup> that collectively account for 60 percent of global gross domestic product (GDP) and found that their annual spending on long-term investment totalled US\$11.7 trillion in 2010. Drawing on a range of growth forecasts and investment projections from external sources, we estimate that these countries will need annual investment of US\$18.8 trillion in real terms by 2020 to achieve even moderate levels of economic growth.

Since the 2007–09 global financial crisis, the need for stability and soundness has dominated the policy agenda, but there must be equal focus on ensuring that financing is available to the real economy—and the two goals are not mutually exclusive. By its nature, long-term finance is less procyclical than short-term finance, and it exerts a stabilizing influence on the financial system.

An ideal market for long-term finance would adhere to four key principles: (1) the financial system should channel savings from households and corporations into an adequate supply of financing with long maturities to meet the growing investment needs of the real economy; (2) long-term finance should be

supplied by entities with committed long-term horizons; (3) a broad spectrum of financial instruments should be available to support long-term investment; and (4) an efficient global financial system should promote economic growth through stable cross-border flows of long-term finance, supported by appropriate global regulation.

## **The current provision of long-term finance often fails to conform to best-practice principles**

Worryingly, we conclude that the current systems overseen and designed by policy makers and market actors fail to adhere to such best practice principles and therefore may do a poor job in supplying long-term-finance from diverse providers to lenders spread across sectors and the globe. There are a number of reasons for these regulatory and market failures.

**Potential long-term investors are increasingly constrained in their ability to provide financing.** Pension funds, sovereign wealth funds, insurance companies, endowments, and foundations are ideal candidates to provide long-term financing. But barriers such as incentives and restrictions on portfolio allocations need to be addressed to make this possible.

Many pension funds face shortfalls that have intensified short-term performance pressures, while they also face risk-mitigation rules that favor low-risk fixed-income securities. For example, allocations to equities in both defined-contribution and defined-benefit funds has dropped by 22 percent in the United Kingdom, 17 percent in the Netherlands, and 9 percent in Switzerland since 2001. Meanwhile, pension

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<sup>1</sup> Brazil, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States.

funds in emerging markets are relatively small, contributing to the lack of long-term financing supply.

Sovereign wealth funds represent another set of potential long-term investors, but some are mandated to focus on fiscal stabilization and thus hold large shares of cash or low-risk government debt. In major Asian economies alone, US\$3 trillion to US\$4 trillion of central bank reserves could be invested through diversified sovereign wealth funds.

Insurance firms, like pension funds, have long-dated liabilities, but over the last decade, many have reduced their allocation to equities. This is a particularly striking trend in Europe, driven by management-led, risk-reduction strategies over the last ten years and, more recently, by anticipation of Solvency II regulations.

Policy makers need to address regulatory and other barriers that currently constrain and limit the ability of these key long-term investors to provide the finance economies will need in the future.

**Long-term financing in many countries rests on a narrow range of instruments.** Policy makers intent on unlocking new sources of long-term finance should foster the growth of new markets and instruments that can help fill the gap between the current sources and projected future demand for long-term investment.

While US bond, equity, and securitization markets are mature and liquid, this is not the case in much of the world. Banks are and will remain for the medium term the dominant source of external financing outside the United States, and commercial bank loan maturities average only 2.8 years in emerging economies and 4.2 years in developed economies—far shorter than bond maturities.

There is large scope to increase the size of corporate bond markets in Europe and several other advanced economies, and in emerging economies over the medium to long term as a complement to the continuing important role that banks must play. For example, if companies with more than US\$500 million in revenue in Canada, France, Germany, Italy, Spain, and the United Kingdom were to obtain 80 percent of their credit from bonds rather than loans—less than what

we observe in the United States for companies of this size—the corporate bond market could potentially grow by US\$2.7 trillion, or 32 percent, over a long period of time.

Bank lending will remain an important source of financing in Europe. However, with the right standards and regulations in place, more small business loans could be packaged into securities and sold to investors, enabling banks to extend more credit.

Emerging economies account for a rising share of the world's wealth, but their corporate bond, securitization, and even equity markets also remain underdeveloped. Bank lending provides the majority of financing in most of these economies (banks account for 75 percent of financing in China). The development of debt and equity capital markets is particularly crucial to economic growth in emerging economies, where the corporate sector relies heavily on external financing for expansion.

Prudent growth of new bond, securitization, and equity markets, adequately overseen and supervised, must be part of the solution to the long-term finance problem.

**Cross-border capital flows have been driven by short-term, volatile lending.** Globally, cross-border capital flows increased from US\$4.9 trillion in 2000 to US\$11.7 trillion in 2007. Nearly 60 percent of this growth was driven by cross-border lending, but most of this was short-term in nature. Since then, cross-border capital flows have fallen precipitously, and they now remain nearly 60 percent below their precrisis peak; approximately half of this drop was driven by a contraction in cross-border bank lending, primarily within Europe.

Going forward, it is clear that enabling more stable flows of long-term capital (such as foreign direct investment) to countries with large investment needs must be a priority. Some countries, like China, may have sufficient domestic savings to fund their growth. But many rapidly industrializing and urbanizing emerging markets will need foreign investors to help fund capital-intensive investments.

## Three major trends on the horizon are likely to constrain the future supply of long-term finance

**Bank deleveraging and new regulation.** In the aftermath of the financial crisis, banks have been rationalizing their business models by tightening underwriting standards or forgoing certain types of lending altogether. The banking industry is also adjusting to market demands for more and higher quality capital, and to new regulatory regimes and higher capital and liquidity requirements. Basel III, in particular, raises the cost of issuing long-term corporate and project finance loans above the cost of issuing mortgages and short-term loans. This is not to argue for a reversal of the new capital regime, but to call for the emergence of new sustainable sources of finance beyond bank lending.

**Fiscal consolidation.** Mature economies are struggling to manage a heavy burden of public debt. Fiscal consolidation over the medium term is likely to be a reality in many countries, a trend that could particularly constrain government investments in infrastructure and education. Going forward, the private sector will need to be mobilized to fill the gap.

**Aging populations.** Aging is one of the most powerful demographic trends worldwide, including in Australia, Canada, China, Europe, Japan, the Republic of Korea, and the United States. Older investors are already shifting their portfolios toward lower-risk assets such as deposits and fixed income. Equity is a crucial source of long-term finance for corporations, but the cost may increase significantly in the face of declining demand.

## Addressing the barriers to long-term financing calls for a multifaceted policy response

To stimulate public debate, the G30 Working Group on Long-term Finance has set out five core objectives and fifteen proposals that, if acted upon, would

support the growing need for long-term finance and address regulatory changes, market developments, issues of international coordination, and the creation of new institutions. The core objectives are outlined below, and they are discussed in detail in Chapter 3, which begins on page 49.

### 1. Ensure investors are better able to take a long-term horizon in their investment decisions.

Action by national and international regulatory bodies will be essential in achieving this objective. We urge national regulators and international bodies such as the International Monetary Fund, the World Bank, the Organisation for Economic Co-operation and Development, and the Financial Stability Board to propose new best-practice guidelines to promote long-term horizons in the governance and portfolio management of public pension funds and sovereign wealth funds.

National policy makers should consider steps to differentiate between short-term and long-term debt (whether public or private), and should consider weighing the pros and cons of phasing out the preferential treatment of sovereign debt in insurance and bank regulation over an extended time horizon.

The Financial Stability Board, in coordination with relevant standard-setting bodies, should review the regulatory and accounting treatments of assets held with long-term horizons to avoid excess focus on short-term market volatility.

### 2. Create new intermediaries and instruments geared toward the provision of long-term finance.

We support the creation of new instruments to enable the public sector to leverage private sector capital for long-term financing, including greater use of public-private partnerships and the creation of new dedicated long-term financing institutions.

Creating and fostering new savings pools that can act as sources of long-term finance in the future will also be necessary. Long-term pension and insurance-based



savings can be encouraged by setting up compulsory auto-enrolled savings programs. Governments should also consider redirecting a portion of structural surpluses in national savings to diversified sovereign wealth funds with a long-term investment mandate, in line with objective 1.

### **3. Develop debt and equity capital markets in order to promote a broad spectrum of financing instruments.**

Policy makers seeking to achieve this objective must balance careful systemic and supervisory oversight with the need to grow markets that support new instruments and channels for flows of long-term investments from providers to end users. We also support the implementation of the Financial Stability Board's regulatory reforms designed to transform shadow banking into resilient market-based finance.

We urge policy makers to take the necessary steps to develop corporate bond markets that support the efficient and sound securitization of long-term debt, particularly in Europe and emerging markets. Developing the infrastructure for capital markets in emerging economies to lengthen financing horizons and diversify sources of funding will also be important.

If policy makers are to develop and support markets they should also aim to eliminate regulatory biases and perverse incentives. In particular, they should consider removing the bias against equity in countries where it is present.

### **4. Ensure that cross-border flows support the efficient global allocation of capital to long-term investment.**

It is clear that open markets help support sustainable economic growth, and cross-border capital flows assist in the efficient allocation of capital to that end. But we also recognize that volatile short-term capital flows can create financial instability. Policy makers must support the international diversification of investment portfolios in both developed and emerging markets.

Policy makers should also gradually move toward liberalization of capital accounts in emerging markets while maintaining financial stability, using macro-prudential policy tools.

### **5. Strengthen systemic analysis when setting future regulatory policy.**

Policy makers must consider the systemic impact of ongoing and future regulatory changes on long-term investment. Failing to do so could result in today's modest unintended consequences becoming tomorrow's much larger real economic problems.

Ensuring a supply of long-term finance adequate for the needs of the global economy as it emerges postcrisis will be a huge task. Above all, addressing the need for adequate long-term finance requires a sense of urgency. The solutions are not simple: they are complex, multifaceted, and multidimensional. No single authority can drive change in this arena. But the findings of this report make clear that strengthening the provision of financing for long-term investment will be critical to the building of a solid foundation for economic growth and job creation in the years to come.



# Introduction

**T**he 2007–09 global financial crisis was a major shock to the financial system and to the global economy. Not only did it destabilize the financial sector, it also led to a major contraction of productive investment in the real sector.

The crisis itself resulted from major imbalances in the financial system and shortcomings in public policy. The response has been to develop regulation to address the weaknesses exposed by the crisis and thereby reduce the probability and economic cost of any future disruption. However, global policy makers also face the urgent challenge of reigniting economic growth and job creation. They need to ensure there are measures to complement new regulations, in order to stimulate investment, and to be alert to potential negative unintended consequences of their decisions.

A fundamental part of reigniting growth is ensuring the availability of sufficient resources to meet long-term investment needs. Productive investment provides a strong basis for both economic growth and job creation. Yet, there is mounting evidence that the postcrisis financial system is not well structured to provide the level of long-term financing that is required to support global economic growth.

There are multiple reasons for this, starting with long-standing problems in incentives and governance that encourage investors to focus on short time horizons and follow procyclical investment strategies. Several of the mechanisms that financed long-term investment prior to the financial crisis were not sustainable, such as bank lending that relied on short-term funding and excessive maturity transformation. There are additional hurdles to overcome, including underdeveloped capital markets in many countries and a declining demand for equities that will become more acute as populations age.

Moreover, in the aftermath of the global financial crisis, the principal aim of regulators has been to limit potential economic costs from episodes of systemic financial stress and increase the resilience of the global financial system. By contrast, less attention has been paid to improving the global financial system's efficiency and aligning its incentives with the long-term investment needs of the real economy. This relative lack of policy focus has become increasingly problematic in the current international context of weak cyclical growth. This is not to argue for a roll-back of regulatory reforms, but rather to suggest that it is important to review the regulatory framework to ensure that reforms aimed at increasing the safety of the financial system are fully supportive of economic growth, investment, and job creation. There should be a shift of attention to active support of long-term growth by encouraging structural innovations that foster the supply of finance.

To sustain growth, economies must build and continually renew the physical and intangible capital that fuels productivity growth and innovation. The ability to develop modern infrastructure will determine whether emerging nations can fulfil their economic potential. It will take an enormous infusion of capital to build transportation networks and deliver education, health care, water, housing, and electricity to growing populations. Advanced economies, too, need long-term investment, since it is one of the few ways to boost economic growth during a time of deleveraging and necessary fiscal consolidation. Many of these countries need to address their aging infrastructure; dramatically accelerate educational attainment and training to build a 21st century workforce; and revitalize innovation, which is the foundation of future progress. Ensuring that businesses can invest in plants,

machinery, and commercial buildings not only creates jobs in the immediate term but also enhances future productivity. Amid a fragile recovery, investments of this magnitude are not easily undertaken, but they cannot be deferred indefinitely without risking further economic stagnation.

In addition to fueling economic growth, long-term investment underpinned by the right kind of risk capital confers an additional benefit. By definition, long-term investors must be patient and willing to take advantage of illiquid opportunities; their presence can therefore exert a stabilizing, countercyclical influence on the financial system as a whole.

The Group of Thirty has undertaken this study to quantify future financing needs and identify the barriers that are likely to hinder the supply of long-term financing, dampening future growth prospects. This report offers proposals for both international and national policy makers to increase the availability of sustainable long-term financing. These should not be construed as formal recommendations that carry the unanimous endorsement of all members of the G30 Working Group on Long-term Finance. Instead, we have detailed a wide array of possible responses that merit further public debate. While all members of the Working Group may not agree with every detail of the report, they fully endorse its main thrust.



# **1. Principles for an Ideal Long-term Finance Market**



Advanced and emerging economies alike face very large-scale investment needs in the years ahead. The availability of long-term finance will determine whether governments, businesses, and households can invest for the future, raising productivity and living standards.

## 1.1 Long-term investment is essential for economic growth

This report defines long-term investment as spending on the various types of infrastructure that, all things being equal, can expand the productive capacity of an economy. This encompasses tangible assets (such as roads, bridges, ports, machinery, factories,

commercial buildings, hospitals, and new housing units) and intangible assets (such as education and research and development) that increase future prospects for innovation and competitiveness.<sup>2</sup>

Many of these investments are at least partially public goods that eventually generate greater returns for society as a whole by expanding vital services, increasing quality of life, or enabling the movement of people and goods. They enable companies and governments to produce more goods and services with fewer resources, raising productivity growth.

Using this definition of long-term investment, we have analyzed the level and mix of investment across nine major economies.<sup>3</sup> This sample includes the five-largest developed economies and four of the largest

<sup>2</sup> See the glossary at the beginning of this report for additional details.

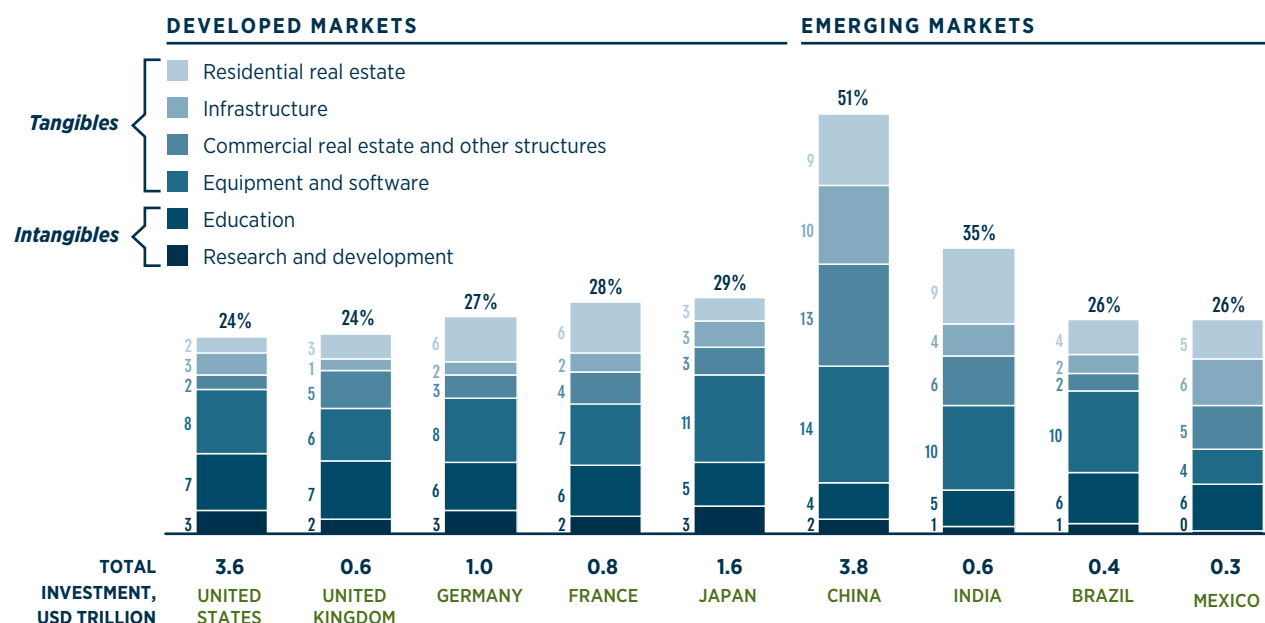
<sup>3</sup> The sample comprises Brazil, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States.

**Long-term investment typically represents 25–30% of GDP, though it can be much higher in economies undergoing rapid economic transformation**

### EXHIBIT 1

## LONG-TERM INVESTMENT BREAKDOWN BY ASSET TYPE FOR 9 SAMPLE COUNTRIES

Percent of GDP, most recent data (2011 or 2010), country sample represents over 60% of world GDP



NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute.

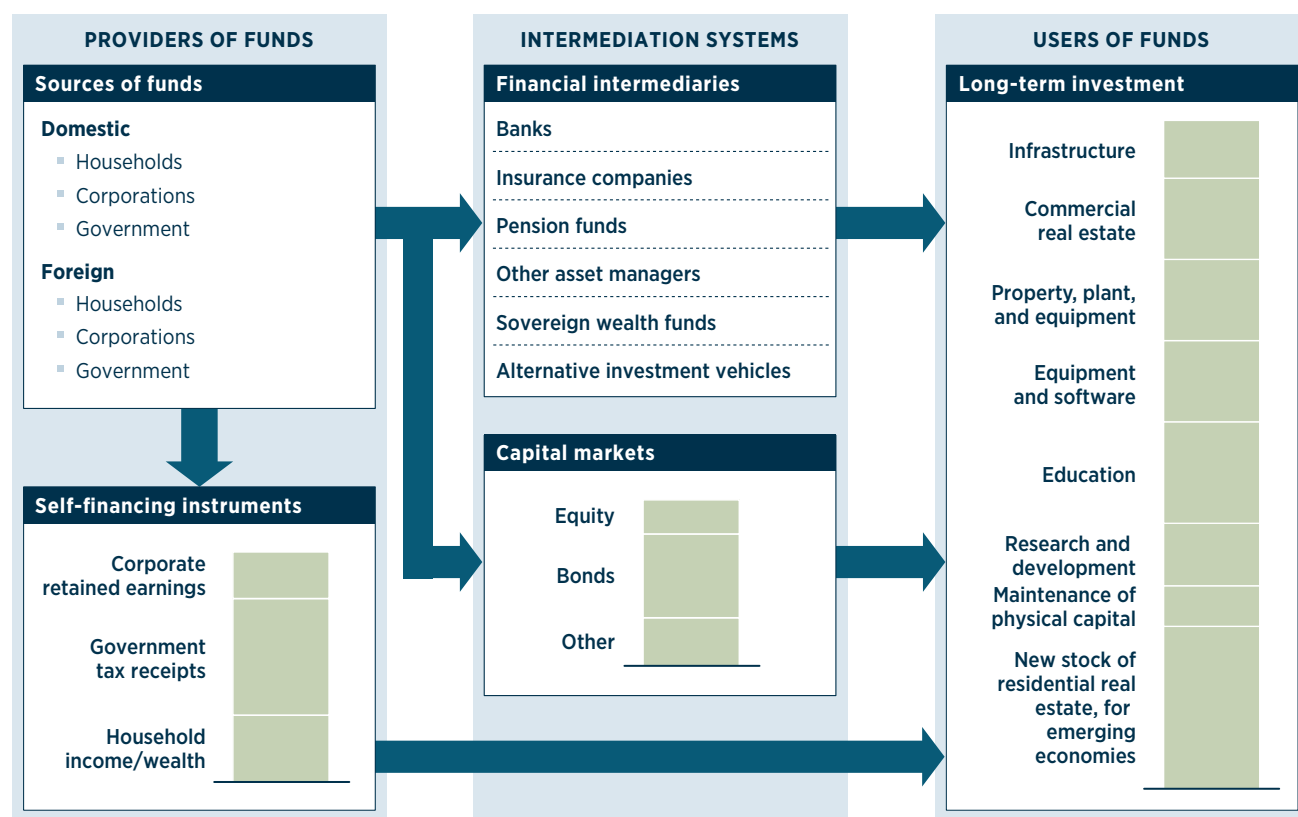
developing economies, together representing over 60 percent of world gross domestic product (GDP). Exhibit 1 shows that investment levels are typically between 25 percent and 30 percent of GDP, though they can be much higher in countries undergoing rapid industrialization and urbanization (India and China, for example, have investment levels equivalent to 35 percent and 51 percent of GDP, respectively). Underscoring the pivotal role of the private sector, we find that equipment and software is the largest category of long-term investment, averaging 8.8 percent of GDP across this sample of economies. This is two to three times greater than infrastructure, and even exceeds investment in residential real estate.

## 1.2 Financing long-term investment requires long-maturity instruments and investors with long time horizons

Exhibit 2 illustrates the flow of long-term finance from providers through the intermediation process to the end users. Long-term finance is the provision of long-dated funds to pay for capital-intensive undertakings that have multiyear payback periods. Various sources act as providers of long-term finance including domestic and foreign households, corporations, and governments. Funds may also come from corporate earnings, government revenues, or household income and wealth, and a proportion of the financing may go directly to the end users. Long-term finance also

### Framework for understanding the provision of financing for long-term investment

#### EXHIBIT 2



SOURCE: McKinsey Global Institute.



flows through various intermediaries (such as banks, insurance funds, pension funds, and so forth), or alternatively the intermediation may be undertaken by capital markets; the precise balance within this intermediation process, between financial institutions and capital markets, varies across the globe. The users of long-term finance apply them to different investments including infrastructure, commercial and residential real estate, plant and equipment, equipment and software, and so forth.

The academic research on the connection between finance and growth is well established.<sup>4</sup> However, this literature has often not distinguished between long-term and short-term finance. Nevertheless, we believe it is important to focus on long-term finance since it is less procyclical than short-term finance and plausibly more supportive of long-term economic growth. Moreover, a prevalence of long-term finance may promote a more stable financial system. Because many long-term investments require an extended gestation period to account for complex development or construction, investors must be prepared to accept a long time horizon for debt repayment or return on equity. They must also be prepared for the likelihood of major downside risk along the way. This is a crucial consideration in designing the appropriate financing mechanisms, because relying on short-term finance for long-term projects likely adds an additional layer of instability.

### 1.3 Four key principles should govern the provision of long-term finance

By articulating a set of fundamental principles that define how an ideal market for long-term finance should function, we can diagnose the current system's shortcomings and begin to identify policy solutions to address these flaws. It is important to note, however, that the following analysis does not deal with individual institutions but considers financial intermediaries at an aggregate level. Therefore, the following

principles should be understood in the context of sound and solid financial institutions.

***Principle 1. The financial system should channel savings from households and corporations into an adequate supply of financing with long maturities to meet the growing investment needs of the real economy.***

The world needs to invest in infrastructure, education, R&D, housing, and business expansion in order to meet even moderate consensus growth forecasts.<sup>5</sup> Policy makers should aim to ensure that the financial system fulfils this core function of providing the capital that allows businesses, governments, and households to invest and build for the future.

***Principle 2. Long-term finance should be supplied by entities with committed long-term horizons.***

Before the crisis, financial innovation attempted to bestow an artificial liquidity on long-term instruments. But when long-term investment rests on the shaky foundation of short-term financing, the resulting maturity mismatch increases risk—for borrowers, for investors, and for the financial system as a whole. That risk is substantially reduced when investors with the appropriate time horizons, risk appetite, and liquidity needs are matched with the right investment opportunities.

***Principle 3. A broad spectrum of financial instruments should be available to support long-term investment.***

Borrowers in advanced and emerging economies alike should have a full menu of options for financing, including bank loans with longer maturities, equity, and bonds. Long-term instruments offer a degree of insulation from the volatility of the business cycle and minimize the potentially disruptive effects of widespread maturity mismatches, which have contributed to past financial crises. Deep and robust capital markets provide a range of options for the needs of diverse borrowers. In addition, investors should have the choice of a full range of instruments, including the use

4 See R. Levine, "Finance and Growth: Theory and Evidence," in *Handbook of Economic Growth*, ed. P. Aghion and Durlauf (Amsterdam: North-Holland Elsevier, 2005); S. G. Cecchetti, and E. Kharroubi, "Reassessing the Impact of Finance and Growth," *Bank for International Settlements Working Papers* (Basel, 2012); T. Beck, A. Demirguc-Kunt, and R. Levine, "Financial Institutions and Markets: Across Countries and Over Time," *World Bank Economic Review* (2010); W. Easterly, R. Islam, and J. Stiglitz, "Shaken and Stirred: Explaining Growth Volatility," *Annual World Bank Conference on Development Economics*, (Washington, D.C., 2000).

5 See section 2.1 for GDP growth projections for major economies.

of hedging instruments and other means of risk mitigation. A gradual shift from the traditional and essential role that banks play as credit intermediaries and lending entities will take time, and systemic stability considerations need to also be taken into account as this takes place, mindful of potential future risks.

*Principle 4. An efficient global financial system should promote economic growth through stable cross-border flows of long-term finance, supported by appropriate global regulation.* An ideal system would enable the efficient transfer from capital-rich economies to capital-poor economies to promote economic growth.<sup>6</sup> This would also enable risk diversification across economies. For this to be achieved in a stable environment, an ideal system would contain the risk of volatile short-term wholesale bank lending and would facilitate greater flows of portfolio investment and long-term foreign direct investment into productive enterprises. This type of investment tends to exert a stabilizing influence that promotes economic

growth. Investors in advanced economies would gain diversification, while emerging economies would be able to tap into financing for urgently needed development projects.

□ □ □

One of the goals of the financial system is to efficiently and seamlessly match global savings with long-term investment opportunities. In reality, however, long-term financing is often executed with terms and vehicles that are not appropriately tailored to the needs of the borrower or the investor—and in some instances, these frictions can substantially increase risk. There is a need to increase the level of savings available, and to more effectively match savings to long-term investment opportunities. The following section analyzes how the market for long-term finance currently functions in order to identify areas in which the system falls short of the principles described above.

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<sup>6</sup> Many observers have noted that emerging markets have been net providers of capital to rich countries over the last decade. However, excluding the large central bank foreign reserve accumulations of developing countries, which are then invested in sovereign bonds of advanced economies, most emerging nations are becoming net recipients of foreign investment (see forthcoming McKinsey Global Institute report, February 2013). Concerning the determinants of the global allocation of capital, there is still much academic debate because currently there is no economic theory that fully accounts for the observed patterns of cross-border capital flows (see Pierre-Olivier Gourinchas, and Olivier Jeanne, “Capital Flows to Developing Countries: The Allocation Puzzle” (University of California, Berkeley, and International Monetary Fund, 2006).







## **2. The Current Financial System Does Not Efficiently Supply Long-term Finance**



**W**orldwide demand for long-term investment continues to rise, but the analysis that follows raises concern about whether the global financial system is configured to meet these growing needs efficiently and sustainably. In recent years, the provision of long-term finance has not satisfied the principles for an ideal market as outlined in Chapter 1. Our analysis indicates that the result is an emerging divergence between the supply and demand for long-term finance which, if left unaddressed, will increase the cost of capital and limit long-term economic growth and development.

The divergence between supply and demand can be partially explained by a natural repricing of risk after the financial crisis, and by transitional difficulties as banks repair their balance sheets and adjust to the new capital adequacy regime. However, even in this case, if there is a relatively low supply of savings, the repricing will lead to a high cost of capital, preventing some investment projects from going ahead.

In addition to repricing, there are also market failures or flawed market designs that should be mitigated by policy responses. Financing outside the United States, in particular, relies on a narrow range of instruments (primarily bank lending), which limits the options available to borrowers. While other countries can learn from some aspects of the U.S. system, this model is also far from ideal. Too often in the United States and elsewhere, long-term investment has been underpinned by short-term financing or by institutions with large maturity mismatches that are sources of systemic risk. In addition, three looming trends, if left unmanaged, are likely to constrain access to long-term capital for governments, corporations, and households in the years ahead, leading to even greater difficulties in creating jobs and maintaining economic growth.

## **2.1 Worldwide demand for long-term investment is rising**

In the coming years, the demand for long-term investment is projected to rise substantially as mature economies address long-deferred infrastructure needs and emerging nations continue to urbanize and industrialize. In both sets of countries, long-term investment will be crucial to achieving future productivity gains and employment growth.

### **By 2020, nine major economies will need to invest an additional US\$7 trillion annually to support growth**

To better understand long-term investment patterns, we undertook a granular analysis of long-term investment in five mature economies and four major developing economies that collectively account for 60 percent of global GDP. Annual spending on long-term investment in these nine countries—Brazil, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States—totaled US\$11.7 trillion in 2010.

Exhibit 3 shows how these levels are set to rise over the course of the current decade. Drawing on consensus growth forecasts, we project that by 2020, annual long-term investment in these countries will need to increase to US\$18.8 trillion in real terms to achieve even moderate levels of economic growth.<sup>7</sup> This equals 34 percent of these nations' GDP, up from 30 percent of GDP, currently.<sup>8</sup> In this projection analysis, we use forecast growth rates to estimate future investment levels (that is, quantity of investment needs), assuming a constant productivity of capital. As such, any potential mismatch between long-term savings and investment represent an ex-ante mismatch. We also perform a sensitivity analysis, examining a scenario with renewed economic growth and another that assumes a

<sup>7</sup> This scenario is based on a consensus growth forecast, which is the average of the country forecasts from the International Monetary Fund, Global Insight, Oxford Economics, and the Economist Intelligence Unit. It uses constant 2010 prices and constant exchange rates. Projected cumulative annual GDP growth rates through 2020 are 2.6 percent for the United States, 1.8 percent for the United Kingdom, 1.5 percent for both France and Germany, 1.1 percent for Japan, 7.8 percent for China, 7.6 percent for India, 3.6 percent for Mexico, and 4.0 percent for Brazil.

<sup>8</sup> For a more in-depth look at the implications of rising investment demand in emerging markets, see McKinsey Global Institute, "Farewell to Cheap Capital? The Implications of Long-Term Shifts in Global Saving and Investment" (December 2010).

global economic slowdown. The outcomes confirm the growing need for long-term investment under a range of different outcomes for global growth: the higher-growth scenario projects investment of US\$20.4 trillion, or 35 percent of GDP, while the slowdown scenario projects investment of US\$17.0 trillion, or 33 percent of GDP.

China accounts for roughly half of the increase, with its long-term investment set to rise from US\$3 trillion today to US\$6.5 trillion in 2020, in real terms. China's currently very high investment rate is projected to remain stable over the decade in our analysis (moving from 51 percent of GDP to 52 percent of

GDP), but this disguises a significant shift in the type of investment. China is projected to decrease investment in fixed assets such as infrastructure and factories as it rebalances its economy toward more consumption and domestic services. But this will be offset by higher levels of spending on education and R&D, both of which are currently well below the levels of mature economies.<sup>9</sup>

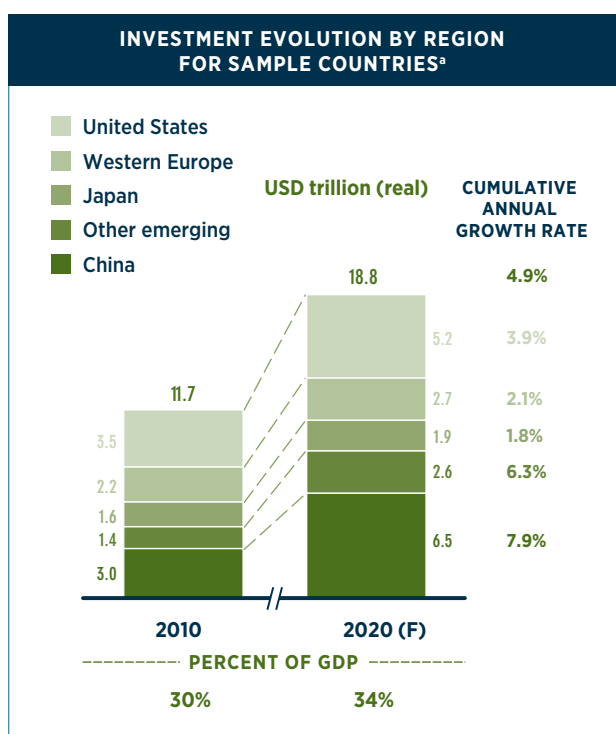
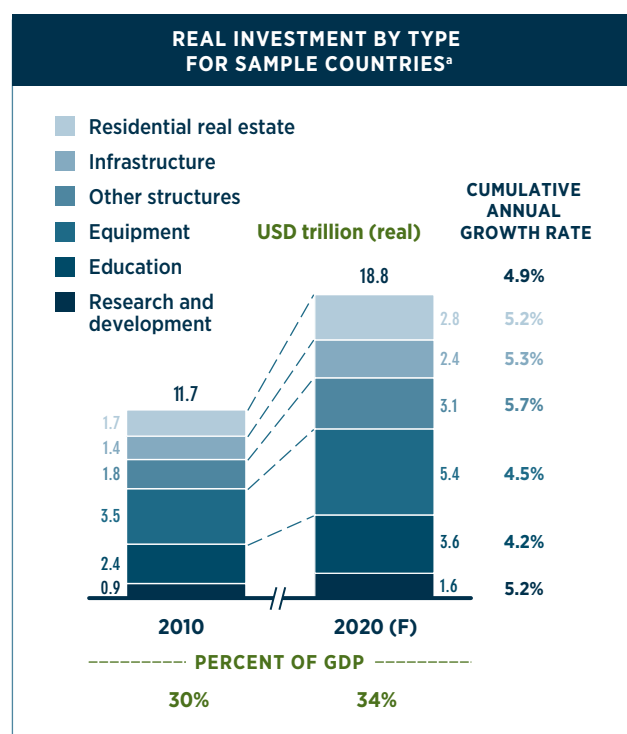
The United States accounts for 23 percent of the growth in our sample of countries, with annual investment reaching US\$5.2 trillion by 2020, in real terms. This increase reflects a projection of solid though not spectacular economic growth over the decade, with real GDP growth averaging 2.6 percent annually.

<sup>9</sup> We also tested a scenario in which there is a global slowdown and China's investment rate in tangible assets falls more sharply, implying an even faster rebalancing of growth to domestic consumption. If China's growth slowed to a rate comparable to Latin America's, it would be investing US\$4.5 trillion rather than US\$6.5 trillion, representing 30 percent of the total in the sample of countries.

## In a consensus growth scenario, long-term investment is projected to grow significantly by 2020

### EXHIBIT 3

Constant 2010 prices, constant exchange rates



NOTE: Numbers may not sum due to rounding.

F = Forecasted

<sup>a</sup> Sample countries include Brazil, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States, representing 60% of world GDP in 2010.

SOURCE: McKinsey Global Institute.

Aside from China, the other emerging markets in our sample—Brazil, India, and Mexico—together account for 18 percent of the growth, with their collective long-term investment rising to US\$2.6 trillion per year by 2020.

European investment is projected to remain largely stagnant, reflecting the low growth rates assumed in the consensus forecast (1.5 percent average annual GDP growth for France and Germany, and 1.8 percent for the United Kingdom).

Ensuring an adequate supply of long-term financing to meet the needs of the real economy is the most fundamental of the principles outlined in Chapter 1. But as we explain in the next section, the current

financial system is straining to provide such financing, and several trends ahead will exacerbate the problems. Policy adjustments will be required to ensure that these projected large-scale increases in demand can be met.

## 2.2 Current provision of long-term finance often fails to conform with the principles outlined in Chapter 1

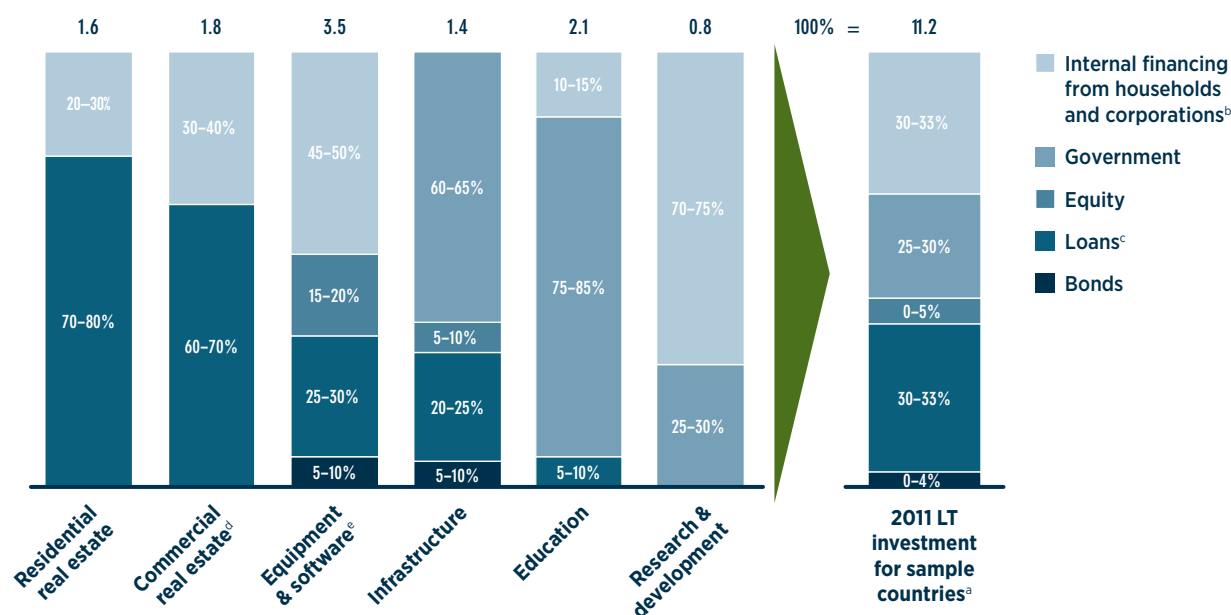
Long-term investment relies on a mix of self-financing (through current earnings and savings) and capital raised through the financial system. As illustrated in Exhibit 4, we estimate that corporate retained earnings fund approximately 45 to 50 percent of all equipment

**Roughly 40% of long-term investment is financed through equity, bonds, or loans**

### EXHIBIT 4

#### FINANCING BY TYPE OF INVESTMENT

Financing type as a percent of total investment, total in USD trillion for sample countries<sup>a</sup>



a Estimates for a typical global project based on data from sample countries including Brazil, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States, representing over 60% of world GDP in 2010.

b Internal financing here defined as financing from household income/wealth, corporations' retained earnings/cash holdings.

c Loans for residential and commercial real estate are as originated; depending on the country, a large portion of these loans could subsequently be securitized.

d Typical commercial real estate investment (including in existing structures) used as a proxy for investment in new commercial structures.

e Total debt and equity financing increase as a share of capital expenditure for nonfinancial corporations across the sample of countries.

SOURCE: McKinsey Global Institute.

and software; the remaining capital must be raised through bank loans, bond issuance, or equity issuance.

As shown in Exhibit 5, we estimate that governments typically account for about 30 percent of long-term investment, financed either through current tax revenues or issuance of government bonds. Infrastructure is the prime example of this type of investment, and across our sample of countries, governments drive some 60 percent of infrastructure spending. Another 30 percent of long-term investment is self-financed by corporations and households via corporate retained earnings and household savings.

The remaining 40 percent of long-term investment must be financed through bank lending and the capital markets. A sustainable and effective system of intermediation would guarantee that adequate capital is available for productive purposes, but the actual delivery of this financing often falls short of the ideal market described in Chapter 1.

**Banks are the dominant source of externally intermediated financing outside the United States. Lending is often short term and potentially volatile**

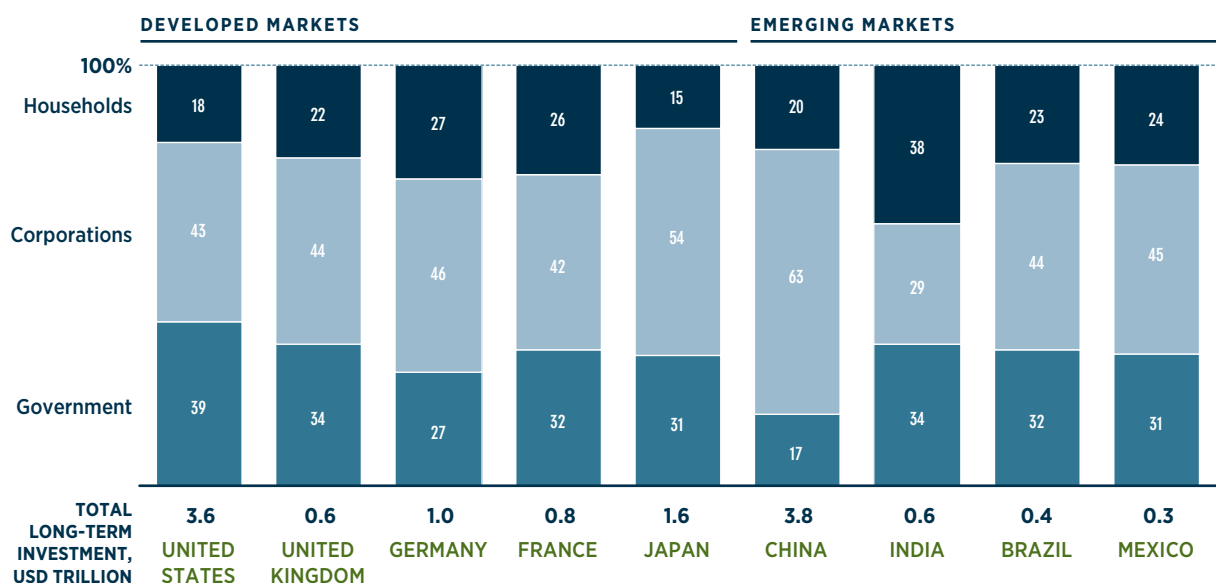
Banks provide only 19 percent of long-term external financing in the United States, while the remaining 81 percent is provided through capital markets. In fact, the diversity of financing methods available in the United States provides policy makers with useful templates to follow (such as deep and well-developed corporate bond markets) and cautionary tales of what can go wrong (such as securitization markets that operated without adequate transparency before the crisis and still rely heavily on two government-sponsored enterprises whose future status remains uncertain). Exhibit 6 shows that, by contrast, in major European economies bank lending accounts for 59 to 71 percent of external financing for long-term investment and 75 percent of financing in China.

## Government accounts for about 30% of long-term investment in most countries

### EXHIBIT 5

#### LONG-TERM INVESTMENT BREAKDOWN BY SECTOR

Percent of total long-term investment, most recent data (2011 or 2010), country sample represents over 60% of world GDP



NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute.



While banks have historically met a large part of financing needs due to their expertise in credit origination and monitoring functions, bank loans are not the most appropriate instrument for all types of long-term financing. As shown in Exhibit 7, commercial bank loan maturities average only 2.8 years in emerging economies compared to 4.2 years in developed economies. These terms are far shorter than either investment-grade or high-yield bond maturities; in developed countries, these are 8.0 years and 7.7 years, respectively, and in emerging markets they are 6.0 years and 6.9 years, as shown in Exhibit 8. Overreliance on bank lending thus undermines the fact that long-term finance is best delivered by intermediaries and instruments with long time horizons.

Moreover, a significant share of bank lending prior to 2008 was financed in short-term wholesale markets. This created an excessive maturity mismatch. When liquidity in that market dried up and short-term interest rates spiked during the financial crisis, the inherent instability of this financing model was laid bare.<sup>10</sup>

Mortgages make up more than half of all long-term lending in the sample countries (with the exception of China, where banks lend mainly to nonfinancial corporations). In the United States, long-term finance for residential real estate is largely provided outside the banking system, since a significant share of the mortgage loans originated by banks are subsequently sold to two large government-sponsored enterprises to be securitized and sold to investors. In theory, this model

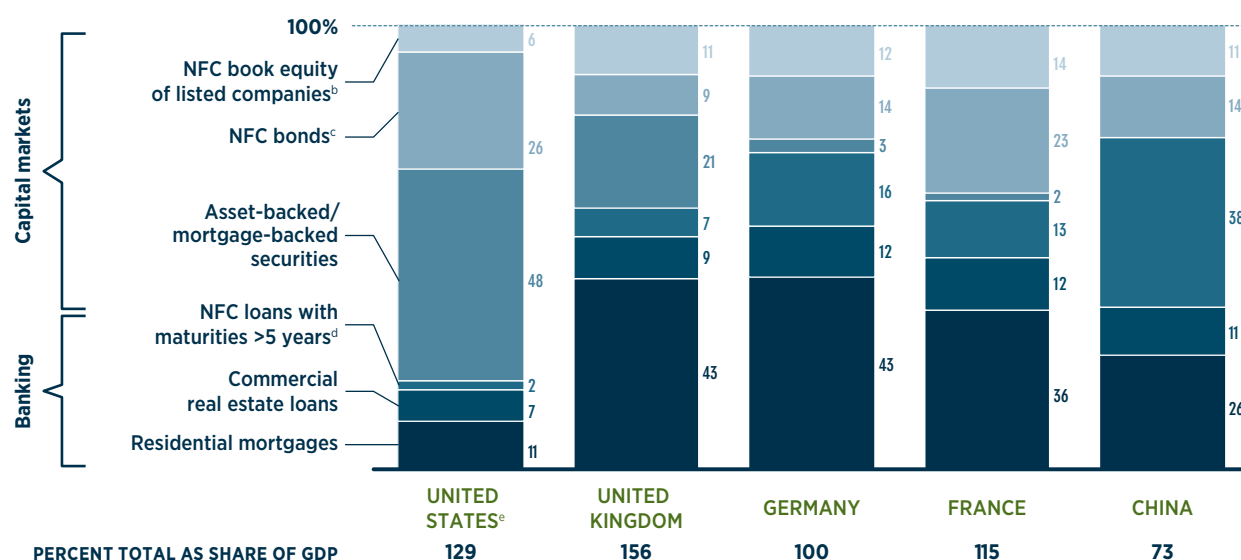
10 See Raghuram Rajan, *Fault Lines: How Hidden Fractures still Threaten the World Economy* (Princeton, NJ: Princeton University Press, 2010).

**Banks provide over 50% of external long-term financing<sup>a</sup> outside the United States, mainly through residential mortgages**

**EXHIBIT 6**

**TYPES OF DOMESTIC LONG-TERM FINANCING OUTSTANDING, 2011**

Percent of total domestic long-term financing



a External long-term financing here includes nonfinancial corporations' (NFCs') book equity, NFC bonds, asset-backed/mortgage-backed securities, longer maturity NFC loans, commercial real estate loans, and residential mortgages. Part of book equity are changes in retained earnings, which could be classified as internal.  
b Calculated by dividing total market capitalization by the average price-to-book ratio for NFC for each economy, and therefore covers only public (listed) companies. Due to data unavailability, the equity of private companies is not included.  
c Used Bank for International Settlements' data for bonds outstanding to be consistent with corporate bonds data.  
d We estimate the portion of 5-year maturities using a broader set of loans.  
e US bank lending includes loans to domestic and foreign entities. The other countries include only domestic entities as counterparties.

SOURCE: McKinsey Global Institute.



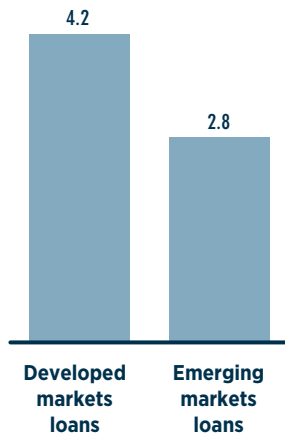
## Bank lending is typically short term, especially in emerging markets

### EXHIBIT 7

#### BANK LENDING MATURITIES

##### AVERAGE MATURITY<sup>a</sup>

Years

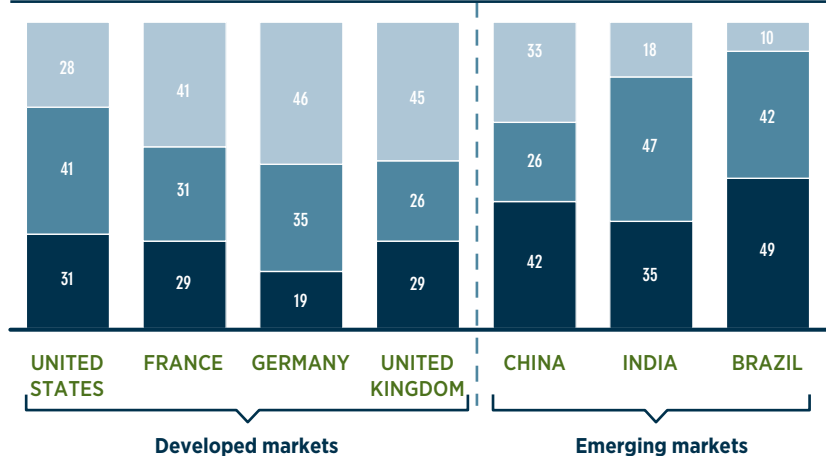


##### PROPORTIONS OF MATURITIES

Loans outstanding, percent

Over 5 years 1-5 years Up to 1 year

Bank lending<sup>b</sup>



NOTE: Numbers may not sum due to rounding.

a Calculated using the countries and weights from the chart on the right, using 0.5, 2.5, and 8 years as average maturities for each category.

b Bottom-up analysis of banks' balance sheets for banks representing at least 70% of the total market share in each country, except for China and India (top ten banks used for both) and European countries (all domestic banks with assets above USD 5 billion used).

SOURCE: McKinsey Global Institute.

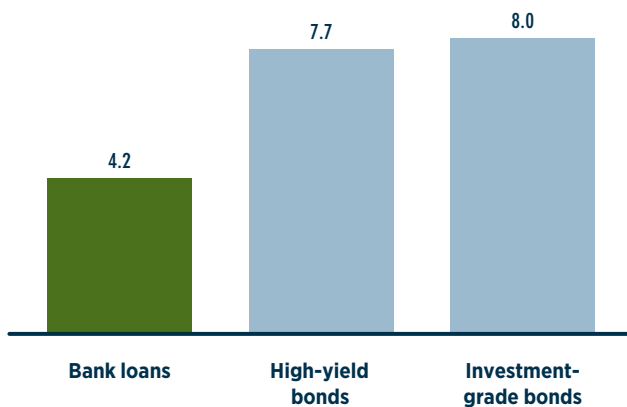
## Corporate bonds have significantly longer maturities than bank loans in both developed and emerging markets

### EXHIBIT 8

#### AVERAGE MATURITY OF FINANCIAL INSTRUMENT<sup>a</sup>

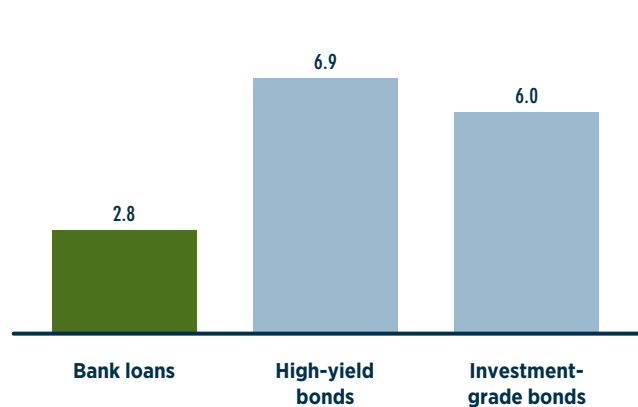
##### DEVELOPED MARKETS

Years



##### EMERGING MARKETS

Years



a Based on 3-year weighted average of maturity from sample countries (the United States, the United Kingdom, Germany, France for developed markets; China, India, Brazil for emerging markets).

SOURCE: McKinsey Global Institute.

## WHY MORTGAGE LENDING IS NOT NECESSARILY FINANCE FOR LONG-TERM INVESTMENT

Mortgage lending typically involves long-maturity loans. However, not all investment into housing fits our definition of long-term investment. In emerging markets, where populations are growing and moving into cities, investment into housing for these populations clearly expands the nation's productive capacity. It facilitates movement of people from rural areas into cities, where their productivity rises. Urbanization also provides citizens with better access to health care, education, and sanitation services. Mortgage lending for expanding the housing stock in these countries thus represents finance for true long-term investment.

In advanced economies, however, there is already extensive housing stock, and most mortgage lending supports the purchase of existing residential properties, not construction of new ones. In these cases, mortgages do not finance an expansion of productive capacity in the economy, but may be viewed instead as supporting the consumption of housing. Exceptions to this would include the finance of construction of new residential buildings to support rising household formation, and investments in retrofitting existing housing stock to improve energy efficiency (which would improve overall economic productivity by reducing energy costs and also reducing carbon emissions).

should disperse mortgage credit risk. However, just under 20 percent of the investors who bought mortgage-backed securities before the financial crisis were commercial banks and savings institutions, while mutual funds held just over 10 percent; these institutions sometimes used short-term borrowing to buy these assets. Just over 15 percent of those securities were held by the government-sponsored institutions themselves. As

a result, mortgage credit risk was not being dispersed beyond the financial system.

Going forward, policy makers can reduce the instability that accompanies maturity mismatches by creating incentives for investors with long time horizons to finance long-term investments.

### Potential long-term investors are increasingly constrained in their ability to provide financing

Pension funds, sovereign wealth funds, insurance companies, endowments, and foundations would all be ideal candidates to provide long-term financing, given their long investment horizons. At the end of 2010, these investors had assets of roughly US\$57 trillion; we project that these institutional investors will see asset growth of up to US\$3 trillion per year in real terms by 2020.<sup>11</sup> This raises the prospect that they could supply up to half of the external financing needed for long-term investments in major economies.<sup>12</sup>

Today, as shown in Exhibit 9, these investors do allocate a substantial share of their portfolios to long-term instruments, including equity, private equity, and other illiquid long-term investments. Some of their investments in fixed-income instruments, such as corporate bonds, are also long term. Even so, there is an opportunity for them to invest more into long-term financing. And in some

cases, such as European pension funds and insurance companies, we have seen a major shift out of long-term assets over the last decade, in response to market developments and risk assessments.

Several factors limit the incentives of these investors to provide more long-term financing. When performance measurement and compensation are tied to benchmarks that are measured quarterly, fund

11 See McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

12 We project annual long-term investment will reach US\$18.8 trillion in real terms by 2020 in nine major economies. Currently, about one-third of long-term investment is financed through external sources (the remaining two-thirds is financed through governments, corporate retained earnings, and household savings). This implies that external financing will be needed for around US\$6.25 trillion of long-term investment in these sample countries.

managers that ride through short-term market movements are penalized. In addition, many fund managers face explicit guidelines on their portfolio allocations that limit equity exposure, private equity, and other alternatives, and even the international share of assets.

These constraints on institutional investors undermine the principles for efficient provision of long-term finance discussed in Chapter 1. In addition to diminishing the overall supply of savings available for long-term investment, these limitations prevent mobilization of a pool of investors with the appropriate time horizons; reinforce reliance on bank lending, thus failing to broaden the instruments used for project finance; and restrict cross-border investment that can match savings in one country with long-term investment opportunities in another. Changes to governance and accounting rules should ease these constraints and enable institutional investors to play a greater role.

## PENSION FUNDS

Because they have clearly defined long-term liabilities, traditional defined-benefit pension funds would seem to be particularly well suited as a source of finance for long-term investment. Globally, these funds have roughly US\$16 trillion in assets.<sup>13</sup> But many defined-benefit funds around the world, both public and private, face substantial financing shortages that have intensified short-term performance pressures. In addition, pension fund accounting encourages risk-mitigation strategies that have steered defined-benefit funds toward low-risk fixed-income securities and away from higher-risk, higher-return equity investment. Not only does this decrease the supply of risk capital, but it also homogenizes the investment approaches of pension funds, creating a lack of diversification that has negative implications for financial stability.

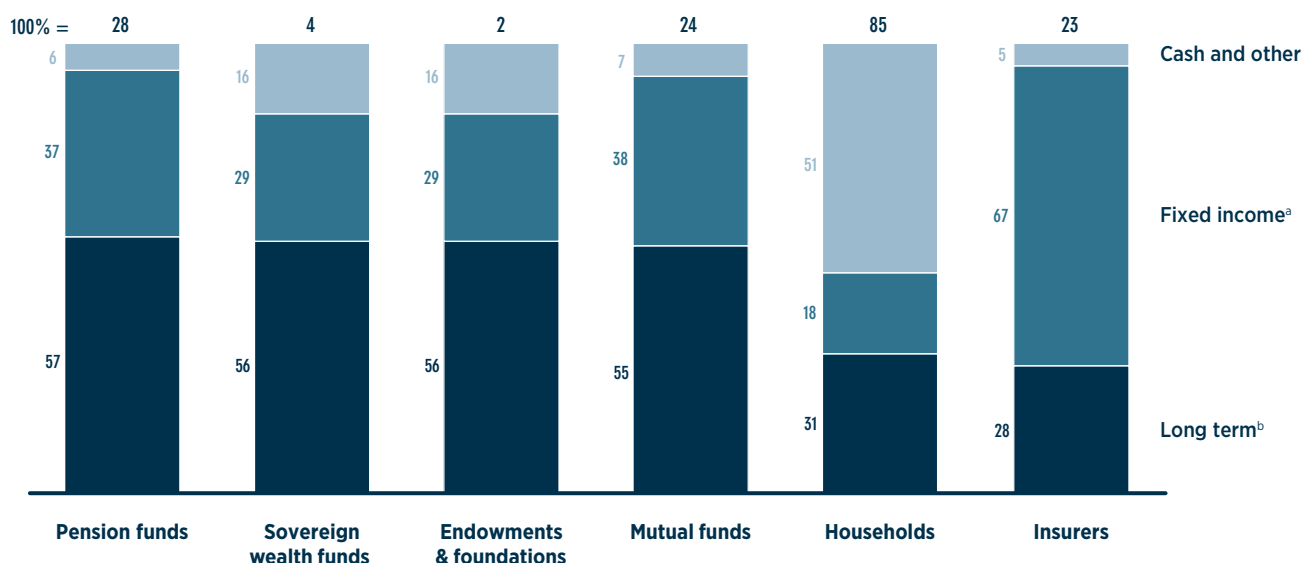
13 This includes both public sector pension funds (although not pay-as-you-go systems) and private sector defined-benefit funds.

## Institutional investors hold long-term assets, but have room to increase the proportion

### EXHIBIT 9

#### INSTITUTIONAL INVESTORS' ASSET ALLOCATION, 2010 OR LATEST

Percent of portfolio, USD trillion



NOTE: Numbers may not sum due to rounding.

a Fixed income includes some risky long-term investment, such as corporate bonds, but the data are unavailable for a further breakdown.

b Long-term investment defined as equities and 80% of alternative assets; cash and other includes cash and 20% of alternative assets.

SOURCE: McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

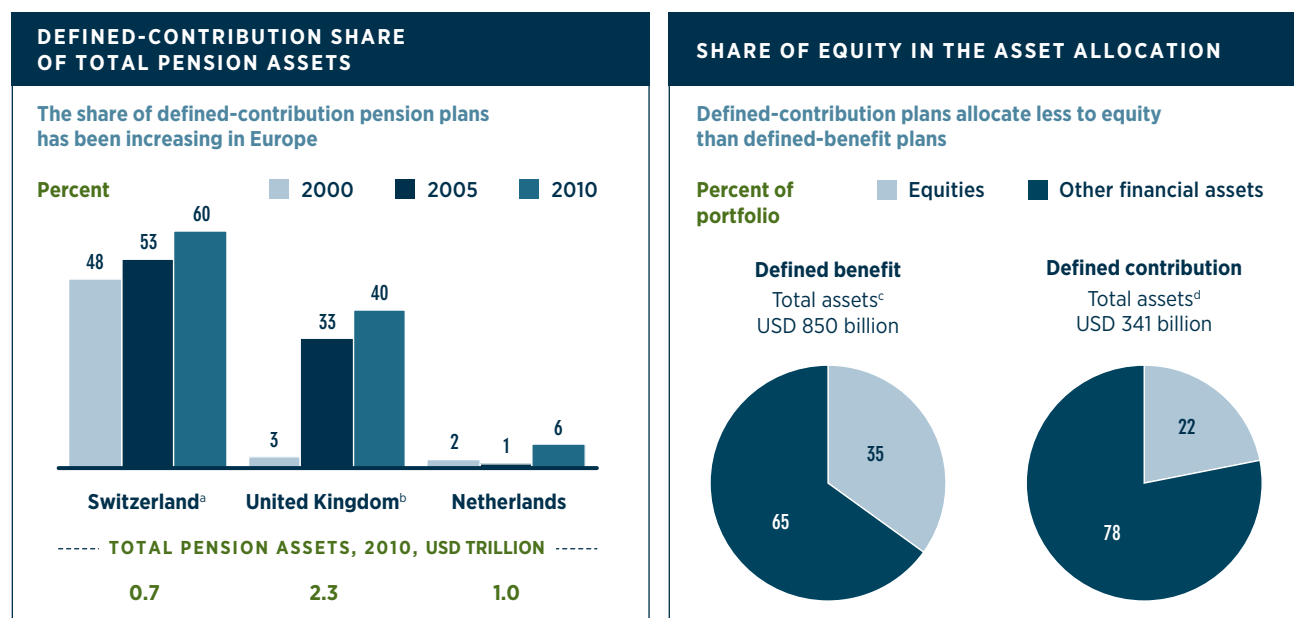
In most advanced economies, defined-contribution retirement plans are supplanting the defined-benefit model, a trend driven by increased longevity and the chronic underfunding of defined-benefit plans. As a share of all pension assets, defined-contribution plans have risen from 3 percent in 2000 to 40 percent in 2010 in the United Kingdom, as shown in Exhibit 10; in the United States, they have risen from 27 percent to 30 percent.<sup>14</sup> Because participants choose their own asset allocations, these plans typically have a simplified menu of investment options relative to those available to professional pension fund managers. They also have lower contribution levels than defined-benefit schemes

in all countries that lack a compulsory savings program (such as Australia and Singapore). Outside the United States, where individual investors still have a relatively strong appetite for equities, participants in defined-contribution plans have much lower allocations to equities and other long-term financing instruments; Exhibit 10 also illustrates the divergence between the two different types of plans in Europe. The shift to defined-contribution plans has thus unintentionally constrained the provision of long-term finance in two ways: by reducing the quantity of funds in retirement plans, and by shifting the allocation of these savings toward instruments with lower risk and lower return.

14 McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

### The rise of defined-contribution pension plans in Europe will lead to a further shift out of equity

#### EXHIBIT 10



a In Switzerland, defined-contribution stands for funds where the plan sponsor shares the investment risk and all assets are pooled. There are almost no pure defined-contribution assets where members make an investment choice and receive market returns on their funds.

b UK data do not include personal and stakeholder assets but do include insurance-administered vehicles. If the latter were excluded as well, the proportion of defined-contribution assets would fall to 25%.

c Allocation based on a sample of the following plans: ABP, Alecta, ATP, FRR, PFZW, Royal Dutch Shell, Universites Superannuation, Varma.

d Allocation based on a sample of the following plans: Barclays Bank UK, Bayerische Versorgungskammer, British Coal Pension Schemes, BT Group, Ilmarinen, PFA Pension, Royal Bank of Scotland Group, Royal Mail.

SOURCE: McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

Exhibit 11 shows that allocations to equities in both types of pension funds (defined-contribution and defined-benefit) have dropped by 22 percent in the United Kingdom, 17 percent in the Netherlands, and 9 percent in Switzerland since 2001.<sup>15</sup> In the United Kingdom, pension funds now hold more bonds than equity for the first time since the 1950s.<sup>16</sup> While a significant proportion of corporate bonds and alternative assets do provide long-term financing, at least 50 percent of European pension funds' fixed-income assets are in government bonds. Much of this debt is used to finance fiscal deficits and current expenditures rather than long-term investment.

Pension funds in emerging markets are small, partly due to legal and regulatory obstacles, contributing to the lack of long-term financing supply. For example, in 2010, total pension assets were 20 percent of GDP in Brazil, 9 percent in China, 7 percent in Mexico,

and 5 percent in India, compared to 103 percent for the United States. (An exception is Chile, which introduced a compulsory funded pension system in 1981; by the end of 2011, the nation's pension assets stood at 53.8 percent of GDP.) Although pension assets are increasing rapidly in emerging markets (between 15 percent and 34 percent per year for this sample compared with growth of 4 percent in the United States), pensions still have a relatively small presence.<sup>17</sup>

## SOVEREIGN WEALTH FUNDS

Sovereign wealth funds (SWFs), with over US\$4 trillion in assets, represent another set of potential long-term investors. These funds are able to adopt long-term investment strategies. A 2011 report by the International Monetary Fund (IMF) highlights the increasing importance of SWFs in long-term finance,

15 This includes both defined-benefit and defined-contribution schemes.

16 "Cult of equity killed off by pension funds," *Financial Times* (November 8, 2012).

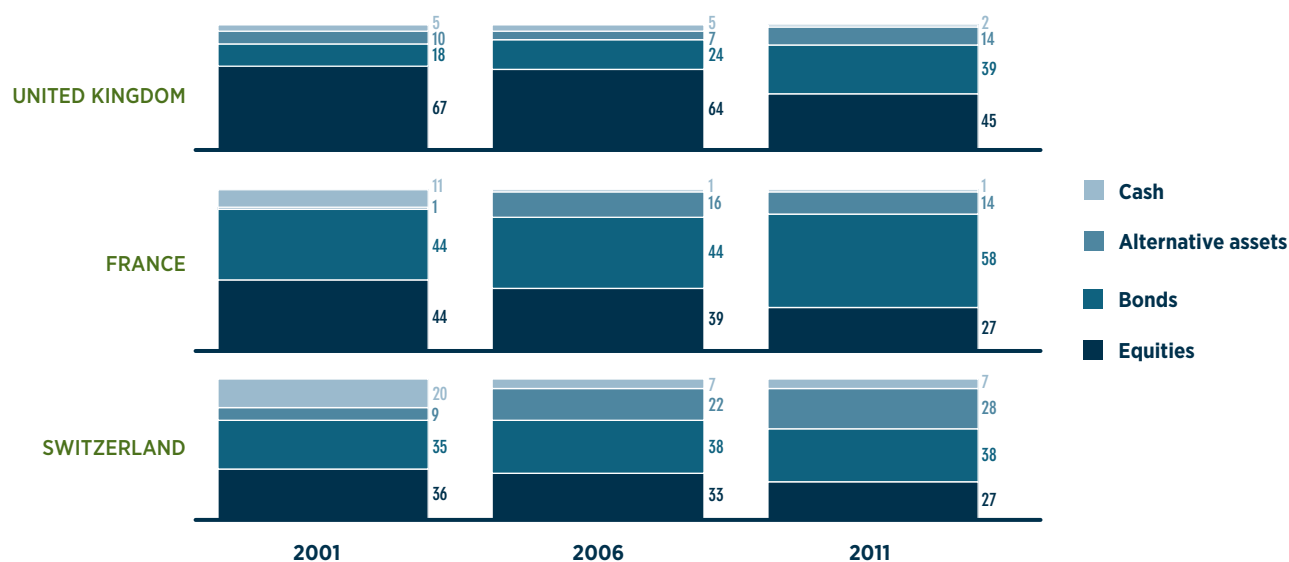
17 Ibid.

## European pension funds have been shifting out of equity, toward bonds and alternative assets

### EXHIBIT 11

#### EUROPEAN PENSION FUNDS ASSET ALLOCATION

Percent of portfolio



SOURCE: McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

since they have typically increased their investments in equities and alternative assets since 2007.<sup>18</sup>

Some funds are instead mandated to focus on fiscal stabilization, resulting in large shares of their portfolios held in cash or in other liquid instruments such as low-risk government debt. These types of SWFs—estimated to be less than 10 percent of the total—are not providers of long-term finance.<sup>19</sup>

However, a larger set of SWFs are investing national wealth for future generations. While there are many different types of funds in this category, these are typically very sophisticated, professionally managed investors that have highly diversified portfolios across both instruments and geographies. A majority of their investments are in long-term finance, either through equities, real estate, private equity, or direct stakes in infrastructure and other projects.

Emerging markets today have a significant opportunity to shift some of the excess central bank reserves they hold into diversified sovereign wealth funds. To be sure, emerging markets learned a bitter lesson in 2007 when they were unable to cope with strong foreign capital outflows and ensure an orderly depreciation of their currencies. However, many countries today have built up reserves that exceed the level necessary for ensuring financial stability. At the end of 2011, central banks of developing countries collectively had US\$6.4 trillion of foreign reserve assets. In many countries, this far exceeds the level that economists consider necessary for financial stability and liquidity for balance of payments.<sup>20</sup> In the major Asian countries alone, there could be US\$3 trillion to US\$4 trillion of central bank

reserves that could be invested through diversified SWFs. This represents a substantial potential pool of capital to fund long-term investments.

## INSURERS

Insurance firms, like pension funds, have long-dated liabilities that should enable them to prudently invest for the long term. However, over the last decade, many have reduced their allocation to asset classes such as equities, as they sought to manage risks, and they are unlikely to increase these holdings going forward.

This is a particularly striking trend in Europe, driven by management-led risk-reduction strategies over the last 10 years and, more recently, by anticipation of Solvency II regulations. Solvency II assesses capital charges for risky assets, with the highest charges assigned to non-unit-linked equities and longer-dated or lower-rated corporate bonds.<sup>21</sup>

Although these new capital adequacy standards do not take effect until at least 2014, European insurers have already reduced their holdings of equities outside unit-linked businesses and may continue to do so, constraining the insurance sector's role as a potential investor in equity. Exhibit 12 indicates that between 2001 and 2010, insurers in Western Europe reduced their allocation to equities by 11 percent outside their unit-linked businesses, and correspondingly increased their fixed-income holdings.<sup>22</sup> By moving out of equity, they have reduced their holdings of risk capital, since a significant portion of their fixed-income investments are in government bonds.

18 International Monetary Fund, "Long-term Investors and their Asset Allocation: Where Are they Now?" *Global Financial Stability Report* (September 2011).

19 McKinsey Global Institute estimate based on data from Peter Kunzel et al., "Investment Objectives of Sovereign Wealth Funds – A Shifting Paradigm," International Monetary Fund Working Paper (January 2011).

20 There are two commonly used rules of thumb. First is the Greenspan-Guidotti rule, which asserts that foreign exchange reserves should equal a country's short-term foreign liabilities. This would cover the full impact of a sudden foreign capital outflow. Another measure states that countries should maintain reserves to cover three to six months of the cost of their imports.

21 Solvency II requires that assets be marked to market and that liabilities be discounted at risk-free rates. It also requires insurers to hold capital against unexpected losses with a probability of 99.5 percent over a one-year horizon.

22 For more information on the strategies of insurance companies and pension funds in the context of new regulations, see Bank for International Settlements, Committee on the Global Financial System, "Fixed-Income Strategies of Insurance Companies and Pension Funds" (Basel, July 2011); or International Monetary Fund, "Long-term Investors and their Asset Allocation: Where Are they Now?" *Global Financial Stability Report* (Washington D.C., September 2011).



Further development of insurance markets in developing countries represents a large opportunity. In 2010, life insurance gross written premiums were only 1 percent of GDP in both Brazil and Mexico compared with 7 percent in France and the United Kingdom. Life insurers, in particular, would be a good source of long-term finance (since property and casualty insurers need to hold more liquid assets for shorter-term payouts). Policy actions should help spur development of these markets, creating new long-term investors to fund growth.

### Long-term financing in many countries rests on a narrow range of instruments

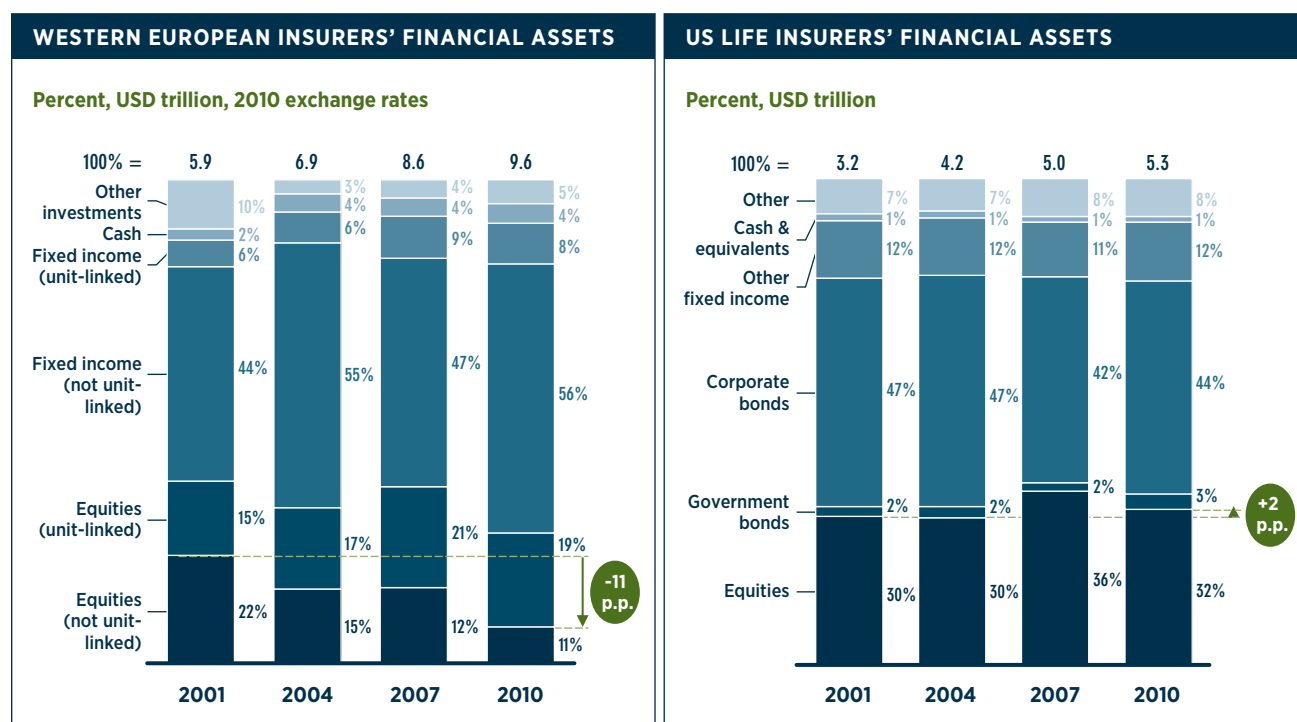
While bond, equity, and securitization markets are mature and liquid in the United States, this is not the case in much of the world, as Exhibit 13 illustrates.

Capital markets complement the traditional and central role of banks as credit intermediaries and lending entities. Without deep capital markets, long-term investment in many nations relies on a narrow set of financial instruments, including some with short maturities or volatile underlying financing sources. This undermines one of the key principles for an efficient market for long-term finance. Taking steps to expand access to suitable financing options, including corporate bonds, equity, and some basic securitization of loans, is a crucial part of ensuring that long-term investment is sustainable and sound.

Corporate bonds, as noted above, offer longer maturities than bank loans, making them a desirable vehicle for companies seeking to finance new plants, machinery, software, or commercial buildings. However, corporate bonds are issued only by very

## European insurers have been decreasing their allocation to equities outside their unit-linked businesses since 2001, in contrast to US insurers

### EXHIBIT 12





large companies; 80 percent of bonds issued in the United States and Europe are from companies with US\$500 million or more in revenue (this is true in the high-yield market, as well). There is a large scope to increase the size of corporate bond markets in Europe and in emerging economies. For example, if companies with more than US\$500 million in revenue in Canada, France, Germany, Italy, Japan, Spain, and the United Kingdom were to obtain 80 percent of their credit from bonds rather than loans (less than what we observe in the United States for companies of this size), the corporate bond market would grow by US\$2.7 trillion (or 32 percent). This analysis demonstrates the potential effects of increasing the size of the corporate bond markets and does not suggest an

immediate ability to move in that direction, but rather that it could occur over a much longer period of time.

Bank lending in Europe will, of course, remain an important source of financing. As already highlighted in Exhibit 6, banks currently provide over 50 percent of external long-term financing. Relative to institutional investors, banks have superior risk-assessment and monitoring capabilities that support their credit origination. There is no reason why, with the right regulations in place and with industry collaboration to define standards, more small business loans should not be packaged into securities and sold to investors, enabling banks to extend more loans.

With the right incentives and oversight, development of both securitization and corporate bond

## Corporate bond markets and securitized loans remain small outside the United States

### EXHIBIT 13

#### DEBT FINANCING OF NONFINANCIAL CORPORATIONS PER REGION

USD trillion, year end 2011



SOURCE: McKinsey Global Institute Financial Stock Database 2012, McKinsey Global Institute analysis.

markets should unlock a significant source of long-term finance and help banks reduce the size of their balance sheets. Our analysis finds that expanding Europe's corporate bond and securitization markets to the same level as those in the United States could, for example, free up more than US\$300 billion in Tier 1 capital for European banks. This is equivalent to at least 30 percent of the equity in all banks in France, Germany, and the United Kingdom today. Securitization is unlikely to reach this scale in Europe, at least within the foreseeable future. However, this estimate illustrates the scope to increase credit provision to businesses in Europe by accelerating the growth of securitization from its current low levels.

Emerging economies account for a rising share of the world's wealth, and their share of financial assets is projected to nearly double by 2020, as shown in Exhibit 14. But borrowers have a particularly narrow range of financing instruments, because corporate bonds, securitization, and even equity markets remain underdeveloped in most economies. Savings are either channelled into banks or into nonproductive investment vehicles such as precious metals. Bank lending provides the majority of financing in most of these economies—and in China, banks account for 75 percent of financing.

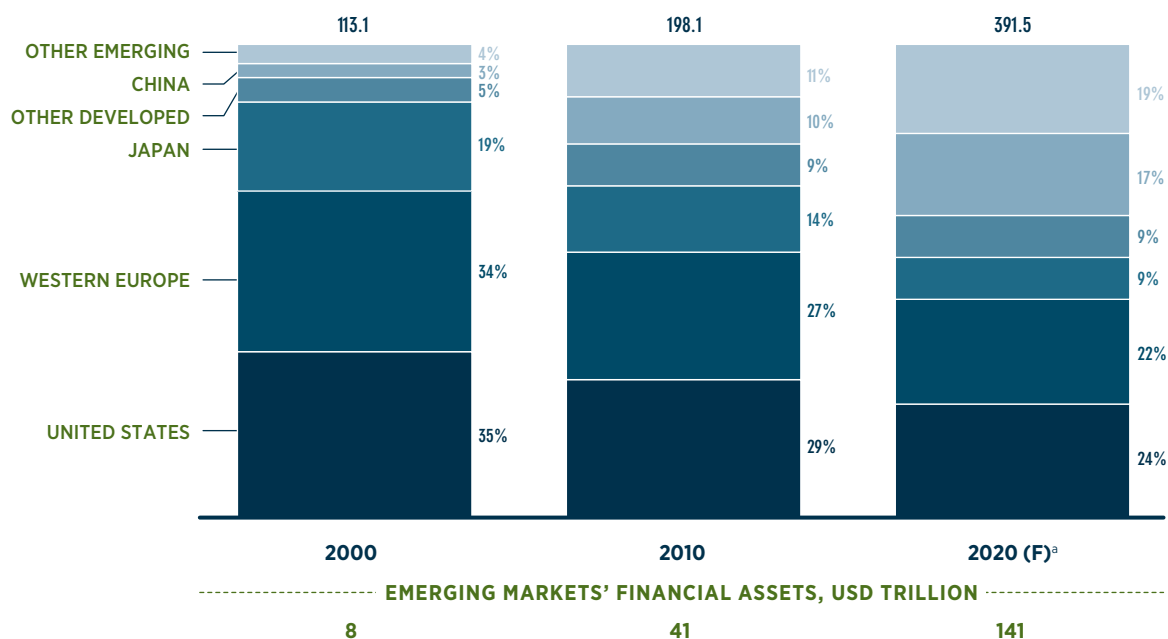
The development of debt and equity capital markets in emerging economies is particularly crucial

**Due to high savings and fast GDP growth, emerging markets' share of financial assets is projected to nearly double by 2020**

#### EXHIBIT 14

#### TOTAL FINANCIAL ASSETS, 2010–2020F

Percent, USD trillion



F = Forecasted

a Assumes consensus GDP forecasts for individual countries and that emerging markets' currencies appreciate vis-à-vis the US dollar.

SOURCE: McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).

to economic growth; Exhibit 15 shows that the corporate sector relies heavily on external financing for expansion. But market development is hindered by a complex set of interacting factors: lack of transparency in markets and corporate performance, lack of supervision in markets to crack down on fraud and market abuse, lack of channels for households to access these markets (for instance, through mutual funds), and lack of large institutional investors from pensions and insurers that form the basis of trading in a market.

Corporate bonds make up less than 10 percent of debt financing in emerging economies, while the value of securitized loans as a percent of GDP is less than 5 percent.<sup>23</sup> Equity markets may have large capitalizations, but in most countries they are dominated by nontradable shares owned by governments or corporate insiders. Public markets for equity would, by contrast, offer long-term financing and satisfy investor demand for liquidity. The “free float” on emerging market stock markets averages less than half of the outstanding shares.

23 McKinsey Global Institute, “Mapping Global Capital Markets 2011” (August 2011).

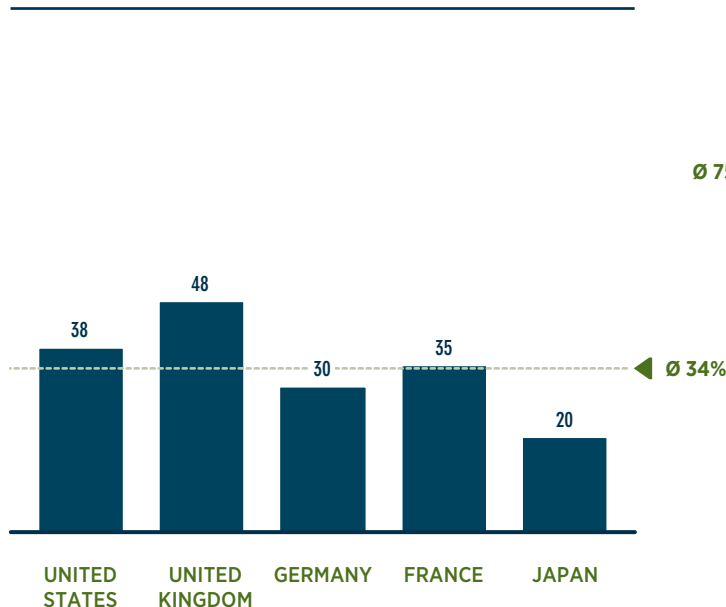
**In the corporate sector, investment is mainly financed through retained earnings in developed markets and debt and equity in emerging markets**

**EXHIBIT 15**

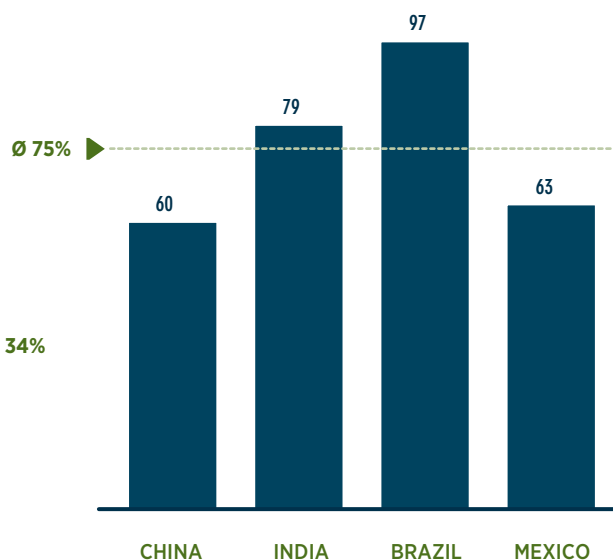
**SHARE OF CAPITAL EXPENDITURE FINANCED THROUGH DEBT AND EQUITY<sup>a</sup>**

Average debt and equity financing as share of capital expenditure, 1995–2010, percent<sup>b</sup>

**DEVELOPED MARKETS**



**EMERGING MARKETS**



Ø = Average

a Total annual change in debt and equity financing as a percentage of capital expenditure used to proxy share of external financing for largest public nonfinancial corporations by market share; capital expenditure includes corporate investment in tangible assets and does not include R&D or education.

b For Mexico, only 97 companies are available; for Brazil, China, France, and Mexico, 2001–2010 average used due to lack of data for previous years.

SOURCE: McKinsey Corporate Performance Analysis Tool, McKinsey Global Institute analysis.

## THE ROLE OF BANKS

Banks are a primary source of finance in most countries. However, a closer look at their balance sheets reveals that much of their activity is not the provision of long-term finance. In advanced economies, a large portion of their loan assets are in real estate (either via residential mortgages or commercial real estate). In fact, bank lending to nonfinancial corporations for purposes other than real estate represents a small fraction of their total balance sheet activity. Exhibit 16 shows this figure is less than 10 percent for countries such as France and Germany, and as low as 3 percent for the United Kingdom. The relatively low UK figure is partially explained by the larger balance sheet size; such loans are 19 percent of GDP, comparable to that of Germany, at 22 percent.

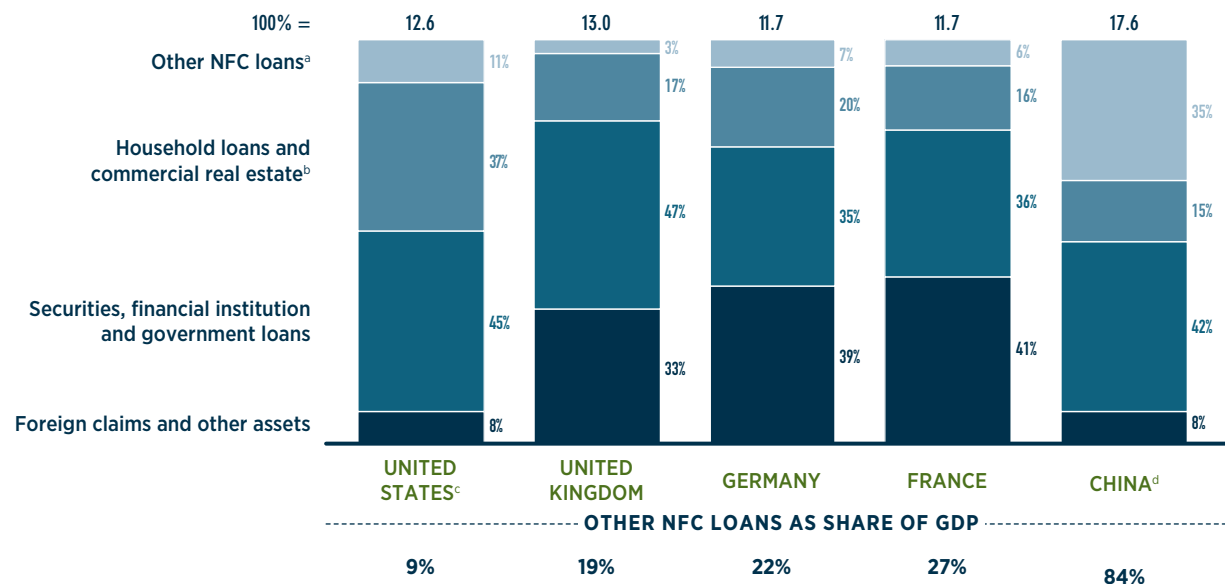
In the United States, bank lending to nonfinancial corporations for purposes other than real estate is slightly higher than Europe's level at 11 percent of balance sheet activity; however, such loans are equivalent to only 9 percent of GDP (reflecting, in part, the wider range of financing instruments available in the United States). Another large portion of bank assets are in lending to other financial institutions, governments, and holding securities (although a portion of these activities may indirectly contribute to long-term finance).

**As a share of total bank assets, lending to NFCs other than for real estate is small, at less than 10% in developed economies**

### EXHIBIT 16

#### TOTAL MONETARY FINANCIAL INSTITUTIONS' BALANCE SHEET ASSETS, 2011

Percent of total, totals in USD trillion



NOTE: Numbers may not sum due to rounding.

a Other NFC (nonfinancial corporation) loans include all NFC loans outstanding except for loans to commercial real estate sectors.

b Includes loans to households (including mortgages and consumer credit) and loans outstanding to commercial real estate sectors.

c The US balance sheets do not provide the domestic/foreign asset distinction. Foreign claims are claims on all counterparties outside of the country.

d The data set for China covers banks and finance companies (excluding Peoples Bank of China). China does not provide details on securities as opposed to loans (and advances), so the loan category includes securities to corresponding counterparties.

### Cross-border capital flows have been driven by short-term, volatile lending

In an ideal world, unconstrained cross-border flows of financial capital should facilitate more efficient matching of global saving and long-term investment, thus enabling investors with long time horizons to benefit from emerging market growth. Over the last decade in particular, however, cross-border capital flows were dominated by short-term bank lending rather than more stable portfolio flows and foreign direct investment (FDI), as the principles in Chapter 1 recommend.

Globally, cross-border capital flows increased from US\$4.9 trillion in 2000 to US\$11.7 trillion in 2007; nearly 60 percent of this growth was driven by cross-border lending (Exhibit 17). Such lending was often

short term in nature: 64 percent of cross-border bank claims had maturities of less than one year at the end of 2007, on the eve of the financial crisis. Ever since the financial crises that spread across Asia, Brazil, and Russia in the late 1990s, a growing body of research has shown that short-term bank lending was the primary source of capital flow reversals in those and other crisis episodes.<sup>24</sup> Our own analysis, shown in Exhibit 18, finds that the volatility of cross-border loans with maturities of less than two years has been greater than that of long-term lending, portfolio flows, or FDI in the last decade across both emerging and developed economies. FDI, in particular, has been substantially less volatile than all other types of cross-border investments, reflecting the long planning timelines and multi-year investments that are typically involved.

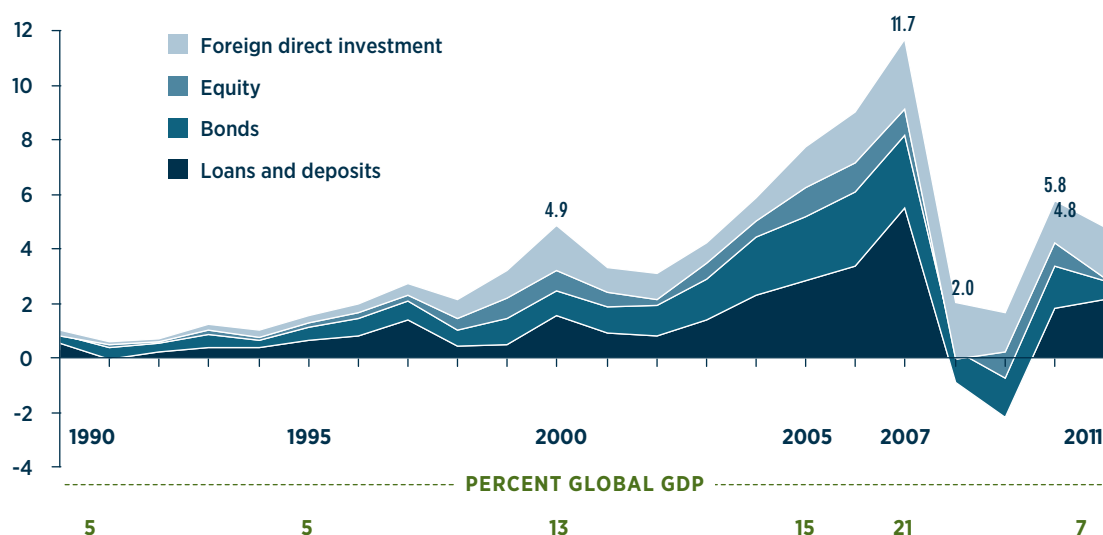
24 See Martin N. Baily, Diana Farrell, and Susan Lund, "The Color of Hot Money," *Foreign Affairs* (March / April 2000); or Graciela Kaminsky and Carmen Reinhart, "On Crises, Contagion, and Confusion," *Journal of International Economics* (June 2000).

**Having driven a substantial portion of flows from 2000 to 2007, cross-border loans dramatically fell away during the crisis**

#### EXHIBIT 17

### TOTAL CROSS-BORDER CAPITAL INFLOWS,<sup>a</sup> 1980–2011

USD trillions, constant 2011 exchange rates



a Flows defined as net purchases of domestic assets by nonresidents (including nonresident banks); total capital inflows comprised of inward foreign direct investment and portfolio (e.g., equity and debt) and lending inflows.

SOURCES: International Monetary Fund; McKinsey Global Institute.

Cross-border capital flows since 2007 have fallen precipitously, and they now remain nearly 60 percent below their precrisis peak. Approximately half of this drop was driven by the contraction in cross-border bank lending, primarily within Europe. The deleveraging of euro area banks continues to exert downward pressure on cross-border bank flows, particularly to emerging markets: the euro area banks' share of new syndicated loan issuance to emerging economies fell to 13 percent in the first quarter of 2012 compared with an average of 20 percent in 2011.<sup>25</sup>

Going forward, enabling more stable flows of long-term capital to countries with large investment needs must be a priority. Some countries, like China, may well have sufficient domestic savings to fund their growth (although China's aging population will likely dampen savings in the years ahead). But many rapidly industrializing and urbanizing emerging markets will

need foreign investors to help fund their large capital-intensive infrastructure, housing, and other projects. Appropriate incentives and mechanisms to facilitate long-term cross-border capital investments will need to be created.

## 2.3 Three trends are likely to constrain the future supply of long-term finance

By 2020, annual long-term investment in the nine major economies in our sample alone is projected to increase by roughly US\$7 trillion over current levels. But three major trends on the horizon are likely to constrain the future supply of long-term finance. In the absence of adequate responses to these trends, prospects for achieving the levels of annual long-term investment consistent with consensus growth forecasts assumed in our investment demand projections will

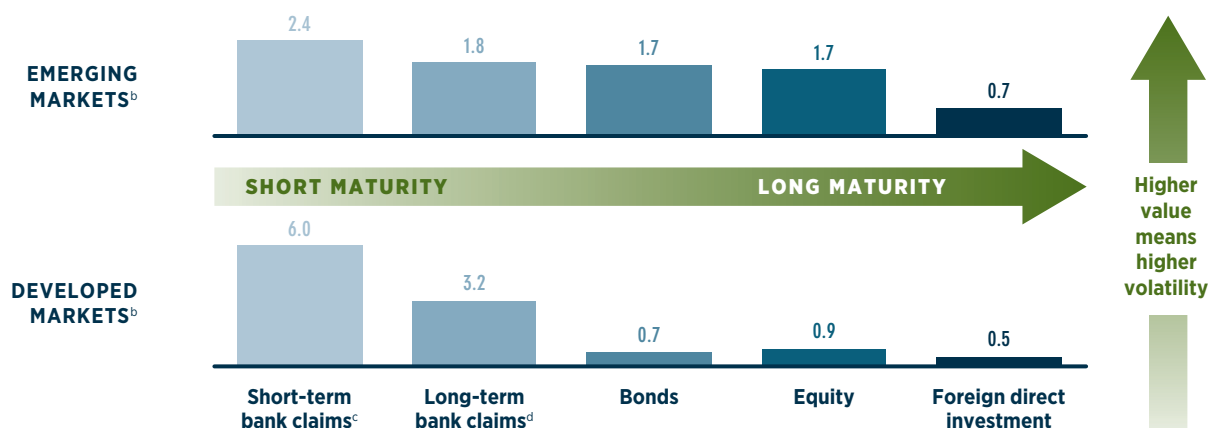
25 Bank of England, "Financial Stability Report" (June 2012).

**Across both emerging and developed economies, cross-border bank claims have been more volatile than bond and equity flows**

### EXHIBIT 18

#### COEFFICIENT OF VARIATION OF INWARD CROSS-BORDER FLOWS BY MATURITY<sup>a</sup>

2000Q1–2011Q4



a Coefficient of variation defined as standard deviation normalized by the mean; calculations are made on quarterly data.

b Sample includes 29 developed markets and 120 emerging markets.

c Bank net acquisition of cross-border loans and other debt assets in emerging and developed economies, with maturity less than or equal to two years.

d Bank net acquisition of cross-border loans and other debt assets in emerging and developed economies, with maturity more than two years.

SOURCES: Bank for International Settlements; International Monetary Fund; McKinsey Global Institute.

be greatly reduced. In these circumstances, long-term economic growth and future job creation may well be jeopardized.

The cost of capital will rise to adjust to any divergence between the demand for and the supply of long-term financing. This implies that some projects will not be undertaken, dampening economic growth and social progress. To overcome the effects of these trends, policy makers will need to find new ways to encourage more saving and to more efficiently channel existing savings into long-term investment.

### **Bank deleveraging and new regulation are contributing to a more restrictive lending environment**

Banks are undergoing a fundamental transformation, driven to a large extent by the overhaul of the international regulatory framework. In the aftermath of the financial crisis, they have also changed their business models by tightening underwriting standards or choosing to forgo certain types of lending altogether, reducing their share of higher-risk activities that require higher regulatory capital. They are also responding to a renationalization of regulation, national ring-fencing and regulatory initiatives that could result in a troubling fragmentation of markets.

Part of this trend reflects the industry's reversion to historical norms and more prudent practices after a leverage-fueled credit boom. However, since banks currently provide the majority of external financing for long-term investments around the world, especially outside the United States, a tighter overall lending environment is likely to restrict the supply of long-term finance.

The banking industry is also adjusting to new regulatory regimes and higher capital requirements designed to increase the stability and resilience of the financial system. But regulatory changes will likely have unintended consequences—and in this case, measures

designed to discourage excessive risk-taking may also reduce lending for business expansion and productive activities.<sup>26</sup> Basel III, in particular, raises the cost for banks to issue long-term corporate and project finance loans above the cost of issuing mortgages and short-term loans. These additional capital requirements reflect the higher risk of long-term lending, which, precrisis, was not adequately backed by capital. However, given the difficulties banks face in expanding their capital bases, it is likely that banks, especially in Europe, will be constrained in their ability to lend for long-term investment projects.

This is not to argue for a reversal of the new capital regime, which is needed to ensure the stability of the banking system. Rather, it is to argue for a more activist and comprehensive approach by policy makers to facilitate the development of new sustainable and secure sources of finance, beyond bank lending, for small and midsize businesses. Properly implemented, these developments should make financial intermediation more efficient and robust, thus supporting job creation and economic growth without undermining financial stability.

Deleveraging has thus far taken place through raising additional capital rather than shrinking bank balance sheets. But this disguises a significant shift in the composition of bank assets that is under way, particularly in Europe. In the euro area and the United Kingdom, annual net new lending by banks to nonfinancial corporations (NFCs) is down from a peak of over €650 billion in 2007 to only €40 billion in 2011. Exhibit 19 shows that loans with maturities of less than one year are the only category of NFC lending that is still growing in the euro area. The stock of NFC loans with maturities greater than five years has been shrinking. Meanwhile, European banks have reduced cross-border lending and purchases of foreign bonds and other securities by US\$3.8 trillion, according to data from the Bank for International

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26 These potential effects are considered in the Financial Stability Board report “Identifying the Effects of Regulatory Reforms on Emerging Market and Developing Economies” (June 2012) ([http://www.financialstabilityboard.org/publications/r\\_120619e.pdf](http://www.financialstabilityboard.org/publications/r_120619e.pdf)) and the B20 report “The Impact of Regulatory Reforms on Emerging Markets” (June 2012). (See glossary for description and members of the B20).



Settlements. This is reducing the availability of long-term finance far outside the euro area.

Bank lending has held steadier in the United States, and foreign claims of U.S. banks have continued to grow (although not enough to replace the withdrawal of euro area bank lending). Lending to the corporate sector continues to grow, although it remains at only a quarter of its precrisis peak; the last two-and-a-half years have produced a quarterly average of US\$140 billion in net new lending to NFCs compared to approximately US\$600 billion in average quarterly lending pre-2007. One reason for the decline is the stagnant commercial real estate market. Residential mortgage finance in the United States, too, has yet to recover from the housing market meltdown, and the stock of outstanding residential mortgages has shrunk by nearly US\$1 trillion so far.

### Necessary fiscal consolidation will diminish governments' ability to fund infrastructure, education, and R&D in the near term

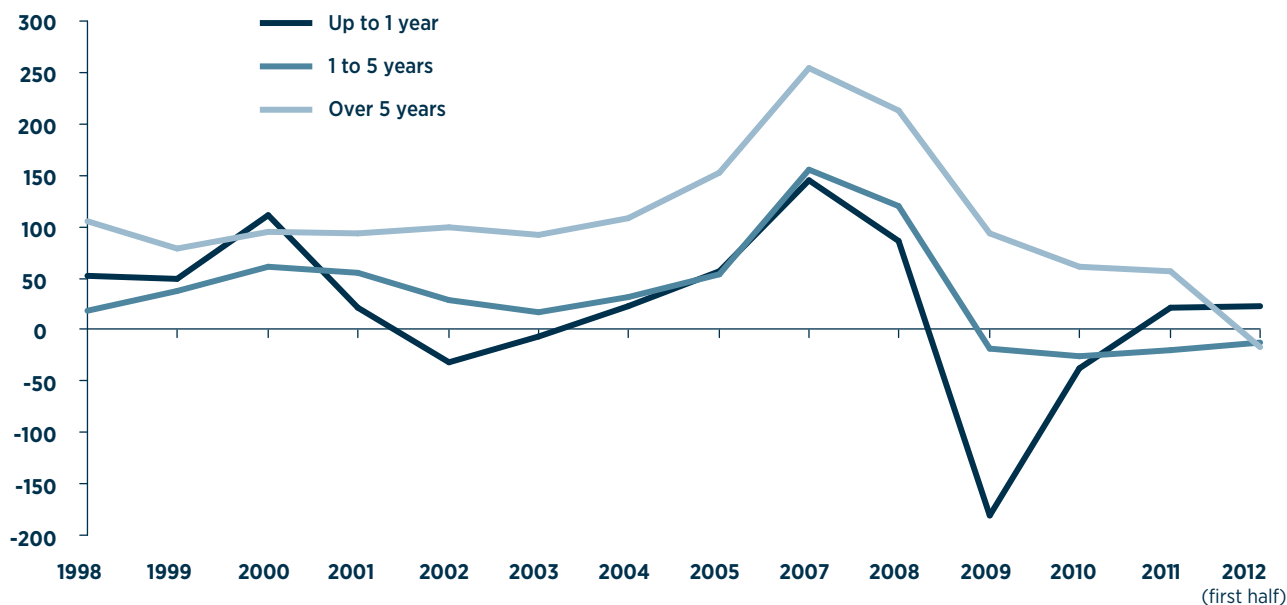
Government is a key actor in long-term investment, financing on average one-third of it in most countries (primarily consisting of spending on education and infrastructure). But in the years ahead, government resources are likely to be constrained. Mature economies are struggling to manage a necessary debt consolidation process in an orderly way. Given the extreme weakness of the recovery to date, this process will likely require a large and prolonged component of fiscal tightening, since economic growth is expected to remain at moderate levels and inflation low. By 2014, the IMF estimates that debt levels will be 113.8 percent of GDP in the United States, 96 percent of GDP in the United Kingdom, and 92.9 percent of

**In the euro area, all net new bank lending to nonfinancial corporations is for maturities of one year or less**

#### EXHIBIT 19

#### EURO AREA ANNUAL NET NEW LENDING TO NONFINANCIAL CORPORATIONS

EUR billion



SOURCES: European Central Bank; McKinsey Global Institute.

GDP in France. The situation is particularly acute in Japan, where government debt is projected to grow to 246.2 percent of GDP.<sup>27</sup>

Fiscal consolidation over the medium term is therefore necessary in many countries, as shown in Exhibit 20. For example, if the United States government is to restore government debt to 60 percent of GDP by 2030, it will have to embark on fiscal tightening equivalent to just under 13 percent of GDP. For governments to be able to provide long-term investments in the medium term, it is imperative that they restore their public finances to good health over the short term. Otherwise, interest payments on

government debt will be enormous and government borrowing will be unsustainable.

Indeed, healthy public finances are an important foundation of financial stability; as shown currently in the eurozone, uncertainty in sovereign debt markets has a spillover effect to other financial markets, increasing risk aversion and reducing the availability of risk capital.

However, this inevitable period of consolidation will impact the supply of long-term finance for investments in which the public sector has traditionally played a large role. In periods of consolidation, governments tend to focus on cutting investment rather than

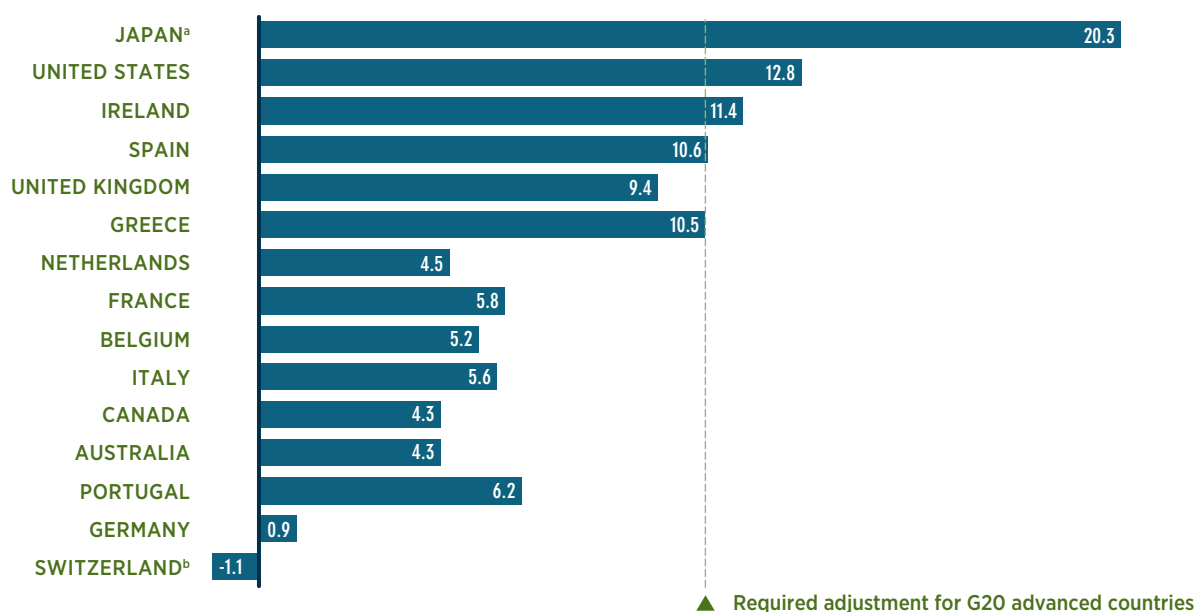
27 International Monetary Fund, “Fiscal Monitor: Taking Stock – A Progress Report on Fiscal Adjustment” (October 2012).

## Restoring government debt to 60% of GDP by 2030 will require painful fiscal adjustment in many countries

### EXHIBIT 20

#### FISCAL TIGHTENING REQUIRED 2011–2020 TO MEET GROSS GOVERNMENT DEBT TARGET OF 60% OF GDP BY 2030

Percent of GDP



NOTE: Countries are assumed to undergo a gradual transition in their primary balance over 2011–2020 and maintain a constant primary balance after 2020.

a Japan's target for fiscal adjustment is set at 80% of GDP.

b Switzerland's target level is to stabilize debt at the end-2011 level by 2030.

SOURCES: International Monetary Fund Fiscal Monitor October 2012; McKinsey Global Institute.

expenditures, a trend that could particularly affect investments in infrastructure and education (Exhibit 21 shows the extent to which governments drive infrastructure spending). In identifying budget cuts, policy makers should be mindful of targeting sectors where they can minimize the impact on long-term investment and growth.

Going forward, the private sector will need to finance more investment in both infrastructure and education to fill the gap created by reduced government spending. New intermediaries, incentives, and instruments would be needed to facilitate this. Public-private partnerships, for example, can be a helpful way for public funds to leverage private capital in the funding of long-term projects, particularly in infrastructure or other projects with a public good focus. They also help to bring in private sector expertise in the management of long-term projects.

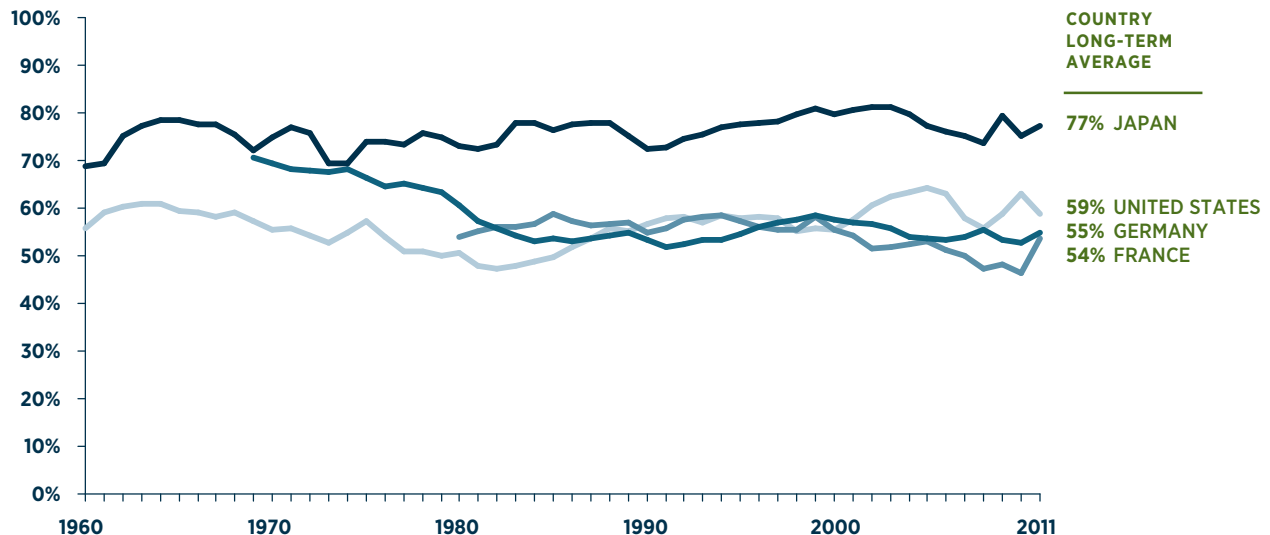
## Aging populations are likely to shift their portfolios out of equities and other long-term instruments

Aging is one of the most powerful demographic trends at work in mature economies, including Australia, Canada, Japan, the United States, and Western Europe, and in lower-income countries such as China, and nations in Eastern Europe. Exhibit 22 offers clear evidence that older investors have already shifted their financial portfolios toward lower-risk assets such as deposits and fixed income as they age. Future aging will amplify a trend already under way in Europe, where households reduced their equity holdings from 37 percent to just 29 percent of financial assets in the decade from 2000 to 2010, following large losses in the stock markets after the dot-com bubble. Moreover, if pension funds are unable to meet households'

**Government austerity plans may reduce future infrastructure investment, since governments currently fund over half**

### EXHIBIT 21

#### PUBLIC SHARE OF INFRASTRUCTURE INVESTMENT



NOTE: Public investment includes investment in highways and streets, transportation, power, sewer systems, water systems, education, and health care structures. Private investment includes private investment in nonresidential structures in power, communication, and other (about 30% of total, including religious, educational, vocational, lodging, railroads, farm, and amusement and recreational structures, net purchases of used structures, and brokers' commissions on the sale of structures, roads, and highways).

SOURCE: McKinsey Global Institute.

needs due to unfunded liabilities and lower yields, this will increase the trend of depleting savings.

Reduced investor demand for equities and long-term corporate bonds will curtail the availability of long-term finance. Equity is a crucial source of long-term finance for corporations, because it enables risk sharing with outside investors, but the cost may increase significantly in the face of declining demand.

China, too, is facing the economic and policy challenges of an aging population. As the government develops health insurance and pension systems, households will feel less pressure to save for health care and retirement in the future. The nation's high household savings rate would be expected to decline as the working-age population declines—a trend that will start as early as 2014.

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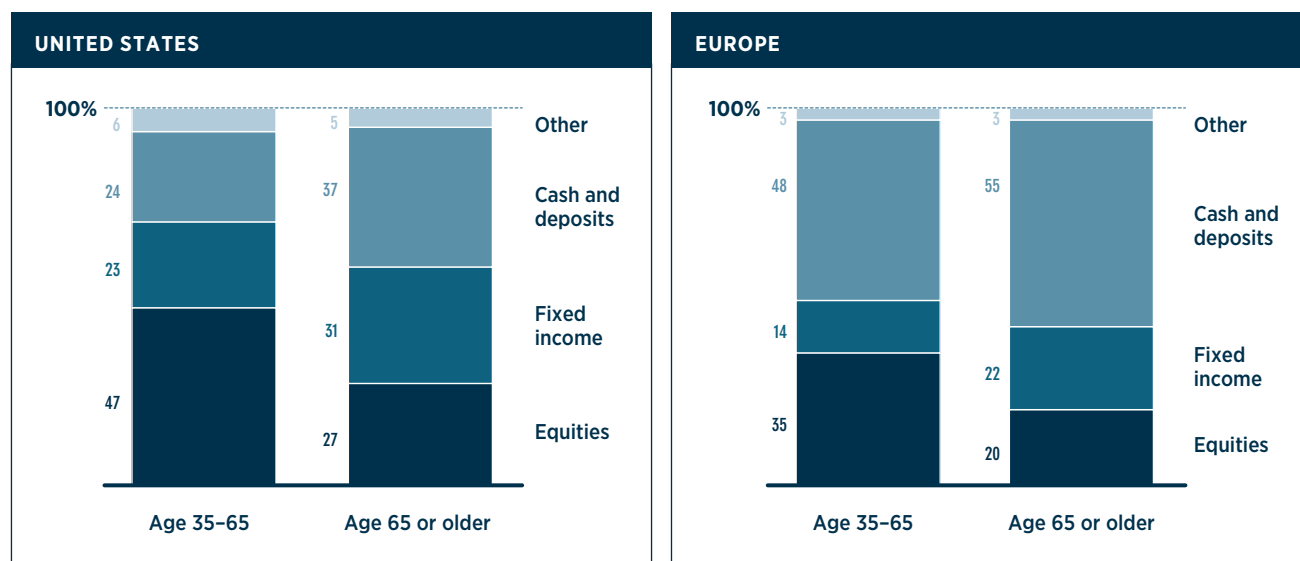
Providing sufficient capital to support long-term investment is one of the essential functions of the global financial system, but the current system falls short of efficiently fulfilling that role in a number of dimensions. Financing for long-term investment has to date been too often provided by short-term bank lending, with too few choices of instruments for borrowers to use. Potential long-term investors such as pensions, insurers, and sovereign wealth funds remain underdeveloped in many regions and face constraints on their investment portfolios in the regions where they do have a large presence. Cross-border flows of capital could support long-term investment where it is needed most, but in the last decade it has entailed mainly short-term and volatile cross-border lending. Looking into the future, questions loom about whether the overall supply of financing will be adequate to meet the world's investment needs. As a result, there needs to be a regime shift in the way long-term finance is provided.

#### As investors age in the United States and Europe, they shift to lower-risk assets

### EXHIBIT 22

#### HOUSEHOLD ASSET ALLOCATION BY AGE COHORT<sup>a</sup>

Percent of total assets



<sup>a</sup> Excludes retirement assets.

SOURCE: McKinsey Global Institute, "The Emerging Equity Gap: Growth and Stability in the New Investor Landscape" (December 2011).



# **Addressing the Challenges:**

## **3. Objectives and Specific Proposals**





The tenuous nature of the global recovery calls for a renewed focus on sustaining economic growth and job creation. Investing for the future is a fundamental component of that task, yet, as the previous chapters have described, multiple barriers exist that may hamper long-term investment in the years ahead.

It is a challenge that calls for a multifaceted response—and many aspects of the problem can be addressed through policy interventions that maintain (or even enhance) the stability of the financial system.

The G30 Working Group on Long-term Finance examined a full range of possible policy responses to support the growing need for long-term financing. The result is a wide-ranging set of policy ideas organized around a set of core objectives. These should not be construed as formal recommendations that carry the unanimous endorsement of all members of the Working Group. Instead, we have detailed a wide array of possible responses that merit further public debate.

There is no one authority that can drive change in this arena. Implementing different policy options requires action by different players, including regulators, national governments, and private industry. The potential impact of recommendations made to private industry is inevitably even less certain than the potential impact of changes in regulatory or accounting rules. However, we believe it is valuable to describe the full range of actions that could be undertaken by various

stakeholders in order to support long-term investment that will spur economic growth and job creation.

The policy proposals are designed to help achieve five objectives:

**Objective I: Ensure investors are better able to take a long-term horizon in their investment decisions.**

(Proposals 1–3)

**Objective II: Create new intermediaries and instruments geared toward the provision of long-term finance.**

(Proposals 4–7)

**Objective III: Develop debt and equity capital markets in order to promote a broad spectrum of financing instruments.**

(Proposals 8–11)

**Objective IV: Ensure that cross-border flows support the efficient global allocation of capital to long-term investment.**

(Proposals 12–13)

**Objective V: Strengthen systemic analysis when setting future regulatory policy.**

(Proposals 14–15)

## OBJECTIVE I

### Ensure investors are better able to take a long-term horizon in their investment decisions.

This is an essential component of ensuring that the provision of long-term finance is built on a stable foundation. If investors' incentives promote short-term horizons, there is a risk that long-term investment will rest on unstable short-term financing—and as the financial crisis illustrated all too vividly, widespread maturity mismatches increase risk for the whole financial system. We therefore propose the following set of policy actions to help address these issues.

◆ **Proposal 1: National regulators and international bodies such as the IMF, World Bank, OECD, and the Financial Stability Board should propose new best-practice guidelines to promote long-term horizons in the governance and portfolio management of public pension funds and sovereign wealth funds.**

- ◆ **Proposal 1a:** Use of performance and asset allocation models that rely excessively on performance relative to market benchmarks are inherently procyclical and should be discouraged. Funds should use transparent and appropriate measures of returns that are consistent with long-term investment horizons, building on work already under way or recently completed.<sup>28</sup>
- ◆ **Proposal 1b:** The governing bodies of sovereign wealth funds and public pension schemes should be strengthened and given the necessary independence in decision making. The boards should have the right mix of skills to design, assess, and challenge long-term investment strategies.<sup>29</sup> An up-front longer-term commitment to board membership among incoming

board members would also create incentives for longer-term planning and strategy.

- ◆ **Proposal 1c:** Incentive pay could also be reconfigured to ensure a focus on longer-term returns. Portfolio managers' bonuses (especially those of senior managers) should be conditional on their performance over a longer defined period, and bonuses for senior managers should be conditioned on a period of no less than three years.<sup>30</sup> This should be driven by the goal of making smart medium-term asset allocation decisions in the context of a long-term policy portfolio.

In addition to these guidelines for public pension funds and sovereign wealth funds, similar actions by private asset managers would be desirable. It is possible that such action could be facilitated by the development of industry guidelines, although the impact of such guidelines is less certain than the impact of changes in public policy.

- ◆ **Proposal 2: National policy makers should consider steps to differentiate between short-term and long-term debt (whether public or private), and weighing the pros and cons of phasing out the preferential treatment of sovereign debt in insurance and bank regulation over an extended time horizon.** This would remove the distortion that favors allegedly “safe” assets such as government bonds and increase insurers' incentives to invest in corporate bonds, equity, and other long-term instruments.<sup>31</sup> Such a change would need to be introduced gradually, over a lengthy period of time, to prevent disruptions in sovereign debt markets. It should be conducted in a way that does not increase overall capital costs for banks and insurance companies.

Short-term horizons are currently indirectly promoted through regulatory and accounting treatments

28 See, for instance, “The Kay Review of UK Equity Markets and Long-Term Decision Making,” UK Department for Business Innovation & Skills (July 2012).

29 For a discussion of board roles and financial institutions, see “Toward Effective Governance of Financial Institutions,” Group of Thirty (2012).

30 The Financial Stability Board's *Principles and Standards for Sound Compensation Practices* could serve as a useful template to ensure the proper alignment of incentives to risk outcomes and their time horizon.

31 International Monetary Fund, “Safe Assets: Financial System Cornerstone?” *Global Financial Stability Report* (April 2012).



that favor mark-to-market accounting and low-risk liquid assets. Governance models and incentive compensation that focus on quarterly or one-year returns reinforce investors' short-term focus.

◆ **Proposal 3: The Financial Stability Board, in coordination with relevant standard-setting bodies, should review the regulatory and accounting treatments of assets held with long-term horizons to avoid excess focus on short-term market volatility.** Relevant securities include those that are highly affected by stress scenarios but maintain their long-term value provided there is no pressure to sell in the short term. For such investments, it would be desirable to move away from mark-to-market accounting for assets with fixed cash flows and a “value at risk” calculation based on a one-year time horizon.

Any new accounting treatments should not discriminate against long-term commitments of equity and debt holdings; in addition to the accounting treatment of assets or liabilities, standard-setters should also reassess the reporting of financial performance so that the income statement better reflects the way that the business is managed.<sup>32</sup> An example of alternative accounting methods for insurers includes the proposed “matching” premium, where an adjustment could be made to the discount rate used in the calculation of liabilities based on the yield that could be earned on the assets held by the insurers to meet the relevant liabilities. By linking the accounting value of liabilities to that of the assets, the insurer can avoid exposure to short-term volatility in the market value of assets it is committed to hold until maturity.

Furthermore, some form of countercyclical measures should be incorporated within the capital framework for insurance companies to avoid any unintended consequences that a market-consistent valuation approach might bring in times

of distressed market conditions, such as worsening solvency positions triggering higher surrenders by policyholders or the forced sale of assets by insurers. An analogous example in the banking sector would be the countercyclical capital buffer. Such countercyclical measures should not be unidirectional in nature, but remain relevant over cycles of market stress and exuberance.<sup>33</sup> New accounting approaches should aim to incentivize long-term horizons; at the same time, however, they should not disguise relevant risks reflected in asset volatility.

## OBJECTIVE II

### Create new intermediaries and instruments geared toward the provision of long-term finance.

The proposals listed under Objective I focus on removing biases in the asset allocation of investors who might otherwise invest for the long term. Here we set out proposals that can foster the development of new savings pools and the creation of instruments and intermediaries geared toward the provision of long-term financing without adversely impacting financial stability. They are meant to overcome behavioral biases against long-term saving, to address situations in which private investors cannot themselves capture all the social returns from long-term investment, and to correct imbalances that arise when other policy objectives bias asset allocations away from productive long-term investment. Three proposals in particular merit consideration:

◆ **Proposal 4: Create new instruments to enable the public sector to leverage private sector capital for long-term financing.** There are various ways to implement the principle of public-private cooperation. The subproposals below are examples of different options for achieving such cooperation.

<sup>32</sup> One possible treatment could be the use of so-called target-date accounting. For a discussion of the concept, see Appendix. An example of an alternative accounting method for insurers is the proposed “matching” premium, where an adjustment could be made to the discount rate used in the calculation of liabilities based on the yield that could be earned on the assets held by the insurers to meet the relevant liabilities. By linking the accounting value of liabilities to that of the assets, the insurer can avoid exposure to short-term volatility in the market value of assets it is committed to hold until maturity; however, such an approach can also give rise to the risk of using imprudently high discount rates for liabilities.

<sup>33</sup> The countercyclical premium under Solvency II has been criticized for being unidirectional and not countercyclical enough. A premium is added in times of stress, but no provision is made during periods of market exuberance.

- ◆ **Proposal 4a:** Establish new and workable models for public-private partnerships (PPPs) to mobilize private sector capital and expertise in funding and managing long-term investments. PPPs may have a role to play in funding projects related to the provision of public goods, such as infrastructure projects. Since some public-private initiatives have not been successful, it is important to focus on best practices that have underpinned success stories in this field. In particular, PPPs should have detailed business plans, with a defined dispute resolution process and clearly identifiable revenue streams. Moreover, PPPs should be supported by a transparent and sound regulatory framework.
- ◆ **Proposal 4b:** Government and multilateral development agencies should consider lowering the higher risks involved during the early phases of long-term projects, through the use of risk mitigation mechanisms such as credit/risk guarantees or the provision of bridge financing via direct loans. This provides a way for investors to enter markets and sectors that otherwise would remain unattractive or impenetrable due to high start-up risk and information asymmetries.
- ◆ **Proposal 4c:** Government and multilateral development agencies should use incentives and instruments to overcome other project-specific risks, political risks, or unfavorable financial market and macroeconomic conditions to encourage private sector project financing. These incentives and instruments could include credit/risk guarantees, first-loss provisions, public sector subsidies, availability of currency swaps, and others.
- ◆ **Proposal 5: Create dedicated long-term financing institutions.** Given the distortions that prevent many investors from capturing the returns from efficient long-term investing, there is a clear market opportunity for the public and private sectors

to work together to establish new lending institutions or investment intermediaries with long-term mandates. Such institutions can take many forms; examples include infrastructure banks, small and medium enterprise lending entities, and innovation funds. In sectors characterized by potential market failures (such as infrastructure finance or green finance) or in countries with underdeveloped financial systems, national policy makers should consider incentives to encourage the creation of private sector institutions to meet long-term investment needs. Public sector institutions such as infrastructure banks and small-business banks are another option, especially in emerging economies where market failures have limited the development of commercial sources for long-term finance.<sup>34</sup>

Such public sector institutions could directly provide project financing, or they could supply indirect financing via guarantees to the private sector. The latter option is particularly relevant in emerging markets where strong public balance sheets allow for credible commitments. An additional option is for such institutions to provide wholesale financing to private banks, which would then lend those funds to long-term projects. When creating new dedicated long-term finance institutions policy makers must guard against implicit government guarantees that could distort markets or the operation of the agencies themselves.

- ◆ **Proposal 6: Foster the development of long-term pension and insurance-based savings by, for instance, setting up compulsory auto-enrolled savings programs.** These would aggregate more savings into funds with long investment horizons, in particular, where household wealth is concentrated in bank deposits and other short-term instruments. This is particularly relevant for emerging economies where the low penetration of institutional investors is hampering the development of debt and equity capital markets. These policies should be decided on a country-by-country basis.

<sup>34</sup> Traditional development banks, with government capital and guarantees, may be required in some emerging economies; however, policy makers should encourage private sector initiatives where possible.

◆ **Proposal 6a:** Create supplementary pension and superannuation programs. Models for such programs include Australia's superannuation scheme, which requires employers to make compulsory minimum payments into a fund; and Chile's compulsory fully financed private pension system, whereby workers' earnings are set aside to fund retirement, disability, and survivor insurance.<sup>35</sup> These funds accumulate large amounts of assets that can be invested by professional asset managers into long-term financing instruments. For instance, Mexico's pension system, which was established in 1997 and is based on mandatory individual contributions, now manages assets corresponding to approximately 10 percent of the Mexican GDP. These funds are a major provider of long-term financing within the economy.

◆ **Proposal 6b:** Accelerate growth in insurance markets. For instance, national policy makers could give tax preferences for premiums, or incentivize auto-enrollment in insurance schemes where appropriate (for example, requiring auto insurance to register a new car).

◆ **Proposal 7: Redirect structural surpluses in national savings to diversified sovereign wealth funds with a long-term investment mandate.** Countries going through long periods with structural surpluses in national savings relative to national investment, particularly for demographic reasons, could increase the efficiency of savings by shifting these funds into diversified sovereign wealth funds (with the principles described in Proposal 2 applied), or using them as part of an overall asset-liability management strategy. This would apply to countries where such surpluses are long-dated, with no defined liabilities. This policy would not apply to countries where the short-term accumulation of reserves is necessary for self-insurance against

capital outflows and exchange rate support.<sup>36</sup> Nor would it apply in situations where surpluses are the result of monetary policy intervention (for example, quantitative easing) such that long-term investment of surpluses would make these policies nonreversible.

### OBJECTIVE III

#### **Develop debt and equity capital markets in order to promote a broad spectrum of financing instruments.**

An overreliance on banking finance can make long-term investment dependent on risky and volatile maturity transformation. With a broader range of long-term finance sources and instruments, financial systems are likely to become more resilient. Relative to the United States, long-term capital markets in Europe and emerging economies are underdeveloped. This restricts the range of financing instruments available to borrowers and savers alike. While it will take time to achieve a shift away from reliance on bank lending, fostering the development of capital markets would be a positive step. However, these policies need to recognize both (a) the lengthy time scale required to achieve a shift away from reliance on bank debt, and (b) the danger that securitized forms of debt can develop in ways that create risks similar to those posed by bank financing (for example, the precrisis shadow banking phenomenon). Proposals for consideration include:

◆ **Proposal 8: Implement the Financial Stability Board and standard-setting bodies' regulatory reforms to transform shadow banking into resilient market-based finance.** These include a range of policy measures to address weaknesses that made securitization markets unstable before the financial crisis, and to mitigate potential systemic risks associated with the shadow banking system. In particular, the reforms aim to increase disclosure,

35 Under Chile's private pension system, 10 percent of worker earnings is set aside to fund retirement, disability, and survivor insurance. An extra 2 to 3 percent is deducted to cover administration costs. The funds are invested in a centrally managed portfolio, and this has contributed significantly to the country's equity market development.

36 For more details on assessing reserve adequacy, see International Monetary Fund, "Assessing Reserve Adequacy" (April 2011).

realign incentives, increase standardization, and strengthen risk management in securitization markets. These markets could prove an efficient source of long-term finance, and confidence in the markets needs to be rebuilt through these reforms.

◆ **Proposal 9: Promote development of corporate bond markets and securitization of long-term debt, particularly in Europe and emerging markets.**

- ◆ *Proposal 9a:* The IMF in collaboration with the World Bank and relevant standard-setting bodies (such as the International Organization of Securities Commission [IOSCO]) should make recommendations on expanding the corporate bond market across regions where equity and/or bank financing dominate. While the development of such markets is likely to take considerable time, during which bank financing will continue to dominate, it is important to provide a minimum set of structures to support the shift from banking to capital markets. They should also deliver recommendations on harmonizing insolvency regulation and creating efficient posttrade clearing mechanisms in regions where they are lacking.
- ◆ *Proposal 9b:* Regulators should foster the development of private placement markets for corporate bonds by establishing standards for ratings (equivalent to the U.S. National Association of Insurance Commissioners system) and establishing an appropriate capital regime for institutional investors.
- ◆ *Proposal 9c:* Regulators and international standard-setting bodies (such as IOSCO) should create incentives and a regulatory framework for the development of securitization markets for long-term debt. While such markets exist in some countries for real estate lending, they should also be oriented toward expanding small and medium enterprise access to the capital markets. These markets should be based on

a sound regulatory footing, with standardized, plain-vanilla instruments, disclosure standards, and sufficient transparency along the intermediation chain. Implementation options to consider could include the development of international and national securitization agencies to play an aggregation and/or securitization role, the use of government guarantees, and the introduction of incentives for private institutions to develop such instruments.

◆ **Proposal 10: Develop the infrastructure for capital markets in emerging economies to lengthen financing horizons and diversify sources of funding.**

- ◆ *Proposal 10a:* Improve the legal and regulatory infrastructure, strengthen financial supervision, and promote transparency in equity markets in countries where these reforms are needed. Legal and institutional issues to be addressed include establishing clear creditor rights, prudential regulations, and insolvency regimes. Governance and information infrastructure issues include the development of credit information systems, accounting and disclosure rules, and internal and external auditing systems. In particular, regulatory changes in emerging markets should make it easier for companies to issue equity or corporate bonds. In countries where the legal codes and institutions have been created, ensure sufficient enforcement to enable the capital markets to function efficiently and protect the rights of creditors and minority shareholders.<sup>37</sup>
- ◆ *Proposal 10b:* Increase the ability of households to place savings in capital markets by promoting the use of mutual funds, exchange-traded funds, and retail brokerages. Provide widespread consumer financial education initiatives to explain the benefits of diversified sources of saving and of compounded annual returns.

<sup>37</sup> See Financial Stability Board “Financial Stability Issues in Emerging and Developing Economies” (October 2011) for more information on developing the necessary infrastructure to support financial market developments ([http://www.financialstabilityboard.org/publications/r\\_111019.pdf](http://www.financialstabilityboard.org/publications/r_111019.pdf)).



◆ **Proposal 10c:** Promote the regular issuance of long-term government debt and create the infrastructure for secondary market trading in order to establish a local currency yield curve. This is critical for the pricing of corporate bonds and other securities. It requires strengthening market infrastructure (for example, trading, depository, and clearing and settlement systems) and rationalization of tax impediments.

◆ **Proposal 10d:** Promote the development of other types of debt securities (for example, through tax preferences). These could include social venture bonds, infrastructure bonds, and covered bonds.

◆ **Proposal 11: Remove the bias against equity in countries where it is present.** Long-term finance can be provided in either debt or equity form; both methods have an important role to play in a resilient system of long-term finance. At present, however, many tax systems create a bias against equity investment. The case, in principle, for removing this bias is widely accepted, but little action has followed, reflecting in part the inherent difficulty of changing tax regimes without creating windfall winners and losers. However, the arguments in favor of action are sufficiently compelling that governments should seriously consider the options for national policy initiatives, and the case for coordinated action should be on the agenda for international discussion.

There are a number of policies that could be implemented. The double taxation of equity should be removed in countries where it exists. In advanced economies with mature debt markets, policy makers should consider changing the tax treatment of debt and/or equity in order to remove the bias, while also ensuring that policy changes are revenue neutral. One option would be to eliminate the tax deductibility of interest payments at the same time as lowering the marginal tax rate for corporates. An alternative option would be to apply tax deductibility to equity dividends at the same time as increasing the marginal tax rate. These options are presented as suggestions that require further discussion.

## OBJECTIVE IV

### **Ensure that cross-border capital flows support the efficient global allocation of capital to long-term investment.**

Long-term international capital flows can foster the allocation of capital to its most efficient use. However, as seen during the financial crisis, volatile short-term capital flows can create financial instability or result in significant capital misallocation, by causing dramatic capital flow reversals. The challenge to support economic growth with a stable supply of long-term finance is global in nature; as such, it requires a strong international financial system underpinned by stable cross-border capital flows. This is increasingly important given the global shift in investment needs from advanced to developing economies, as highlighted in our forecasts. We therefore include the following proposals designed to promote more stable, long-term international capital flows:

◆ **Proposal 12: Support the international diversification of investment portfolios in both developed and emerging markets.** National policy makers should reduce impediments to international portfolio diversification and promote the use of long-term cross-border investments. This will help facilitate the efficient cross-border distribution of capital. Chief among these barriers are the geographic restrictions imposed on many public pension portfolios and some insurance companies. These include cross-border investment limits and restrictions that have an indirect negative impact on cross-border risk-sharing (such as limits on equity, mutual funds, and other asset classes through which international diversification might be achieved, and impediments to hedging currency risk). Policy makers should also consider removing impediments to foreign direct investment, especially since this is a relatively stable type of cross-border financing. Regulations regarding cross-border resolution regimes should complement and help facilitate the removal of such impediments.

- ◆ **Proposal 13:** Move gradually toward liberalization of capital accounts in emerging markets while maintaining financial stability, using macroprudential policy tools.

- ◆ *Proposal 13a:* National policy makers should promote gradual liberalization of capital accounts in order to strengthen international risk sharing. As highlighted by the IMF, liberalization needs to be well planned and sequenced, with the appropriate degree of liberalization depending on whether a country has reached certain thresholds with respect to financial development.<sup>38</sup> There is a need for strong macroprudential tools and international cooperation to manage the financial stability risks associated with capital flows. Governments will need to track gross and net capital flows, and asset and liability positions, in order to meet financial stability objectives.

In particular, policy makers should design macroprudential tools at an international level to reduce incentives for short-term cross-border flows of less than one-year maturity, and to promote long-term foreign investment. These would discourage procyclical and potentially destabilizing volatility in short-term flows such as bank loans. Other measures include a reduction of biases in favor of debt over equity financing, since the latter is more stabilizing and increases international risk sharing.

- ◆ *Proposal 13b:* Policy makers should consider whether the IMF should be given jurisdiction over capital controls. The IMF currently has jurisdiction over restrictions made by member states on making payments and transfers for current international transactions; this could be extended to the capital account. This could provide benefits to the international financial system by removing arbitrary controls that impede efficient global allocation of capital. At the same time, it would allow the IMF to guide national governments in economies where temporary targeted restrictions may be necessary.

## OBJECTIVE V

### Strengthen systemic analysis when setting future regulatory policy.

Targeted regulation can support and promote long-term financing. However, the inherent complexity of regulation, across different financial sectors and geographies, engenders the potential for inconsistencies and conflicts among rules. This may produce unintended consequences that promote the use of short-term horizons and volatility, and this potentially undermines the goal of supporting diverse sources and providers of long-term finance. In addition to the specific policy proposals listed above, we make two recommendations relating to regulatory philosophy and to the analysis needed to inform future policy decisions.

- ◆ **Proposal 14:** Policy makers should consider the systemic impact of ongoing and future regulatory changes on long-term investment.

Policy makers should continue to review the broader systemic and macroeconomic impact of regulatory changes on the provision of finance to support long-term investment. Regulation should focus on reducing systemwide risks and making sure that no barriers to long-term investment are created. Current regulations typically focus on reducing risk at the level of the individual financial institution. For instance, existing proposals for Solvency II and Liquidity Coverage Ratios incentivize individual financial institutions to better match the duration of their assets and liabilities for liquidity and solvency reasons. However, at a macro level, such regulations may also create barriers to long-term investment. They can lead to a situation in which long-term investment is funded with short-term instruments, increasing procyclicality and leading to a build-up of risk at the systemwide level.

- ◆ **Proposal 15:** National authorities should improve the collection of data statistics on the supply of and demand for global long-term finance. International organizations such as the Financial Stability Board, the IMF, and the OECD

38 International Monetary Fund, “Liberalizing Capital Flows and Managing Outflows” (March 2012).



should consider developing guidelines for the collection and reporting of consistent and reliable data sets with the necessary information on trends in the supply of long-term finance. Key information

from these data sets should be shared not only with all relevant national policy institutions, but should also be used to facilitate international regulatory cooperation.

# Conclusion

The proposals enumerated in this report would increase the financial system's efficiency and align its incentives with the long-term investment needs of the real economy. They are designed to feed into the process led by the G20<sup>39</sup> and the Financial Stability Board of international economic diplomacy that has been under way since 2008 and that continues in 2013 under the Russian Presidency of the G20.

The solutions and proposals are designed to aid government policy makers, private sector actors, and investors as they seek to ensure the availability of sufficient resources to meet the long-term investment needs of the world at a level that will provide the foundation for sustainable economic growth in the years ahead. This process will be neither short nor easy, but the proposals, if acted upon, will help address weaknesses in the regulatory system and in the global financial markets, and will foster the growth of institutions and instruments designed to help provide the long-term finance necessary to achieve common economic goals.

Investors need to be encouraged to take a long-term horizon on their investment decisions. Short-term biases need to be dealt with. Changing investment incentives and the accounting rules under which actors operate so that they better foster long-term financial flows is essential.

Governments and supervisors should support existing and new intermediaries, institutions, and instruments that foster the provision of long-term finance, and should support the creation of new savings pools. The proposed changes not only recognize that the public sector cannot provide the flows, but also that private investors cannot capture all the social

returns from long-term investment. A combination of approaches, therefore, is warranted.

Debt and equity markets should be developed to increase the range of financing instruments available to borrowers and savers. With a broader range of long-term financing sources and instruments, financial markets are likely to become more resilient, but they must be supervised vigilantly so that developing risks can be identified as they emerge outside the banking sector. This process of market creation and development will take time and will vary from country to country and across regions.

Open markets foster economic growth, and cross-border capital flows assist in the efficient allocation of capital. The proposals in this report recognize that volatile short-term capital flows can create financial instability. Policy makers should strive collectively and internationally to support economic growth via a more stable supply of long-term finance that is global in nature.

Targeted regulation can support and promote long-term finance, but the inherent complexity of regulation, across different financial sectors and geographies, may produce negative unintended consequences at odds with the desired goal of sustainable economic growth supported by flows of long-term finance. It is essential, therefore, that policy makers continue to monitor the systemic impact of ongoing and future regulatory changes on long-term investment going forward.

As with earlier Group of Thirty studies since the financial crisis,<sup>40</sup> it is hoped that this report will add meaningfully to the public and private sector debate now under way and that it will have a measurable impact on the policies subsequently adopted.

39 The G20 (Group of Twenty) members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union.

40 See Group of Thirty, *Financial Reform: A Framework for Financial Stability* (2009); *Reform of the International Monetary Fund* (2009); and *Enhancing Financial Stability and Resilience: Macroprudential Policy, Tools, and Systems for the Future* (2010).

# Appendix: Long-term Accounting

## HOW CAN THE QUESTION OF LONG-TERM FINANCE BE RESOLVED WITHOUT LONG-TERM ACCOUNTING?

Accounting methods that embed a short-term horizon are a potential impediment to long-term finance. Given this, it is worthwhile considering a range of options for accounting methods. Here, we describe just one of many potential options, included as an example for consideration rather than a formal proposal. This approach, which we call “target-date accounting,” focuses on accounting for equities held for long-term investment purposes. Equity is well suited to financing long-term investments, and is an effective form of risk-absorbing capital. It not only supports productive investments in the real economy, but promotes financial stability, as well. However, in the context of mark-to-market accounting, the short- to medium-term volatility of stock prices may discourage investors from allocating a high proportion of their portfolios to this instrument.

Target-date accounting would address this issue by placing a diversified portfolio of equities into a “target-date fund” with a binding commitment to hold them for a long horizon (for example, five, ten, or twenty years). The manager could switch in and out of individual stocks but would need to remain invested in equities as an asset class. The fund would then be valued at a time-weighted average of cost and market value, thus smoothing out short-term volatility early in the life of the fund, but allowing for progressively greater recognition of volatility as the investments approach their maturity dates. This approach could be extended to setting regulatory capital, as well.

The regulatory capital held each year would be based on the shortfall risk versus the expected value of the fund at the target end date, rather than at a one-year horizon. Such an approach would lower capital requirements in the early years and avoid procyclicality, but capital requirements would still approach current regulatory levels as the target date nears. This approach would balance the need to take a long-term view with the need to ensure investors have sufficient capital to meet the risk of shortfall. Importantly, the relevant measure of shortfall is based on the likely value of the fund at a predefined target date, not the current valuation.

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