

McKinsey Global Institute



December 2011

# The emerging equity gap: Growth and stability in the new investor landscape



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# The emerging equity gap: Growth and stability in the new investor landscape

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# Preface

Inevitably, the diverging growth rates of developed and emerging economies will change how the world's wealth is distributed, shifting more of the balance toward the fast-growing economies of Asia and other regions. At the same time, aging populations and other factors are changing how wealth is invested in many developed economies. We undertook the research in this report, *The emerging equity gap*, to assess the impact of these trends on the global financial system over the next decade. We start by determining where financial assets are held today and how they are invested, and then project their growth rates and the effects of trends that are influencing investor behavior. Our goal is to better understand how shifting financial wealth and changes in investor behavior will affect the global capital market.

Our central finding is that, short of a very rapid change in investor behavior and adoption of new policies in the largest emerging economies, the role of equities in the global financial system may be reduced in the coming decade. This has important implications for economic growth, how companies fund themselves, and how investors reach their goals.

MGI leaders Susan Lund and Charles Roxburgh, along with Richard Dobbs, led this effort. Haihao Wu managed the project team, which included John Piotrowski and Emanuel Pleitez. Andreas Schreiner and Micha Wälchli conducted the initial phase of the study. Geoffrey Lewis provided editorial support, and we thank the MGI communications and operations organization—Deadra Henderson, Tim Beacom, Julie Philpot, and Rebeca Robboy—for their many contributions.

Distinguished experts from outside McKinsey served as academic advisers to this project. We wish to thank Sir Howard Davies, former Director of the London School of Economics and Political Science and currently Professor of Practice at the Institut d'Études Politiques in Paris; Richard Cooper, the Maurits C. Boas Professor of International Economics at Harvard University; and Rakesh Mohan, former Deputy Governor of the Reserve Bank of India and Professor in the Practice of International Economics of Finance, Yale School of Management.

This work also reflects the valuable insights of regulators, central bankers, chief investment officers, and other senior executives whom we interviewed in our research. In particular, we wish to thank James Davis, Vice President, Strategy & Asset Mix and Chief Economist, Ontario Teachers Pension Plan; John Foley, Group Chief Risk Officer and Director, Prudential PLC; Bob Hills, Glenn Hoggarth, and William Speller of the Bank of England; David Miles, member of the Monetary Policy Committee, Bank of England; Ali Toutounchi, Managing Director, Index Funds, Legal & General Investment Management; Lord Adair Turner, Chairman of the UK Financial Services Authority; Jack Weingart, Partner, TPG Capital; and Nigel Wilson, Group CFO, Legal & General Group.

We are indebted to many McKinsey colleagues who generously gave us their time and shared their expertise. These include Vivek Agrawal, Manu Balakrishnan, Pierre-Ignace Bernard, Stephan Binder Tab Bowers, Kevin Buehler, Daniele Chiarella, Beth Cobert, Toos Daruvala, Kito de Boer, Miklos Dietz, Heinz-Peter Elstrodt, Onur Erzan, Sacha Ghai, Philipp Härle, Helmut Heidegger, David Hunt, Vinayak HV, Alok Kshirsagar, Claude Kurzo, Kenny Lam, Diaan-Yi Lin, Heitor Martins, Salil Mathur, Christopher Mazingo, Jean-Christophe Mieszala, Joe Ngai, Rob Palter, Gary Pinkus, Emmanuel Pitsilis, Olivier Plantefève, Salim Ramji, Bruno Roy, Naveen Tahilyani, Jonathan Tétrault, Sergio Waisser, Jonathan Woetzel, and Jeffrey Wong. We are especially grateful to our colleagues at the Corporate Performance Center, who provided key analysis. In particular, we thank Tim Koller for his invaluable insights and Bin Jiang and Bing Cao for their help with our technical models.

Our goal is to quantify and assess the long-term trends that will shape capital markets in the coming decade. We hope that this work will help initiate a discussion among policy makers, corporate leaders, bank executives, and asset managers about the best path for the global capital market system. As with all MGI research, this research is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

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December 2011

# *Global financial assets today . . .*

## \$198 trillion

Total value of global financial assets in 2010,

**21%** in emerging economies

## \$85 trillion

financial assets held by households (excluding retirement accounts and insurance products)

**15%** of emerging market household portfolios are invested in equities, compared with

**42%** in US households

*... and tomorrow*

**\$371 trillion**

Projected value of global financial assets in 2020,<sup>1</sup> with

**30%** in emerging economies

**22%** Estimated share of global financial assets in listed equities in 2020, down from

**28%** in 2010

**\$12.3 trillion**

Potential global “equity gap” in 2020



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# Executive summary

Several forces are converging to reshape global capital markets in the coming decade. The rapid accumulation of wealth and financial assets in emerging-market economies is the most important of these. Simultaneously, in developed economies, aging populations, growing interest in alternative investments, the move to defined-contribution pension schemes, and new financial regulations are changing how money is invested. These forces point to a pronounced rebalancing of global financial assets in the coming decade, with a smaller share in publicly listed equities.<sup>1</sup>

This emerging picture is based on new research by the McKinsey Global Institute on the size, growth, and asset allocations of investor portfolios around the world. This work complements our previous reports on deleveraging in the world's major economies and the effects of an investment boom in emerging markets on real interest rates in coming decades.<sup>2</sup> In this report, we develop new insights into how the world's financial assets are growing and being invested, and how these assets could evolve over the next decade. Among our key findings:

- Today, investors in developed economies hold nearly 80 percent of the world's financial assets—or \$157 trillion—but these pools of wealth are growing slowly relative to those in emerging markets.
- The financial assets of investors in emerging economies will rise to as much as 36 percent of the global total by 2020, from about 21 percent today. But unlike in developed countries, the financial assets of private investors in these nations currently are concentrated in bank deposits, with little in equities.
- Several factors are reducing investor appetite for equities in developed countries: aging populations; shifts to defined-contribution retirement plans; growth of alternative investments such as private equity; regulatory changes for financial institutions; and a possible retreat from stocks in reaction to low returns and high volatility.
- Based on these trends, we project the share of global financial assets in publicly traded equities could fall from 28 percent today to 22 percent by 2020. That will create a growing “equity gap” over the next decade between the amount of equities that investors will desire and what companies will need to fund growth. This gap will amount to approximately \$12.3 trillion in the 18 countries we model, and will appear almost entirely in emerging markets, although Europe will also face a gap.

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1 In this report, we use the terms “equities” and “stocks” to refer to shares in publicly listed companies, not the unlisted equity in privately- or government-owned companies.

2 See McKinsey Global Institute, *Debt and deleveraging: The global credit bubble and its economic consequences*, January 2010, and *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*, December 2010. These reports are available online at [www.mckinsey.com/mgi](http://www.mckinsey.com/mgi).

- As a result, companies could see the cost of equity rise over the next decade and may respond by using more debt to finance growth. Only a tripling of equity allocations by emerging market investors could head off this drop in demand for equities—which will be difficult to accomplish in this time-frame, given the remaining institutional barriers. The probable outcome is a world in which the balance between debt and equity has shifted.

The implications of this shift are potentially wide ranging for investors, businesses, and the economy. Companies that need to raise equity, particularly banks that must meet new capital requirements, may find equity is more costly and less available. Reaching financial goals may be more difficult for investors who choose lower allocations of equities in their portfolios. And, with more leverage in the economy, volatility may increase as recessions bring larger waves of financial distress and bankruptcy. At a time when the global economy needs to deleverage in a controlled and safe way, declining investor appetite for equities is an unwelcome development.

Today, the advantages of investing in listed equities are being questioned in light of corporate scandals and a perception that the markets may no longer serve the interests of ordinary investors.<sup>3</sup> But equity markets, when functioning properly, provide significant benefits across an economy. They are an important source of long-term financing for high-growth companies; they allocate capital efficiently; and they disperse risk and reduce vulnerability to bankruptcy. These advantages outweigh shortcomings, we believe, and make public equity ownership an important element of a balanced global financial system.

## **GLOBAL WEALTH IS SHIFTING TO EMERGING ECONOMIES**

Until this decade, the preferences of investors in developed nations have shaped the evolution of global capital markets. Today these investors control 79 percent of the world's nearly \$200 trillion in financial assets (Exhibit E1).<sup>4</sup>

Broadly speaking, investors in developed economies hold highly diversified portfolios, with significant portions in equities. The United States stands out for consistently high equity allocations: currently US households have 42 percent of their non-retirement financial assets in publicly listed shares. Households in Hong Kong have similar shares of their wealth in equities. On average, Western European households placed 29 percent of their financial assets in equities in 2010.

Among developed nations, Japan stands out for its very low investment in equities. Despite a long tradition of equity investing by individual investors for most of the 20th century, Japanese households now hold less than 10 percent of their assets in equities, down from 30 percent before the 1989–90 crash. Because of low or negative returns over the past two decades, Japanese allocations have never exceeded 18 percent in this period.

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<sup>3</sup> See Dominic Barton, "Capitalism for the long term," *Harvard Business Review*, March 2011.

<sup>4</sup> We define financial assets as equities, bonds, and other fixed-income securities, cash and bank deposits, and alternative assets. We exclude the value of real estate, derivatives, physical assets such as gold, and equity in unlisted companies.

## Exhibit E1

## Investors in developed countries hold the majority of global financial assets

Financial assets owned by residents, 2010

\$ trillion

■ Large (>\$10 trillion)  
■ Medium (\$3–10 trillion)  
■ Small (<\$3 trillion)

	United States	Western Europe	Japan	China	Other developed <sup>1</sup>	Other Asia <sup>2</sup>	Latin America	MENA	Rest of world	Total
<b>Households</b>	27.0	23.0	11.6	6.5	4.1	5.4	3.5	2.7	1.4	<b>85.2</b>
<b>Institutional investors</b>	15.0	5.3	3.3	0.5	2.4	0.6	0.7	0.4	0.1	<b>28.3</b>
▪ Pensions <sup>3</sup>										
▪ Insurance	6.6	9.6	3.5	0.6	0.7	1.0	0.3	0.1	0.3	<b>23.0</b>
▪ Endowments & foundations	1.1	0.2	0.0	--	0.1	--	0.0	0.0	--	<b>1.5</b>
<b>Corporations</b>	4.0	11.9	6.7	3.9	1.4	0.9	0.9	0.5	0.5	<b>30.7</b>
▪ Banks										
▪ Nonfinancial corporations	2.0	1.7	1.2	3.8	0.3	1.3	0.3	0.2	0.2	<b>11.0</b>
<b>Governments</b>	2.3	1.7	1.0	2.5	0.2	1.9	0.5	0.4	1.5	<b>12.0</b>
▪ Central banks										
▪ Sovereign wealth funds	0.1	0.6	--	0.7	0.1	0.9	0.1	1.7	0.2	<b>4.3</b>
▪ Other government	--	--	--	1.1	--	0.4	0.5	0.3	0.1	<b>2.4</b>
<b>Total</b>	<b>58.1</b>	<b>54.0</b>	<b>27.3</b>	<b>19.8</b>	<b>9.3</b>	<b>12.4</b>	<b>6.8</b>	<b>6.3</b>	<b>4.3</b>	<b>198.1</b>

1 Includes Australia, Canada, and New Zealand.

2 Includes both developed countries and emerging markets.

3 Includes defined contribution plans and individual retirement accounts (IRAs).

NOTE: Numbers may not sum due to rounding.

SOURCE: National sources; McKinsey Global Institute

Emerging market financial assets grew 16.6 percent annually over the past decade, nearly four times the rate in mature economies. These assets stood at about \$41 trillion in 2010 and constituted 21 percent of the global total, up from 7 percent in 2000. Depending on economic scenarios, we project that emerging market financial assets will grow to between 30 and 36 percent of the global total in 2020, or \$114 to \$141 trillion (Exhibit E2).<sup>5</sup> China's financial assets could be as much as \$65 trillion by then, and India's could reach \$8.6 trillion.<sup>6</sup>

With this growth, emerging markets will become an increasingly important force in determining the shape of the global financial system. Emerging market investors keep most of their assets in bank deposits (Exhibit E3),<sup>7</sup> which reflects lower income levels, underdeveloped financial markets, and other barriers to diversification. A key question for the future of global financial markets is the speed and extent to which investors in these countries will develop a larger appetite for equities and other financial instruments and diversify their portfolios.

5 Our base case consensus growth scenario and the two-speed recovery scenario use 2010 exchange rates, and so do not include impact of currency movements on asset values. We model the effects of likely currency in an alternate scenario. See Appendix for additional detail on the scenarios.

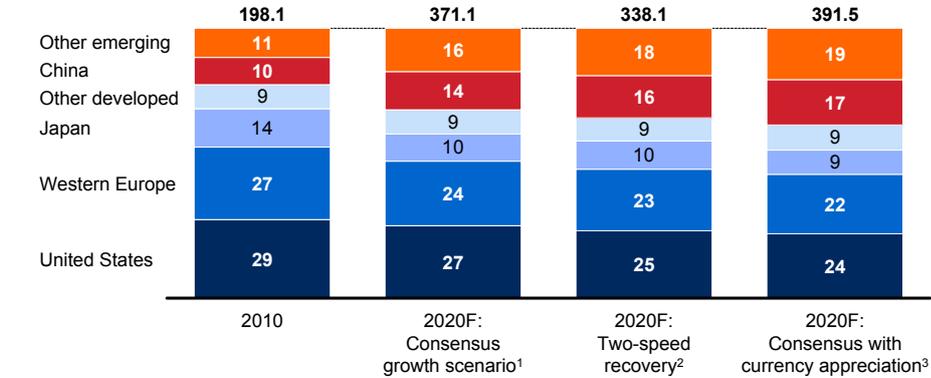
6 This high estimate includes the impact of appreciation of the renminbi and other emerging market currencies over the next decade

7 Moreover, in many emerging markets, a large share of wealth is held in physical assets, such as real estate and gold. See Alok Kshirsagar and Naveen Tahilyani, *Deepening financial savings: Opportunities for consumers, financial institutions, and the economy*, McKinsey & Company, November 2011.

**Exhibit E2**

**The share of global financial assets held in emerging markets will rise over the next decade in all economic scenarios**

Total financial assets, 2010–20F  
%; \$ trillion



Emerging markets' financial assets  
\$ trillion

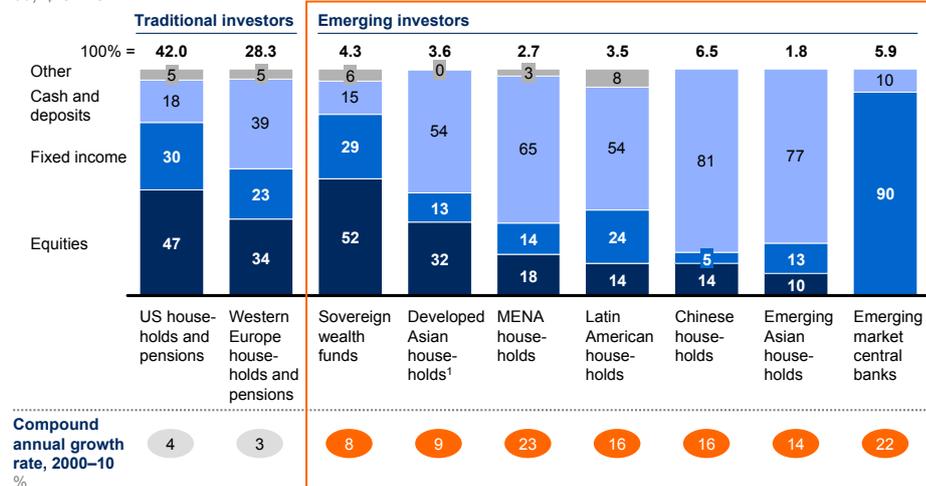


1 Measured in 2010 exchange rates.  
2 Rapid growth in emerging markets but low growth through 2015 in mature economies.  
3 Emerging markets' currencies appreciate vis-à-vis the US dollar.  
SOURCE: McKinsey Global Institute

**Exhibit E3**

**Today, most investors in emerging markets have very low allocations to equities**

Asset allocation by investor, 2010  
%; \$ trillion



1 Includes Singapore, Hong Kong, Korea, and Taiwan. Excludes Japan, where households allocate 10% of their portfolio to equities.  
SOURCE: National sources; McKinsey Global Institute

Over the past century, there has been a clear pattern: with few exceptions, as countries have grown richer, investors have become more willing to put some money at risk in equities to achieve higher rates of return. We have seen this pattern not only in the United States and Europe, but more recently in Singapore, South Korea, and Hong Kong. However, other factors must also be in place for equity markets to thrive: rules and regulations that protect minority investors, transparency by listed companies, sufficient liquidity in the stock market, the presence of institutional investors, and easy access to markets by retail investors.

Today, most emerging markets lack these conditions. Exchanges are often dominated by state-controlled companies with only a small portion of their shares trading publicly, exposing investors to high levels of volatility. Even where appropriate regulatory frameworks have been erected, enforcement often has been weak. Limited visibility into corporate performance and little accountability to public shareholders put outside investors at a further disadvantage. Not surprisingly, in a recent survey, more than 60 percent of investors in emerging Asian economies said they prefer to keep savings in deposits rather than in mutual funds or equities—a figure that has changed little over the past decade.<sup>8</sup>

### **WHY INVESTOR DEMAND FOR EQUITIES MIGHT DECLINE IN DEVELOPED ECONOMIES**

Aging is the largest factor affecting investor behavior in mature economies. As investors enter retirement, they typically stop accumulating assets and begin to rely on investment income; they shift assets from equities to bank deposits and fixed-income instruments. This pattern has led to predictions of an equity sell-off as the enormous baby boom generation in the United States and Europe enters retirement<sup>9</sup> (the oldest members of this cohort reached 65 in 2011). We find this fear is somewhat exaggerated, but the effects of aging are real: if investors retiring in the next ten years maintain the equity allocations of today's retirees, equities will fall from 42 percent of US household portfolios to 40 percent in 2020—and to 38 percent by 2030. In Europe, where aging is even more pronounced, we see an even larger shift in household portfolios.

Also influencing equity allocations in mature economies are the shift to defined-contribution retirement plans in Europe and rising allocations to alternative investments. In Europe, we see that defined-contribution plan account owners allocate significantly less to equities than managers of defined-benefit plans. And as private pension funds close to new contributors, managers are shifting to fixed-income instruments to meet remaining liabilities. Meanwhile, institutional investors and wealthy households seeking higher returns are shifting out of public equities and into “alternative” investments such as private equity funds, hedge funds, real estate, and even infrastructure projects. Although we estimate that some 30 percent of assets in private equity and hedge funds are public equities, the shift is still causing a net reduction in allocations to equities.

Another factor weighing on demand for equities is weak market performance. The past decade has brought increased volatility and some of the worst ten-year returns on listed equities in more than a century. In opinion polls, Americans say they have less confidence in the stock market than in any other financial institution and believe that the market is no longer “fair and open.”<sup>10</sup> However, to put these sentiments in perspective, it is also worth noting that individual investors can have short memories and may be willing to return to equities in the event of an extended rally.

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8 See Kenny Lam and Jatin Pant, “The changing face of Asian personal financial services,” *McKinsey Quarterly*, September 2011.

9 See James Poterba, “Demographic structure and asset returns,” *Review of Economics and Statistics*, Volume 83, Number 4, 2001, 565–584. Also see Zheng Liu and Mark M. Spiegel, “Boomer retirement: Headwinds for US equity markets?” Federal Reserve Bank of San Francisco, *FRBSF Economic Letter*, Number 26, Federal Reserve Bank of San Francisco, August 22, 2011.

10 See Paola Sapienza and Luigi Zingales, Financial Trust Index, Results, Wave 12, October 19, 2011, and NBC News/Wall Street Journal, Study Number 10316, May 2010.

The final factor is the effect of financial industry reforms on the uses of equities by banking and insurance companies. US and European banks today hold \$15.9 trillion of bonds and equities on their balance sheets. But new capital requirements under Basel III will prompt banks to shed risky assets, including equities and corporate bonds. Similarly, European insurers have already reduced equity allocations in anticipation of new rules, known as Solvency II, and could lower them further over the next five years. At a time when European banks need to raise more capital, Solvency II constrains the insurance sector as a potential purchaser of that equity.

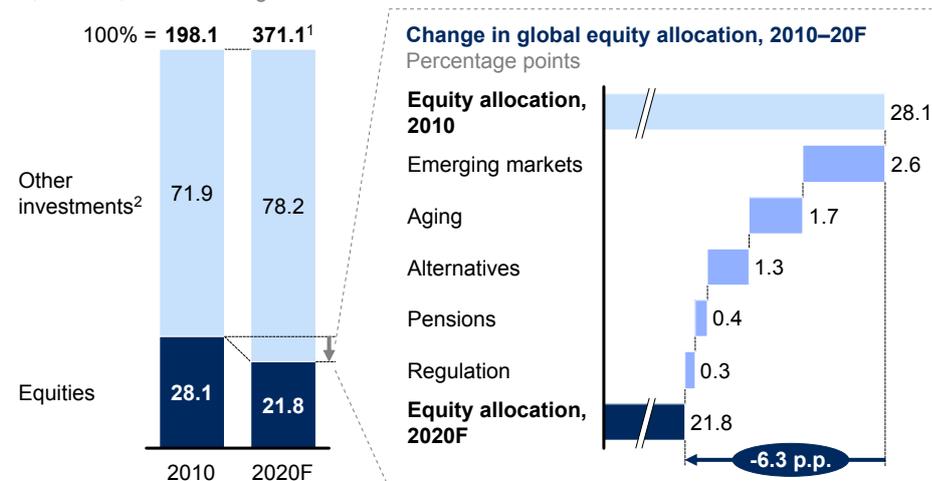
## THE EMERGING EQUITY GAP

As a result of shifting global wealth and investor behavior, we estimate that by 2020 investors around the world may allocate just 22 percent of their financial assets to equities, down from 28 percent today (Exhibit E4). The rise of wealth in emerging nations is the largest factor in this shift, followed by aging populations and growth of alternative investments.

### Exhibit E4

#### In our baseline scenario, equities decline from 28 percent of financial assets to 22 percent by 2020

Global asset allocation, 2010–20F  
%; \$ trillion; 2010 exchange rates



<sup>1</sup> Based on consensus global growth scenario.

<sup>2</sup> Includes cash, deposits, and fixed-income securities.

SOURCE: McKinsey Global Institute

This trend away from equities will affect how companies are funded. Even though total investor demand for equities would still grow by more than \$25 trillion over the next decade in our base case scenario,<sup>11</sup> this demand would not be sufficient to cover the amount of additional equity that corporations will need. Companies issue shares to support growth and to allow founders, venture investors, and other insiders to monetize their shares. Using a sample of ten mature economies and eight emerging markets,<sup>12</sup> we calculate that companies will need to raise \$37.4 trillion of additional capital to support growth. This would exceed investor

<sup>11</sup> This scenario uses consensus forecasts for GDP growth and saving rates, and country-specific historic rates of asset appreciation. It allows for changing asset allocations due to aging, regulatory changes, and shifting investor tastes toward alternative investments. See Appendix for details.

<sup>12</sup> Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, South Africa, South Korea, Spain, Turkey, United Kingdom, and United States.

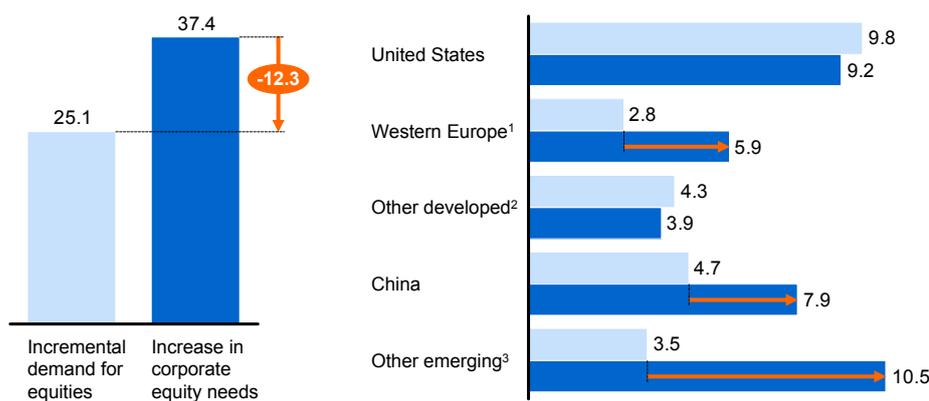
demand in those countries by \$12.3 trillion (Exhibit E5). Eventually, markets will move to correct this imbalance: equity prices may fall and returns may rise to stimulate investor demand, or companies may use more debt and less equity to fund growth. Nevertheless, this change in demand would represent a significant reduction in the role of equities in the global financial system.

**Exhibit E5**

**The emerging equity gap: Demand for equities may not satisfy corporate needs**

Incremental demand for equities by domestic investors vs. increase in corporate equity needs, 2010–20F  
 \$ trillion; 2010 exchange rates

■ Incremental demand for equities  
 ■ Increase in corporate equity needs



1 France, Germany, Italy, Spain, and the United Kingdom.  
 2 Australia, Canada, Japan, and South Korea.  
 3 Brazil, India, Indonesia, Mexico, Russia, South Africa, and Turkey.  
 SOURCE: McKinsey Global Institute

Most of the emerging equity gap would occur in developing nations. Companies in those countries not only have high needs for external funding to keep up with their rapid growth, but they also have relatively low returns on invested capital (ROIC), which limits their ability to use retained earnings to fund growth. In addition, many large companies, both privately owned and state owned, will seek to list on stock exchanges and issue shares. In Europe, a smaller equity gap would appear, as a result of declining investor appetite for equity, aging, and rising needs for new equity by banks.

In the United States and several other developed countries, investor demand for equities will most likely continue to exceed what companies will need because many companies in these economies generate sufficient profits to finance investment needs. Indeed, US companies at the end of 2010 had more than \$1.4 trillion in cash, and over the past decade nonfinancial corporations have been buying back shares, rather than issuing new ones.<sup>13</sup>

Changes on several fronts could narrow the gap between corporate needs and investor desire for equity. Households in the large equity investing countries could be encouraged to save more and overcome “home bias” to purchase more foreign equities. In addition, corporations, particularly in emerging markets, could become more efficient users of capital, enabling them to fund more of their growth through retained earnings. Finally, emerging market investors could rapidly develop a larger appetite for equities. We calculate that if emerging market

13 See McKinsey Global Institute, *Mapping global capital markets 2011*, August 2011 (www.mckinsey.com/mgi).

investors were to raise their equity allocations to current US levels over the next decade, global investor demand for equities would match corporate needs. However, such a sudden shift in investor preferences would be unprecedented and would require rapid evolution of institutions, market access mechanisms, and practices that make markets attractive to individuals seeking long-term appreciation.

### **ECONOMIC CONSEQUENCES AND IMPLICATIONS FOR COMPANIES AND INVESTORS**

A shift away from equity in the global financial system is an important trend and, in our view, an unwelcome one. Equity markets have enabled growth by efficiently channeling money to the best-performing companies, including rapidly growing enterprises that drive economic growth. Although the debate over the relative merits of equity finance versus debt financing is not settled, the most persuasive empirical evidence suggests that if legal protections for shareholders are strong, financial systems that include robust capital markets in addition to bank financing promote faster and more stable economic growth than predominantly bank-based ones.<sup>14</sup>

Moreover, at a time when the global economy still struggles to recover from the collapse of the credit bubble, greater use of debt—whether from banks or through capital markets—would be an unwelcome development. Public equities disperse corporate ownership and give companies resilience in downturns; equity is a highly effective “shock absorber.” By contrast, higher leverage increases the risk of bankruptcy and economic volatility and makes the world economy more vulnerable to shocks.

As their allocations to equity decline, ordinary investors may find it more challenging to meet saving goals. Institutional investors and wealthy families have many options to generate high rates of return—private equity, hedge funds, real estate—but retail investors do not. We find that the poor equity returns of the past decade are anomalous. For almost all ten-year periods in the modern era—except in Japan—equities have generated significantly higher real returns than bonds.

Many companies are likely to find that they are unable to raise enough equity in their home countries or can do so only at high cost. Banks, particularly in Europe where investor demand for equities is weak, may find it challenging to find buyers for all the additional equity capital they need to raise. All companies will want to think about sourcing capital globally by listing in markets where investors’ demand for equities is strong, or through private placements of equity shares.

At the same time, shifting patterns of global wealth will create opportunities and challenges for the asset management industry and for investors. Asset managers will need an increasingly global reach to cultivate the emerging investor classes of Asia and other regions, which will require tailored products to fit their preferences and budgets. In mature markets, aging and low returns present growth challenges. However, there are unmet needs, too: the industry can profit by educating investors about the financial implications of longer life spans, including the need to get higher returns over a longer period. In this vein, some asset managers may need to redesign target-date mutual funds if they reduce

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<sup>14</sup> See Thorsten Beck and Ross Levine, “Industry growth and capital allocation: Does having a market- or bank-based system matter?” *Journal of Financial Economics*, 2002.

or eliminate equities too early to meet the ongoing accumulation needs of clients today.

Investors around the world will need to think more globally. Today investment portfolios remain disproportionately skewed toward investors' home markets. Investors in developed countries can tap faster pockets of economic growth by buying foreign shares or shares of multinational companies that are active in fast-growing markets. The challenge will be to find sources of return commensurate with the risk—and to find good values. Today, with the limited amount of shares in emerging market companies available to public investors, valuations can be distorted.

## **POLICY OPTIONS TO CONSIDER**

We propose that business leaders and policy makers around the world consider a range of options to ensure that the potential equity gap does not emerge and that the world economy is set on a more stable, more sustainable course.

**Emerging markets.** Emerging economies can create the conditions in which healthy equity investing cultures can take root. They can strengthen listing requirements, ensure that securities regulations require full transparency by issuers, and provide meaningful protections to minority shareholders. Emerging market officials should also use regulatory changes and incentives to encourage faster expansion of institutional investors, such as pensions and insurance companies. They also can encourage development of more channels for equity investing by households.

**Developed countries.** As we have argued in previous reports, increasing the saving rate in the United States and other developed nations is an important step for ensuring long-term growth and rebalancing the global economy. Increasing saving overall would also increase flows into equities in these nations. More tax incentives for saving, automatic enrollment in retirement plans (with the right to opt out), and changes in the default allocation are all proven saving boosters. Additionally, we would look into removing tax biases that favor corporate use of debt over equity and reducing management incentives that reward buybacks and higher leverage. Finally, policy makers should also consider measures to revive the IPO market, such as expanding the streamlined registration process for small firms or creating a more robust legal framework for “crowdfunding.” Enabling small-company listings is important for maintaining a vibrant equity culture that attracts investors.

**Global policy makers.** The free flow of capital between nations will be even more important in a time of limited demand. To enable global capital flows, emerging nations need to allow greater access to their equity markets while protecting themselves from the ebb and flow of “hot money.” Ultimately, the best protection—and the best way to attract investment—is to develop broad and deep financial markets and credible oversight. To overcome home bias by investors, nations can remove limits on overseas investing. Access to currency hedging instruments and financial education about global diversification would also help investors raise their allocations of foreign equities. Finally, international regulatory bodies should carefully consider the cumulative impact of new regulations

affecting banks and other financial institutions, as these may have unintended consequences.<sup>15</sup>

□ □ □

Governments and business leaders share a common interest in expanding the supply of equity to the world economy. More equity will promote more stable and possibly more rapid growth. Many steps that could reverse the current trends against equities are well understood. Action now will ensure that the potential equity gap does not emerge, and put the world economy on a more stable, more sustainable course.

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<sup>15</sup> See, for example, Ahmed Al-Darwish et al., "Possible unintended consequences of Basel III and Solvency II," IMF Working Paper Number 11/187, August 2011.

# 1. Shifting global wealth

In the past decade, the pattern of global economic growth shifted toward the developing world. In the next decade, growth in emerging market wealth will follow. By the end of 2010, the global pool of financial assets—including equities, bonds, other debt securities, and bank deposits<sup>16</sup>—stood at roughly \$200 trillion, double the amount in 2000.<sup>17</sup> Investors in developed economies held 79 percent of these assets. But by 2020, we project that investors in China and other emerging economies will account for one-third or more of the world's financial assets, nearly doubling their 2010 share. If current investing patterns persist, the majority of this financial wealth will be held in deposits. This will shift the balance in the global pool of financial assets and reduce the proportion of equities.

## **INVESTORS IN DEVELOPED COUNTRIES OWN NEARLY 80 PERCENT OF THE WORLD'S FINANCIAL ASSETS**

Investors in developed nations<sup>18</sup> own \$157 trillion in financial assets. Households in these countries—and, indeed, around the world—comprise the largest class of investors, holding \$69 trillion in assets, excluding interests in pensions and balances in insurance policies and defined-contribution retirement funds (Exhibit 1). Institutional investors (pension funds, insurance companies, foundations, and endowments) are the next largest group of investors, with \$49 trillion in assets. The securities on corporate balance sheets—of both financial and nonfinancial firms—are surprisingly large, at \$31 trillion.<sup>19</sup> Central banks and sovereign wealth funds account for the remainder of financial assets in developed countries, with about \$7.7 trillion in 2010. Since the 2008 financial crisis, securities held by central banks in the United States and Europe have swelled by 31 percent, to \$4 trillion.

Investors in developed economies have shaped the evolution of global capital markets over the past century. For the most part, they have held highly diversified portfolios: equities, different types of bonds and fixed-income securities, deposits, and other investments. There are significant—and potentially growing—differences across regions, however. In broad strokes, in nations where long-term equity returns have been consistently high (the United States and the United Kingdom, for instance), demand for equities is highest and investors have allocated large portions of their portfolios to publicly listed shares. Where long-term equity returns have been lower (Japan, for example), allocations are much smaller.

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16 In this report we exclude the value of real estate, derivatives, physical assets such as gold, and equity in unlisted companies.

17 See McKinsey Global Institute, *Mapping global capital markets 2011*, August 2011 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

18 This includes the United States, Western Europe, and Japan; Australia, Canada, and New Zealand; and developed Asian economies (Hong Kong, Singapore, South Korea, and Taiwan).

19 We recognize that including the financial securities held on bank balance sheets double counts some assets, since banks take deposits and issue bonds to finance loans and purchases of securities. We have chosen to include banks' securities because our goal is to account for who owns all the financial assets in the world, and we would be missing a sizable portion of government and corporate bonds as well as equities if we excluded them.

**Exhibit 1**

**Around the world, households are the largest class of investors**

Financial assets owned by residents, 2010  
\$ trillion

■ Large (>\$10 trillion)  
■ Medium (\$3–10 trillion)  
■ Small (<\$3 trillion)

	United States	Western Europe	Japan	China	Other developed <sup>1</sup>	Other Asia <sup>2</sup>	Latin America	MENA	Rest of world	Total
<b>Households</b>	27.0	23.0	11.6	6.5	4.1	5.4	3.5	2.7	1.4	85.2
<b>Institutional investors</b>	15.0	5.3	3.3	0.5	2.4	0.6	0.7	0.4	0.1	28.3
▪ Pensions <sup>3</sup>	6.6	9.6	3.5	0.6	0.7	1.0	0.3	0.1	0.3	23.0
▪ Insurance	1.1	0.2	0.0	--	0.1	--	0.0	0.0	--	1.5
▪ Endowments & foundations	4.0	11.9	6.7	3.9	1.4	0.9	0.9	0.5	0.5	30.7
<b>Corporations</b>	2.0	1.7	1.2	3.8	0.3	1.3	0.3	0.2	0.2	11.0
▪ Banks	2.3	1.7	1.0	2.5	0.2	1.9	0.5	0.4	1.5	12.0
▪ Central banks	0.1	0.6	--	0.7	0.1	0.9	0.1	1.7	0.2	4.3
▪ Sovereign wealth funds	--	--	--	1.1	--	0.4	0.5	0.3	0.1	2.4
▪ Other government										
<b>Total</b>	<b>58.1</b>	<b>54.0</b>	<b>27.3</b>	<b>19.8</b>	<b>9.3</b>	<b>12.4</b>	<b>6.8</b>	<b>6.3</b>	<b>4.3</b>	<b>198.1</b>

1 Includes Australia, Canada, and New Zealand.  
2 Includes both developed countries and emerging markets.  
3 Includes defined contribution plans and individual retirement accounts (IRAs).  
NOTE: Numbers may not sum due to rounding.  
SOURCE: National sources; McKinsey Global Institute

**United States**

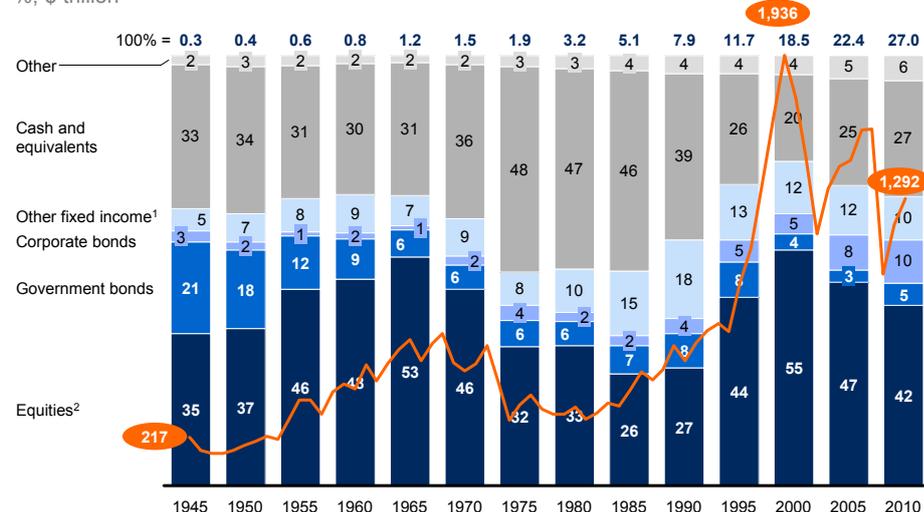
US investors owned \$58.1 trillion of financial assets in 2010, nearly 30 percent of the global total. Their strong commitment to equities makes them outliers; the portion of US household portfolios in equities today stands at 42 percent (Exhibit 2). In retirement programs, Americans are even more aggressive buyers of equities, placing 61 percent of their defined-contribution plan funds in stocks and equity mutual funds. This enthusiasm for equities reflects a long tradition of participation in the markets. Americans have access to thousands of mutual funds and other vehicles to invest in equities, and there are many kinds of individual investors, ranging from those who buy and hold, to active stock pickers and day traders.

**Exhibit 2**

**US households maintain high allocations to equity**

US households' asset allocation, 1945–2010  
%; \$ trillion

— S&P Index (year-end, 2010 prices) 



1 Includes commercial paper, agency- and GSE-backed securities, and municipal securities.  
2 Includes listed equity shares and equities held via mutual funds.  
SOURCE: US Federal Reserve Flow of Funds; Shiller S&P Composite data set; McKinsey Global Institute

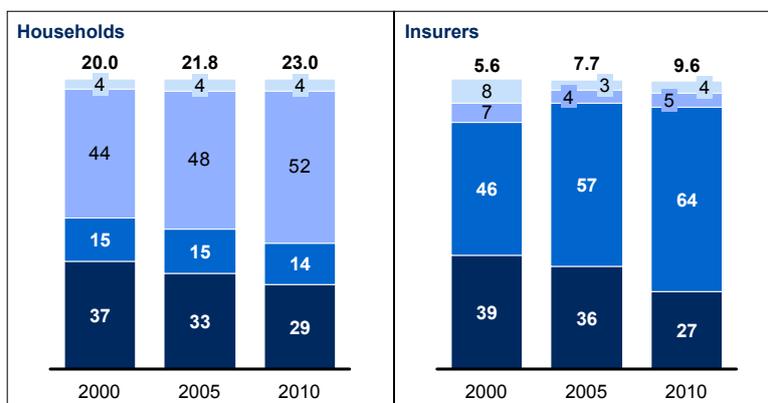
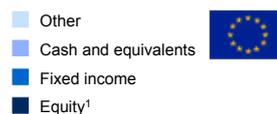
### Western Europe

Western European investors<sup>20</sup> have \$54 trillion in financial assets. Their portfolios are also diversified, but households, insurers, and pension managers have all reduced their equity exposures significantly in the past decade (Exhibit 3). Among households, demand for equities grew in the 1990s and reached a peak in 2000, when the equity allocation averaged at 37 percent: country averages then ranged from 28 percent in Germany to 45 percent in the United Kingdom. Over the 1990s, European stock market capitalization rose by more than 600 percent, driven in part by government privatizations, including massive IPOs for companies such as Deutsche Telekom and Italian electric utility Enel, as well as by appreciation. But the stock market bubble collapsed in the early 2000s, causing individual investors to pare their equity holdings. A few years later, just when investors in some countries were starting to rebuild equity positions, the 2008 market crash hit, once more sending equity allocations downward. The question in Europe today is whether the losses and volatility of the past decade will be forgotten quickly if equity market returns rebound, or whether it will take a new generation of European individual investors to embrace equities and reverse the decline in equity allocations.

#### Exhibit 3

#### EU households and insurers have decreased their equity allocation significantly since 2000

Western Europe asset allocations, 2000–10  
 %; \$ trillion; 2010 exchange rates



<b>MSCI Europe (year-end)</b>	1,378	1,468	1,457	1,378	1,468	1,457
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1 Includes listed equity shares and equities held via mutual funds.  
 SOURCE: European Central Bank; Eurostat; national central banks; CEA Insurers of Europe; Committee of European Insurance and Occupational Pensions Supervisors; Bloomberg; McKinsey Global Institute

For different reasons, European insurers and pension funds have also reduced holdings of public equities over the past decade. Some insurers suffered large market losses in the 2000–01 downturn, leaving them nearly insolvent and prompting them to reduce equity holdings. More recently, regulators have devised new capital adequacy rules, known as Solvency II, which assign capital charges based on the riskiness of assets. The charge for holding equities and some types of corporate bonds will increase substantially in 2014, when Solvency II is fully in force. In anticipation, insurers have been paring their equity exposures.

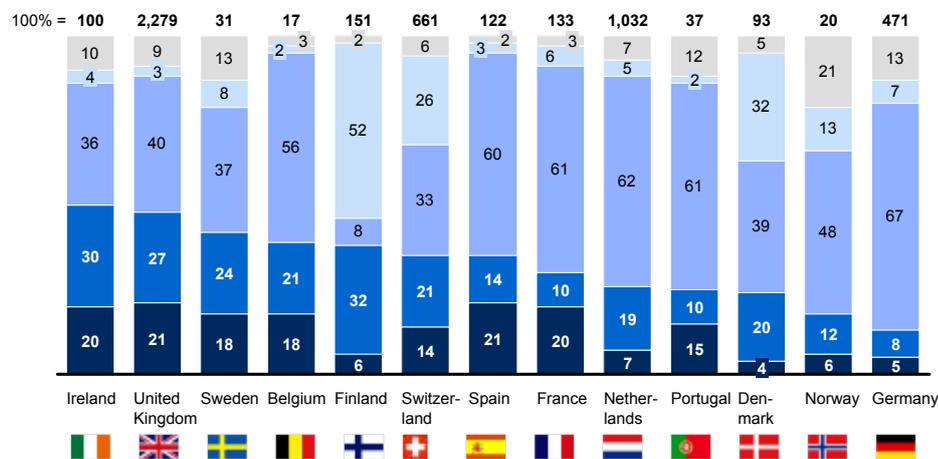
<sup>20</sup> Western Europe includes the EU-15, plus Switzerland and Norway.

Meanwhile, changes in European pension schemes have also reduced overall allocations of equities. For example, after the United Kingdom implemented a minimum-funding requirement in 1997, UK pension funds cut equity allocations from nearly 70 percent to 48 percent over the next 13 years. While pension funds across Europe have widely divergent holdings of equities, countries with the largest private pension funds—the United Kingdom, the Netherlands, and Germany—have all reduced equity allocations in recent years (Exhibit 4).

**Exhibit 4**

**Equity exposures of European pension funds vary widely**

Western European pension fund asset allocations, 2010  
%; \$ billion



SOURCE: Mercer; OECD; national sources; McKinsey Global Institute

**Japan**

Japan stands as an outlier among wealthy nations for its very low allocation to equities. Japanese investors of all kinds hold a total of \$27 trillion in financial assets—second only to the United States—but only about 10 percent is currently invested in equities. Japanese households keep 80 percent of their wealth in bank deposits (see Exhibit 6 below). This was not always the case. Japan has a long history of equity investing, and Japanese households were allocating more than 30 percent of financial portfolios to equities in the 1980s. Since then, the Japanese have avoided stocks in response to persistently low returns (see Box 1, “Japan’s retreat from equities”). Japanese households’ \$9.2 trillion of bank deposits have been used largely to finance the banks’ holdings of government bonds. This creates a stable source of financing for Japan’s huge government debt, but has starved Japanese equity markets. Japanese pension managers have also retreated from equities, reducing their public equities from 39 percent of portfolios in 2000 to 20 percent in 2010, while increasing holdings of government bonds. This shift reflects both a reaction to poor returns and growing liquidity needs as more Japanese reach retirement age.

### Box 1. Japan's retreat from equities

Today, Japanese investors stand out for the very low portion of their wealth they hold in equities—less than 10 percent of household portfolios and by far the lowest among the developed economies. This is not, we find, the result of a cultural aversion to risk or because Japan never developed robust equity market institutions. Indeed, a century ago, Japan had one of the most vibrant equity investing cultures in the world, with ten exchanges and a higher ratio of stock market value to GDP (49 percent) than in the United States. Through the 1920s and 1930s, more than half of the external financing for Japanese firms came from newly listed shares and corporate ownership was more dispersed than in Great Britain or Germany. In 1949, Japanese households owned 69.1 percent of the shares in publicly listed companies; today, US households hold about half of US equities.

Starting in the 1950s, however, Japan's public equity market changed from one in which outside investors were majority owners to one dominated by insiders. Japan's largest banks and corporations dramatically increased purchases of listed equities and by the 1970s, banks owned more than half of Japanese stocks, in effect reducing the public float.<sup>1</sup> In the 1980s, those holdings were used as collateral to fund the property boom, helping to create simultaneous real estate and equity bubbles. The Nikkei index rose from 7,000 in 1980 to nearly 39,000 in 1989.

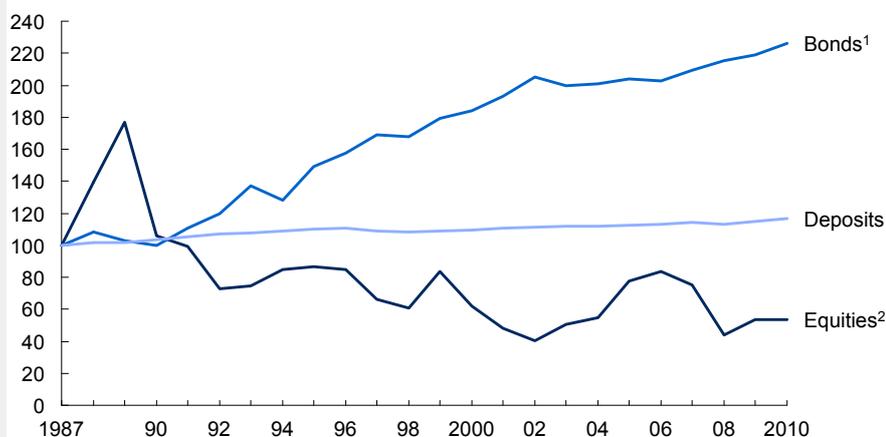
When the dual bubble collapsed, share values fell more than 70 percent and over the subsequent decades Japanese equities have yielded low or negative returns, trailing government bonds (Exhibit 5). Apart from a short-lived rally in 2006–07, Japanese investors have not come back to equities.

#### Exhibit 5

##### Cumulative real returns on Japanese equities have been negative since 1987



Cumulative ex-post real return on \$100 investment, 1987–2010  
Real \$ (adjusted for inflation)



1 Ten-year government bond; assumes reinvestment of coupon.

2 Based on Nikkei 225 index; assumes reinvestment of dividends.

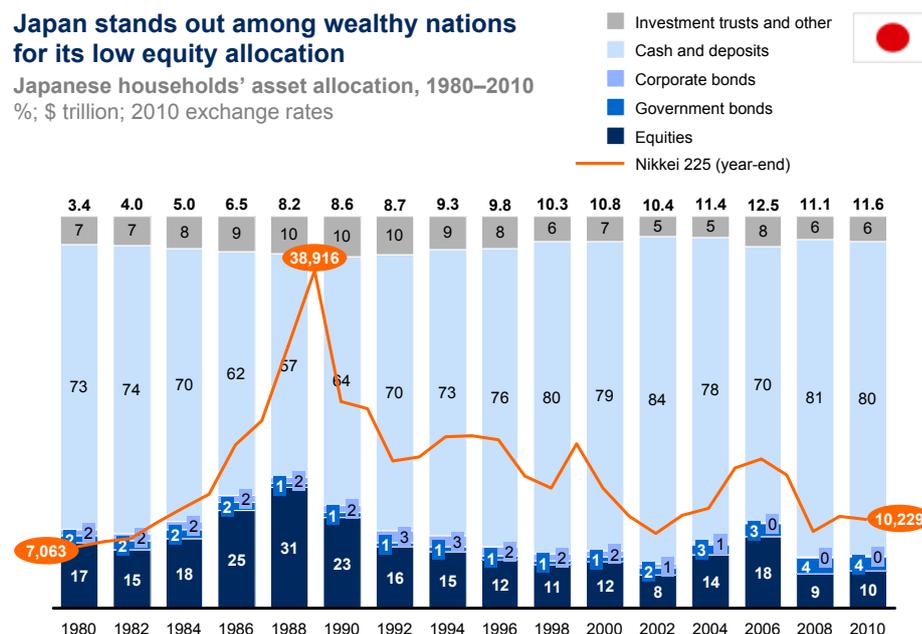
SOURCE: Bank of Japan; Bloomberg; International Monetary Fund; McKinsey Global Institute

1 For a full discussion of the evolution of Japanese equity markets, see Julian Franks, Colin Mayer, and Hideaki Miyajima, "Equity markets and institutions: The case of Japan," RIETI Discussion Paper, July 27, 2009.

## Exhibit 6

### Japan stands out among wealthy nations for its low equity allocation

Japanese households' asset allocation, 1980–2010  
%; \$ trillion; 2010 exchange rates



SOURCE: Bank of Japan; Bloomberg; McKinsey Global Institute

## TODAY, EMERGING MARKET INVESTORS HOLD A FIFTH OF FINANCIAL ASSETS—LARGELY IN DEPOSITS

Investors in emerging markets—nations with 84 percent of the world's population—today hold slightly more than one-fifth of global financial assets (\$41.3 trillion), but their wealth is growing rapidly. Over the past decade, total financial assets held by emerging market investors grew at a compound annual rate of 16.6 percent—nearly four times as fast as the financial assets of developed-country investors. This increase reflects not only the rapid economic growth of China, India, and other emerging nations, but also the high saving rates, rising equity valuations, and the deepening of financial markets in these countries.

About half of emerging market financial assets are in China, where investors held nearly \$20 trillion in assets in 2010, or 10 percent of the global total—up from just 3 percent in 2000 (Exhibit 7). After the United States and Japan, China is now the world's third-largest owner of financial assets. In other parts of emerging Asia, financial assets grew to \$3.1 trillion<sup>21</sup> during the 2000–10 decade and reached \$6.8 trillion in Latin America and \$3.9 trillion in Central and Eastern Europe.

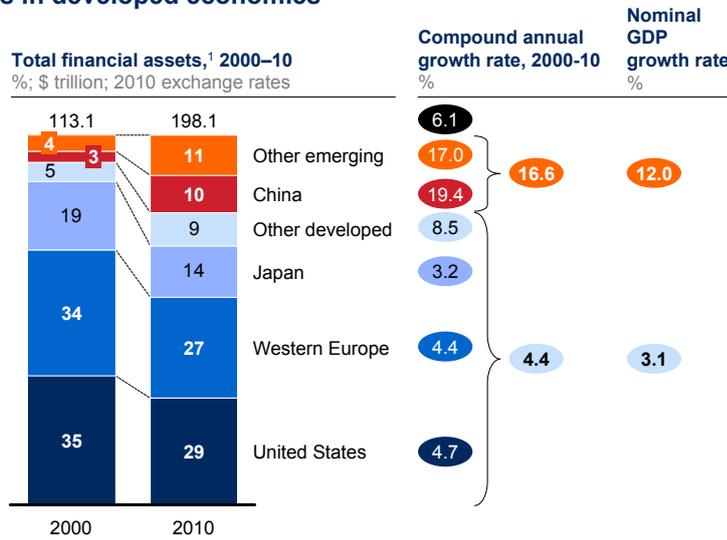
As in developed countries, most emerging market wealth is in the hands of households. Unlike their developed-country counterparts, however, household investors in most emerging market regions overwhelmingly favor cash and deposits and, on average, allocate less than 15 percent of their financial assets to equities (Exhibit 8). The low investment in equities reflects the lower levels of wealth of emerging market investors, an unwillingness to risk principal and a preference for investing in physical assets such as gold or family businesses. (Because of the lack of reliable data, we have not counted real estate or equity in privately held firms as financial assets in this report.) Among major investor classes in emerging markets, only sovereign wealth funds—which hold about

<sup>21</sup> Emerging Asia includes India, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

7 percent of emerging market assets—have well-diversified portfolios, holding on average 52 percent of portfolios in publicly listed equities and 29 percent in bonds.

**Exhibit 7**

**Emerging market financial assets are growing nearly four times as quickly as assets in developed economies**

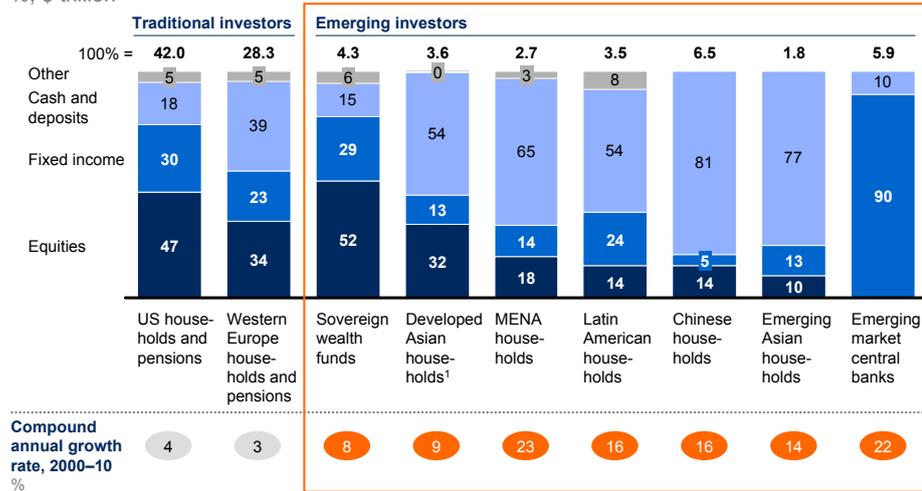


1 Includes cash and deposits, fixed-income securities, listed equities, and alternative investments; excludes real estate, commodities, derivatives, and nonlisted equities.  
 SOURCE: National sources; McKinsey Global Institute

**Exhibit 8**

**Today, most investors in emerging markets have very low allocations to equities**

Asset allocation by investor, 2010  
 %; \$ trillion



1 Includes Singapore, Hong Kong, Korea, and Taiwan. Excludes Japan, where households allocate 10% of their portfolio to equities.  
 SOURCE: National sources; McKinsey Global Institute

The distribution of financial assets across investor types in emerging markets differs from that seen in most developed economies (Exhibit 9). Central banks, for example, are a more important class of investors, holding 15 percent of all emerging market financial assets, or about \$5.9 trillion. This money is held almost exclusively in short-term government bonds and other securities with

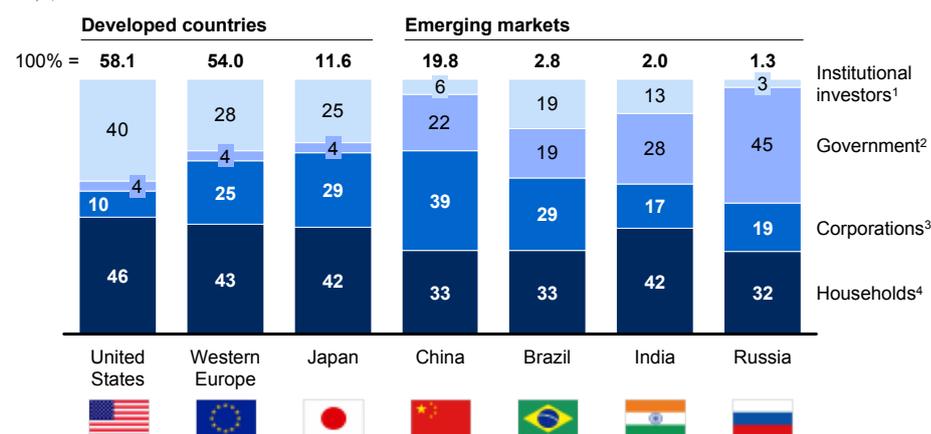
high credit ratings. Institutions such as pension funds and insurance companies, which usually are large buyers of equities, are relatively small players in emerging markets—holding just 6 percent of financial assets, compared with 30 percent in advanced economies.

### Exhibit 9

#### Governments account for a large share of financial assets in emerging markets

Total financial assets, 2010

%; \$ trillion



1 Includes pensions, insurance, and endowments and foundations.

2 Includes central banks, sovereign wealth funds, and government holdings in publicly listed corporations.

3 Includes banks and nonfinancial corporations.

4 Includes investments in mutual funds; excludes pension and insurance assets.

SOURCE: National sources; McKinsey Global Institute

### China

With rapid income growth and a high saving rate, Chinese household wealth more than tripled over the past decade, reaching \$6.5 trillion in 2010. Most of that money is held in low-yielding deposit accounts. With the introduction of popular securities investment funds in 2007, Chinese household equity allocations did jump briefly from 4 percent to 19 percent. But since the Shanghai market fell in 2008, household equity allocations have fallen to just 14 percent of financial assets. Financial wealth—and equity investors—are concentrated in China's fast-growing coastal cities, most notably in Shanghai, where nearly 40 percent of household investors own stocks (see Box 2, "The evolving investment preferences in Chinese cities").

Overall, however, households account for a relatively low share of total financial assets in China—33 percent, compared with more than 40 percent in developed countries and in many other emerging markets. This reflects the large holdings of securities by Chinese corporations and the Chinese government. Banks hold \$3.9 trillion in bonds, funded in part by household and corporate deposits, and Chinese corporations have \$3.7 trillion in cash on their balance sheets, held mainly in deposit accounts. The Chinese government manages a total of \$4.3 trillion in financial assets, through a mix of central bank bond holdings, sovereign wealth fund investments, and holdings in publicly listed banks and nonfinancial corporations.

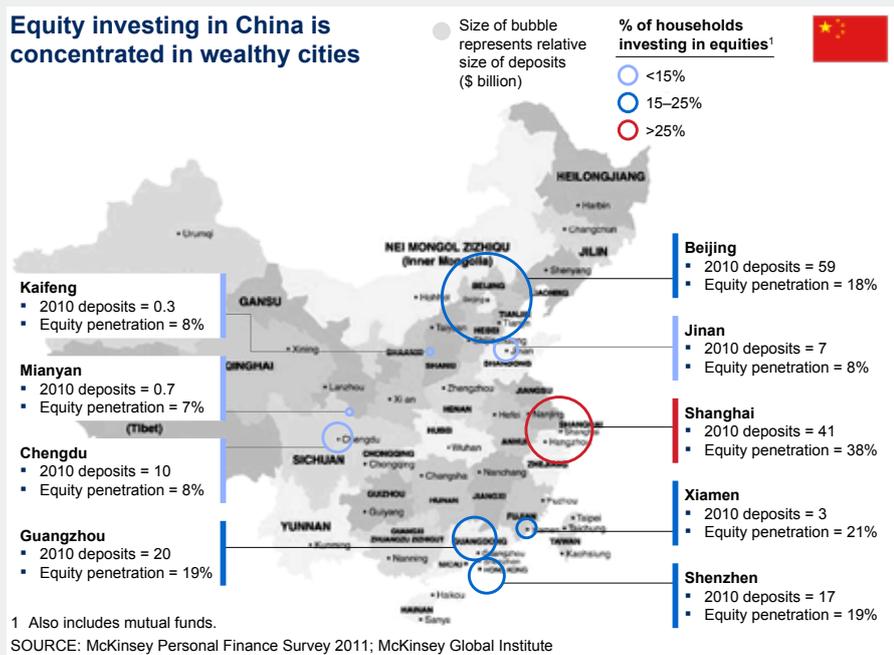
### Box 2. The evolving investment preferences in Chinese cities

Today pools of Chinese financial wealth are highly concentrated in cities, and demand for equity varies tremendously across regions. In the large, industrialized coastal cities that have the highest incomes, the percentage of households that have equity investments is two to five times that of inland cities (Exhibit 10). Shanghai stands apart from all other cities, where 38 percent of households now own equities, according to a recent McKinsey consumer survey.

Urbanization will bring wealth to more areas and one likely byproduct will be rising household investments in equities. According to MGI’s 2009 report on Chinese urbanization,<sup>1</sup> more than 240 million Chinese will move from the countryside to cities by 2025—locating both in established centers and in new cities, particularly in China’s interior. Based on a growing population of residents with the means to invest in equities, we can expect rising allocation to equity across Chinese households.

Exhibit 10

#### Equity investing in China is concentrated in wealthy cities



1 See McKinsey Global Institute, *Preparing for China’s urban billion*, March 2009 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

## India

Households are the largest investor class in India, holding 42 percent of financial assets—\$835 billion out of \$2 trillion. This money is invested almost exclusively in bank deposits, and equities accounted for only 8 percent of household financial assets in 2010. Overall, Indian household investors prefer gold and real estate to financial assets.<sup>22</sup> The Indian government plays a large role in the financial system, holding more than a quarter of all financial assets. This \$560 billion portfolio is

22 Alok Kshirsagar and Naveen Tahilyani, *Deepening financial savings: Opportunities for consumers, financial institutions, and the economy*, McKinsey & Company, November 2011.

largely invested in bonds and the listed equity of corporations. Banks are also investors, with \$280 billion in securities. While the wealth of Indian households is expected to grow rapidly in the coming decade, the prospects for India to develop a significant equity investing culture are unclear. In 2009 the Securities and Exchange Board eliminated upfront sales charges, or “loads,” on mutual funds, which has caused distributors to pull back. Such regulations, perversely, may temper Indian investor demand for equities.

### **Brazil**

Propelled by strong economic growth, Brazilian financial assets grew by 17 percent per year on average from 2000 to 2010, increasing from \$600 billion (90 percent of GDP) to \$2.8 trillion (134 percent of GDP). The majority of these assets are held by households and, increasingly, in pension and insurance accounts. Brazilian pension funds and retirement accounts had more than \$400 billion in assets by the end of 2010, more than in any other emerging market. The Brazilian government is a large holder of equities, retaining majority stakes valued at about \$250 billion in Petrobras, Banco do Brasil, and other major companies. The appetite for publicly listed equities and other types of high-yield investments has grown along with wealth. Pension funds allocate nearly 30 percent of their assets to equities, similar to the ratio in many European pension plans, and have also increased their exposure to alternative asset classes over the last few years. As in other Latin American countries, a great deal of financial wealth is tied up in the private equity of family-owned businesses and not captured by our measure of financial assets.

### **BY 2020, EMERGING ECONOMIES COULD OWN MORE THAN A THIRD OF GLOBAL FINANCIAL ASSETS**

In our base case scenario, we project that emerging market financial assets will continue to grow much more quickly than assets in developed economies through 2020—by 12 percent annually, compared with 5 percent annually in developed economies. This projection is based on the consensus forecasts of GDP growth and saving rates, historical average asset returns in each country, and today’s prices and exchange rates. A similar result holds if we consider other scenarios for the global economy, such as a “two-speed recovery” scenario, in which emerging markets continue to grow rapidly while mature economies see minimal growth, at least in the near term (Exhibit 11).<sup>23</sup>

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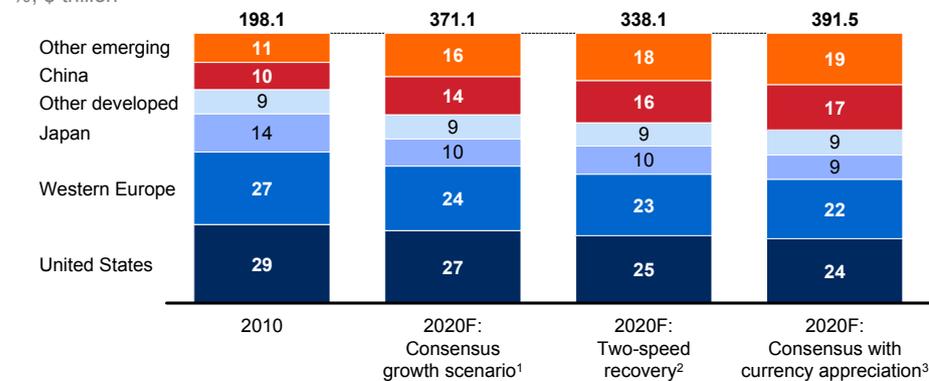
23 See Appendix for more detail on scenario assumptions.

**Exhibit 11**

**The share of global financial assets held in emerging markets will rise over the next decade in all economic scenarios**

Total financial assets, 2010–20F

%; \$ trillion



**Emerging markets' financial assets**  
\$ trillion

41

114

114

141

<sup>1</sup> Measured in 2010 exchange rates.

<sup>2</sup> Rapid growth in emerging markets but low growth through 2015 in mature economies.

<sup>3</sup> Emerging markets' currencies appreciate vis-à-vis the US dollar.

SOURCE: McKinsey Global Institute

Our projections of growth of financial assets in emerging markets in the base case and two-speed recovery scenarios do not factor in exchange rate movements. Economic theory and historical experience indicate that emerging market currencies will appreciate in relation to those of developed economies as national incomes and wealth rise. While we do not attempt to predict currency values a decade in the future, we have modeled the possible impact of emerging market currency appreciation, based on projected growth in per capita GDP,<sup>24</sup> and we find that the share of global financial assets held in emerging markets could grow to as much as 36 percent in 2020.



The growth of emerging market nations that has changed the face of the global economy will be felt increasingly in capital markets. As the wealth of these investors grows, their preferences will shape global capital markets. The key question, then, for companies and investors is how the behavior of this rising investor class will change in the next decade and beyond. In the next chapter, we analyze the forces that will shape investor behavior in emerging markets.

<sup>24</sup> See Appendix for more detail on how we model currency appreciation.



## 2. Emerging market investors: Will they diversify?

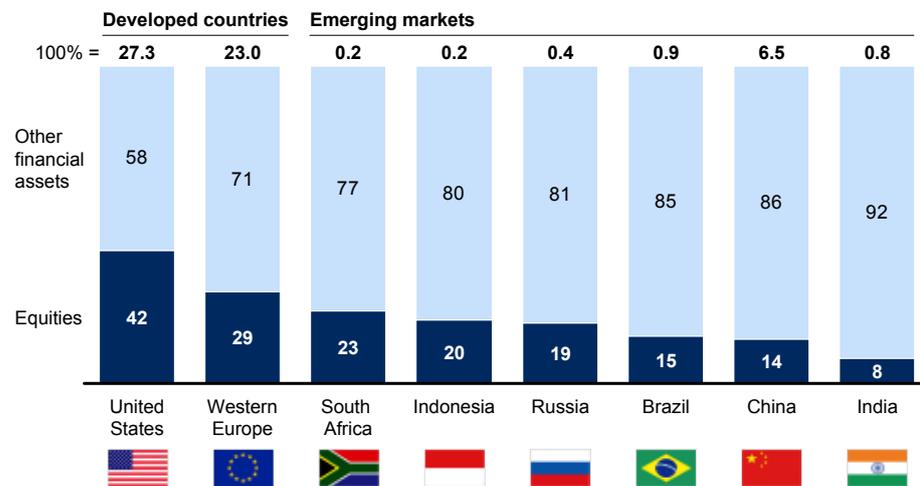
With few exceptions, as nations have grown wealthier, they have increased their use of equity markets to fund growth and build savings. As economies advance, businesses rely less on bank lending for long-term capital and more on other sources, including listed equity. The share of global stock market capitalization represented by emerging market issues increased from 6 percent in 2000 to 26 percent in 2010—an increase of nearly \$12 trillion in market value. However, much of this equity is held by investors in developed economies or by governments, rather than by domestic households or institutional investors. So, while equity allocations in developed countries typically settle at approximately 30 percent of total financial assets, in today’s emerging markets, investors are far from that level: publicly listed equities represent from 8 percent to 20 percent of household portfolios in the largest emerging markets (Exhibit 12).

Whether emerging market investors follow the established pattern of rising equity investing will be perhaps the most important factor in determining how global financial assets are reallocated in years to come. Many investment experts we interviewed expect that as household investors in China, India, and other emerging nations acquire greater wealth, they will follow the lead of citizens in wealthy Asian nations such as Singapore and Hong Kong, who have substantial equity allocations. However, the timing and extent of this shift remain uncertain.

### Exhibit 12

#### Households in emerging markets have a smaller share of their portfolios in equities than developed-country households do

Household financial assets,<sup>1</sup> 2010  
%; \$ trillion



<sup>1</sup> Includes investments in mutual funds; excludes pension and insurance assets.

SOURCE: National sources; McKinsey Global Institute

## IN MOST MATURE ECONOMIES, RISING PER CAPITA GDP HAS LED TO RISING ALLOCATIONS TO EQUITIES

Various academic studies have shown a correlation between rising wealth and growing tolerance for financial risk.<sup>25</sup> As per capita GDP increases and citizens feel a “wealth effect” because they have more than enough resources for routine needs, they are willing to take on some risk to principal in pursuit of higher returns. We have seen this pattern clearly among households in the United States, the United Kingdom, and most European countries. These countries also have institutional investors and professional asset managers who hold diversified portfolios that contain a range of products, including a significant allocation to equities.

Among the higher-income Asian economies, we see a similar pattern. In Singapore, for instance, household financial assets grew from \$167 billion in 1997 to \$427 billion in 2010.<sup>26</sup> The share that these households invested in equities rose from 18 percent in 1997 to 31 percent in 2007, before recent market declines. In Hong Kong, where many citizens have had high incomes and wealth for decades, equity allocations in household portfolios average 42 percent, matching the level of US households. In South Korea, 27 percent of financial assets owned by households were equities in 2010.<sup>27</sup> We see this pattern within China as well. In cities with rising incomes—especially in Shanghai—there is a high level of equity investing (see Box 2, “The evolving investment preferences in Chinese cities,” in Chapter 1).

However, there have been important exceptions to this pattern of rising wealth and equity investing, too. Japan—until recently the world’s second-largest national economy—has seen its equity investing culture decline for decades. And in Germany, despite steadily rising incomes from 1950 to 2000, household equity allocations only briefly reached 30 percent, slightly above the developed-country average. This peak occurred just before the 2000 crash, which took the DAX Index from 6,958 to 2,892. Today, individual investors in Germany hold just 19 percent of their assets in publicly listed equities.

## EQUITY INVESTING REQUIRES MATURE, TRUSTED INSTITUTIONS AND COST-EFFECTIVE CHANNELS

Rising incomes alone will not create a vigorous equity investing culture. That requires development of the institutions, policies, oversight, and infrastructure to make equity investing safe, transparent, and accessible. It also requires listings of attractive companies.

In the United States, for example, investors acquired a strong appetite for equities during the 20th century largely to get a share of the profits of the nation’s rising industrial corporations. To serve those investors, large financial services and asset-management industries arose to “manufacture” and sell retail products such as mutual funds. Equity investing got an additional boost in the 1970s with

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25 See, for example, “Risk aversion, wealth, and background risk,” by Luigi Guiso and Monica Paiella, *Journal of the European Economic Association*, 2008, Volume 6, Issue 6, 1109-1150.

26 Includes assets held in Singapore’s compulsory savings program, the Central Provident Fund.

27 This is not the peak, however. Household allocations briefly exceeded 40 percent in the 1970s, after the government forced owners of Chaebol conglomerates to list shares, which were sold to employees and to the public through investment trusts.

the shift from defined-benefit pensions to defined-contribution plans. Equity investing has evolved in similar ways in Europe.

Equally important, the United States and European nations created the legal and regulatory institutions that make equity markets attractive to ordinary investors. Often, these protections arose in response to abuses. For example, most advanced economies have laws to ensure that insiders do not have special advantages over minority investors as well as regulations to head off fraud and abuse by brokers and promoters. Accounting and reporting standards were developed to ensure that shareholders could accurately assess company performance.

To be sure, oversight has not been infallible: institutions that were created to protect shareholders have been unable to prevent some abuses. Today, there is a legitimate concern that market abuses and corporate scandals could erode investor confidence in the system and reduce the American appetite for equities. As we discussed (see Box 1, “Japan’s retreat from equities”), the shift in the Japanese stock market from control by outside investors to inside investors helped drive the household retreat from equities.

In most emerging market countries today, legal and regulatory institutions governing public equity markets are nascent or not strong enough to win the confidence of ordinary investors. There is still a lack of transparency about corporate performance and governance, limited channels for equity investing, and a clear disadvantage for outsiders in the market. In addition, even where markets offer a level playing field, listings may be dominated by state-owned or formerly state-owned companies in banking or natural resources, leaving investors with limited choices. For instance, on Brazil’s Bovespa two former state-owned companies—oil giant Petrobras and Vale, a mining and logistics company—account for 40 percent of all shares. On the Mexican exchange, the top ten companies account for two-thirds of the total market capitalization. That is twice the share of the top ten companies on the London Stock Exchange.

China, the largest emerging market, has made significant strides in creating a solid regulatory framework and improving market access. Yet stock purchasing by individuals in China remains largely a short-term trading pursuit, rather than a form of long-term investing, reflected by high annual turnover of shares.<sup>28</sup> On the exchanges, almost all issues are state-owned corporations with thin public floats and the government maintains a significant portion, if not a majority, of shares. Also, government entities continue to intervene in the market by purchasing shares of state-owned banks to bolster prices, for example.<sup>29</sup> Traditional and online brokers have emerged, but have limited reach and offerings. China’s mutual fund industry, for example, has \$350 billion under management, about \$100 billion of which is household investment. That compares with nearly \$12 trillion held in US mutual funds. Chinese insurance and pension products are available and growing quickly, but from a very low base (Exhibit 13). And, while China no longer prohibits purchases of foreign stocks, individual investors must

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28 From 2000 to 2010 annual turnover on the Shanghai and Shenzhen stock exchanges averaged 144 percent and 251 percent of total market capitalization, respectively, compared with 122 percent on the New York Stock Exchange and 105 percent on the London Stock Exchange.

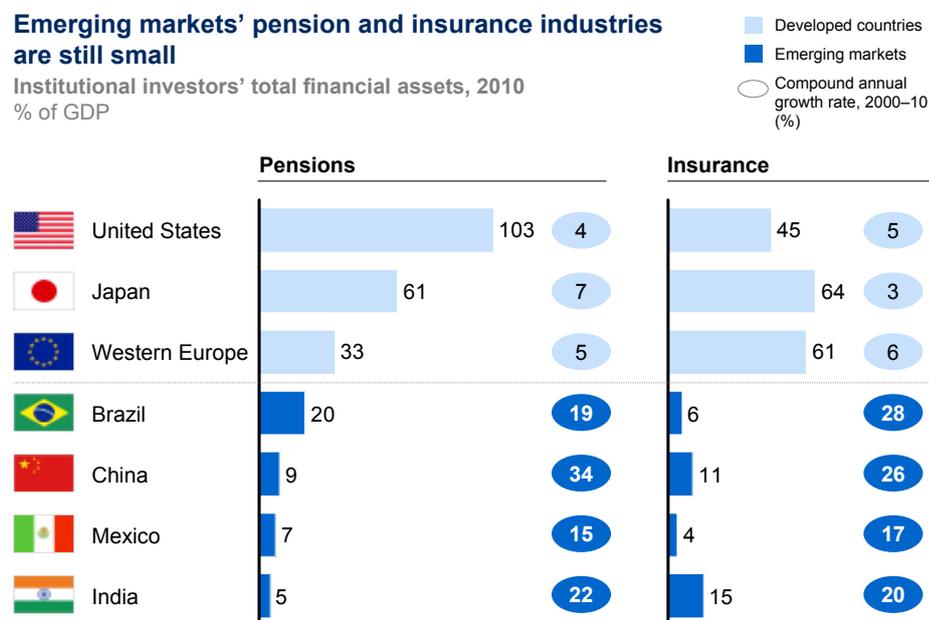
29 Dinny McMahon and James T. Areddy, “China props up bank shares,” *The Wall Street Journal*, October 11, 2011. See also Simon Rabinovitch, “China’s bank buying fails to win over investors,” *The Financial Times*, October 11, 2011.

go through a “Qualified Domestic Institutional Investor”—banks, mutual funds, and other asset managers that are allowed to purchase foreign securities up to a quota granted by the government. These rules represent a deterrent to some investors.

### Exhibit 13

#### Emerging markets’ pension and insurance industries are still small

Institutional investors’ total financial assets, 2010  
% of GDP



SOURCE: National sources; McKinsey Global Institute

There is also a political dimension to the evolution of equity markets. Policy makers often attempt to determine an “ideal” capital structure for a particular stage of economic development.<sup>30</sup> In South Korea, for example, the government pushed the family-owned holding companies (Chaebols) to list shares on public exchanges in the 1970s to diversify ownership. It also required Chaebol owners to make shares available to employees and to household investors through investment trusts. As a result, South Korean allocations to equities rose above 40 percent for several years.

However, governments can also have policy goals that conflict with the development of an equity investing culture. For example, in some countries helping households diversify their portfolios would deprive state-owned banks of deposits to fund government-directed lending.<sup>31</sup>

### ATTITUDES TOWARD FINANCIAL RISK VARY ACROSS COUNTRIES

While we resist reliance on stereotypes and note that behavioral norms evolve over time, it is also clear that cultural traditions and social norms influence how savers allocate their investments. Academic studies, for example, have found that

<sup>30</sup> See Justin Yifu Lin, Xifang Sun, and Ye Jiang, “Toward a theory of optimal financial structure,” World Bank Policy Research Working Paper Number 5038, September 2009.

<sup>31</sup> See Carl E. Walter and Fraser J. T. Howie, *Red Capitalism: The Fragile Financial Foundation of China’s Extraordinary Rise*, John Wiley & Sons, 2011.

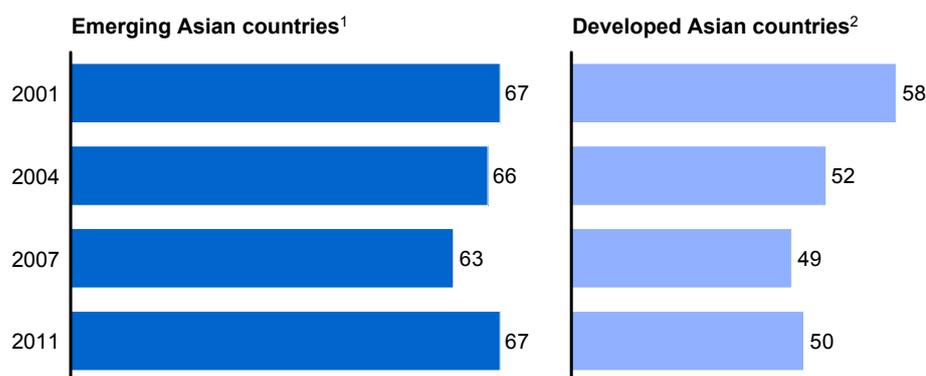
while levels of individual risk aversion are similar across countries, perceptions of what is risky vary widely.<sup>32</sup>

A recent McKinsey survey of investors in emerging Asian economies confirms this.<sup>33</sup> In the survey, 67 percent of respondents said they agree or strongly agree with the statement “I would prefer to put most of my savings in bank deposits rather than invest in stocks or mutual funds” (Exhibit 14). In China, only 25 percent of the wealthiest respondents<sup>34</sup> believe that even moderate risk to principal is acceptable in return for higher financial asset returns—a figure that has changed little over the past decade, despite rising wealth. However, as noted, attitudes toward investing vary widely across China.

**Exhibit 14**

**Investors in emerging Asian economies retain a strong preference for deposit accounts**

Percent responding agree or strongly agree with the statement:  
**I would prefer to put most of my savings in bank deposits rather than invest in stocks or mutual funds**



1 China, India, Indonesia, Malaysia, Philippines, and Thailand.

2 Hong Kong, Singapore, South Korea, and Taiwan.

SOURCE: McKinsey Asia Personal Financial Services Survey 2001, 2004, 2007, and 2010; McKinsey Global Institute



As nations grow wealthier, we see a natural progression to more sophisticated and diverse capital markets. This helps raise and allocate the capital needed to build large enterprises and provides citizens with an opportunity to diversify their financial wealth. However, many factors must align to make this transition. In particular, household investors must see a strong value proposition in moving some of their wealth out of deposit accounts, their businesses, and other assets into equities and other instruments. Given the many institutional barriers that exist today, this transition is likely to unfold gradually.

32 Elke U. Weber and Christopher Hsee, “Cross-cultural differences in risk perceptions, but cross-cultural similarities in attitudes toward perceived risk,” *Management Science*, Volume 44, Issue 9, 1205-1217 (1998).

33 This survey gathered input from more than 20,000 consumers in China, India, Thailand, Indonesia, Hong Kong, Singapore, Vietnam, Malaysia, Taiwan, Australia, and Philippines. See Kenny Lam and Jatin Pant, “The changing face of Asian personal financial services,” *McKinsey Quarterly*, September 2011.

34 “Wealthiest” is defined as the top 20 percent of respondents by income level.



### 3. Developed-country investors: Changing portfolios

Investors in developed nations remain the world’s largest equity investors, holding roughly 90 percent of all outstanding publicly listed shares today (Exhibit 15). But several factors could reduce the proportion of equities in the portfolios of investors in wealthy nations in coming years: aging populations; changes in pension plans and shifting strategies of institutions and high-net-worth individuals; new financial regulations; and the effects of poor stock market returns. While periodic market rallies may draw discouraged equity investors back to stocks, aging and financial reforms are structural shifts that could act as powerful drags on demand for equities for many years.

**Exhibit 15**

**Investors in developed countries own 90 percent of the world’s listed equities**

Ownership of publicly listed equities, 2010  
\$ trillion



	United States	Western Europe	Japan	China	Other developed	Other Asia	Latin America	MENA	Rest of world	Total
<b>Households</b>	11.5	7.7	1.1	0.9	1.7	1.4	0.5	0.5	0.3	25.8
<b>Institutional investors</b>	8.4	2.3	0.8	0.3	1.1	0.2	0.1	0.1	0.1	13.5
▪ Pensions	1.8	2.5	0.3	0.0	0.2	0.3	0.1	0.0	0.1	5.5
▪ Insurance	0.4	0.1	0.0	--	0.0	--	0.0	0.0	--	0.6
▪ Endowments & foundations	0.2	2.4	0.5	0.1	0.2	0.0	0.0	0.0	0.0	3.6
<b>Corporations</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
▪ Banks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
▪ Nonfinancial corporations <sup>1</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Governments</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
▪ Central banks	0.0	0.3	--	0.3	0.1	0.5	0.0	0.7	0.2	2.1
▪ Sovereign wealth funds	--	--	--	1.1	--	0.4	0.5	0.3	0.1	2.4
▪ Other government										
<b>Total</b>	<b>22.4</b>	<b>15.5</b>	<b>2.8</b>	<b>2.7</b>	<b>3.3</b>	<b>2.9</b>	<b>1.3</b>	<b>1.7</b>	<b>0.9</b>	<b>53.7</b>

1 Due to data limitations, nonfinancial corporations’ investments in publicly listed equities excluded.

NOTE: Numbers may not sum due to rounding.

SOURCE: National sources; McKinsey Global Institute

#### HOW AGING AFFECTS DEMAND FOR EQUITIES

Populations are aging in developed countries around the world, particularly in Japan and Europe and, to a lesser extent, in the United States. In these countries, both individuals and the pension funds that pay their benefits are expected to reduce their exposures to equities and shift to fixed-income instruments and other low-risk assets to preserve capital and provide guaranteed income streams.<sup>35</sup> (China’s population is also aging rapidly, which is another factor that may slow its shift to more widespread equity investing.)

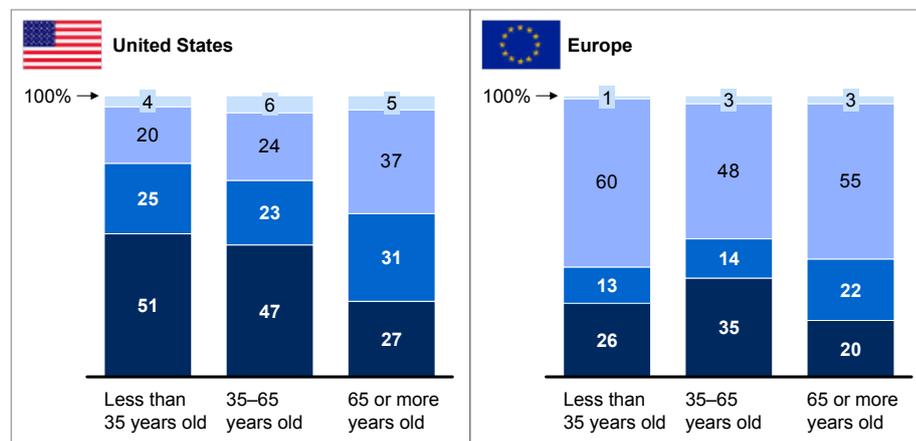
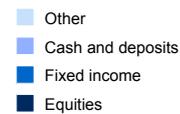
35 See E. Philip Davis, “Discussion: How will ageing affect the structure of the financial markets?” *Demography and Financial Markets*, 267-295 (2006).

The shift away from equities by older US investors is borne out by the data. Enrollees in 401(k) plans who are in their 20s allocate 54 percent of their funds to equity; those in their 60s allocate 38 percent. In non-retirement accounts, people under 35 years of age place more than half of their investments in equities, almost twice what people over age 65 allocate (Exhibit 16). A similar pattern is seen among Europe's individual investors, although prime working-age investors, aged 35 to 65, rather than the youngest investors, have the highest equity allocations there. The shift away from equities by older investors is automatic in "target-date" mutual funds that increase the share of fixed-income purchases as the account holder gets closer to retirement.

### Exhibit 16

#### As investors age in the United States and Europe, they reduce their equity holdings

Household asset allocation by age cohort<sup>1</sup>  
% of total assets



<sup>1</sup> Excludes retirement assets.

SOURCE: European Central Bank; UK Office of National Statistics; German Federal Statistical Office; Banca d'Italia; US Survey of Consumer Finances; US Census Bureau; US Federal Reserve Flow of Funds; McKinsey Global Institute

Several factors might slow the traditional shift away from equities as investors approach retirement. With longer life spans, people now face 20 or 30 years of retirement, and the new concern among financial advisers is that clients will live long enough to exhaust their savings. MGI found that even before the market crash of 2008–09 reduced portfolio values, members of the baby boom cohort lacked adequate pensions or savings.<sup>36</sup> Now they have even greater needs for high returns. Moreover, in many countries, policy makers are discussing raising the retirement age, which could help keep people in equities longer.

<sup>36</sup> See McKinsey Global Institute, *Talkin' 'bout my generation: The economic impact of aging US baby boomers*, June 2008 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

Nevertheless, aging will have an impact on asset allocations, though not the great equity sell-off that some analysts fear.<sup>37</sup> We project that if Americans of all age groups maintain the asset allocations they have today, the rising share of the population over 65 over the next ten years will drive down the overall share of household financial assets in equities from 42 percent to 40 percent. In 2030, when the last of the baby boomers reach retirement, the US household allocation would fall to 38 percent. Because of the great size of US household wealth, the US reallocation will have a measurable impact on global investor demand for equities.

The impact of aging on household allocations could be even more dramatic in Europe, where the allocations start at a lower point and the proportion of people in retirement or approaching retirement is higher than in the United States. As a result, we project that by 2020 the portion of equity in the average household portfolio will fall from 29 percent to 25 percent in the United Kingdom, from 25 percent to 22 percent in France, and from 19 percent to 16 percent in Germany.

### **SHIFTS IN RETIREMENT PLANS HAVE REDUCED EQUITY ALLOCATIONS**

In recent years, countries around the world have, to varying degrees, shifted from traditional defined-benefit pensions to defined-contribution plans, in which employees can choose how much they will contribute and how the funds will be invested. This trend can reduce equity allocations in three ways. First, employees often put too little into their retirement accounts. In the United Kingdom, for example, annual contributions to defined-benefit plans average between 16 percent and 20 percent of employee salaries (11 to 14 percent from employer and 5 to 6 percent from employee). In defined-contribution plans, total contributions range from 7 percent to 11 percent of salaries (4 to 7 percent from the employer and 3 to 4 percent from the employee).<sup>38</sup>

Moreover, the investment choices employees make in their defined-contribution plans tend to be similar to how they invest their non-retirement wealth. So, while Americans choose to put a high percentage of 401(k) or IRA funds into equities—as they do with their household portfolios—individuals in Europe, where such defined-contribution plans are being implemented now, do not. Europe's eight largest defined-contribution plans allocate, on average, 22 percent of their assets to equities, compared with 35 percent in Europe's eight largest defined-benefit plans (Exhibit 17).

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37 For a review of this argument, see James Poterba, "Demographic structure and asset returns," *Review of Economics and Statistics*, Volume 83, Number 4, 2001, 565-584. Also see Zheng Liu and Mark M. Spiegel, "Boomer retirement: Headwinds for US equity markets?" *FSBR Economic Letter* Number 26, Federal Reserve Bank of San Francisco, August 22, 2011.

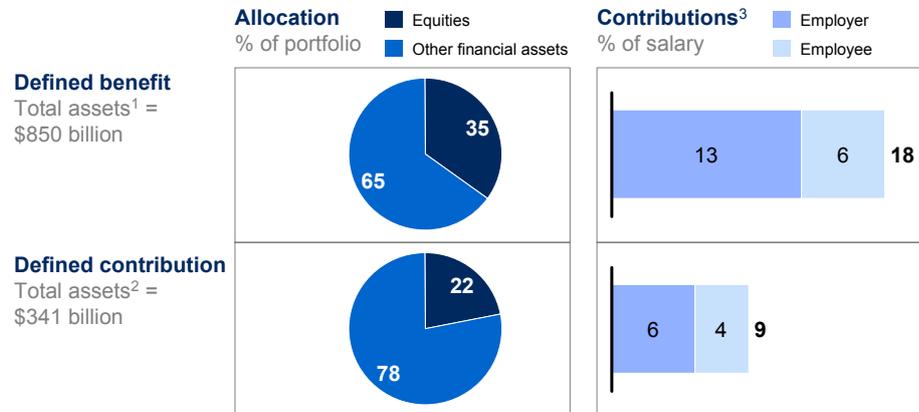
38 See Adair Turner, *A new pension settlement for the twenty-first century: Second report of the Pensions Commission*, 2005.

## Exhibit 17

### In Europe, both equity allocations and annual contributions are lower in defined-contribution plans than in defined-benefit plans



Equity allocation and average annual contributions to defined-benefit and defined-contribution pension plans in Europe



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

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

3 Based on surveys of UK pension plans.

SOURCE: Towers Watson; pension fund annual reports; UK Pensions Commission; McKinsey Global Institute

Finally, as defined-benefit pension plans close to new beneficiaries, plan managers shift a higher proportion of assets to fixed-income investments to match liabilities and reduce volatility for the plan sponsors. This is a potentially important shift: some 80 percent of defined-benefit pension funds are now closed to new beneficiaries in the United Kingdom.

## THE RISE OF ALTERNATIVE INVESTMENTS ALSO CURBS DEMAND FOR EQUITIES

In search of high returns, institutional investors and high-net-worth individuals have increased their investments in alternative assets over the past decade. These alternative asset classes include private equity funds, hedge funds, commodities, real estate, and infrastructure projects. To make room for alternative products, investors have reduced the publicly listed shares in their portfolios. Determining the precise impact of this trend on equity holdings is difficult, because some alternative classes also include public equities. For example, hedge funds hold common stock, and private equity funds take minority stakes in publicly listed companies in deals known as PIPEs (private investment in public equities). We estimate these public equity holdings are about 30 percent of hedge fund assets and 13 percent of private equity fund holdings.

The rising popularity of alternative assets among institutional investors squeezes out equities in two ways. Managers not only reduce holdings of publicly listed shares to purchase alternative investments, they also buy more fixed-income products to provide cash for immediate needs while waiting for long-term, illiquid assets to pay off. As the CIO of one public employee pension fund explains, “We can earn a premium by funding illiquid projects, such as infrastructure. To meet our near- and medium-term liabilities, however, we also need to increase investments in fixed-income products.”

## REGULATORY REFORMS ARE REDUCING HOLDINGS OF EQUITIES AND CORPORATE BONDS BY FINANCIAL INSTITUTIONS

As a consequence of reforms aimed at reducing systemic risk in banking and insurance, many of the largest global financial institutions will need to adjust their capital structures and portfolios of assets in the next few years. New standards for risk-weighted assets in the Basel III requirements—and additional national requirements such as the US Dodd-Frank legislation—will prompt banks to reduce the sizes of their balance sheets and shed risky assets, including some types of corporate bonds and equities. This may have a potentially large impact on capital markets, since banks in the United States and Europe today hold \$15.9 trillion of sovereign bonds, corporate bonds, and equities. These are securities used for trading books, assets held to meet liquidity requirements, cross-holdings in other banks and corporations, and debt securities issued by corporate clients. As banks deleverage and shrink balance sheets, they may reduce lending and the need for all such securities, including equities.

Similarly, new capital adequacy standards for insurers in Europe—known as Solvency II—assess capital charges for risky assets.<sup>39</sup> The capital charges are highest for equities and some types of corporate bonds (those with low credit ratings and/or long maturities). In response to these pending rules, which have been developed over recent years and will take effect in 2014, insurance companies in Europe have already reduced holdings of such assets (Exhibit 18). How much more they will sell is a matter of diverging opinion among the experts we have interviewed. Insurers have already reduced their allocation to equities from 39 percent of assets in 2000 to 27 percent in 2010, and the majority of their remaining equity holdings are held for clients in unit-linked accounts and are not covered by the new rules.

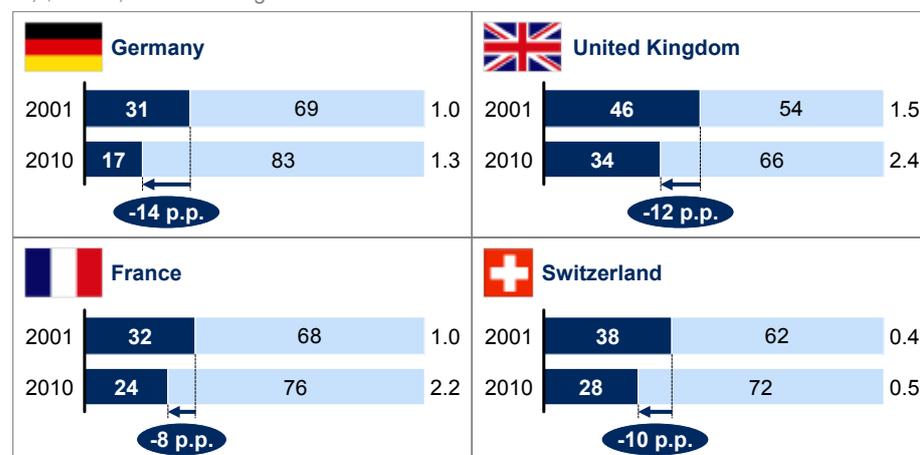
### Exhibit 18

#### European insurers have decreased their equity holdings over the past decade

■ Equity  
■ Other

Equity as % of total financial investments<sup>1</sup> for 4 largest European insurance industries

%; \$ trillion; 2010 exchange rates



<sup>1</sup> Includes investments for which policyholders bear the risk.

SOURCE: A.M. Best Company; annual reports; Association of British Insurers; Swiss Financial Market Supervisory Authority; McKinsey Global Institute

<sup>39</sup> The separate regulatory regimes being implemented for banks, European insurers, and American insurers will affect the specific asset holdings of each separately. For a detailed analysis, see Ahmed Al-Darwish et al., “The unintended consequences of Basel III and Solvency II,” IMF Working Paper Number 11/187, August 2011.

We calculate that insurers could sell as much as \$150 billion of equities over the next five years, if they shed all equities not associated with unit-linked accounts. Alternatively, they may continue to hold some equities outside of unit-linked accounts over the next few years. In any case, it is clear that Solvency II already has reduced the amount of long-term risk capital that insurers will provide to the economy. At a time when European banks need to raise more capital, Solvency II significantly constrains the insurance sector as a potential source of equity for banks.

### A DECADE OF POOR EQUITY RETURNS AND VOLATILITY MAY REDUCE INDIVIDUAL INVESTOR INTEREST

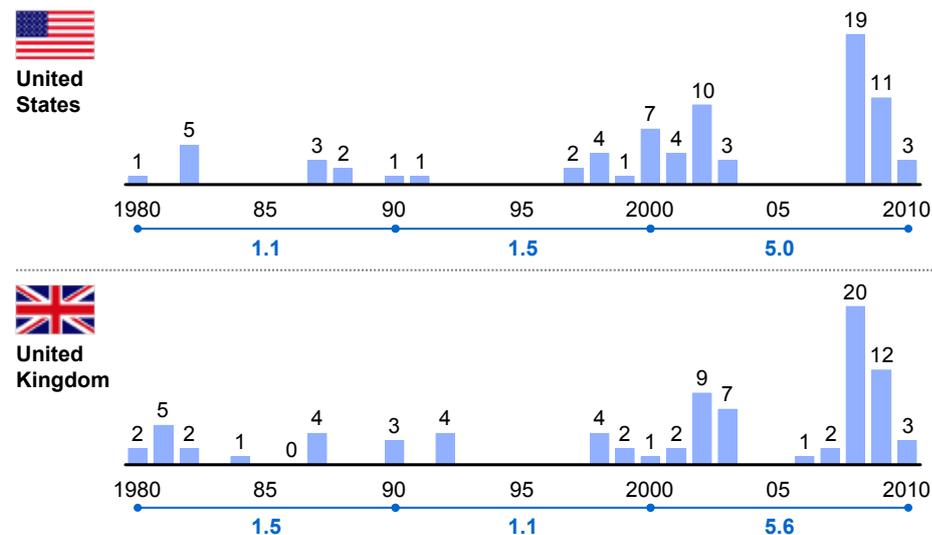
Individual investors, who hold about half of all publicly listed equities (\$25.8 trillion globally) have endured a decade of jarring volatility and, overall, flat or negative returns on their shares and mutual funds. Daily price movements on exchanges across Europe and the United States have become more volatile, making the market seem far riskier for nonprofessionals who want to hold investments for long-term gains (Exhibit 19).

#### Exhibit 19

##### Volatility in many equity markets has increased in recent years

Number of days per year that daily price change exceeded 3%

# Average days per year that change exceeds 3% in corresponding decade



SOURCE: Datastream; McKinsey Global Institute

Perhaps as important, confidence and trust in equity markets may be fading. Corporate governance scandals and events such as the May 2010 “flash crash” reinforce the impression that the system is not working. In a 2010 public opinion poll conducted in the United States, 58 percent of respondents said they no longer find the stock market to be “fair and open,” due to “corporate corruption and broker practices.”<sup>40</sup> In the periodic Financial Trust Index, a poll conducted jointly by the University of Chicago’s Booth School of Business and Northwestern University’s Kellogg School, American consumers have consistently indicated they have little faith in the stock market; the proportion of respondents who have said that they have confidence in the market has ranged from 12 to 16 percent, far

40 NBC News/Wall Street Journal, Study Number 10316, May 2010.

lower than the 32 to 45 percent who have said they have confidence in banks.<sup>41</sup> A study in the Netherlands found a direct correlation between trust in the markets and market participation.<sup>42</sup>

History tells us that the unwelcome combination of poor returns and eroded confidence can lead to the sort of retreat from equities seen in Japan since the 1980s. Unless loss of trust in the markets is addressed, there is a risk that developed nations today will see another “lost generation” of investors.<sup>43</sup> After the 1929 stock market crash, Americans avoided equities until the 1950s, when the US securities industry undertook a concerted marketing campaign to stimulate demand for equities among mass-market investors.

It also should be noted, however, that individual investors, especially in the United States, are often willing to put aside painful market memories when equity values rise. Indeed, the 1970s was such a dismal time for returns on Wall Street that by the end of the decade many analysts predicted a long-term shift to bonds.<sup>44</sup> However, when the bull market got under way in 1982, investors jumped back in.

Another factor that might attract investors to equities is higher dividend yields. For decades, dividend yields have declined and investors have counted on price appreciation as the primary source of equity returns. In 2000, yields reached historic lows and have remained below the postwar average (Exhibit 20). In his book *Against the Gods*, Peter Bernstein explains that this shift began when inflation took root after World War II. Investors started moving back to equities, because inflation and rising nominal interest rates were undermining bond returns.<sup>45</sup> Until the 1940s, inflation averaged just 0.4 percent annually and bonds offered an attractive, stable source of income. To entice investors to put money in stocks, which were volatile, issuers before the 1950s had to offer a higher dividend stream. However, once investors moved into equities in the 1950s and stock values proved more resilient in the face of inflation than those of bonds, dividend yields began to fall (except during the bear market of the 1970s). Since the early 1980s, dividend yields have dropped steadily. In recent years, rising share buybacks helped sustain the decline, even as inflation subsided in the “Great Moderation.”<sup>46</sup>

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41 See <http://www.financialtrustindex.org/>

42 For a detailed analysis of the correlation between trust and market participation, see Luigi Guiso, Paola Sapienza, and Luigi Zingales, “Trusting the stock market,” *The Journal of Finance*, Volume 63, Number 6, December 2008.

43 See Richard C. Koo, *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession*, John Wiley & Sons, 2008.

44 “The death of equities: How inflation is destroying the stock market,” *BusinessWeek*, August 13, 1979.

45 Peter L. Bernstein, *Against the Gods: The Remarkable Story of Risk*, John Wiley & Sons, 1996.

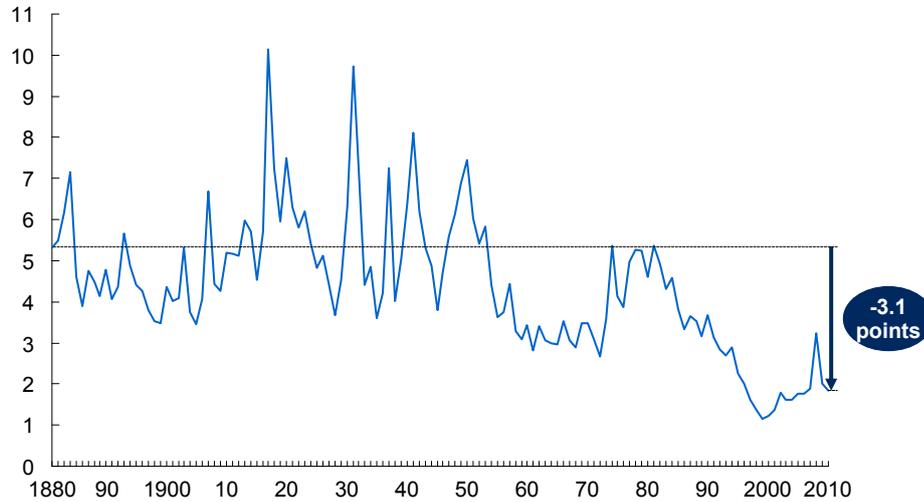
46 See Bin Jiang and Tim Koller, “Paying back your shareholders,” *McKinsey on Finance*, Number 39, Spring 2011.

**Exhibit 20**

**US dividend yields since 2000 are at historic lows**



S&P index annual dividend yield  
%



SOURCE: Shiller S&P Composite data set; McKinsey Global Institute

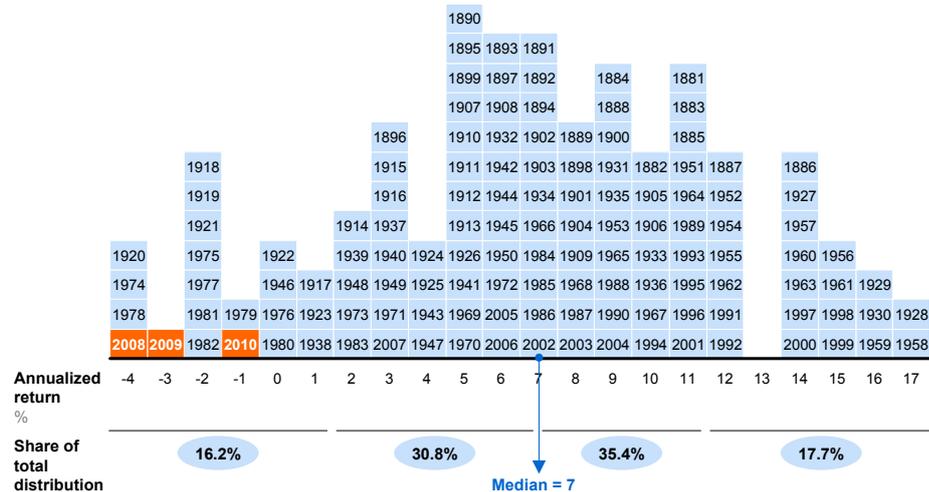
Ultimately, it is relatively high returns that make equities attractive. Given recent performance, investors today question the claim of superior returns. However, the data show that in many countries the poor returns of the past decade have been anomalous—outliers in more than a century of stock market history (Exhibit 21). In part, this is because 2000 was an equity market peak and in 2010 the market was still recovering from the 2008 crash, producing a decade with unusually poor ten-year returns. In Box 3, “A closer look at equity returns,” we see that across more than a century of rolling ten-year periods, the mean annual return on US stocks was almost 7 percent—far above real bond returns, which averaged 2.4 percent. Similar results are seen in the United Kingdom, Germany, and France (although not in Japan).

**Exhibit 21**

**The negative 10-year equity returns of the past 3 years are rare in 130 years of US stock market history**



Distribution of rolling 10-year annualized equity returns<sup>1</sup>, 1881–2010  
Number of occurrences, S&P composite index



<sup>1</sup> Each block represents the end point of a 10-year period and shows the annualized total real returns to shareholders.  
SOURCE: Shiller S&P Composite data set; McKinsey Global Institute

### Box 3. A closer look at equity returns

It is easy to understand why investors might be questioning their belief in equities. The past decade has been a period of rising volatility and disappointing returns on most exchanges.

It is useful to put this performance into historical perspective. By examining every ten-year period of US returns going back to 1880, we quickly see that the periods ending in 2008, 2009, and 2010 are among the worst for equity returns ever recorded (see Exhibit 21). All three of these recent periods fall two standard deviations away from the median return of 7 percent annually for all ten-year periods. Based on the historical record, the chances of having another ten-year period with the 4 percent negative returns seen in the period ending in 2008 is only 2 percent.

We also see that real ten-year equity returns have outperformed government bonds over the last century in the United States and the United Kingdom. The same is true in France and Germany over the past 25 years.<sup>1</sup> Japan is the exception, where real government bond returns have exceeded real equity returns since 1985, on a ten-year rolling basis.

Furthermore, when viewed sequentially, US ten-year and 20-year equity returns show a distinct pattern of 25- to 30-year cycles of strong returns followed by declining returns, as was seen in the 1970s (Exhibit 22). We have clearly entered a trough since 2008. How long it will last is impossible to predict. But it is likely that equities will at some point revert to long-term rates of return. (See Appendix for data on rolling 30-year returns.)

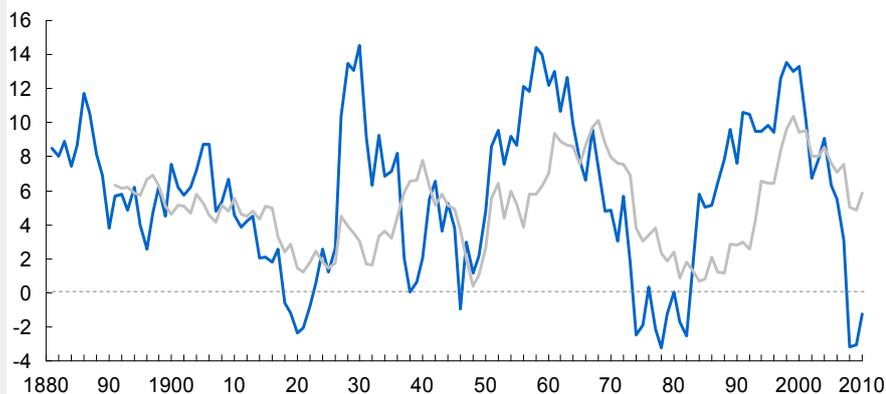
#### Exhibit 22

##### Rolling equity returns show three major equity cycles over the past 90 years

Rolling, annualized real equity return<sup>1</sup>  
S&P Composite  
%



— 10-year  
— 20-year



<sup>1</sup> Assumes dividend reinvested.

SOURCE: Shiller S&P Composite data set; McKinsey Global Institute

<sup>1</sup> See Appendix for more detail.



Even as emerging economies become a major force in global capital markets, the actions of investors in developed economies will continue to have enormous influence on the demand for different types of financial assets. Many signs, from the effects of aging to changes in pension schemes to regulatory requirements for financial corporations, point to lower demand for listed equities from these investors. We do not see any signs of a Japanese-style retreat from equities by investors in Europe and the United States. However, we also do not see any forces in play that would encourage investors in mature economies to allocate more of their wealth to domestic equities. As we will see in the next chapter, this may result in a significant decline in global investor appetite for equities.

## 4. The emerging equity gap

The shift in global wealth and trends in investor behavior described in this report will have a significant impact on global investor demand for equity. We calculate that under current trends, the overall investor allocation to equities could decline by 20 percent over the next decade. Moreover, investor demand for equities would fail to keep pace with growing corporate needs for equity, resulting in a \$12.3 trillion gap. This gap will be centered in the developing economies, but major European nations will also find that equity needs exceed investor demand.

Only a tripling of allocations to equity by emerging market investors would raise demand sufficiently to prevent such a gap—an unlikely scenario. That will leave the market to correct the imbalance. As it does so, companies may find that equity is more costly and some may choose to use more debt and less equity to fund growth, raising the risk of financial distress and bankruptcy during recessions. The market would reach a new equilibrium, with a reduced role for equity, which would pose additional problems for economic growth, corporate financing, and investor strategies.

### **GLOBAL INVESTOR ALLOCATION TO EQUITY WILL DECLINE**

Today household investors in many countries remain wary of equities, due to the poor returns and volatility of recent years. And, even if equity markets rebound, structural factors will push investors away from equities. These factors include aging, changes in retirement plans, growth of alternative investments, and the rise of emerging market investors.

As a result, we calculate that the global investor appetite for equities will decline through 2020. If current trends persist, this will change the allocation of global financial assets, reducing the share held in equities from the current 28 percent to 22 percent by 2020 (Exhibit 23).<sup>47</sup> Roughly 40 percent of this decline in demand is attributable to the growing share of financial assets in emerging markets (assuming no significant change in equity allocations by those investors). The remainder would be due to factors in mature economies: reduced demand from aging households, growth of alternative investment vehicles, impact of new regulations, and changes in retirement financing.

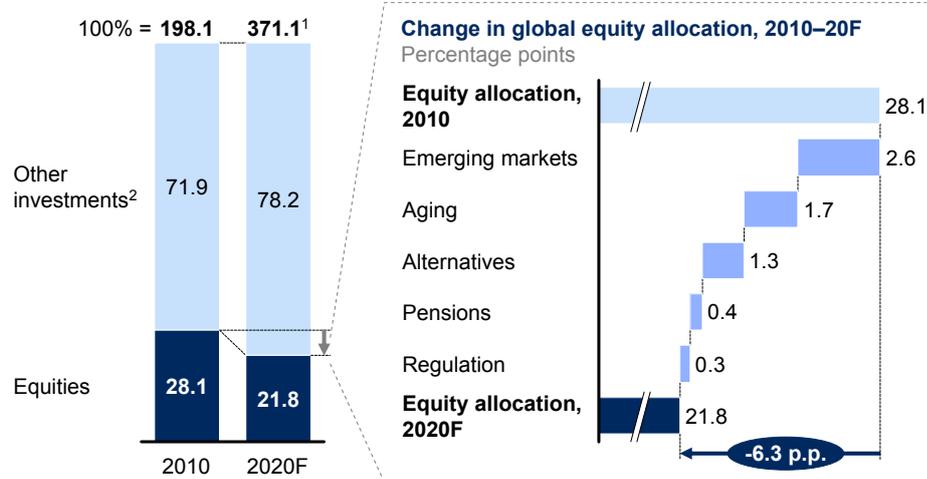
This shift may not be inevitable, but the most important force driving the reallocation of global assets—the rise of emerging market investors with low equity allocations—is not likely to lose its power within ten years. We calculate that it would require all emerging market household and institutional investors to raise their equity allocations to US levels to sustain the current global allocation to equities in 2020. That implies not only a substantial shift in investor risk appetite, but also rapid development of the institutions and legal protections that make equity markets efficient, transparent, and safe for all kinds of investors.

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<sup>47</sup> This is a partial equilibrium analysis that looks only at investor preferences; it does not take into account the dynamic general equilibrium effects, nor does it consider the corporate need for equity, which we model below. See Appendix for additional detail.

**Exhibit 23****In our baseline scenario, equities decline from 28 percent of financial assets to 22 percent by 2020**

Global asset allocation, 2010–20F  
%; \$ trillion; 2010 exchange rates



<sup>1</sup> Based on consensus global growth scenario.

<sup>2</sup> Includes cash, deposits, and fixed-income securities.

SOURCE: McKinsey Global Institute

The global reallocation could also be reduced significantly by a strong revival in US equity markets—perhaps driven by a new technology boom—that would restore household allocations to the 50 percent-plus levels last seen in 2000. Also, in a scenario of rising inflation fears, investors around the world might increase purchases of equities, which hold their value during inflation cycles better than bonds and bank deposits.

**CORPORATE NEEDS FOR EQUITY WILL GROW**

The likely fall in investor demand for equities will affect how companies are funded. Even as the share of equities in global financial assets declines, total global investor demand for equities will grow by more than \$25 trillion through 2020 in our base case scenario for economic growth, savings, and asset appreciation.<sup>48</sup> However, this demand will not be sufficient to cover the additional equity corporations will need to fund growth.

Companies rely on equity financing for several reasons. One is to raise long-term capital to fund investments. Another important reason to list shares is to allow owners to monetize their private equity stakes. Over the next decade, banks will have a unique need to increase equity as they strive to meet new regulatory requirements. Using a sample of ten mature economies and eight emerging markets,<sup>49</sup> we model these sources of future corporate equity needs.<sup>50</sup> We find that companies in these countries will require \$37.4 trillion of additional equity capital to support growth. This amount does not directly equate to issuance

<sup>48</sup> We use consensus forecasts for GDP growth and saving rates, and historic rates of asset appreciation for individual countries. It allows for changing asset allocations due to aging, regulatory changes, and growing investor demand for alternative investments. See Appendix for additional detail.

<sup>49</sup> Our sample consists of the following countries: Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, South Africa, South Korea, Spain, Turkey, Russia, United Kingdom, and United States.

<sup>50</sup> See Appendix for more detail.

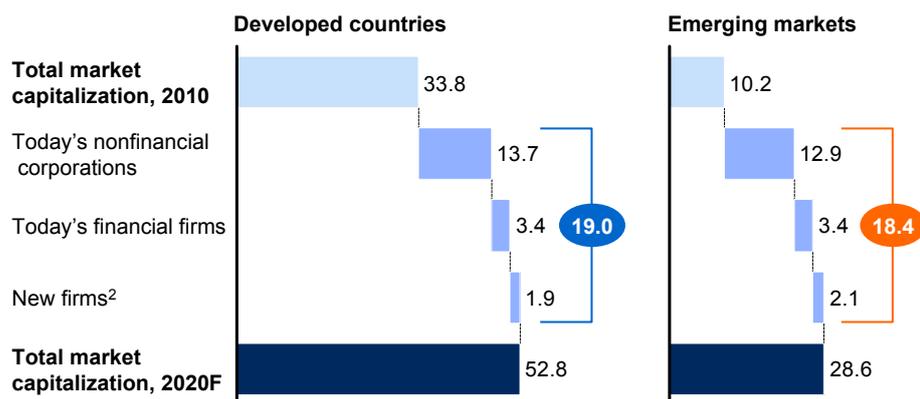
of shares because some equity needs of companies can be met with retained earnings. In either case, however, the added equity will increase the market capitalization of these companies and, thus, investor holdings.

The \$37.4 trillion equity requirement is split evenly between companies in developed countries and those in emerging markets, implying roughly similar increases in their stock market capitalizations (unless valuations diverge from our projections). But there is a critical difference: for emerging economies, an incremental \$18.4 trillion represents a 180 percent increase in stock market capitalization over 2010 levels, while the \$19 trillion projected increase in valuation in developed economy equities would be a rise of only about 56 percent (Exhibit 24). In emerging markets, companies not only have higher needs for external funding to keep up with their rapid growth, they also have relatively low returns on invested capital (ROIC), which limits their ability to fund growth through retained earnings.

**Exhibit 24**

**Corporate needs for equity will increase by almost \$19 trillion in both developed countries and in emerging markets**

Increase in firms' equity needs,<sup>1</sup> 2010–20F  
\$ trillion, 2010 exchange rates



1 Based on a sample of 10 developed countries (Australia, Canada, France, Germany, Italy, Japan, South Korea, Spain, the United Kingdom, and the United States) and 8 emerging economies (Brazil, China, India, Indonesia, Mexico, Russia, South Africa, and Turkey).  
2 Calculated as estimated market value of cumulative annual IPOs from 2011 through 2020.  
SOURCE: McKinsey Global Institute

Part of the projected equity needs come from start-ups and other privately owned companies around the world that will seek to float initial public offerings. IPOs have served an important role in funding growth by allowing entrepreneurs, early backers, and founding families to cash out and diversify their personal fortunes, and by providing the critical jolt of capital that is often needed to take a company from a medium-sized player to a segment leader and major employer. This is particularly true in emerging markets, where young industries are expanding and many companies remain in the hands of governments or private investors. Based on historical IPO trends for nonfinancial companies, we would expect new firms around the world to require \$4.0 trillion in equity capital by 2020, with \$2.1 trillion of that in emerging markets.<sup>51</sup>

51 During this period we do not anticipate major IPOs of financial institutions. See Appendix for more detail on these projections.

Financial firms in both developed and emerging markets will also need additional equity. In developed countries, banks have been active issuers of equity in the wake of the financial crisis and will continue to amass significant additional equity in order to meet Basel III requirements and national regulations. In emerging markets, banks will also need additional equity to fund growing balance sheets. Given the limited prospects for banks in developed countries to increase returns on equity under new regulations, their need for additional funding could run up against limited investor demand (see Box 4, “The rise of bank shares in global stock markets”).<sup>52</sup>

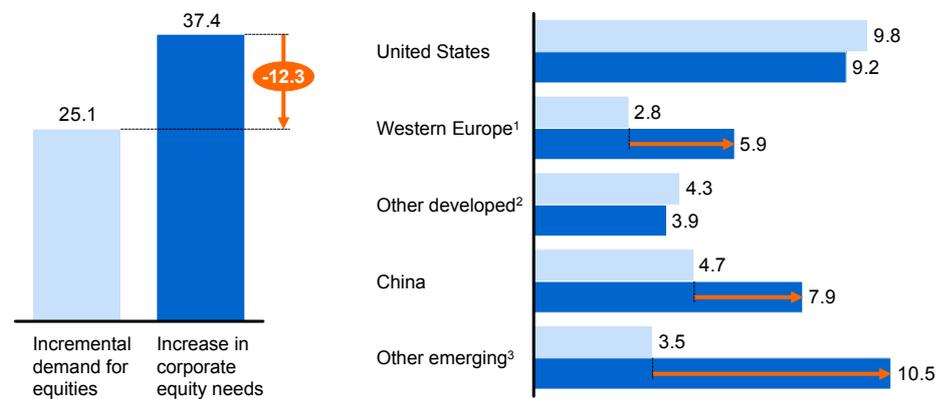
### A POTENTIAL \$12 TRILLION GAP BETWEEN INVESTOR DEMAND FOR EQUITIES AND CORPORATE NEEDS

Based on this analysis, we find an emerging gap between the equity capital that companies will need and what domestic investors will demand over the next decade. In our base case scenario for our sample of 18 countries, this gap could be as large as \$12.3 trillion<sup>53</sup> (Exhibit 25).

#### Exhibit 25

#### The emerging equity gap: Demand for equities may not satisfy corporate needs

Incremental demand for equities by domestic investors vs. increase in corporate equity needs, 2010–20F  
\$ trillion; 2010 exchange rates



<sup>1</sup> France, Germany, Italy, Spain, and the United Kingdom.

<sup>2</sup> Australia, Canada, Japan, and South Korea.

<sup>3</sup> Brazil, India, Indonesia, Mexico, Russia, South Africa, and Turkey.

SOURCE: McKinsey Global Institute

<sup>52</sup> See “In search of a sustainable model for global banking,” *McKinsey Quarterly*, September 2011.

<sup>53</sup> If emerging market currencies appreciate, the gap could total \$13.7 trillion by 2020. The reason for this modest impact is that currency appreciation would increase both investors’ financial assets and corporate needs for equity in those countries. See Appendix for additional detail.

### Box 4. The rise of bank shares in global stock markets

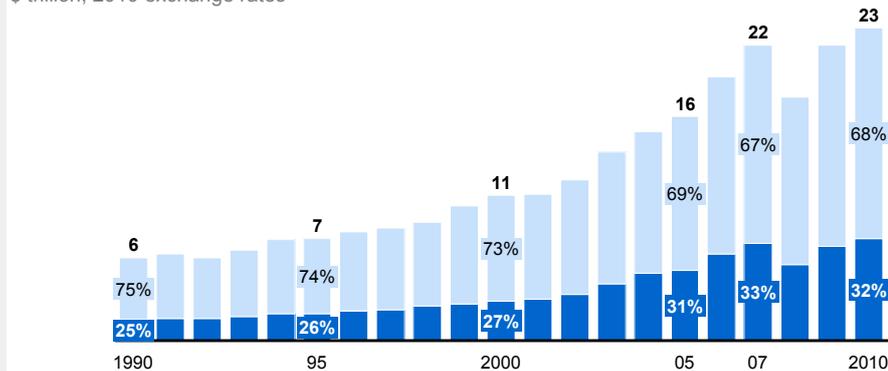
The share of global stock market capitalization represented by bank-issued stock has increased over the past decade and, with new capital requirements under the Basel III agreement, it may increase further. At the end of 2010, shares issued by banks made up 32 percent of the book value of listed equities in developed countries, up from 27 percent in 2000 (Exhibit 26). The figure in Europe and the United Kingdom is even higher, where banks account for 36 percent and 37 percent, respectively, of the book value of listed equity.

The weight of bank shares on major exchanges is likely to grow more pronounced in the years to come. Basel III requires banks to increase their capital cushions, particularly common equity. Several national regulators are considering higher capital requirements for systemically important institutions that are already among the largest issuers of public shares in the world. McKinsey estimates that banks will need to increase capital by hundreds of billions of dollars above the level at year-end 2010 to meet the new requirements. Banks might do this through retained earnings or new issues. In either case, the book value of their equity will rise. Factoring continuing share buybacks from nonfinancial companies, the bank share of stock market capitalization could increase to 39 percent by 2020. Such an increase would affect risk and return characteristics of major equity indices and the wealth of investors who use index mutual funds.

#### Exhibit 26

#### In developed countries, financial firms' equity accounts for one-third of total stock market book value

Book value<sup>1</sup> of developed countries' equities, 1990–2010  
\$ trillion, 2010 exchange rates



#### Market-to-book multiple

Financials	1.7	1.8	2.6	1.9	1.5	1.1
NFCs	1.8	2.3	3.4	2.6	2.5	2.0

<sup>1</sup> Calculated based on yearly country-specific market-to-book multiple.

SOURCE: Standard & Poor's; Datastream; Bloomberg; McKinsey Corporate Performance Analysis Tool (CPAT); McKinsey Global Institute

Most of the emerging equity gap will occur in developing countries, where investors have small appetites for equities and corporate needs for equity are high. In China, for instance, we calculate that currently listed companies and new firms will need \$7.9 trillion of additional equity by 2020, assuming nominal GDP growth of 11.7 percent annually during this period and not factoring in any changes in exchange rates. At current asset allocations, Chinese investors will increase their equity holdings by only \$4.7 trillion in these years, leaving a nearly \$3.2 trillion theoretical gap.<sup>54</sup> Altogether, other emerging markets face an equity gap of \$7 trillion.

The gap disappears in some developed countries because corporate need for equities and investor demand will align. In these countries, established companies generate sufficient profits to finance their investment needs. Indeed, US companies had \$1.4 trillion in cash at the end of 2010.<sup>55</sup> The United States and several other developed countries will have more investor demand for equities than what companies will need.

European nations are exceptions among mature economies: the combination of aging, declining investor appetite for equity over the past decade, changes in retirement schemes, and significant needs for banks to raise new equity capital mean that the five largest European economies could face an equity gap of as much as \$3.1 trillion over the next ten years.

Ultimately, market forces will balance investor demand for equity and corporate issuance. One mechanism to accomplish this would be a rise in the risk premium of equities (the spread between equity returns and the risk-free rate of return), which would attract more investors into the market. This would happen through lower stock prices or valuations, producing higher yields. Continued government ownership of shares could also fill the gap—especially in the banking sector if bank profitability remains low and private investors are unwilling to provide the additional equity that banks will need. Nonfinancial companies might respond by shifting their capital structures and using more debt and less equity to fund growth, given the rising costs of equity and the continued tax subsidies for debt.

The most important steps for avoiding the equity gap would be to create incentives and conditions for more investor demand. Households in the large equity investing countries, such as the United States and United Kingdom, could be encouraged to save more. But they will need to overcome “home bias” and increase their allocations to foreign equities to help fill the gap in emerging markets.<sup>56</sup> Another way to avoid an equity gap is to induce emerging market households and institutional investors to develop a larger appetite for equities. As noted, we calculate that if these investors were to match the allocations of US investors over the next decade, investor demand would satisfy corporate needs. However, such a rapid shift by savers to equity investing would be unprecedented historically and would require rapid evolution of institutions, market access

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54 Of course, domestic investors' demand for equities includes their demand not only for domestic firms but also for foreign firms. We did not attempt to calculate the foreign versus domestic holdings.

55 See McKinsey Global Institute, *Mapping global capital markets 2011*, August 2011 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

56 If emerging market currencies appreciate, developed countries may need to increase savings even more to fill the equity gap in emerging markets because a decline in the value of developed-country currencies vis-à-vis emerging market currencies would make it more costly for developed-country investors to invest abroad.

mechanisms, and practices that make stock markets attractive to individuals seeking long-term appreciation.

□ □ □

The possibility of a substantial gap between investor demand for equities and corporate needs poses many challenges for the global economy. As we will discuss in the following chapter, listed equity plays a unique role, both for investors and in corporate finance. Reducing the impact of equities on global capital markets would have lasting effects on how investors reach their goals, how companies expand, and how smoothly economies move ahead.



## 5. Implications of a world with a lower allocation to equity

A decline in equities as a proportion of global financial assets would be an important development, and one with significant implications for economic growth and global rebalancing, as well as for corporate funding and investor strategies.

Traded equity and debt have proven to be useful alternatives to bank financing for long-term capital needs. Expansion of equity markets has provided an important source of funding for companies; it has offered an exit option for venture funders who are so important to innovation; it ushered in a new era of corporate ownership and governance, as families and founders transferred control of companies to a diverse set of shareholders; and it has spurred greater competition within industry sectors and fostered faster entry and exit of firms through M&A and spin-offs. In most countries, equity investments have offered investors higher returns on savings over the long term than bonds or deposits, helping them to accumulate wealth and fund retirement. Reducing this enabler of dynamic performance will have implications for economic performance and global rebalancing.

The shift in global wealth and evolving investor behavior will directly affect companies that raise money in capital markets, businesses that manage investments, and investors themselves. For both issuers and purchasers of equities, it will be essential to understand how their needs can be met in a global investing system where the center of gravity is moving east—to where the appetite for equities remains muted. For asset managers and banks, this global shift complicates traditional business models, but opens opportunities to create new ones.

### **ECONOMIC GROWTH MAY BE SLOWER AND MORE VOLATILE**

GDP growth rates could be slowed somewhat by a reduction in the relative role of equity funding and a rise in debt financing. Equities provide not only long-term funding, but also an important means of absorbing risk and dispersing it across many investors. During economic downturns, high levels of debt in the economy—in households, or in the corporate or government sectors—create a higher risk of bankruptcy. By contrast, companies that are financed with higher levels of equity have less risk of financial distress than those financed mainly with debt.<sup>57</sup> The procyclical dynamic of high leverage exacerbates the depth of recessions, forcing more companies to cut back employment to meet debt payments and leaving more firms in danger of bankruptcy. In addition, over-reliance on debt financing may help fuel asset bubbles. When a downturn does occur, more diversified financial systems can withstand the strain better and can resume growth more rapidly because their companies are less indebted and have alternative means of raising financing.

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<sup>57</sup> See Stephen G. Cecchetti, M. S. Mohanty, and Fabrizio Zampolli, “The real effects of debt,” BIS Working Paper Number 352, September 2011.

Equity markets also promote economic growth by efficiently channeling money to the best-performing companies. Today, policy makers and economists continue to debate the relative merits of equity financing versus bank financing and there are certainly ample examples of countries that have sustained strong growth with limited equity markets: South Korea during its fastest growth phase, Germany, and recently China, for example. Current academic thinking suggests that the optimal financial market structure for a country depends on its stage of economic and industrial development: as economies advance, firms need larger and more robust equity markets to facilitate innovation and supply large amounts of capital for new industries.<sup>58</sup> Empirical evidence suggests that if legal protections for shareholders are strong, financial systems that include robust capital markets—in addition to bank financing—promote faster economic growth than purely bank-based ones.<sup>59</sup>

Another link between well-developed equity markets and growth is in new company formation and the growth of young companies. Equity markets encourage investment in start-ups by venture capital groups and individual “angel investors” because they offer a clear exit option if companies succeed. For high-growth companies, equity issuance is the main source of external financing for expansion. Without an established business, collateral, and steady cash flow, a business cannot get a bank loan or float a bond. But an entrepreneur can raise seed capital by selling shares to angel investors or friends and family. Certainly, the existence of an equity market alone is not sufficient to guarantee innovation and entrepreneurship in an economy. However, it may be an important enabler.

There is no question that the past decade has provided ample examples of how public ownership can fail.<sup>60</sup> Nonetheless, a shift in the global financial system away from equities would likely produce a world with more concentrated ownership structures, higher economic volatility, less efficient allocation of capital, and slower growth.

### **HOUSEHOLD WEALTH ACCUMULATION MAY SLOW**

As a lower proportion of household wealth is invested in equities, ordinary investors would find it much more challenging to meet saving goals. Institutional investors and wealthy families have access to many options to generate high rates of return—private equity, hedge funds, real estate—but mass-market retail investors do not. We have seen that ordinary investors in countries with strong equity investing habits consistently earn higher returns on their savings. Over the past 15 years in the United States, when household equity allocations have averaged nearly 50 percent, total annual returns on all financial assets have averaged almost 5 percent. During that period in Germany, where households placed 20 to 25 percent of their financial wealth in equities, annual returns averaged 1.5 percent. This helps explain why household financial assets are

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58 See Justin Yifu Lin, et al., “Toward a theory of optimal financial structure,” World Bank Policy Research Working Paper Number 5038, September 2009.

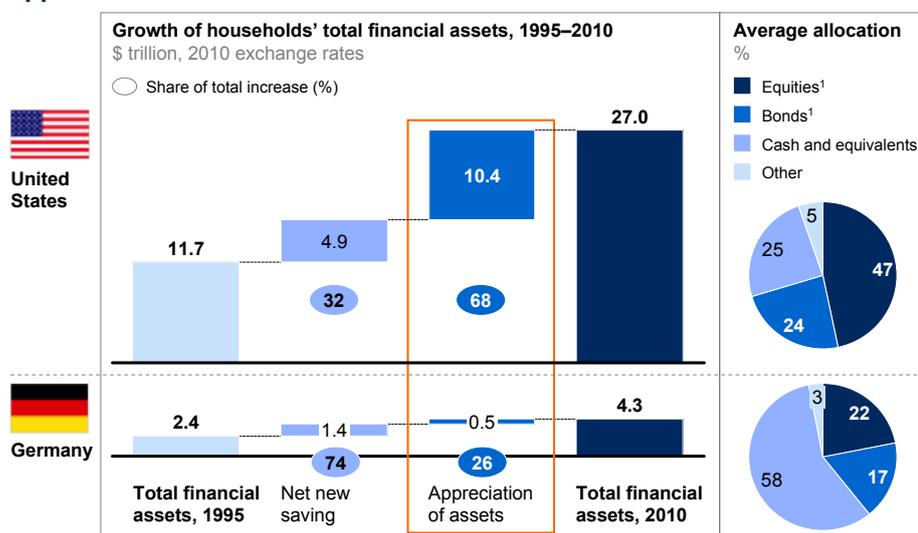
59 See Thorsten Beck and Ross Levine, “Industry growth and capital allocation: Does having a market- or bank-based system matter?” *Journal of Financial Economics*, 2002. Also see, from the same authors, “Stock markets, banks, and growth: Panel evidence,” National Bureau of Economic Research Working Paper Number 9082, July 2002.

60 It is also now widely accepted that private ownership models can generate higher returns for some companies, particularly those undergoing restructuring. See, for example, Viral V. Acharya, Conor Kehoe, and Michael Reyner, “The voice of experience: Public versus private equity,” *McKinsey Quarterly*, December 2008.

growing faster in the United States than in Germany, despite a US personal saving rate that is less than half that of Germany (Exhibit 27).

**Exhibit 27**

**Investors with low equity allocations rely more on new saving than appreciation to increase their stock of financial assets**



1 Domestic German stocks and bonds had higher average annual return (10% and 7%, respectively) over this period than did domestic US stocks and bonds (7% and 6%, respectively).

SOURCE: US Federal Reserve Flow of Funds; Bundesbank Financial Accounts; McKinsey Global Institute

Promoting household investment in equities and other higher-yielding assets could be one way to achieve global rebalancing. Indeed, the Chinese government has stated that, in addition to promoting better corporate management, it is developing equity markets to enable more household consumption.<sup>61</sup> Although raising the savings rate in the United States is important for long-term growth and rebalancing the global economy, it is equally important to raise consumption in other countries. Offering mass investors higher returns could be one piece of the solution.

**SOME NONFINANCIAL COMPANIES WILL FIND IT MORE DIFFICULT TO RAISE PUBLIC EQUITY**

The emerging equity gap may be a serious challenge for companies that need to raise money in public markets. Companies in emerging markets and many based in Europe are likely to find that they are not able to raise enough equity capital in their home countries or can do so only at high cost. All companies will want to think about sourcing capital globally. For companies outside the United States, a US listing will continue to be an attractive option, as the United States is one of the few regions that will continue to see a surplus of investor demand for equities. Another option is to raise equity through private placements with emerging market sovereign wealth funds, high-net-worth families, and institutions such as pension funds.

61 See McKinsey Global Institute, *If you've got it, spend it: Unleashing the Chinese consumer*, August 2009 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

To spur investor demand in their home countries and in other developed economies, issuers might consider raising dividend yields. As we describe above, dividend yields have been falling for many years. Higher dividends would make shares attractive to retirees seeking a reliable quarterly check. And, at a time of low returns and rising volatility, dividend-paying stocks are regarded as more stable. Policy makers can encourage this shift by permanently equalizing tax treatment of dividends and capital gains.<sup>62</sup>

### **BANKS WILL BE CHALLENGED AS THEY RAISE NEW EQUITY**

While many major nonfinancial corporations in the United States and Europe can fund all of their needs for expansion capital through retained earnings, banks cannot. As noted above, new capital requirements have made banks the most active issuers of secondary offerings in recent years and they account for more than one-third of the book value of shares on American and European exchanges. However, given new regulatory restrictions on their businesses, bank earnings are under increasing pressure and few banks today are earning their cost of capital.<sup>63</sup> In the future, given higher capital ratios, bank shares may perform more like those of regulated utilities, offering investors lower total returns but with less volatility than nonfinancial companies. Investors, then, may regard banks increasingly as a distinct class of equities. For banks, attracting investors in such an environment will be challenging—and even more so in Europe than in the United States, because investor interest in equity there is lower and declining.

However, the global shift of wealth does hold out opportunity for banks as deposit institutions. In places where pools of wealth are growing fastest, investors hold three-quarters or more of their financial assets in bank deposits. Over the next decade, if current asset allocations hold, bank deposits will grow by an estimated \$24 trillion in emerging markets (Exhibit 28). Foreign banks have been very successful in winning market share in some emerging market regions, such as Spanish banks in Latin America. Others banks can follow suit. Africa remains full of opportunity because of its low banking penetration. Southeast Asian nations, including Vietnam and Indonesia, also have rapidly growing populations of new investors. However, regulatory restraints, such as forcing banks to establish locally-owned subsidiaries, could limit the ability of banks to use deposits raised in one country to fund assets in another. This would result in pockets of trapped liquidity in markets with high savings (raising risks of asset bubbles there) and funding constraints in deposit-poor countries.

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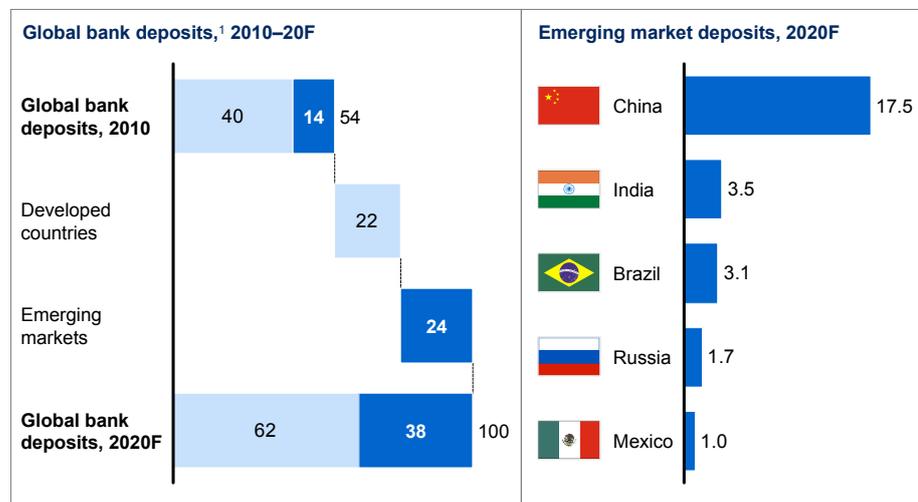
62 In many countries, dividends are taxed at the rate of personal income, while capital gains are taxed at a lower rate. In the United States, qualified dividends currently get the same tax treatment as capital gains, but this rule is set to expire in 2013.

63 See "In search of a sustainable model for global banking," *McKinsey Quarterly*, September 2011.

**Exhibit 28**

**Emerging market investors could help push total assets in deposit accounts to \$100 trillion by 2020**

\$ trillion, 2010 exchange rates



1 Includes deposits made by households, institutional investors, and corporations; excludes the deposits of banks at other financial institutions or with the central bank.

SOURCE: National sources; McKinsey Global Institute

**ASSET MANAGERS FACE MAJOR CHALLENGES BUT ALSO FRESH OPPORTUNITIES**

The asset management industry has experienced three very challenging years since 2008. Market performance has erased trillions of dollars of client wealth and net inflows into equities remain low in many countries as investors continue to seek safety in bank deposits.<sup>64</sup> But asset managers may find new opportunities in both emerging and mature markets in the next few years.

Developing markets may be particularly fruitful sources of growth. By 2020, we project that investors in developing economies will hold \$114 trillion or more in financial assets. Of that, nearly \$50 trillion will be household financial assets and about \$18 trillion will be assets in insurance companies and pension funds. Today, only a very small slice of household financial assets in developing economies is entrusted to professional managers, both because of the habits of individual investors and because, in most emerging markets, the asset management industry is still very small.

64 See a recent McKinsey & Company report on the asset management industry, *Will the goose keep laying golden eggs?* June 2011, available at [www.mckinsey.com](http://www.mckinsey.com).

Asset managers will need a strong global reach to cultivate the newly wealthy households of Asia and other regions. This effort will require tailoring product offerings to fit the preferences and budgets of the emerging investor class; emerging market household income, while rising, is still only a fraction of the levels in mature economies and it may take long-range marketing and educational strategies to cultivate these new customers. Products will need to be simple and low cost, but the potential to build a trusted brand is wide open. At the same time, foreign players have disadvantages: a majority of Asian investors in a recent McKinsey survey say that they prefer local institutions, but their loyalty to their existing banks is declining.<sup>65</sup>

In mature economies, poor stock market returns and aging households may both work against professional asset management. However, there remain enormous untapped needs, too. Individual investors in the United States and other advanced economies have done a poor job accumulating retirement savings—in their own accounts and in their employer-sponsored investment programs.<sup>66</sup> Some solutions, such as increasing the personal saving rate, will require policy changes. But asset managers can take steps to increase saving.

The industry can also do a better job educating investors about the financial implications of longer life spans, including the need to get higher returns over a longer period. Mutual fund companies may need to redesign some lifestyle and target-date funds. Today, lifestyle fund marketers ask investors to select funds with different asset allocations based on simplistic assessments of risk tolerance. Target-date funds automatically change the asset allocation as investors near their expected retirement dates. But they may reduce or eliminate equities too early to meet the ongoing accumulation needs of clients today, given lengthening life expectancies.

### **ALL INVESTORS NEED TO LOOK BEYOND HOME MARKETS AND ADJUST THEIR APPROACHES**

Despite the globalization of capital markets, investors in mature economies have been slow to diversify portfolios internationally, so their holdings remain skewed toward their home markets (Exhibit 29). For instance, investors in US mutual funds have 70 percent of equities in domestic funds and Japanese households keep 93 percent of their equities in domestic listings. In emerging markets, holdings of foreign equities are actually declining as the value of domestic stock markets soars and regulations continue to constrain foreign investing.

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65 See Kenny Lam and Jatin Pant, “The changing face of Asian personal financial services,” *McKinsey Quarterly*, September 2011.

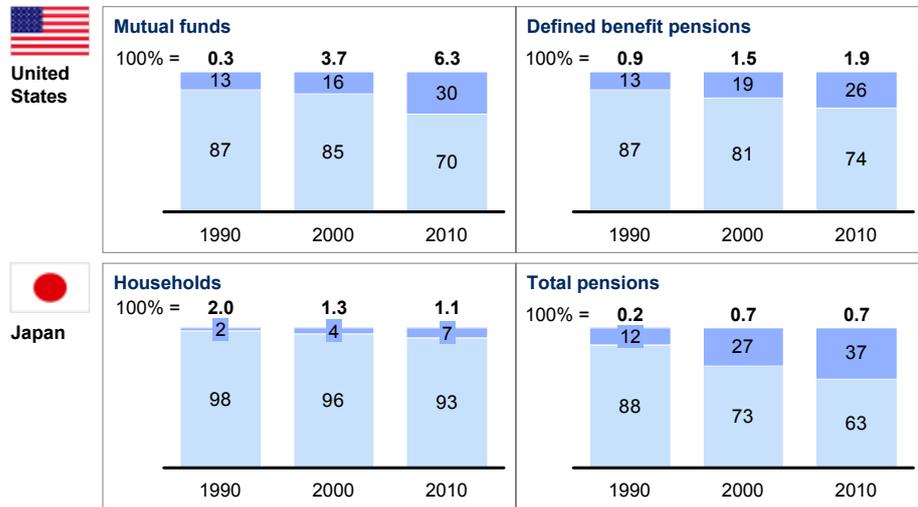
66 See, for example, David A. Hunt, Janice Revell, and Joanna Rotenberg, “What US workers don’t know about retirement,” *McKinsey Quarterly*, January 2007.

**Exhibit 29**

**Home bias is declining but remains prevalent, even among professional asset managers**

Foreign vs. domestic equity holdings, 1990–2010  
%; \$ trillion, 2010 exchange rates

■ Domestic  
■ Foreign



SOURCE: National sources; McKinsey Global Institute

To meet investing goals, households and institutions will need to look to where GDP grows most rapidly, which means focusing on the most promising companies based in developing countries and multinational companies that have successful operations in those markets. Individuals and institutional investors in developed nations will want to increase exposure to emerging economies, particularly to issues of top companies in the most successful emerging markets. The challenge will be to find sources of return commensurate with the risk—and to find good values. Today, with the limited amount of publicly floated shares in emerging markets, valuations can be high. For retail investors, one relatively low-risk way of gaining exposure to emerging market growth will be through investing in multinationals that have a strong emerging market presence.

Finally, investors will need to adjust their approaches to investing. Rather than thinking about equities and fixed-income investments as two completely different asset classes with distinct selection criteria, it may be more useful to view investing more “holistically”—buying both the equity and the debt of companies with the best performance potential, for example. And, as noted, the changing characteristics and continuing growth of bank equities as a share of overall market capitalization of major exchanges justifies a special approach for investing in this sector.

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A global reallocation of investment portfolios that reduces the role of equities will have widespread effects on the economy, corporate finance, the financial industry and on investing itself. Understanding the dynamics of a world with less equity will help policy makers, corporate executives, and investors make the best decisions about how to respond to this change. In the next chapter, we discuss specific steps that could reduce these impacts.



## 6. Policy options to consider

A long-term shift away from equity investing would mark a significant change in the historic evolution of global financial markets. It would, in our view, have undesirable consequences for investors, businesses, governments, and economies—in particular for the developing economies that will be the engines of growth for global GDP.

Therefore, we believe that it is important to understand how these forces driving the shift away from equities can be blunted or even reversed. Some of these forces are irreversible; aging cannot be stopped. Yet, even in that case, there are policies—and even products—that can help shift investor behavior and reduce the impact on equities.

Policy makers can take steps to close the emerging equity gap by changing investor incentives and increasing the knowledge and opportunities needed for investing in equities. They can also take actions to ensure companies use a prudent mix of debt and equity, thereby maintaining a balanced global financial system.

### **EMERGING MARKETS MUST CREATE THE CONDITIONS FOR EQUITY INVESTING**

The single most important step to minimize or prevent the emerging equity gap is for emerging economies to further develop their equity markets and create the conditions for households and other investors to participate in these markets. Several critical policies can spur the rise of equity investing in these countries:

- **Strengthen the legal and regulatory foundations of equity markets.** There are many benefits of diversifying company ownership and developing deep and liquid stock markets in emerging economies. To accomplish this will require more than establishing modern stock exchanges—those institutions are largely in place. What is more critical in most developing countries are the “soft factors” that underpin healthy stock markets: improving financial auditing, reporting, and transparency of listed companies; developing and enforcing legal codes that protect the rights of shareholders; and ensuring that market oversight is robust and fair. More transparent markets will attract more liquidity and create a virtuous cycle: demand for equities rises, making it more attractive to owners of private companies to float shares in their companies, thereby deepening the market, which in turn will attract more investors and create more liquidity.
- **Expand channels for households to access equity markets.** Emerging markets would benefit from expanded retail channels and products for equity investing, including mutual funds, exchange-traded funds, and access to

discount and online brokerage services.<sup>67</sup> Allowing foreign firms to offer such financial services could expand the market quickly and spur domestic players to compete for customers. In some countries, policy makers must also address some of the reasons that households overwhelmingly prefer to put their savings in deposits. For instance, in China citizens avoid risk in their portfolios because, in the absence of health insurance and other forms of private insurance, they must always have access to liquid assets for emergencies.

- **Enable the growth of institutional investors.** Institutional investors, such as pension funds, insurance companies, and mutual funds, are important elements of stable, liquid equity markets. These investors have long time horizons and can provide “patient” capital to the market, as well as volume and liquidity. In some Asian markets today, such as Shanghai, Taipei, and Seoul, retail “day traders” dominate the market and focus on profiting from small price movements. Turnover volumes on these markets are very high. In Chile, a switch to a system of private pension accounts tripled the savings rate, created institutional investors, and deepened public equity and debt markets in the 1980s.<sup>68</sup>

## DEVELOPED COUNTRIES MUST REMOVE BIASES AGAINST EQUITIES AND PROMOTE MORE SAVING

Although the evolution of equity investing in emerging markets will be most important for shaping global capital markets in the years to come, there are other steps that advanced economies can take. Policy makers in these countries can take actions to increase saving and create incentives for investing in equity. They should also carefully consider the current incentives for companies to use equity versus debt, and ensure stock markets remain accessible to a broad range of companies, including start-ups.

- **Increase household saving and enable flows into equities.** As we have argued in previous reports, policies to stimulate more saving by households in advanced economies where saving rates have been low (the United States and the United Kingdom in particular) would have many benefits: shoring up meager retirement savings; paring current account deficits; and strengthening household balance sheets. Many different policies have been shown to raise household saving. One lesson from these initiatives is that mandatory programs have greater impact than incentives. Australia, for example, nearly doubled its saving rate, to 8 percent of GDP from 4.4 percent, by mandating that employers contribute 9 percent of salaries to the national retirement program.<sup>69</sup> Singapore also has a long-standing mandatory saving program, the Central Provident Fund. The United Kingdom will be implementing an

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67 For in-depth discussion of capital markets evolution in emerging economies, see Robert E. Litan, Vincent Pomerleano, and V. Sundararajan, *The future of domestic capital markets in developing countries*, The Brookings Institution, 2003; or Stephen Green and Guy S. Liu, *Exit the Dragon: Privatization and State Control in China*, The Royal Institute of International Affairs, Wiley-Blackwell, 2005.

68 Robert Holzmann, “Pension reform, financial market development, and economic growth: Preliminary evidence from Chile,” International Monetary Fund staff papers, Volume 44, Number 2, June 1997.

69 See McKinsey Global Institute, *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*, December 2010 ([www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)).

automatic-enrollment pension system in 2012.<sup>70</sup> Higher saving rates would increase the flow of funds into equities—particularly if governments were to introduce tax incentives for saving plans that invest in equities and long-term corporate bonds. One example of such an incentive is the UK Personal Equity Plan, as originally designed.

- **Reduce tax biases against equity.** The corporate tax code in most developed economies makes interest payments—but not dividend payouts—deductible from corporate income taxes. Reforming the tax code to remove this bias could shift the capital structures of firms and may even raise investment and improve capital allocation.<sup>71</sup> We acknowledge that this reform may briefly exacerbate the equity gap described in this report by increasing corporate issuance of shares. However, we believe that biasing companies toward using more debt does not serve the broader interest of the economy. We also realize that simply eliminating the deductibility of interest would effectively raise corporate tax rates, unless that move were offset by a lower marginal rate. An alternative reform would be to allow corporations to deduct dividends from profits in calculating their corporate tax liabilities. This allowance might encourage companies to pay dividends rather than pursue share buybacks, reverse the trend of falling dividend yields, and perhaps attract older investors and others looking for steady income. In this era of fiscal austerity, this reform might be accompanied by other tax reforms to ensure the package is revenue-neutral. Another option is a broader reform that would give companies a tax benefit for all of capital costs, regardless of payout policy. Known as the Allowance for Corporate Equity (ACE), this policy has been implemented or is under consideration in several countries.<sup>72</sup>
- **Reduce management incentives against equity.** Corporate performance metrics, in particular targets based on earnings per share (EPS), create perverse management incentives against equity. Executives can mechanically increase EPS through share buybacks, with no change in the underlying profitability of the company. They can also boost EPS and return on equity (ROE), which is another common metric of management performance, by increasing debt and reducing equity. Judging performance on more neutral metrics, such as return on invested capital (ROIC) and return on assets, can reduce the bias against equity. Institutional investors, who typically own both debt and equity in a company, should consider judging performance on a wider set of metrics, beyond just EPS or ROE.
- **Expand access to equity markets for smaller companies.** Even in the countries with the deepest equity markets, more can be done to extend access to a broader range of small companies and small investors. In the United States, IPO volumes have fallen sharply since the 2008 financial crisis, but they were already in decline during the ten years preceding the crisis. In

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70 See “Implementing an integrated package of pension reforms: The final report of the Pensions Commission,” The Pensions Commission of the United Kingdom, 2006. Also see “NEST: Key facts and mythbusters,” UK National Employment Savings Trust, 2010.

71 See Ruud A. de Mooij, “Tax biases to debt finance: Assessing the problem, finding solutions,” IMF, 2011.

72 Today Belgium, Brazil, and Latvia have variants of ACE. Italy, Austria, and Croatia had variants of ACE, which they abandoned when they adopted broader measures to reduce corporate income taxes. ACE has been proposed in the United Kingdom. For a full discussion of ACE proposals, see James Mirrlees et. al., *Tax by Design: The Mirrlees Review*, Oxford University Press, 2011.

1995, IPOs in the United States raised the equivalent of 0.4 percent of GDP. That rate fell to 0.2 percent of GDP in 2007. As the number of IPOs has fallen, their size has increased. This trend has also been accompanied by a shift in venture capital toward later-stage start-ups; instead of seeding many early-stage companies, venture investors focus on a few established firms that are on a clear path to an IPO. This reduces opportunities for entrepreneurs just starting out and for promising small companies that need expansion capital. Several policy changes could address this problem: increase the amount of money that can be raised through “mini IPOs” that have lighter registration requirements; provide tax credits for registered “angel investors” that fund early-stage start-ups; and legalize “crowdfunding” that matches many small investors with new start-ups on platforms outside of stock exchanges—with appropriate limits on the amount of capital that can be raised.<sup>73</sup> Another emerging trend is a new crop of regional stock exchanges that rely primarily on local investors to provide capital for local businesses that are too small to list on major exchanges.<sup>74</sup>

### **GLOBAL POLICY MAKERS MUST CREATE CONDITIONS FOR STABLE GLOBAL CAPITAL FLOWS**

We have viewed the issues surrounding the growth and allocation of financial assets from a global perspective throughout this paper. However, while economies and financial systems are interconnected around the globe, we find that from an investor perspective, global integration is still at a very early stage. Advancing this integration will benefit both investors who need higher returns and nations that need to fund growth.

- **Create a regulatory framework for enabling growing but stable global capital flows.** The analysis in this report shows that many emerging market companies are likely to need increasingly large capital flows from foreign investors to meet their rapidly growing equity needs. Emerging markets are already net importers of equity investments, and this need will grow in the years to come. Policy makers in receiving countries must create a stable regulatory framework to enable such flows to flourish without creating instability.<sup>75</sup> This means avoiding broad, capital controls that distort markets and instead focusing on mitigating the specific risks associated with volatile, short-term flows of foreign capital. Allowing exchange rates to appreciate or carefully adjusting interest rates can help stem the tide of speculative inflows. Prudent measures that improve the stability of the domestic financial system, such as differential reserve requirements on foreign currency liabilities

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73 Both crowdsourcing and increasing the size of companies that can apply for mini-IPOs have been proposed in the United States. In November 2011, the US House of Representatives passed the “Entrepreneur Access to Capital Act,” which would allow small companies to raise money directly from individual investors. See Meredith B. Cross, “Testimony on crowdfunding and capital formation before the Subcommittee on TARP, Financial Services and Bailouts of Public and Private Programs of the US. House of Representatives, Committee on Oversight and Government Reform,” September 15, 2011; and Grant Thornton, “Hope for the small IPO market?” Grant Thornton research report, June 2011.

74 See Amy Cortese, *Locavesting: The Revolution in Local Investing*, John Wiley & Sons, 2011.

75 See Howard Davies and Michael Drexler, “Financial development, capital flows, and capital controls,” *The Financial Development Report*, 2010.

and maximum loan-to-value ratios, can help lessen the risk.<sup>76</sup> Countries can provide a better environment for corporations, institutional investors, and others with long-term investment horizons by offering opportunities to co-invest in infrastructure projects and by improving accounting and legal standards. Finally, policy makers in emerging markets should encourage the development of all parts of the financial system—credit, currency, and equity markets, as well as instruments to hedge currency, maturity, and liquidity risks.<sup>77</sup>

- **Reduce home bias among investors.** To encourage global capital flows, investors in developing economies must overcome “home bias”—the tendency to hold a disproportionate share of financial wealth in domestic rather than foreign assets. Individual and institutional investors in the United States today on average have 13 percent of their total portfolios in foreign assets. In Japan, households hold only 1 percent of their total financial assets in foreign investments, despite the very low returns they earn on domestic assets. Policy makers can discourage home bias through several measures: remove any limits on the amount that households and pension funds can invest in foreign markets; create mutual funds and other vehicles that will enable emerging-market investors to purchase foreign securities; ensure that appropriate currency hedging instruments are widely available and cost effective; and increase consumer financial education.
- **Carefully consider the cumulative impact of regulatory changes.** There is no question that global reforms are necessary to reduce the systemic risks that were revealed during the global financial crisis. However, the full ramifications of regulatory changes to the world banking system must be considered. As we outlined above, the increased capital requirements for banks under Basel III and separate national regulations will further increase the share of global equity that banks will absorb. It is therefore important to enact reforms that would simultaneously increase the total supply of equity in the economy. Solvency II, the new European regulations on insurers set to take effect in 2014, is working in the opposite direction and will reduce the equity allocation of insurers.<sup>78</sup> Regulators need to review the cumulative impact of current banking and insurance regulations, together with changes to pension regimes, to ensure they are not creating undesirable barriers to long-term investing.

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76 Min Zhu, “Managing Capital Inflows in Emerging Markets,” text of speech, International Monetary Fund, May 26, 2011; Jonathan Ostry et al., “Capital inflows: The role of controls,” IMF Staff Position Note 10/04 (2010); Jonathan Ostry et al., “Managing capital inflows: What tools to use?” IMF Staff Discussion Note 11/06 (2011).

77 See Howard Davies and Michael Drexler, “Financial development, capital flows, and capital controls,” *The Financial Development Report*, 2010.

78 See Ahmen Al-Darwish et al., “Possible unintended consequences of Basel III and Solvency II,” IMF Working Paper Number 11/187, August 2011.



As we have shown, the combination of the rising wealth of emerging market investors and changing behaviors of investors in developed economies exert a powerful force against equities. Without intervention on multiple fronts and across the globe, this will result in a diminished role of publicly listed equities and reduce access to a critical source of growth and stability for economies, companies, and investors. Policy makers as well as leaders of businesses and financial institutions should take steps to avoid this unwelcome development.

## Appendix: Technical notes

These technical notes provide additional detail on the definitions and methodologies employed in this report. Specifically, the notes expand on the following points:

1. Definition of financial assets
2. Mapping global financial assets and allocations by investor type
3. Projecting 2020 financial assets for different economic scenarios
4. Projecting the global portfolio allocation to equities in 2020
5. Projecting corporate needs for equity and the emerging equity gap
6. Calculating real equities and bond returns

### **1. DEFINITION OF FINANCIAL ASSETS**

In this report, we define financial assets as publicly listed equities; corporate and government bonds and other fixed-income securities; bank deposits; and other financial assets (e.g., holdings in hedge funds and private equity funds).

We value financial assets in the following way: We use market value rather than book value for equities, to reflect how investors perceive the size and value of their portfolios. This means that changes in the value of equities held by different types of investors in different nations reflect increases or decreases in market prices, as well as purchases or sales. We include in our inventory of financial assets government bonds, corporate bonds (issued by nonfinancial corporations and financial institutions), commercial paper, asset-backed securities, and other tradable fixed-income instruments. The value of non-equity securities is measured at book or face value, due to a lack of comprehensive data on market valuations. We also include money held in deposit and saving accounts in banks, credit unions, and other deposit-taking institutions and holdings of alternative assets such as hedge funds and private equity funds. We attempt to count all investor financial assets in our categories, whether held domestically or overseas.

While our figures capture a large share of global financial wealth, we exclude some types of wealth because of lack of reliable global data on ownership and value. We do not include the value of homes and other real estate assets, or investments in gold, commodities, or fixed assets. We also do not include the value of equity in privately held businesses. Finally, we do not include loans.

## 2. MAPPING GLOBAL FINANCIAL ASSETS AND ALLOCATIONS BY INVESTOR TYPE

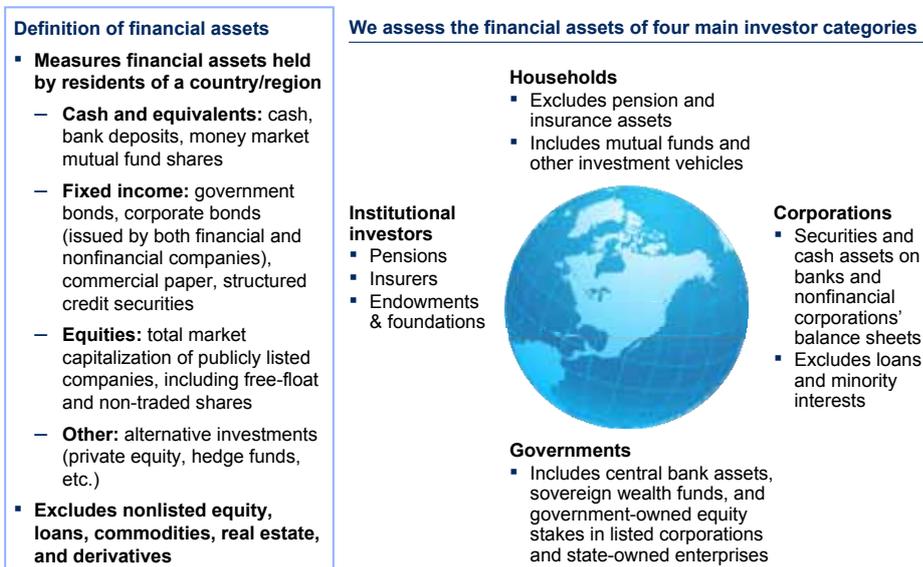
In this report, we document the ownership of financial assets by country, region, and investor type to better understand how financial wealth is distributed around the world and to identify key trends in future wealth accumulation. To do this, we rely on a variety of sources: statistical publications and data from central banks; reports produced by the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), and other international organizations; household and investor surveys; industry and analyst reports; annual reports published by corporations and institutional investors; and proprietary estimates made by McKinsey's regional offices and practice experts.

We group the world into nine distinct regions in this report: the United States, Western Europe, Japan, and other developed countries; China, and other Asian countries; Latin America, and the Middle East and North Africa (MENA); and rest of the world. Western Europe consists of the EU-15, plus Switzerland and Norway. "Other developed" includes Australia, Canada, and New Zealand. "Other Asia" includes the developed Asian economies of Hong Kong, Singapore, South Korea, and Taiwan, as well as the emerging Asian economies: India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Latin America includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela; MENA consists of the Gulf Cooperation Council (GCC) countries, plus Israel, Lebanon, and Turkey, and the North African countries of Algeria, Egypt, Libya, Morocco, and Tunisia. Finally, "rest of the world" covers Central and Eastern Europe; Russia and other Commonwealth of Independent States (CIS) countries; and sub-Saharan Africa.

Within each of these regions, we examine four types of investors: households; institutional investors (pension funds, insurance companies, and endowments and foundations); corporations (financial and nonfinancial); and governments (central banks, sovereign wealth funds, and other state institutions) (Exhibit A1). We strive to be comprehensive in each region, while avoiding double-counting between different investor types.

### Exhibit A1

#### In this report, we analyze the financial assets of different types of investors



SOURCE: McKinsey Global Institute

For each type of investor, we count both holdings of domestic financial assets (e.g., equities and bonds issued by domestic companies or governments) and foreign financial assets (e.g., equities and bonds issued by foreign companies or governments). Some of these assets may be managed by intermediaries, such as mutual fund companies or financial advisers.

Viewing financial assets by investor and region gives us a granular and comprehensive understanding of how wealth is distributed around the world (Exhibit A2). The notes below provide more detail on how we calculate the financial assets of each type of investor, and how we determine the asset allocations of each investor.

## Exhibit A2

### We have developed a comprehensive view of financial wealth by region and by investor type

Financial assets owned by residents, 2010

\$ trillion

	United States	Western Europe	Japan	China	Other developed <sup>1</sup>	Other Asia <sup>2</sup>	Latin America	MENA	Rest of world	Total
<b>Households</b>	27.0	23.0	11.6	6.5	4.1	5.4	3.5	2.7	1.4	<b>85.2</b>
<b>Institutional investors</b>	15.0	5.3	3.3	0.5	2.4	0.6	0.7	0.4	0.1	<b>28.3</b>
▪ Pensions <sup>3</sup>										
▪ Insurance	6.6	9.6	3.5	0.6	0.7	1.0	0.3	0.1	0.3	<b>23.0</b>
▪ Endowments & foundations	1.1	0.2	0.0	--	0.1	--	0.0	0.0	--	<b>1.5</b>
<b>Corporations</b>	4.0	11.9	6.7	3.9	1.4	0.9	0.9	0.5	0.5	<b>30.7</b>
▪ Banks										
▪ Nonfinancial corporations	2.0	1.7	1.2	3.8	0.3	1.3	0.3	0.2	0.2	<b>11.0</b>
<b>Governments</b>	2.3	1.7	1.0	2.5	0.2	1.9	0.5	0.4	1.5	<b>12.0</b>
▪ Central banks										
▪ Sovereign wealth funds	0.1	0.6	--	0.7	0.1	0.9	0.1	1.7	0.2	<b>4.3</b>
▪ Other government	--	--	--	1.1	--	0.4	0.5	0.3	0.1	<b>2.4</b>
<b>Total</b>	<b>58.1</b>	<b>54.0</b>	<b>27.3</b>	<b>19.8</b>	<b>9.3</b>	<b>12.4</b>	<b>6.8</b>	<b>6.3</b>	<b>4.3</b>	<b>198.1</b>

1 Includes Australia, Canada, and New Zealand.

2 Includes both developed countries and emerging markets.

3 Includes defined-contribution plans and individual retirement accounts (IRAs).

NOTE: Numbers may not sum due to rounding.

SOURCE: National sources; McKinsey Global Institute

## 2.1 Households

Many advanced economies, through either their flow of funds or financial accounts, publish detailed household financial balance sheets, with information on both household assets and annual accumulation by type of instrument. For our count of household financial assets, we exclude balances in retirement plans such as 401(k)s or individual retirement accounts (IRAs), pension assets, or insurance contracts. Those assets are counted in our figures on pension and insurance assets.

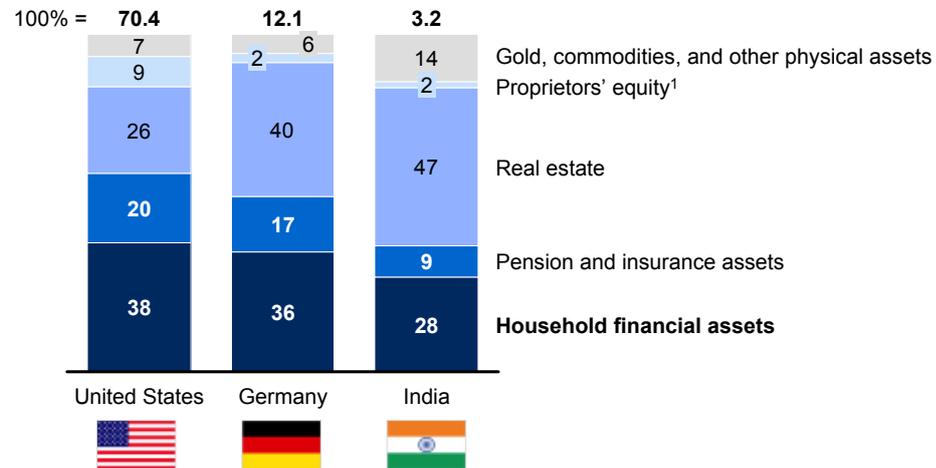
As noted in the report, we do not attempt to value or account for equity in privately held businesses. Most developed countries report household investments in listed equity shares and unlisted equity assets separately. For countries that do not report the two separately, we use the typical proportions from other countries to divide listed and unlisted equity assets.

Household financial assets also do not include gold, commodities and other physical assets, or values of homes and real estate. We acknowledge that in many parts of the world, such assets can be quite substantial (Exhibit A3).

**Exhibit A3****Financial assets are less than half of total household assets**

Household assets, 2010

%; \$ trillion



<sup>1</sup> Estimated value of equity holdings in unlisted companies.

NOTE: Numbers may not sum due to rounding.

SOURCE: US Federal Reserve Flow of Funds; Bundesbank; German Federal Statistical Office; Reserve Bank of India; Kshirsagar and Tahilyani (2011); McKinsey Global Institute

As part of household financial assets, we also include shares in mutual fund and other investment trusts.<sup>79</sup> National household balance sheets typically report shares in mutual funds or investment funds as a line item separate from direct holdings of bonds or equities. To compile asset allocation by households, we estimate the share of mutual funds invested in equities, bonds, and cash holdings using data from national sources and the Investment Company Institute. These data show the breakdown of mutual fund assets in 45 countries. Globally, mutual funds had \$24.7 trillion of assets at the end of 2010, 38 percent of which were owned by households and 62 percent by institutions and corporations (this includes defined-contribution and other retirement fund assets invested in mutual funds).

Beyond the largest emerging economies, such as China and Brazil, most emerging market nations do not publish household balance sheet data. For these countries, we therefore estimate household financial assets and portfolios based on proprietary estimates from McKinsey's Banking and Asset Management practices. We compare these figures with published data on bank deposits reported by national central banks and the International Monetary Fund as well as McKinsey Global Institute data on the size of national stock and bond markets.<sup>80</sup>

**2.2 Pension funds**

Policy makers identify three "pillars"<sup>81</sup> of pensions: government, corporate, and individual. Our figures on pension assets include pillars II and III: assets of

<sup>79</sup> In order to avoid double counting, we do not include mutual funds or other intermediaries such as private equity funds as institutional investors in our matrix of global financial assets. These intermediaries gather funds from households, pensions, sovereign wealth funds, and other institutional investors. If we included these intermediaries in our matrix, we could not sum across rows to see country total financial assets.

<sup>80</sup> See *Mapping global capital markets 2011*, McKinsey Global Institute, August 2011.

<sup>81</sup> For a deeper discussion of the different types of pension provision, see Juan Yermo, "Revised taxonomy for pension plans, pension funds, and pension entities," OECD, October 2002.

corporate pension plans funded by contributions of employees and employers (both defined-contribution and defined-benefit plans); and the individual accounts set up by households outside of corporate plans. Our estimates for these two categories of assets come from data published by the OECD, central banks, national regulators, and the balance sheets of some of the largest pension plans in each country. We count the equities, bonds, cash, and alternative investments on their balance sheets, while excluding, to the extent possible, investments in real estate or unlisted companies. We do not include assets of government plans such as the Social Security Administration in the United States or similar plans in Western Europe and elsewhere.

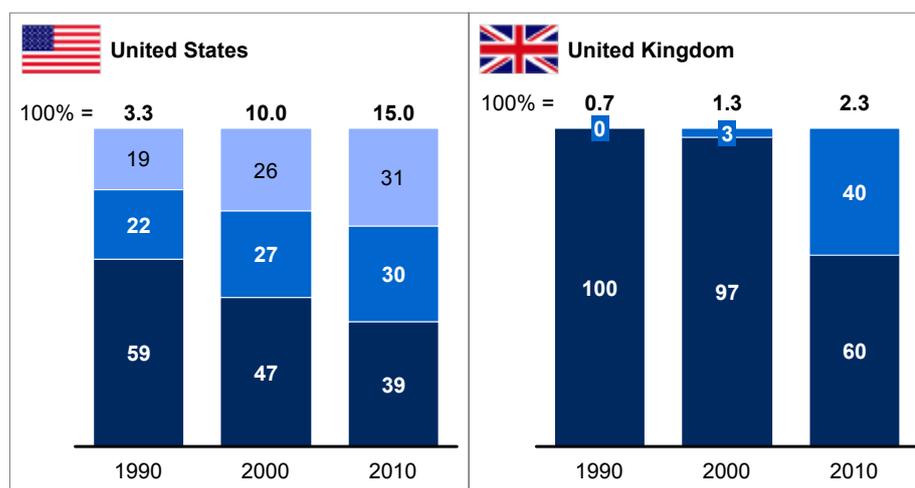
In a defined-benefit plan—essentially, a traditional pension—employers guarantee a certain stream of payments to former employees at retirement, based on earnings history, age, tenure, and other factors. In a defined-contribution plan, employees make contributions to their own individual accounts, often with some level of matching funds from their employers. The employee can choose how the funds are invested, and the gains are accumulated on a tax-deferred basis. Upon retirement, the individual begins to draw down the account.<sup>82</sup> Defined-contribution plans have been in place in the United States since the late 1970s and have since been adopted by many other countries. Some countries also offer employee-owned retirement accounts, including tax-deferred IRAs. Defined-contribution plans and IRAs now comprise 61 percent of total pension assets in the United States, up from 41 percent in 1990 (Exhibit A4).

**Exhibit A4**

**Pension assets are shifting away from defined-benefit plans**

Pension asset by type of plan, 1990–2010  
 %; \$ trillion, 2010 exchange rates

■ Individual retirement accounts (IRAs)  
 ■ Defined-contribution<sup>1</sup>  
 ■ Defined-benefit<sup>1</sup>



1 Includes government pensions (both state and local) that fall into each pension type.  
 SOURCE: US Federal Reserve Flow of Funds; UK Office for National Statistics; Towers Watson; McKinsey Global Institute

82 For more information on defined-benefit and defined-contribution pension plans, see John Broadbent, Michael Palumbo, and Elizabeth Woodman, “The shift from defined benefit to defined contribution pension plans Implications for asset allocation and risk management,” December 2006; and *Pensions: Challenges and choices—the first report of the Pensions Commission*, The Pensions Commission of the United Kingdom, 2004.

### 2.3 Insurance companies

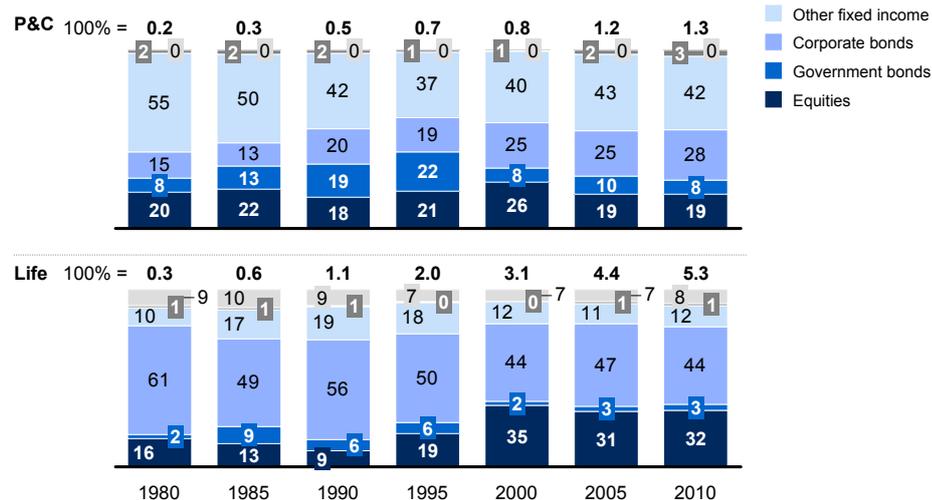
Our estimates for financial assets held by insurers include assets of both life insurance companies and property and casualty (P&C) insurance companies. Our estimates for these assets come from national regulators and insurance industry groups (e.g., Association of British Insurers), as well as the balance sheets of individual insurance companies. For many emerging markets, we also rely on data provided by Global Insurance Pools, a proprietary McKinsey database.

Life insurers hold equities and fixed-income securities to meet claims by policyholders, to fund annuities, and to serve as investments in unit-linked policies. Life insurance company financial assets have grown rapidly over the past 20 years, driven in large part by the expansion of the annuity and unit-linked businesses (Exhibit A5). For example, as of 2010, \$1.8 trillion of the \$2.5 trillion in equities held by European life insurers backed unit-linked products.

#### Exhibit A5

##### US life insurers' assets have grown rapidly, including their equity holdings

US property & casualty (P&C) and life insurance assets, 1980–2010  
%; \$ trillion



NOTE: Numbers may not sum due to rounding.

SOURCE: US Federal Reserve Flow of Funds; insurance company annual reports; McKinsey Global Institute

We also include the equities and bonds held on the balance sheets of property and casualty companies, which generate income needed to cover claims. Typically, these insurers invest in government and corporate bonds and other fixed-income securities, due to regulatory constraints on the types of securities in which they can invest. In the United States, nearly 80 percent of property and casualty insurer assets are fixed-income instruments.

### 2.4 Endowments and foundations

The financial assets of university endowments, foundations, and charities are large in the United States (\$1.1 trillion) and quite small elsewhere in the world. Data on university endowments in the United States are provided by the National Association of College and University Business Officers, and data on foundation assets are provided by the Foundation Center. Both sources provide information on the amount of assets and allocations by asset classes. Endowments and foundations have highly diversified portfolios and, given their long investment

horizons, place a significant portion of their portfolios in alternative asset classes, including private equity and hedge funds.

### 2.5 Banks

Aggregated data on the assets of deposit-taking institutions are provided by central banks or banking regulators in almost all countries. We supplement this data with information on bond and equity holdings disclosed in bank annual reports and regulatory filings. Our count of bank financial assets includes only the publicly listed equities and fixed-income securities that banks hold on their balance sheets; we do not include loans, derivatives, or other assets. We also exclude from these figures assets that banks manage on behalf of households, pensions, and other types of investors through their asset-management businesses. Moreover, we exclude reserves held at central banks.

We include banks in our matrix of global investors because our goal is to understand where all equities and bonds outstanding are held. Around the world, banks held nearly \$31 trillion of such assets at the end of 2010—more than pension funds or insurance companies. If banks pare such holdings in coming years (in response to new regulatory requirements, as we describe in the report), that would have implications for overall investor demand for such assets. Nonetheless, we also recognize that including the financial securities held on bank balance sheets “double counts” some portion of global wealth, since banks take deposits from customers and issue bonds (both of which count as financial assets of households and other institutions) and then use the proceeds to finance loans and purchases of securities.

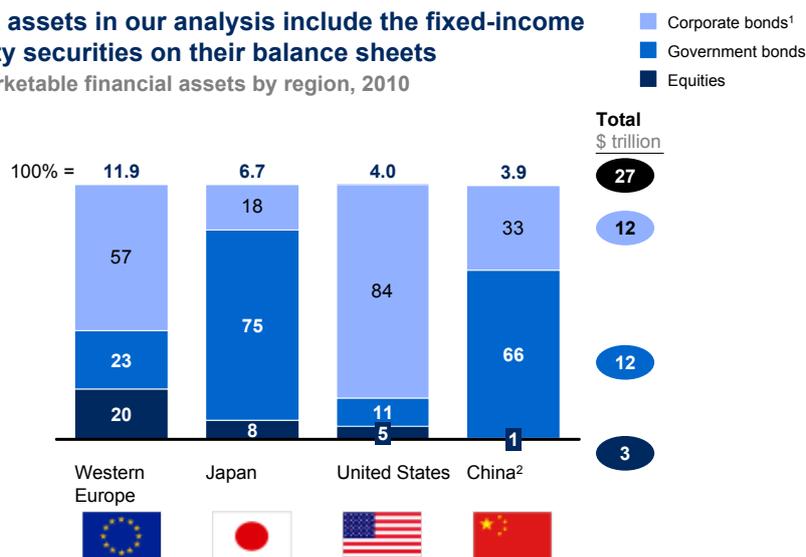
Most bank financial assets are government or corporate bonds (including the bonds of other financial institutions). In Western Europe, however, 20 percent of securities on bank balance sheets, or \$2.4 trillion, is invested in publicly listed equities (Exhibit A6). This figure includes assets in trading books, equities backing bank-owned insurance business, and shares held as investments.

#### Exhibit A6

#### The bank assets in our analysis include the fixed-income and equity securities on their balance sheets

Banks' marketable financial assets by region, 2010

%; \$ trillion



1 Includes both financial and nonfinancial corporate bonds. Also includes agency- and GSE-backed securities.

2 Split between government bonds and corporate bonds is an estimate.

NOTE: Numbers may not sum due to rounding.

SOURCE: US Federal Reserve; Bank of Japan; European Central Bank; People's Bank of China; bank annual reports; McKinsey Global Institute

## 2.6 Nonfinancial corporations

Data on the cash and securities of nonfinancial corporations come from McKinsey's Corporate Performance Analysis Tool (CPAT), a proprietary database with detailed information on balance sheets of a large sample of publicly listed companies in many countries. The figures for these countries are then scaled up to a national level using each country's total stock market capitalization. This figure does not account for the cash and securities held by non-listed companies. Although conceptually it would be useful to include this information, data on the balance sheets of such companies are not publicly available.

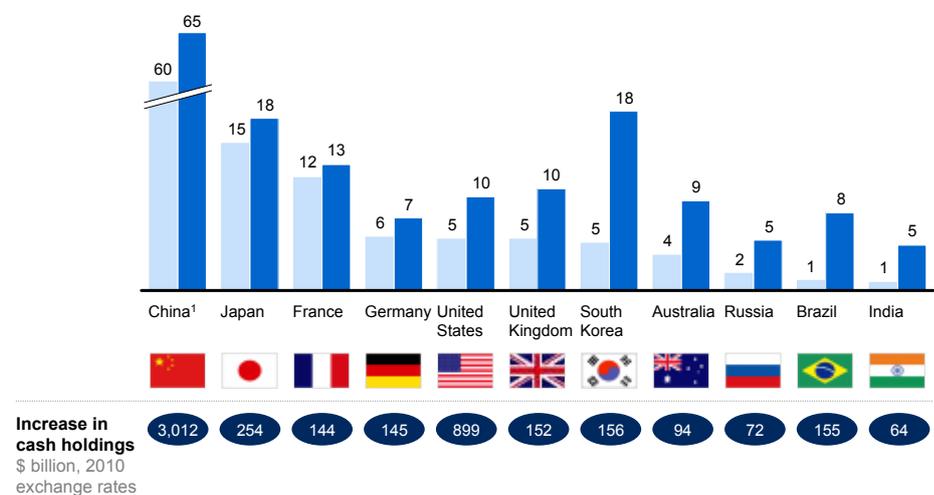
Our figures for nonfinancial companies also do not include the minority interests or ownership stakes in other firms that nonfinancial companies hold. While we would like to include their holdings of listed companies, data limitations in many countries prevent us from distinguishing between corporate ownership of listed and unlisted shares.

Corporate cash balances have grown quickly over the past ten years, especially in the United States, China, and other Asian economies (Exhibit A7). At the end of 2010, corporations around the world had \$9.1 trillion in cash on their balance sheets, reflecting rising profitability as well as the effects of economic uncertainty.

### Exhibit A7

#### Corporate cash balances have increased by \$3 trillion in China and \$2.1 trillion in other major economies since 2000

Cash holdings of corporations, 2000 and 2010  
% of GDP



<sup>1</sup> Includes all state-owned enterprise deposits.

SOURCE: People's Bank of China; McKinsey Corporate Performance Analysis Tool (CPAT); McKinsey Global Institute

## 2.7 Central banks

Data on central bank assets come from central bank reports or the International Monetary Fund's International Financial Statistics. These assets include foreign exchange reserves, which are typically invested in government bonds denominated in foreign currencies, as well as other securities that central banks hold on their balance sheets. We do not include central banks' gold reserves, nor do we include repurchase agreements, lending facilities, or other types of loans.

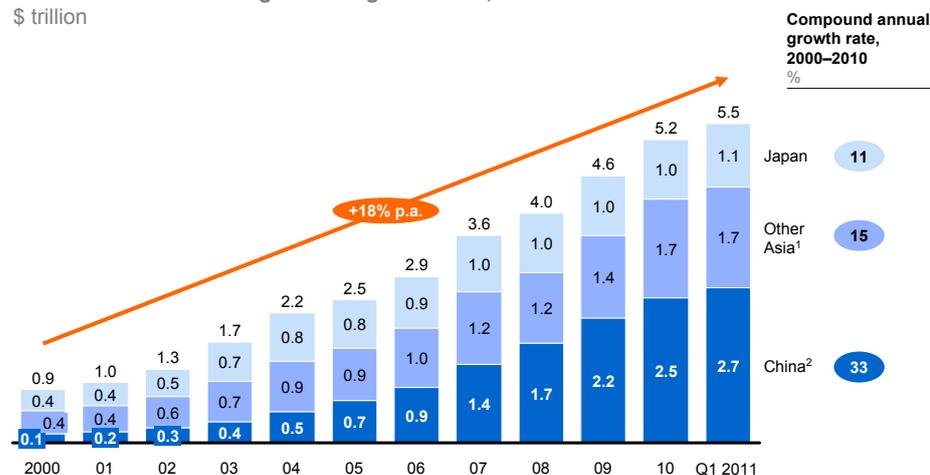
Central banks added assets faster than any other investor type over the past ten years; their financial assets rose by 18.6 percent annually from 2000 to 2010, compared with 5.9 percent annually for assets held by other types of investors. This reflects the accumulation of foreign exchange reserves by many governments (Exhibit A8). From 2000 to 2010, the balance sheet of China's central bank grew 33 percent annually, from \$100 billion to \$2.5 trillion.<sup>83</sup> Reserves held by Japan and other Asian countries also grew rapidly over the period, and stood at \$2.8 trillion by at the end of 2010. Growth in the reserve assets of these countries reflects large trade surpluses and exchange rate policies designed to avoid currency appreciation.<sup>84</sup>

**Exhibit A8**

**Asian central banks' foreign exchange reserves have increased tremendously over the last 10 years, particularly in China**

Asian central bank foreign exchange reserves, YE 2000–Q1 2011

\$ trillion



1 Includes Bangladesh, Cambodia, India, Malaysia, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, and Vietnam; excludes Hong Kong (Hong Kong Monetary Authority considered a SWF).

2 Excludes portion invested by State Administration of Foreign Exchange (SAFE) in risky assets, much like a SWF.

NOTE: Numbers may not sum due to rounding.

SOURCE: International Monetary Fund; central banks; McKinsey Global Institute

In the wake of the financial crisis, the balance sheets of the central banks in the United States and Europe have also expanded dramatically. After remaining nearly constant at 6 percent of GDP for 30 years, the US Federal Reserve's balance sheet grew after purchases of \$1 trillion of mortgage-backed securities, as well as \$300 billion in US Treasuries and \$100 billion of other securities purchased during two rounds of "quantitative easing." This caused the Federal Reserve's balance sheet to more than double, to \$2.4 trillion, or about 16 percent of GDP. The Bank of England and European central banks<sup>85</sup> have also increased their assets due to crisis-related measures over the same period.

83 Our figures for China's foreign exchange reserves exclude that portion thought to be managed actively by the State Administration of Foreign Exchange (SAFE) and invested in assets riskier than government bonds. In 2010, this amounted to approximately \$300 billion of the reported \$2.8 trillion managed by SAFE.

84 For more on the sources and costs of central bank reserve accumulation, see McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are shaping global capital markets*, October 2007; and McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are faring in the financial crisis*, July 2009.

85 This includes the European Central Bank as well as the national central banks.

## 2.8 Sovereign wealth funds

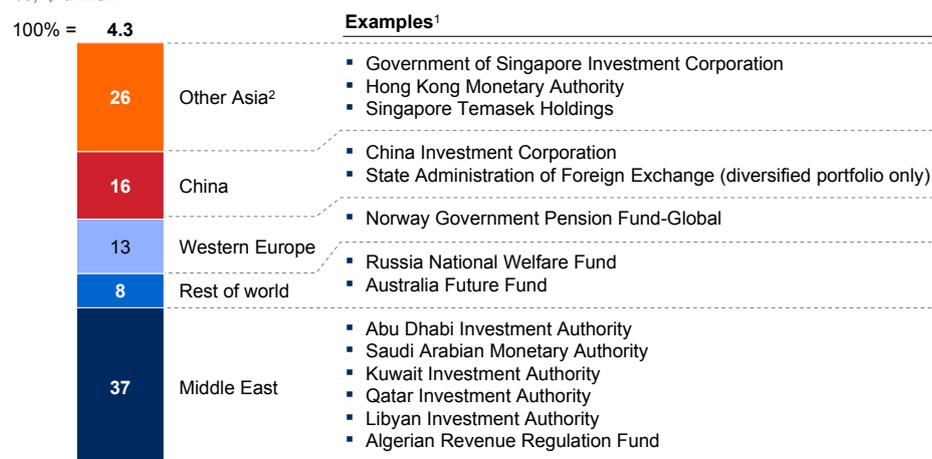
MGI has tracked assets in sovereign wealth funds (SWFs) since 2007.<sup>86</sup> For this report, we have updated our estimates of the assets of these funds as well as the estimated composition of their portfolios. We look first to annual reports, where available (e.g., for the China Investment Corporation and Norway's Government Pension Fund). However, data are not readily available for many of the largest SWFs. For such funds, we base our estimates on academic studies, analyst reports, reports by the IMF and the Sovereign Wealth Fund Institute, and interviews with asset managers and other experts.

We estimate that SWFs, which are concentrated primarily in the Middle East and Asia, held domestic and foreign assets worth \$4.3 trillion in 2010 (Exhibit A9). Although a portion of these assets is invested in real estate, unlisted companies, and direct equity partnerships, we do not attempt to exclude such investments, since we have no reliable information across funds on their size. For the SWFs that report their asset holdings, these illiquid assets average to 15 percent of portfolios.

### Exhibit A9

#### Sovereign wealth funds assets, which totaled \$4.3 trillion in 2010, are primarily in Asia and the Middle East

Global central bank and sovereign wealth fund (SWF) assets, 2010  
%; \$ trillion



<sup>1</sup> Only funds that have more than \$50 billion in assets in 2010 are listed in this exhibit.

<sup>2</sup> Includes other funds from Taiwan, South Korea, and Malaysia.

SOURCE: International Monetary Fund; central banks; McKinsey Global Institute

## 2.9 Other government

To complete our picture of global financial assets, we also include government-owned shares in publicly listed companies, since these are a sizable portion of all equities held in some countries. While governments in many emerging economies have started to privatize state-owned enterprises (SOEs) through listings on stock exchanges, they often retain significant (and frequently majority) stakes. This is true for most of the formerly state-owned banking and resources companies in emerging markets. The Chinese government, for instance, is the single largest investor in the Industrial and Commercial Bank of China (ICBC), one of the largest companies by stock market capitalization in the world.

<sup>86</sup> See McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are shaping global capital markets*, October 2007; and McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are faring in the financial crisis*, July 2009.

To estimate the value of government equity stakes in publicly listed companies, we first look at data published by ministries of finance or regulatory bodies that oversee state-owned enterprises. Some countries, such as Brazil and Indonesia, publish the values of their stakes in corporations on a regular basis. In cases in which no such information is provided by the government, we look at the annual reports of the largest firms in the country to determine the government’s ownership share. We include estimates only of government holdings in listed companies—we do not include any estimates of the value of privately held state-owned enterprises, such as Saudi Aramco.

Governments in mature economies also have stakes in publicly listed companies, mainly as a result of the financial crisis. In 2009, for instance, the British government became the largest shareholder in Royal Bank of Scotland, with a 70 percent stake, after providing nearly \$80 billion of state support at the onset of the financial crisis. Under TARP, the US government provided some \$700 billion in equity to Citigroup, AIG, Chrysler, and other companies. However, these holdings are expected to decline over the next few years and many banks and corporations that received government funding during the crisis have repaid their stakes. We therefore do not attempt to count the value of the remaining government holdings of corporate shares in our matrix of global financial assets.

### 3. PROJECTING 2020 FINANCIAL ASSETS FOR DIFFERENT ECONOMIC SCENARIOS

The financial wealth of emerging market investors grew more than twice as fast as that of investors in developed economies over the past decade. This was consistent across investor types and across regions (Exhibit A10). As highlighted in our report, the growth of assets held by emerging market investors has implications for the global mix of financial assets. In addition, investors in mature economies, because of aging, regulatory changes, and other factors, are also adjusting their asset allocations. To quantify these effects, we developed a model to estimate the global stock of financial assets in 2020 as well as how portfolio allocations will shift.

#### Exhibit A10

#### Financial assets in emerging markets are growing much faster than in developed countries

Compound annual growth rate, 2000–10  
%; 2010 exchange rates



	United States	Western Europe	Japan	China	Other developed <sup>1</sup>	Other Asia	Latin America	MENA	Rest of world	Total by investor type
<b>Households</b>	3.9	2.9	0.6	16.2	6.6	10.0	15.6	22.8	16.2	4.4
<b>Institutional investors</b>	4.1	5.2	6.8	27.3	5.6	19.4	24.0	14.0	24.3	5.1
▪ Pensions	5.1	4.4	2.6	30.0	2.3	18.9	21.7	15.5	18.0	4.4
▪ Insurance	4.9	7.3	6.8	--	13.2	--	16.6	--	--	5.5
▪ Endowments & foundations	5.0	7.4	7.1	21.2	20.0	14.3	13.7	20.7	32.8	8.5
<b>Corporations</b>	9.2	3.4	2.9	17.7	10.4	15.5	18.2	18.7	16.1	9.6
▪ Banks	37.0 <sup>1</sup>	18.7 <sup>1</sup>	11.6	33.0	6.5	15.0	12.6	22.6	21.9	18.6
▪ Nonfinancial corporations	0.0	9.0	--	7.7	3.6	8.1	20.4	12.0	1.0	7.7
<b>Governments</b>	--	--	--	14.7	--	9.2	11.2	10.2	13.4	12.5
▪ Central banks	4.8	4.4	3.3	19.2	7.6	15.7	16.1	21.0	19.7	6.3
▪ Sovereign wealth funds	4.1	3.3	-0.5	14.7	5.3	9.2	11.2	12.3	13.4	5.3
▪ Other government										
<b>Total</b>										
<b>Nominal GDP growth</b>	4.1	3.3	-0.5	14.7	5.3	9.2	11.2	12.3	13.4	5.3

<sup>1</sup> US and Western Europe central bank assets grew dramatically during the financial crisis.  
SOURCE: National sources; McKinsey Global Institute

### 3.1 Methodology for financial asset projections for each investor type

We project future financial assets for each investor type in each region through 2020. To do so, we make certain key assumptions, including that long-term nominal historic rates of return on different asset classes will continue and that, for the most part, investors will retain their current asset allocations. We also rely on a consensus forecast of nominal GDP and other macroeconomic variables that we obtain by averaging the forecasts provided by Global Insight, the Economist Intelligence Unit, Oxford Economics, and the International Monetary Fund.

Our approach varies for each investor type. For households, pensions, and central banks, we model the financial assets in any future year as the result of appreciation on their financial assets today plus net purchases of financial assets. We project annual net new purchases of financial assets using a regression model and consensus forecasts of macroeconomic variables. Together with the historic nominal rates of return for different asset classes, we can model growth in the financial assets of these investors.

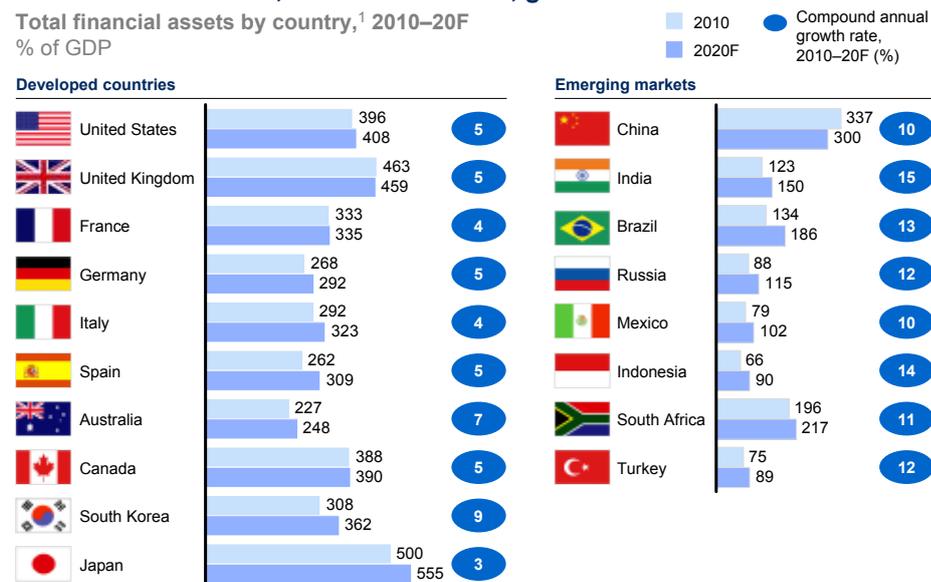
For insurance and bank assets, we rely on proprietary McKinsey forecasts of asset growth in these industries. These models use consensus GDP growth and other macroeconomic and regulatory variables to project industry growth. Finally, we assume that financial assets of nonfinancial corporations (mainly cash and some fixed-income securities) and other government investments (i.e., the shares they hold in state-owned or formerly state-owned companies) will grow at the same rates as nominal GDP in most countries (we describe the exceptions below).

We use the following methodology to estimate the financial assets held by each type of investor in each region in 2020. Summing these results from all of a country's investor types gives us growth of national financial assets (Exhibit A11).

#### Exhibit A11

#### Total financial assets, as a share of GDP, grow in most economies

Total financial assets by country,<sup>1</sup> 2010–20F  
% of GDP



<sup>1</sup> Includes total financial assets across all investor types (households, institutional investors, corporations, and governments).

SOURCE: McKinsey Global Institute

- **Households:** We estimate net purchases of financial assets using a two-step process. First, we take projections of the future household saving rate (expressed as a percent of disposable income) and multiply it by projected disposable income. For most countries, we assume household saving rates over the next decade will remain constant. For a few countries, such as China, we relax this assumption.<sup>87</sup> We then determine how much of that new saving will be invested in financial assets versus real estate and other forms of wealth. We find empirically that this fraction is relatively constant over time. Typically 60 to 70 percent of household savings go to financial investments in most countries. Combining estimated net purchases with historic rates of return for each country, we project household financial wealth through 2020, based on this ratio.

We assume that household asset allocations will remain the same as in 2010 over the next decade, except in the United States and Europe, where we factor in declining allocations to equities as a result of aging. While there is evidence to suggest households in emerging markets will increase their allocation to equities as incomes rise, much will depend on the legal, regulatory, and institutional framework in these countries, and it is not clear how these will evolve over the next ten years. Therefore, for our base case projection, we model current allocations everywhere but Western Europe and the United States through 2020.

- **Pensions:** In countries with sufficient historical data on net inflows into pension funds, we project future inflows based on a regression with nominal GDP and disposable income as the primary inputs. Together with historic returns by country on different asset classes, this allows us to sum the overall growth in pension assets to 2020. To ensure consistency with other projections, we make sure that total inflows into pension funds and growth of household non-retirement financial assets do not comprise a share of annual household saving that exceeds historical patterns. We also adjust the mix of pension assets invested in defined-benefit and defined-contribution plans based on historical trends (i.e., a continuing shift away from defined-benefit plans).

In emerging markets, where pension industries are in the early stages of development, we allow projected pension assets, relative to GDP, to rise toward the levels of developed countries. We determine the rate of this convergence based on increasing income levels and the historic growth of pension assets in the United States over the past 75 years. As we did for household financial assets, we assume the asset allocation of all pension and individual retirement accounts remain the same (except for the adjustment made for aging in advanced economies, described below).

- **Insurance companies:** McKinsey's Global Insurance Pools, a proprietary database, projects the growth of both life and P&C insurance assets through 2014, using a model that relies primarily on GDP growth. We extend this methodology through 2020 and find, as would be expected, that insurance assets in emerging markets are projected to grow rapidly, in many cases faster

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<sup>87</sup> For more on household saving behavior and historic household saving rates, see McKinsey Global Institute, *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*, December 2010.

than GDP. This reflects convergence of insurance asset levels toward those of mature economies.

- **Banks:** The ratio of securities on bank balance sheets to the size of their loan portfolios has remained roughly constant over the past ten years. McKinsey's Global Banking Pools, a proprietary database, estimates the growth of bank lending through 2020 based on consensus GDP forecasts. Thus, we assume that the ratio of financial assets to loans and the composition of the portfolio stay the same as they were over the previous ten years. However, we reduce financial asset growth in both the United States and Western Europe to reflect regulatory changes in capital requirements, which we describe below.
- **Nonfinancial corporations:** Over the past decade, the amount of cash and fixed-income securities on corporate balance sheets grew faster than GDP. This reflects rising profitability of companies; in the United States and many other countries, profits as a share of GDP are at historic highs. Therefore, for most countries, we assume that the cash and fixed-income securities on corporate balance sheets will grow no faster than nominal GDP in the decade to come. For countries in which corporations have very large cash holdings relative to GDP (e.g., China and South Korea), we assume the growth rate of corporate cash holdings and other financial assets will grow at a rate less than that of nominal GDP.
- **Central banks and sovereign wealth funds:** We follow the methodology described in previous MGI reports on the growth of assets held by central banks and sovereign wealth funds.<sup>88</sup> The growth of foreign reserve assets in emerging markets is based on the country's current account surplus and the amount of net private capital inflows. We use consensus forecasts for the current account balance in each country. In our consensus growth scenario, China experiences a decline in its current account surplus from 5 percent of GDP in 2010 to 1 percent of GDP by 2020. We project net private capital inflows for each country by assuming that their size as a share of GDP remains the same as over the past five years. The sum of these two factors, which represents the amount of foreign currency flowing into the economy, equals the increase in central bank reserves each year.

We assume that central banks in developed countries, many of which increased their balance sheets substantially in response to the financial crisis, gradually return to their historic levels in terms of share of GDP.

The growth of sovereign wealth funds over the past decade reflects both appreciation of their assets and additional funds allocated to SWFs by central banks and governments. However, we model their growth solely on asset appreciation, based on their portfolio allocations and past rates of return for each asset class. Unlike for household and pension assets, we use global rates of return on bonds and equities, reflecting the very high portion of foreign assets in sovereign wealth funds. We do not model additional capital that central banks or governments may inject into these funds, because in most countries these capital injections occur sporadically and we cannot

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88 See McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are shaping global capital markets*, October 2007; and McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are faring in the financial crisis*, July 2009.

predict future government behavior. Therefore, our projection is a conservative estimate of their size in 2020. Because the portfolios of SWFs are highly diversified and have a relatively high risk-return profile, we project that their assets will nearly double from \$4.3 trillion in 2010 to \$8.2 trillion by 2020.

- **Other government investments:** In most countries, we assume that governments do not buy or sell additional shares of publicly listed companies and assume that the value of current stakes will grow at the same rate as corporate earnings (which we assume grow at the rate of nominal GDP). In countries where governments have large equity holdings today (e.g., China), we assume that the value of the government-owned equities will grow more slowly than nominal GDP, to reflect a potential sale of state-owned shares.

### 3.2 Economic scenarios

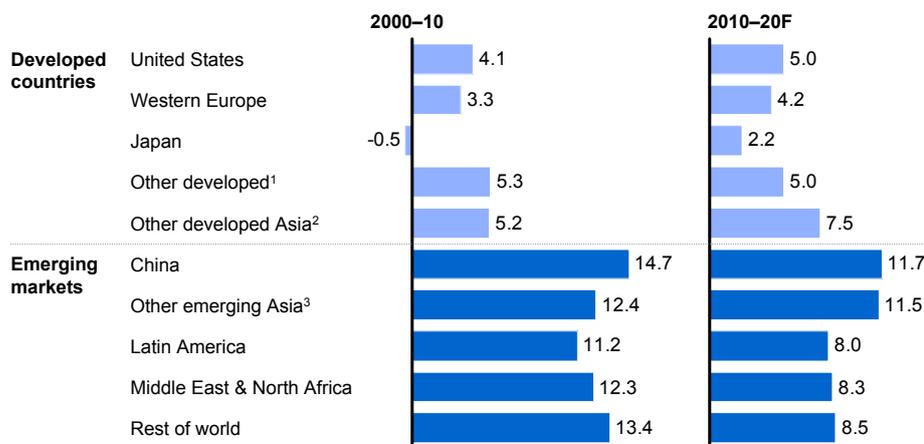
In this report, we project financial asset growth in three alternative macroeconomic scenarios, each with different assumptions about nominal GDP growth rates, nominal returns on financial assets, and the effects of exchange rates.

- **Consensus growth scenario:** In this scenario, we average the nominal GDP forecasts provided by Global Insight, the Economist Intelligence Unit, Oxford Economics, and the International Monetary Fund to create one consensus nominal GDP forecast for each country. In this scenario, nominal GDP growth averages 4.5 percent per annum in developed countries and 10.8 percent per annum in emerging markets (Exhibit A12). In this scenario, we also assume that nominal rates of return for equities, bonds, and deposits equal the long-term averages in each of the countries or regions. Finally, we use 2010 exchange rates to convert our local currency projections to US dollar values.

#### Exhibit A12

#### Emerging markets are forecast to grow faster than developed economies over the next ten years

Average annual nominal GDP growth, 2000–10 vs. 2010–20F  
%; 2010 exchange rates



<sup>1</sup> Includes Australia, Canada, and New Zealand.

<sup>2</sup> Includes Hong Kong, Singapore, South Korea, and Taiwan.

<sup>3</sup> Includes India, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

SOURCE: Global Insight; Economist Intelligence Unit; Oxford Economics; International Monetary Fund; World Bank; McKinsey Global Institute

- **Two-speed recovery:** This scenario reflects a slow economic recovery in the developed countries while emerging markets continue to experience robust growth. We assume that nominal GDP growth in developed countries averages

2.5 percent annually from 2011 through 2015, and then rises to 4.5 percent annually to 2020. During the years of slower growth, nominal returns on bonds and equities are assumed to be lower than their historical averages. We use 2010 exchange rates to convert our projections to US dollars.

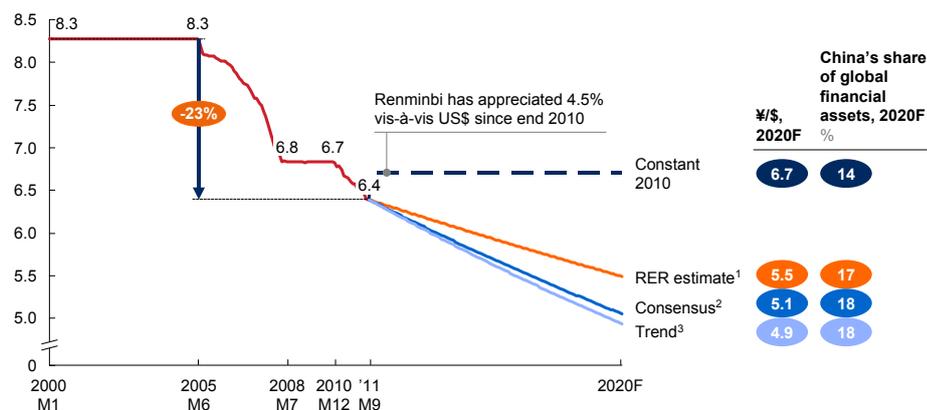
- Consensus growth scenario with currency appreciation:** In this scenario, we use the same nominal GDP growth rates and asset returns assumptions as in the consensus growth scenario. However, we allow the Chinese renminbi and other emerging market currencies to appreciate vis-à-vis the US dollar (Exhibit A13). In emerging markets, per capita GDP is growing faster than in mature countries. This means that the relative cost of non-tradable goods and services is likely to increase compared with tradable ones, leading to a higher dollar value for domestic sales in those countries. We account for this factor by assuming a relative real exchange rate (RER) appreciation of emerging market currencies that is proportional to the difference between their per capita GDP growth rates and that of the United States. This leads to a higher estimate of the dollar value of emerging market financial assets in 2020.<sup>89</sup>

### Exhibit A13

#### China's share of global financial assets in 2020 ranges from 14–18% in \$ terms under different exchange rate assumptions



Monthly China/United States exchange rate, 2000–2020F  
¥/\$, average over month



1 Using real exchange rate (RER) methodology, whereby China's currency appreciates and its market exchange rate converges towards its PPP exchange rate as China's real GDP per capita approaches that of the United States; methodology used in MGI's *Urban World* report, using latest available projections.

2 Average exchange rate forecast provided by Global Insight, Oxford Economics, and Economist Intelligence Unit.

3 Assumes exchange rate appreciates from 2010 to 2020 at same rate it appreciated from 2000 to 2010.

SOURCE: Global Insight; Economist Intelligence Unit; Oxford Economics; McKinsey Global Institute

## 4. PROJECTING THE GLOBAL PORTFOLIO ALLOCATION TO EQUITIES IN 2020

As noted, we generally assume in our projections that asset allocations of different investor types remain constant at 2010 levels. We do, however, incorporate the impact of four trends that will lower investors' appetite for equities: aging, the rise of alternative investment classes, the shift toward defined-contribution retirement programs, and the impact of regulatory changes on

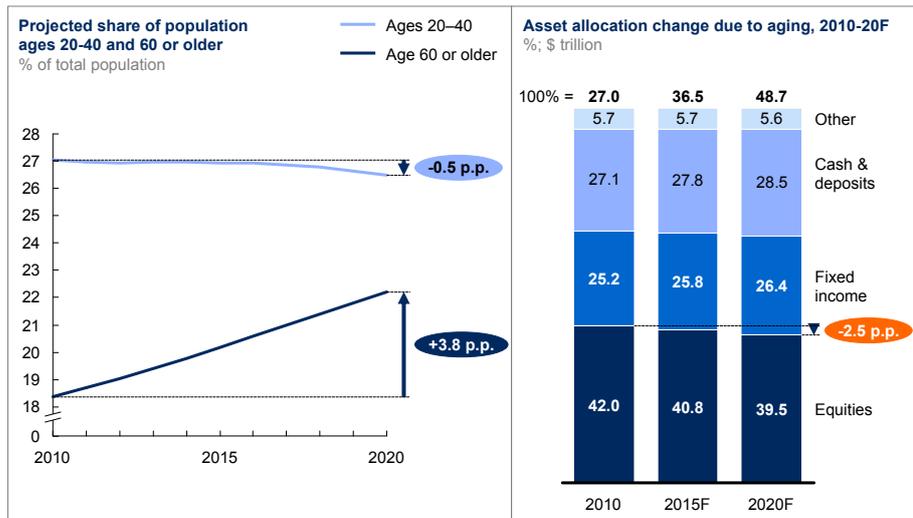
89 This approach was used in McKinsey Global Institute, *Urban world: Mapping the economic power of cities*, March 2011. For more detail on the economic theory behind this approach, see P. A. Samuelson, "Theoretical notes on trade problems," *Review of Economics and Statistics*, 1964; and B. Balassa, "The purchasing-power parity doctrine: A reappraisal," *Journal of Political Economy*, 1964.

financial institutions. These factors—and the rising proportion of wealth held in emerging economies that have low allocations of equities—result in an overall reduction in the global share of financial assets invested in publicly listed shares, from 28 percent in 2010 to 22 percent in 2020 (see Exhibit 23 in Chapter 4).

- Aging:** Household survey data from the United States and Western Europe show that investors reduce the share of their portfolios invested in equities as they age. To estimate this effect over the next ten years, we start with data on the median value of investors' financial assets by type of asset and by age cohort.<sup>90</sup> We use these data to estimate a typical portfolio for each age group, including its allocation to equities. This allows us to predict how allocations to equity change as individuals grow older. Then, using detailed population projections published by governments, we move each age cohort forward one year at a time from 2011 through 2020, rebalancing each cohort's portfolio to reflect aging. In this way, the changing age mix of investors produces a rebalancing of overall household portfolios away from equities in Europe and the United States (Exhibit A14). We use this methodology to estimate 2020 equity allocations for both households and pension assets in these countries.<sup>91</sup>

**Exhibit A14**

**An aging population could lead to a declining allocation to equities for US households**



NOTE: Numbers may not sum due to rounding.  
SOURCE: US Federal Reserve Survey of Consumer Finances; US Census Bureau; Investment Company Institute; US Federal Reserve Flow of Funds; McKinsey Global Institute

- The rise of alternative investment classes:** Proprietary surveys conducted by McKinsey show that individuals with high net worth as well as many types of institutional investors are increasing their investments in alternative asset classes, such as private equity, hedge funds, real estate, infrastructure, and commodities. Interviews with asset and pension fund managers confirm this

90 Specifically, we rely on US Survey of Consumer Finances, UK's Wealth and Assets Survey, Germany's Survey of Income and Expenditure, and Bank of Italy's Survey of Household Income and Wealth.

91 Many surveys report the median value of both direct financial asset holdings by households and the value of their retirement accounts for different age cohorts. For countries that report both separately (e.g., the United States), we estimate the effect on household and pension portfolios separately. In instances where such detail is not provided (e.g., Germany), we estimate a single aging model and apply to both households and pensions.

trend and suggest that such increases typically come at the expense of equity holdings. Investors who raise allocations to illiquid alternative investments also typically want to raise their holdings of fixed-income investments to guarantee income for near-term needs. Using proprietary survey data (which also provide information on expectations for future investments in alternatives), we estimate an increase in the allocation to alternative investments by wealthy individuals,<sup>92</sup> defined-benefit pension funds, and sovereign wealth funds of five percentage points over the next ten years. We assume a one-to-one relationship (in percentage point change and in portfolio allocation) between increases in alternative investments and decreases in equities. This results in a 1.3 percentage point increase in the share of global assets invested in alternative vehicles over the next ten years. Such a growth rate implies a \$4.5 trillion increase, or roughly a doubling, in holdings of alternative investments.

- **The shift toward defined-contribution pensions:** In Europe, the share of pension assets in defined-contribution plans has grown in the past ten years. In the United Kingdom, for example, defined-contribution plan balances account for 40 percent of total pension assets, up from just 3 percent in 2000. Defined-contribution pensions are also increasing in Germany, the Netherlands, and Switzerland.<sup>93</sup> Across Western Europe, defined-contribution plan participants typically have a significantly lower allocation to equities than do defined-benefit plan administrators (see Exhibit 17 in Chapter 3). We assume growth of defined-contribution plans in the four largest European pension markets (the United Kingdom, the Netherlands, Switzerland, and Germany) will continue at the same rate as over the 2000–10 period. We also assume the introduction and growth of defined-contribution plans in the rest of Europe at the same average rate as in these four countries. This means that over the next decade, European defined-contribution plan assets grow at 11 percent annually, compared with a projected 4 percent growth rate of defined-benefit plan assets. We also assume that defined-contribution plan participants will continue to allocate substantially less of their portfolios to equities than defined-benefit pension plan managers. This leads to a lower overall allocation to equities in European pension plan and a 0.4 percent decline in the global allocation of equities by 2020.
- **The impact of financial industry regulatory changes:** Solvency II rules in Europe will affect the way insurers invest in financial assets. Specifically, these rules will require insurers to hold more capital for risky assets. However, based on interviews with insurers and McKinsey experts as well as detailed data on insurer asset allocations, we find that some of the adjustment in asset allocation needed by Western European insurers to prepare for Solvency II has already been made (Exhibit A15). We find that across Europe, more than two-thirds of insurers' equity holdings back unit-linked products, in which customers, not insurers, bear the risk of falling equity prices. Such equity holdings are exempt from Solvency II regulations, and thus insurers have little incentive to offload these equities. Moreover, unit-linked products are growing and are likely to continue to grow as a share of insurers' businesses, which is reflected in our projections taken from McKinsey Global Insurance

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<sup>92</sup> We rely on internal estimates, as well as external figures, to estimate the share of household financial assets owned by high-net-worth individuals with in each region.

<sup>93</sup> See Towers Watson, *Global Pension Asset Study 2011*, for more information.

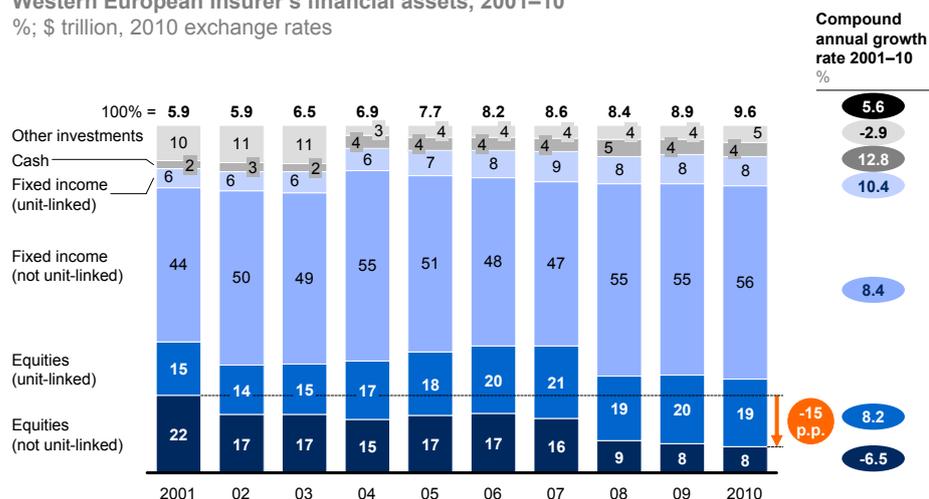
Pools. Equities held outside unit-linked products comprise only 8 percent of European insurers' total financial assets today. We assume this share declines to 4 percent of total assets by 2020, as European insurers make additional portfolio adjustments to comply with Solvency II.

**Exhibit A15**

**European insurers decreased their allocation to equities outside their unit-linked businesses from 22 to 8 percent over the last 10 years**

Western European insurer's financial assets, 2001–10

%; \$ trillion, 2010 exchange rates



1 Includes investments for which policyholders bear the risk.

NOTE: Numbers may not sum due to rounding.

SOURCE: A.M. Best Company; annual reports; Association of British Insurers; Swiss Financial Market Supervisory Authority; McKinsey Global Institute

Basel III, the Dodd-Frank Act in the United States, and other national regulations are likely to affect banks' financial asset holdings. Many of these regulations aim to limit the risks banks can take in their trading activities and in the assets they hold. While we assume bank asset allocations stay constant, we also assume that the size of their trading books grow only half as fast as their other financial assets. Combined with the decline in European insurers' equity holdings outside their unit-linked business, we estimate a 0.3 percentage point decline in the global asset allocation to equities due to bank and insurance regulations.

**5. PROJECTING CORPORATE NEEDS FOR EQUITY AND THE EMERGING EQUITY GAP**

To understand the potential impact of a declining global allocation to equities by investors, we modeled corporate needs for equity over the next decade. If demand for equities is less than corporate needs, companies may seek more debt financing, or they might forego some investment altogether. In either case, insufficient demand for publicly listed equities has implications for company capital structures, corporate financing, and economic growth and stability.

To see how investor demand for equities lines up with corporate needs for equity capital, we developed a model that estimates the increase in market value of firms' outstanding shares through 2020—or the additional equity required for growth, given today's capital structure—and we compare this to our projections for the increase in investors' equity holdings over that period.

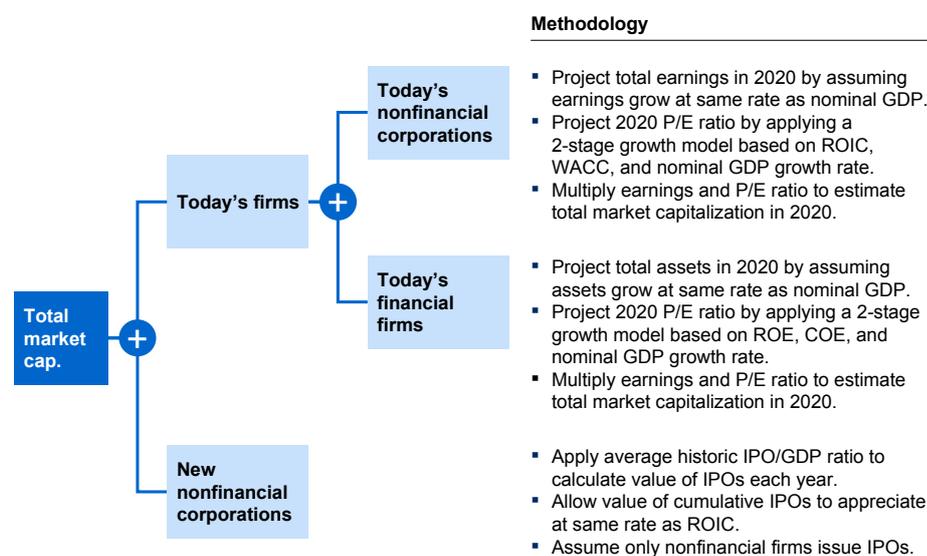
## 5.1 Estimating corporate needs for equity

Companies need financing, whether through debt or equity, for growth. Given current capital structures, roughly 75 percent of this financing will come through equity and 25 percent through debt. The increase in equity can come either by companies issuing more shares on stock exchanges (secondary offerings) or from retained earnings, which increase the value of the firms' outstanding equity. In either case, the stock market capitalization of the company will increase, and this will require demand from investors who wish to hold equities.

We model the change in stock market capitalization between 2010 and 2020 to estimate the need for equities by companies. This comes both from increases in the market capitalization of today's listed firms and the estimated equity that will be raised by new companies expected to list shares on public exchanges over the next ten years (Exhibit A16). We estimate total stock market capitalization in 2020 for ten developed countries (Australia, Canada, France, Germany, Italy, Japan, South Korea, Spain, the United Kingdom, and the United States) and eight emerging markets (Brazil, China, India, Indonesia, Mexico, Russia, South Africa, and Turkey). Together, these 18 countries generated 82 percent of global GDP in 2010 and account for 83 percent of global financial assets.

### Exhibit A16

#### We estimate equity needs of both today's listed firms and new publicly listed firms through 2020



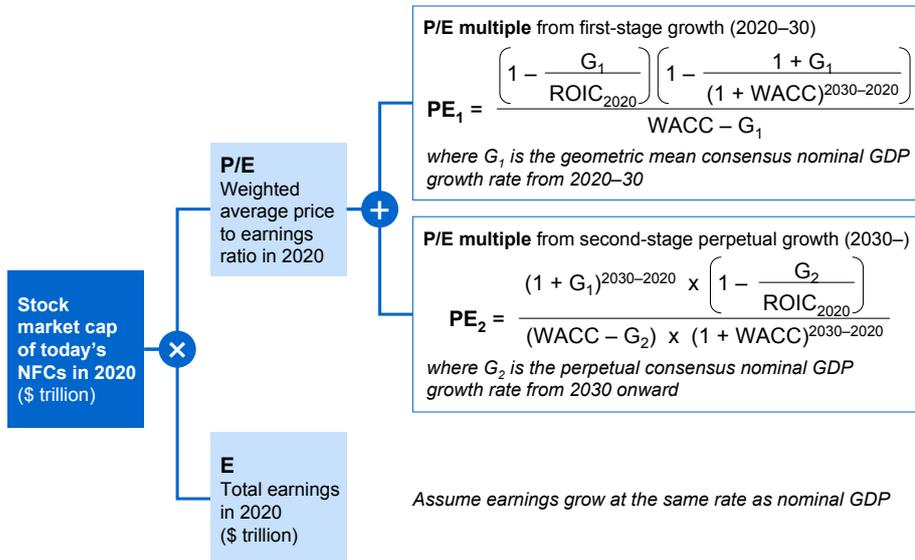
SOURCE: McKinsey Corporate Performance Center; McKinsey Global Institute

To determine how total market capitalization of companies in this sample will rise, we used the following approach:

- Today's listed nonfinancial corporations:** The stock market capitalization in 2020 of today's nonfinancial corporations will reflect earnings in 2020 and the price-earnings multiple (Exhibit A17). To obtain earnings in 2020, we assume that corporate earnings grow at the same rate as our consensus nominal GDP forecasts in each country. As explained above, this is a conservative estimate, since corporate earnings in many countries have grown faster than GDP in the past.

**Exhibit A17**

**The 2020 stock market capitalization of today's listed nonfinancial corporations (NFCs) will reflect earnings and the P/E ratio in 2020**



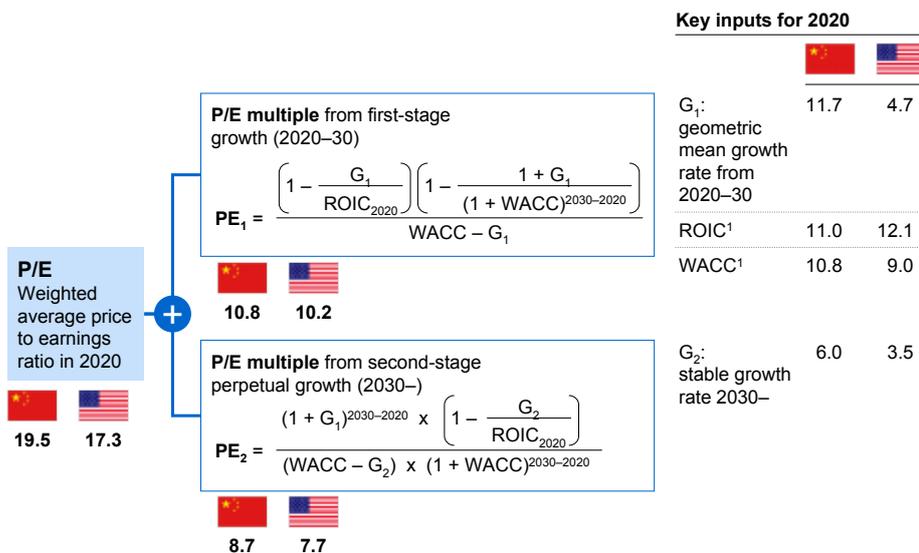
SOURCE: McKinsey Corporate Performance Center; Koller, Goedhardt, and Wessels (2010); McKinsey Global Institute

We then estimate a forward-looking P/E ratio for each country in 2020 that relies on nominal GDP growth rates, as well as return on invested capital (ROIC) and the weighted average cost of capital (WACC) (Exhibit A18).<sup>94</sup>

**Exhibit A18**

**2020 P/E ratio is estimated using a two-stage growth model**

EXAMPLE



<sup>1</sup> Mean over entire economy.

SOURCE: McKinsey Corporate Performance Analysis Tool (CPAT); McKinsey Global Institute

<sup>94</sup> This approach is described in more detail in Tim Koller, Marc Goedhardt, and David Wessels, *Valuation: Measuring and Managing the Value of Companies*, 5th Edition, John Wiley & Sons, 2010. Country-specific estimates of ROIC and WACC, as well as 2010 earnings data, come from McKinsey's Corporate Performance Analysis Tool.

We estimate the 2020 P/E ratio in two stages: in the first stage, we assume earnings grow at forecasted nominal GDP growth rates. But over time, economies and companies with very rapid growth rates would be expected to slow. Overall, nominal GDP and corporate earnings growth in emerging markets would be expected to slow and converge to growth rates in developed countries. We assume that this convergence starts around 2030 and that it affects the perpetual stream of earnings of a company. We assume country-specific ROIC and WACC rates stay constant at their 2010 level. In order to arrive at a 2020 stock market capitalization estimate, we multiply our GDP-based earnings forecast by the calculated P/E ratio.

- **Today's listed financial institutions:** To estimate the stock market capitalization of financial firms in 2020, we use a model similar to that used for nonfinancial corporations. Rather than using ROIC and WACC in our calculation of the P/E ratio, however, we substitute return on equity (ROE) and cost of equity. Banks' earnings are assumed to grow at the same rate as nominal GDP.

We then include estimates for the effects of Basel III, Dodd-Frank, and other national regulations on banks' capital needs. These measures require banks to enlarge their capital cushions in order to raise their resilience to financial crises, and they change the risk weightings assigned to different assets. We assume that banks in the United States and Europe will need to meet a 7 percent Core Tier 1 capital ratio, plus a 1 percent capital buffer. In addition, banks that are designated global systemically important financial institutions (G-SIFIs) pay an additional surcharge. We assume banks raise this new equity in even increments by 2015, and we let this new equity appreciate in value at the same rate as ROE to determine its 2020 market value.

- **New firm listings:** Over the next decade, many more companies will issue equity shares on stock exchanges around the world, in order to raise capital to expand operations and to provide liquidity for private owners. Initial public offerings in our sample of 18 countries averaged 0.3 percent of GDP annually over the previous decade, with the highest rate in China (0.7 percent of GDP, on average)<sup>95</sup> (Exhibit A19). We assume this ratio of IPOs to GDP stays constant for each country through 2020<sup>96</sup> and apply this to annual nominal GDP forecasts to estimate the value of IPOs each year. We let each year's issued shares appreciate in value at the same rate as ROIC in order to estimate their market value by 2020.

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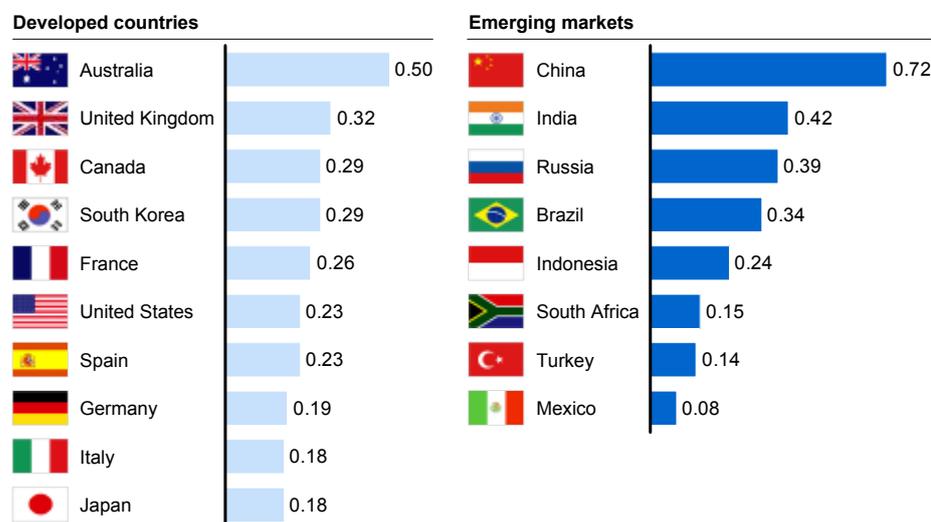
<sup>95</sup> We include only IPOs of nonfinancial firms and assume no listings by major financial firms.

<sup>96</sup> Even though the annual rate of IPOs in China has been quite high, the flow of new issues could remain strong due to the nation's rapid growth and the large number of companies that are still wholly owned by the state.

**Exhibit A19**

**We use historical IPO/GDP ratios to estimate equity that will be required by new firms over the next ten years**

Average market value of initial public offerings per year, 2000–10  
% of GDP



SOURCE: Dealogic; IMF; World Bank; McKinsey Global Institute

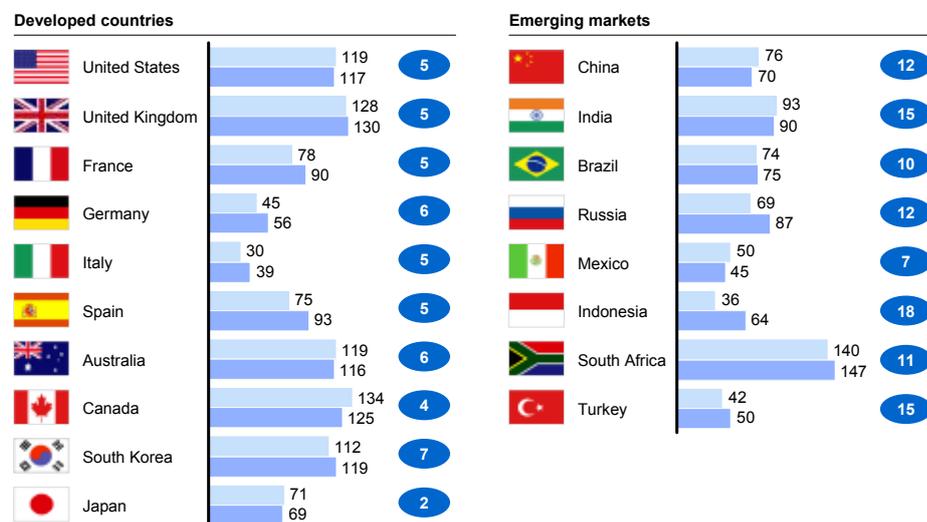
Using this approach, we estimate that the total market capitalization of firms domiciled in our 18-country sample will increase by \$37.4 trillion over the next ten years, implying a 4 percentage point increase in global stock market capitalization as a share of GDP (the same rate of return that occurred from 2001 to 2010). This \$37.4 trillion increase consists of a \$26.6 trillion increase in the capitalization of currently listed nonfinancial firms, a \$6.8 trillion increase in the capitalization of currently listed financial firms, and an estimated \$4.0 trillion increase in equities due to the listings of new firms. In developed countries, stock market capitalization, as a share of GDP, remains largely the same or shows a modest increase in some countries (Exhibit A20). For emerging market countries with low market capitalization today (e.g., Indonesia), we project an increase of 10 to 20 percentage points over the next ten years. For emerging markets with large stock markets today, like China and India, our projections show that the ratio of stock market capitalization to GDP changes very little over the next decade.

## Exhibit A20

### Total stock market capitalization, as a share of GDP, remains stable for most countries from 2010 to 2020

Total stock market capitalization by country, 2010–20F  
% of GDP

2010  
2020F  
Compound annual growth rate, 2010–20F (%)



SOURCE: McKinsey Corporate Performance Center; McKinsey Global Institute

## 5.2 Comparing corporate needs and investor demand for equities

To see whether projected investor demand for equity will match the needs of companies, we compare our estimates of the increases in national stock market capitalizations with our projections of the increases in domestic investors' equity holdings for our sample of 18 countries.<sup>97</sup> Overall, we find a \$12.3 trillion gap between the two.

In the United States and several other developed countries, investor demand for equities will be sufficient to satisfy the needs of corporations over the next ten years (Exhibit A21). In our five European economies (United Kingdom, France, Germany, Italy, and Spain), we find an aggregate gap of \$3.1 trillion between domestic investor demand for equities and corporate needs. This is because all types of European investors had lower holdings of equities than US investors in 2010 and because we expect that these allocations will decline further due to aging, changes in pension plans, and the impact of regulation over the next ten years. This implies that European firms could face difficulty in attracting domestic equity investors as a source of financing.

In emerging markets, we estimate that corporate needs for equity financing will far outweigh domestic investor demand (Exhibit A22). The total shortfall amounts to \$10.2 trillion, or 55 percent of the equity that emerging market firms will need to sustain growth over the next ten years (unless their capital structures shift further toward debt). The largest gap is in China, where we estimate investors' equity holdings could increase by \$4.7 trillion while corporate needs could increase by nearly \$8 trillion over the next ten years. India, Russia, and Brazil all face potential shortfalls of \$1 trillion to \$2 trillion each. This shortfall means that emerging

<sup>97</sup> We recognize that this comparison is a simplification because it assumes that all investor demand for equities will be for shares in domestic companies. In reality, some investor demand will be for the equities of foreign companies. Similarly, foreign investors outside these developed economies purchase equities of companies in the United States and other developed countries.

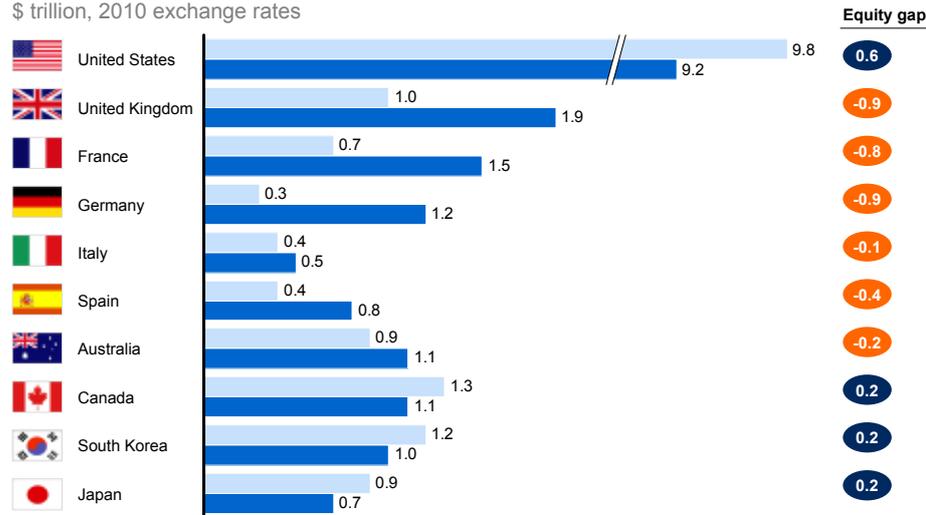
market firms may need to use more debt to finance growth, become much more capital efficient, or forego some investment altogether. A portion of the gap could also be filled by foreign investor demand for emerging market equities and by continued government ownership of shares. Alternatively, a rapid shift in domestic investor behavior could close the gap.

**Exhibit A21**

**Incremental investor demand will meet equity needs in the United States, but not in Europe**

Increase in investor demand for equities vs. increase in required equity by firms, 2010–20F  
\$ trillion, 2010 exchange rates

Legend:  
■ Increase in investor demand  
■ Increase in required equity  
● Demand meets equity needs  
● Demand does not satisfy equity needs



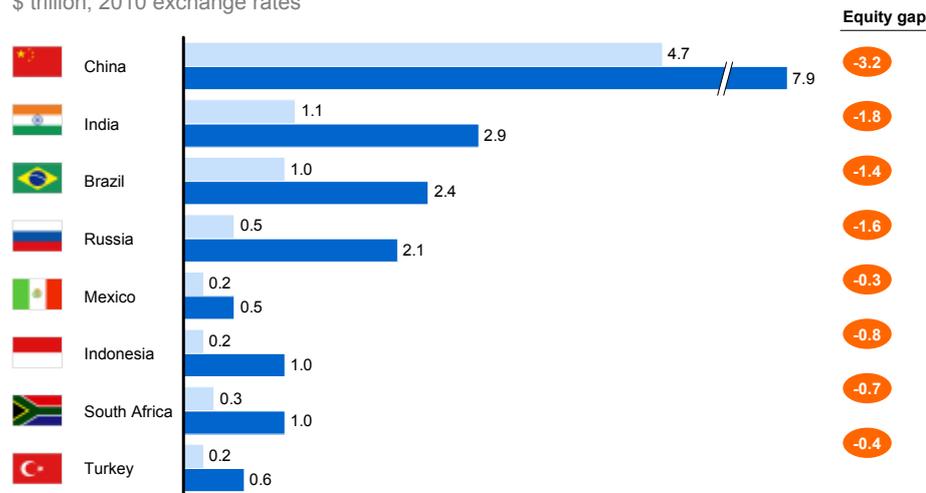
SOURCE: McKinsey Corporate Performance Center; McKinsey Global Institute

**Exhibit A22**

**Incremental demand for equities falls short of equity required by firms in emerging markets**

Increase in investor demand for equities vs. increase in required equity by firms, 2010–20F  
\$ trillion, 2010 exchange rates

Legend:  
■ Increase in investor demand  
■ Increase in required equity  
● Demand meets equity needs  
● Demand does not satisfy equity needs



SOURCE: McKinsey Corporate Performance Center; McKinsey Global Institute

## 6. CALCULATING REAL EQUITY AND BOND RETURNS

We calculate real equity and bond returns over different periods using long time series for the United States and the United Kingdom (Robert Shiller's data set<sup>98</sup> for the US market and the Barclays Equity Gilt Study for the UK market) and shorter time series from Bloomberg LLP for other countries.

For equities, we calculate nominal total returns to shareholders as the sum of the stock's value and the dividend payout. To get the dividend payout, we multiply the stock price by the average dividend yield for the economy. We assume that this dividend is reinvested into equities the next year. Finally, we convert the nominal return to a real return in 2010 terms, using the country's consumer price index (CPI) as a deflator.

We also compute an annualized real return to shareholders for rolling 10- and 20-year periods, for as many observations as possible, to remove short-run volatility in returns. As discussed in this report, we find the past decade had some of the worst real ten-year returns in more than a century in the United States (see Exhibits 21 and 22 in Chapter 3). This was also true in the United Kingdom (Exhibit A23).

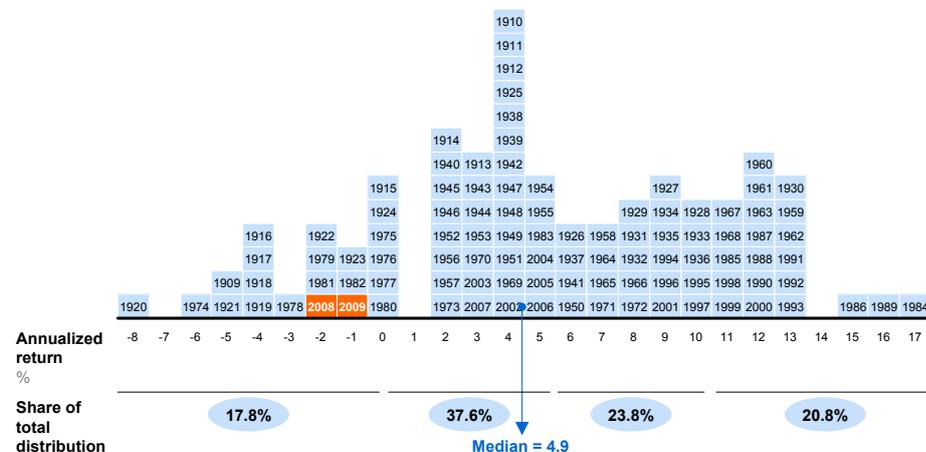
### Exhibit A23

#### As in the United States, the poor 10-year returns of recent years on UK equities are statistically unusual



##### Distribution of 10-year<sup>1</sup> total real equity returns, 1909–2009

Number of occurrences, Barclays UK Equity Index<sup>2</sup> adjusted for inflation



1 Each block represents the end point of a 10-year period and shows the annualized total real returns to shareholders.

2 From 1899 to 1935, based on 30 largest corporations; from 1935 to 1962, based on FT30 Index; from 1962 to 2010, based on FTSE Actuaries All-Share Index.

SOURCE: Barclays Equity Gilt Study 2010; McKinsey Global Institute

We also find that the same pattern of lengthy market cycles that we observed in the United States (see Box 3, "A closer look at equity returns," in Chapter 3) were apparent in the UK 10- and 20-year rolling returns as well, although 20-year equity returns in the United Kingdom have never been negative (Exhibit A24). We then examined 30-year rolling returns for the United States and the United Kingdom and again found a cyclical pattern, albeit more muted, with 30-year returns always above 2 percent in the United Kingdom and above 3.3 percent in the United States (Exhibit A25).

98 For more detail on the construction of this data set, see Robert Shiller, *Irrational Exuberance*, Princeton University Press, 2005. In this report, we use Shiller's data set updated through 2010, as published on his Web site (<http://www.irrationalexuberance.com/>) as of July 2011.

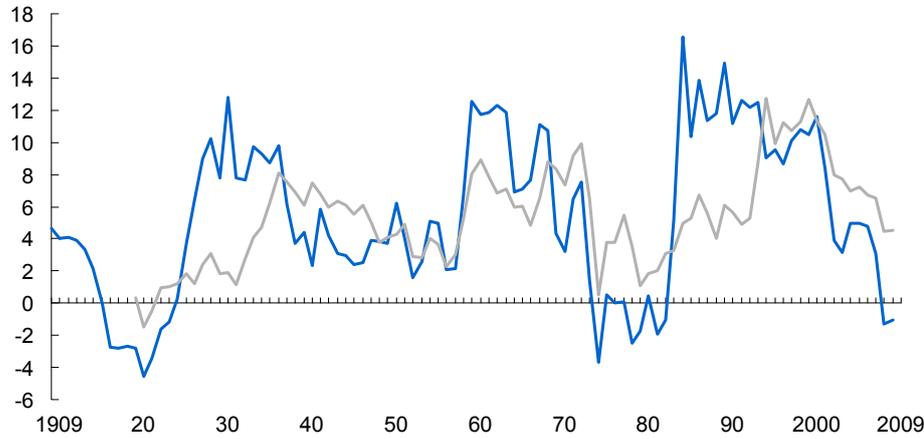
**Exhibit A24**

**UK rolling 10- and 20- year equity returns follow a cyclical pattern similar to US returns**

Rolling, annualized real equity return<sup>1</sup>  
Barclays UK Equity Index  
%



— 10-year  
— 20-year



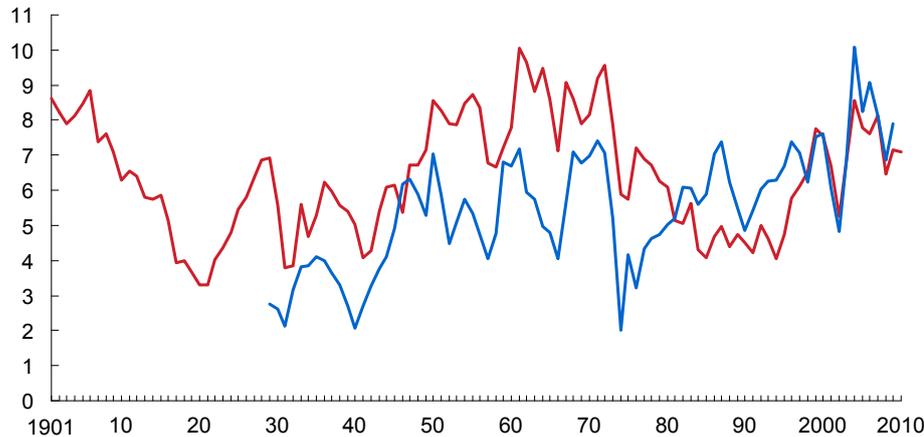
<sup>1</sup> Assumes dividend reinvested.  
SOURCE: Barclays Equity Gilt Study 2010; McKinsey Global Institute

**Exhibit A25**

**US and UK 30-year rolling returns also show some cyclical properties**

30-year rolling, annualized real equity return<sup>1</sup>  
S&P Composite Index (US) and Barclays Equity Index (UK)  
%

— United States  
— United Kingdom



<sup>1</sup> Assumes dividend reinvested.  
SOURCE: Shiller S&P Composite data set; Barclays Equity Gilt Study 2010; McKinsey Global Institute

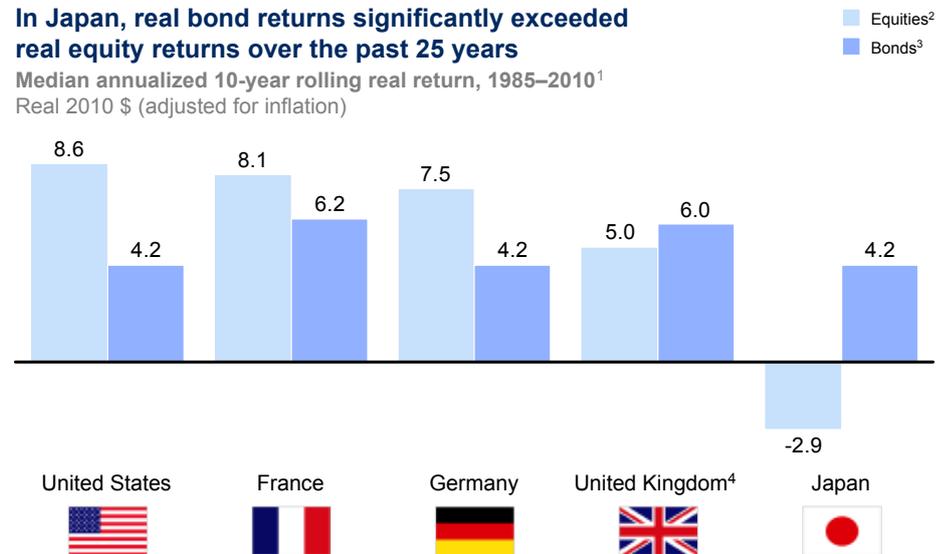
To understand whether equities generate higher returns than other asset classes, we calculate the real return on ten-year government bonds as well. We first calculate the nominal return, based on the coupon rate. Then, to make returns comparable with our equity returns, we assume that the bond coupon payments are reinvested. Again, we convert nominal returns to real rates of return using a CPI deflator. Finally, we annualize the real returns over a rolling ten-year investment horizon.

Overall, we find that only in Japan do real returns on government bonds significantly exceed real returns on equities (Exhibit A26). This reflects the fact that Japan has had low and even negative inflation rates, which have produced relatively high real rates of returns on bonds, despite very low coupon rates. It also reflects the very low returns on Japanese equities over the past 20 years.

### Exhibit A26

#### In Japan, real bond returns significantly exceeded real equity returns over the past 25 years

Median annualized 10-year rolling real return, 1985–2010<sup>1</sup>  
Real 2010 \$ (adjusted for inflation)



<sup>1</sup> Covers 15 10-year periods, with the earliest beginning in 1985 and the latest ending in 2010.

<sup>2</sup> Country-specific stock index; assumes reinvestment of dividend.

<sup>3</sup> 10-year government bond; assumes reinvestment of coupon.

<sup>4</sup> Average annualized 10-year returns for bonds and equities the same, at 6 percent.

SOURCE: Bank of Japan; Bloomberg; International Monetary Fund; McKinsey Global Institute

# Bibliography

Acharya, Viral, Conor Kehoe, and Michael Reyner, "The voice of experience: Public versus private equity," *McKinsey Quarterly*, December 2008.

Acharya, Viral and Philipp Schnabl, "Do global banks spread global imbalances? The case of asset-backed commercial paper during the financial crisis of 2007–09," *IMF Economic Review*, 2010, Number 58, 37–73, International Monetary Fund.

Ahn, James and David Cogman, "A quiet revolution in China's capital markets," *McKinsey on Finance*, Number 24, Summer 2007.

Al-Darwish, Ahmed, Michael Hafeman, Gregorio Impavido, Malcolm Kemp, and Padraic O'Malley, "Possible unintended consequences of Basel III and Solvency II," International Monetary Fund Working Paper Number 11/187, August 2011.

*Asset Allocation Survey: European Institutional Market Place Overview 2011*, Mercer LLC.

Balassa, B., "The purchasing-power parity doctrine: A reappraisal," *Journal of Political Economy*, 1964.

Bank for International Settlements Basel Committee on Banking Supervision, "Results of the comprehensive quantitative impact study," Bank for International Settlements, December 2010.

Bank for International Settlements Committee on the Global Financial System, "Fixed income strategies of insurance companies and pension funds," Bank for International Settlements, CGFS Paper Number 44, July 2011.

Barton, Dominic, "Capitalism for the long term," *Harvard Business Review*, March 2011.

Beck, Thorsten and Ross Levine, "Industry growth and capital allocation: Does having a market- or bank-based system matter?" *Journal of Financial Economics*, 2002.

Beck, Thorsten and Ross Levine, "Stock markets, banks, and growth: Panel evidence," National Bureau of Economic Research (NBER) Working Paper Number 9082, July 2002.

Bernstein, Peter L., *Against the Gods: The Remarkable Story of Risk* (New York: John Wiley & Sons, 1996).

Bertaut, Carol, Laurie Pounder DeMarco, Steve Kamin, and Ralph Tyson, "ABS inflows to the United States and the global financial crisis," Federal Reserve Board, international finance discussion paper 2011–1028, August 2011.

Börsch-Supan, Axel, "Demographic change, saving and asset prices: Theory and evidence," *Demography and Financial Markets* (Sydney: Pegasus Press Group, 2006).

Börsch-Supan, Axel, ed., *Life-Cycle Savings and Public Policy: A Cross-National Study of Six Countries* (San Diego, CA: Academic Press, 2003).

Börsch-Supan, Axel and Alexander Ludwig, "Aging, asset markets, and asset returns: A view from Europe to Asia," *Asian Economic Policy Review*, 2009, Volume 4, Number 1, 69–92.

Braga-Alves, Marcus V. and Kuldeep Shastri, "Corporate governance, valuation, and performance: Evidence from a voluntary market reform in Brazil," *Financial Management*, 2011, Volume 40, Issue 2, 139–157.

Broadbent, John, Michael Palumbo, and Elizabeth Woodman, "The shift from defined benefit to defined contribution pension plans: Implications for asset allocation and risk management," paper prepared for a working group on institutional investors, global savings, and asset allocation established by the Committee on the Global Financial System, December 2006.

Brooks, Robin, "Demographic changes and asset prices," *Demography and Financial Markets*, 2006, 234–261.

Caballero, Ricardo J., "A global perspective on the great financial insurance run: Causes, consequences and solutions," MIT Economics Alumni Dinner, speaking notes, January 20, 2009.

Caballero, Ricardo J., "The 'other' imbalance and the financial crisis," NBER Working Paper Number 15636, January 2010.

Cap Gemini and Merrill Lynch Global Wealth Management, *2011 World Wealth Report*.

Cecchetti, Stephen G., M. S. Mohanty, and Fabrizio Zampolli, "The real effects of debt," BIS Working Paper Number 352, September 2011.

Cortese, Amy, *Locavesting: The Revolution in Local Investing* (Hoboken, NJ: John Wiley & Sons, 2011).

Cosimano, Thomas F. and Dalia S. Hakura, "Bank behavior in response to Basel III: A cross-country analysis," International Monetary Fund Working Paper Number 11/119.

Cross, Meredith B., "Testimony on crowdfunding and capital formation before the Subcommittee on TARP, Financial Services and Bailouts of Public and Private Programs of the US. House of Representatives, Committee on Oversight and Government Reform," September 15, 2011.

Davies, Howard and Michael Drexler, "Financial development, capital flows, and capital controls," *The Financial Development Report*, 2010.

Davis, E. Philip, "Discussion: How will ageing affect the structure of the financial markets?" *Demography and Financial Markets*, 2006, 267–295.

“The death of equities: How inflation is destroying the stock market,” *BusinessWeek*, August 13, 1979.

De Mooij, Ruud A., “Tax biases to debt finance: Assessing the problem, finding solutions,” International Monetary Fund Staff Discussion Note Number 11/11, May 2011.

Demirgüç-Kunt, Asli, and Ross Levine, eds., *Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development* (Cambridge, MA: MIT Press, 2001).

Forbes, Kristin J., “Why do foreigners invest in the United States?” MIT-Sloan School of Management, Working Paper Number 4701–4708, June 2009.

Forbes, Kristin J. and Francis E. Warnock, “Capital flow waves: Surges, stops, flight, and retrenchment.” NBER, Working Paper Number 17351, August 2011.

Franks, Julian, Colin Mayer, and Hideaki Miyajima, “Equity markets and institutions: The case of Japan,” RIETI Discussion Paper, July 27, 2009.

Freeman, Richard T., “Discussion: How will ageing affect the structure of the financial markets?” *Demography and Financial Markets*, 2006, 296–298.

French, Eric, et al., “Asset rundown after retirement: The importance of rate of return stocks,” *Economic Perspectives*, 2007, Volume 31, Number 2, 48–64.

Grant Thornton, *Hope for the small IPO market?* June 2011.

Green, Stephen and Guy S. Liu, *Exit the Dragon: Privatization and State Control in China* (Hoboken, NJ: Wiley-Blackwell, 2005).

Groom, W. Todd, et al., “Population ageing, the structure of financial markets and policy implications,” *Demography and Financial Markets*, 2006, 340–366.

Guiso, Luigi and Monica Paiella, “Risk aversion, wealth, and background risk,” *Journal of the European Economic Association*, 2008, Volume 6, Issue 6, 1109–1150.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales, “Trusting the stock market,” *The Journal of Finance*, Volume 63, Number 6, December 2008.

Haldane, Andrew G., “The big fish small pond problem,” text of speech given at the Institute for New Economic Thinking Conference, Bretton Woods, New Hampshire, April 9, 2011.

Holzmann, Robert, “Pension reform, financial market development, and economic growth: Preliminary evidence from Chile,” International Monetary Fund staff papers, Volume 44, Number 2, June 1997.

Hunt, David A., Janice Revell, and Joanna Rotenberg, “What US workers don’t know about retirement,” *McKinsey Quarterly*, January 2007.

“Implementing an integrated package of pension reforms: The final report of the Pensions Commission,” The Pensions Commission of the United Kingdom, 2006.

"In search of a sustainable model for global banking," *McKinsey Quarterly*, September 2011.

Institute of International Finance, *The cumulative impact on the global economy of changes in the financial regulatory framework*, September 2011.

Institute of International Finance, *The implications of financial regulatory reform for the insurance industry*, August 2011.

International Monetary Fund, "Recent experiences in managing capital inflows—Cross-cutting themes and possible policy framework," Policy and Review Department, staff paper, February 2011.

International Monetary Fund, *Global Financial Stability Report: Durable Financial Stability—Getting There from Here* (Washington, DC: International Monetary Fund, 2011).

International Monetary Fund, "Recent experiences in managing capital inflows—Cross-cutting themes and possible policy framework," Policy and Review Department, staff paper, February 2011.

International Monetary Fund, *Global Financial Stability Report: Durable Financial Stability—Getting There from Here* (Washington, DC: International Monetary Fund, 2011).

Jackson, Richard and Neil Howe, *The Graying of the Great Powers: Demography and Geopolitics in the 21st Century* (Washington, DC: Center for Strategic & International Studies, 2008).

Jiang, Bin and Tim Koller, "Paying back your shareholders," *McKinsey on Finance*, Number 39, Spring 2011.

Jiangdong, Wen, "Discussion: Will China eat our lunch or take us to dinner? Simulating the transition paths of the US, EU, Japan and China," *Demography and Financial Markets*, 2006, 230–232.

Kent, Christopher, Anna Park, and Daniel Rees, eds., *Demography and Financial Markets* (Sydney: Pegasus Press Group, 2006).

Koller, Tim, Richard Dobbs, and Bill Huyett, *Value: The Four Cornerstones of Corporate Finance* (Hoboken, NJ: John Wiley & Sons, 2010).

Koller, Tim, Marc Goedhart, and David Wessels, *Valuation: Measuring and Managing the Value of Companies*, 5th Edition (Hoboken, NJ: John Wiley & Sons, 2010).

Koo, Richard C., *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession* (Singapore: John Wiley & Sons, 2008).

Krishnamurthy, Arvind and Annette Vissing Jorgensen, "The aggregate demand for treasury debt," Northwestern University and National Bureau of Economic Research, May 2010.

Kshirsagar, Alok and Naveen Tahilyani, *Deepening financial savings: Opportunities for consumers, financial institutions and the economy*, McKinsey & Company, November 2011.

Lai, Christine W., "How retired households and households approaching retirement handle their equity investments in the United States," *Journal of Family and Economic Issues*, 2008, Volume 29, Number 4, 601–622.

Lam, Kenny and Jatin Pant, "The changing face of Asian personal financial services," *McKinsey Quarterly*, September 2011.

Laux, Christian and Christian Leuz, "Did fair-value accounting contribute to the financial crisis?" ECGI, Finance Working Paper Number 266/2009, October 2009.

Levine, Ross, "Bank-based or market-based financial systems: Which is better?" *Journal of Financial Intermediation*, 2002, Volume 11, 398–428.

Lin, Justin Yifu, Xifang Sun, and Ye Jiang, "Toward a theory of optimal financial structure," World Bank Policy Research Working Paper Number 5038, September 2009.

Litan, Robert E., Vincent Pomerleano, and V. Sundararajan, *The future of domestic capital markets in developing countries* (Washington, DC: The Brookings Institution, 2003).

Liu, Zheng and Mark M. Spiegel, "Boomer retirement: Headwinds for U.S. equity market?" *FRBSF Economic Letter*, 2011, Number 26, Federal Reserve Bank of San Francisco, August 22, 2011

McKinsey & Company, *The state of global banking—in search of a sustainable model*, *McKinsey annual review on the banking industry*, September 2011.

McKinsey & Company, *Will the goose keep laying golden eggs?* June 2011.

McKinsey Global Institute, *An economy that works: Job creation and America's future*, June 2011.

McKinsey Global Institute, *Debt and deleveraging: The global credit bubble and its economic consequences*, January 2010.

McKinsey Global Institute, *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*, December 2010.

McKinsey Global Institute, *If you've got it, spend it: Unleashing the Chinese consumer*, August 2009.

McKinsey Global Institute, *Mapping global capital markets 2011*, August 2011.

McKinsey Global Institute, *Preparing for China's urban billion*, March 2009.

McKinsey Global Institute, *Talkin' 'bout my generation: The economic impact of aging US baby boomers*, June 2008.

McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are faring in the financial crisis*, July 2009.

McKinsey Global Institute, *The new power brokers: How oil, Asia, hedge funds, and private equity are shaping global capital markets*, October 2007.

McKinsey Global Institute, *Urban world: Mapping the economic power of cities*, March 2011.

McMahon, Dinny and James T. Areddy, "China props up bank shares," *The Wall Street Journal*, October 11, 2011.

Miles, David, "Monetary policy and banking fragility," text of speech given at London School of Economics, July 27, 2011.

Mirrlees, James, et al., *Tax by Design: The Mirrlees Review* (Oxford: Oxford University Press, 2011).

Mitchell, Olivia S., et al., "Financial innovation in an ageing world," *Demography and Financial Markets*, 2006, 299–336.

*NEST: Key facts and mythbusters*, UK National Employment Savings Trust, 2010.

O'Sullivan, Michael and Richard Kersley, *Credit Suisse Global Investment Returns Yearbook 2010* (Zurich: Credit Suisse Research Institute, 2010).

Organisation for Economic Co-operation and Development, "Pension fund assets struggle to return to pre-crisis levels," *Pension Markets in Focus*, 2010, Issue 7.

Organisation for Economic Co-operation and Development, *Revised taxonomy for pension plans, pension funds, and pension entities*, October 2002.

Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B. S. Reinhardt, "Capital Inflows: The Role of Controls," International Monetary Fund Staff Position Note 10/04, February 19, 2010.

Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Luc Laeven, Marcos Chamon, Mahvash S. Qureshi, and Annamaria Kokenyne, "Managing Capital Inflows: What Tools to Use?," International Monetary Fund Staff Discussion Note 11/06, April 5, 2011.

*Pensions: Challenges and choices the first report of the pensions commission*, The Pensions Commission of the United Kingdom, 2004.

Poterba, James, "Demographic structure and asset returns," *Review of Economics and Statistics*, 2001, Volume 83, Number 4, 565–584.

Poterba, James, et al., "The drawdown of personal retirement assets," NBER Working Paper Number 16675, January 2011.

Pozsar, Zoltan, "Institutional cash pools and the Triffin dilemma of the U.S. banking system," International Monetary Fund Working Paper Number 11/190, August 2011.

Rabinovitch, Simon, "China's bank buying fails to win over investors," *The Financial Times*, October 11, 2011.

Reinhart, Carmen M. and M. Belen Sbrancia, "The liquidation of government debt," NBER Working Paper Number 16893, March 2011.

Rudebusch, Glenn D., "The Fed's interest rate risk," *FRBSF Economic Letter*, 2011, Number 11, Federal Reserve Bank of San Francisco.

Samuelson, P. A., "Theoretical notes on trade problems," *Review of Economics and Statistics*, 1964.

Sapienza, Paola and Luigi Zingales, Financial Trust Index, Results, Wave 12, October 19, 2011, <http://www.financialtrustindex.org/resultswave12.htm>.

Schwarzer, Helmut, "Discussion: Demographic changes and asset prices," *Demography and Financial Markets*, 2006, 262–265.

Shiller, Robert, *Irrational Exuberance*, 2nd edition (Princeton, NJ: Princeton University Press, 2005).

Turner, Adair, *A new pension settlement for the twenty-first century: Second report of the Pensions Commission* (London, The Stationery Office, 2005).

Walter, Carl E. and Fraser J. T. Howie, *Red Capitalism: The Fragile Financial Foundation of China's Extraordinary Rise* (Hoboken, NJ: John Wiley & Sons, 2011).

Weber, Elke U. and Christopher Hsee, "Cross-cultural differences in risk perceptions, but cross-cultural similarities in attitudes toward perceived risk," *Management Science*, 1998, Volume 44, Issue 9, 1205–1217.

World Economic Forum, Financial Development Report, 2010.

World Economic Forum, *The future of long-term investing*, World Economic Forum, with Oliver Wyman Associates, 2011.

Yermo, Juan, "Revised taxonomy for pension plans, pension funds, and pension entities," OECD, October 2002.

Zähres, Meta, "Solvency II and Basel III: Reciprocal effects should not be ignored," Deutsche Bank Research, September 22, 2011.

Zhu, Min, "Managing Capital Flows in Emerging Markets," text of speech, International Monetary Fund, May 26, 2011.



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