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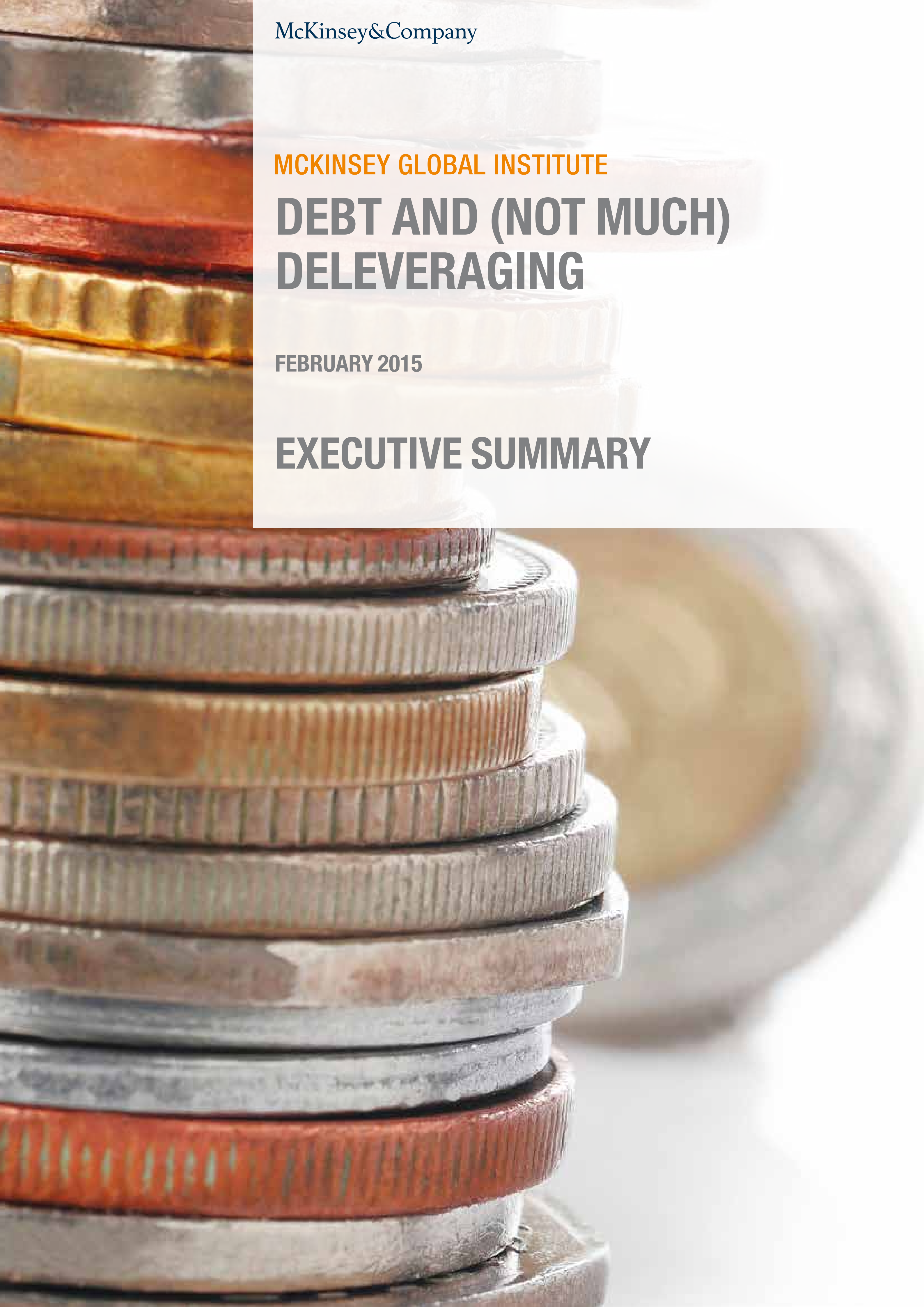
DEBT AND (NOT MUCH) DELEVERAGING

FEBRUARY 2015

EXECUTIVE SUMMARY



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DEBT AND (NOT MUCH) DELEVERAGING

FEBRUARY 2015

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IN BRIEF

DEBT AND (NOT MUCH) DELEVERAGING

After the 2008 financial crisis and the longest and deepest global recession since World War II, it was widely expected that the world's economies would deleverage. It has not happened. Instead, debt continues to grow in nearly all countries, in both absolute terms and relative to GDP. This creates fresh risks in some countries and limits growth prospects in many.

- **Debt continues to grow.** Since 2007, global debt has grown by $57 trillion, raising the ratio of debt to GDP by 17 percentage points.* Developing economies account for roughly half of the growth, and in many cases this reflects healthy financial deepening. In advanced economies, government debt has soared and private-sector deleveraging has been limited.
- **Reducing government debt will require a wider range of solutions.** Government debt has grown by $25 trillion since 2007, and will continue to rise in many countries, given current economic fundamentals. For the most highly indebted countries, implausibly large increases in real GDP growth or extremely deep reductions in fiscal deficits would be required to start deleveraging. A broader range of solutions for reducing government debt will need to be considered, including larger asset sales, one-time taxes, and more efficient debt restructuring programs.
- **Shadow banking has retreated, but non-bank credit remains important.** One piece of good news: the financial sector has deleveraged, and the most damaging elements of shadow banking in the crisis are declining. However, other forms of non-bank credit, such as corporate bonds and lending by non-bank intermediaries, remain important. For corporations, non-bank sources account for nearly all new credit growth since 2008. These intermediaries can help fill the gap as bank lending remains constrained in the new regulatory environment.
- **Households borrow more.** In the four "core" crisis countries that were hit hard—the United States, the United Kingdom, Spain, and Ireland—households have deleveraged. But in many other countries, household debt-to-income ratios have continued to grow, and in some cases far exceed the peak levels in the crisis countries. To safely manage high levels of household debt, more flexible mortgage contracts, clearer personal bankruptcy rules, and stricter lending standards are needed.
- **China's debt is rising rapidly.** Fueled by real estate and shadow banking, China's total debt has quadrupled, rising from $7 trillion in 2007 to $28 trillion by mid-2014. At 282 percent of GDP, China's debt as a share of GDP, while manageable, is larger than that of the United States or Germany.* Several factors are worrisome: half of loans are linked directly or indirectly to China's real estate market, unregulated shadow banking accounts for nearly half of new lending, and the debt of many local governments is likely unsustainable.

It is clear that deleveraging is rare and that solutions are in short supply. Given the scale of debt in the most highly indebted countries, the current solutions for sparking growth or cutting fiscal deficits alone will not be sufficient. New approaches are needed to start deleveraging and to manage and monitor debt. This includes innovations in mortgages and other debt contracts to better share risk; clearer rules for restructuring debt; eliminating tax incentives for debt; and using macroprudential measures to dampen credit booms. Debt remains an essential tool for funding economic growth. But how debt is created, used, monitored, and when needed discharged, must be improved.

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* Includes debt of the financial sector.

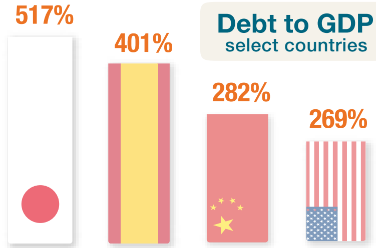
Seeking stability in an indebted world

What happened to deleveraging?

Global Debt

$57 Trillion
since 2007

Debt to GDP
select countries



Across sectors and geographies there are troubling signs:

CHINA'S debt is soaring

Quadrupled since 2007

~50% of loans linked to real estate

Shadow banking growing at 36% p.a.

HOUSEHOLDS borrow more

80% of countries have higher debt

74% of household debt is mortgages

7 countries at risk

GOVERNMENT debt is up $25 trillion since 2007

75% of increase in advanced economies

Exceeds 100% of GDP in 10 countries

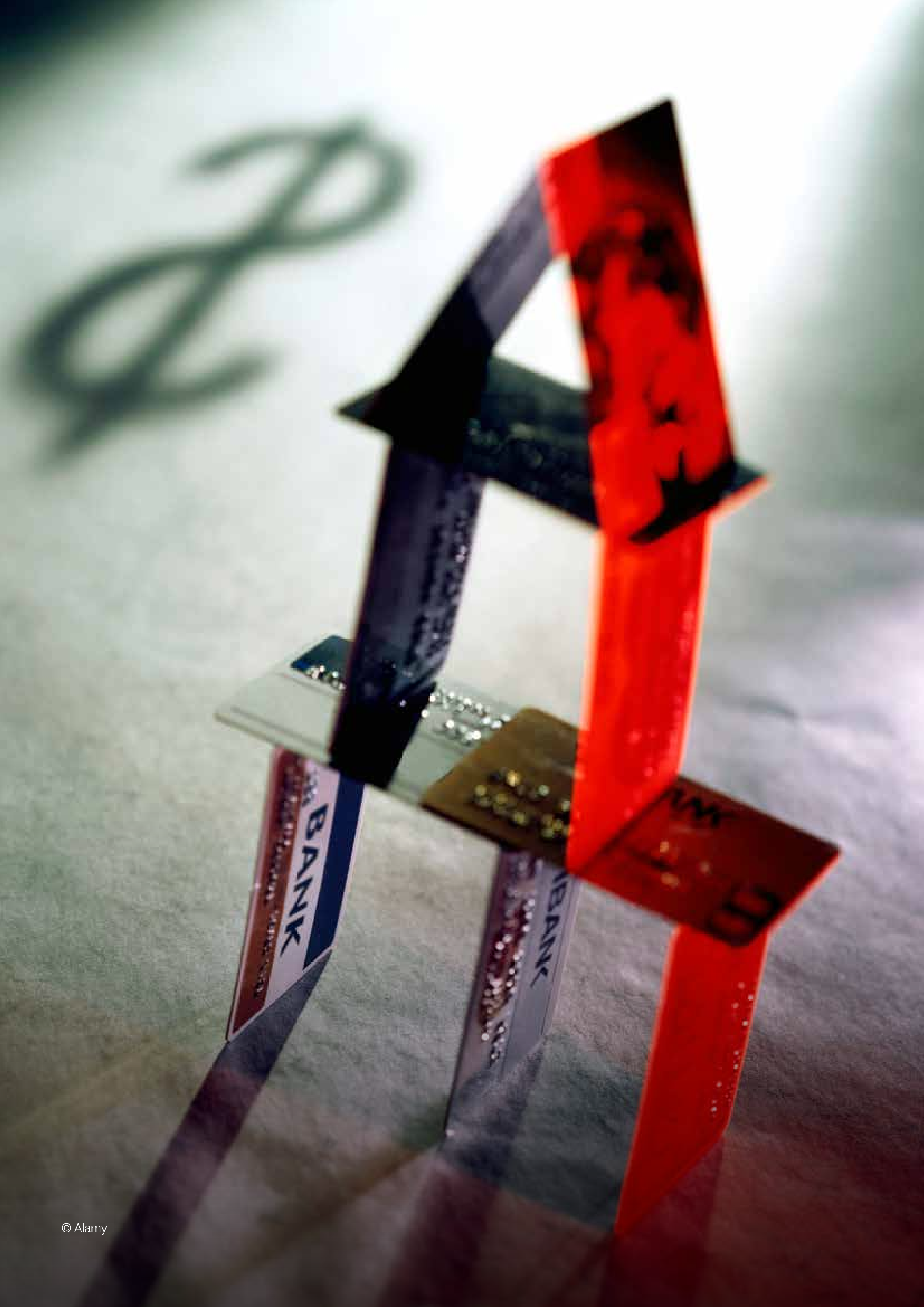
Projected to keep growing in Europe and Japan

Good news: the financial sector has deleveraged and become safer

Risky forms of shadow banking are fading, while non-bank lending is rising in importance

To avoid boom-and-bust credit cycles,
we need new tools to create, manage, and monitor debt

- New mortgage contracts to share risk
- Better bankruptcy and restructuring processes
- Macroprudential rules to dampen credit cycles
- Tax policies that do not unduly favor debt
- Better data collection and monitoring
- More tools for resolving sovereign debt
- Improved mix of bank and non-bank credit
- Healthy financial deepening in developing economies


BANK
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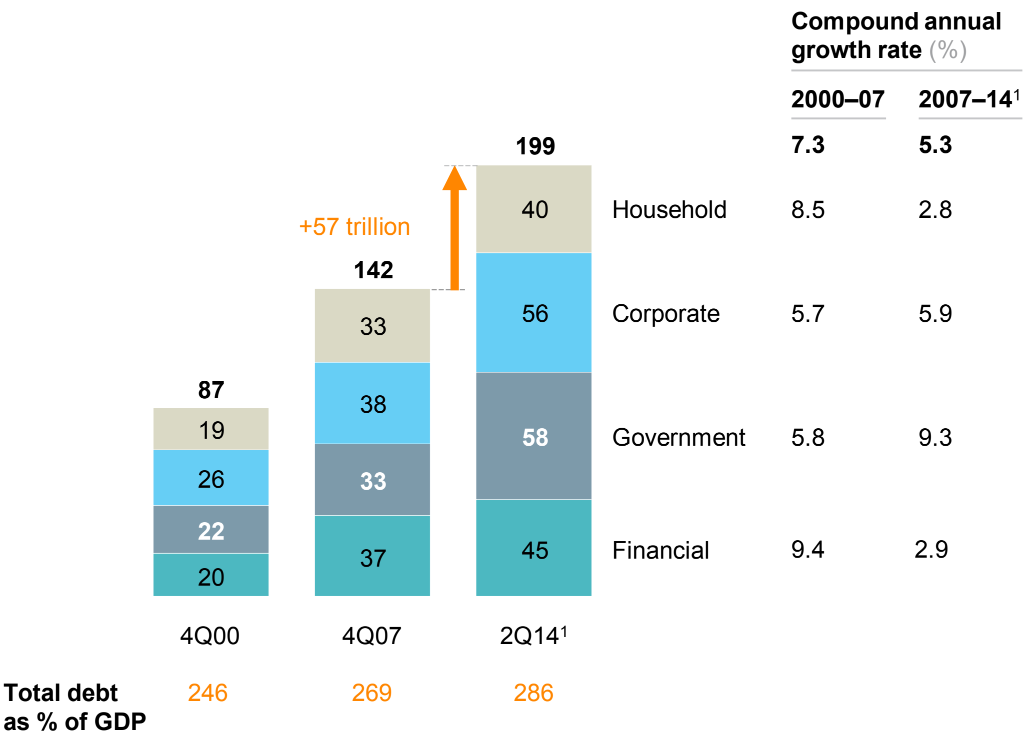
EXECUTIVE SUMMARY

Seven years after the global financial crisis, global debt and leverage have continued to grow. From 2007 through the second quarter of 2014, global debt grew by $57 trillion, raising the ratio of global debt to GDP by 17 percentage points (Exhibit E1). This is not as much as the 23-point increase in the seven years before the crisis, but it is enough to raise fresh concerns. Governments in advanced economies have borrowed heavily to fund bailouts in the crisis and offset falling demand in the recession, while corporate and household debt in a range of countries continues to grow rapidly.

Exhibit E1

Global debt has increased by $57 trillion since 2007, outpacing world GDP growth

Global stock of debt outstanding by type[1]
$ trillion, constant 2013 exchange rates



1 2Q14 data for advanced economies and China; 4Q13 data for other developing economies.
NOTE: Numbers may not sum due to rounding.

SOURCE: Haver Analytics; national sources; *World economic outlook*, IMF; BIS; McKinsey Global Institute analysis

There are few indicators that the current trajectory of rising leverage will change, especially in light of diminishing expectations for economic growth. This calls into question basic assumptions about debt and deleveraging and the adequacy of the tools available to manage debt and avoid future crises. We find it unlikely that economies with total non-financial debt that is equivalent to three to four times GDP will grow their way out of excessive debt. And the adjustments to government budgets required to start deleveraging of the most indebted governments are on a scale that makes success politically challenging.

This situation demands a broader set of approaches. Debt will remain an essential tool for the global economy, funding needed investments in infrastructure, business expansion, and urbanization. But high debt levels, whether in the public or private sector, have historically placed a drag on growth and raised the risk of financial crises that spark deep economic recessions.[1] A broader range of tools to avoid excessive borrowing and efficiently restructure debt when needed should be considered.

High debt levels, whether in the public or private sector, have historically placed a drag on growth and raised the risk of financial crises that spark deep economic recessions.

This research builds on our previous work on global debt and deleveraging, which examined debt in the private and public sectors across countries.[2] In this report, we examine the evolution of debt and prospects for deleveraging in 22 advanced economies and 25 developing economies. Our research focuses on debt of the "real economy"—of households, non-financial corporations, and governments—and treats financial-sector debt separately. One bit of good news in our research is the reduced leverage and increased safety of the financial sector in advanced economies.

In our analysis we examine several important developments in global debt since the crisis: the continuing rise of leverage around the world; growing government debt and how it might be managed; continued rapid growth in household debt in some countries that raises the risk of future crises; the potential risks of China's rising debt, which accounts for about a third of the increase in global debt since 2007; and the decline of the riskiest forms of shadow banking and continued growth of other forms of non-bank lending. We conclude that, absent additional steps and new approaches, business leaders should expect that debt will be a drag on GDP growth and continue to create volatility and fragility in financial markets. Policy makers will need to consider a full range of responses to reduce debt as well as innovations to make debt less risky and make the impact of future crises less catastrophic.

Since the crisis, most countries have added debt, rather than deleveraging

A large body of academic research shows that high debt is associated with slower GDP growth and higher risk of financial crises.[3] Given the magnitude of the 2008 financial crisis, it is a surprise, then, that no major economies and only five developing economies have reduced the ratio of debt to GDP in the "real economy" (households, non-financial corporations, and governments, and excluding financial-sector debt). In contrast, 14 countries have increased their total debt-to-GDP ratios by more than 50 percentage points (Exhibit E2).[4] Exhibit E3 shows the change in the ratio of debt to GDP in countries by sector since 2007 and ranks countries by the size of their total debt-to-GDP ratio.

1 There has been much debate about what constitutes excessive leverage. We find that the definition will vary by country and that specific target ratios cannot be applied universally. Our data provide a basis for comparison and further analysis.

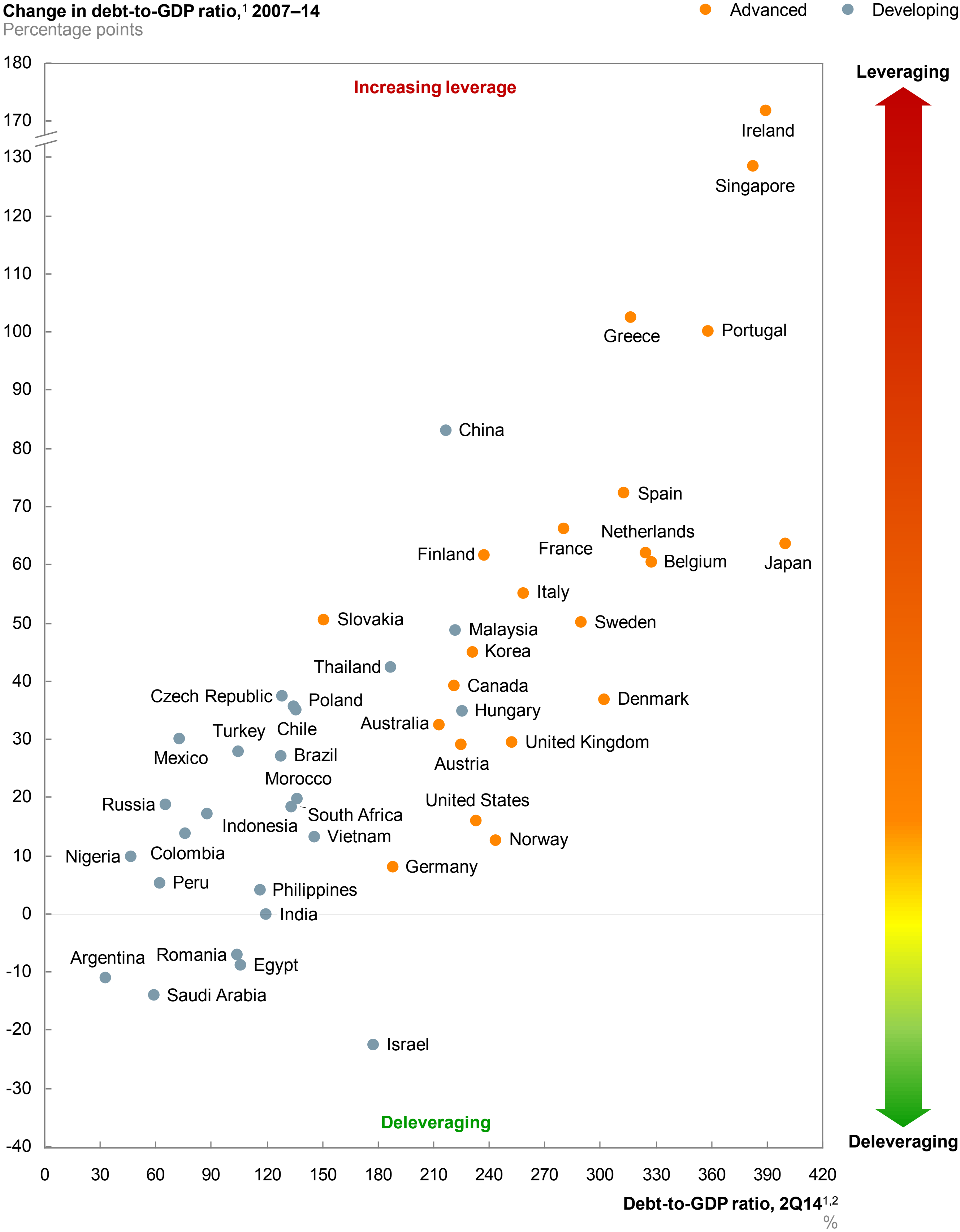
2 *Debt and deleveraging: Uneven progress on the path to growth*, McKinsey Global Institute, January 2012; *Debt and deleveraging: The global credit bubble and its economic consequences*, McKinsey Global Institute, January 2010.

3 Carmen M. Reinhart, Vincent R. Reinhart, and Kenneth S. Rogoff, "Public debt overhangs: Advanced economy episodes since 1800," *Journal of Economic Perspectives*, volume 26, number 3, Summer 2012; Stephen G. Cecchetti, M. S. Mohanty and Fabrizio Zampolli, *The real effects of debt*, Bank for International Settlements (BIS) working paper number 352, September 2011.

4 This pattern of rising overall leverage has been observed in academic papers, notably by Luigi Buttiglione et al., "Deleveraging? What deleveraging?" *Geneva Reports on the World Economy*, issue 16, September 2014.

Exhibit E2

The ratio of debt to GDP has increased in all advanced economies since 2007



1 Debt owed by households, non-financial corporates, and governments.
2 2Q14 data for advanced economies and China; 4Q13 data for other developing economies.

SOURCE: Haver Analytics; national sources; McKinsey Global Institute analysis

Exhibit E3

Change in debt-to-GDP ratio since 2007 by country

Ranked by real economy debt-to-GDP ratio, 2Q14[1]

Advanced economy / Developing economy; ↑ Leveraging / ↓ Deleveraging

Rank	Country	Debt-to-GDP ratio[1] %	Real economy debt change, 2007–14 Percentage points				Financial sector debt change
			Total	Government	Corporate	Household	
1	Japan	400	64	63	2	-1	6
2	Ireland	390	172	93	90	-11	-25
3	Singapore	382	129	22	92	15	23
4	Portugal	358	100	83	19	-2	38
5	Belgium	327	61	34	15	11	4
6	Netherlands	325	62	38	17	7	38
7	Greece	317	103	70	13	20	1
8	Spain	313	72	92	-14	-6	-2
9	Denmark	302	37	22	7	8	37
10	Sweden	290	50	1	31	18	37
11	France	280	66	38	19	10	15
12	Italy	259	55	47	3	5	14
13	United Kingdom	252	30	50	-12	-8	2
14	Norway	244	13	-16	16	13	16
15	Finland	238	62	29	17	15	24
16	United States	233	16	35	-2	-18	-24
17	South Korea	231	45	15	19	12	2
18	Hungary	225	35	15	21	-1	10
19	Austria	225	29	23	6	0	-21
20	Malaysia	222	49	17	16	16	6
21	Canada	221	39	18	6	15	-6
22	China	217	83	13	52	18	41
23	Australia	213	33	23	-1	10	-8
24	Germany	188	8	17	-2	-6	-16
25	Thailand	187	43	11	6	26	21
26	Israel	178	-22	-4	-21	3	-2
27	Slovakia	151	51	28	8	14	-5
28	Vietnam	146	13	10	-1	5	2
29	Morocco	136	20	8	7	5	3
30	Chile	136	35	6	20	9	9
31	Poland	134	36	14	9	13	9
32	South Africa	133	19	18	2	-2	-3
33	Czech Republic	128	37	19	9	9	4
34	Brazil	128	27	3	15	9	13
35	India	120	0	-5	6	-1	5
36	Philippines	116	4	-3	9	-2	-5
37	Egypt	106	-9	9	-18	0	-8
38	Turkey	104	28	-4	22	10	11
39	Romania	104	-7	26	-35	1	-4
40	Indonesia	88	17	-5	17	6	-2
41	Colombia	76	14	1	8	5	3
42	Mexico	73	30	19	10	1	-1
43	Russia	65	19	3	9	7	-4
44	Peru	62	5	-10	11	5	2
45	Saudi Arabia	59	-14	-15	2	-1	-8
46	Nigeria	46	10	7	1	2	-1
47	Argentina	33	-11	-14	1	2	-5

1 Includes debt of households, non-financial corporations, and government; 2Q14 data for advanced economies and China; 2013 data for other developing economies.

NOTE: Numbers may not sum due to rounding.

SOURCE: *World economic outlook*, IMF; BIS; Haver Analytics; national central banks; McKinsey Global Institute analysis

Some of the growth in global debt is benign and even desirable. Developing economies have accounted for 47 percent of all the growth in global debt since 2007—and three-quarters of new debt in the household and corporate sectors. To some extent, this reflects healthy financial system deepening, as more households and companies gain access to financial services. Moreover, debt in developing countries remains relatively modest, averaging 121 percent of GDP, compared with 280 percent for advanced economies. There are exceptions, notably China, Malaysia, and Thailand, whose debt levels are now at the level of some advanced economies.

More concerning is the continuing rise of debt levels in advanced economies. Despite the tightening of lending standards, household debt relative to income has declined significantly in only five advanced economies—the United States, Ireland, the United Kingdom, Spain, and Germany.[5] The United States and Ireland have achieved the most household deleveraging, using very different mechanisms (default in the United States, and loan modification programs in Ireland). Meanwhile, a number of countries in northern Europe, as well as Canada and Australia, now have larger household debt ratios than existed in the United States or the United Kingdom at the peak of the credit bubble. Corporations were not highly leveraged at the start of the 2008 crisis and their debt has risen only slightly since then. For small businesses, particularly in parts of Europe, new lending has dried up.

47%
Contribution of developing economies to global debt growth

Government debt: A wider range of solutions is needed

Government debt in advanced economies increased by $19 trillion between 2007 and the second quarter of 2014 and by $6 trillion in developing countries. In the depths of the recession, the rise in government spending was a welcome counterbalance to the sharp decline in private-sector demand. Indeed, at the first G20 meeting in Washington, DC, policymakers urged governments to use fiscal stimulus to combat the recession.

But government debt has now reached high levels in a range of countries and is projected to continue to grow. Given current primary fiscal balances, interest rates, inflation, and consensus real GDP growth projections, we find that government debt-to-GDP ratios will continue to rise over the next five years in Japan (where government debt is already 234 percent of GDP), the United States, and most European countries, with the exceptions of Germany, Ireland, and Greece.

It is unclear how the most highly indebted of these advanced economies can reduce government debt. We calculate that the fiscal adjustment (or improvement in government budget balances) required to start government deleveraging is close to 2 percent of GDP or more in six countries: Spain, Japan, Portugal, France, Italy, and the United Kingdom (Exhibit E4). Attaining and then sustaining such dramatic changes in fiscal balances would be challenging. Furthermore, efforts to reduce fiscal deficits could be self-defeating—inhibiting the growth that is needed to reduce leverage.

Nor are these economies likely to grow their way out of high government debt—which was essential to some previous successful deleveraging episodes, such as Sweden's and Finland's in the 1990s. In these countries, too, government debt rose in the recessions that followed their crises. But their private sectors deleveraged rapidly, and both nations benefited from an export boom, fueled in large part by a 30 percent currency depreciation and strong global demand. Today, many of the world's largest economies are trying to deleverage at the same time and in an environment of limited global growth and persistently low inflation. Our analysis shows that real GDP growth would need to be twice the current projected rates or more to start reducing government debt-to-GDP ratios in six countries: Spain, Japan, Portugal, France, Italy, and Finland.

5 In some countries, such as Japan, Ireland, and Portugal, deleveraging of households has been offset by rising corporate-sector leverage.

Exhibit E4

European economies and Japan require significant fiscal adjustment to start public-sector deleveraging

Country	Primary balance—current and required[1] (%): Primary balance, 2014	Primary balance to start deleveraging	Fiscal adjustment required ● – ■ (Percentage points)	Real GDP growth, 2014–19 consensus forecast[2] (%)
Spain	-2.3	2.6	4.9	1.7
Japan	-5.4	-1.3	4.1	1.1
Portugal	0.1	3.7	3.6	1.4
France	-2.3	0.2	2.5	1.5
Italy	1.7	3.6	1.9	0.9
United Kingdom	-2.7	-0.8	1.9	2.5
Finland	-1.6	-0.3	1.3	1.6
Netherlands	-1.0	0.1	1.1	1.6
Belgium	0.1	0.8	0.7	1.6
United States	-1.0	-0.8	0.2	2.8
Ireland	0.4	-0.2	n/a	3.0
Greece	2.7	1.4	n/a	2.5
Germany	2.1	0.0	n/a	1.6

1 Based on consensus GDP forecast, current inflation, 2Q14 government debt-to-GDP level, and estimated 2014 effective interest rate.
2 Average real GDP growth forecast from 2014 to 2019 per IMF, IHS, EIU, Oxford Economics, OECD, and McKinsey Global Growth Model.

SOURCE: McKinsey Country Debt database; IMF; IHS; EIU; Oxford Economics; OECD; McKinsey Global Growth Model; McKinsey Global Institute analysis

A wider range of solutions to enable government deleveraging is therefore needed. The specifics will depend on the circumstances of each country. But these may include, for instance, more widespread public asset sales, higher or one-time taxes on wealth, higher inflation targets, and more efficient programs for debt restructuring.

Household debt continues to grow rapidly, and deleveraging is rare

Unsustainable levels of household debt in the United States and a handful of other advanced economies were at the core of the 2008 financial crisis. Between 2000 and 2007, the ratio of household debt relative to income rose by one-third or more in the United States, the United Kingdom, Spain, Ireland, and Portugal. This was accompanied by, and contributed to, rising housing prices. When housing prices started to decline and the financial crisis occurred, the struggle to keep up with this debt led to a sharp contraction in consumption and a deep recession.[6]

6 Atif Mian and Amir Sufi, *House of Debt: How they (and you) caused the Great Recession, and how we can prevent it from happening again*, University of Chicago Press, 2014.

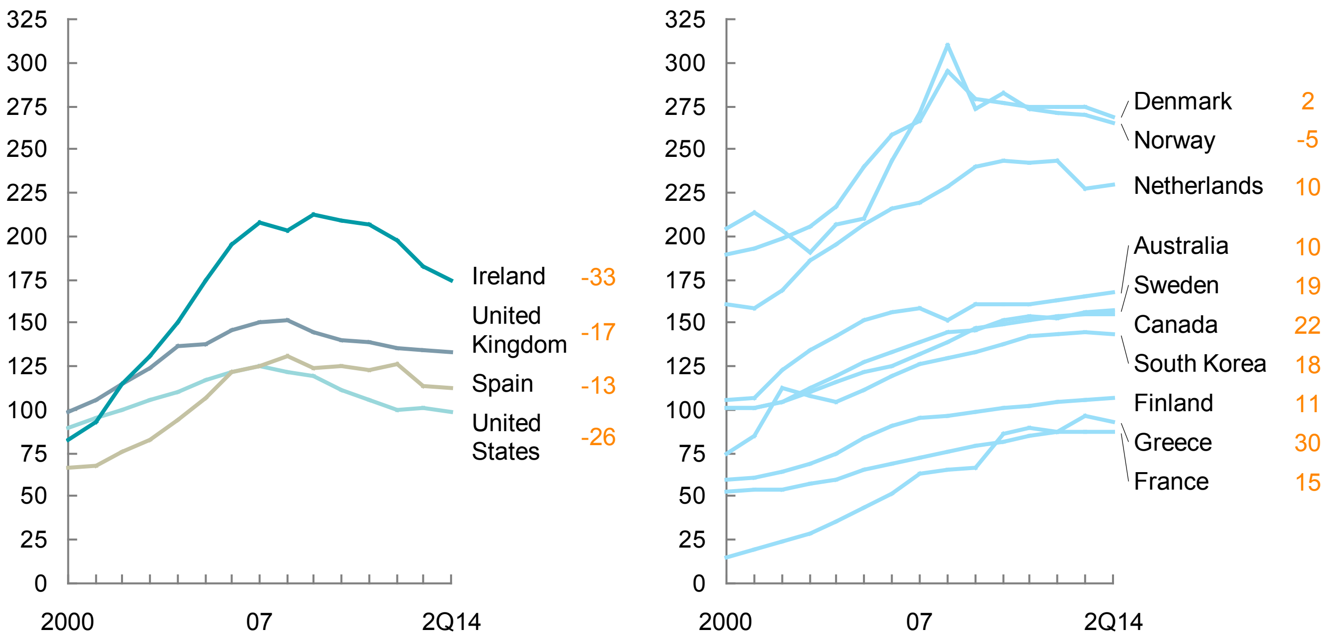
Since then, households in those countries have begun deleveraging, with the most progress in Ireland and the United States (Exhibit E5). In many other countries, however, household debt has continued to rise rapidly. In the Netherlands, Denmark, and Norway, household debt now exceeds 200 percent of income—far above US or UK household debt at the peak. In other advanced economies, such as Canada, South Korea, and Australia, household debt also continues to grow. Household debt has risen rapidly in some developing countries, too—quadrupling in China, for instance—but remains at much lower levels relative to income than in advanced economies (Malaysia and Thailand are exceptions).

Exhibit E5

Households in the hard-hit countries have deleveraged, but household debt has continued to grow in most advanced economies

Household debt-to-income ratio, 2000–2Q14
%

XX Change in debt-to-income ratio, 2007–2Q14
Percentage points



SOURCE: Haver Analytics; national central banks; McKinsey Global Institute analysis

Why is household deleveraging so rare? Mortgages are the main form of household debt in all advanced economies, and rising housing prices contribute to more borrowing. And, when buyers can obtain larger mortgages, they bid up house prices even more. We find a strong correlation between increases in real estate prices and household debt both across countries and between US states. Housing prices, in turn, reflect land costs, which are influenced by physical limitations, regulatory policies, and urban concentration.[7] We show that urbanization patterns matter: countries in which a large share of the population crowds into a small number of cities have higher real estate prices—and household debt—than countries with more dispersed urban development. Policy makers will therefore need to be particularly vigilant in monitoring debt growth and sustainability in global cities with high real estate prices.

[7] Other factors, including the size of the high-skill, high-income workforce, also contribute to higher land and housing prices in large cities.

The question now is whether high household debt in some countries will spark a crisis. We assess the level and growth of debt-to-income ratios, debt service ratios, and house price changes. Using these metrics, we find that seven economies today have potential vulnerabilities in household debt: the Netherlands, South Korea, Canada, Sweden, Australia, Malaysia, and Thailand. More than ever, effective tools are needed for issuing, monitoring, and managing household debt.

The riskiest forms of shadow banking have retreated, but non-bank credit remains important

$4.3T
Increase in corporate bonds outstanding since 2007

One bright spot in our research is progress in financial-sector deleveraging. In the years prior to the crisis, the global financial system became ever more complex and interconnected. Credit intermediation chains become very long, involving multiple layers of securitization, high levels of leverage, and opaque distribution of risk. This was reflected in growing debt issued by financial institutions to fund their activities. Financial-sector debt grew from $20 trillion in 2000 to $37 trillion in 2007, or from 56 percent of global GDP to 71 percent. Much of this debt was in the so-called shadow banking system, whose vulnerability was starkly exposed by the financial crisis.

It is a welcome sign, then, that financial-sector debt relative to GDP has declined in the United States and a few other crisis countries, and has stabilized in other advanced economies. At the same time, banks have raised capital and reduced leverage. Moreover, the riskiest elements of shadow banking are in decline. For example, the assets of off-balance sheet special-purpose vehicles formed to securitize mortgages and other loans have fallen by $3 trillion in the United States. Repurchase agreements (repos), collateralized debt obligations, and credit default swaps have declined by 19 percent, 43 percent, and 67 percent, respectively, since 2007.

However, if we consider the broader context of non-bank credit, including corporate bonds, simple securitizations, and lending by various non-bank institutions, we see that non-bank credit is an important source of financing for the private sector. Since 2007, corporate bonds and lending by non-bank institutions—including insurers, pension funds, leasing programs, and government programs—has accounted for nearly all net new credit for companies, while corporate bank lending has shrunk (Exhibit E6). The value of corporate bonds outstanding globally has grown by $4.3 trillion since 2007, compared with $1.2 trillion from 2000 to 2007. Most of these forms of non-bank credit have fewer of the risks of the shadow banking seen before the crisis, in terms of leverage, maturity mismatch, and opacity.

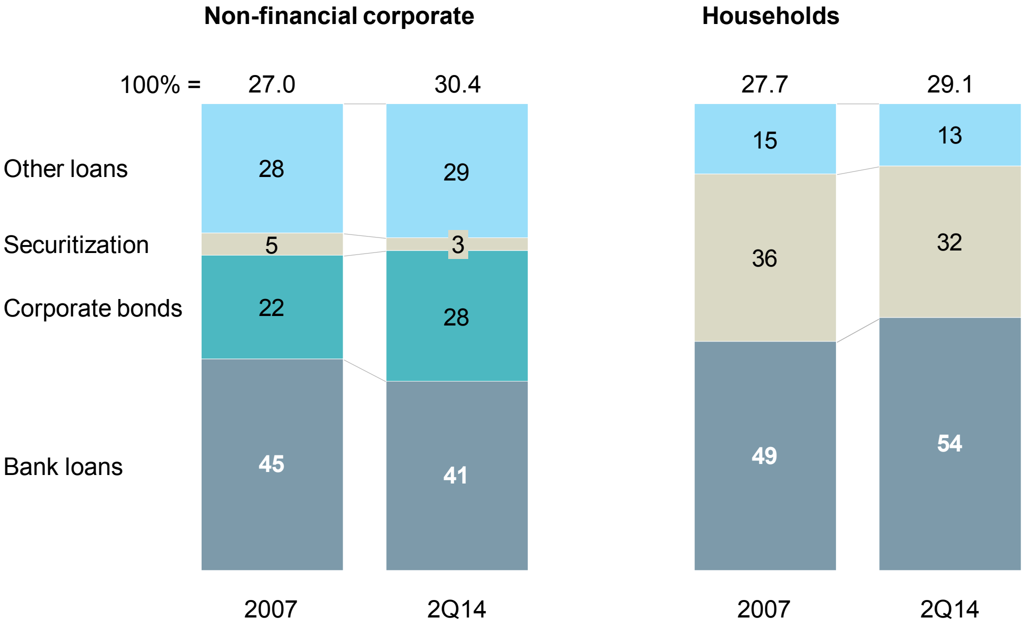
Some specific types of non-bank credit are growing very rapidly, such as credit funds operated by hedge funds and other alternative asset managers. Assets in credit funds for a sample of eight alternative asset managers have more than doubled since 2009 and now exceed $400 billion. Another small, but rapidly growing, source of non-bank debt is peer-to-peer lending. These online lending platforms have originated only about $30 billion in loans so far, but private equity funds, other asset managers, and even banks have begun investing in peer-to-peer platforms, suggesting that these lenders could build greater scale. Currently, the risks associated with these new credit intermediaries appear low, although they should be monitored closely, as that could change.

With bank lending likely to remain constrained in the future due to new regulations, non-bank credit could fill a growing need. If appropriate restrictions on leverage and use of complex, opaque financial instruments are in place, loans from non-bank intermediaries, corporate bonds, and simple forms of securitization can play an important role in funding growth.

Exhibit E6

Since 2007, non-bank credit has grown as a corporate funding source and declined for households

Outstanding debt in advanced economies[1]
%; $ trillion, constant exchange rates 2013



1 Australia, Canada, France, Germany, Japan, Netherlands, South Korea, United Kingdom, United States.
NOTE: Numbers may not sum due to rounding.

SOURCE: National central banks, statistics offices, and regulators; BIS; ECB; SIFMA; McKinsey Global Institute analysis

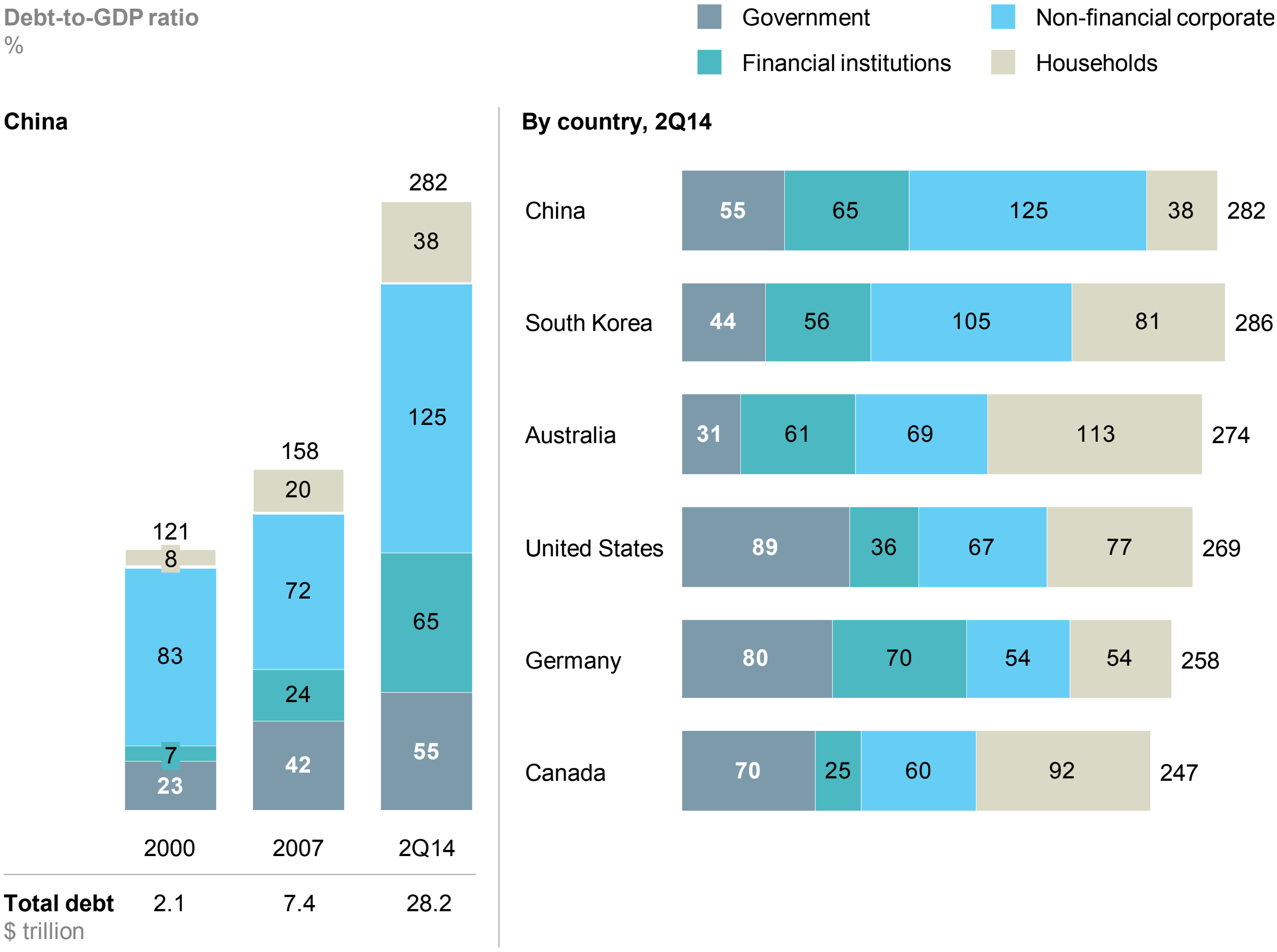
China's debt is rising rapidly, with several potential risks ahead

Since 2007, China's total debt (including debt of the financial sector) has nearly quadrupled, rising from $7.4 trillion to $28.2 trillion by the second quarter of 2014, or from 158 percent of GDP to 282 percent (Exhibit E7). China's overall debt ratio today appears manageable, although it is now higher in proportion to GDP than that of the United States, Germany, or Canada. Continuing the current pace of growth would put China at Spain's current level of debt—400 percent of GDP—by 2018. We find three particular areas of potential concern: the concentration of debt in real estate, the rapid growth and complexity of shadow banking in China, and the off-balance sheet borrowing by local governments.

We estimate that nearly half of the debt of Chinese households, corporations, and governments is directly or indirectly related to real estate, collectively worth as much as $9 trillion. This includes mortgages to homeowners; debt of property developers; lending to related industries, such as steel and cement; and debt raised by local governments for property development. This concentration in the property sector poses a significant risk. Property prices have risen by 60 percent since 2008 in 40 Chinese cities, and even more in Shanghai and Shenzhen. Residential real estate prices in prime locations in Shanghai are now only about 10 percent below those in Paris and New York. Over the past year, a correction has begun. Transaction volumes are down by around 10 percent across China, and unsold inventories are building up: smaller inland cities now have 48 to 77 months of inventory. A slowdown in the property market would be felt mostly in construction and related industries, rather than by households, which are not highly indebted. However, housing construction is an enormous sector, accounting for 15 percent of GDP. Thousands of small players in the industry, many of which rely on high-cost shadow banking loans, would have trouble keeping up with debt service payments in a prolonged slowdown.

Exhibit E7

China's debt reached 282 percent of GDP in 2014, higher than debt levels in some advanced economies



NOTE: Numbers may not sum due to rounding.

SOURCE: MGI Country Debt database; McKinsey Global Institute analysis

The rapid growth of shadow banking in China is a second area of concern: loans by shadow banking entities total $6.5 trillion and account for 30 percent of China's outstanding debt (excluding the financial sector) and half of new lending. Most of the loans are for the property sector. The main vehicles in shadow banking include trust accounts, which promise wealthy investors high returns; wealth management products marketed to retail customers; entrusted loans made by companies to one another; and an array of financing companies, microcredit institutions, and informal lenders. Both trust accounts and wealth management products are often marketed by banks, creating a false impression that they are guaranteed. The underwriting standards and risk management employed by managers of these funds are also unclear. Entrusted loans involve lending between companies, creating the potential for a ripple of defaults in the event that one company fails. The level of risk of shadow banking in China could soon be tested by the slowdown in the property sector.

The third potential risk in China is the growing debt accumulated in off-balance sheet local-government financing vehicles, which are used to fund infrastructure (airports, bridges, subways, industrial parks), social housing, and other projects. Local governments rely on these off-balance sheet entities because they have limited taxing authority, must share revenue with the central government, and until recently have not been permitted to issue municipal bonds. Since China's 2009 stimulus program, lending to local governments has surged, reaching $2.9 trillion. The central government has recognized the growing risk and in 2014 conducted an audit of local government finances, finding that 40 percent rely on land sales to make loan payments and that 20 percent of new borrowing is to repay older loans. The slowing of property markets puts these entities at risk of default.

We find three particular areas of potential concern in China: the concentration of debt in real estate, the rapid growth and complexity of shadow banking, and the off-balance sheet borrowing by local governments.

China's central government has the financial capacity to handle a financial crisis if one materializes—government debt is only 55 percent of GDP. Even if half of property-related loans defaulted and lost 80 percent of their value, we calculate that China's government debt would rise to 79 percent of GDP to fund the financial-sector bailout. However, the larger question is whether China could manage this without a significant slowdown in GDP growth (which then would put additional pressure on government finances). China's challenge today is to enact reforms to deflate the growing credit and property bubbles, increase transparency and risk management throughout the financial system, and create efficient bankruptcy courts and other mechanisms to resolve bad debt without provoking instability or financial crises.

The path forward: Learning to live with debt

The growing debt of the global economy is an unwelcome development seven years after the financial crisis began. It slows the recovery, raises the risk of new crises, and it limits the ability to respond to them. While significant deleveraging may prove elusive for many countries, effectively managing the growth of debt—and reducing it where necessary—is an imperative. We offer several ideas that warrant further discussion:

- **Encourage innovations in mortgage contracts.** More flexible mortgage contracts can avoid foreclosure and the associated social and economic costs. One proposal is a "shared responsibility mortgage," in which loan payments are reduced when home prices decline below the purchase price and revert when prices improve; in return, when the home is sold, the lender receives a portion of the capital gain.[8] A "continuous workout mortgage" would adjust payments automatically in response to triggers such as recession or job loss to enable borrowers to continue making payments and avoid default.[9] Or homeowners could be given incentives (or required) to purchase insurance to cover mortgage payments in case of job loss or other developments that inhibit their ability to pay. The benefits of these schemes should be weighed carefully against the costs and risks, but could improve financial system stability.

8 Ibid. Atif Mian and Amir Sufi, *House of debt*, 2014.

9 Robert J. Shiller et al., *Continuous workout mortgages*, NBER working paper number 17007, May 2011.

- **Improve processes for private-sector debt resolution.** Loan defaults, when they occur, can be made less disruptive. Non-recourse mortgages, which allow creditors to seize only the collateral when a loan is in default, are widely used in the United States. These facilitate relatively swift resolution of bad debts and enable households to extinguish debt through default and resume normal consumption. Recourse loans, which are common in most of the rest of the world, permit the lender to pursue a borrower's other assets and future income. As a result, borrowers try to make loan repayments under all circumstances, and they have a strong incentive to limit debt. The downside is that to keep up with loan payments, households may cut other spending dramatically, which can deepen and extend a recession. Non-recourse loans must be combined with strong macroprudential rules that limit excessive borrowing, but could facilitate more efficient resolution of bad debts when they occur.

- **Use macroprudential tools to dampen credit cycles.** The 2008 financial crisis was a reminder that, given the opportunity, some borrowers will take on too much debt. Macroprudential measures are intended to reduce those opportunities. For example, these measures may place limitations on loan-to-value ratios (LTVs) or restrict certain types of mortgages, such as interest-only loans. In addition, they may include countercyclical measures to dampen lending during periods of strong credit growth, for instance by raising capital requirements for banks. Most advanced economies today have adopted some macroprudential regulations, and these should be strengthened and expanded to consider the total leverage in the economy.

- **Reduce tax incentives for debt.** Given the role of housing debt and real estate bubbles in financial crises, it may be time to reconsider deductibility of mortgage interest and other tax preferences for housing debt. Interest deductibility benefits high-income households most and creates incentives for households to take out larger mortgages to maximize deductions. Reducing or phasing out the deductibility of interest on corporate debt would be more challenging, but policy makers should consider measures that would put debt and equity on a more equal footing. This could improve capital allocation in firms and also would reduce the incentives to invest in capital goods rather than labor. Such reforms may need to be accompanied by other adjustments to corporate tax codes, including perhaps reductions in marginal rates. While changes in tax policy are always difficult, they deserve attention.

- **Consider a broader range of tools for resolving sovereign debt.** Unilateral default is the most extreme option for countries struggling with unsustainable public debt. But today a broader range of options for restructuring debt may be available. Greece, for example, negotiated a partial debt restructuring in 2012 by modifying only the debt held by private investors. Stronger collective-action clauses would facilitate such restructuring by compelling bondholders to accept a majority vote to modify loans. In addition, when assessing the sustainability of government debt, more attention should be paid to net debt, which can be defined as excluding debt owned by other government agencies and central banks, rather than gross debt. In a sense, such debt is merely an accounting entry, representing a claim by one arm of government on another. Moreover, debt owned by central banks could be replaced upon maturity indefinitely, eliminating the future need to raise taxes or reduce government spending, with interest payments remitted to the national treasury. Focusing on net government debt provides a clearer picture of sustainability.

- **Improve data collection and monitoring of debt.** Better information is essential for avoiding future credit crises. Governments and businesses should invest in improving the granularity and reliability of data about debt. Government debt reporting remains relatively opaque. Treatment of unfunded future pension and health-care liabilities and intragovernment borrowing varies across governments, for example. Microeconomic data about household finances, including the liabilities, assets, and incomes of individual households, are available in only a few advanced economies but should be expanded to more countries. To monitor business debt, a central credit register that collects all data about commercial loans of a certain size from different sources could be helpful. This information would be useful for regulators as well as lenders.

- **Create a healthy mix of bank and non-bank credit intermediaries.** Given the constraints on bank lending due to new regulations, non-bank intermediaries will play an important role in funding economic growth. Corporate bond markets, which provide capital for large companies, could expand significantly in most countries, and private placements of bonds with insurers, pension funds, and other investors can provide financing for smaller companies. "Plain vanilla" securitization, which has proven sustainable in providing liquidity to the mortgage market, can be a useful component of the financial system and applied to other forms of debt, such as loans to small and medium-sized enterprises. New and fast-growing non-bank intermediaries, such as credit funds and online peer-to-peer lending platforms, could be another important source of non-bank lending, but should be monitored as they continue to grow and evolve. For all non-bank intermediaries, it will be important to strengthen reporting standards and monitoring to avoid excessive risk-taking and leverage.

- **Promote financial deepening in developing economies.** Rising levels of debt relative to GDP should be expected in developing economies, which need to fund growing businesses, infrastructure, and housing. This should be accompanied by the introduction of a wider range of financial products and services and more intermediaries, as well as the development of debt and equity capital markets. But developing economies today should also learn from the mistakes of recent years and take action now to avoid future financial crises. This includes strengthening regulations on lending, adopting macroprudential regulations, expanding rules for financial disclosure, and creating a legal system that protects the rights of minority shareholders and efficiently disposes of bad debt through bankruptcy. Many developing economies have these elements in place on paper, and the challenge now is ensuring they function effectively in practice.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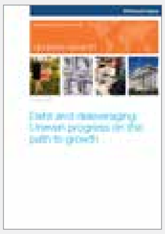

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McKinsey Global Institute
February 2015

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