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The Great Mismatch:
Addressing Barriers to Global Capital Flows

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ABOUT THIS REPORT

This report was jointly produced by PGIM and Knowledge@Wharton, the online research journal of the Wharton School of the University of Pennsylvania.

The paper was researched and written with the close cooperation of investment professionals within the investment businesses of PGIM, and scholars and practitioners affiliated with Wharton. The primary interviewees include:

- Franklin Allen, professor of finance and economics, The Wharton School (currently on leave at Imperial College London)
- Mauro Guillén, professor of international management and director of the Joseph H. Lauder Institute of Management and International Studies, The Wharton School
- Edward F. Keon Jr., managing director and portfolio manager, QMA, a business of PGIM
- Joshua Livnat, managing director and senior researcher, QMA, a business of PGIM
- Vinay Nair, visiting professor, The Wharton School, and founding principal, Ada Investments
- Jürgen Odenius, managing director, chief economist and head of Global Macroeconomic Research, Prudential Fixed Income
- Arvind Rajan, managing director and international chief investment officer, Prudential Fixed Income
- Michael Schlachter, managing director and head of Multi-Asset Class Solutions, PGIM

EXECUTIVE SUMMARY

Cross-border capital flows are at an inflection point. While in aggregate they have not returned to pre-crisis high watermarks—primarily driven by a significant decline in bank lending—they are increasingly varied in their scope and direction. More countries around the world are seeking and providing capital across borders than ever before. And asset managers and asset owners—not just governments, corporations and banks—are becoming increasingly influential in determining the scale and stability of global capital flows.

Yet capital around the world is being deployed inefficiently—large pools are not getting the returns they should, even as many needs for investment, both public and private, go unmet. This "great mismatch" is driven by a confluence of governments focused on near-term electoral cycles and rent-seeking, emerging-market financial institutions lacking investment management expertise and depth, and investors prioritizing short-term gains over sustainable long-term investment priorities.

Correcting this mismatch represents one of the most significant opportunities for global growth over the next decade. Success will require both long-term institutional investors and policymakers re-thinking long-standing assumptions and re-shaping their role in global markets. This report provides the backdrop and lays the case for six key recommendations over both the nearer and longer term:

Nearer Term – A New Strategic Mindset

- Re-thinking standard indexing and asset allocation approaches, especially the use of benchmarks
- Updating investment frameworks to better capture true opportunities and risks, including the use of more differentiated metrics beyond the nation state
- Continuing to reduce home country bias where appropriate

Longer Term – Transforming Global Frameworks

- Developing new valuation tools that better capture the investment opportunity set in economies with sparser and less lengthy historical data
- Establishing consistent standards for governance, transparency and professional investment practices across countries
- Evolving the global governance framework to better represent emerging market economies in multilateral financial institutions such as the World Bank and IMF

Where Are We Post-Crisis?

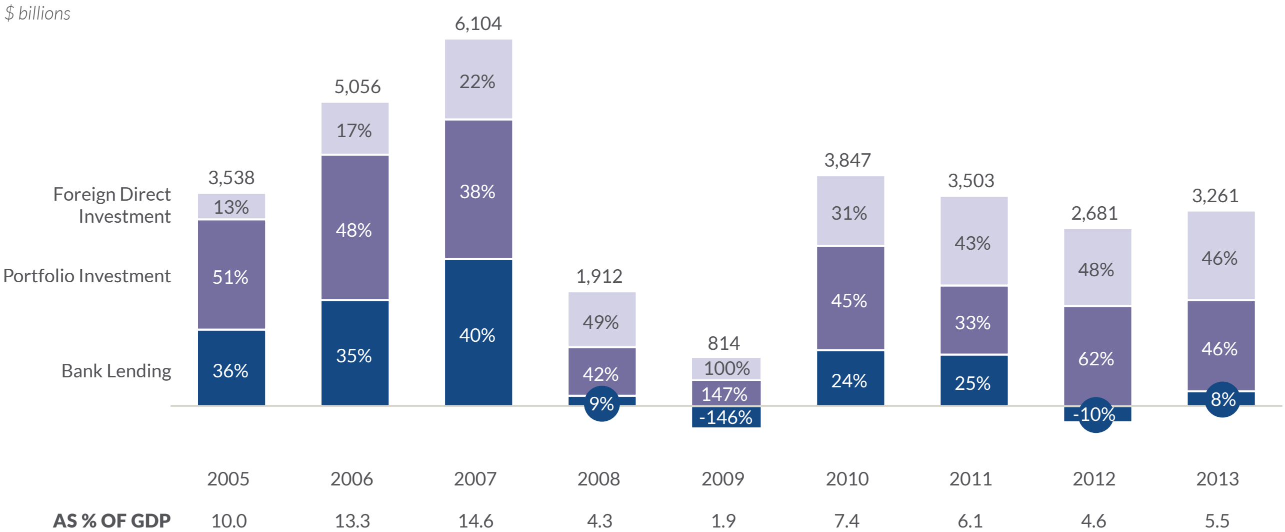
For a century and a half, the flow of capital around the world has experienced periods of steady expansion and optimism, only to see sharp declines during periods of financial instability and crisis. Three decades of steady growth in capital flows ended with the start of World War I. A post-war recovery in flows (much of it driven by lending to cover government deficits) collapsed at the start of the Great Depression. Bank lending saw a heyday in the 1970s until the Latin American debt crisis of 1982. The 1990s boom in foreign direct investment (FDI) and portfolio flows also came to an abrupt end.[1]

And, of course, the global economy of the 2000s saw rising flows until the global crisis of 2008 set them back once again.

Since the 2008 global financial crisis, aggregate cross-border capital flows into G20 nations, including inflows from both other G20 countries and non-G20 countries, have steadied, but they have only partly returned to pre-crisis high watermarks. They remain below the average level, on a percentage of GDP basis, for the G20 over the past decade. (See Exhibit 1.)

EXHIBIT 1

GROSS CROSS-BORDER CAPITAL FLOWS INTO G20 NATIONS, 2005-2013



NOTE: Gross flows are defined as the summation of the cross-border inflows into each G20 entity. EU data reported as one consolidated entity. No 2005-2009 data for China or 2005 data for Saudi Arabia available. Numbers do not always equal 100% due to rounding.
SOURCE: IMF - Balance of Payments and International Investment Position Data

The G20 is used in the following figures as a proxy for the global economy, both because it provides the most robust capital account data and because it represents more than 80% of global GDP. The G20 includes the following developed-market countries: Australia, Canada, France, Germany, Italy, Japan, the U.S. and the UK. The G20 also includes the following emerging-market countries: Argentina, Brazil, China, India, Indonesia, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa and Turkey. The EU is also a G20 member and is classified as a developed market in this report.

Flows into G20 emerging markets have grown almost five times between 2005 and 2013 while developed G20 economies have witnessed more than a one-third decline in the same time frame.

However, the underlying sources of cross-border flows followed different patterns. Bank lending remains severely depressed and has proven volatile since 2009, with a high likelihood of continued uncertainty given the evolving regulatory environment around bank capital standards. On the other hand, FDI and portfolio investment have largely recovered and sometimes even exceed their highest levels of the past decade. (See Exhibit 2.)

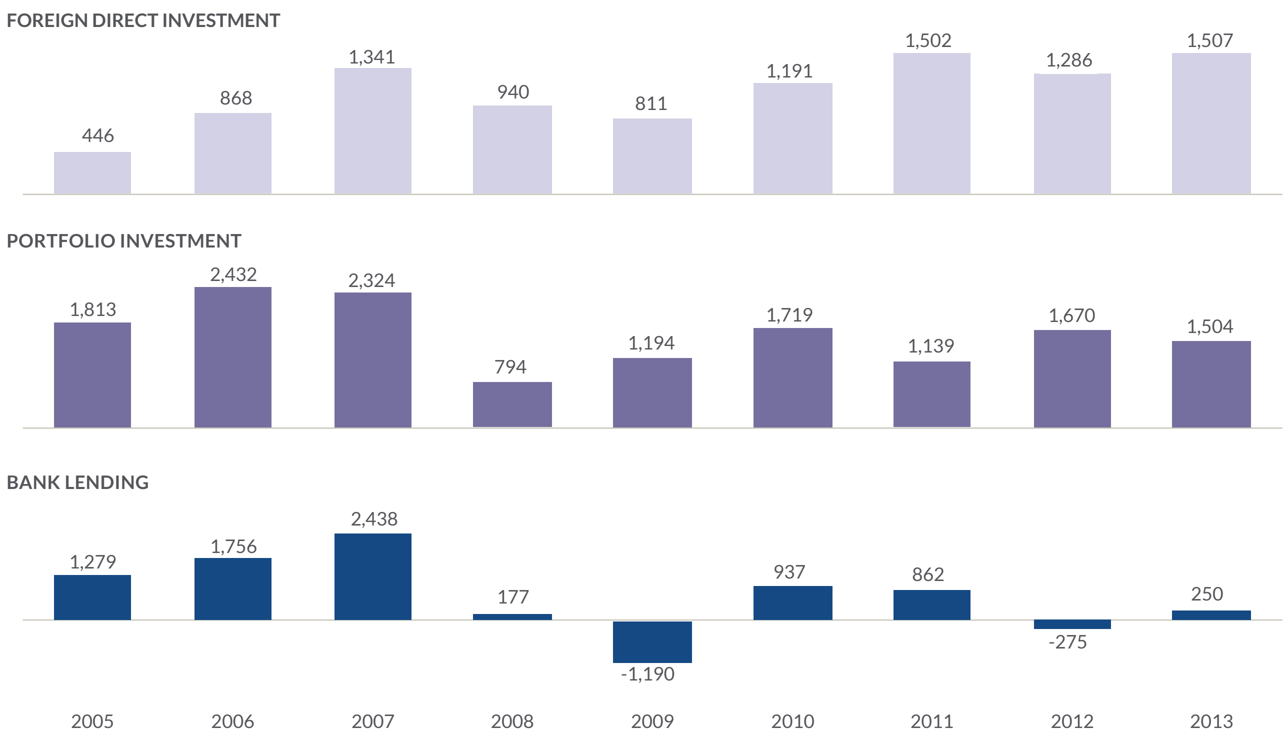
Despite a post-crisis slowdown, aggregate cross-border capital flows have become more multi-directional in nature, incorporating more of the emerging world into the exchange of capital. Indeed, key emerging-market countries are now attracting closer to their "fair share" of capital, in proportion to their share of global GDP—a significant change from a decade ago. (See Exhibit 3.) Accordingly, flows into G20 emerging markets have grown almost five times between 2005 and 2013 while developed G20 economies have witnessed more than a one-third decline in the same time frame. (See Exhibit 4.)

Several indicators point to continued growth in multi-directional capital flows in the years to come.

EXHIBIT 2

GROSS CROSS-BORDER CAPITAL FLOWS BY TYPE INTO G20 NATIONS, 2005-2013

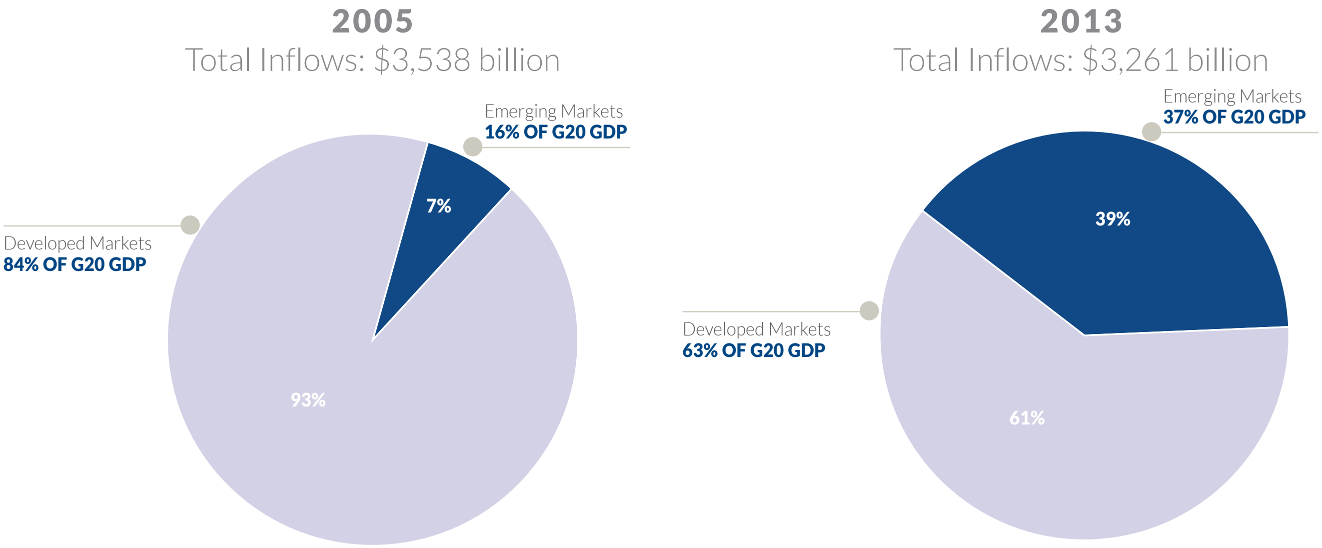
$ billions



NOTE: Gross flows are defined as the summation of the cross-border inflows into each G20 entity. EU data reported as one consolidated entity. No 2005-2009 data for China or 2005 data for Saudi Arabia available.
SOURCE: IMF - Balance of Payments and International Investment Position Data

GROSS CROSS-BORDER CAPITAL FLOWS INTO DEVELOPED- AND EMERGING-MARKET G20 NATIONS, 2005 VS. 2013

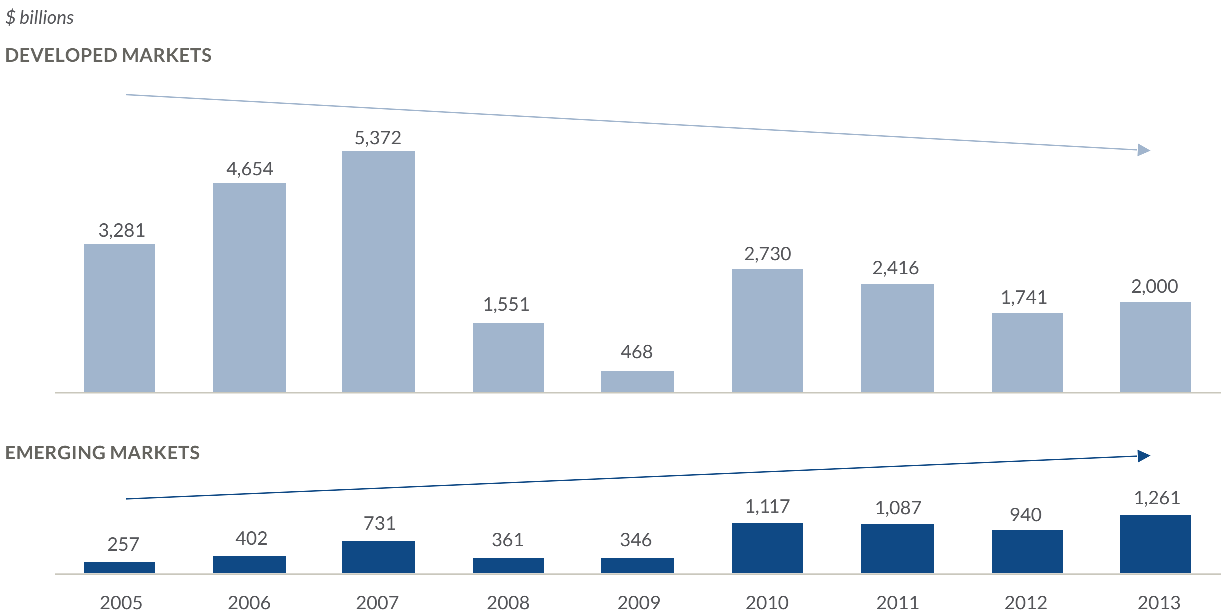
EXHIBIT 3



NOTE: Gross flows are defined as the summation of the cross-border inflows into each G20 entity. Includes FDI, portfolio investment and bank lending. EU data reported as one consolidated entity and classified as a Developed Market. No 2005-2009 data for China or 2005 data for Saudi Arabia available.
SOURCE: IMF - Balance of Payments and International Investment Position Data

CHANGE IN GROSS CROSS-BORDER CAPITAL FLOWS INTO DEVELOPED- AND EMERGING-MARKET G20 NATIONS, 2005-2013

EXHIBIT 4



NOTE: Gross flows are defined as the summation of the cross-border inflows into each G20 entity. Includes FDI, portfolio investment and bank lending. EU data reported as one consolidated entity and classified as a Developed Market. No 2005-2009 data for China or 2005 data for Saudi Arabia available.
SOURCE: IMF - Balance of Payments and International Investment Position Data

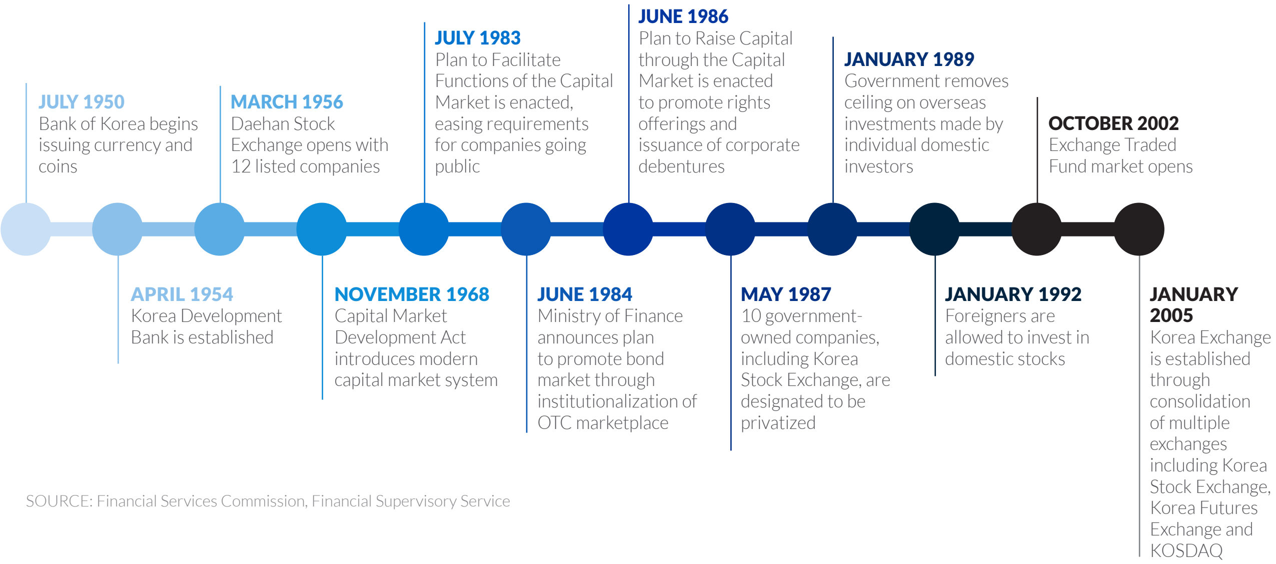
Emerging markets across the world are opening their markets to investors in ways that would have been unimaginable a few years ago—China's Shanghai Free Trade Zone, India's relaxation of regulations to attract overseas capital and Saudi Arabia's opening of its stock market to foreign investors in 2015 are just a few examples. This upsurge in capital flows into emerging markets is reflected in day-to-day investment management. "There was a time when it would have been pretty exotic to invest in Korea or Taiwan," says Edward F. Keon Jr., managing director and portfolio manager at QMA, a business of PGIM. "Now, it's not much different than buying shares of IBM." (See Exhibit 5.)

As Joseph Stiglitz, winner of the 2001 Nobel Prize in economics, recently wrote, "The problem is a financial system that [...] has failed at its core task: intermediating savings and investment on a global scale."[2]

In part, the barriers to global capital flows reflect a perception of risk in emerging-market investments that has a paradoxical consequence: Many capital-hungry emerging nations are actually net *exporters* of capital. "You have a number of [emerging-market] countries that are exporting capital because they feel more comfortable with returns elsewhere," says Jürgen Odenius, managing director at Prudential Fixed Income, and chief economist and head of

EXHIBIT 5

CAPITAL MARKETS DEEPENING IN THE REPUBLIC OF KOREA



SOURCE: Financial Services Commission, Financial Supervisory Service

Despite these promising signs, significantly more still needs to be done to improve the allocation of capital around the world. With what may be a long-term and permanent retreat of bank lending, other forms of capital flow—namely FDI and portfolio investment—must fill the gap in order to sustain growth, especially in emerging markets.

In some regions, largely in developed markets, capital remains under-invested or provides lackluster returns. In other areas, largely in emerging markets, private and public needs for investment go unmet.

Global Macroeconomic Research. This perception, he adds, tends to divert capital away from some emerging markets although returns there in principle should be higher than elsewhere.

Similarly, a lag between perception and reality can also be seen in developed markets where, many believe, the investor's toolkit has not kept pace with changes in the world economy, making it difficult to accurately evaluate risk-return trade-offs. To put it simply, investment language has not evolved at a pace necessary to support today's complex and sophisticated markets.

An examination of the current account of G20 countries demonstrates this perception-reality mismatch. A number of developed-market G20 nations run current account deficits and import capital to cover their spending, while a number of emerging-market countries run current account surpluses, meaning they have capital savings that they export (in theory, the current and capital accounts of a nation should offset). While this is due in part to the U.S. and other developed markets being seen as a safe haven for assets, it may also be because of a lack of understanding about opportunities available in emerging markets or insufficient ability to deploy capital there in a efficient manner. (See Exhibit 6.)

Why is so much capital sitting idle or sub-optimally utilized? Why, at the same time, are so many capital-hungry companies and projects failing to find investors? And why do so many nations view capital flows with suspicion, as fundamentally unreliable?

In this report, we explain what barriers prevent the sustainable and efficient allocation of capital, explore potential changes in the near future and discuss how investors and other stakeholders might respond.

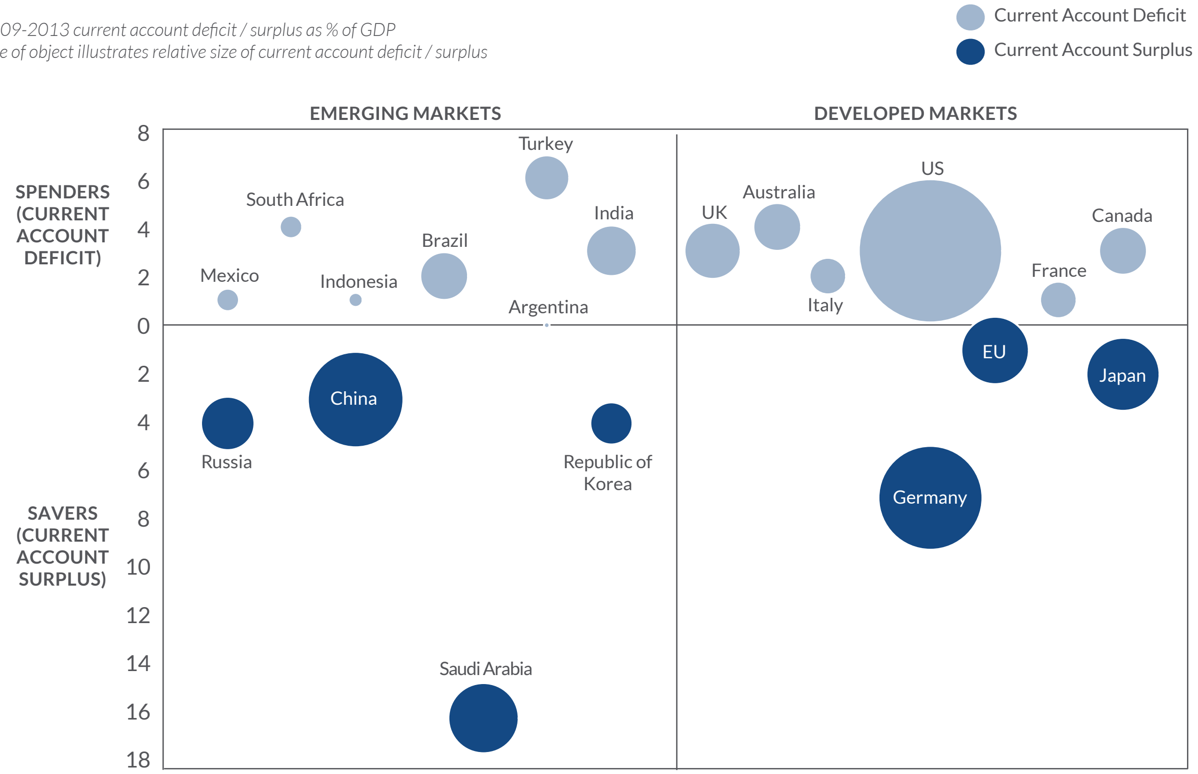
Part II untangles the current barriers to the efficient allocation of capital around the world—regulations, conventions, cultural hurdles and other reasons why substantial amounts of capital are under-invested in a world where many potentially attractive enterprises and projects are eagerly seeking funding.

Part III then explores how investors and policymakers in the near and long term might work to overcome these barriers and respond to this evolving international investing landscape.

SAVERS AND SPENDERS AMONG G20 NATIONS

EXHIBIT 6

2009-2013 current account deficit / surplus as % of GDP
Size of object illustrates relative size of current account deficit / surplus



NOTE: Includes FDI, portfolio investment and bank lending. Entire EU region is classified as a Developed Market. Germany, the UK, France and Italy are members of the EU but are included here individually as well since they are the four largest economies within the region and are independent members of the G20. No 2009 data for China available.
SOURCE: IMF – Balance of Payments and International Investment Position Data

The Barriers to Efficient Capital Flows

Efficient cross-border capital flows—allowing investors to search for reliable returns, and in the process, meet legitimate capital needs wherever they are—would be a more effective way to finance the global economy than today's system. In theory, few dispute this. In practice, many barriers have been erected that hamper efficient flows. The deliberate or inadvertent barriers to efficient global capital flows have been erected by a unique combination of regulators, governments, historical conventions and path-dependencies, investor mindsets and capital-seekers themselves. (See Exhibit 7.)

CHAPTER 1
THE ROLE OF GOVERNMENT

In the first glow of the 1990s economic boom, as capital flows to many emerging markets increased substantially, any restrictions on the cross-border flow of capital were widely considered a mistake. However, the crises of the 1990s and the 2008 meltdown have left many today with sympathy for some forms of capital controls. Today, most asset managers and other market participants are not

EXHIBIT 7

GOVERNMENTS, INSTITUTIONS AND INVESTORS CREATE BARRIERS TO CAPITAL FLOWS

CHAPTER 1 — GOVERNMENTS
- Ineffective regulation
- Onerous capital controls
- Spending used for political gain
- Slow pace of change

CHAPTER 2 — FINANCIAL INSTITUTIONS
- Limited local-market investment management expertise
- Insufficient depth and resilience of financial markets

CHAPTER 3 — INVESTORS
- "Hot money" chasing short-term gains

purists. They are likely to recognize the need for sensible regulation, but in looking at the state of capital flows around the world, they may conclude the regulatory regime is often far from sensible. It creates barriers to capital flows that serve neither investors nor those who seek investment.

BUREAUCRATIC BARRIERS AND RED TAPE

For FDI, the hurdles are often posed by cumbersome red tape and sluggish bureaucracies. Investment in India, for example, has long been complicated by a myriad of regulatory hurdles that delay projects and divert capital to unproductive limbo. In June 2013, then-Prime Minister Manmohan Singh had to create the Project Monitoring Group, a separate body whose mission was to clear 463 stalled direct-investment projects, with a total worth of 22 trillion rupees ($362 billion). One year later in June 2014, the group's project count had increased to 543.[3] While still in its early days, progress toward the removal of red tape may have accelerated with the arrival of India's prime minister, Narendra Modi, in 2014. Shortly after his election, Modi announced the abolition of the central government's Planning Commission, a group devoted to five-year plans and a managed economy.

To cite another emerging-market example, investors in Vietnam also face complex regulatory systems that block or delay projects. Land cannot be privately held; legally, the government holds all land in trust for its people. Any development requires that the individual or entity responsible for the project be given land-use rights from the government, which involves both national and local authorities whose interests don't always align. As one researcher found, for real estate development, "the ability of investors to get access to land and protection from corruption is largely determined by the attitudes of local authorities" and therefore varies significantly from location to location.[4] This lack of uniformity in what is supposedly a national system adds considerable delay and uncertainty to projects. For example, while the national law on land-use rights specifies that it should take 23 days to obtain a decision, the median time for actually getting such rights was found to be 60 days.[5]

Regulatory barriers are not unique to emerging markets: From 2008-2012, Australia had the most cross-border mergers and acquisitions withdrawn for regulatory reasons.[6] Indeed, in some ways, the greater technical capacity of regulators in developed markets gives them greater power to influence capital flows than their emerging-market counterparts.

Regulators, reflecting the politics of their governments, are usually worried about repeating some mistake that occurred in the recent past. "The regulatory framework and the regulators are often looking only backwards in time," says Arvind Rajan, managing director and international chief investment officer at Prudential Fixed Income. Rules built on past experience are seldom tuned correctly for current conditions, Rajan says, "so the regulatory frameworks are also an effective impediment to a lot of capital flows."

An analysis by the Organization for Economic Co-operation and Development of emerging and developed economies found that "the probability of a banking crisis or sudden stop increases by a factor of four after large capital inflows."

ONEROUS CAPITAL CONTROLS

There is no question, however, that a balance must be struck; completely uncontrolled capital flows pose serious risk for recipient nations. A tidal wave of capital can overwhelm the capacity of an economy to absorb new investment, making it vulnerable to shocks, inflation and both credit and asset bubbles. An analysis by the Organization for Economic Co-operation and Development of emerging and developed economies found that "the probability of a banking crisis or sudden stop increases by a factor of four after large capital inflows."

Many countries have enacted regulatory regimes to mitigate such risks, but in the minds of many investors, they have not struck the right balance. The regulations often take the form of onerous capital controls. Even more worrisome than rules that bottle up capital are those that would seek to capture it *after* it has crossed a border. In considering any investment in emerging markets, Rajan looks not just for signs that he can get in, but also that he can get out. Some risky emerging markets, he says, have proved to be one-way streets for investors who can take a stake in a direct investment, debt or in equities but then get stuck. “You might not get your money out again—even if you avoid default and devaluation, there’s restructuring, redenomination and repatriation risk.”

> “There are many ‘bridges to nowhere’ out there, but every one of them came from somewhere.”

That balance between efficiency and protection from volatility is needed, Rajan says. “I’m not arguing for a completely unfettered capitalist system,” he says. “If a country wants to develop its resources, it should do the things that it needs to do. But the trick there is to do it in a way that interferes as little as possible with the workings of the free market. And many times rules actively discourage investors, and when they do, then it’s a destruction of capital flow as opposed to being an encouragement of the right ones.”

GOVERNMENT CAPITAL EQUALS POLITICAL CAPITAL

The political uses of capital allocation by government or quasi-governmental entities are many. In some parts of the world, “the investments by government entities like state-owned enterprises—or other kinds of very complicated arrangements like the ones that China is implementing in Africa—play a very big role,” says Mauro Guillén, a Wharton professor and director of the school’s Joseph H. Lauder Institute of Management and International Studies. “So for some countries, especially in Africa and perhaps also some Latin American countries, that kind of investing activity represents a very large percentage of the total.”

Potential investors and host governments have some common goals, especially the ultimate reputational and commercial success of a project, but they also have a number of divergent objectives. Rajan says, “For example, while investors are risk averse and sensitive to changes in political support for their projects, governments often cannot commit beyond their electoral cycles and have objectives such as job creation, social responsibility and socioeconomic development that may be at odds with nearer-term commercial imperatives.”

It might be, for instance, that a project for which there are specific social and political incentives—hypothetically, for example, a copper mine in Zambia—never would make economic sense without a tax-friendly environment because the whole enterprise could otherwise be done for a better return in say, Chile, Rajan says. “Thus, in order to attract private capital, the government of Zambia may have had to change the rules of the capitalist game by providing special tax incentives for some time in support of their long-term development agenda. Of course, it helps if such rules are not reversed during the next political cycle.”

Ultimately, infrastructure capitalism is a multi-period, multi-player game where the economics of investments have to be reconciled with political and social goals, and investors must engage with players whose objectives and time horizons are quite different. Unfortunately, in this context, there is also the potential for graft, corruption and short-termism and a possibility for sub-optimization and bad design. “There are many ‘bridges to nowhere’ out there, but every one of them came from somewhere,” Rajan says.

This is why investors cannot and should not expect completely unfettered market-based policies in many emerging markets. After all, even today’s developed-market powerhouses, like the U.S. and Western Europe, went through long periods in the 19th and 20th centuries of extreme protectionism during which they walled themselves off from global market forces.[7]

THE DIFFICULTY IN CHANGING DIRECTION

Emerging markets that are wary of opening themselves to capital flows often have understandable reasons, Rajan notes. These are rooted in their history, when exploitation of their labor or resources left them with few rewards compared to those reaped by foreign investors. But some developing nations try to learn from that history and work to create government interventions that foster, rather than hinder, capital flows. What they often learn from that effort, though, is how difficult it can be, and how long it can take, to get traction in a new direction.

One such intervention is the free trade zone of the sort implemented in many emerging markets from South America to Africa to Asia. "What needs to happen," says Rajan, "is a political acceptance of the value of free-market phased-capital investment in a context where it's not obvious to the builders of these countries. They can be forgiven a certain amount of skepticism." A phased-in free trade zone provides incremental proof of concept by demonstrating the benefits of less restrictive cross-border capital flows.

"Some portion of the $50 trillion to $70 trillion that presumably needs to go into emerging-market infrastructure projects over the next quarter century or so will find a way to do that more efficiently if it has examples to follow," Rajan says. "And frankly, you won't get that money to budge unless you create those clean examples."

CHAPTER 2
FOUNDATIONS OF FINANCE

It is all too easy, and quite common, to blame government regulation for impeding the function of the free market. However, some of the barriers to efficient capital flows are caused by gaps within the investment industry itself. Investors who are willing or even eager to plunge into certain markets find that certain nations and regions lack the supporting infrastructure of developed-world finance: stock markets, bond markets and world-class analytic and risk measurement tools. Then, too, in some nations, the professions of investment management and investment advisor do not exist. As a consequence, there is not a culture to support and educate local investors, or help those from abroad.

LACK OF PROFESSIONAL INVESTMENT MANAGEMENT

For a variety of reasons rooted in history, culture, politics and economics, investment expertise, and more broadly, a professional money management sector, are lacking in many parts of the emerging world. In some nations (India, for example), investment managers and advisors are in place, but they lack access to the high-quality research and analytic tools available to leading firms, says Vinay Nair, a visiting professor at Wharton and founding principal of Ada Investments. In most frontier markets, professional money management for individuals and institutions is in its infancy. Without such expertise, it is difficult for local investors to make educated decisions concerning their finances and investments, and it is more difficult for foreign investors to identify and correctly assess opportunities to place capital.

> **"Some portion of the $50 trillion to $70 trillion that presumably needs to go into emerging-market infrastructure projects over the next quarter century or so will find a way to do that more efficiently if it has examples to follow. And frankly, you won't get that money to budge unless you create those clean examples."**

Indeed, professional money management will be essential for new markets and institutions to play their anticipated role in improving the efficiency of capital allocation. Without the market discipline that professional management brings, a new stock or bond market or other financial infrastructure can easily fall prey to inefficiency, inaccurate pricing or over-regulation.

At the moment, an investor contemplating an emerging market has to price in the effects of a variety of risks, Prudential Fixed Income's Rajan says. As noted earlier, there is repatriation risk. But there is also counterparty risk and "accounting and transparency risk with respect to what you can trust in terms of financial reporting and audit statements," he adds. "And all the infrastructure of accounting, legal and credit ratings may be much less developed." The costs of such risks decline with the presence of professional money managers with local knowledge.

For now, Rajan says, "in a lot of emerging countries, local investments are fraught. So you need boots on the ground. That could be taken as an exhortation to the local authorities to make that possible. But it's also a statement to encourage international investors to take advantage of those cases where those opportunities are created to put some boots on the ground or establish local partnerships."

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MISSING THE BASICS: MARKETS AND FINANCIAL INFRASTRUCTURE

However, no amount of knowledge transfer or local expertise can make up for another fact of global economic life: Many capital-hungry nations lack deep markets—especially those that issue and trade debt—and other financial infrastructure necessary for the capital flows they seek.

For example, one stubborn fact about many emerging markets is that their needs are organized into buckets that are too small for the fire hose of developed-world investment practices. Hence, in a market whose overall needs are enormous, investors often find that any particular offering isn't big enough, notes Wharton's Nair.

A great deal of capital is sitting with large firms that aren't interested in "bite size" deals, he says. Meetings with top private equity firms in India can reveal that "there are long periods where these private equity teams have done no deals—say five years," he says, "because there are only 10 or 20 deals anywhere in the nation where you can put $300 million or $400 million to work on one project. If you look at small to mid-cap private equity funds, which are putting $5 million to $10 million to work, they've been active. But obviously the [opportunities] are not large enough to attract too many of my students to go start private equity funds in India."

The problem is that "there's an optimal marginal speed or rate at which capital can be deployed efficiently," says Prudential Fixed Income's Rajan. "And it's a function, to a large extent, of what is already there." In a place where much infrastructure remains to be built, "the rate at which you can add infrastructure may be a very high rate in percentage terms, but it's a very small amount of capital in absolute terms." In a very real sense, then, it takes infrastructure to make infrastructure—both in the financial sense of the term (markets, investment instruments and professional investors) and in the literal (roads, sewers, housing and the like).

"One way you can circumvent that," Rajan says, is intervention by a government or government-owned entity for strategic reasons. "So in Angola in 2002, after the end of a multi-decade civil war, the new government struck an infrastructure-for-oil deal with China to build energy, transportation, telecommunication, agribusiness and other major projects for the next decade or more. And the Chinese suddenly appeared with their equipment and their engineers and their oil-backed loans, and all over Angola these enormous new works projects started. By 2014, bilateral trade between China and Angola totaled $36 billion. So that kind of scale can happen. But it can only happen in those special cases where both sides have something very specific to offer that the other needs."

Even without such scale and without a single giant investor, it is important to note that emerging markets can be quite rewarding to investors before they have established the institutions and procedures that are common in the developed markets. As long as there is basic transparency and the rule of law in an emerging market, QMA's Keon says, investors have the information they need to make sound choices and the assurance that their assets are accessible. "It is all about reliable data," he says. "It doesn't have to be perfect. If we can see price, company earnings, liquidity and capacity, we can assess." In a nation without established, well-designed structures for investors to rely upon, trust—in the information available and in the rule of law—is something investors build up over time, Keon says.

ESG—environmental, social and governance—concerns are increasingly important to investors of all types. From individuals to institutions to sovereign wealth funds, many now wish to consider ESG factors that could materially impact the risk-adjusted return of a potential investment. What was once a way for a few individuals and organizations to express their moral convictions as part of a "socially responsible" investment portfolio is now a mainstream concern of many institutional investors integrated into detailed investment analysis. For example, there are more than 1,200 signatories to the UN Principles for Responsible Investment, managing some $45 trillion in capital, notes Wharton's Vinay Nair, whose investment firm, Ada Investments, is ESG-oriented.[8]

In the past two years, "substantially more" questions and requests about ESG have come from clients, says Joshua Livnat, managing director and senior researcher at QMA.

Increased awareness of governance issues reflects a growing sophistication about the nature of ESG investing. As the concept has come to be taken more seriously—less as method for reflecting moral values and more as a component of strategy—investors no longer think it sufficient to just avoid certain industries (like tobacco or weapons) and make sure to be in others (like renewable energy). Increasingly, says Nair, responsible investing will be about finding high-quality business practices, regardless of industry sector or geographic region.

As an example, research by Nair and his colleagues at Ada Investments found that investors who shorted badly governed companies and held a portfolio of firms with good governance saw returns of 9% a year over 14 years. Assessments of governance, once seen as "extra-financial" information, are in fact relevant to returns, he says. Governance is now being "priced in" to evaluations of equities, Nair says, and he believes that other kinds of ESG information will be taken into account in the future. His research also indicates that sustainable practices are associated with a company's longevity, and thus, are relevant to long-term valuation.

However, there is debate about the connection between ESG factors and financial performance. In their own research, Livnat says he and his QMA colleagues found little connection; but, that does not mean that ESG concerns are, or should be, irrelevant to future capital flows. Consider governance. Even if companies with good governance don't consistently provide higher returns, they are nonetheless more transparent and reliable in their reporting than less well-governed firms. As providers of more and better information, such firms are lower-risk investments than those that are less well-run.

"The governance side of things is probably more important in emerging markets because the legal institutions are weak. And the environmental side is getting increasingly more important in emerging markets as people are seeing some of the costs of not taking the externalities into account."

Moreover, Livnat points out, institutional investors such as university endowments and pension funds will insist on ESG because of moral issues originally cited as the driver behind responsible investing. In a teachers' union pension fund, for example, Livnat says, "obviously, the constituents care about the money being there for when they retire. But a lot of them also care about other issues. Being green, for example."

Investors should not imagine that governance and sustainability are concerns only in developed markets, Nair says. "The governance side of things is probably more important in emerging markets because the legal institutions are weak," he says. "And the environmental side is getting increasingly more important in emerging markets as people are seeing some of the costs of not taking the externalities into account." Meanwhile, the social impacts of company activity can matter more in developed markets. Despite differences in emphasis, though, he says, "the topic as a whole still remains quite important in both [markets]."

CHAPTER 3
INVESTORS AND THEIR INCENTIVES

Systemic factors like government regulation and lack of supporting structures are relatively easy to identify in many markets. Harder to acknowledge are the preconceptions, mindsets and incentive structures of investment professionals and investors. These too are a source of barriers to efficient capital flows.

At first glance it seems indisputable that capital, when put to work, can foster economic growth and its attendant benefits. Roads in India, schools in South Africa, new businesses in China or Bulgaria or Argentina—these cannot be built without capital, and in many cases that capital is missing. This is also true in many developed countries, which are rightly fretting about crumbling infrastructure without clear plans for a fix. (In fact, global demand for the funding of infrastructure investments could easily reach $57 trillion by 2030, according to global management consultancy McKinsey & Company.[9])

Yet the past two decades have supplied skeptics with plenty of ammunition. The economist Jagdish N. Bhagwati famously wrote in 1998, "When we penetrate the fog of implausible assertions that surrounds the case for free capital mobility, we realize that the idea and the ideology of free trade and its benefits [...] have, in effect, been hijacked by the proponents of capital mobility." Bhagwati's point is that the classic arguments for free trade apply when nations trade goods, but not when they exchange capital. There is a difference, as he puts it, between "trade in widgets" and "trade in dollars."[10]

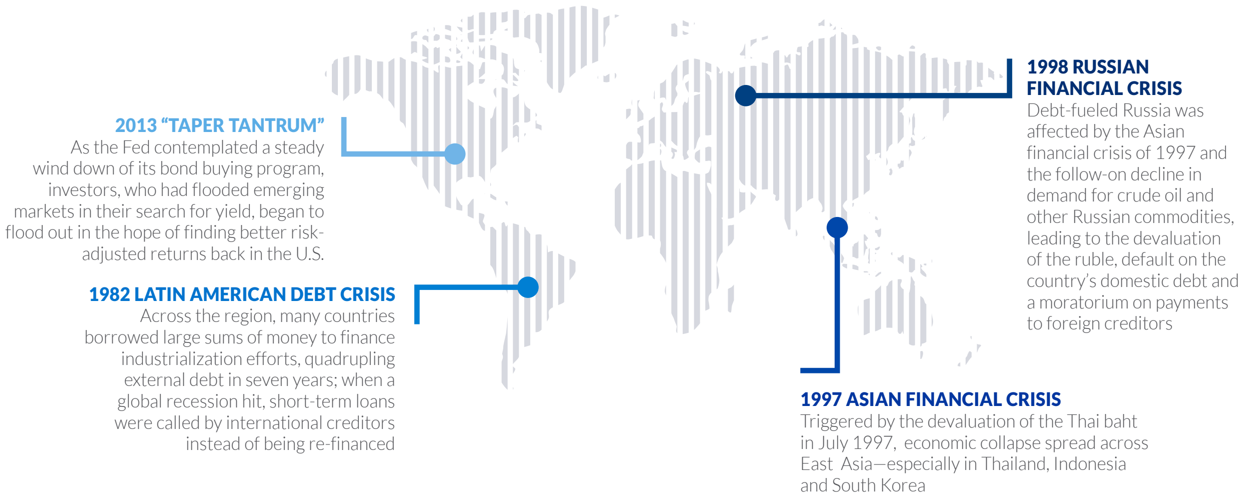
THE TROUBLE WITH "HOT MONEY"

The problem with capital exchanges is that capital mobility makes it all too easy for investors to chase high but short-term yields in nations where borrowing for the short term is commonplace. And this problem of inherently unreliable "hot money" is not confined to equity portfolios or bank loans. Even direct investment in bricks and mortar can be withdrawn, albeit more slowly, if investors are fearful of loss. Since the great upturn in private investment in emerging markets in the 1990s, nation after nation has coped with sudden floods and droughts of capital and their effects. In many cases, the influx (and exit) of foreign capital merely exacerbated problems that were inherent to the nations' financial systems. "Most crises have resulted from the opening of unsound systems to capital flows," Maurice Obstfeld of the University of California, Berkeley, has written.[11]

Thus, there is little doubt that international capital flows expose nations to risk in ways that domestic investment does not. The list of emerging-market crises that affected foreign investors over the past 25 years is long: It includes Chile in the early 1980s, and, in the 1990s alone, Argentina, Mexico, Russia and Turkey. And, of course, that was also the

EXHIBIT 8

"HOT MONEY" AND FINANCIAL CRISES



SOURCE: IMF, World Bank

decade when Thailand triggered a slew of currency and payment crises throughout Asia in 1997-1998 following heavy borrowing in foreign currencies and the subsequent deep devaluation of the baht. In addition to Thailand, Indonesia and South Korea were deeply affected, with others suffering significant economic setbacks. (See Exhibit 8.)

At the same time, emerging markets have found themselves whipsawed by the changing goals and assessments of developed-market investors, who can flood a nation with investment one year and pull out fast in the next. Many of the 1990s crises in emerging-market nations, for example, were triggered or exacerbated by foreign investors abruptly taking their money out.

On the other hand, cross-border capital flows can also trigger a virtuous cycle, spurring the creation of jobs, increasing income and thus increasing demand for goods and services, which in turn creates more jobs. Capital invested from other nations is a spur to economic growth in nations that lack indigenous sources of capital and is a boon to local investors.

In short, capital flows have obvious benefits, but these do not occur in all times and places. Nor do different modes of capital flow have the same effects—direct investment, for example, is less susceptible to sudden changes, while bank loans are more so. It is not sufficient then to promote any and all forms of cross-border capital flow at all times. It is vital for investors to identify which types of capital flow should be fostered in particular nations at specific times.

For all the uncertainties ahead for global capital flows, investors who have crossed borders have achieved good results. For instance, "the bulk of emerging-market debt investments have generated very strong returns over the last 20 years," says Prudential Fixed Income's Rajan.

Some key characteristics distinguish these success stories from investments that have not performed as well.

Assess risk accurately. "Early movers have the highest advantage—they also have the highest risk," Rajan observes. So one key to success in this space is a willingness to be first. But to do that successfully, one must assess the true risk of an investment and distinguish that from its perceived risk, which can often be different. Of course, says Prudential Fixed Income's Odenius, "repayment issues [on bonds] have arisen more frequently in emerging markets than in developed markets, although credit quality continues to improve in the emerging-market asset class." But investors tend to assume that risks in the past linger into today—or that risks in one emerging market apply to risks in another. In an emerging market portfolio, however, governance risks "are very idiosyncratic," differing a great deal from one nation to another, says Wharton's Nair, and must be correctly analyzed in order to mitigate them.

Seek transparency. Information need not be abundant about a potential investment, but it needs to be accurate enough to give investors the means to price their risk.

Stage investments correctly. Time of entry is extremely important in emerging markets, Nair notes. These markets are more volatile than are those in the developed world, due to the characteristics of their liquidity flows. The markets are not as deep, Nair points out, and "everyone leaves markets together, everyone comes in together, and the pool of capital moves the markets a lot more." Accordingly, it is essential to get the timing right. Slight deviations "can dictate your returns for a long time."

Be aware of currency risks. Some of the most significant risks in emerging-market investments today are related to currency fluctuations. A growing number of nations are using monetary policy to boost demand, leading others to respond to prevent appreciation of their own currencies. Exchange-rate fluctuations can thus end up redistributing value internationally very quickly. One recent example: the Swiss central bank's unexpected decision in January 2015 to remove the cap on its currency against the euro sent global credit and currency markets into a frenzy, with some currencies soaring and others sinking in a reaction that one finance executive characterized as "volatile volatility."[12]

Until the 2008 crisis, currencies tended to move together and this issue was not important to many investors. Today, though, exchange-rate volatility is increasing the cost of regional flows, Nair says. "Currency risks are something that you want to be more and more careful about, going forward. There are some countries, I would mention Turkey and South Africa, that look very vulnerable."

In fact, currency risks cannot only be hedged easily, but they can also be an independent source of active return. So currency risk should be separated, measured, hedged as required and managed explicitly.

Look for investments in places where government intervention is limited, or at least predictable. "You don't want to pump a huge amount of money into a project based on the current administration's priorities," says Rajan, "and then the next administration says, 'Well, we kind of changed our mind. Can we amend this contract so the 90-10 becomes 10-90?' That happens frequently."

Find investments that run according to economic logic, not politics. "We know, for example," says Rajan, "that in Nigeria, there's the Excess Crude Account, which is supposed to feed a sovereign fund, but oil revenue has been open to all the regional governments to dip into. Just before elections, they spend it on their favorite local project." Their impact on the Nigerian economy is very hard to measure. And in the meantime the fund has declined." Such examples of the political use of resource-extraction revenues are common, and are by no means confined to emerging markets. And some emerging markets have created the right governance structures. Botswana, for example, has carefully husbanded excess oil revenues in its transparently governed and much admired Pula Fund.

Ideas for Navigating Capital Flows

To succeed in the evolving global capital landscape, long-term institutional investors will need to be at the forefront of re-thinking long-standing assumptions and re-shaping markets. Enough success factors have already been identified to serve as a rough guide for investors to navigate the growing opportunities in emerging markets, while mitigating risks, in both the near term and beyond. (See Exhibit 9.)

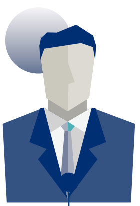
CHAPTER 4
NEARER TERM: A NEW STRATEGIC MINDSET

Today's debates about capital flows differ in an important way from those of a generation ago, says Prudential Fixed Income's Odenius: Today's relationship between emerging and developed markets is much more complex. Years ago, emerging markets were bystanders in policy debates getting "crumbs left on the table" of policy consequences decided in the developed world. This is no longer the case, as is shown, for example, by the impact of the developed world's quantitative easing programs.

"It's a lot more interactive and a lot more codependent [today]," Odenius says. "Previously, seen from a developed-market perspective, it was good if the emerging markets were running good policies, of course. But now you have to concern yourself with the question of how the emerging

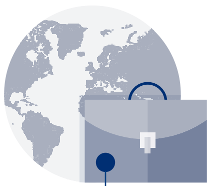
EXHIBIT 9

OPERATING IN A NEW WORLD ORDER IN CAPITAL FLOWS



CHAPTER 4 — NEARER TERM: A NEW STRATEGIC MINDSET

- Re-thinking standard investment approaches and metrics to reflect a new world order, especially the use of benchmarks
- Updating investment frameworks to more accurately assess opportunities and risks
- Continuing to reduce home country bias where appropriate



CHAPTER 5 — LONGER TERM: GLOBAL FRAMEWORK, BIG CHANGES

- Developing new valuation tools and techniques
- Establishing consistent international standards for governance, transparency and the rule of law
- Evolving the global governance framework to better represent emerging-market economies

markets set policy in response to central bank policy in the U.S., in Europe and in Japan."

RE-THINKING THE USE OF BENCHMARKS

To adapt to this new interactive world of capital flows, it is crucial to recognize and change mindsets that exist today. "There's a tremendous amount of conservatism, in the bad sense," says Prudential Fixed Income's Rajan. "And it comes from not wanting to be the one who is the first to go out there to do something that is out of the ordinary. And it manifests itself through the indexing process and the standard asset allocation process. "

> **"It's a lot more interactive and lot more codependent [today]. Previously, seen from a developed-market perspective, it was good if the emerging markets were running good policies, of course. But now you have to concern yourself with the question of how the emerging markets set policy in response to central bank policy in the U.S., in Europe and in Japan."**

For example, many investment managers look at asset class sizes to determine allocations. As noted earlier, markets in the developed world are much bigger than they are in emerging markets. "So if you make allocations based on the size of the markets," Rajan says, "you'll under-allocate to [emerging markets]—the place that has the best growth potential."

The Barclays Global Aggregate Bond Index gives disproportionate weight to developed nations—the U.S. alone accounts for 42% of it. Meanwhile, it has an attribution weight for non-China emerging markets of about 8%, plus China at 1.1%, for a total for emerging markets of only 9.1%, which is very low by economic metrics, such as share of global GDP, demonstrating a bias against emerging markets.

This kind of contra-growth assessment is not the only consequence of an investment outlook that depends too much on the status quo. These benchmarks also over-allocate to over-indebted and over-priced debt markets and countries, many of which are in the developed world, Rajan says. He notes that such benchmarks "have become an albatross that the entire industry has to carry." The recent yield on Japanese government 10-year bonds is one-half of 1%. "We'd rather lend to an emerging country at 5% when we've made sure that it has a sustainable debt-to-GDP ratio and a positive trajectory," Rajan says. "But if a client comes in with a benchmark that has 20% Japanese bonds and they tell us 'Don't depart from this by more than five,' we have no choice."

Yields are higher in emerging-market bonds, and governments there often carry much less debt. "So it really makes one scratch one's head when you think about how so many actors in the investment community are committed, even for the long term, in poorly constructed benchmarks," Rajan says.

MOVING BEYOND THE NATION STATE AS THE UNIT OF ANALYSIS

In order to categorize investments in a more accurate way, it might be useful to stop using "region" or "nation" as the basis; there are circumstances where investments should be classified differently to produce a better analysis, and thus, better results, Wharton's Nair says.

For example, "when thinking in terms of categories, where the categories are not defined by regions but are defined by risk premium—whether you think of it as yield, value, momentum, liquidity—those drive flows. So if there's a high demand on flows on yield, then within some emerging markets, some instruments look pretty aggressively priced," Nair says. "But if people don't want to take liquidity risk, some other instruments look differently priced. So when you start thinking in terms of where are people allocating capital, to which category are they allocating capital to, and put on the lens of risk premium, it starts making more sense than if you worked with ad hoc political or non-economic categories."

Similarly, "emerging market" itself may be a concept that is insufficiently precise to distinguish worthwhile investments from those that will not perform as well. Descriptions need to be more differentiated—moving the paradigm from investing in a particular country to investing in a particular industry, or, in the case of real estate and infrastructure, a particular portfolio of cities—because of the underlying growth prospects.[13]

For now, though, in holding on to traditional mindsets, many investors are failing to assess opportunities correctly when they lump all emerging markets together, rather than evaluating and pricing risks according to relevant local-market conditions. For example, Nair says, "there's no reason to think that when there's a protest in Turkey, India's going through issues. So you can construct portfolios that have enough of different emerging markets [to protect against excess risk], but the overall perception of Turkey's protest affecting the entire emerging-market basket cannot be diversified away. So that's where all the spillover effects of risk aversion show up. But the reality of that risk may be diversifiable."

A general wariness of all emerging markets may be the reason there is now a potential bubble in what are considered to be safe assets—often U.S. and other developed-market assets. These are relatively expensive, due to a widespread sentiment around the world that savings have few other safe places to go.

LOOKING BEYOND OUR OWN BORDERS

A less subtle form of this kind of excess wariness in investment is "home country bias"—the preference for investments on one's own turf, which many investment advisors see as irrational.

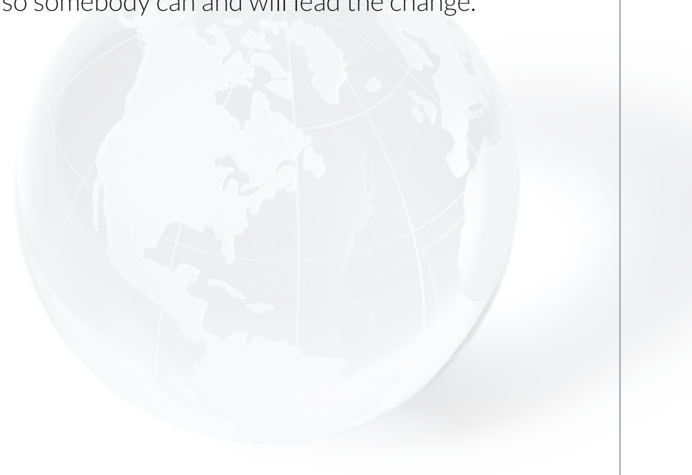
"In an ideal world, each investor would hold the same portfolio," says QMA's Keon. "Why should Belgian investors hold 80% of their assets in Belgium? In the long run, that's sub-optimal." More accurate assessments of investment opportunities should reduce this bias, he says. But it is unlikely to disappear completely, because it is based on practical considerations, not prejudice.

> **"In an ideal world, each investor would hold the same portfolio. Why should Belgian investors hold 80% of their assets in Belgium? In the long run, that's sub-optimal."**

It is natural, he says, for investors to "feel more comfortable owning stuff [they] can see." Moreover, he says, currency fluctuations can make home-country investments less risky. "If your obligations come in dollars, holding a dollar-denominated portfolio makes a lot of sense."

At the end of the day, most investors are reluctant to break away from their routines. Escaping this trap will require leadership. Those who are first to take the right steps will be rewarded by good returns, Rajan predicts.

For now, pension funds in the U.S. and Europe are still hugely under-allocated to emerging markets. "There is an information barrier. When you're in the realm of the new, you need leadership to create new practices," says Rajan. "And of course there's always a bleeding edge. But while there's a bleeding edge on the risk side, there's a leading edge on the returns side. Technology keeps lowering those information barriers, so somebody can and will lead the change."



In the immediate future, China looms large as a source of change and uncertainty in capital flows. With a high savings rate, tight currency controls, insufficient depth of markets and limited presence of local investment professionals, the nation has one of the world's largest pools of "trapped capital." However, unlike the world's other trapped-capital giant—Germany—China has begun the process of undamming its capital flows.

> **"They've got a lot of growing to do to catch up in terms of per capita GDP. A lot of money will come out of China and a lot of money will go into China."**

The well-managed liberation of capital from confinement in China is essential for the country's long-term economic health. The capital of many enterprises and a vast number of individual savers has been confined to China due to currency restrictions and other controls. As China experiments with changing controls to give its institutions and people access to the global financial system, it will become an increasingly important source of capital moving *to* the rest of the world. Another cause of China's movement in this direction is the fact that much of the nation's needed infrastructure has been built in the past 20 years, and many industries now have excess manufacturing capacity. The government is nudging its economy toward services, whose need for capital will be lower than that of China's infrastructure and manufacturing sectors.[14] All of this means that Chinese capital—already being invested in Africa, South America, North America and, more recently, Europe—could in the long term transform the country from being the world's manufacturer to the world's financier.[15]

Even as China's government experiments with finding outlets outside the nation for Chinese savings and other capital, there are Chinese enterprises seeking investment *from* the rest of the world in many forms. Stock markets are growing, and an effort to expand bond markets is accelerating. FDI is encouraged, especially in service industries, as China looks to

EXHIBIT 10

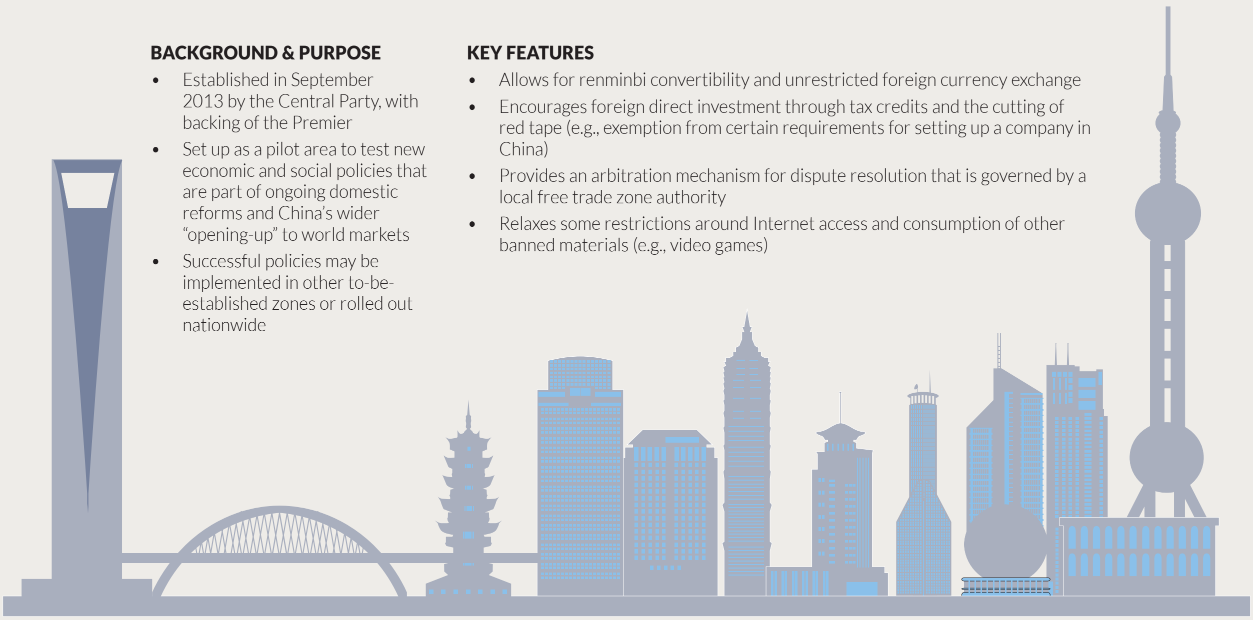
WHAT IS THE SHANGHAI FREE TRADE ZONE?

BACKGROUND & PURPOSE

- Established in September 2013 by the Central Party, with backing of the Premier
- Set up as a pilot area to test new economic and social policies that are part of ongoing domestic reforms and China's wider "opening-up" to world markets
- Successful policies may be implemented in other to-be-established zones or rolled out nationwide

KEY FEATURES

- Allows for renminbi convertibility and unrestricted foreign currency exchange
- Encourages foreign direct investment through tax credits and the cutting of red tape (e.g., exemption from certain requirements for setting up a company in China)
- Provides an arbitration mechanism for dispute resolution that is governed by a local free trade zone authority
- Relaxes some restrictions around Internet access and consumption of other banned materials (e.g., video games)



SOURCE: Shanghai Pilot Free Trade Zone Official Website the services sector to promote a more balanced and sustainable economy. (In the first decade of this century, FDI in China's service sector increased more than 300%—more than three times the increase of FDI in manufacturing during that period.[16]) Like the world's other economic powerhouses, China is rapidly evolving into a nation that is both a recipient and a source of global capital flows.

Many experiments have already been launched to facilitate flows of capital from China. Late in 2014, for example, the Hong Kong and Shanghai stock exchanges were linked in a pilot program that opened access to Chinese equities to foreigners for the first time, even as it gave Chinese investors a chance to buy into foreign companies traded in Hong Kong. "This is the biggest milestone in China's continuing liberalization of its markets," Michael Karbouris, head of business development for the Asia Pacific region at Nasdaq, told *The New York Times*.

The Shanghai Free Trade Zone is also starting to give Chinese investors experience with outside investment firms and foreigners a window into Chinese opportunities. (See Exhibit 10.)

Since it launched in September 2013, the trade zone's residents are permitted a new type of bank account in which they may hold both China's currency, the renminbi (RMB), and foreign currencies. This policy lowers barriers to financial transactions and encourages knowledge transfer among Chinese and foreign investors. Funds in such an account are expected to be sourced largely from outside China. The money can be moved without restrictions to accounts outside mainland China, to accounts in other free trade zones or to accounts held by non-residents anywhere in China. Holders of these accounts may thus finance and hedge international investments from China—a major break from the restrictions imposed on the rest of the banking system. "It's a way of allowing Chinese financial services firms to deal internationally," says Wharton finance professor Franklin Allen. "And also for foreigners to get some experience within China."

That said, many assessments of the zone's first year of operation were negative, noting that general promises of liberalized interest rates and reduced capital controls have not yet been followed up by the detailed rules investors need. Many engaged with the zone complain that, in the absence of detailed regulations, they simply don't know what is and is not permitted. The gap between lofty rhetoric and reality illustrates how stubborn the problem of regulatory barriers can be—even a nation that has, with high-level support from its leadership, created a zone specifically to reduce restrictions, finds that those restrictions are still in place a year later.

Despite this short-term disappointment, though, Allen remains optimistic about the Shanghai zone. In the longer term, he says, the experiments in the zone will allow many Chinese firms to get capital from outside China, where now they must seek it from a "shadow banking" system of wealthy individuals and institutions working outside of official bank-intermediated channels.

"China has been playing by the rules in terms of investment. They don't want to challenge the global financial order. What they want to do is play in it."

The zone "has the potential to allow a lot more investment in firms in China," he says. But such a transformative change will take time. "This is not something that's going to happen in the next six months or year, but the next five to 10 to 20 years."

The Chinese are also moving to expand bond markets, and this expansion is expected to accelerate in the next two to three years. In November 2014, the government opened its $4.3 trillion interbank bond market (worth RMB 26.31 trillion) to non-financial firms for the first time. This kind of opening of capital markets to more players, Allen says, "has a potential to really transform things."

All of these moves reflect China's interest in attracting foreign investment, both for its potential to supply capital at lower interest rates to its own firms and regional governments and for the potential it holds for valuable knowledge transfer as the nation becomes a leading player in capital flows.

"There will be a huge flow of capital into China because they just have so many needs and abilities to have profitable projects," says Allen. "They've got a lot of growing to do to catch up in terms of per capita GDP. A lot of money will come out of China and a lot of money will go into China."

Chinese capital—already being invested in Africa, South America, North America and, more recently, Europe—could in the long term transform the country from being the world's manufacturer to the world's financier.

Some observers note that the expansion of Chinese markets will mean that investors there will change the global financial system, not just join it. Of the future Chinese investment landscape, Allen says, "I doubt very much whether it's going to be a lot like London or New York. I think it's going to be quite different."

It is clear, for example, that China is not content with existing institutions for distributing capital internationally. Recently, for example, it launched a new multi-national development bank, the Asian Infrastructure Investment Bank, to help emerging-market nations in Asia finance their infrastructure projects. The Chinese government has pledged $50 billion in capital to the new institution.

Like Beijing's proposal for an Asian free trade zone, the bank will create channels for the flow of capital in Asia that were not developed or dominated by the nations central to today's international financial institutions—Japan and the U.S. Though the U.S. government remains resistant, China's bank has attracted many other participants: Several Western nations have signed on as founding members, including the UK, France, Germany and Italy.

Some observers, though, are skeptical that new emerging-market players will greatly change the way capital flows are managed throughout the world. "China has been playing by the rules in terms of investment," says Wharton's Guillén. "They don't want to challenge the global financial order. What they want to do is to play in it."

CHAPTER 5
LONGER TERM: GLOBAL FRAMEWORK, BIG CHANGES

Over the next five to 10 years, many observers expect a period of widespread change, as the world adjusts to more multi-polar capital flows. China will be the largest but far from the only emerging market that will be sending capital to other emerging markets and to the developed world as well.

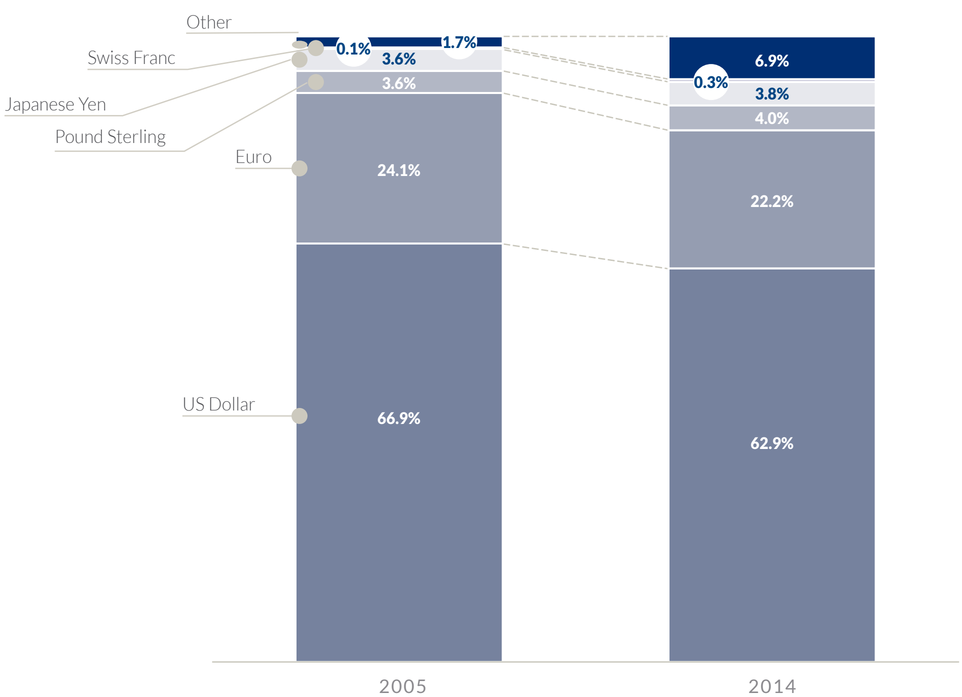
Foreign exchange reserves have become more diversified, with non-core reserve currencies accounting for 6.9% of global reserves in 2014 versus just 1.7% in 2005, only nine years earlier. (See Exhibit 11.)

Many predict that within the next 10 years, the RMB could become fully tradable and convertible, joining the dollar and the euro as one of the world's key reserve currencies. Already, RMB settlement is substantial, accounting for 9% of China's total trade in 2011 and 12% in 2012. And many see further changes coming quickly. HSBC, for example, has issued a briefing note saying it expects "the RMB to become a top-three global currency for trade settlement by 2015 and to be fully convertible before the end of this decade."

The rest of this decade will be a period of experimentation, with unfamiliar risks as well as opportunities. One of those risks arises from greater interdependence itself: what Wharton's Guillén terms "interactive complexity" is increasing as trade and investment link nations in more complicated ways. Economies that have few links to one another, either direct or through intermediaries, are not vulnerable to each other's crises tied to currency, inflation, stock, domestic debt, external debt or banking, Guillén has pointed out. The more tightly linked nations are through investment and trade, the less this is true. And, in fact, Guillén, using data assembled by economists Carmen Reinhart and Kenneth Rogoff, has found that the overall trend line since 1980 shows more such crises and more

EXHIBIT 11

EVOLUTION OF FOREIGN EXCHANGE RESERVES



NOTE: Accounts for only reserve allocations reported to the IMF, which represented 77% of total reserves in 2001 and 52% in 2014.
SOURCE: IMF – COFER Data

countries affected by them as global integration has proceeded. (See Exhibit 12.)

But increased interdependence in capital markets has positive effects as well. It fosters knowledge transfer and increases the costs of political conflict. And it encourages the spread of best practices in corporate governance and in the rule of law, says QMA's Livnat.

"Even in China, today you see more and more private enterprises that are not state owned, which are branching out," he says. "And the more dependent the economy is on other parts of the system, the pressure would percolate for [China] to open up."

NEW TOOLS AND TECHNIQUES

Over the medium term we are likely to see new approaches to valuation and analysis take hold. Investors, Nair says, know that they need better ways to define and price risk in a more interdependent world. For example, they need to be able to distinguish the fundamentals of an investment from the risks posed by fluctuating exchange rates.

Newer practices may rectify today's "extreme dependence on historical return analysis," Rajan says, which comes from "a very few equity markets around the world for which there's data and for which we have persistent decent performance over a 100-year period. And it's those things that we point to in defending these practices—the U.S. market, the UK market."

The problem is, judging performance elsewhere in the world according to that data might well be like comparing apples to oranges. The assumption that a century of returns in London should be used to evaluate opportunities in Shanghai is untested. "We have 100 years of U.S. stock returns," says Rajan. "What about 100 years of German stock returns?" No one would say German investments aren't so sound because the German record is interrupted by the utter devastation of World War II.

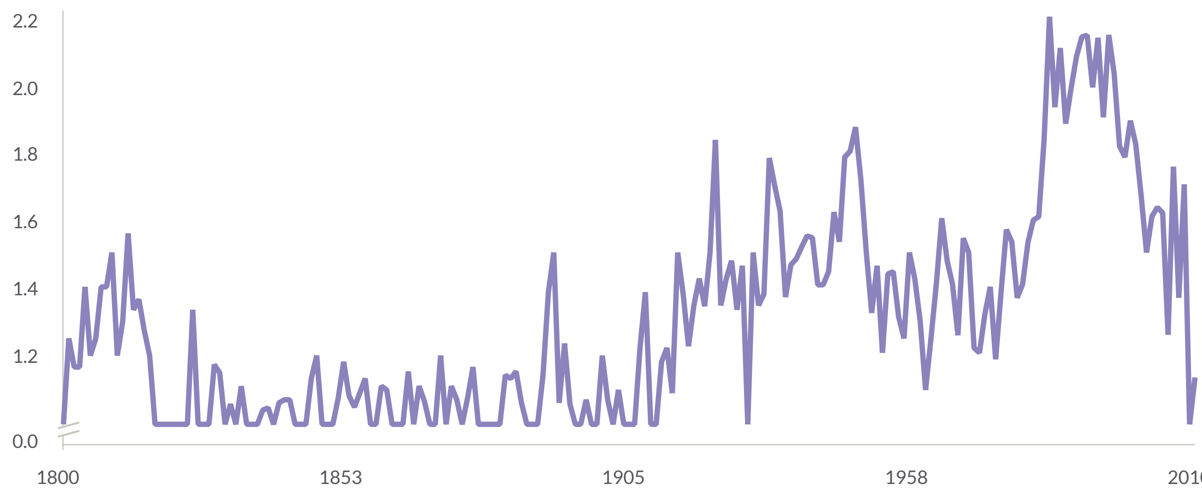
"We forget what a tumultuous process history really is," Rajan says.

Then, too, he adds, much analysis is run the way the drunk in the famous joke searches for his keys—under a streetlamp, because while the keys aren't likely to be there, "the light is much better here." Much historical analysis is confined to periods for which there is data that makes the analysis easy, Rajan notes.

EXHIBIT 12

INCREASING CONTAGION OF ECONOMIC CRISES

Average number of crises per country affected



NOTE: Analysis is based on 70 of the largest economies. Crises are defined as inflation (greater than 20% per annum), currency depreciation (greater than 15% per annum), stock market crash (real returns of -25% or less), bank runs / government takeovers and government default.
SOURCE: This Time Is Different: Eight Centuries of Financial Folly — Carmen Reinhart and Kenneth Rogoff

For both these reasons—over-reliance on a few data sets and a tendency to analyze only where there is easily obtained data—"historical data analysis is really something everyone would acknowledge is extremely inadequate," Rajan says. "But you fall back on it because it's better to do some analysis than none. But that's actually an assumption. Is it really better to do some analysis rather than none? And the answer is that very often it's really the only thing you can do when you don't want to be tapped on the shoulder the next day for having done the wrong thing."

GOVERNMENTS HAVE A ROLE TO PLAY

While governments have often played a role in creating barriers to capital flows, in recent times they have also worked to create sensible policies and enact initiatives that support a truly global system for investment and the exchange of capital. However, over time, more can and needs to be done.

Investors face real risks when deploying capital and seek reasonable protections to help mitigate those risks, especially those that are not tied to the fundamentals of the investment itself, says Michael Schlachter, head of PGIM's Multi-Asset Class Solutions group. Much of this effort depends on governments' creating the right governance and regulatory frameworks, and establishing a transparent and accountable rule of law. Ideally, these systems must transcend borders.

Might there someday be such a system for investment, offering consistent standards and practices throughout the world? QMA's Keon thinks it's possible in the long term. In the meantime, he notes, trends are heading slowly in that direction. He likens the situation to developments in accounting over the past few decades. "In accounting, there has been an effort to harmonize standards around the world." Though there will always be some tension everywhere between local practices and general rules, accounting standards are converging.

In a century, Keon says, investors may look back on the same sort of convergence in standards for transparency, the rule of law and professional practices in the movement of capital around the globe.

A NEW GLOBAL REGIME

In the long term, investors should hope and push for a truly global regime for investment. A shift of this magnitude will require, among other things, considerable change at existing global institutions—the International Monetary Fund (IMF) and the World Bank.

For both these reasons—over-reliance on a few data sets and a tendency to analyze only where there is easily obtained data—"historical data analysis is really something everyone would acknowledge is extremely inadequate."

"What needs to change, of course (and they're working at it in very slow motion) is the over-representation of the old world in these institutions compared to the new world," says Prudential Fixed Income's Odenius. The system must catch up to the fact that not only population growth but also economic growth in emerging markets has outpaced developed markets in recent decades. "Every blue moon, there's an adjustment made in the voting power relative to changes in the economic size. And these things are always hugely political, as you might imagine. They tend to come way too late and the conclusions are way too small." More dramatic progress is needed "to maintain the legitimacy of these organizations," says Odenius. "But since it's also a political process involving close to 190 countries, you have to align a few stars to get this done in an efficient way."

Establishing a framework to guide these global discussions and policy coordination is an imperative first step for which investors should advocate, but that must be quickly followed up with action promoting a restructuring in the quotas of the IMF. Without this much-needed change, voting power will remain imbalanced between developed and emerging countries, leading to a degradation in legitimacy of the IMF and other multilateral institutions, and a missed opportunity to set a better long-term tone for cooperation in international economic policy matters.[17]

PART IV

Reasons for Optimism

Global capital flows are at an inflection point. They are increasingly more varied in their scope and direction, but much capital around the world is being deployed inefficiently—large pools are not getting the returns they should, even as many needs for investment, both public and private, go unmet. This mismatch should not continue. And, in fact, it will not. Changes are coming to global capital allocation that could bring considerable disruption and risk to the system. However, these changes also represent an opportunity to improve current practices and institutions.

Handled correctly, developments in the next few years could see a reduction in today's inefficiencies, so that investors globally get good returns on more of their assets as more companies and public works get the capital they need. According to Christine Lagarde, managing director of the IMF, an upsurge in global investment is necessary to avoid the "new mediocre" that so many economies are experiencing—the prospect of decades lost to anemic or zero growth.[18] And investors who have the analytic tools and the confidence to take advantage of those improvements could see attractive long-term returns.

On the immediate horizon, the biggest of these coming changes is the opening of a vast pool of trapped capital in China. There, as we have described, many experiments are underway, aimed at reducing constraints on capital held by Chinese institutions and individuals while also opening up the nation to more investment by foreigners. One challenge in the near future will be channeling this influx productively so that it does not become a destabilizing flood. Another will be integrating this new global player into systems and institutions already in place, even as it tries to create alternatives, such as the new Asian Infrastructure Investment Bank.

Longer term, the overall framework for capital flows may well be permanently transformed by the ever-changing sources and direction of capital and as even more emerging-market economies are integrated into a new world order. This shift, besides leading to new forms of knowledge transfer, is expected to increase pressure on global institutions like the IMF and the World Bank for change. This evolution could well lead to the creation of new global or regional institutions, especially if the IMF and World Bank do not make the required pivot.

We have found that much can be done, by investors directly and by other stakeholders whom investors can address, to improve capital flows. In the nearer term, it is important to accelerate the removal of unproductive government barriers. Some of these barriers, such as capital controls, are directly aimed at investors. Others are indirect, and sometimes even unintentional, consequences of policies that negatively distort incentives or prevent the free flow of information. It is also important that investors insist on better corporate governance, which is the root of the reliable information they need. At the same time, investors must look to themselves, reducing "home country bias" and moving away from the use of practices and tools designed for a non-globalized world.

In the longer term, investors may find themselves establishing new methods and frameworks to evaluate opportunities and price risk. Many observers agree that investment success in the future will require the diffusion of best practices and professionalism to more nations around the world. And they believe that this spread of professionalism will not involve simply transporting what worked in the last century to new places.

In any event, the advent of new practices and perhaps new institutions will be fostered by an ever-higher level of integration among sources and seekers of capital. Economically, integration moves capital from nations with surpluses to those with deficits, putting that capital to productive use. Politically, it binds nations together in reciprocal ties that potentially make conflict more difficult to start and escalate.

For the long term, "I am a huge optimist," says QMA's Keon. "The analogy I would draw is to China's labor pool. Twenty years ago much of it was living in villages where it did not add a huge amount of value to the global economy." Since then, a sustained flow of labor moved to Chinese cities and became a crucial part of the global economy.

"Think of global capital as being similarly trapped in an unproductive place and seeking higher growth," Keon says. "It is not something that will change overnight but you could see it gradually being deployed over the next 30 years in productive enterprises in different places."

ENDNOTES

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