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September 2015

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# The End of Globalization or a more Multipolar World?

# Contents




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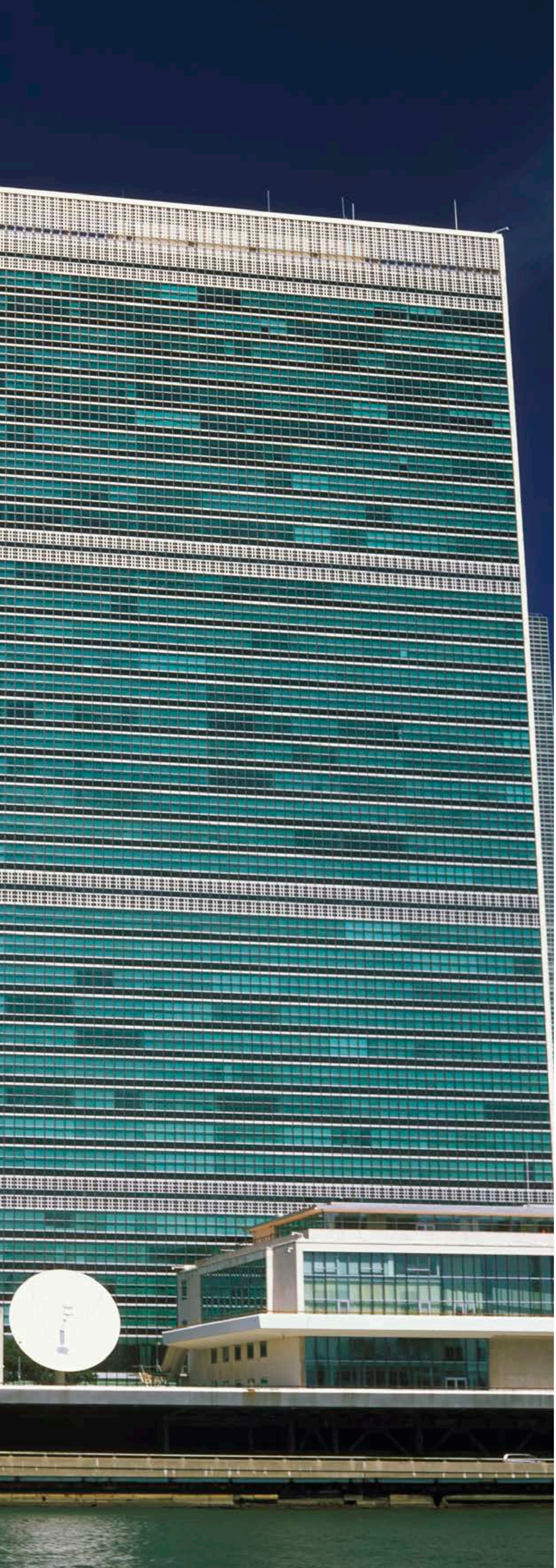

# Introduction

Globalization, which we define as the increasing interdependence and integration of economies, markets, nations and cultures, is the most powerful economic force the world has witnessed in the past twenty years. It is now so pervasive in its effects and has produced so many startling outcomes—the rise of global cities, the successes of small states, growing wealth in emerging economies, the emerging consumer and fast-changing consumer tastes, for example—that we risk taking it for granted.

The current wave of globalization is the second the world has seen, the first one occurring between the years 1870 to 1913, built on the fruits of the industrial revolution and the rise of the American economy. 'The current period effectively dates from the early 1990s, where events like the fall of communism, rounds of trade liberalism and the growing momentum of the Chinese economy accelerated globalization. This was then driven by US multi-nationals, the advent of the euro, the growth of financial markets and the development of many emerging economies.

However, in recent years the path that globalization is taking has become obstacle strewn and much less clear. The global financial crisis has slowed economic growth, left large amounts of indebtedness in its path and checked the rise of the financial services industry. The Eurozone appears to many to be in a state of perpetual crisis while the structural rise of China's economy has caused some to fear the role it will play geopolitically. Its cyclical slowdown is also promoting concern. Elsewhere the side-effects of globalization—such as inequality and climate change—are now widely debated.

This report adds to the CS Globalization Index by developing a 'Multipolarity Index' and a 'Globalization Clock' and by examining specific trends in financial markets, trade, governance and corporate activity. Our sense is that the world is currently in a benign transition from full globalization to a multipolar state, though this is not complete. Specifically, the world is most multipolar in terms of trade patterns and economic activity; but financially the world, although highly globalized, is much less multipolar with the USA still dominating markets. Companies continue to try to sell their goods across borders but are less willing to invest internationally.

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# Towards a multipolar world?

Globalization is the predominant economic, strategic and political force of our age. Its implications and side-effects—from wealth creation to climate change—are pervasive. As such the direction that globalization takes has far-reaching implications. The rise of emerging markets, financial and economic crises in the USA and Europe, the creation of new institutions and the demise of 20th century ones, amongst other trends, point towards a more multipolar world. However, there is a narrative that points to the geopolitical risks of such a development—from regional conflicts, cyberwars and 'great power' rivalry. In this report we set out three scenarios: 'globalization thrives,' 'a multipolar world emerges at economic, political and social levels' and, more dramatically, 'globalization comes to an end.'

**Michael O'Sullivan**

We build on the CS Globalization Index that we introduced in the CSRI 'Success of Small Countries Report' by creating a Multipolarity Index and incorporate these into a Globalization Clock, which captures the world in terms of globalization as a phenomenon and multipolarity as a state of the world. This and our analysis of trends in the financial, governance, economic and corporate spheres, help to quantify the extent to which the world is more globalized or multipolar. Our sense is that the world is currently in a benign transition from full globalization to multipolar state, though this is not complete. Specifically:

- The world is most multipolar in terms of trade patterns and economic activity. Trade is becoming more regional though there are signs of the erection of barriers to trade.
- Financially, the world is highly globalized but less multipolar, with the USA remaining at the centre of the financial world in terms of the sway that US markets have over others internationally and the central role of the dollar compared to the euro and renminbi.
- Our analysis of corporate investment and revenue growth shows that globalization remains intact in terms of consumption and marketing patterns, there appears to have been a retrenchment in cross-border investment by corporates. Together with the rise of emerging market (EM) companies in terms of both sales and investment, we read these results as pointing towards a more multipolar world where companies continue to sell across borders but are more cautious in investing across them.
- In terms of governance, the impetus provided to the spread of democracy by globalization looks to have reached a limit, with less democratic forms of government being perceived to produce economic success and new regional institutions replacing the activities of world ones. New institutions—such as sovereign wealth funds and fiscal councils—are amongst the more prominent new actors on the institutional stage. Geopolitically, conflict now takes place more within countries and regions, than between countries.
- The world is increasingly undercut by faultlines in terms of religion, climate change, language, military development and indebtedness to name a few. Our 'end of globalization' risk scorecard flags indebtedness and migration as risks to focus on.

### Globalization – where are we headed?

In the course of the last year alone some events, such as the establishment of the Asia Infrastructure Investment Bank, international political engagements surrounding the Ukraine crisis, Abenomics in Japan, the rise of Asian companies like Alibaba and the active role that the ECB is playing in the European economy, point towards the emergence of a more complex, multipolar world and away from globalization as we have come to know it. In big picture terms, Figure 1 (using IMF forecasts) underlines this trend by showing how China and India are on their way to building dominant economic powerhouses.

A slightly different view confirms this. Combining IMF and UN forecasts and following a simplified version of the methodology established by Danny Quah (2011) we show how geographically the location of world GDP has moved eastward (Figure 2). In the future, the top 50 urban agglomerations[1] will be dominated by cities such as Delhi, Shanghai, Mumbai and Beijing that are

1 Filtered on cities with population greater than 100,000 in 1950.

all located in the east. By contrast, in 1950, 22% of the world's top 50 urban agglomerations were located in the USA alone but by 2030 only 6% of the world's urban commercial centers would be in the USA.

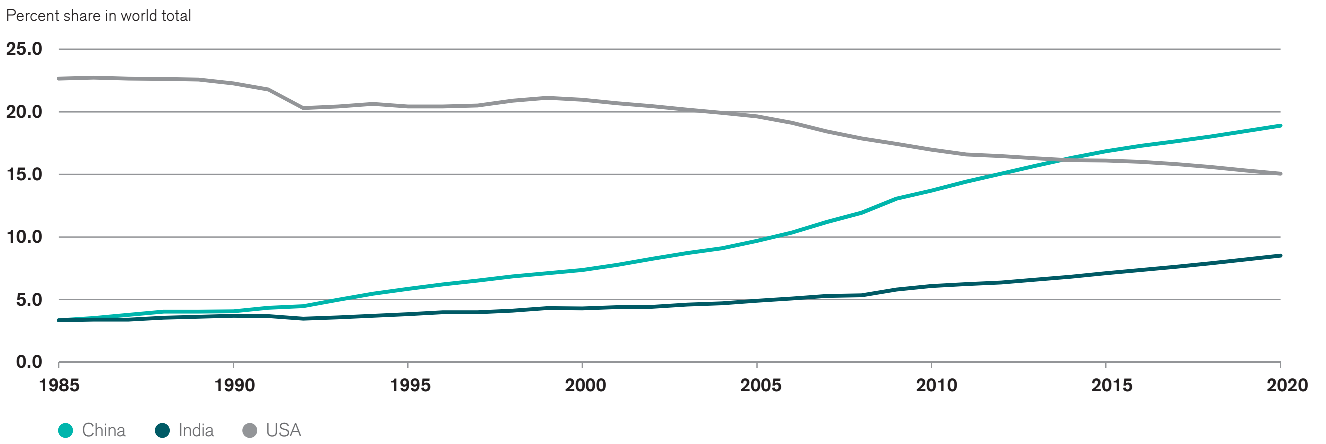
If such a change is materializing, it will have enormous implications for companies, markets, economies and governments—not least because so many of them have come to rely upon globalization. In this respect, the aim of this report is to establish and track the direction that globalization is taking, with three different scenarios in mind (Figure 4).

**Scenario 1: Globalization continues:** The first of these is that globalization continues in the form we have come to know and understand over the past thirty years. In substance, this means the dollar continues its role as first amongst equals in the forex world, generally western multinationals dominate the global business landscape and the fabric of international law and institutions is still western in nature. In economics, macroeconomic volatility is low, trade grows with few interruptions from protectionism and the internet economy grows, across borders. Socio-politically, the significant development is that human development improves, characterized by more 'open societies.'

**Scenario 2: A multipolar world:** This second scenario is based on the rise of Asia and a stabilization of the Eurozone so that the world economy rests, broadly speaking, on three pillars—the Americas, Europe and Asia (led by China). In detail we would expect to see the development of new world institutions that outgrow the likes of the World Bank, the rise of 'managed democracy' and a more regionalized version of the rule of law, migration becomes more

Figure 1

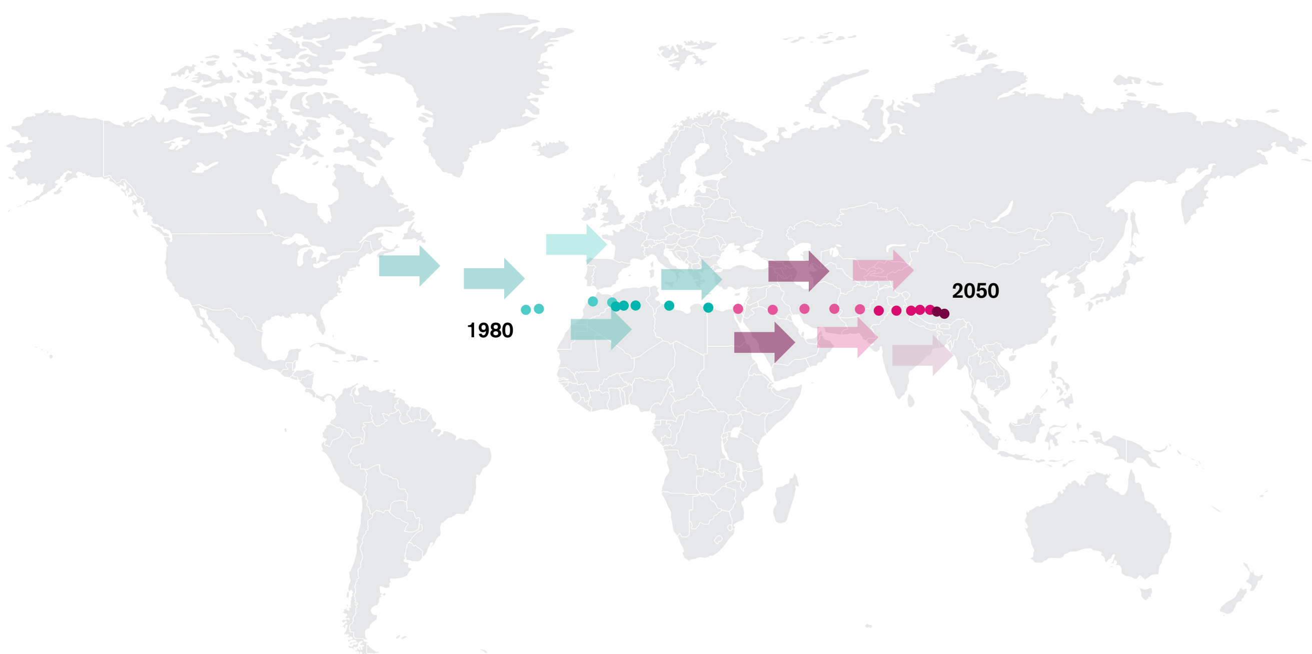
**World GDP may again be dominated by China and India**




Source: IMF, Credit Suisse

Figure 2

**Geographic location of world GDP – economic center of gravity – has shifted eastward**




Source: UN Department of Economic and Social affairs, IMF, Credit Suisse regional and rural to urban-led rather than cross-border, regional financial centers rise and banking and finance develop in new ways. At the corporate level, the significant change would be the rise of regional corporate champions, which in many cases would supplant global multinationals.

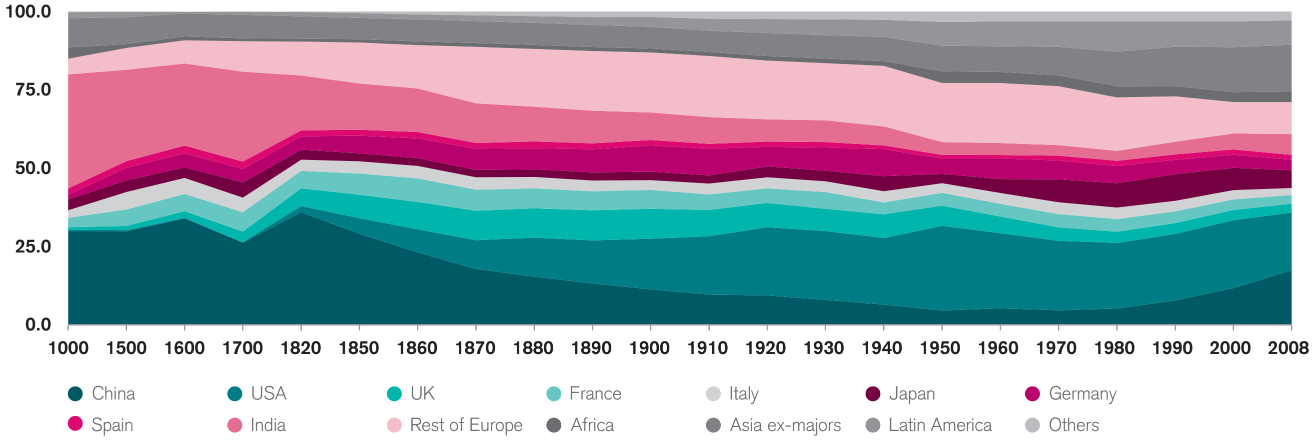
We would also expect to see uneven improvements in human development leading to more stable, wealthier local economies on the back of a continuation of the EM consumer trend. In Europe, the EU halts its outward expansion and thrives as the restructuring of banks and companies makes for a leaner economy.

**Scenario 3: The end of globalization:** Our third scenario is a darker, negative one that recalls the collapse of globalization in 1913 and the subsequent onset of the First World War. Though the world has been stressed by the global financial crisis and terrorist attacks in recent years, these developments have arguably led to more rather than less cooperation between nations. Still, there are risks to globalization and in this section we outline them in the form of a risk scorecard.

The kinds of things we watch for are—a trend slowing in economic growth and trade with the added possibility of a macro shock (from indebtedness, inequality, immigration), a rise in protectionism, a geopolitical/military clash between the great powers, currency wars, a climate event(s), the rise of broad-based anti-globalization political movements and a backlash against global corporations, or a reversal in transitions to democracy.

Figure 3

## Global GDP shares – a historical perspective




Source: Angus Maddison database, Credit Suisse

Figure 4

## The future of globalization – three scenarios

| | Globalization continues | Multipolar world | End of globalization |
|---|---|---|---|
| Trade & financial flows | Strong upward trend; increased interdependency. Few interruptions from protectionism. | Rises at lower pace, regional in nature. Regional trade agreements. | Barriers to trade and protectionism increase. |
| Markets | Low cost of capital | The rise of regional financial centers. | Fragmentation; rise in the cost of capital. |
| Currency | Dollar dominates. | Rise of new anchor currencies. | Currency wars |
| Economic growth | Increasingly driven by trade growth. Low macro-economic volatility, except in times of crisis when risk of contagion is higher. | Lower growth, some regions thrive while others fall back. Regional setbacks in response to economic crisis. EM consumer grows. | Domestic focused; slower. Shocks from debt, inequality, climate and geopolitics. |
| Corporations | Multinationals become more powerful. | Regional champions. EU thrives | National champions. Anti-MNCs. |
| Global governance | Collaborative; Supranational institutions dominate; US dominant force. Global regulators. | Competitive; regional hegemons; covert conflicts; spheres of influence. New institutions with exclusive memberships. | Open conflicts. Geopolitical military clashes. Climate events. |
| Forms of government | Spread of democracy | 'Managed democracies' more entrenched | Reversals in transitions to democracy |
| People flows | Open door policy for immigrants | Increased restrictions on immigrants. Selective skill-based movement of labor. Urban-rural migration to dominate cross-country movement. | Breakdown for migration. Social exclusion of migrant population. |
| Social & human development | Greater convergence in living standards but less globalized regions fall back. Human development improves. | Living standards become more unequal. Local economies become wealthier in aggregate. In EM economies – rising consumer (incomes, consumption and wealth). | Increased poverty & civil strife. Rise of anti-globalization socio-political movements. |

Source: Credit Suisse

PHOTO: ISTOCKPHOTO.COM/ TERADAT SANTIVIVUT

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## Globalization Clock

In the sections that follow we measure the extent to which the twin trends of globalization and multipolarity have developed. Here, we have taken many of the indicators and data used throughout the report and constructed a Globalization Clock.

To give context, we start with the rise of globalization in the 19th century and its collapse into the First World War. This we illustrate with a crude but meaningful measure of globalization—exports/GDP in Figure 5.

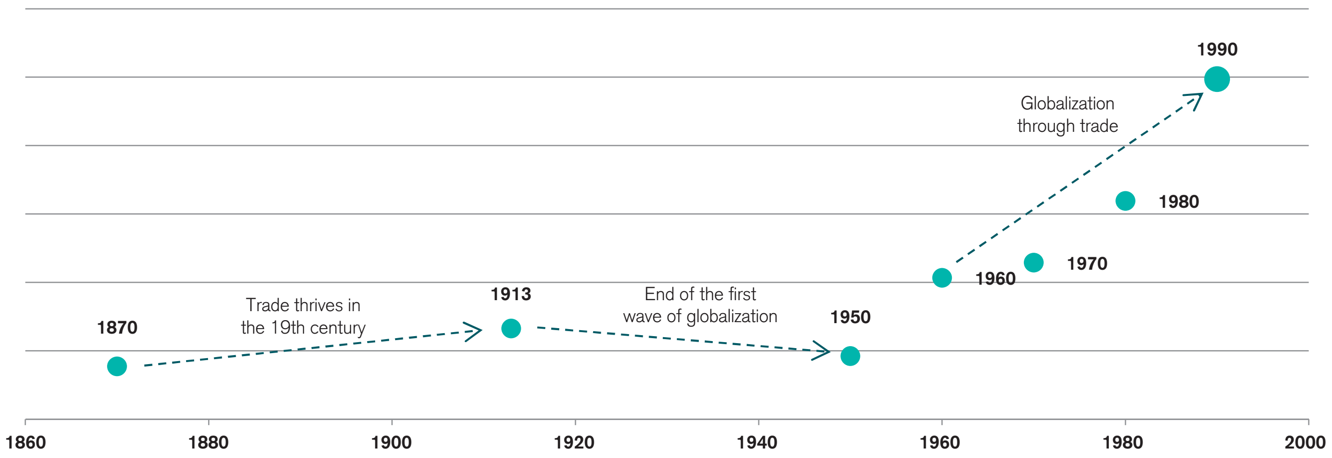
Globalization then revived in 1990 and as we move through the 21st century we find greater evidence of multipolarity. We bring the two indicators together in the form of the Globalization Clock. This plots globalization and multipolarity scaled against their long-term averages.

Some clusters are clearly visible and match historical events. For instance, the early 1990s were dominated by the USA and European countries, followed by a phase of low globalization and low multipolarity during the period of 2000-2005, driven by the growth of information technology and the consolidation of military power by major advanced countries during the Iraq and Afghanistan wars. Since then, the world has moved into the first quadrant of the Clock—a sweet spot—to become more globalized and more multipolar at the same time, accentuated by the economic weakness of developed economies and stronger emerging market economies.

Figure 5

### The first wave of globalization

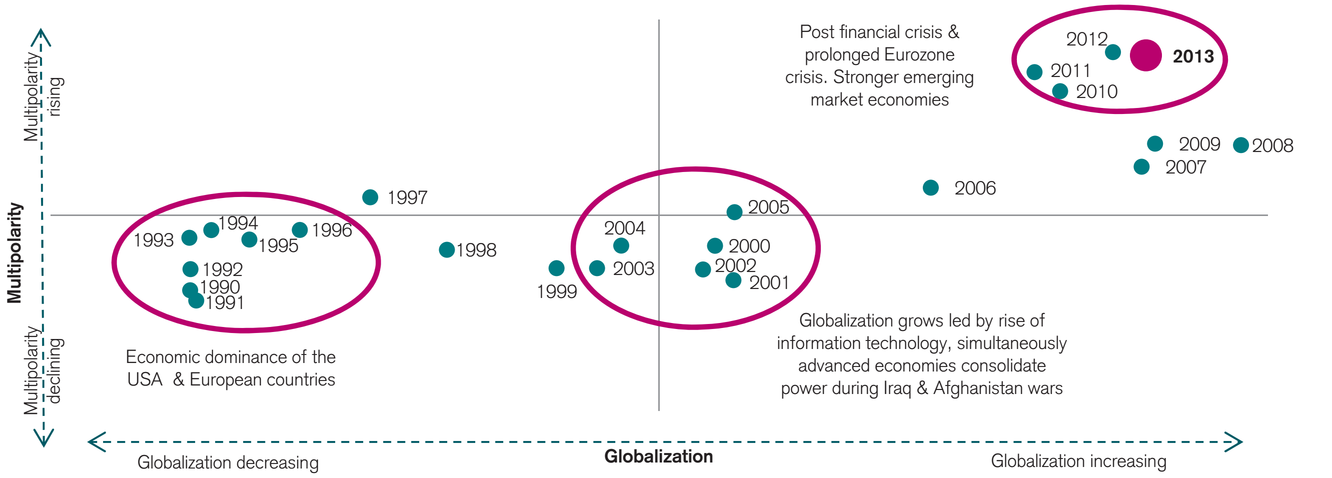
Exports/GDP percent




Source: OECD (2001), UN World Trade Report (2013), World Bank, Credit Suisse

Figure 6

### The Credit Suisse Globalization Clock




Source: World Bank, Credit Suisse

PHOTO: ISTOCKPHOTO.COM/NAPHTALINA

# Globalization – What is it?

In broad terms, globalization refers to the increasing interdependence and integration of economies, markets, nations and cultures. It is difficult to measure, a fact that probably contributes to the wide range of interpretations that are given to it.

**Michael O'Sullivan** and **Krithika Subramanian**

In order to understand and measure globalization, it is first of all necessary to define what it is. There is a broad range of definitions of globalization, though most tend to focus on the integration or interlinking of economies, perhaps because this is the most tangible form of globalization.

One of the more extensive efforts to define and understand globalization has been undertaken by the House of Lords Select Committee on Economic Affairs.[2] The Committee, whose report was published in 2002, gathered together a varied and experienced cast of experts, policy makers and opinion formers. They highlight a number of definitions, such as that adopted by the World Bank, namely that globalization is 'the rapid increase in the share of economic activity traded across national boundaries, measured by international trade as a share of national income, foreign direct investment flows and capital market flows.'

The United Nations Conference on Trade and Development (UNCTAD)[3] offered a definition in a similar vein to the above:

> In general terms, globalization describes the process of increasing economic integration among nations through cross-border flows of goods and resources together with the development of a complementary set of organizational structures to manage the associated network of economic activities.

Other economic academics display a crisp understanding of globalization. O'Rourke and Williamson[4] whose research focuses on international trade, take globalization to be represented by 'the integration of international commodity markets… the only irrefutable evidence that globalization is taking place, on our definition, is a decline in the international dispersion of commodity prices or what we call commodity price convergence.'

The political scientist Joseph Nye defines globalization as referring to networks of interdependence at worldwide (multi-continental) distances.[5] He expands on this definition in his book 'Governance in a Globalizing World', by stating that 'these networks can be linked through flows and influences of capital goods, information and ideas, people and force, as well as environmentally and biologically relevant substances.'[6]

### Measuring globalization

In general, definitions of, objections to and perspectives on globalization span many fields. In many cases, it is not easy to identify whether specific problems arise as a result of globalization, or indeed if globalization simply exacerbates them. Measuring globalization and in particular the causality of its effects is difficult, though perhaps the least problematic aspect of analyzing globalization is to measure its economic effects.

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2 House of Lords Economic Affairs Committee, First Report on Globalization, (London: House of Lords, 16 January 2003). www.parliament.the-stationery-office.co.uk/pa/ld200203/ldselect/ldeconaf/5/501.htm

3 www.unctad.org

4 Kevin O'Rourke & Jeremy Williamson, 'When Did Globalization Begin?', *European Review of Economic History*, vol. 6, 2002, p. 24.

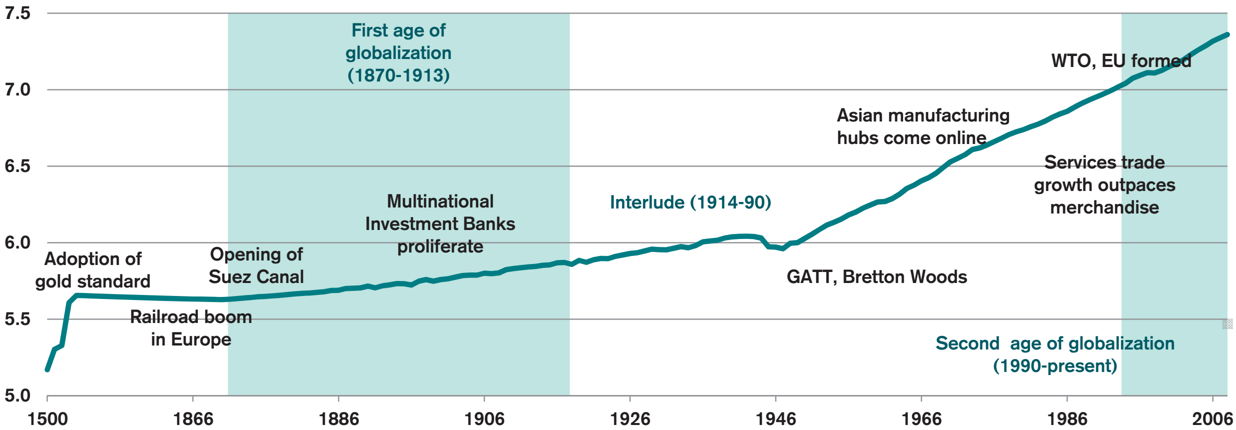
5 Joseph Nye, 'Globalization's Democratic Deficit: How to make International Institutions More Accountable,' *Foreign Affairs*, vol. 80, 4, July/August 2001.

6 J. Donahue & J. Nye, *Governance in a Globalizing World*, (Washington: Brookings Institution Press, 2000), p1.

Figure 7

## Two waves of globalization

GDP (Geary Khamis $ constant prices scaled log scale)




Source: Angus Maddison database, Credit Suisse

Measures that economists often examine are the relation between a country's savings and its investment activities, its current account relative to its output, and levels of foreign direct investment (FDI). A number of other more idiosyncratic measures can be examined as well, such as the change in the number of foreign firms located in a country, differences between domestic and national products and between the research and development activities of foreign and indigenous corporations. Measures of migration are useful too, though the flow of labor was more widespread during the first wave of globalization than it is now.

Figure 8

## CS Globalization Index

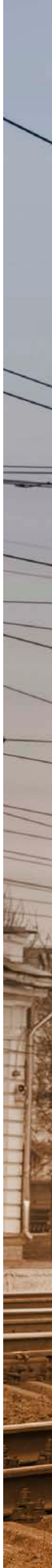
| Rank | Country | Size | Score |
|---|---|---|---|
| 1 | Luxembourg | S | 0.97 |
| 2 | Singapore | S | 0.87 |
| 3 | Switzerland | S | 0.86 |
| 4 | Hong Kong | S | 0.85 |
| 5 | Belgium | M | 0.81 |
| 6 | Ireland | S | 0.81 |
| 7 | Netherlands | M | 0.80 |
| 8 | Denmark | S | 0.76 |
| 9 | Iceland | S | 0.74 |
| 10 | Korea | M | 0.72 |

Source: Credit Suisse

### CS Globalization Index

There have been some notable attempts to measure globalization[7] and in a recent publication we constructed a CS Globalization Index (in our July 2014 CSRI publication on the 'Success of Small Countries' followed by an update in April 2015). The CS Globalization Index is based on economic, social and technological factors.[8]

This index shows that European countries dominate the list, while African nations tend to be the least globalized. However, we should flag that some small countries that act as trade or financial entrepots (i.e. Luxembourg) have very heavy finance and trade flows relative to their GDP size and as such appear intensely globalized in the economic sense.



7 Such as the Foreign Policy/AT Kearney Globalization Index.

8 **Economic globalization:** Trade openness (% of GDP), FDI (% of GDP), FPI (% of GDP).
**Social globalization:** Cellphone subscription (per 100 people), telecom lines (per 100 people), remittances (inward + outward) (% of GDP).
**Technological globalization:** Internet users (per 100 people), secure servers (per million people).

# Déjà vu all over again

Though many of the artefacts of globalization such as technological advances make it look and sound new, it does have a precedent.[1] There are two generally recognized waves of globalization, the first taking place from 1870 to 1913, and the current one which effectively began in the late 1980s. The first wave of globalization was spearheaded by British merchants and the second one by American corporations.

The nineteenth century period of globalization was one of extensive commodity market integration. Against this backdrop the level of trade surged so that by 1913 merchandise exports as a share of GDP in western European economies reached a level of 17%, from 14% in 1870 (subsequently falling to around 6% by 1938 and climbed above 17% again in the 1990s).[2]

The fantastic power that capital markets seem to wield make it difficult to appreciate that the world could have been anything as developed as it is now. Yet, research shows that a number of countries (especially those outside the USA) were more financially developed in 1913 than they were by 1980.[3] For instance, in proportion to GDP (gross domestic product), the market capitalization of the French stock market was nearly twice that of the USA in 1913, but fell to a quarter of it by 1980. Generally speaking, financial market development over the course of the last hundred years reached its nadir in 1980, from which point it has increased towards and beyond the levels of development seen at the turn of the last century.

The 1870-1913 period of globalization was also remarkable for the levels of emigration that were witnessed. Over sixty million people migrated to the New World between 1820 and 1913. It is estimated that from the 1880s to the early 1900s, 6% of the population of several European countries migrated overseas.

However vibrant globalization was at the turn of the century, burgeoning levels of trade, finance and technological advances (in transport and communications) soon led to imbalances in the European, Latin American and American economies, which in many cases, were dealt fatal blows by poor policy making. Openness quickly gave way to protectionism and the application of tariffs. The rise in poverty and unemployment that was brought about by inflation in the price of goods and deflation in asset prices forced an eventual response from governments who had come to fear the greater say that the poor had in politics because of the expanding franchise. Where small governments had previously been in vogue (in 1912 government expenditure in developed countries was about 13% of GDP) governments were now expected to spend and protect their way back to prosperity. Thus, protectionism, economic decline, nationalism and finally war brought down the curtain on the first period of globalization.

1 Ireland and the Global Question, Cork University Press 2006
2 Rodrik (1997), op. cit., p.7.
3 R. Rajan and L. Zingales, 'The great reversals: The politics of financial development in the twentieth century,' *Journal of Financial Economics*, vol. 69, 1, 2003, pp. 5-50.

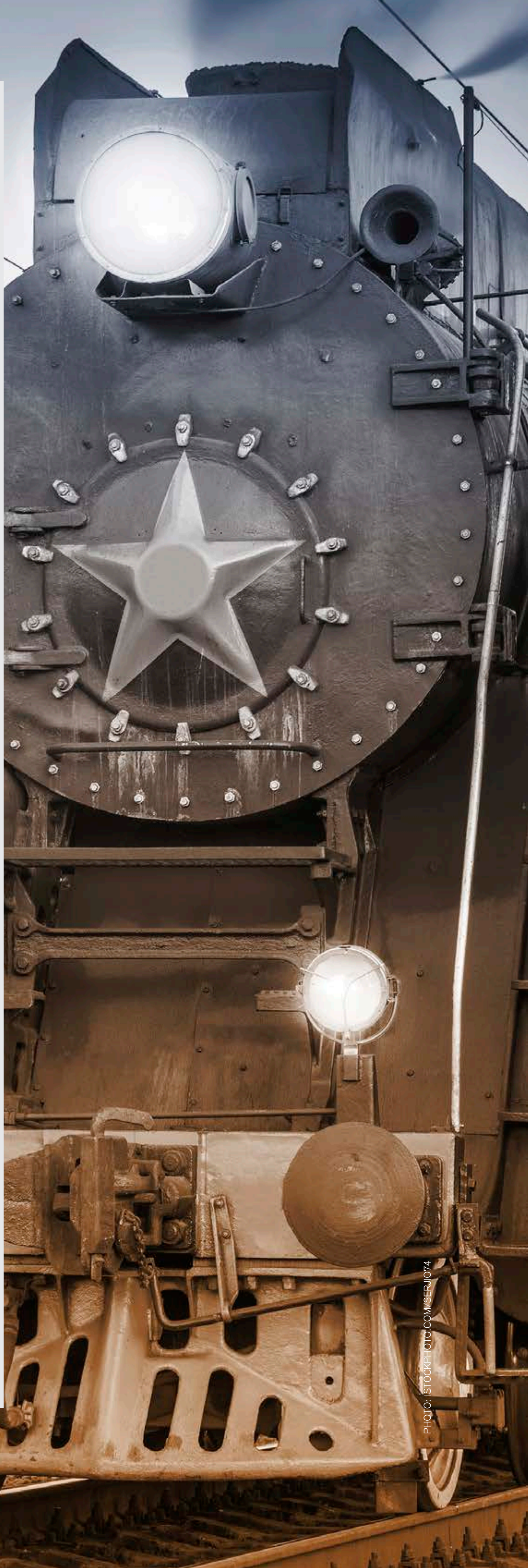


PHOTO: ISTOCKPHOTO.COM/SERJIO74

# A multipolar world

The first period of globalization (1870 to 1913) serves to show the benefits of globalization and also how it can be negatively transformed by geopolitics and changes in international economic health. It highlights the severe and enduring costs associated with the end of globalization. In this respect, we pay very close attention to changes in globalization and the direction that these might take. In the following chapter we consider how an end of globalization scenario might unravel, though in this section we examine the more likely evolution of globalization towards a multipolar form. We identify a multipolar world as one that evolves from a globalized world, where trade, economic, socio-cultural and corporate activities take place around several geopolitically significant poles.

In recent years it seems that globalization has been checked by the global financial crisis and become more balanced in that wealth and economic power have risen in a number of emerging markets, notably China. Notwithstanding Europe's struggles with the euro, it remains a considerable though yet diverse economic bloc.

Other CSRI research strands, such as the Emerging Consumer Survey and the Global Wealth Report detail the rise of emerging economies and we increasingly see diverse signs of this – the opening up of capital markets in Asia and Arabia, the growth of new institutions in Asia and the pick-up in commerce in Africa. The amalgam of many of these trends points to a more multipolar world, though this is still difficult to quantify.

In this context, we are increasingly mindful of George Orwell's 1984, where he divided the world into three regions – Oceania, East Asia and Eurasia on the basis of economic power and form of government. Although it requires some conceptual shoehorning we could well fit the major countries of the world into the following categories: Oceania (USA, Canada and Latin America), Eurasia (Europe, the Middle East and Russia), East Asia (Africa, Asia and the Pacific economies). Some countries like the UK, Japan and Australia could just as easily fit in two categories. In today's world, Orwell's classification is not a 'clean' one but the three broad regions he has set out give a sense as to how a multipolar world might evolve at a high level.

More specifically we would consider a 'pole' to be based on the following factors – size of GDP, size of population, an imperial legacy, open economy, does the pole have open/plentiful trade with surrounding countries, military size and sophistication (absolute spending, number of fighter jets and ships), human development indicator relative to region, is it a member of a regional grouping (e.g. Sweden with Nordics). So, under this schema India and China might be poles, but Japan and Russia would not qualify as distinct poles.

In this section we aim to measure the extent to which the world is multipolar rather than globalized. Specifically we examine the following themes:

**Are trade and output concentrated or spread out across the world?** We gather together data on trade, finance, people flows and output, and innovate on some recent World Bank analysis to determine whether the distribution of economic activity is becoming more or less concentrated.

**Is protectionism constraining free trade?** We take a look at tariff and non-tariff barriers to trade, to examine if the world is prospering with free trade or becoming more regional amidst higher protectionist measures?

**Are we moving towards a multi-currency world?** The dollar has in many respects been the vehicle through which globalization has spread, though the bumpy rise of the euro and the potential for the renminbi as a more internationalized currency offer the prospect of a multi-currency world.

**Does Wall Street still lead the world?** There is considerable literature on the tendency for international markets to be led by the USA In a more multipolar setting we would expect this trend to have weakened. We examine the extent to which Wall Street leads international markets today or whether Chinese markets are leading others.

**Are we nearing the end of the multinational?** One prominent trade economist, Jagdish Bhagwati, called multinational corporations the far-ranging B-52s of globalization. We pool together an extensive set of corporate profit and loss statement and balance sheet data for 4000 companies going back to 1970 to examine whether the composition of revenues of multinationals is becoming more global and the extent to which their investment spending also reflects this.

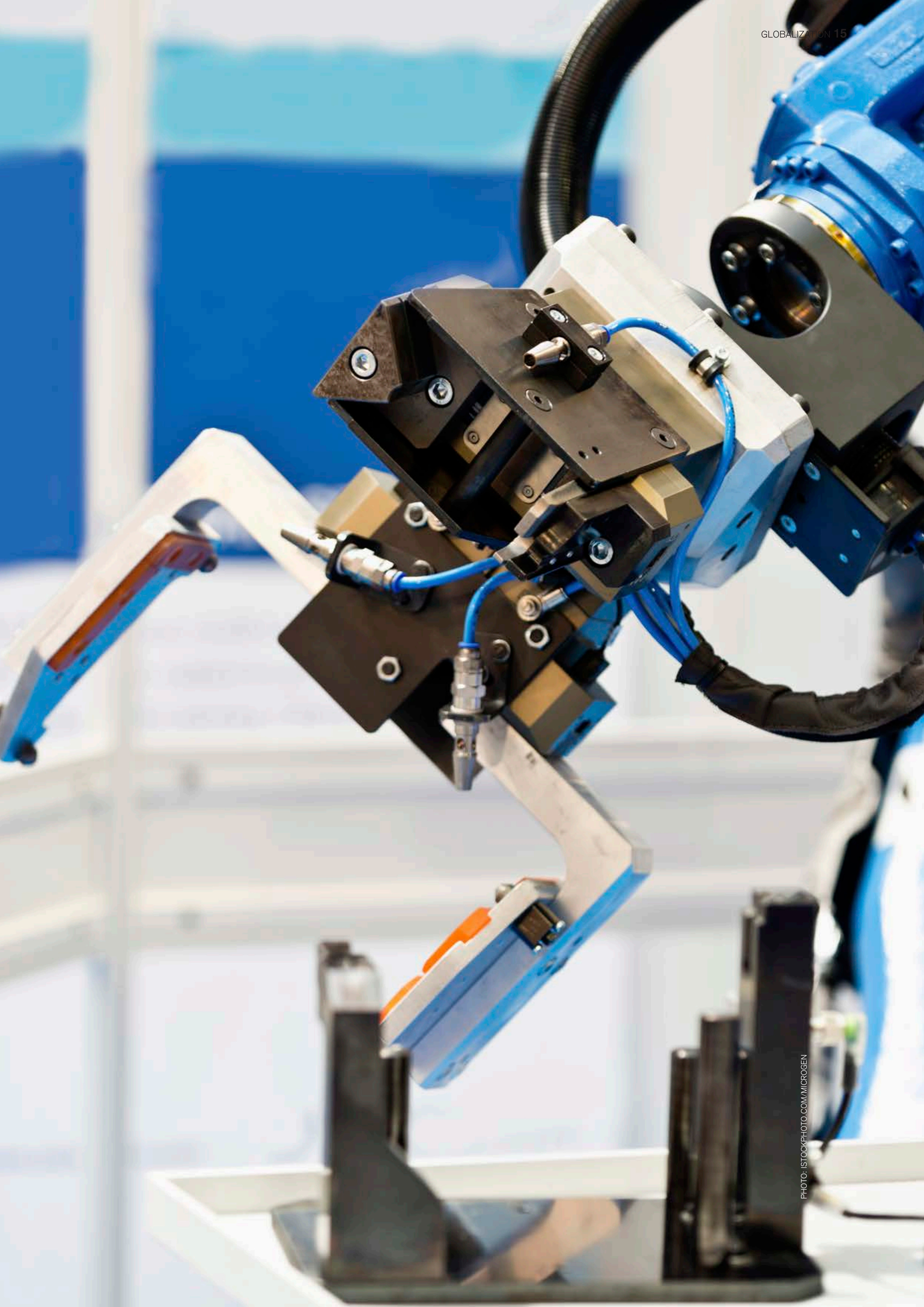


PHOTO: ISTOCKPHOTO.COM/MICROGEN

**Are we looking at the rise of 'managed democracies'?** Following our 2011 publication on the economic implications of the Arab Spring, we examine the extent to which democracy has spread throughout the world and in contrast the number of increasingly wealthy countries which could be described as managed democracies. We also consider ways in which new international institutions reflect an increasingly multipolar world.

## Concentration and multipolarity index

Trade, investment and to an extent people flows are the bases of globalization. In this section we aim to establish the extent to which trade and other activities are concentrated in a small number of countries, or whether they are more dispersed across the globe (more multipolar). Specifically we calculate a concentration index (Herfindahl-Hirschman index) for a range of indicators. The index is developed such that countries having larger shares in world totals get higher weights and those with smaller shares are awarded lower weights. This magnifies the level of concentration and makes trends in concentration more perceptible. Simply put, a lower level of concentration would support the hypothesis of growing multipolarity. We further develop the multipolarity index as a derivative of the concentration index for select economies, in order to gauge how trends within major poles have changed with time.

To start with we examine trends in concentration for GDP and trade. Figure 10 shows how concentration in world nominal GDP declined during the period 1960-2013, suggesting that world GDP is now more widely spread amongst countries. In order to account for any biases in nominal data, we also analyze GDP in PPP terms and real GDP (in constant terms) and find that the results remain largely unchanged. However, we do not represent those results here, and stick to nominal GDP, with an aim to align the treatment of all variables in our concentration index.

Similarly, concentration levels in world trade (exports and imports) have declined significantly; supporting the conjecture of the world being more multipolar today than it was in 1960.

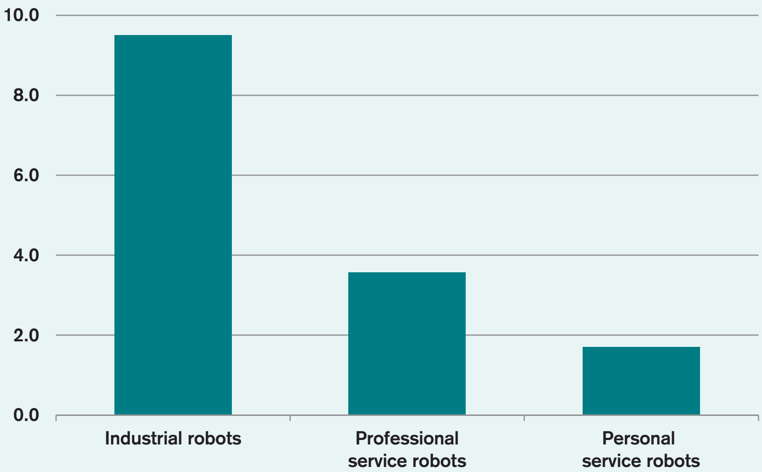
# Game changer 1: Automation

While a fully humanoid robot is still a distant fantasy, industrial and consumer robots are increasingly capable of taking over tasks previously done by humans. 3D printing enables on-site production of crucial inputs. Self-driving cars are not far away from a commercial breakthrough. Even warfare is executed by robots with the rise of military drones. The replacement of human labor by robots and computer algorithms has the potential to alter demographic challenges that many countries face, while at the same time changing the marginal products of capital and labor on a global scale.

Figure 9

### Robot sales as evidence of growing automation

Sales value in 2013, dollars in billions




Source: International Federation of Robotics (IFR), Credit Suisse

### How it could make the world more connected

It is unrealistic to think all countries would develop competitive robotics industries, so even if robots, once produced, reduced interdependence between countries, the production of robots would still be concentrated in a few regions of the world, keeping up global interdependence. Changes in manufacturing processes together with cheap energy could, however, drastically alter the economic landscape of the world to the advantage of countries lacking labor, but endowed in capital.

### How it could make the world more fractured

Innovations such as 3D printing could reduce the need for global trade in intermediate goods and even end products once it is commercially viable to print these instead of transporting them across the globe. Also, in the far future the use of robots in warfare could lower human interaction and risk for the combatants lowering the political price for military action. This could possibly lead to more instability in global politics.

At the aggregate level, we construct our concentration index, which is measured as a weighted composite of three stock variables (namely GDP, budget size and population) and two flow variables (namely trade[9] and net foreign direct flows[10]) over a period of 53 years (1960-2013), across 215 countries. Of these, GDP and trade are the most crucial. The results meet our a priori expectations and are discussed here:

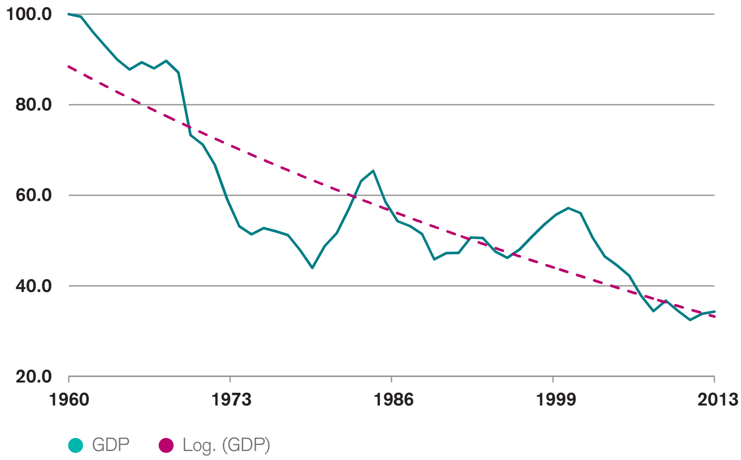
- Economic concentration has declined steadily over the last five decades, driven by a pronounced diffusion in the concentration of GDP size and trade volumes. In other words, hitherto smaller contributors to the world economy have increased their share in total, while larger ones have seen their strength moderate. Although, trends in population size also exhibit a decline, the change is relatively sticky and rather flat.
- Our concentration index dipped to its lowest value in 2008 (Figure 12), suggesting that the world was most multipolar just ahead of the deep onset of the global financial crisis. We note thereafter, that the index has been inching up. This may be explained by the weakness of major economies such as the USA and the Eurozone, and the rise of emerging and frontier market economies in a greater share of world GDP, world trade and global capital flows (especially as some of the artificially created liquidity in developed markets found its way to more lucrative EM markets). Accordingly, economic concentration is increasing once again.
- Our analysis of 215 countries shows us that large economies still dominate the global economy, though the dynamics within these countries have changed over the last five decades. To spot such changes, we narrow down our universe and study the performance of the top 30 major countries since 1960. It is worth pointing out that the list of the top 30 countries (as of 2013) for each of the five variables may vary. Moreover, some countries may move in and out of the top 30 list over time and across variables, which further makes a case for the growth of multipolarity and perhaps offers a lead signal for the rise of a new pole going forward.

9 Trade is calculated as the sum of both exports and imports.
10 An investor country and an investment receiving country are treated equally, as both categories of countries are considered financially open economies. Accordingly, the absolute value of net foreign direct flows is considered.

Figure 10

## Concentration trends in GDP

1960 = 100

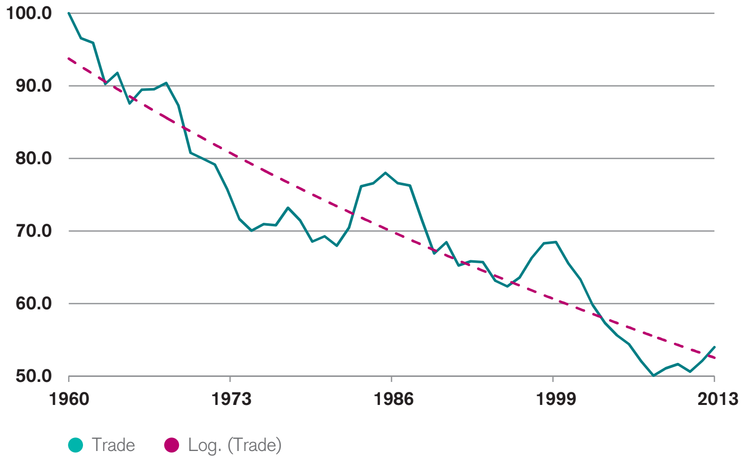



Source: World Bank, Credit Suisse

Figure 11

## Concentration trends in trade

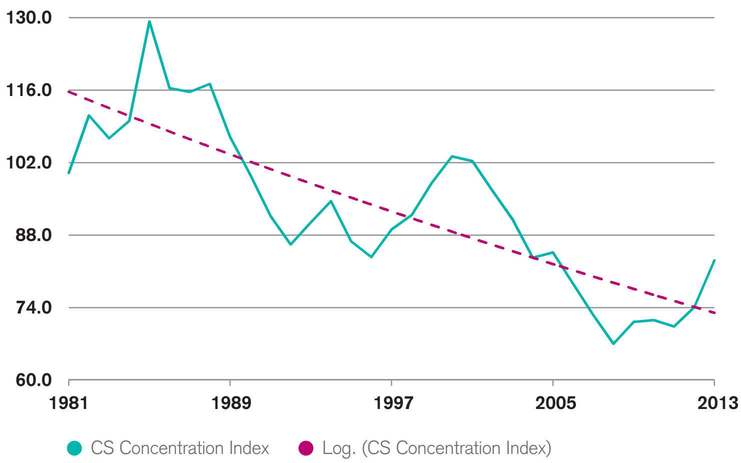
1960 = 100




Source: World Bank, Credit Suisse

Figure 12

## The CS Concentration Index



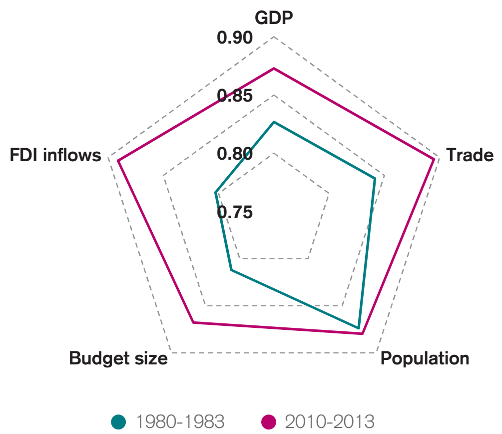

Source: Datastream, World Bank, Credit Suisse

As shown in Figure 13, trends in multipolarity intensified through time. Period averages for 1980-1983 and 2010-2013 have been calculated as the average of annual values.

We combine trends across the five variables to form the CS multipolarity index, which is calculated as an inversed derivative of the CS concentration index for the top 30 countries of each variable set. The CS multipolarity index recognizes that each of the five variables may have a different set of poles, making the overall world more multipolar. A higher value for the multipolarity index suggests that economic activity is now relatively more dispersed across the world.

Figure 13

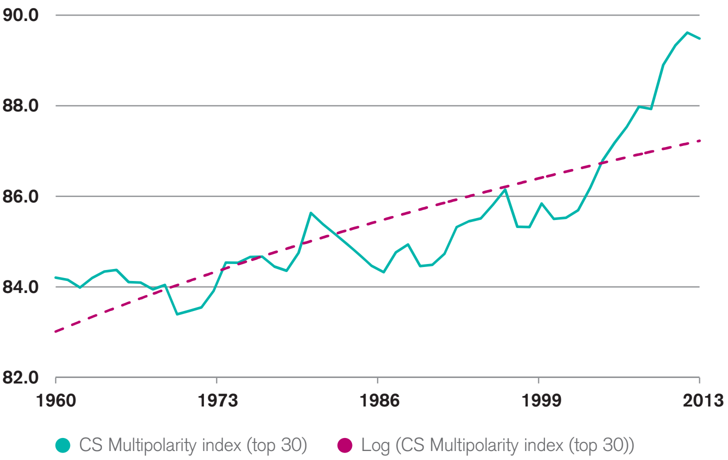
## Evidence of multipolarity across key variables




Source: Datastream, World Bank, Credit Suisse

Figure 14

## The CS Multipolarity index (top 30 countries)




Source: World Bank, Credit Suisse

## Trade – Is the world prospering or becoming more protectionist?

While the seeds of globalization may have been political—the fall of communism and a trend towards deregulation in the USA and Europe—it has been sustained by economic trends and in particular by the flow of trade. In this respect, trade is a crucial measure of the quality of globalization, and any signs that trade is ebbing or that the world economy is becoming more protectionist should be watched carefully.

Amongst the key economic variables in our globalization index, trade has expanded significantly in recent decades, fuelled it seems by debt.

Specifically, trade openness (as a percentage of GDP) has risen from around 32% in 1990 to over 54% in 2013. For the sake of illustration, and following upon our remarks on George Orwell's '1984' we group a set of representative countries into three regions, namely Eurasia, East Asia and Oceania[11] in this section. We find that Eurasia and East Asia are relatively more open than the world average, driven by the formation of the EU and the growth of emerging Asia.

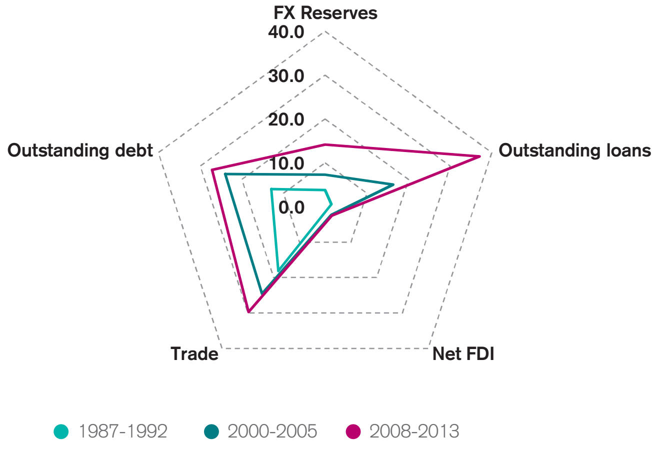
11 **Eurasia** includes Europe (Denmark, Sweden, Norway, Ireland, Switzerland and a selection of the major Eurozone countries including Belgium, Finland, France, Germany, Greece, Italy, Netherlands, Portugal and Spain), the Middle East and the Russia Federation. **East Asia** includes Asia (China, India, Singapore, Hong Kong, Korea and Indonesia), Japan and Africa (South Africa, Nigeria, Algeria, Morocco, Angola, Ecuador, Libya, Tunisia and Ethiopia). **Oceania** includes the USA, Canada and Latin America (Argentina, Brazil and Mexico).

PHOTO: ISTOCKPHOTO.COM/FOTOTRAV

Figure 15

## Expansion of global economic factors

As percent of GDP

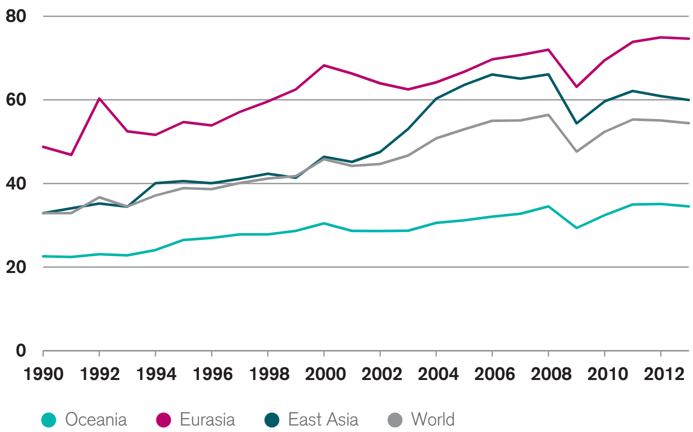



Source: Datastream, World Bank, BIS, Credit Suisse

Figure 16

## Trade openness

As percent of GDP

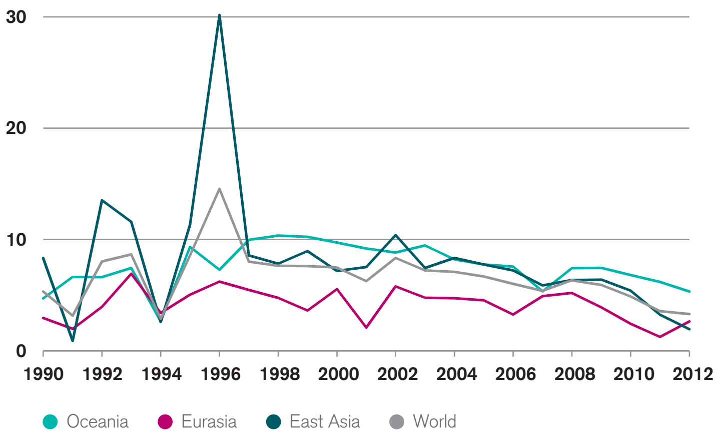



Source: Datastream, World Bank, Credit Suisse

Figure 17

## Tariff barriers to world trade

MFN tariff rate (weighted average), percent




Source: WTO, Credit Suisse

We find evidence of region-specific trends in economic, social and technological factors that are distinct from aggregate world trends. For instance, developing Asia has most recently outstripped developed Europe as the world's largest exporter and nearly equals the share in world imports. The share of developing Asia in world exports has risen significantly, from just above 15% in 1950 to 35.6% in 2013, greater than its 34.4% share of developed Europe.

The regional focus of trade has been accentuated by both tariff and non-tariff barriers to trade that selectively limit trade openness, either amongst countries or in specific commodity categories. Tariffs directly restrict the flow of goods and services by making them less price competitive and were more prevalent prior to the World Trade Organization's (WTO) regime that began in 1995.

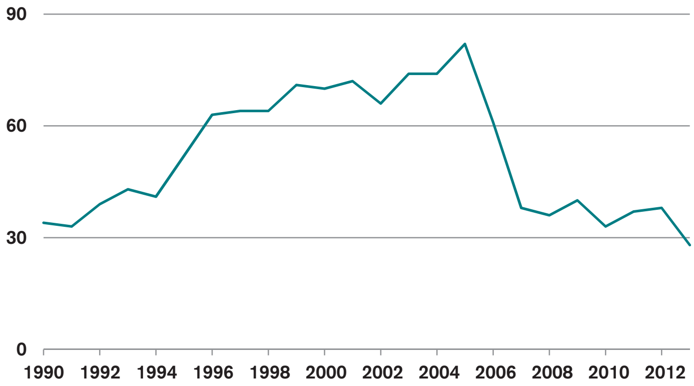
Tariff rates in Eurasia are the lowest, thanks to freer cross-border trade promoted by the European Union (Figure 17). The dawn of the millennium brought with it a preference for non-tariff barriers, as the WTO actively discouraged the levy of tariffs. Non-tariff barriers to trade have the 'charm' of not distorting price dynamics but restricting trade volumes through more qualitative routes.

Although the number of countries imposing non-tariff barriers declined during the period of 1990-2013 (peaked in 2005), the total number of non-tariff barriers imposed on trade in fact rose significantly (Figures 18 and 19)—the USA leads here—making global trade not-so free after all.

Figure 18

## Countries participating in imposing non-tariff barriers

Number of countries imposing non-tariff barriers

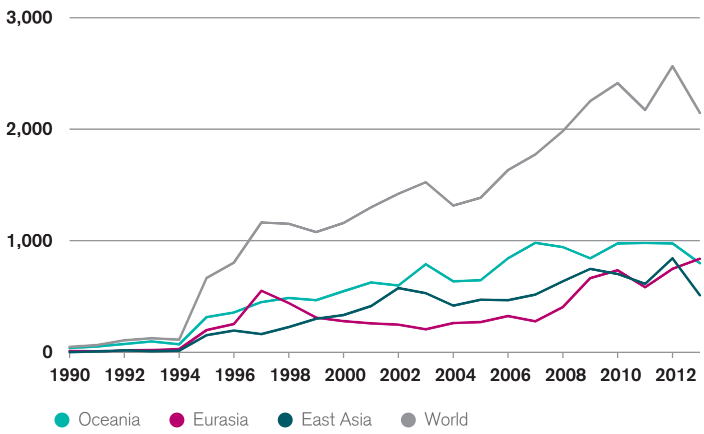



Source: WTO, Credit Suisse

Figure 19

## But overall number of non-tariff barriers rising

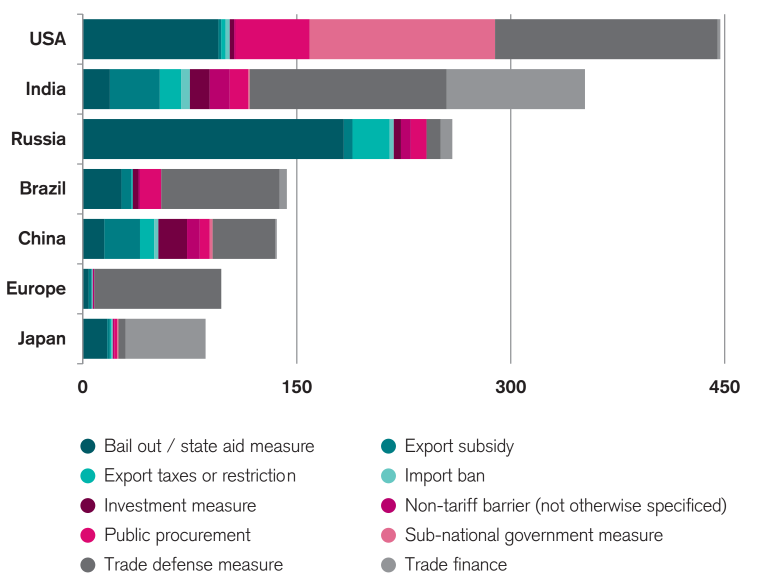
Number of non-tariff barriers by region




Source: WTO, Credit Suisse

Figure 20

## The USA imposes the highest number of protectionist measures




Source: Global Trade Alert, Credit Suisse

We believe that countries are now more focused on securing select trade markets, rather than approaching the entire world with their tradable offerings (goods, services and funding). The growing number of preferential trade agreements (PTA) and regional trade agreements (RTA)—that are at their all-time high since 2000—supports this conjecture (Figures 21 and 22). Trade agreements tend to make such transactions exclusively free for participating countries, while making it restrictive to the rest of the world.

In this sense, developed economies have found it more lucrative to liaise with developing and emerging economies that provide large fast-growing markets, partly we suspect because of the absence of another significant global trade round.

PHOTO: ISTOCKPHOTO.COM/MAURO GRIGOLLO

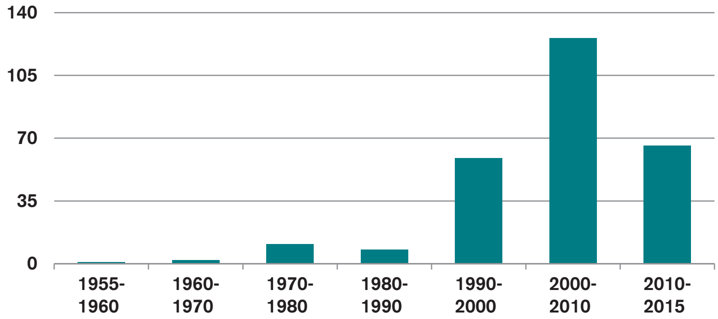
Trends in investments are no exception. Bilateral investment treaties are growing in number, with a majority of them being signed between advanced and emerging market economies (Figure 23).

Trade appears to be increasingly taking a political tone, making it an invisible barrier to trade. Although geopolitical and strategic trade partnerships are viewed as long-term collaborations, they are highly selective in nature and restrict economic integration. For instance, the Association of Southeast Asian Nations (ASEAN) is a socio-political alliance in which trade relations have become vital and led to the establishment of the ASEAN Free Trade Area, which has led to increased South-South trade. A more contemporary example of politicization of trade – a major barrier – is the imposition of trade and other economic sanctions (including foreign investments) on Russia in the aftermath of the Ukraine crisis.

Figure 21

## The rise of regional trade agreements (RTA)

Number of RTAs, by date of initial entry into force

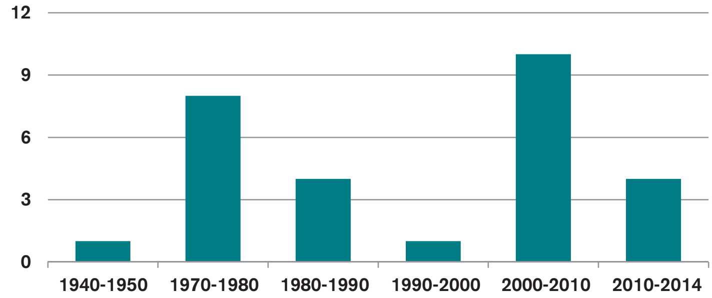



Source: WTO, Credit Suisse

Figure 22

## Preferential trade agreements find favor

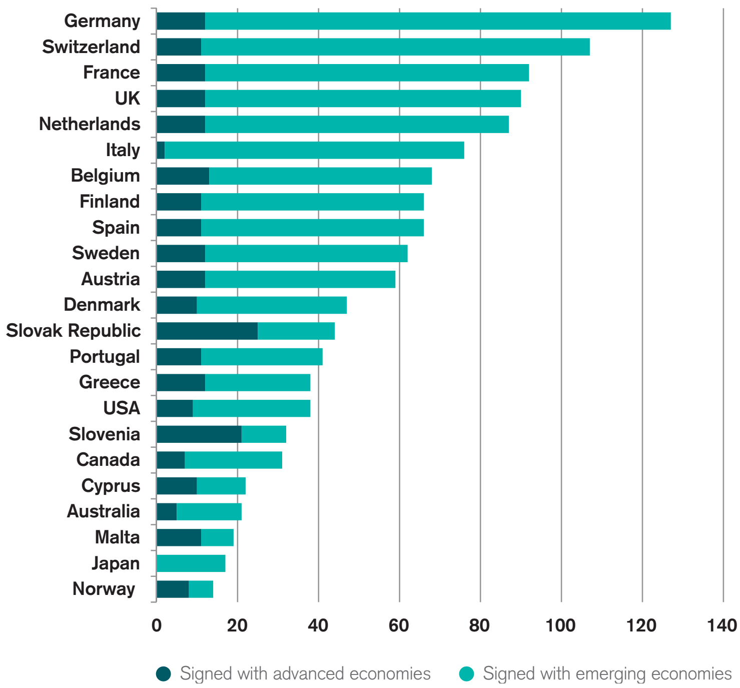
Number of PTAs, by date of initial entry into force




Source: WTO, Credit Suisse

Figure 23

## Bilateral investment treaties signed by advanced economies




Source: UNCTAD, Credit Suisse

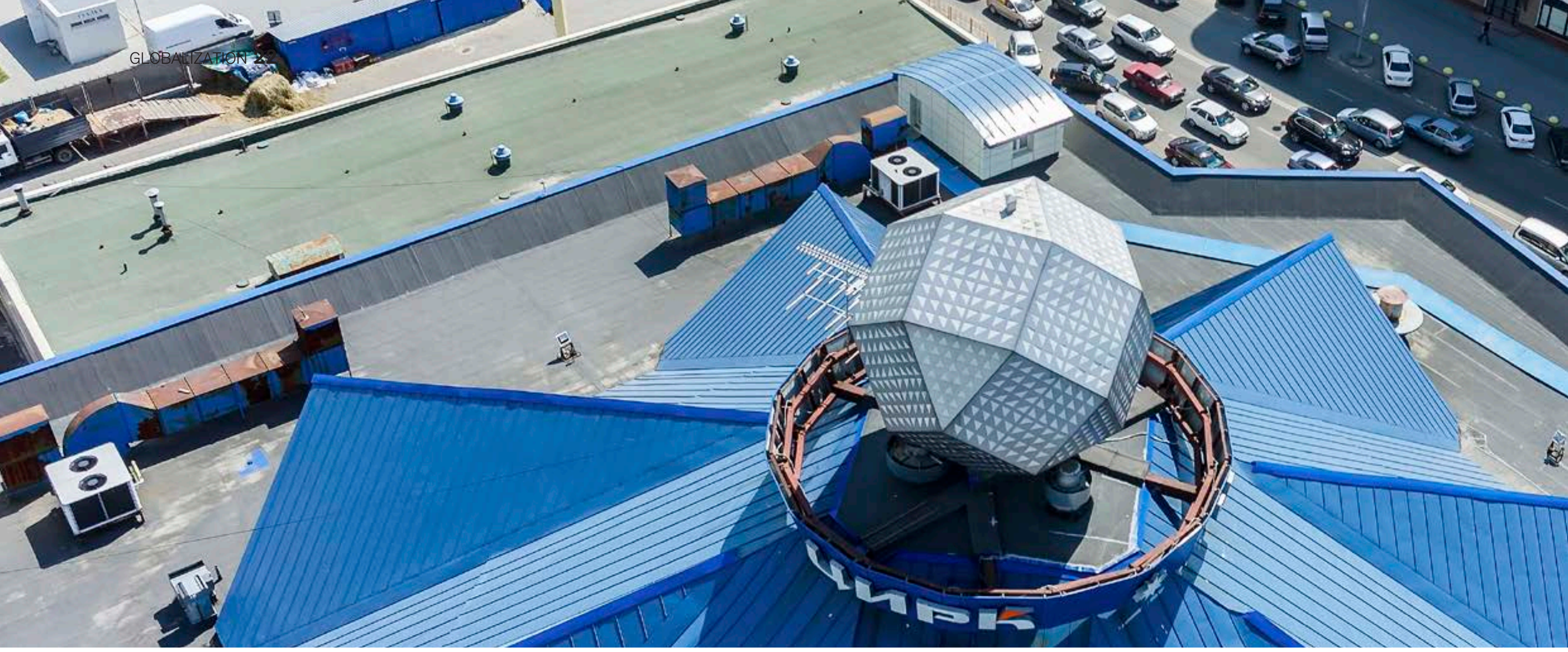
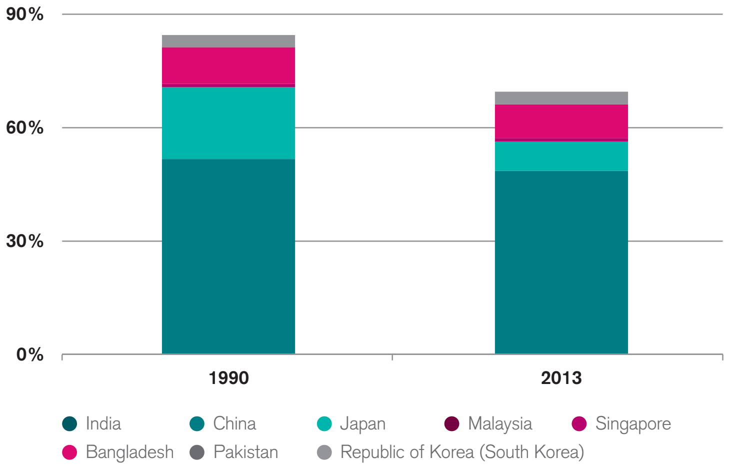


Figure 24

## Migration from Asia to the USA has declined

Proportion of total migrant stock in USA




Source: United Nations, Credit Suisse

Note: We total the mid-year migrant stock across the USA and select Asian countries (Bangladesh, China, India, Japan, Republic of Korea (South Korea), Malaysia, Pakistan and Singapore) and calculate the proportion of migrants within this universe. Hence, a decline in the share of Asian migrants in the USA would imply an increase in Asian migrants in other Asian countries.

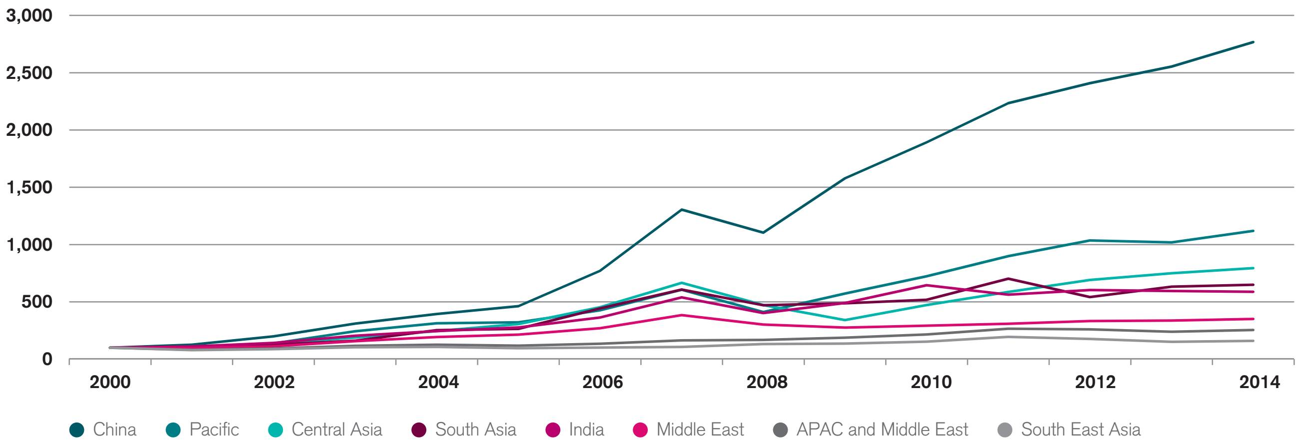
Similarly, when we look upon labor as a traded commodity, we find that the world is recording higher mismatches between the labor pool, employment opportunities and available resources. The world is hence moving towards a regime of stricter immigration rules that is akin to the higher tariff and non-tariff barriers imposed on the goods trade, discussed earlier. While, Europe and the USA are increasingly seeking to confine immigration to selective high-skill labor, increased job creation and urbanization in developing economies is proving to be a 're-pull' factor for migrants from Asian and African economies. Figure 24 shows how migration from Asia has shifted away from the USA and in favor of other Asian economies.

Urbanization and gainful employment has translated into greater wealth accumulation that is more pronounced in Asia, led by the rapid increase in the number of millionaires in China in the last decade (Figure 25). Although the rapid rise of wealth in China supports our theory of multipolarity, we also put in a note of caution that such uneven distribution of wealth is unsustainable, a potential threat pointing to the end of globalization as we know it today.

Figure 25

## Number of millionaires by region 2000-2014

Base year 2000=100




Source: CS Wealth Report

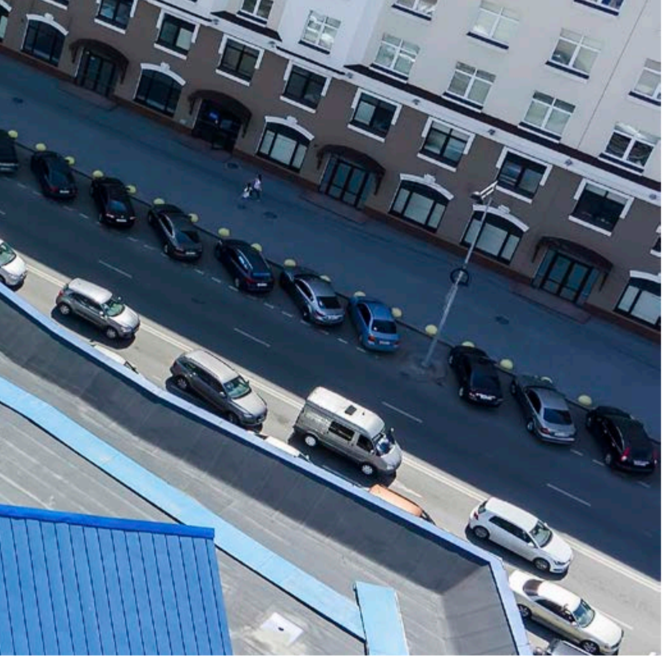


PHOTO: ISTOCKPHOTO.COM/SERGEI BUTORIN

## Dollar hegemony and the rise of a multipolar monetary system

One of the salient features that accompanied globalization has been the undisputed dominance of the USD as an international and reserve currency. Reserve currencies are typically issued by economies holding a large share of global output and trade, while at the same time offering deep and highly liquid financial markets, hence capturing large shares of global market transactions. The latest IMF report on FX reserves suggests that more than 62% of known allocated reserves are in USD, a share broadly held constant since the advent of the EUR in 1999. The second largest reserve currency—the EUR—only accounts for slightly more than 20%, leaving only minor stakes for the rest of the major currencies.

Figure 26

### Currency distribution of global FX market turnover

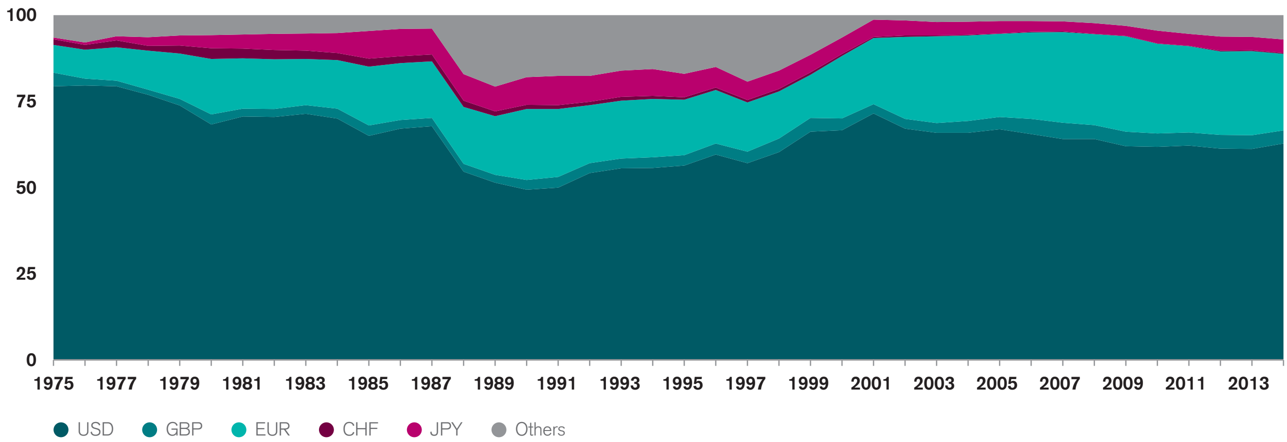
| | 1998 | 2001 | 2004 | 2007 | 2010 | 2013 |
|---|---|---|---|---|---|---|
| USD | 86.8 | 89.9 | 88.0 | 85.6 | 84.9 | 87.0 |
| EUR | NA | 37.9 | 37.4 | 37.0 | 39.1 | 33.4 |
| JPY | 21.7 | 23.5 | 20.8 | 17.2 | 19.0 | 23.0 |
| GBP | 11.0 | 13.0 | 16.5 | 14.9 | 12.9 | 11.8 |
| AUD | 3.0 | 4.3 | 6.0 | 6.6 | 7.6 | 8.6 |
| CHF | 7.1 | 6.0 | 6.0 | 6.8 | 6.3 | 5.2 |
| CAD | 3.5 | 4.5 | 4.2 | 4.3 | 5.3 | 4.6 |
| MXN[3] | 0.5 | 0.8 | 1.1 | 1.3 | 1.3 | 2.5 |
| CNY[3] | 0.0 | 0.0 | 0.1 | 0.5 | 0.9 | 2.2 |
| NZD[3] | 0.2 | 0.6 | 1.1 | 1.9 | 1.6 | 2.0 |
| SEK | 0.3 | 2.5 | 2.2 | 2.7 | 2.2 | 1.8 |
| Others | 65.8 | 17.0 | 16.5 | 21.2 | 19.1 | 17.8 |
| Total | 200.0 | 200.0 | 200.0 | 200.0 | 200.0 | 200.0 |

Source: BIS Triennial Survey, Credit Suisse

Note: [1] Adjusted for local and cross-border inter-dealer double-counting (i.e. "net-net" basis). [2] Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%.

Figure 27

### Evolution of currency reserves as a percent of known allocated reserves

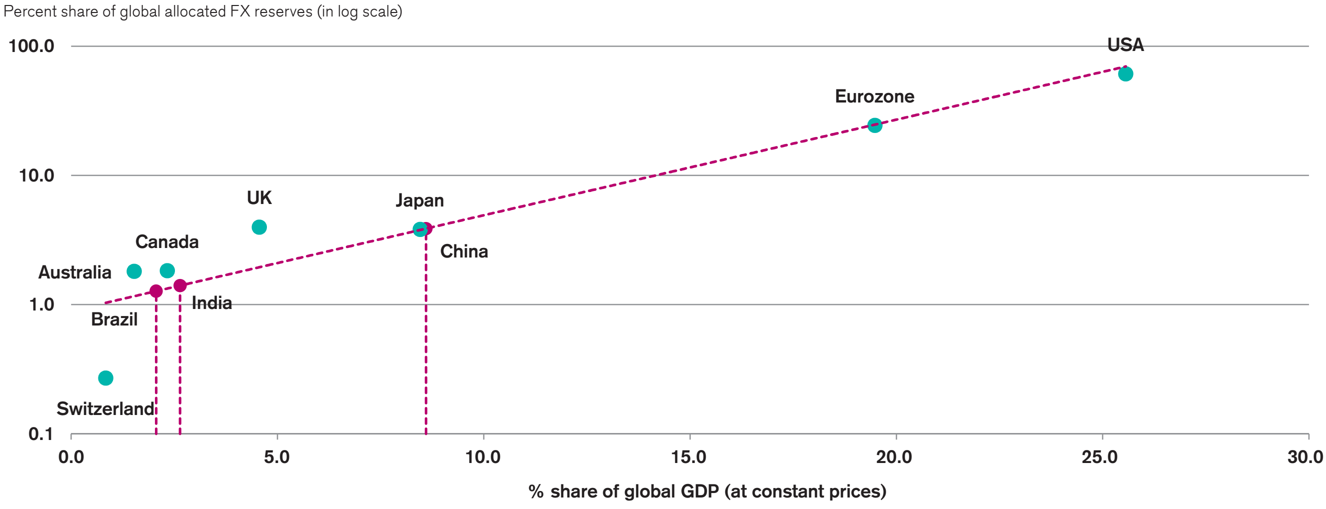



Source: IMF, Credit Suisse

Note: "EUR" = DEM + FRF +NLG for periods before 1999 and EUR for periods after

Figure 28

## Share of allocated FX reserves versus share of global GDP

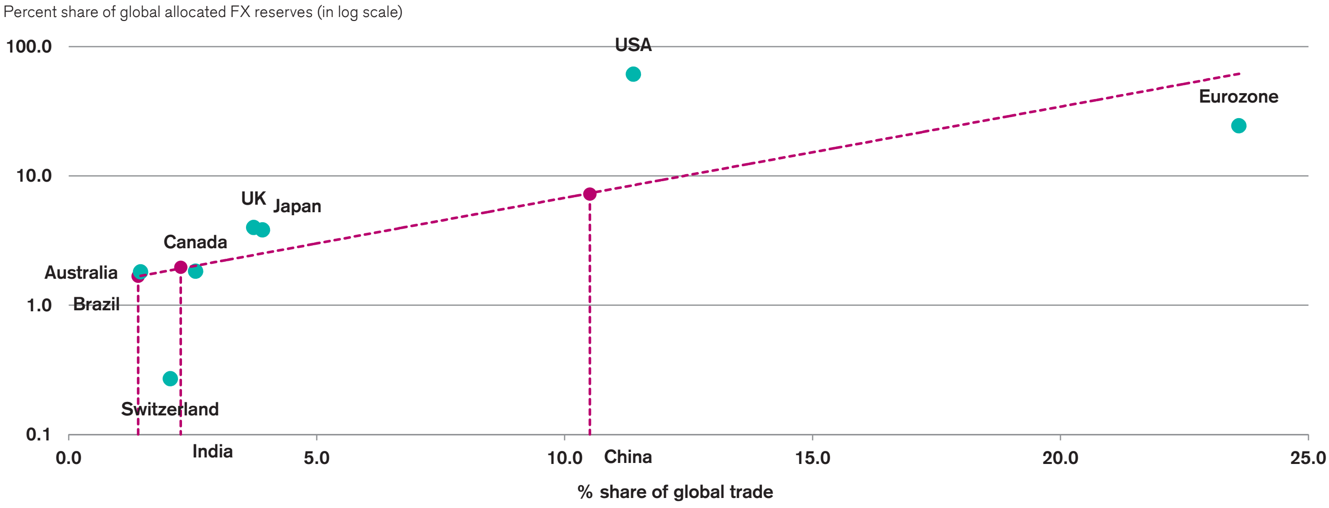



Source: IMF, Credit Suisse

Note: Based on 2013 data. Percent shares of global FX reserves for China, India and Brazil as implied by the fitted trendline are 3.9%, 1.4% and 1.3% respectively

Figure 29

## Share of allocated FX reserves versus share of global trade




Source: IMF, World Bank, Credit Suisse

Note: Percent shares of global FX reserves for China, India and Brazil as implied by the fitted trendline are 7.3%, 1.9% and 1.7% respectively

Moreover, the BIS calculates that in 2013 nearly 90% of global FX transactions involved the USD as a counterpart; a share that remained relatively stable in the last decade. Other currencies rank far behind, with EUR, JPY and GBP trailing behind with shares of 33%, 23%, and 12% respectively (Figure 26).[12] But such dominance does not necessarily entirely reflect the shift in global trade, investment and finance of recent years.

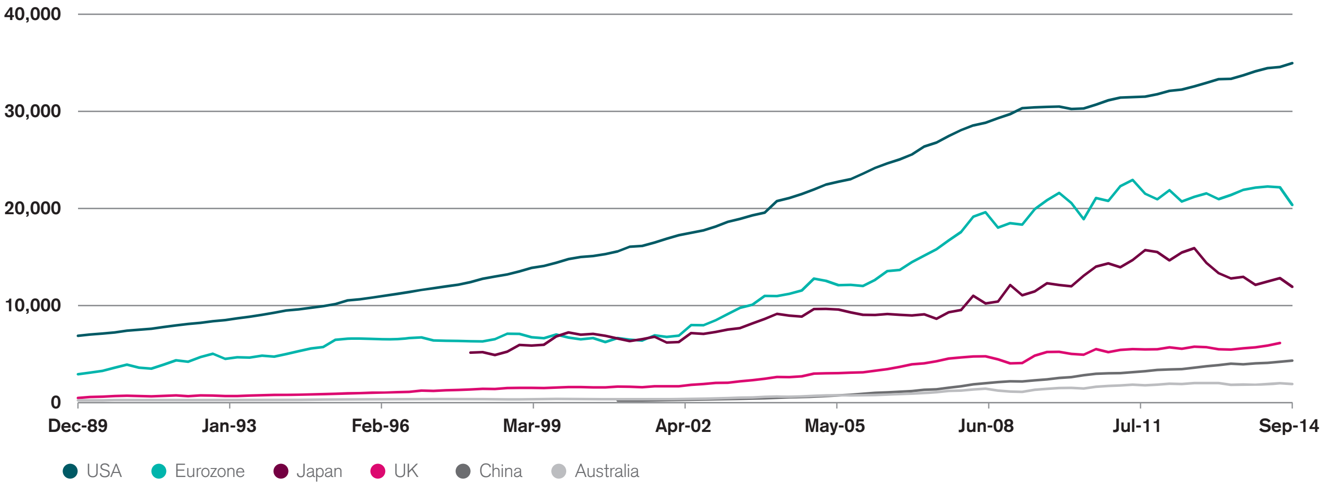
In view of China's rapid economic and financial developments, many think that the rise of the Renminbi (RMB) as a prominent international currency is only a matter of time. As a result, the world could soon face a new and multipolar monetary system. Depending on whether we measure its role in the world economy based on share of global GDP or share of world trade, the RMB could be already consistent with a share of reserve allocation between 4% and 7% (Figures 28 and 29). Potentially the RMB could be the third largest reserve currency, ahead of JPY and right behind the USD and the EUR. Provided China's share of world GDP and trade is set to grow further, these shares of reserve allocation to RMB would constitute lower bounds.

12 Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200%.

Figure 30

## Total outstanding debt securities (all issuers)

USD in billions

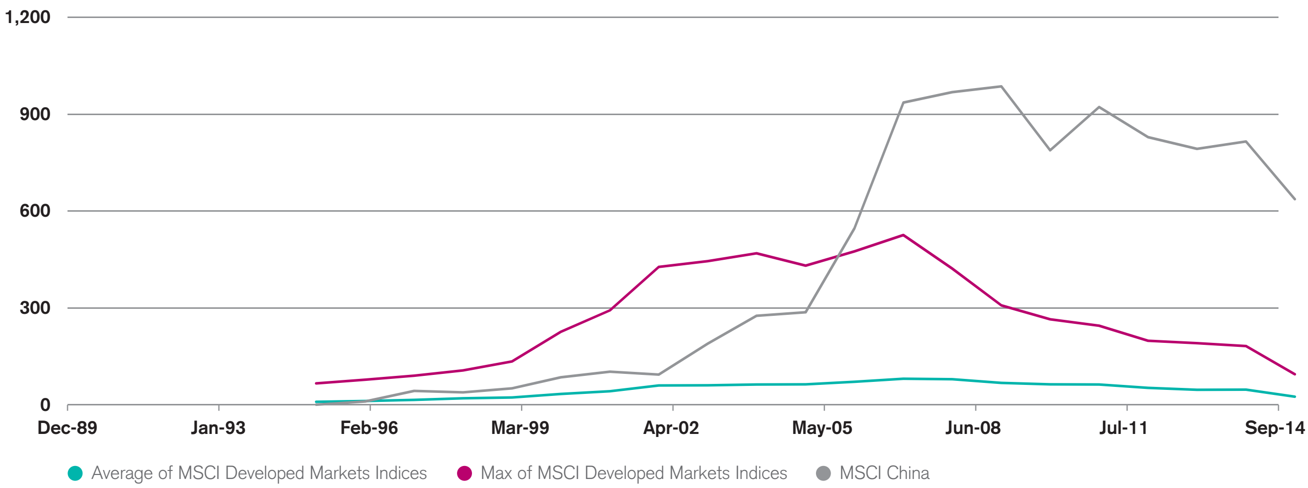



Source: BIS, Credit Suisse

Figure 31

## Higher trading volumes in Chinese stock exchanges

Annual equity trading volume in MSCI indices, billions




Source: Bloomberg, Credit Suisse

Although China's share in global output and trade has increased continuously in recent years, we do not yet see evidence that the use of the Chinese RMB as an international reserve currency has risen in parallel. We think that the lack of an international role for the RMB has resulted from mainly three things: 1) The still limited capital account openness, 2) the relatively small sized and shallow financial markets, and 3) the managed float regime, which is reminiscent of the lack of willingness to promote RMB's internationalization from the authorities' perspective.

It is therefore unsurprising that Chinese authorities' efforts to reform the exchange regime, liberalize cross-border capital flows and grow domestic financial markets have been substantial over the last couple of years. More recently, Chinese authorities have allowed for a one-off spot exchange rate depreciation of the RMB, thus enabling an alignment of the fixing rate set by the PBoC and the spot rate. It also decided to reform the fixing rate mechanism to allow for more market-determined exchange rate movements. All these steps are aimed at fostering the use of RMB as an international currency and ultimately pushing for the RMB to be part of the Special Drawing Right (SDR) basket of currencies. As the SDR is an international reserve asset, the entering of the RMB into the composition of this basket would ensure its use as an international reserve currency and take a more prominent role in the monetary system. We trust these efforts will ultimately prove successful and help position the RMB as a major international currency over time. It remains to be seen whether these efforts will prove successful at the International Monetary Fund's next SDR review.

Our discussion has so far left out the consideration of the second largest reserve currency block, the EUR. The common currency is set to remain a leading international currency given its size in the global economy and financial markets. But we think that a further expansion of the euro's global role as a reserve currency faces two main hurdles. First, the recent European crisis has increased concerns over the viability of the EUR as a global currency alternative. Second, European financial markets, and in particular the government debt market, remain fragmented and comparatively small at the individual country level. In short, there is no such Eurozone government debt issued that would enable market size to rival the US Treasury market.

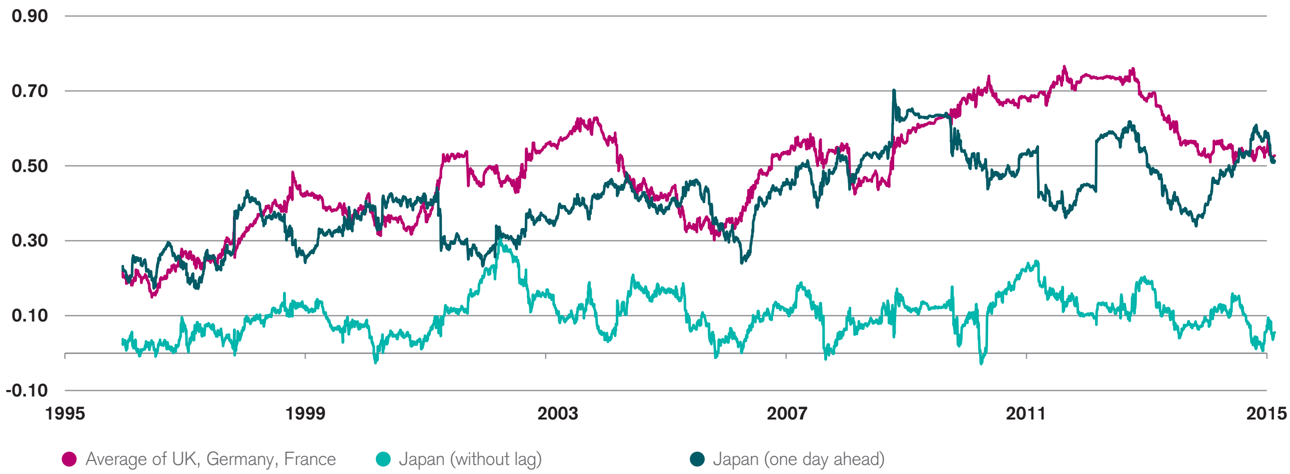
Should the Eurozone manage to overcome these uncertainties, chances are that the world will face a multipolar international monetary system with USD, EUR and RMB all being prominent international reserve currencies. Over time, as China progresses with reform and its economy takes a larger share of global output and trade, we would expect the RMB to become the second largest alternative to the USD, surpassing the EUR. Whether the RMB can ultimately challenge the USD in its leading role remains doubtful, however, at least over the coming few years. Should Europe prove less successful in addressing the above issues, we think that RMB has the potential to surpass the EUR as a credible alternative to the USD, so that instead of a tri-polar world, we may first face the emergence of a bi-polar Sino-American reserve currency world in the next decade.

## Stock markets – does Wall Street still lead the world?

The globalization of financial markets has had a powerful and lasting impact on the world economy, not least in terms of the side effects of the global financial crisis. Before this, Wall Street had been the undisputed driver of stock markets, though for long periods during the Eurozone crisis European markets were the lead movers of international markets. More recently the rise of

Figure 32

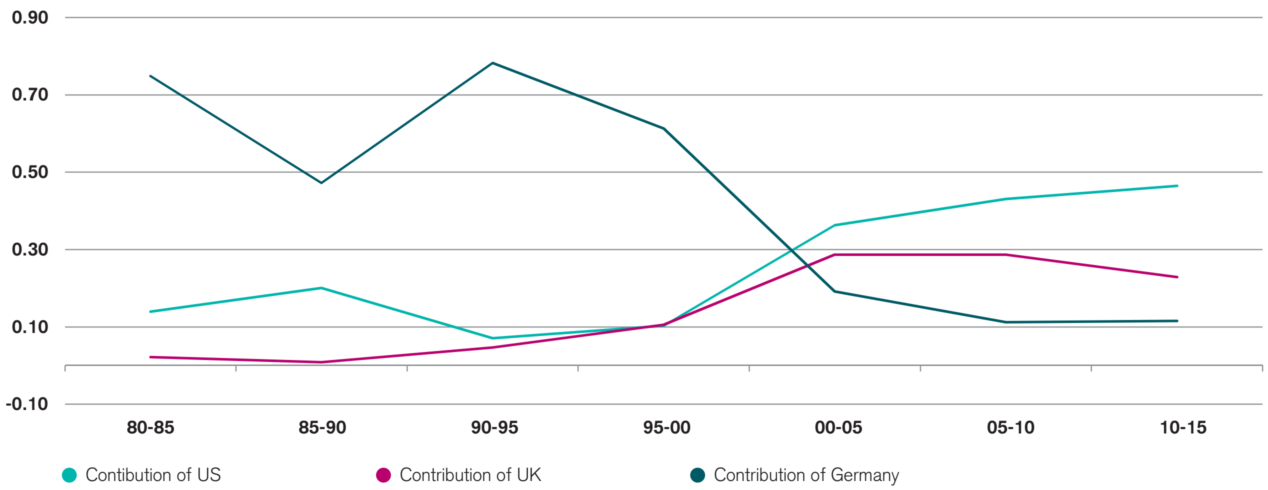
### Rolling yearly correlation with US equity markets




Source: Datastream, Credit Suisse

Figure 33

### Percentage of German stock market variance explained by UK and US markets




Source: Datastream, Credit Suisse

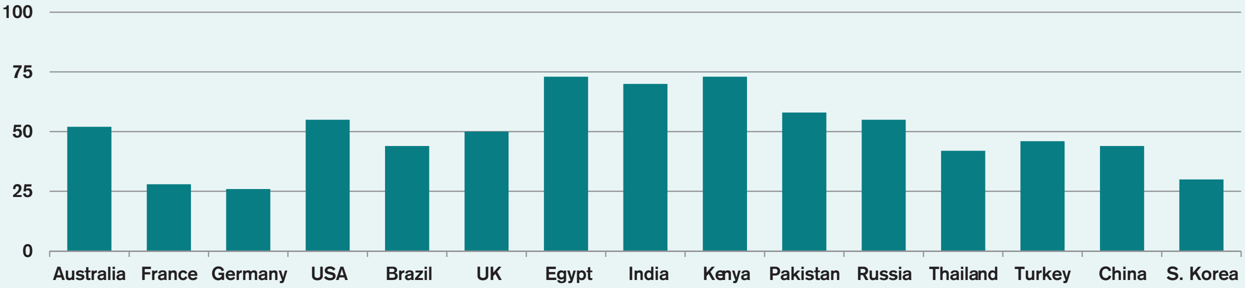
# Game changer 2: Internet security

Big data storage and ever more powerful internet connections have led to the internet being increasingly present in everyday life. At the same time it creates unprecedented possibilities for companies or governments to track every action of its users. For instance, a study by the Wall Street Journal found an average of 64 tracking tools on the top 50 websites in the United States. Revelations about government agencies such as the NSA have shown that effective mass surveillance is possible—and increasingly done.

Figure 34

### Internet perceptions

Responses to the poll question: 'the internet is a safe place to express my opinion', percent of internet users responding 'strongly agree' or 'agree'




BBC Global Poll

### How it could make the world more connected

The internet by its design is tough to completely control for an individual nation without severe limitation of its use. Movements for free internet access as a fundamental right and net neutrality continue to fight for open connections worldwide. At the same time increasing awareness about tracking technology might cause a backlash with internet users starting to protect their privacy online.

### How it could make the world more fractured

The danger of surveillance threatens countries without extensive capabilities in this field, giving them an incentive to try to control or even limit internet connections across their borders. This could lead to increasing efforts to create closed national networks (e.g. the Great firewall in China). Civic and opposition groups in states with extensive national surveillance would also be inclined to limit their use of internet communication, hampering global connectivity.

the Chinese stock market has been accompanied by a sharp increase in trading volumes, such that the Chinese exchanges have recently traded more volume than those in the developed world.

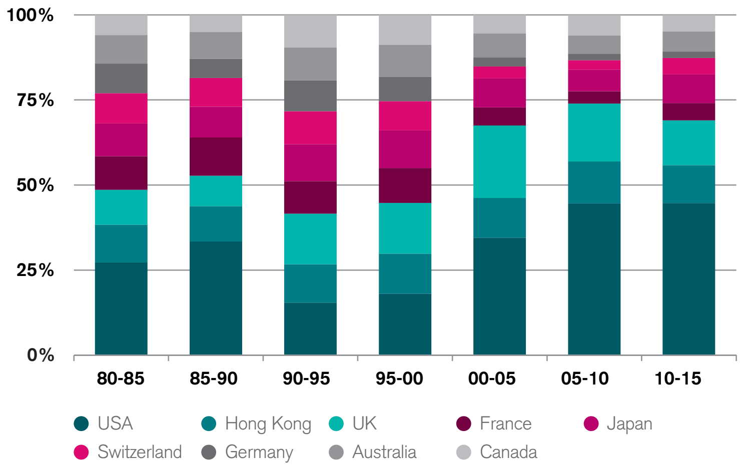
With this trend in mind we set out to examine the extent to which the US market continues to lead other markets, or whether it now follows them. We study a subgroup of key developed and emerging markets. Specifically, we conduct a two-step statistical analysis to find evidence of the lead effect of US markets on others. In the first step, we look at the rolling yearly correlation of daily returns between specific international equity markets and the USA In the second step, we employ vector auto-regression (VAR) modelling to dig deeper in terms of which market is dominant and how this has changed over the years.

First, we take the pairwise rolling yearly correlation of daily returns of equity markets (local market returns) for the USA, UK, Germany, France, Japan and Hong Kong from January 1995 to March 2015. We incorpo-

Figure 35

### Contribution to total variation of eight major stock markets

Percent share

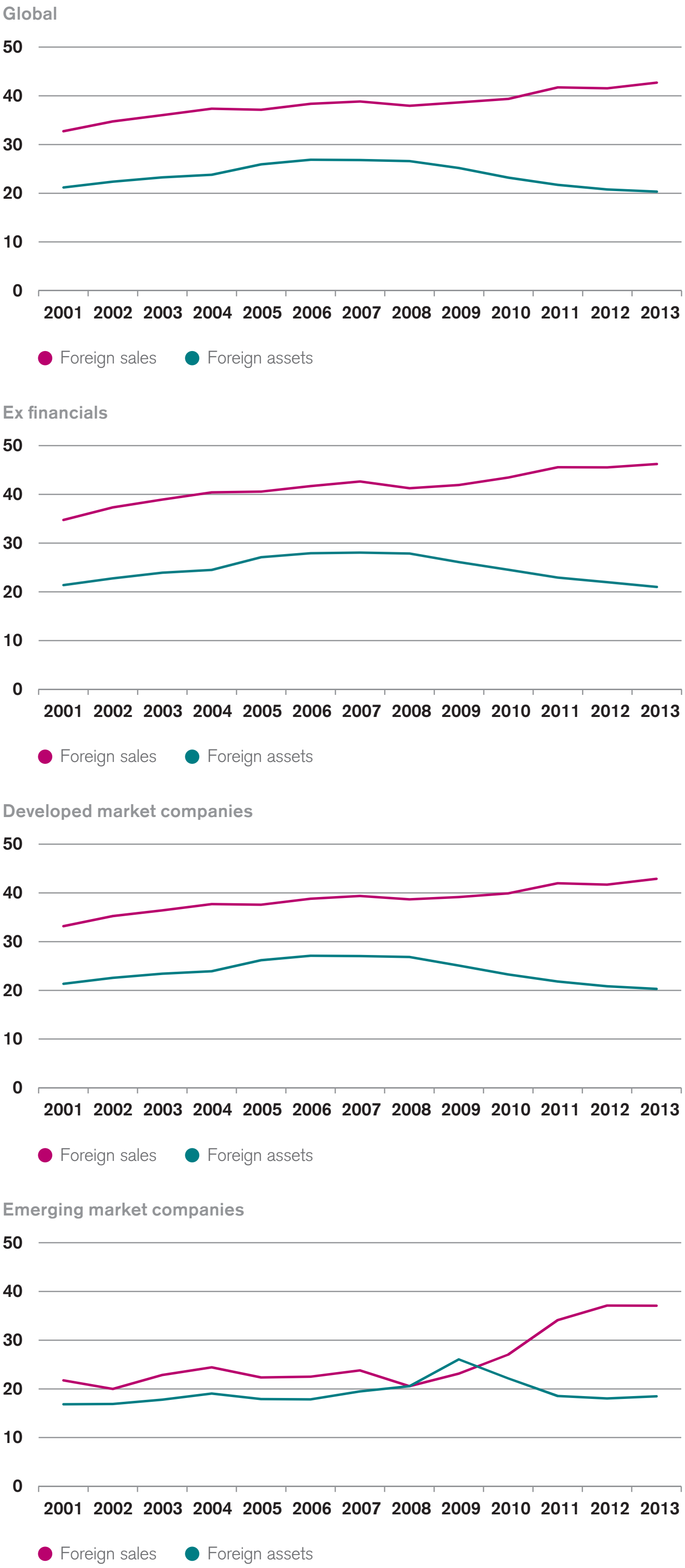



Source: Datastream, Credit Suisse

Figure 36

**Share of foreign assets and sales since 2003**

Percent of total




Source: Datastream, Credit Suisse

rate time-zone differences between different markets with the help of lag analysis. Figure 32 shows the rolling yearly correlations of daily returns of the stock markets in the UK, Germany and France (averaged without lag) and Japan (with and without one-day lag) with that in the USA.

Our results show that US equity markets are highly correlated with European and UK equity markets and the correlation has increased gradually since 1995. We find that European markets are even driven by the lagged effect of the US market but not the other way around, suggesting that the US market continues to lead these markets. We run a similar analysis with Asian markets and the USA Since the Japanese and Hong Kong stock markets open and close before the US stock market, we employ a correlation analysis without the lag. Here, we find that the correlation is not significant. Further, we take the US stock market at a lag to the Japanese and Hong Kong stock markets; we find that the correlation is significant. This reasserts our conjecture that the USA leads global stock markets.

In order to overcome noise generated by market volatility[13] we perform a vector auto-regression model over the period 1981 to 2015.

We also extend some of the academic work on the impact of the USA on other markets; to find that it has changed through time. From Figure 35 we see that the USA alone accounts for about 25%-30% of total variation of the sample countries from 1980-90. This contribution decreases from 1990 to 2000. Yet, post the dot.com bubble, the USA regained its dominance over other countries and that has increased even more in the recent period.

When looked at an individual country basis, the US market alone explains approximately 98% of its own variation. Only 2% of its variation was explained by other countries in the sample.

Financial markets across countries are significantly inter-connected and in that sense already globalized. We find that the USA continues to impact global stock markets[14] on a daily basis. The UK's influence on regional stock markets such as Germany and France is seen to rise in more recent times possibly because it is more global in its make-up.

## End of the multinational? Globalization and corporations

Large companies, their investment flows and brands have been one of the key drivers of globalization. In particular the early part of this wave of globalization was driven by US multinationals in the consumer and technology sectors, and the spread of US banks to Europe is now well documented. Lately we have seen the rise of EM companies, with an emphasis on large Chinese firms.

13 Cheol Eun & Sangsdal Shim in 1989, 'International Transmission of Stock Market Movements,' *The Journal of Financial and Quantitative Analysis*, vol. 24, 2.

14 Represented by the world's major stock markets (USA, Canada, UK, France, Germany, Switzerland, Australia, Hong Kong and Japan).

Taking corporates as one of the main channels through which globalization flows we investigate the course of globalization by looking at the trends in the foreign sales and asset shares of major, listed corporations over the last decade.

A retreat of globalization would be consistent with a fall in the share of foreign sales and assets, while a continuation would manifest itself through the expansion of corporations abroad, both in terms of foreign sales and investments. Our sample incorporates the constituents of the MSCI All Countries World index. For each company in the index we determine the share of foreign assets and sales as a share of total assets and sales respectively. We exclude companies when data for either of the two fields are missing.

Foreign sales accounted for 39% of total global corporate sales in 2014, well above the 2004 level when they accounted for 31% (Figure 36, Global). The global financial crisis slowed this expansion, but did not end the upward trend. This holds irrespective of how we aggregate the data (using equal, sales or market cap weights). This pattern is also generally consistent across sectors and regions, financials and non-financial companies (Figure 36) with only some exceptions, such as companies from Europe.

The trend for foreign assets, however, is different. The penetration of foreign assets is typically lower than that of foreign sales, as they accounted for just 19% of total assets in 2014 on average. In contrast to sales, the upward trend in foreign assets was brought to an end during the global financial crisis. Foreign assets accounted for 21% of the total in 2003, peaked at 26% in 2008, and then troughed to 18% in 2012. This pattern is similar across most sectors and regions, although again there are some exceptions.

If we consider the difference between developed and EM companies, there does seem to be more of a retrenchment in the foreign asset exposure of developed world companies versus those in EMs, which seem to have expanded their overseas revenues vigorously while their overseas investment has not slowed to the same extent as DMs (Figure 36).

## Sector trends

Among sectors, technology companies are strongly associated with globalization. The sector enjoys a very high share of foreign sales relative to other sectors, but at the same time has the lowest share of foreign assets. This gap between foreign sales and assets in new economy companies helps highlight the changing nature of globalization and the impact of technology.

The financial sector, which was at the epicenter of the financial crisis, has managed to keep foreign revenues relatively stable, but the share of foreign assets has contracted from the peak of 2007 by some 5%. The sector is not an exception, because industrial and consumer goods companies have exhibited similar trends. This leads us to believe that the retreat of companies back to their domestic markets is broader and is perhaps a reflection of risk reduction.

## Regional sales and assets

Regional trends do not signal that globalization is coming to an end, but that companies seem more reluctant to invest abroad. The foreign sales share of emerging market companies showed a downward trend until 2007, after which they expanded strongly, albeit from relatively low levels. In contrast, the share of foreign sales of developed market companies trended upwards over the entire 2003-2013 period.

Figure 37

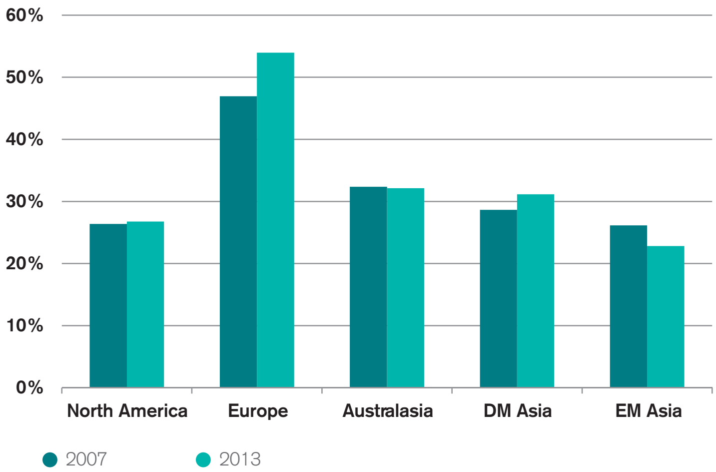
### Sector trends

Percent of total


Source: Datastream, Credit Suisse

Figure 38

### Sales outside region by domicile of company




Source: Datastream, Credit Suisse

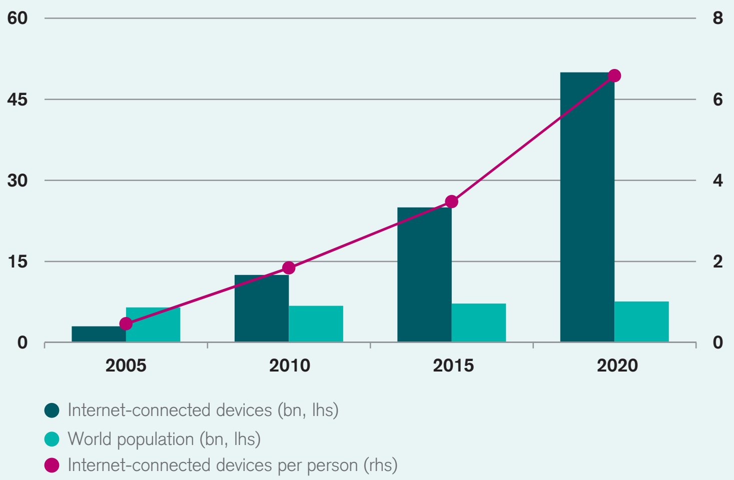
# Game changer 3: Digital world

Services, products and even money are becoming increasingly digital. Digital services are revolutionizing, whole industries, which once were considered non-tradable and making geographical distances redundant. Digital content is increasingly making up a growing share of wallet, heightening the importance of intellectual property protection. Digital money transfers are creating decentralized systems, sidelining sovereign control. All these trends make it much more complex to track economic activity in traditional statistics and creating difficult issues for national taxation. Services, products and even money is becoming increasingly digital.

Figure 39

**Number of internet-connected devices**

Population and total device numbers in billions (lhs), devices per person (rhs)




Source: CISCO, Credit Suisse

### How it could make the world more connected

Digitization is one of the strongest trends today when it comes to fostering globalization. The digital sphere renders many things, once thought essential, redundant: transportation, production space, even national borders. Digital translation algorithms are even increasingly lessening linguistic barriers, real-time translation in VoIP communication is already a reality (e.g. Skype). It also lessens states' influence on many activities, strengthening globalization even without interstate cooperation.

### How it could make the world more fractured

We are still far from a truly globalized digital sphere. Cultural, linguistic and historical barriers strongly compartmentalize the internet. It is an unlikely scenario, but digital interactions might make actual contact with other parts of the world less important.

PHOTO: SHUTTERSTOCK.COM/NEIRFY

The share of foreign assets of developed market companies is around 5% off its 2007 level, but foreign assets of emerging market companies do not show a clear trend.

An examination of sales outside each company's region (not country) reveals that companies have not stopped their global expansion in the post-crisis years (Figure 38).

Overall, the results of our analysis of corporate investment and revenue growth show that globalization remains intact in terms of consumption and marketing patterns, though notwithstanding the side-effects of the global financial and euro crises, there appears to have been a retrenchment in cross-border investment by corporates. Together with the rise of EM companies in terms of both sales and investment, we read these results as pointing towards a more multipolar world where companies continue to sell across borders but are more cautious in investing across them.

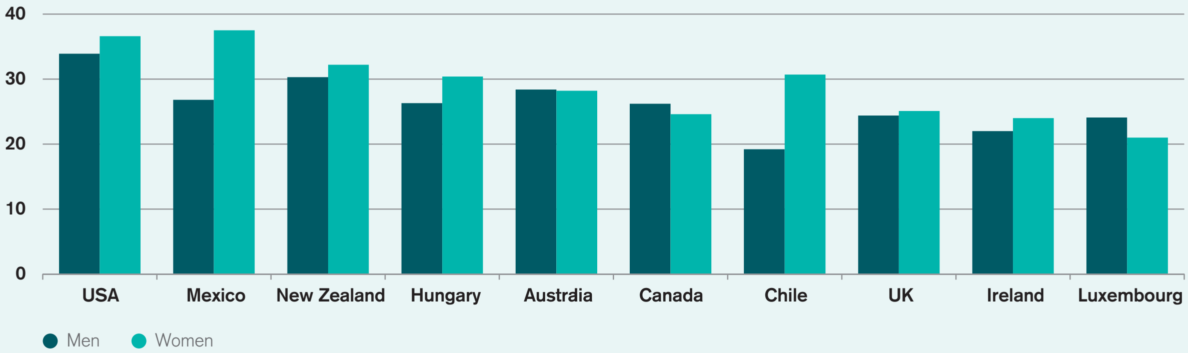
# Game changer 4: Food and obesity

The increasing prevalence of obesity has created pressure on healthcare systems not only in the developed world but also in emerging markets, like China and India, where the systems are either not highly developed or not available for a large number of people. According to the World Health Organization (WHO), obesity has more than doubled since 1980, while in 2014 more than 1.9 billion adults were overweight, of which 600 million were obese. According to the latest OECD statistics overweight and obese people combined are now a majority in many countries, such as the United States, Mexico and Australia. At the same time, there exists inequality between countries in terms of food consumption. According to the Food and Agriculture Organization of the United Nations (FAO), 805 million people were estimated to be chronically undernourished in 2012-2014.

Figure 40

## Obesity among adults

Percent of population aged 15 years and over




Source: OECD (2014), OECD Health Statistics 2014, forthcoming, www.oecd.org/health/healthdata

Note: for the year 2012 or nearest year

### How it could make the world more connected

Obesity, and at the same time lack of food, are nowadays critical global issues, which require international intervention strategies. The WHO reports also that 42 million children under the age of five were obese or overweight in 2013 and interestingly, under-nutrition and obesity can exist side-by-side ('double burden of disease') within the same country, community and even in the same household, especially in many low-and middle-income countries. From the food production's perspective, more private and public investments are needed to increase agricultural productivity as well as social protection for the most vulnerable ones, in order to reduce hunger on a global level. Therefore, more comprehensive and increasing international cooperation among countries would be highly important in the fight against the imbalances of obesity and undernourishment.

### How it could make the world more fractured

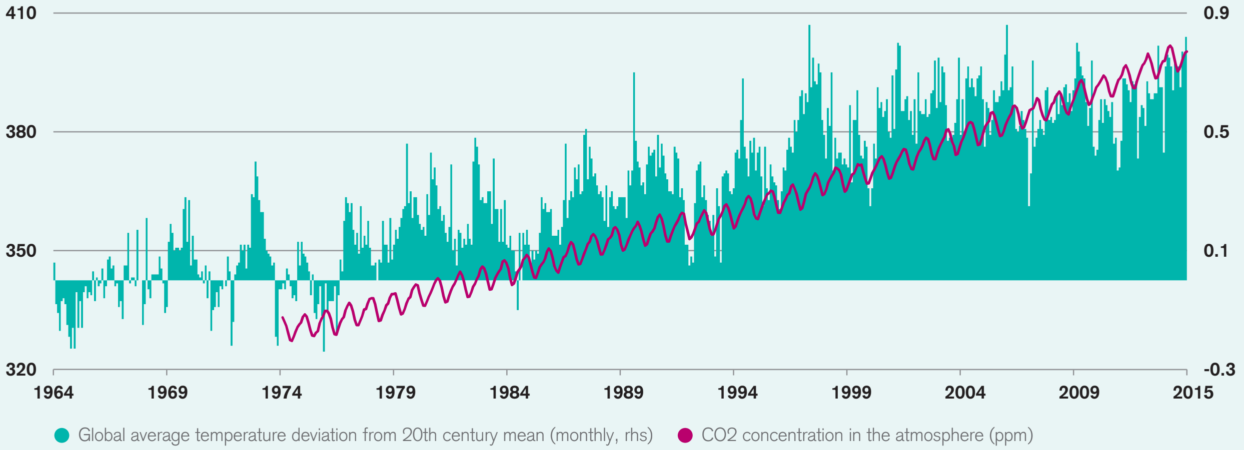
Besides the problems caused by overweight and obesity, the even larger issue is food scarcity, given the global growth of population. Food security in forms of food supply and individuals' access to it could become a major political issue, especially in the most unstable and vulnerable countries. Being overly dependent on food imports is a concern for many countries, possibly leading them to shy away from globalization in food markets. The Russian export ban on wheat in 2010 and China's goal of self-reliance for all major crops are just two examples.

# Game changer 5: Climate change

The oil price has seen dramatic price movements in the last 12 months and the supply and price of energy will continue to play a crucial role in world politics. At the same time concern about the environment and adverse climate change is rising with the next round of negotiations on reducing emissions taking place in Paris in December 2015. The lower price for oil offers an opportunity to change the energy mix towards more renewable sources, but at the same time lowers the incentive to do so.

Figure 41

**Global temperature deviation and $CO_2$ concentration**




Source: NOAA, Credit Suisse

### How it could make the world more connected

Most issues regarding climate change can only be tackled on a global level, requiring more cooperation between nations. The more pressing the issue becomes, the more states are forced to cooperate. Rising environmental concerns in emerging countries align their interests with the developed world. At the same time fossil fuels will remain a major global energy source, connecting energy-consuming countries with producing countries, many of them in geopolitical hotspots.

### How it could make the world more fractured

Renewable energy sources such as solar, wind or hydro energy have the potential to decentralize energy production, lessening the need for energy imports in many countries. While it will still be economically reasonable to import energy from the cheapest producer (e.g. solar energy from North Africa to Europe); the desire to be more energy independent may lead many countries to reduce global interdependences.

PHOTO: ISTOCKPHOTO.COM/ZORAZHUANG

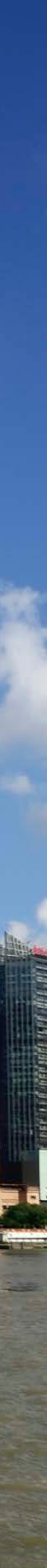
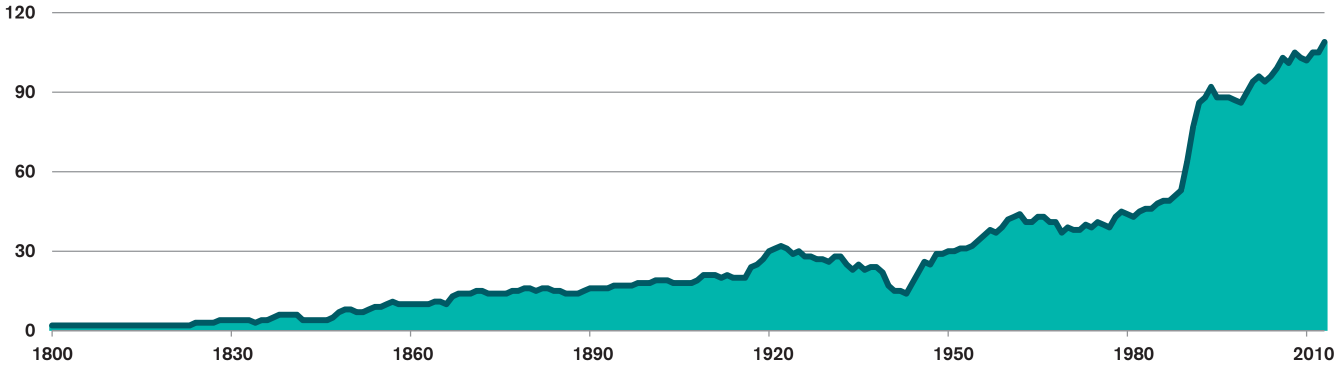


Figure 42

## The rise of democracy

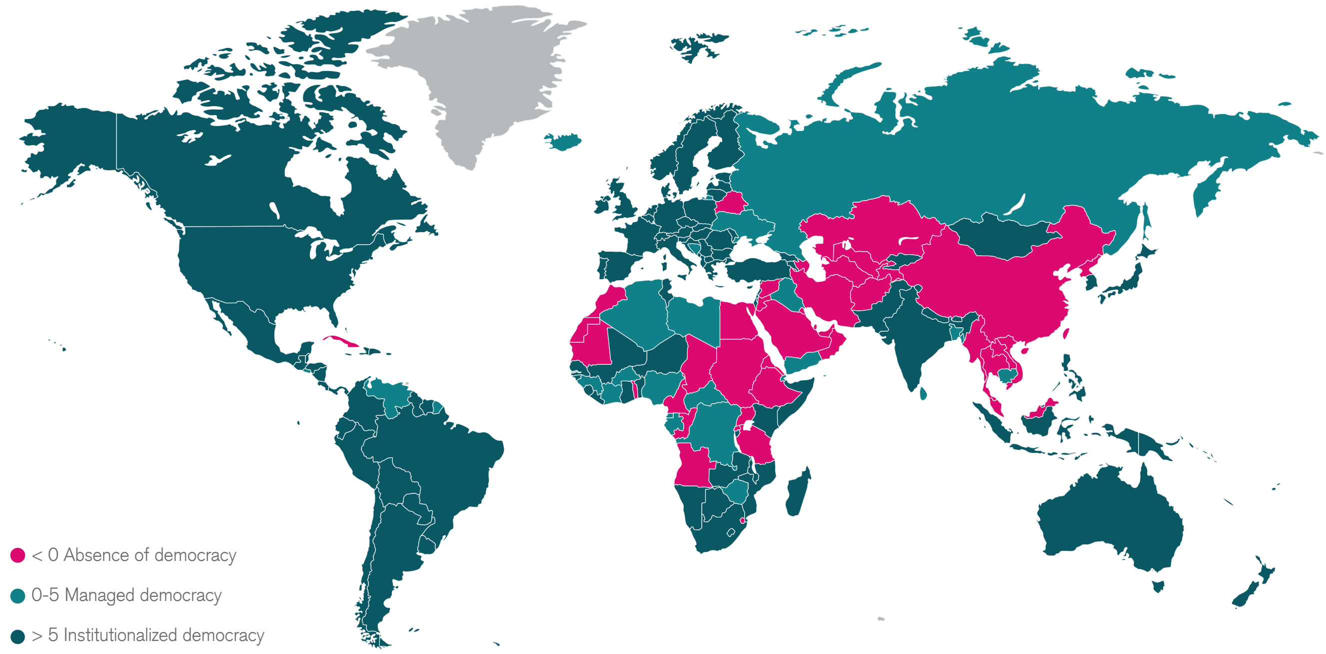



Source: Center for Systemic Peace, Credit Suisse

Note: Democratic regimes with a CSP score of 5 or greater than 5 on 'Institutionalized Democracy' are plotted here

Figure 43

## Quality of democracy




Source: CSP, Credit Suisse

## Governance and the rise of new institutions

A key facet of globalization is the trend in political transformations driven by the gradual waning of colonialism and fall of communism, paved the way for the rise and spread of democratic regimes. While some countries have not embraced democracy as the primary form of governance, others suffer from a gap between legislation and implementation, where civil liberties remain curbed and/or concentrated in the hands of quasi-democratic administrators.

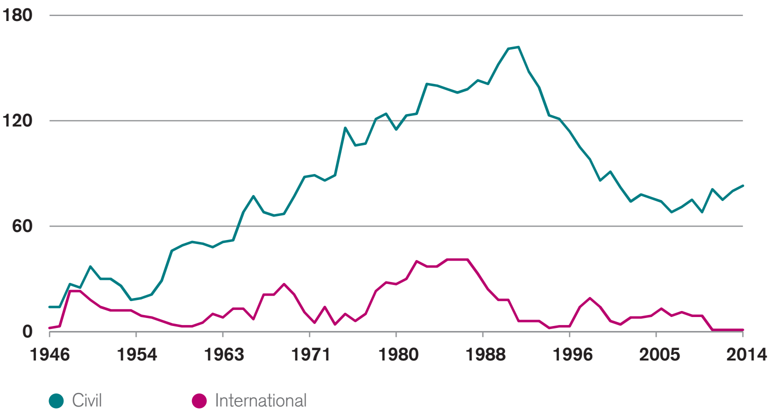
As witnessed recently – (i.e. 2011 Arab Spring in the MENA region) the contest for more democracy is ongoing and here, data from the CSP suggest that conflict within countries and regions may be replacing conflict between them as a source of geopolitical stress (Figure 44).

The regionalization of politics is also visible from the plateauing of memberships to various US-based multilateral organizations such as the International Monetary Fund (IMF), World Trade Organization (WTO, erstwhile GATT) and the United Nations (UN) (Figure 45). These are now being challenged by the rise of new international organizations in Europe and Asia (Figure 46).

Figure 44

## Political conflicts are increasingly becoming domestic/regional

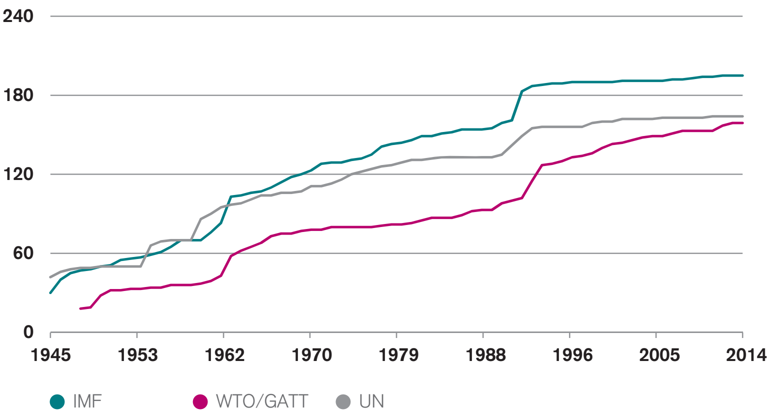
Number of conflicts




Source: CSP, Credit Suisse

Figure 45

## Membership of international multilateral organizations

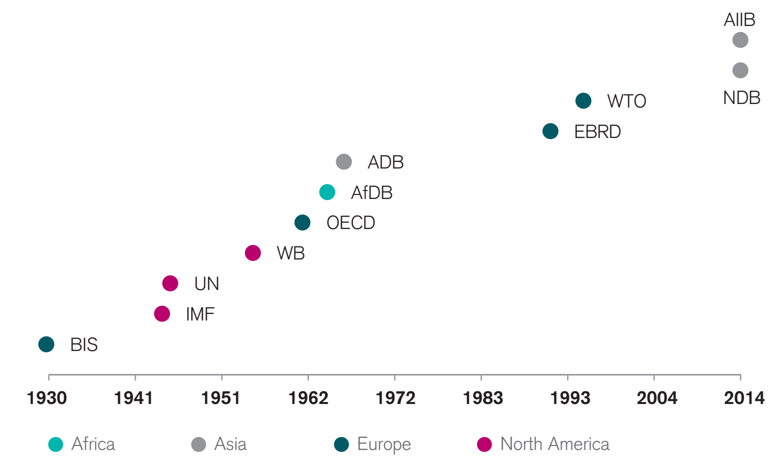



Source: IMF, WTO/GATT and UN membership rolls, Credit Suisse

Figure 46

## Rise of new international institutions in Europe and Asia

By date of initial establishment and headquarter location




Source: Official websites of the various institutions, Credit Suisse

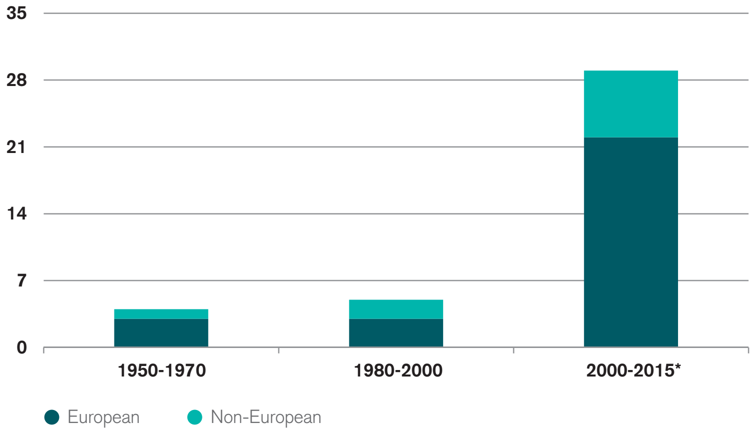
We also note an evolution in the type of new institutions that are being created. For instance, in a world that is increasingly becoming sensitive to fiscal responsibility and the containment of negative spillovers, the rise of independent fiscal councils as an alternative to the directives of the IMF and World Bank is noteworthy. Not only has Europe become more active in this space, but the initiative of other non-European economies also appears to be growing (Figure 47).

Similarly, the regional expansion of sovereign wealth funds (SWFs) as prudential fiscal back-ups is an interesting trend. Figure 48 shows that the MENA region leads with the maximum number of SWFs (largely resource-based), followed by Asia-Pacific (that also have non-commodity SWFs) and Latin America.

Figure 47

## Growing importance of fiscal councils

Number of fiscal councils



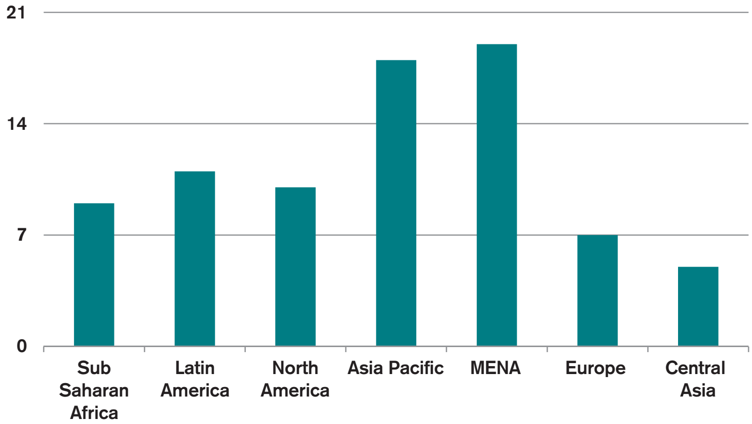

Source: IMF Fiscal Council Dataset, Credit Suisse

*includes fiscal councils in development

Figure 48

## Sovereign wealth funds by region

Number of SWFs by region in 2014




Source: Sovereign Wealth Fund Institute Open Database, Credit Suisse

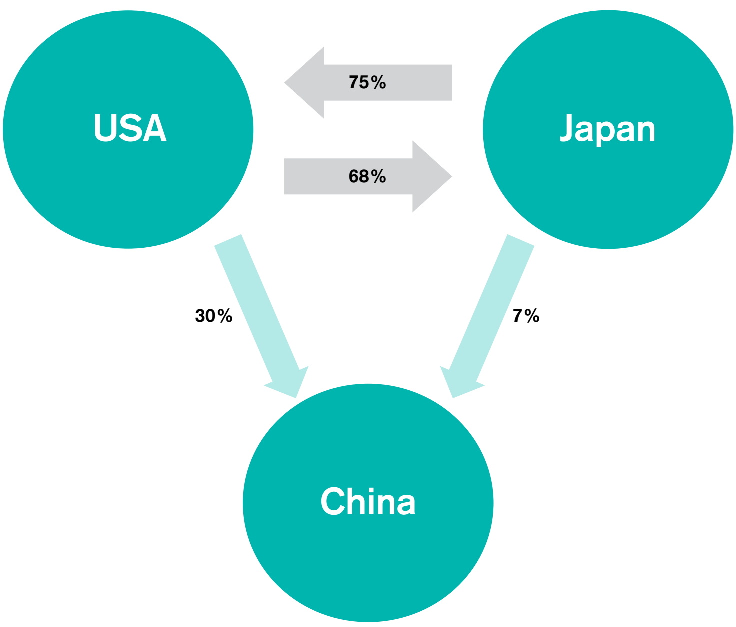
# Faultlines: The end of globalization?

Our third scenario is a darker, negative one that recalls the collapse of globalization in 1913 and the subsequent onset of the First World War. Broadly, our sense is that the world is currently in a zone between full globalization and multipolarity and as such an end of globalization scenario is a low probability one. However, there is a growing narrative that the global economy continues to face the risky combination of low growth and high indebtedness, and from a geopolitical point of view that the rise of new Asian powers is challenging historically dominant economic and political nations.

Figure 49

**Trust dynamics between major economic powers**

Response to the survey question: can trust great deal/fair amount




Source: Pew Research Center, Credit Suisse

An example of this is found in recent surveys from the PEW Research Center in 2015 that identify underlying perceptions and attitudes on the economic agenda and status of major powers; namely the USA, Europe, Japan and China.

In particular the Global Attitudes survey (2015) highlights that the rise of China is increasingly being viewed anxiously, and relatedly the rebalancing of America's military commitment and strategy towards Asia is regarded positively amongst most Asian countries, except Malaysia.

From a European point of view, perceptions are also changing with a median[15] of 41% of Europeans now considering China as the leading economic power, while the USA follows close at heels(median of 39%).

On a more optimistic note, while the world has been stressed by the global financial crisis and terrorist attacks in recent years; these developments have arguably led to more rather than less cooperation between nations. Still, there are risks to globalization and in this section we outline them in the form of a risk scorecard.

15 Median across five EU countries, namely Britain, France, Germany, Poland and Spain.

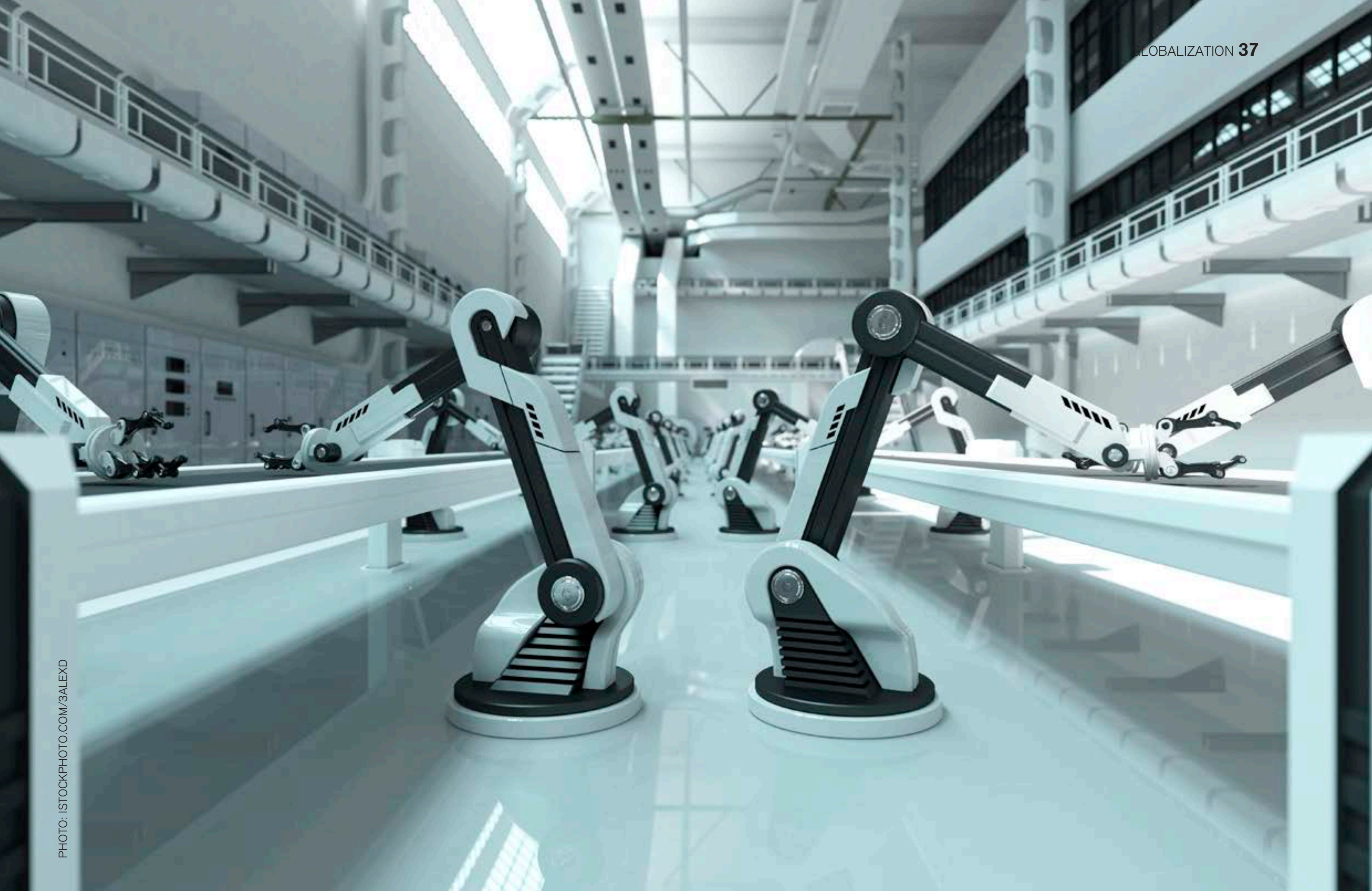


PHOTO: ISTOCKPHOTO.COM/3ALEXD

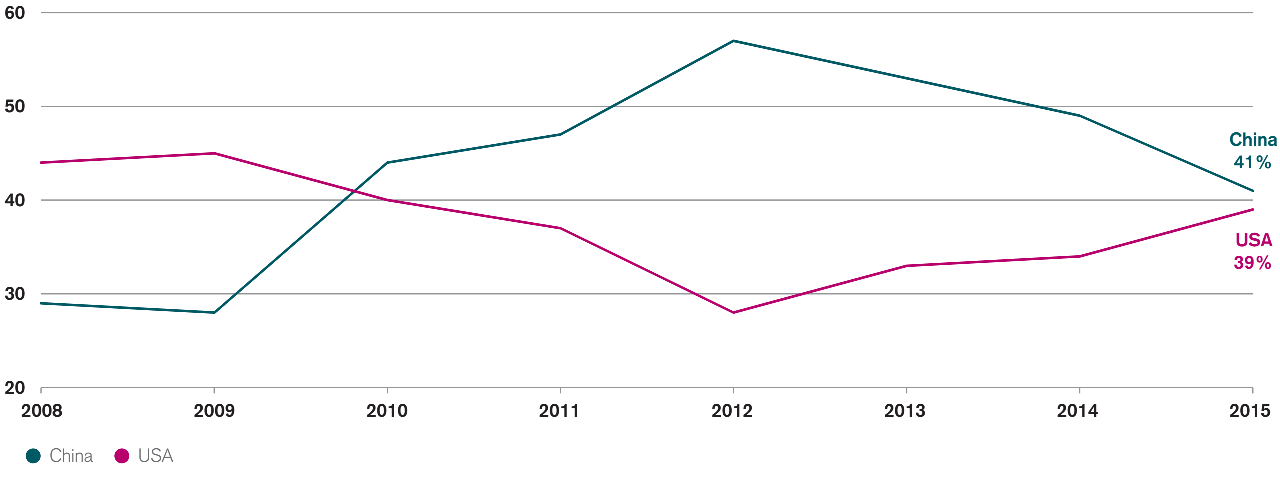
Our aim here is to not only analyze the perceived risks but also their relative intensity and ability to adversely affect the progress of globalization. Of course, geopolitical tensions stem from geographical, religious/linguistic demographics and we highlight these faultlines in the form of world maps (please see relevant section).

Our attempt at understanding the effects of globalization on global climatic conditions and vice versa is worth mentioning here as we build a separate climate dashboard that studies changes in average temperature, greenhouse gas (GHG) emissions etc. over the last few decades. Finally, we try to understand the obvious barriers to globalization like protectionist measures (tariff/non-tariff barriers, including countervailing measures) and the rise of anti-globalization movements/nationalist parties in major countries (SNP and UKIP in the recently-concluded UK general elections come to mind).

Figure 50

## USA and China at economic parity?

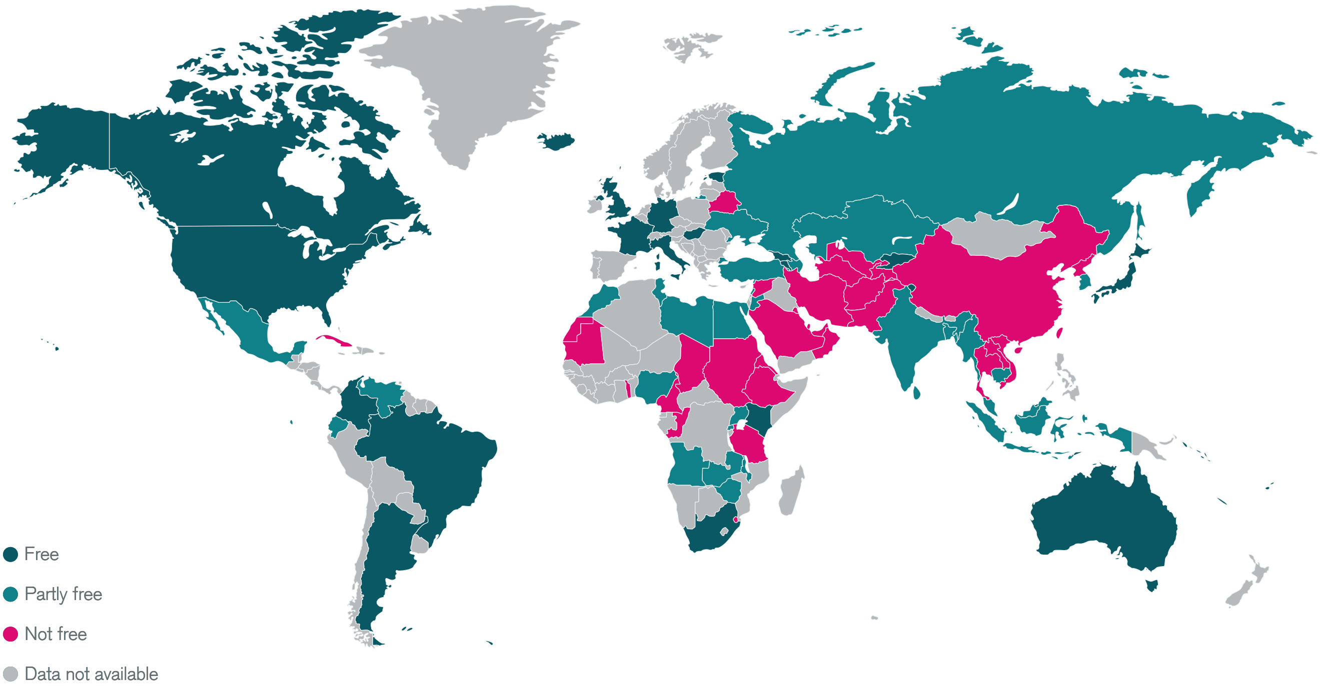
European views – Medians across five European nations saying (China/USA) is the world's leading economic power, 2008-2015




Source: Pew Research Center, Credit Suisse

Figure 51

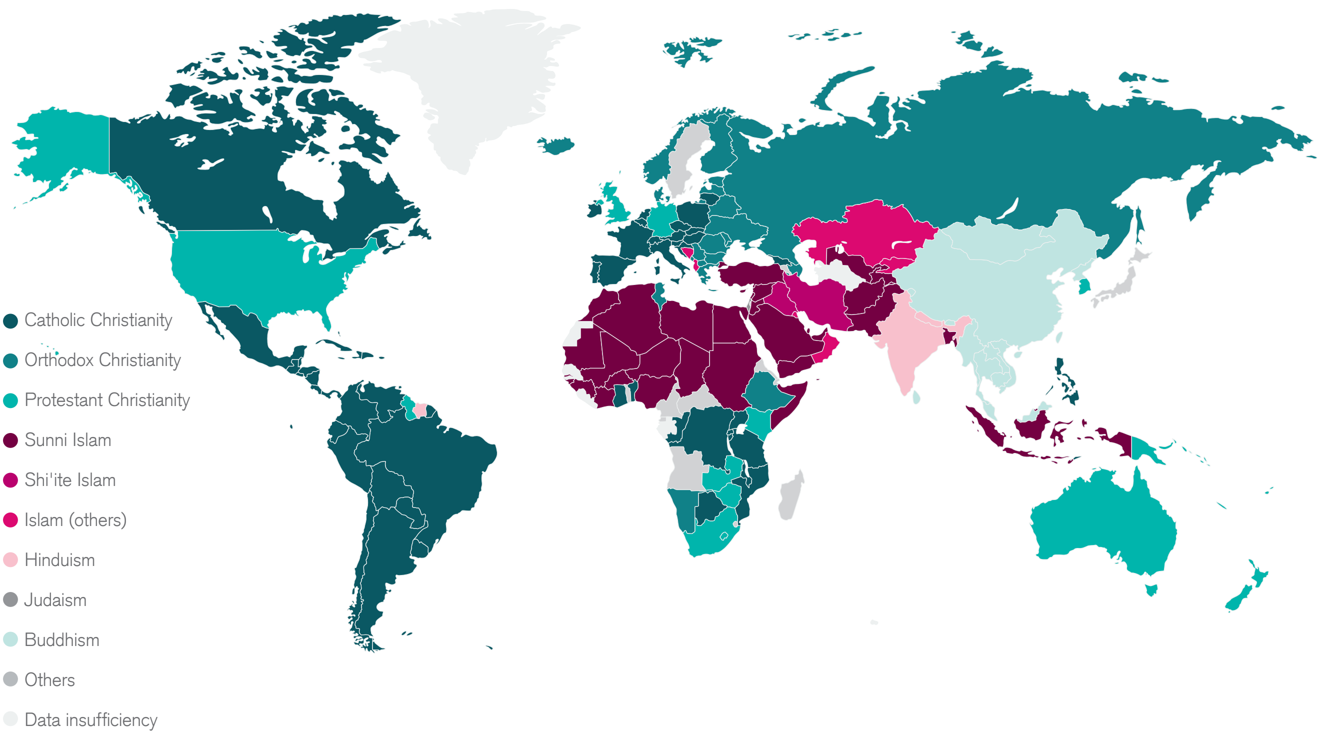
## Internet freedom




Source: Freedom House, Credit Suisse

Figure 52

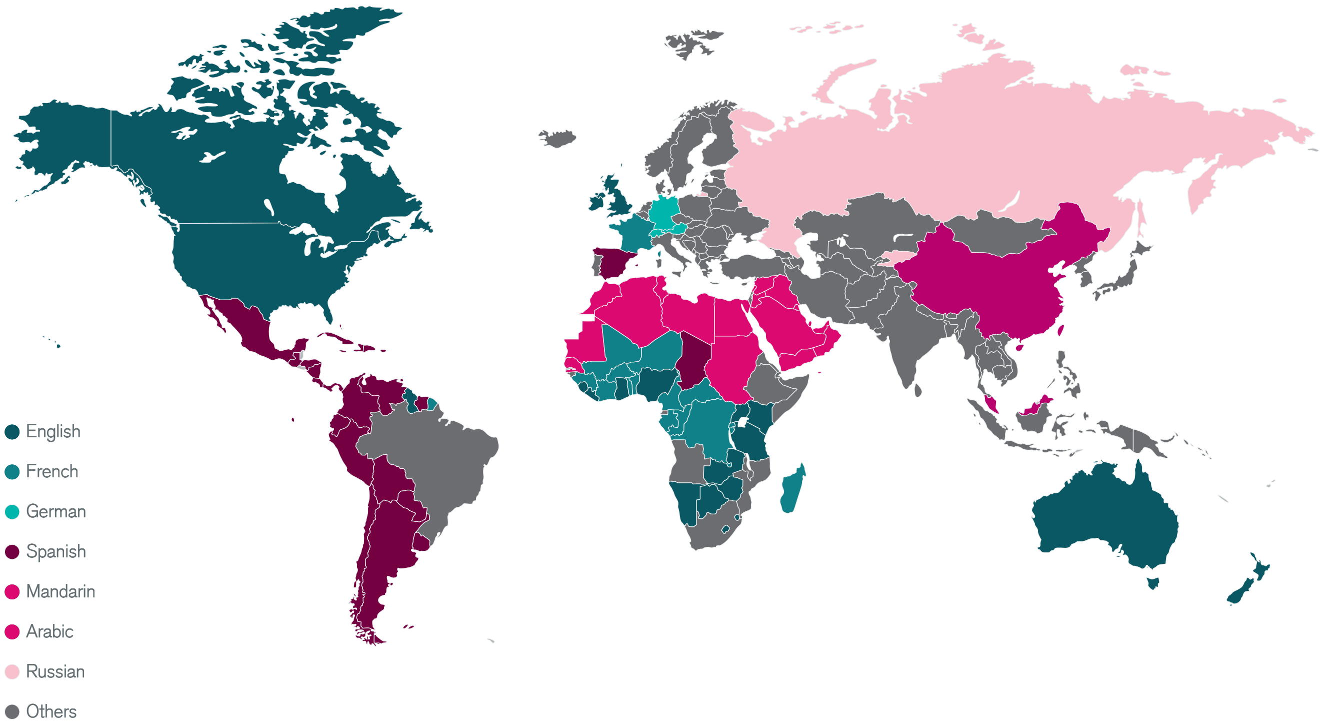
## Religious demographics




Source: CIA World Factbook, Pew Research Center, Credit Suisse

Figure 53

## Linguistic demographics




Source: CIA World Factbook, Ethnolog, Credit Suisse

### Faultlines – internet freedom

As the internet has developed over the past two decades, information exchange has become a key driver of social and technological globalization. As outlined earlier, internet security concerns are a growing threat, with sovereign governments seeking to 'manage internet freedom'. We use data from Freedom House, an American watchdog to measure the level of internet and digital media freedom in 65 countries on three broad categories of internet freedom.[16] Developed countries are seen to enjoy relatively greater internet freedom when compared with their developing country counterparts, especially like China and Iran that support technological sovereignty (Figure 51).

### Religious demographics

Many conflicts between and within states, in recent years, have involved religion or a change in religious demographics regionally. Figure 52 depicts the dominant religion of the countries under consideration. Christianity has the most followers globally, with Islam close behind, although there are many variants in both the religions. Hinduism and Buddhism are localized to Asia while Islam has strong roots in the Middle East and North Africa. It seems obvious to focus on the expected evolution of religious demographics to understand how globalization might evolve on these lines. A recent study by Pew Research Centre predicts that Islam will register the highest growth rate by 2050 (73%) and will be almost on a par with Christianity as the world's most followed religion.

### Linguistic demographics

On similar lines to religion, we study global linguistic demographics that bring into perspective the status of English as the de-facto lingua franca. Although Spanish and French are still the official languages in many countries, especially in South America and parts of Africa, the advent of English finds its roots in the British Empire and the emergence of the USA as a superpower in the 20th century (Figure 53).

16 **Obstacles to Access:** Assesses infrastructural and economic barriers to access; governmental efforts to block specific applications or technologies; and legal, regulatory, and ownership control over internet and mobile phone access providers.
**Limits on Content:** Examines filtering and blocking of websites; other forms of censorship and self-censorship; manipulation of content.
**Violations of User Rights:** Measures legal protections and restrictions on online activity; surveillance; privacy; and repercussions for online activity.

## Climate

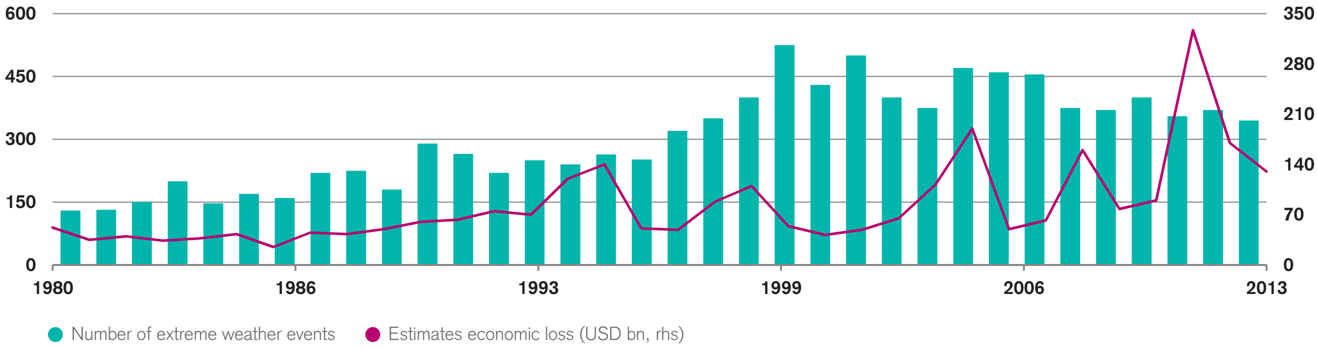
Unsurprisingly, the expansion in global trade and integration of supply chains and production processes have come at the cost of increasing GHG emissions and exploitation of natural resources, which have cumulatively caused a substantial dislocation in global temperatures and weather cycles. Increasing global trade has been closely correlated with a rise in global mean temperature. There is a persistent positive deviation away from global historic mean temperatures from the mid-1980s. In order to better understand the impact of the increase in global trade on GHG emissions and climate change, we measure net emissions (In kg CO2), emission intensity of exports in goods and services (in kg CO2/USD) and trade openness (as a percentage of GDP) for select major economies since 1997. Although the emissions intensity of exports has fallen substantially for all major economies since 1997, net GHG emissions have nevertheless continued to increase – particularly for the USA, China and India.

Despite efforts to control the damage, a lot more is left to be done. In this context, we make reference to a study by a group of leading climatologists who conducted a series of multi-factor analyses (Meinhausen et al 2006) to gauge the quantum of global emissions required to prevent a global mean temperature increase of 2 degrees Celsius by 2050 – the results of which were published in an influential study in the Nature in 2006. According to this study, with emissions equaling 1000 gigatons of carbon dioxide (GT), the probability of global temperatures increasing beyond 2 degree levels would be limited to 25%. To further reduce the probability of overshooting this limit to 20%, a GHG emission limit of 886 GT would have to be enforced. The most recent data published by Carbon Tracker Initiative, a London think tank, suggest that as of 2011 about 560 GT of this global carbon budget had already been exhausted in the first decade of this century. Clearly, climate change mitigation efforts require a more urgent commitment of resources to prevent global temperatures from overshooting.

How credible and imminent is the threat to the global economy from climate change? To show this, we created Figure 54 using the International Disaster Database, which measures the number of extreme weather events – thunderstorms, floods, droughts, heat and cold waves – against estimated economic loss since the 1980s. As the chart shows, there has been a visible acceleration in extreme weather events since the mid-90s. New research from Intergovernmental Panel for Climate Change (2014) and the American Meteorological Society (2013) independently found that the human impact on the global climate had increased the risk

Figure 54

### Climate events and economic losses

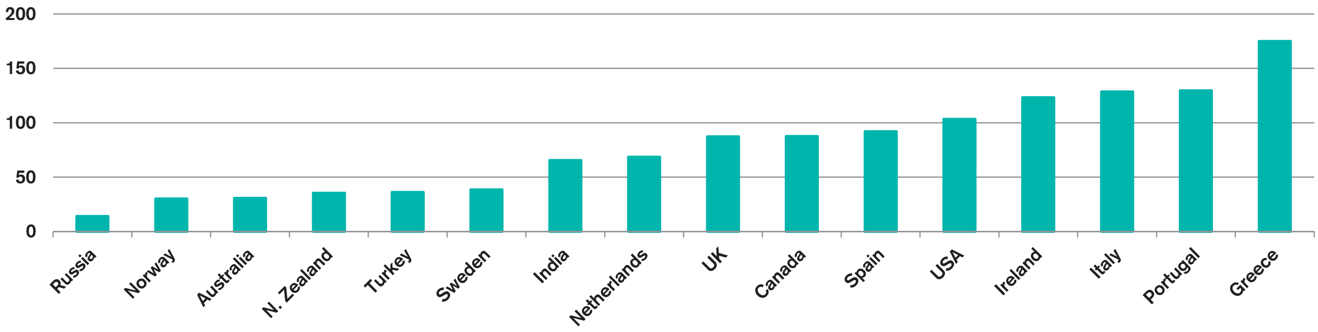



Source: International Disaster Database, Credit Suisse

Figure 55

### Central government debt

Percent of GDP




Source: IMF, Credit Suisse

Figure 56

## Military strength indicator

| Country | Overall ranking | Active personnel ('000) | Tanks | Aircraft | Attack helicopters | Aircraft carriers | Submarines | Final military strength score |
|---|---|---|---|---|---|---|---|---|
| United States | 1 | 0.90 | 0.86 | 0.95 | 0.95 | 0.95 | 0.95 | 0.94 |
| Russia | 2 | 0.81 | 0.95 | 0.90 | 0.90 | 0.52 | 0.86 | 0.80 |
| China | 3 | 0.95 | 0.90 | 0.86 | 0.86 | 0.52 | 0.90 | 0.79 |
| Japan | 4 | 0.38 | 0.38 | 0.76 | 0.81 | 0.76 | 0.81 | 0.72 |
| India | 5 | 0.86 | 0.81 | 0.81 | 0.19 | 0.76 | 0.76 | 0.69 |
| France | 6 | 0.33 | 0.24 | 0.67 | 0.43 | 0.90 | 0.57 | 0.61 |
| South Korea | 7 | 0.76 | 0.57 | 0.71 | 0.71 | 0.05 | 0.67 | 0.52 |
| Italy | 8 | 0.52 | 0.33 | 0.38 | 0.57 | 0.76 | 0.43 | 0.52 |
| UK | 9 | 0.19 | 0.14 | 0.52 | 0.67 | 0.52 | 0.57 | 0.50 |
| Turkey | 10 | 0.57 | 0.67 | 0.57 | 0.57 | 0.05 | 0.67 | 0.47 |
| Pakistan | 11 | 0.71 | 0.62 | 0.48 | 0.48 | 0.05 | 0.52 | 0.41 |
| Egypt | 12 | 0.62 | 0.76 | 0.62 | 0.38 | 0.05 | 0.14 | 0.34 |
| Taiwan | 13 | 0.43 | 0.52 | 0.43 | 0.76 | 0.05 | 0.14 | 0.32 |
| Israel | 14 | 0.24 | 0.71 | 0.33 | 0.48 | 0.05 | 0.33 | 0.32 |
| Australia | 15 | 0.05 | 0.05 | 0.10 | 0.24 | 0.52 | 0.43 | 0.30 |
| Thailand | 16 | 0.48 | 0.43 | 0.24 | 0.14 | 0.52 | 0.05 | 0.28 |
| Poland | 17 | 0.14 | 0.48 | 0.19 | 0.29 | 0.05 | 0.33 | 0.23 |
| Germany | 18 | 0.29 | 0.19 | 0.29 | 0.33 | 0.05 | 0.14 | 0.19 |
| Indonesia | 19 | 0.67 | 0.29 | 0.05 | 0.10 | 0.05 | 0.10 | 0.12 |
| Canada | 20 | 0.10 | 0.10 | 0.14 | 0.05 | 0.05 | 0.14 | 0.10 |

Source: SIPRI, Global Firepower, Credit Suisse

of severe natural calamities. Losses due to extreme weather events tend to occur in cycles – varying by the intensity of natural disasters. However, since the mid-2000s, economic damages due to extreme weather events have been more severe.

### Central government debt

Having looked at 5-year averages of central government debt for major country poles (till 2012), we find the usual suspects like debt-ridden Greece on the wrong end of the spectrum while Scandinavian countries are relatively debt-free (Figure 55).

### Military strength indicator

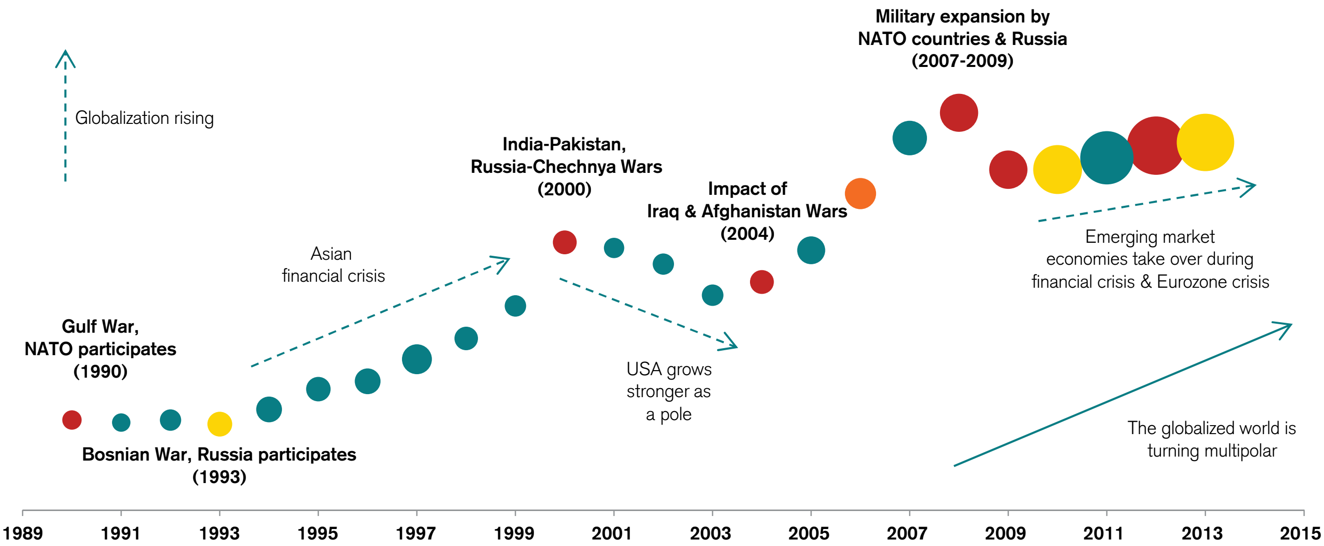
Determining the strength of modern militaries is no mean feat, especially when one considers the myriad capabilities under consideration. To give a sense of how major military powers relate to each other, we have created a weighted military strength index which identifies six key elements[17] of modern warfare (only conventional war capabilities considered) for top-20 nations (Figure 56). Our analysis reveals the military superiority of the United States in conventional war capabilities compared to its close rivals. Its fleet of 13,900 aircraft, 920 attack helicopters, 20 aircraft carriers and 72 submarines far outweighs the military might of any of its close rivals and so does its defense spending worth USD 610 bn in 2014, which is far more than the combined military expenditures of the next nine countries in our index. In reality, in today's nuclear era, conventional forces are not the only indicator of military strength. Russia and the United States account for more than 90% of global inventories of nuclear weapons according to data provided by Stockholm International Peace Research Institute's (SIPRI) Yearbook 2015.

There are some data issues here that we should flag. We have only considered data for these 20 countries and this index highlights these countries' relative military strength to each other. The absence of time series data prevents us from making historical and cross-country comparisons of the military capabilities of these nations. Also, Germany ranks considerably lower than might otherwise be expected by conventional wisdom due to its relatively smaller fleet of aircraft carriers and submarines – capabilities which command higher weights in our index.

17 The six elements considered along with their weights are: Active personnel (5%), tanks (10%), attack helicopters (15%), aircrafts (20%), aircraft carriers (25%), submarines (25%).

Figure 57

## Globalization timeline

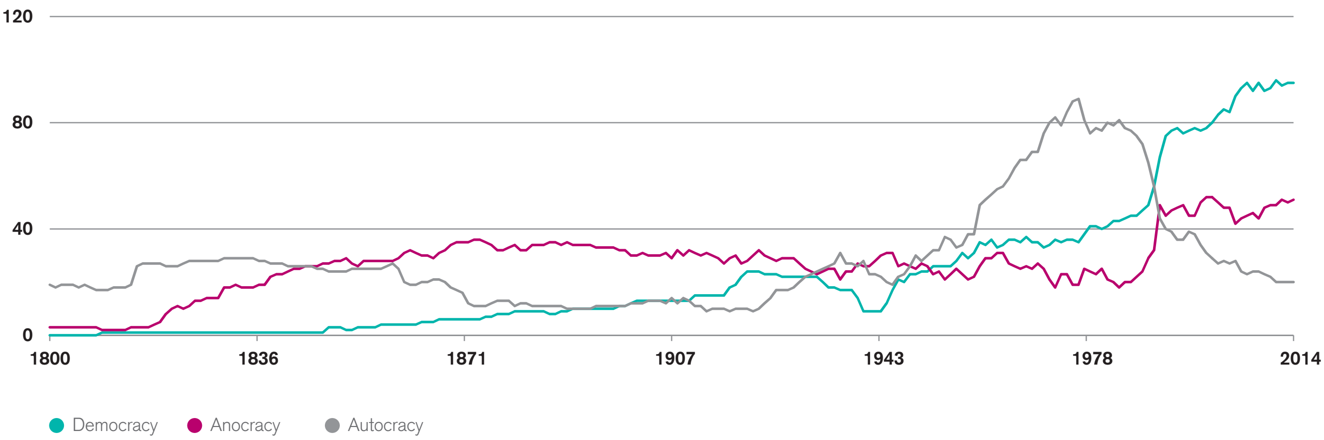



Source: Freedom House, Credit Suisse

**Yellow bubbles** indicate hurdles to globalization in the form of localized armed conflicts, growing debt (as a % of GDP) and/or marginal increases in trade barriers. **Orange stands** for more intense conflicts, heavy debt burden and/or constraining trade barriers. **Red stands** for major threat to globalization from severe military expansion, unsustainable debt positions and/or barriers to trade

Figure 58

## Governance regimes




Source: Center for Systemic Peace, Credit Suisse

The debate about the end of globalization can be both chilling and entertaining, and we suspect that it will generate a great deal of media content in coming years, though for the moment our work suggests that we are far from an end of globalization scenario. Figure 57 helps to illustrate the progress of globalization in the midst of geopolitical risks. The chart takes our broad measure of globalization (measured on the y-axis) and adds a measure of multipolarity (size of bubble) over time (measured on the x-axis), giving us an idea of where we are today.

The measure for globalization is a weighted sum of trade, financial flows, technological advancement,[18] technological outreach (measured by the share of high-tech exports in manufactured goods exports) and international migration stock. An expansion in all or any of three variables is qualitatively regarded as a facilitator of globalization and vice versa. On the contrary, the imposition of greater barriers to trade, higher debt burden and/or military expansion would result in a weakening of globalization. Such threats are color-coded in Figure 57.

18 Technological advancement is further calculated as the sum of fixed land line subscriptions (per 100), mobile subscriptions (per 100) and internet users (per 100).

PHOTO: ISTOCKPHOTO.COM/MARRIO31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**End of globalization risk scorecard**

Having already sketched some of the faultlines that may threaten globalization, we now bring these and other factors together to form a warning system or heat map of the risk factors to globalization.

Our end of globalization scorecard comprises a range of variables – a trend slowing in economic growth and trade with the added possibility of a macro shock (from indebtedness, inequality, immigration), a rise in trade protectionism, wealth inequality or a reversal in transitions to democracy (Figure 58). Our aim is to gauge the current levels of stress faced by key countries/regions pertaining to these variables (please see footnote).

There are some caveats that need addressing here. We have employed z-scores to understand the current levels of risks to mentioned variables, a decrease in values of these variables (with a high current absolute value) might give a somewhat false indication of less spending (particularly relevant in military spending as percent of GDP).

Our heat map first highlights that military spending, though high in absolute terms, is not accelerating. Instead the principle threats to globalization come from immigration and indebtedness, two live political topics. To a certain extent wealth inequality is an issue for a number of emerging countries in the sense that it is getting more extended while we also note the relative increase in the imposition of non-tariff barriers, especially since the formation of the WTO in 1995, as an indirect barrier to trade is also a potential threat to globalization along with trade sanctions.


Figure 59

## End of globalization risk scorecard

| | Military spending | Polity | Wealth inequality | Non-tariff barriers | Migrant stock | Debt |
|---|---|---|---|---|---|---|
| **North America** | -0.88 | 10.00 | -1.13 | 0.87 | 1.93 | 1.85 |
| United States | -0.64 | 10.00 | -1.83 | 0.39 | 1.64 | 1.85 |
| Canada | -1.27 | 10.00 | -1.05 | 2.39 | 2.27 | -0.48 |
| **Europe** | -1.60 | 10.00 | 1.34 | -0.91 | 1.89 | |
| United Kingdom | -1.07 | 10.00 | 2.04 | -0.83 | 1.83 | 2.40 |
| Germany | -0.92 | 10.00 | -0.59 | -0.94 | 0.89 | 2.21 |
| Italy | -2.24 | 10.00 | 1.15 | -0.58 | 2.46 | 1.58 |
| France | -1.19 | 9.00 | 0.36 | 0.53 | 0.42 | 2.60 |
| Spain | -1.26 | 10.00 | 2.08 | -0.58 | 2.41 | 1.66 |
| Switzerland | -1.05 | 10.00 | -0.48 | -0.13 | 1.28 | |
| Russia | 1.12 | 4.00 | 2.23 | 3.20 | 1.41 | -0.50 |
| **Asia** | -1.30 | 7.00 | 1.84 | 0.51 | 1.18 | |
| Australia | -1.07 | 10.00 | 1.12 | 0.36 | 1.00 | 2.59 |
| Japan | 0.85 | 10.00 | -1.33 | 0.38 | 1.98 | 1.63 |
| China | 0.10 | -7.00 | 1.57 | 0.83 | 2.36 | |
| India | -1.35 | 9.00 | 0.99 | -0.55 | -1.28 | -0.49 |
| **Latin America** | -1.14 | 8.00 | 2.30 | 0.11 | -1.01 | |
| Brazil | -0.47 | 8.00 | 2.25 | 0.48 | -1.01 | |
| **Middle-East** | -0.36 | -7.50 | 1.22 | 1.94 | 1.14 | |
| Saudi Arabia | 0.06 | -10.00 | -2.05 | 3.10 | 0.86 | |
| **EM** | -1.54 | 4.00 | 0.51 | 1.19 | -0.02 | 0.36 |
| **DM** | -1.59 | 10.00 | 0.72 | 1.12 | 1.79 | 2.21 |
| **World** | -1.31 | 8.00 | 0.97 | 0.64 | 1.89 | 1.77 |

Source: World Bank, SIPRI, Center for Systemic Peace, CS Wealth Report, Credit Suisse

1. **Military spending (% GDP):** Time series data from 1988, giving an overview of military expenditure of over 175 countries. Z-score method to draw out changes observed through time in the variable for each country. Source: Stockholm International Peace Research Institute
2. **Polity data:** Time series data from 1800, defining the state's level of democracy. Changes in scores over the past decade and a half have been focused on to observe the transient nature of democracy in certain countries. Source: Center for Systemic Peace
3. **Wealth inequality:** Time series data from 2000 elucidating top-decile wealth share, used as a proxy for studying wealth inequality in major countries. Source: Credit Suisse Wealth Database
4. **Non-tariff barriers:** Number of non-tariff barriers imposed since 1990 by around 140 countries. Source: UNCTAD
5. **Migrant stock (% population):** International migrant stock as a proportion of domestic population. Source: World Bank
6. **Central government debt (% GDP):** Time series data since 1990 to ascertain the level of government debt across countries/regions. Source: World Bank

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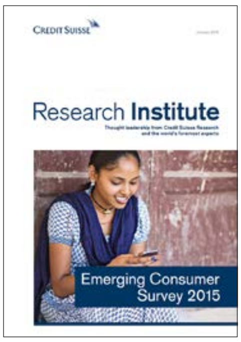


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# Imprint

**PUBLISHER**
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**EDITORIAL DEADLINE**
September 17, 2015

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RCE 1546064 09/2015