The Bulletin

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Homeland insecurity

The rise of economic nationalism

Meghnad Desai on mitigating India's growth slowdown

Steve Hanke on freer markets solving the productivity puzzle

Robert Koopman on social progress and technological disruption

Otaviano Canuto on filling the infrastructure financing gap

Claudio Borio on the effect of real factors on inflation

Elliot Hentov on the internationalisation of the renminbi

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Contents

- Vol. 8 Ed. 10

November 2017

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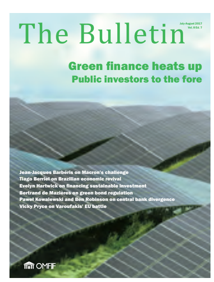
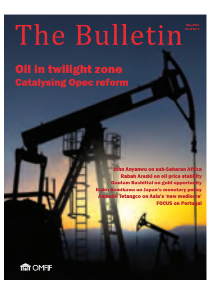




EDITORIAL

Homeland insecurity: the rise of economic nationalism

In the 12 months since the US presidential vote, the feeling of popular dissatisfaction with the status quo that brought Donald Trump to the White House has manifested itself in other elections around the world. This month's Bulletin reflects on the forces that continue to disrupt economics and politics and the risks of them contributing to a rise in economic nationalism.

Robert Koopman of the World Trade Organisation draws attention to how artificial intelligence and robotics are disrupting the labour market and impacting the relative demand for skilled v. unskilled workers, while Juan Carlos Martinez Oliva focuses on the importance of globally coordinated compensation schemes to narrow this divide. Claudio Borio of the Bank of International Settlements argues that the role of globalisation and technology in influencing wage-setting weakens central banks' control over inflation. Weak inflation was a key factor in the European Central Bank's decision on 26 October to extend its quantitative easing programme. Danae Kyriakopoulou suggests that the Bank of Japan's yield curve control policy may provide useful lessons as the ECB runs against constraints to achieving its mandate. Kenneth Sullivan and Robin Darbyshire discuss the need for central banks to properly account for their gold and related transactions to strengthen accountability to stakeholders.

Two other major central banks were due to meet as this Bulletin went to press. The US Federal Reserve is not expected to move policy this month, though a rate hike is widely expected for December, writes Darrell Delamaide. The Bank of England meets in early November and is widely expected to raise interest rates. The economic outlook remains clouded by the UK-European Union exit negotiations after yet another inconclusive summit in Brussels at the end of October. More than two-thirds of respondents in this month's OMFIF Advisers Network poll expressed confidence that a transitional period of some sort will be agreed.

In emerging markets, Meghnad Desai promotes fiscal policy as the crucial tool to revive India's growth, while Steve Hanke draws lessons from Georgia's efforts in improving the regulatory environment to boost productivity. Mario Blejer and Juan Cancelli present evidence for the impact of modernisation of banking procedures on Argentina's housing market. Adam Cotter highlights that renminbi internationalisation stands at an inflection point, concluding that the long-term trend will be one of greater adoption on global markets, while Elliot Hentov suggests that internationalisation of the Chinese currency is a matter of political will.

One of the factors holding back emerging market development is underinvestment in infrastructure, in turn challenged by a lack of properly structured investment projects, according to Otaviano Canuto. However, while a substantial infrastructure push is needed, the challenge will be to do this in a way that accounts for its potentially harmful impact on the environment, warns Kat Usita. This is becoming a worry in the US, where Trump's election was accompanied by a commitment to revive the coal industry. But the president's ambition to be 'energy dominant' can be realised through renewables rather than coal, argues Oliver Thew.

The desire to reduce the amount of carbon dioxide in the atmosphere, however, requires enlisting supporters beyond national governments. The attraction of private capital is crucial, writes Caroline Butler. Public-private solutions are the way forward for mobilising finance to cope with the global refugee crisis, notes Gary Kleiman in his proposal for dedicated 'refugee bonds'. While dependence on public and private support is crucial during such crises and in the event of natural disasters, individuals will generally turn to cash. Policy-makers need to use forecasting tools to plan for sudden surges in the demand for cash, argues Doug Brooks of De La Rue.

Renminbi expansion is inevitable

Belt and Road central to currency's continued rise

Adam Cotter

In contrast to this time last year, China has taken a more subdued approach towards the internationalisation of the renminbi. Beijing is instead focusing on stabilising the economy and on changeovers in government following the 19th Communist Party congress, held between 18-20 October. Zhou Xiaochuan, governor of the People's Bank of China, confirmed he would leave the post 'soon' when asked if he intended to retire this year or next. The choice of his successor will be an expression of President Xi Jinping's 'grand strategy' for the world's second-largest economy.

Under Zhou's leadership the PBoC has overseen the increased adoption of the renminbi on the world stage. One of Zhou's major accomplishments was the gradual loosening of the renminbi's dollar peg in 2005, and allowing market forces to play a greater role in setting the currency's value. Moreover, while the PBoC does not possess total autonomy with regard to deciding policy, it did gain some independence from the governing state council. This may, however, be at risk if the council decides to exercise more control behind the scenes, in an effort to steady China's economic transition. Twelve years on from the 2005 reforms, renminbi internationalisation has reached an inflection point. Further detachment from the dollar is inevitable, and the currency is likely to become a more proactive force in international markets. By leading the cross-border Belt and Road infrastructure initiative, China will expand the use of the renminbi in connected countries thanks to improved international payment and settlement facilities. Although Beijing will maintain a low profile – Xi has already sought to allay concerns about its ambitions among China's neighbours – there is already encouraging renminbi growth in countries along the 'maritime silk road'.

Upon joining the World Trade Organisation in 2001, China pledged to relax incrementally its currency regime. There are calls for the PBoC to let the market play a greater role, but Beijing is likely to retain considerable control of its economy. The leadership is in no rush to relinquish authority to market forces. We remain in a dollarised world; but amid the restructuring of the world economy, the long-term trend will be one of greater renminbi adoption on global markets.

Adam Cotter is Head of Asia at OMFIF.

OMFIF at IMF-World Bank meetings

Opening capital markets, securing growth

Speakers at a meeting organised by OMFIF, HSBC and the Toronto Centre in Washington on 12 October discussed the trade-off facing regulators between safety and growth as they adjust frameworks for harmonising rules across markets. They discussed implications of opening capital markets and examined the need for a global reserve currency.

The panel included Stefan Ingves, governor of Sveriges Riksbank; Masamichi Kono, deputy secretary-general of the Organisation for Economic Co-operation and Development; and Philip Turner, former deputy head of monetary and economics department of the Bank for International Settlements.

Trends in reserve management

Arunma Oteh, vice president and treasurer of the World Bank, gave a keynote address in Washington on 12 October, at the second annual seminar organised by OMFIF and the World Bank Treasury's Reserves Advisory and Management Program.

The panel featured Tiago Berriel, deputy governor of the Banco Central do Brasil; Per Callesen, governor of Danmarks Nationalbank; Nestor Espenilla Jr, governor of the Bangko Sentral ng Pilipinas; Mario Marcel, governor of the Banco Central de Chile; and Daniel Mminele, deputy governor of the South African Reserve Bank. They focused on trends in reserve management and the resilience of emerging markets to tightening in advanced economies.

Assessing emerging market economies

Central banks and governments from emerging markets must pay increasing attention to improving governance and transparency to retain investor confidence at a time of rising world interest rates.

That was the message of a panel organised by OMFIF and Barings, the US asset management firm, in Washington on 12 October.

The panel included Tom Finke, chairman and chief executive officer of Barings; Katarzyna Zajdel-Kurowska, member of the management board of Narodowy Bank Polski; Javier Guzmán Calafell, deputy governor of the Banco de México; and Ricardo Adrogué, head of emerging market debt at Barings

US-European relations in the age of Trump

OMFIF and the American Enterprise Institute convened a panel of experts in Washington on 13 October to examine how US-European trade, economic and political relations are evolving under the Trump administration.

The panel featured Daniel Ahn, deputy chief economist at the US state department; Marek Belka, former prime minister of Poland; Jonathan Faull, former director general of the European Commission; Fabrizio Saccomanni, former Italian economy minister; and Stan Veuger, resident scholar at the AEI. They discussed the realignment of global free trade and multilateral agreements, opportunities and challenges presented by Brexit, financial co-operation and regulation, as well as potential barriers to foreign direct investment and global capital flows.

France, Germany and UK in new Europe

On 14 October in Washington, OMFIF and DZ BANK held their seventh joint breakfast on the occasion of the annual meetings of the International Monetary Fund and World Bank, focusing on the state of the global political economy.

This year's panel concentrated on the relationship between France, Germany and the UK, three key actors in defining the direction of the European economy, particularly in the light of the UK's departure from the European Union.

The panel featured Jean-Claude Trichet, former president of the European Central Bank; Andreas Dombret, member of the Deutsche Bundesbank executive board; Kalin Anev Janse, secretary general of the European Stability Mechanism; Tamim Bayoumi, deputy director of the strategy, policy and review department at the IMF; Debora Revoltella, director of the European Investment Bank's economics department; and Sir Jon Cunliffe, deputy governor for financial stability at the Bank of England.

Ramos: 'Build robust Africa'

OMFIF launched the Barclays Africa Group Financial Markets Index 2017 in Washington on 13 October.

The Index, produced by OMFIF and sponsored by Barclays Africa Group, uses a variety of parameters, both qualitative and quantitative, to record the openness and attractiveness of 17 countries across the continent to foreign investment.

Speaking at the launch, Maria Ramos, chief executive of Barclays Africa Group, said: 'By broadening their understanding of their strengths, challenges and areas of investor interest, African leaders can increasingly develop robust markets.'

A panel discussion and Q&A followed, discussing the key findings. The panel included Jingdong Hua, vice president and treasurer of the International Finance Corporation; Denny Kalyalya, governor of the Bank of Zambia; Daniel Mminele, deputy governor of the South African Reserve Bank; and Ken Ofori-Atta, Ghana's minister of finance and economic planning.

The report is available to download at thinktank.omfif.org/afmindex

Forthcoming meetings

Avoiding the cliff edge
A roundtable briefing with Kenneth Clarke, Conservative member of parliament for Rushcliffe. The discussion analyses the state of the Brexit negotiations, including the government's priorities and the political and economic implications.
9 November, London

The evolution of Saudi Arabia's economy - prospects for growth and diversification
A roundtable discussion with Fahad Alshathri, deputy governor for research and international affairs at the Saudi Arabian Monetary Authority. The discussion focuses on prospects for economic diversification and growth in Saudi Arabia.
13 November, London

A new phase of monetary policy
A joint policy meeting by OMFIF and the Japan Center for Economic Research discusses the progress of Abenomics, the outlook for global trade, Japan's structural reforms, and regional geopolitical dynamics.
22 November, Tokyo

Investing into Italy: Views and perspectives
A dinner discussion with Claudio Costamagna, chairman of Cassa Depositi e Prestiti. The topics will include the macroeconomic and financial situation in Italy, the challenges and opportunities for investment, implications of the UK's withdrawal from the EU, as well as Italian political developments.
29 November, London

For details visit www.omfif.org/meetings

Prospects for Asian growth

Innovation, extensive human capital and improved infrastructure can pave the way towards higher incomes in Asia, according to Yasuyuki Sawada, chief economist of the Asian Development Bank, who took part in an OMFIF briefing in London on 16 October.

Banking reform in Spain and Europe

Alberto Nadal Belda, Spain's state secretary for budget and expenditure, spoke about the country's strong foundations for further growth by achieving three years of GDP expansion around 3%.

He was speaking at OMFIF's second Economists Meeting held at the Banco de España in Madrid on 3 October. Key topics included the outlook for the euro area, reforming the European banking system, and fintech.

Mitigating India's growth slowdown

Looser fiscal policy is last available instrument

Meghnad Desai, Advisory Council

In 2014, the year Narendra Modi became prime minister of India, the country enjoyed GDP growth of 7.5%. The economy continued to grow at a robust rate, exceeding 8% in 2015 and 7.1% last year, outperforming China on both occasions.

But 2017 has shown a marked slowdown, with the annualised growth rate for April to June falling to 5.7%. This deceleration means Modi, for the first time, has to confront a jubilant opposition faulting his economic performance, rather than on grounds of intolerance or cultural communalism. A growth rate of 5.7% is hardly a symbol of deeply damaging stagnation, but Modi has raised expectations and the problems he faces are of his own making. It is unclear if the fall in the growth rate is part of a longer-term trend or due to some special factors.

Internal disruption

Two policy initiatives disrupted growth. One was the large-scale demonetisation of high denomination banknotes. In November 2016 Modi surprised the nation by declaring that all Inr500 and Inr1000 notes would be stricken out by the new year. This sudden change disrupted the large cash-based informal economy.

The idea was to punish those who held illegal hordes of cash – so-called 'black money' – to evade income tax. Cash hordes of old currency were to lose all their value. What happened instead was that the holders of such cash laundered their funds by buying whatever they could. New banknotes were slow to arrive and it took six to ten weeks before normality was restored. The demonetisation caused economic hardship for three to four months. While some of effects were exaggerated, the loss in GDP was estimated at 0.5%.

> ***"A growth rate of 6.7% is hardly a symbol of deeply damaging stagnation, but Modi has raised expectations and the problems he faces are of his own making.***

The other significant change was long-awaited tax reform. India has countless local taxes imposed on the transport of goods across state borders, and even a tax on goods entering urban areas. This variety was replaced in July by a modern goods and services tax, creating a genuine Indian single market.

The switch will continue to impact economic activity as traders get used to the new tax structure. There was some drawing down of existing stocks before the regime came into effect. Other issues have arisen – the requirement to complete online forms each month surprised business. Regardless, the long-term impact of the goods and services tax on GDP will be positive. Prices will fall, and a greater quantity of goods and services will be delivered.

Increasing government spending

The deceleration in growth rates, therefore, may not be systemic. A longer-run factor has been India's credit famine, caused by the prevalence of non-performing assets held by nationalised banks. The government has moved too slowly on this issue. It needs to simplify bank structures, reduce their numbers through mergers, and establish a 'bad bank' to absorb toxic debts. Then credit may flow again. Time is short before the next election, scheduled for 2019, and voters would welcome quick, decisive action.

Another reason for the slide in growth is international. Indian growth was strongest in the first few years of the 21st century, in line with the booming global economy. Though not as dependent on foreign trade as China, India still benefits from generous capital inflows and export demand when the global economy is buoyant. The decline in energy prices over the last three years benefited India, but these have stopped falling. At least some of the growth slowdown may, therefore, be attributed to global factors.

Deep structural reforms of India's land, labour and credit markets must be addressed to facilitate robust long-term growth. In the short term, however, the quickest and most effective boost can come only through fiscal or monetary policy.

> ***"Deep structural reforms of India's land, labour and credit markets must be addressed to facilitate robust long-term growth. In the short term, however, the quickest and most effective boost can only come only through fiscal or monetary policy.***

The government has been disciplined in terms of reducing the budget deficit. The Reserve Bank of India has stayed relatively stalwart on interest rates, in spite of numerous appeals for deeper cuts. Any sizeable rise in inflation would be electorally damaging. This leaves fiscal policy and increased spending as the final available instrument to revive growth. ■

Lord (Meghnad) Desai is Emeritus Professor of Economics at the London School of Economics and Political Science, and Chair of the OMFIF Advisers Council.

Modi withdrew high denomination notes in 2016 to help prevent hoarding and tax evasion

Adjustment through flexibility

Social progress and technological disruption

Robert Koopman, Marc Bacchetta and Jose-Antonio Monteiro, World Trade Organisation

Rapid advances in technology and international trade have propelled the global economy through a period of extraordinary dynamism over the last 35 years, but at the cost of important changes and disruptions in the labour market.

In the 1980's most trading countries were reliant on markets in the US, Europe and Japan. Today, more countries are trading more goods with many more economies. There has been, too, a general convergence of income levels across countries, but with rising income disparity within them. Workers doing routine tasks have not benefited from economic change to the same extent as those performing more complex, non-routine tasks, regardless of their skill level. Understanding the impact of trade and technology on workers is essential if policy-makers are to ensure appropriate responses.

The World Trade Organisation's 'World Trade Report 2017' notes that, while the scale and pace of global economic change over the last three decades is unprecedented, the process is not new. Ultimately, continued economic progress depends on the ability of economies to adjust to changes and promote greater inclusiveness. While today's labour market problems are traceable to domestic policy shortcomings, a failure to find answers will have global ramifications.

> ***"Changes in technology have led to a higher relative demand for skilled workers and a lower relative demand for workers performing routine activities.***

Technological disruption

Several factors, such as the expanding proportion of workers with secondary and tertiary education, have affected manifest change in labour markets. The increasing participation of women in employment, and declining participation of men, is similarly significant, as is the increasing number of non-standard jobs.

The proportion of employees in the services sector continues to grow while the proportion of workers in agriculture and manufacturing is stagnating or declining. This trend has been accompanied in developed economies and a number of developing countries by a relative increase in the share of high- and low-skilled occupations in total employment, together with a relative decline in the share of middle-skill occupations. Changes in labour markets differ widely across economies, suggesting that a pivotal role is played by country-specific factors. These include macroeconomic conditions, labour market institutions and mobility obstacles.

By making some products or processes obsolete, and creating new products or expanding demand for products subject to innovation, technological change implies the reallocation of labour across and within businesses. Technological progress can assist workers, through labour-augmenting technology, or replace them, via automation. In both cases, the overall effects on the market's demand for labour are ambiguous.

Changes in technology have led to a higher relative demand for skilled workers and a lower relative demand for workers performing routine activities. The use of computers has been the central force impacting the wages of skilled workers relative to the wages of unskilled workers. The next wave of technological advances, namely artificial intelligence and robotics, will continue to disrupt the labour market.

Trade-related job expansion

Although trade opening tends to increase overall employment and wages, certain regions, sectors, and individuals may be left worse off in the absence of adequate policy responses.

Data suggest that increased trade may explain up to 20%-25% of the decline in US manufacturing jobs over the last 30 years. The remaining 75%-80% can be explained by other factors, such as technological change. Both trade and technological progress increase the relative demand for high-skilled workers, especially in non-routine occupations, as well as the nominal wages of high-skilled workers relative to low-skilled workers.

Furthermore, trade increases the purchasing power of low-skilled workers by enabling them to purchase more affordable imported products and therefore increasing their wages in real terms.

Jobs are created not only to fulfil a country's domestic demand, but to produce goods and services that are directly exported to other countries, or used to produce goods and services that will be exported by other firms. The share of export-related jobs in domestic employment can reach up to 30% of total employment in some countries. Import-related activities likewise support job creation by improving firms' competitiveness. In addition, both exporting and importing firms pay higher wages than firms focusing exclusively on their domestic market.

> ***"Although trade opening tends to increase overall employment and wages, certain regions, sectors, and individuals may be left worse off in the absence of adequate policy responses.***

Adjusting to change

The ability of workers to adjust and move from lower- to higher-productivity jobs, and from declining sectors to expanding ones, helps make technological progress and trade contribute to growth, development and rising living standards.

But the appropriate public policy responses to the negative consequences of trade and technological developments will differ according to individual countries' circumstances. In developing economies the larger share of workers in the informal, agricultural and state-owned enterprise sectors needs to be taken into account.

Governments need a mixture of policies to promote competitiveness and labour market flexibility. In this way, countries can better manage the cost of adjusting to technological and trade disruption, while making sure the economy captures as much as possible the benefits from these changes. ■

Robert Koopman is Chief Economist of the World Trade Organisation. Marc Bacchetta in Counsellor and Jose-Antonio Monteiro is Research Economist in the WTO's economics research and statistics division.

Reviving the new era of globalisation

Social security and international coordination essential

Juan Carlos Martinez Oliva, Banca d'Italia

We are living through the deepest and most widespread process of interconnection ever experienced in the world economy. Market liberalisation and advances in technology, have created a network encompassing every economic and social activity.

The main features are the emergence of new international powers and the role of technology. Globalisation defined two other periods of recent history, at the end of the 19th century and in the decades after the second world war. In the latest phase, income and wealth inequality in advanced economies have risen at levels not seen since the late 1800s. In the US, inequality in the run-up to the 2008 financial crisis was almost identical to the peak preceding the 1929 Wall Street crash and subsequent depression. This is in striking contrast with the post-war period, characterised by generous welfare systems in almost all advanced countries.

Three eras of globalisation

When the latest era of globalisation started, many economists warned that an intensification of international trade and finance liberalisation would entail risks of increased inequality. Their prediction proved to be correct. A general conclusion from trade theory is that if imported goods are also produced domestically, trade liberalisation will profit some actors at the expense of others in the global value chain. Financial globalisation may likewise have negative distributional effects. Globalised financial markets may make domestic institutions weaker, and hamper debt-enforcing mechanisms. Capital movements induce boom-and-bust patterns, with damaging consequences for the weakest parts of societies.

The connection between financial globalisation and distributional issues is undeniable in the light of the varied mobility of capital and labour in an economy. When a crisis strikes, capital will move elsewhere, while labour is more likely to stay and absorb the shock at its own expenses, through lower salaries or unemployment. Moreover, capital may easily avoid taxation and look for more favourable treatment across the world. This is more difficult for labour, with obvious distributional effects. The ability of multinational enterprises to locate production where labour is cheaper may reinforce bargaining power with regard to labour organisation, and therefore exert a downward pressure on salaries in the domestic economy.

There are some conventional answers to issues of inequality arising from a major economic change such as trade liberalisation. If overall incomes have increased, 'winners' may compensate the 'losers', to leave everyone better off. But compensation schemes have not operated equally across developed countries. In the US, consistent action did not follow on from wide-ranging debates on how to remedy the negative impact of free trade agreements on labour. In the European Union, governments maintain a more comprehensive social safety net, despite the enduring strains from crises in the region.

Post-war international order

Globalisation has created great opportunities for traders, multinationals and investors. It has provided growth opportunities for large emerging economies like China, which accomplished a quick sectoral shift from agriculture to manufacturing. This boosted GDP growth and reduced poverty overall.

But, at the same time, globalisation has broadened the divide between skilled and unskilled workers; employers and employees; rural and urban workers; and in general between the elites and ordinary people.

Those on the right place the responsibility for the negative consequences of globalisation on large emerging economies and immigration. On the left, resentment is mostly reserved for international institutions and corporates. The emphasis is on the need for more redistributive tax policies, better social security, more transparent corporate balance sheets, and less severe fiscal consolidation programmes. A feature which both the left and right share, however, is strong criticism of the political system for its perceived inability or unwillingness to respond to the social impact of globalisation on the weak and the poor.

The post-war Bretton Woods system emphasised discretionary policies, countercyclical devices and the protection of national economies. It encouraged capital controls, tolerated tariffs and protection, and promoted Keynesian expansionary policies.

Due to the alarming weakness of the world economy outside the US in the post-war years, global recovery was the highest priority. Achieving economic prosperity was viewed as politically crucial in an international setting dominated by the cold war. The perceived superiority of the free market economy after the collapse of the Soviet Union invigorated 'neoliberal' economic policies, and the global economy became fully open to market forces. Technological advancements contributed to the rapid expansion of a growing network of trade and financial relations.

Curbing economic nationalism

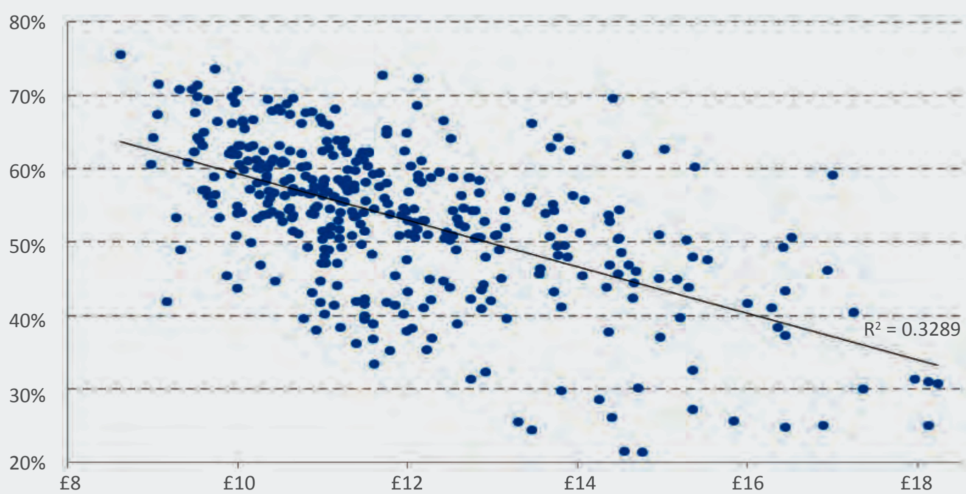
Compensation schemes should be created, or reinforced where they already exist. Achieving a better balance of pay-offs globally will require abundant coordination.

Everyone likes the litany of opportunities that globalisation opens. But the rise of economic nationalism and political populism across the world is a warning that globalisation's imbalances must be corrected. ■

Juan Carlos Martinez Oliva is Senior Director in the Economics, Research, and International Relations Department of Banca d'Italia. He writes in a personal capacity.

Income disparity's relationship to rise of political populism

Share of UK EU referendum vote for Leave, % v. hourly earnings, £



Source: UK Office for National Statistics, Nomis, Resolution Foundation analysis

Trump's populist energy ambitions

Renewable energy jobs already exceed traditional sectors

Oliver Thew

Donald Trump based his presidential campaign on the assurance he would 'make America great again'. His nationalist rhetoric was aimed at those people who felt they had been left behind by economic globalisation.

One such group is workers in the coal industry, which saw a decline over the last decade in the light of increased regulation and the rise of more efficient energy alternatives, especially liquid natural gas. In 2003 coal accounted for half of domestic power generation. In 2015, it accounted for just one-third, with almost the entire difference made up by gas. Total coal mining capacity shrank to 1.2m tonnes in 2015 from 1.4m tonnes in 2008. Since 2010, 259 of the nation's 523 coal power plants closed or announced their retirement.

Trump campaigned heavily in Wyoming, Pennsylvania, West Virginia, Kentucky and Illinois, which account for 71% of domestic coal production and where voters backed him by overwhelming margins. Meanwhile, Hillary Clinton faced heavy opposition after claims she would put coal miners out of business by replacing fossil fuel-based energy production with renewable systems. This culminated in an unemployed coal miner confronting her at a televised town hall meeting in West Virginia. Clinton has described attacking the coal industry as the biggest regret of her campaign.

Conversely, a key component of Trump's plan was to increase domestic energy production, specifically coal and other fossil fuels, in addition to nuclear power. According to Trump, the aim is make the US not only 'energy independent' but 'energy dominant', and to 'end the war on coal'.

Coal-friendly cabinet

Trump's administration is one of the most fossil fuel-friendly administrations in US history. Rick Perry, former Texas governor and drilling advocate, runs the energy department, which he once famously said he would abolish. Scott Pruitt, climate change denier, Oklahoma attorney general and friend of the state's shale-industry, is head of the Environmental Protection Agency. Ryan Zinke, Montana Republican and former chief executive of an oil and gas consultancy, oversees US federal land and national parks as interior secretary. Rex Tillerson stepped down as head of ExxonMobil to become secretary of state.

To boost domestic production and job creation in the coal industry, Trump has begun dismantling much of the regulation established during Barack Obama's presidency. In February he signed a bill repealing the stream protection rule, which restricts coal companies from burying new streams. In March Trump signed an executive order vowing to roll back other Obama-era climate change policies, including the clean power plan which limits carbon pollution from coal-fired plants.

> ***"Support for Trump in coal mining parts of the US remains strong, and those who supported his nationalist and protectionist campaign welcome his decisions to repeal unpopular Obama-era regulations.***

These actions have drawn criticism from scientists, regulators, grid operators, environmental and health organisations, Democrats and parts of the Republican party, renewable energy companies, and even liquid natural gas companies. But Trump has no intention of trying to win favour with these groups. Support for Trump in coal mining parts of the US remains strong, and those who supported his nationalist and protectionist campaign welcome his decisions to repeal unpopular Obama-era regulations. A late-October survey put Trump's approval rating at 83% among Republican voters.

Small gains, large losses

There is a perception among coal mining communities that jobs are being created. This is, in small part, true. For the first time in years a new coal mine, in Pennsylvania, has opened in the US. Coal production was 12% higher in the first three quarters of 2017 compared to the same period in 2016.

But these gains are small compared to the sector's overall loses. The new mine will employ only 70 people when it reaches full capacity. Coal mining is a sliver of the US economy, employing around 52,000 Americans as of September 2017, down more than 70% since the 1990s. Power plants continue to close across the country – 251 since 2010 and 12 since Trump took office. Analysts say US domestic production may decline by as much as 40m tonnes over the next year, with prices failing to increase sufficiently to benefit shareholders or stimulate new investment.

Despite this, the administration is pushing ahead with its agenda. In September Perry directed the federal energy regulatory commission to create rules that would favour coal plants. Zinke wants to allow coal mines to operate nearer to national monuments and in national parks. In June, Trump withdrew the US from the Paris climate accord. In October, Pruitt said the 'war on coal is over' and announced he would sign a rule overriding Obama's clean power plan.

Renewable energy answer

Trump's aspiration to make the US 'energy dominant', boost economic growth and create jobs is understandable. But supporting coal production is a step backwards. An alternative energy policy exists which can meet the same goals and appeal to his supporters, while addressing the problems associated with climate change. This is the renewable energy option.

The US department of energy reports that solar energy employs more US workers than coal, gas and oil combined – 374,000 people over the year 2015-16 or 43% of the sector's workforce, compared to the fossil fuel workforce of 187,117. In the last 12 months, wind energy employed an additional 102,000 people across the US. In Wyoming, one of the major coal producing states, there is a shift towards renewable energy. The bureau of labour statistics predicts that 'wind energy technician' will become the fastest growing occupation in the state, more than doubling over the next seven years.

There are three clear areas where the administration can act. It can increase the production of biogas and oils; support the development of renewable energy technology in the private sector; and provide funding for the re-training of unemployed coal workers.

These issues are surmountable, but require a long-term commitment from the government and will meet resistance in coal mining communities.

Trump's efforts to remove regulatory barriers are only slowing the decline of the coal industry, not reviving the sector. Supporting renewable energy could revitalise those states where coal was once dominant and ensure US 'energy dominance' for years to come. ■

Oliver Thew is Programmes Manager at OMFIF.

Choice of chair creates Fed ambiguity

Regional chiefs to the fore ahead of announcement

Darrell Delamaide, US editor

As this issue of The Bulletin was going to press, the announcement was nearing of US President Donald Trump's choice of Federal Reserve chair when Janet Yellen's term expires in February. Among the shortlist of Yellen, Fed Governor Jerome Powell, former Fed Governor Kevin Warsh, academic economist John Taylor, and White House Chief Economic Adviser Gary Cohn, Powell appeared to be moving into lead position. Please visit the OMFIF website for a commentary on how Trump's choice could impact monetary policy.

Amid the speculation about the impending nomination of the Fed chair, board members in Washington avoided any definitive policy statements. Yellen's speeches seemed to be aimed at defining her legacy, in the expectation she would not be reappointed. Lael Brainard continued to focus on labour issues and inequality, and Powell focused on uncontroversial topics like financial innovation and emerging markets.

Trump's first appointee to the board, Randal Quarles, took office in mid-October as the first ever vice-chair for supervision, just days before Stanley Fischer stepped down from his post as vice-chair for the board. Presuming Yellen will leave the board when her term as chair expires early February, that leaves the president with the task of appointing three (or four if Powell is named chair) additional board members and designating a new vice-chair.

In a speech to the National Economics Club in Washington, Yellen recounted how the Fed had dealt with the consequences of the 2008 financial crisis by using unconventional tools, including quantitative easing and forward guidance. With interest rates apparently settled at a much lower level, the same challenges may arise again. 'For this reason, we must keep our unconventional policy tools ready to be deployed again should short-term interest rates return to their effective lower bound,' she said.

Outspoken regional chiefs

The heads of the regional banks were less reticent when speaking about monetary policy. Although the policy-making Federal Open Market Committee is set up to give the Washington-based board of governors an advantage, with all seven members entitled to vote against five regional chiefs who rotate through voting positions, it is the regional banks that outnumber board members five to four.

Boston Fed Chief Eric Rosengren demonstrated again how the unconventional policies have turned hawks into doves and doves into hawks. Rosengren, once a prominent dove, said he expects the Fed to raise rates in December (everyone does), and then will need to raise them three or four more times in 2018 if the unemployment rate continues to decline and inflation accelerates. If unemployment, at 4.2%, fell below 4% as inflation reached the Fed's 2% target, it might indicate the economy is overheating, he said.

Rosengren, who is not a voting member either this year or next, seemed unworried about the prospect of an academic like Taylor becoming Fed chief, who might want to follow a set rule for setting interest rates. 'My hope would be that they were flexible and pragmatic enough that if the rule wasn't working particularly well that they would make adjustments,' he said in an interview with CNBC.

In a separate interview Rosengren maintained his hawkish tone, saying labour market slack has declined to the point where inflation is bound to rise – he thinks. 'So if we continued to have the unemployment rate fall and we didn't get any wage pressures at all, I would be very surprised, and I'll be looking for a reason for why that's occurring,' he said.

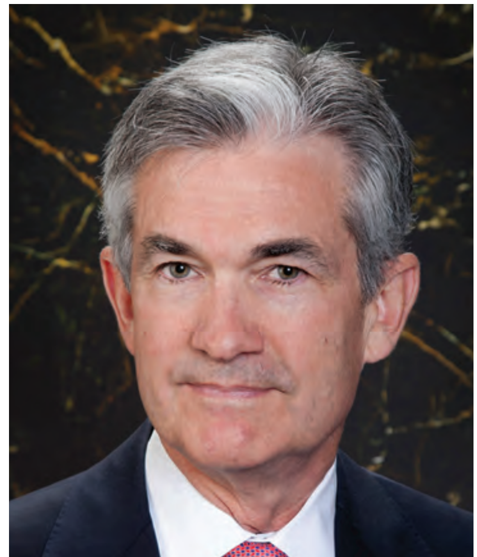
Robert Kaplan, Dallas Fed chief, is neither as bullish nor as hawkish and continues his migration to the dovish side of the ledger. He said the slippage in Treasury yields – 10 basis points at one point in mid-October – could be a warning. 'That is not a sign of easy financial conditions,' he said to reporters in New York. 'That may be a sign of worry about future growth.' Kaplan is a voting member this year.

'I'm concerned we'll make a mistake'

Philadelphia Fed Chief Patrick Harker, another voter this year, maintained his place squarely in the middle, predicting one more rate increase in December but cautioning he could change his mind if inflation doesn't increase. He told reporters he had 'pencilled' in one more rate increase in 2017.

'I emphasise the world "pencil",' he said. 'We have to see how inflation dynamics roll out over the next couple of months and we have to make sure that the process of ceasing reinvestment is, as we anticipate, not very disruptive to the market.' He referred to the Fed's programme of winding down its inflated balance sheet by cutting back on reinvestment of maturing securities.

The Atlanta Fed chief, Raphael Bostic, who took office in June, hasn't had a chance to show which way he leans. He said at a Hong Kong conference that he thought the unwinding programme had gotten off to a good start, in part because the economy is relatively strong. 'The exit will be less dramatic than the entry,' he said. Bostic will have his first round as a voter next year.



Jay Powell is the leading candidate to become Fed chair

Charles Evans, head of the Chicago Fed and a voter this year, while not exactly hawkish, said he was open to discussing tightening if it remained gradual and inflation appeared to be reaching the Fed's 2% target. 'There is room for honest discussion later this year about whether it is the right time to raise rates,' he said. 'The state of the economy is quite strong, unemployment low, the labour market is good.'

New York Fed Chief William Dudley, a permanent voter, seemed to share this attitude. A tightening US labour market should bring inflation back to its 2% target, he said. 'Even though inflation is currently somewhat below our longer-run objective, I judge that it is still appropriate to continue to remove monetary policy accommodation gradually,' Dudley said, reiterating his stance from the previous month.

James Bullard, head of the St. Louis Fed, remained the most sceptical. September unemployment figures showed a surprising drop in the number or workers. 'I thought the market reaction was a little bit too nonchalant about this number,' he said to reporters after a speech in Missouri. 'I'm getting more concerned that we might make a policy mistake.' ■

Darrell Delamaide is a writer and editor based in Washington.

Meeting cash demand after crises

Forecasting tools to help disaster-stricken central banks

Doug Brooks, De La Rue

Natural disasters in the US, Mexico and the Caribbean over the last few months caused a dramatic disruption to infrastructure and services, including power supplies and mobile and computer networks. Aid authorities are well-versed in delivering necessities such as food, water, shelter, as well as operating mobile networks. But, at the most basic level, what everybody needs is immediate access to cash.

The World Bank reports that 80% of the world's largest cities are vulnerable to severe earthquakes and flooding. It is therefore essential for authorities to plan for a sudden surge in cash demand following natural disasters. Cash provides much-needed security in times of crisis. It is universal, trusted, and facilitates fast payments.

After two major earthquakes struck Christchurch in New Zealand in 2010 and 2011, there was a large and sudden increase in the demand for cash. Electronic retail payment systems were not working and, within only a couple of hours, commercial banks were ordering additional banknotes from the Reserve Bank of New Zealand. The central bank reported an increase in cash demand across the country in the periods following these quakes.

Immediately before Hurricane Irma struck Florida in September, Miami banks were filled with people withdrawing notes. Puerto Rico is desperate for physical cash to support its economy after Hurricane Maria ruined the island's power network.

Value of forecasting

Powerful storms occur with seasonal regularity in various parts of the world. Although we cannot predict exactly when the next will strike, forecasters can say with a degree of confidence that it will happen. Knowing what can and cannot be foreseen is, in itself, a great success.

On this basis, countries frequently affected by natural disasters should be able to prepare for a sudden cash demand. A simple but expensive answer would be to hold more cash in central banks' vaults. However, forecasting can facilitate more accurate scenario planning by using historical experience and data.

John McDermott, assistant governor and head of economics at the Reserve Bank of New Zealand said during a speech in Christchurch in May that 'more often than not, the world does not turn out as we forecast. However, forecasting is still a valuable and necessary part of the monetary policy process. Producing forecasts and allowing them to be publicly subject to challenge enables us to build a solid foundation for policy decisions, learn from developments, and improve our policy outcomes. Forecasting is not supposed to be prophecy; rather, it is about being precise about our thinking.'

Forecasting alone will not give the answer. Political scientists and data analysts advocate the need for what they describe as 'super-forecasting'. This involves developing a greater understanding of the mechanism behind predictions, as opposed to just attaining accurate forecasts without knowing why they arise. Lines of reasoning must be questioned and new ideas tested. Forecasters should maintain a perpetual affinity for experimentation, never settling on just one mechanism.

> ***"It is essential for authorities to plan for a sudden surge in cash demand following natural disasters. Cash provides much-needed security in times of crisis. It is universal, trusted, and facilitates fast payments.***

Vital crisis management tools

The benefits of forecasting for central banks and for people affected by natural disasters are potentially enormous. Regular forecasting exercises will allow central banks to develop an in-depth understanding of how cash in circulation is used. Authorities can then better decide on denominational requirements and volumes in a time of crisis.

For citizens, the availability of banknotes would provide vital access to essential supplies and enable them to purchase items to meet their own individual needs. Cash transactions would immediately stimulate local economies and negate the practical problem of vendors being reluctant or unable to accept debit or credit cards.

Tools are available to help an issuing authority use forecasting as a vital crisis management tool. Modelling against history and learning from the past will make forecasters more precise in their analytics and more accurate in their predictions. When these tools are used proactively, central banks will be better able to prepare for and meet the spike in demand for cash caused by natural disasters. ■

Doug Brooks is Business Development Director of Currency Solutions at De La Rue.

The 2010-11 earthquakes in Christchurch, New Zealand fuelled a surge for cash.

Refining central bank gold practices

Standards boost transparency and accountability

Kenneth Sullivan and Robin Darbyshire on behalf of World Gold Council

Central banks hold large quantities of gold, mostly monetary gold, as part of their foreign reserves, but in other forms as well, such as antiques. Such holdings of public resources require monetary authorities to account appropriately for their gold and related transactions, relating to their accountability to stakeholders.

Since central banks hold monetary gold principally for functional rather than profit-maximising purposes, issues can surface when trying to reflect gold on balance sheets and income statements. In the absence of any 'standard setting' body for central banks' accounting methods, most adopt International Financial Reporting Standards or national accounting standards, often with specific variations for central banks.

> ***"Convergence on a common approach to accounting for monetary gold would strengthen accountability, comparability and transparency of central bank reporting.***

The problem with gold arises because IFRS define gold as a commodity, not a financial asset. Although this is appropriate for gold held by the commercial entities for which IFRS are intended, it is not so for central banks. For monetary authorities, gold is a financial instrument, similar to holdings of reserve currencies. To address this problem central banks have adopted a wide array of practices consistent with their own laws and accounting preferences.

Developing a common best practice

A 2016 World Gold Council paper surveyed the various gold accounting processes adopted by central banks and distilled these into seven fundamental approaches. Convergence on a common method to accounting for monetary gold would strengthen accountability, comparability and transparency of central bank reporting while facilitating external auditor agreement on divergence from IFRS or national frameworks.

The WGC has issued a draft guidance note on common best practice on accounting for gold and is holding meetings with central banks. The key issues in gold accounting are whether to hold it on the balance sheet at cost or at market value, and if held at market value how to treat the resulting unrealised revaluation gains and losses to ensure they do not form part of distributable profit.

Consistent with the International Monetary Fund's balance of payments manual, there is a general preference to report monetary gold in the balance sheet at market (or fair) value rather than cost. Of the 69 central banks covered in the WGC survey, 60 reported gold at fair value. While there is general convergence on recognising gold at fair value, there is none on the appropriate treatment of unrealised revaluations.

Refining reporting frameworks

The WGC accounting guidelines seek to follow IFRS principles as closely as possible, not just on accounting but, more importantly, on disclosure requirements. The guidance recommends that central banks report monetary gold in the balance sheet at market value denominated in their domestic currency, combining the gold price and the dollar exchange rate into a single price. Revaluation gains and losses do not pass through profit and loss, but pass to a separate unrealised revaluation reserve in the balance sheet through 'other comprehensive income'.

Under this approach unrealised revaluation gains and losses will not form part of distributable profit until disposal of the gold. The disclosure of revaluation movements in 'other comprehensive income' is consistent with the need to use this statement to report net movements in balance sheet value. The guidance recommends that revaluation losses should offset balances in the relevant reserve until the reserve is zero, after which the bank offsets revaluation losses against realised profit.

The WGC paper discusses, too, how to price gold. It recommends that the fair value should reflect adjustments for the form and location of the gold, as the standard prices quoted in markets are for gold in a specific form held in a gold market location. The analysis covers the accounting for non-monetary gold and some specific gold transactions such as swaps as well.

The effort to provide a common guidance for monetary gold is an example of a broader discussion of issues central banks have with adopting IFRS which is likely to grow as they seek to refine their reporting frameworks. ■

Gold standard: World Gold Council seeking best practice from central banks

Kenneth Sullivan is a Consultant for the World Gold Council. He is former Chief Manager of Accounting and Corporate Services at the Reserve Bank of New Zealand. Robin Darbyshire is an independent consultant and former Financial Accountant at the Bank of England.

Slash regulation to solve productivity puzzle

Freer markets linked to longer lives and greater prosperity

Steve Hanke, Advisory Board

Productivity and economic growth continue to disappoint in most countries. Although analysts show a great deal of concern for the so-called 'productivity puzzle', little attention is paid to the real solution: freer markets and increased competition. Unfortunately, in most economies, policy is moving in the opposite direction.

The World Bank has rigorously measured the ease of doing business in many countries for more than 10 years, producing an abundance of empirical evidence revealing different aspects of countries' regulatory environments. The Bank publishes its results identifying levels of economic freedom each year in a report entitled 'Doing Business', which details 10 indicators (see Chart 1) that capture important dimensions of an economy's regulatory environment.

These are each measured by using standardised procedures that ensure comparability and replicability across the 190 countries studied. For each indicator, the scores range from a low of 0, designating failure, to a high of 100 for those countries that excel.

The overall ease of doing business (DB) score for a country is simply its average across the 10 indicators. Using the DB scores, we can determine whether there is a relationship between a freer regulatory environment (a high DB score) and prosperity as measured by GDP per capita. Chart 2 shows there is a strong positive relationship between DB scores and prosperity. The DB score for the US is 82.45, and its GDP per capita is $57,220. Meanwhile Zimbabwe's DB score is only 47.1, and its GDP per capita is $1,081. All the remaining 188 countries are plotted on the chart. There are only five countries that are outliers with outsized GDP per capita relative to their DB scores: Qatar, Luxembourg, Switzerland, Norway and the microstate of San Marino.

> ***"Economic prosperity is, quite literally, a matter of life or death. Higher individual and national incomes produce favourable effects on nutrition, standards of housing and sanitation, and on health and education expenditures.***

In addition to the positive relationship between regulatory freedom and prosperity, more deregulation yields increasing returns. Each incremental increase in the DB score yields greater gains in GDP per capita. With each improvement in regulatory freedom, there is a disproportionate improvement in prosperity. This explains why post-communist countries that embraced large-scale economic liberalisation, such as Poland, have done noticeably better than those that introduced only gradual changes.

Mimicking best practice

Economic prosperity is, quite literally, a matter of life or death. Higher individual and national incomes produce favourable effects on nutrition, standards of housing and sanitation, and on health and education expenditures.

While reductions in mortality have sometimes been the result of technological factors, it is clear that sustained economic growth is a precondition for the kinds of investments and innovations that, over time, significantly reduce mortality.

Knowing that a freer regulatory environment is associated with higher levels of GDP per capita, onlookers can observe that a freer regulatory environment is associated with higher life expectancies. Chart 3 illustrates the positive relationship between DB scores and life expectancy, albeit one characterised by diminishing returns.

Many of the 190 countries reviewed in the World Bank's 2017 'Doing Business' report are far away from adopting best practice policies with regard to their regulatory frameworks. Consequently, prosperity and

Chart 1: Ease of Doing Business indicators

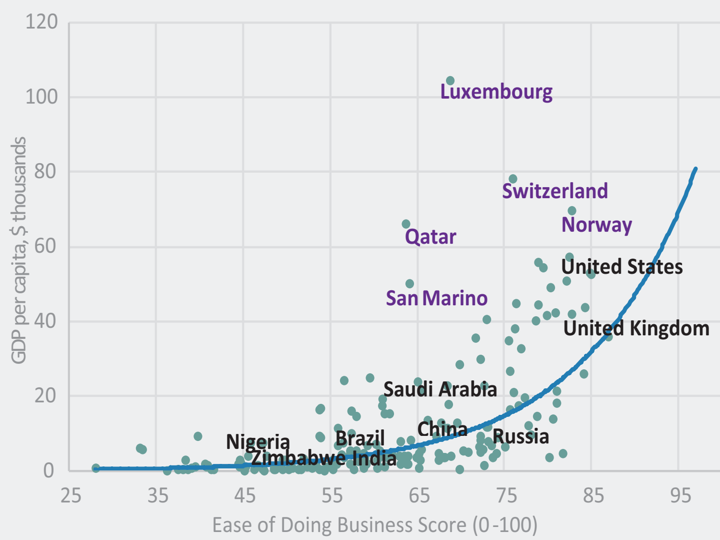
10 areas of business regulation

Indicator	What it measures
Starting a business	Procedures, time, cost and paid-in minimum capital to start a limited liability company
Dealing with construction permits	Procedures, time and cost to complete all formalities to build a warehouse and the quality control and safety mechanisms in the construction permitting system
Getting electricity	Procedures, time and cost to get connected to the electrical grid, the reliability of the electricity supply and the transparency of tariffs
Registering property	Procedures, time and cost to transfer a property and the quality of the land administration system
Getting credit	Movable collateral laws and credit information systems
Protecting minority investors	**Minority shareholders' rights in related-party transactions** and in corporate governance
Paying taxes	Payments, time and total tax rate for a firm to comply with all tax regulations as well as post-filing processes
Trading across borders	Time and cost to export the product of comparative advantage and import auto parts
Enforcing contracts	Time and cost to resolve a commercial dispute and the quality of judicial processes
Resolving insolvency	**Time, cost, outcome and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency**

Source: World Bank Ease of Doing Business 2017

Chart 2: Regulatory freedom brings prosperity

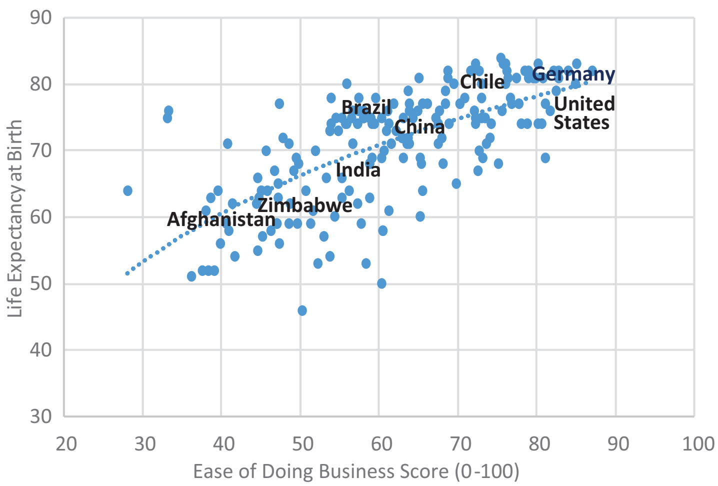
GDP per capita, $ thousands v. Ease of Doing Business score, 0-100



Source: World Bank Ease of Doing Business 2017, International Monetary Fund, Steve Hanke, The John Hopkins University

Chart 3: Freer markets, longer life

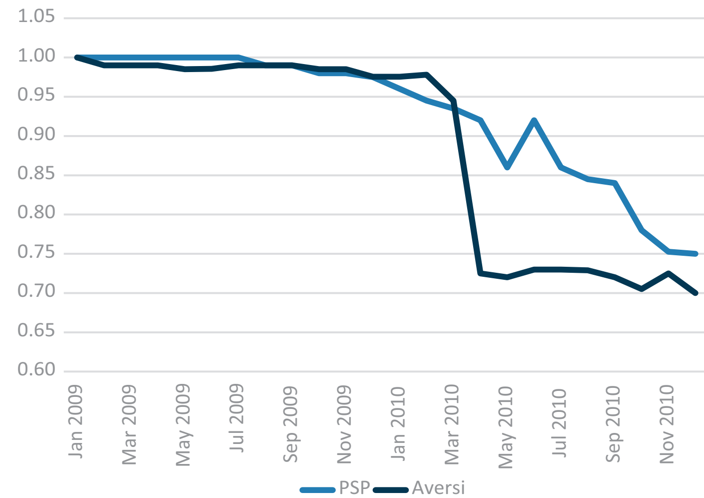
Life expectancy at birth, number of years v. Ease of Doing Business score



Source: Source: World Health Organisation, Steve Hanke, The John Hopkins University

Chart 4: Georgia's 'approval regime' lowers drug prices

Average prices for 30 drugs, indexed Jan 2009 = 1



Source: Hanke, Walters, and Rose, 'How to Make Medicine Safe and Cheap', 2014

health in these economies are inferior to what they could be.

The easiest way for these countries to improve their regulatory frameworks is to imitate what is done in places where best practice prevails. This is an old and effective technique often used in industry, particularly when competitive markets thrive. The same strategy can be used by governments to slash excessive regulations and bureaucratic nuisances.

The Georgian example

Numerous examples support this position. Before 2009, businesses seeking to import and sell pharmaceuticals in the Republic of Georgia faced the same regulatory review process as if the drugs were produced domestically. Applicants would pay a registration fee and file a two-part form at the ministry of labour, health and social affairs.

The subsequent review process involved both expense and delay, with much deliberation between the applicant and the bureaucracy. This process was not intended to exceed six months, but often took much longer. In addition, the government required all importers to obtain trade licenses from foreign manufacturers, adding to their costs.

This system of government pharmaceuticals approval was costly to administer, and created an uncompetitive market which was dominated by three suppliers – PSP, Aversi, and GPC – which sold around 75% of all medicines consumed in Georgia. Prices tended to be high relative to Georgian incomes, and the number of treatments on the market was lower than in many other countries.

In October 2009, however, the Georgian government adopted a new 'approval regime'. It compiled a list of foreign authorities with good regulatory track records so pharmaceuticals approved for sale by those entities could gain automatic consent in Georgia. In addition, registration fees were slashed by 80% for brand-name drugs, and packaging regulations were greatly simplified under a new reporting regime.

This regulatory outsourcing reduced the time and expense required to compete in the Georgian market. It was anticipated this would put significant downward pressure on prices and improve access to drug therapies in the domestic market. As Chart 4 shows, it did so quickly.

Georgia's move to outsource regulation was not the only reform it implemented over the last two decades. Led by the late Kakha Bendukidze, economy minister between 2004-08 and a well-known free-market advocate, Georgia has since 2003 made sweeping free market reforms as part of its post-communist transformation. The country's World Bank DB score increased rapidly during this period. In the 2017 report, it ranks 16th overall, just above Germany.

Since 2003, Georgia's GDP per capita has increased at an average annual rate of 6.4%. This is no coincidence. By inspecting and quantifying the various aspects of business regulation in its economy, Georgia could identify individual factors inhibiting business growth.

Georgia's path shows that a country can unlock huge potential for increasing productivity, prosperity, and health by adjusting rules and regulations to allow the private sector to thrive. The productivity puzzle is easy to solve. Other countries would be well advised to mimic the Georgian example and slash red tape. ■

Steve Hanke is a Professor of Applied Economics at The John Hopkins University, Baltimore.

"The easiest way for these countries to improve their regulatory frameworks is to mimic what is done in places where best practice prevails. This is an old and effective technique often used in industry.

The Peace bridge, Tbilisi, Georgia

Reshaping our understanding of inflation

Markets are underestimating real factors and monetary policy

Claudio Borio, Bank of International Settlements

Central banks used to struggle to bring inflation down or keep it under control; now they toil to push it up. They used to fear wage increases; now they urge them on. They used to dread fiscal expansion; now they sometimes invoke it. Fighting inflation defined a generation of post-war central bankers. Encouraging it could define the current one.

The vast majority of central banks have price stability as a core objective. Increasingly, with the spread of inflation targeting, that objective has crystallised in a precise number – 2% is the most common. For those central banks with a numerical objective, the chosen number is their credibility benchmark. Yet the behaviour of inflation is becoming increasingly difficult to understand.

The link between measures of domestic slack (productive capacity) and inflation has proved rather weak and elusive for at least a couple of decades. Inflation no longer appears to be sufficiently responsive to tightness in product and labour markets.

Several factors help to explain these developments. The most popular explanation is that greater anti-inflation credibility has weakened the link. Inflation expectations become better anchored around inflation objectives, so that wages and prices become less responsive to slack.

But no doubt the globalisation of product, capital and labour markets has also played a significant role. The entry into the global economy of the former Soviet bloc and China and the opening-up of other emerging market economies added around 1.6bn people to the effective labour force. Similarly, technological advances encouraged the relocation of the production of goods and services across the world.

The behaviour of both labour and firms has become much more sensitive to global conditions. Workers are not just competing with peers in the same country but with those abroad as well. Globalisation has made markets much more contestable, eroding the pricing power of both labour and businesses. This means global slack matters too as a measure of (dis)inflationary pressures.

The Bank for International Settlements has examined the role of global value chains as a key transmission channel of international influences on domestic inflation, by increasing competition at all stages of production.

If globalisation has contributed to a decline in pricing power, it should have reduced the wage responsiveness to labour market slack. The same principles could apply to technological change. Just as globalisation, technological advances threaten labour's pricing power – think robots as opposed to foreign workers. And both reduce incumbent firms' pricing power. Cheaper products cut costs, newer products make older ones obsolete, and more transparent prices make shopping around easier.

> *"Globalisation has been the big shock since the 1990s. But technology threatens to take over in future.*

Overcoming ingrained views

The impact of monetary policy on real interest rates over long horizons may have been underestimated. This has coincided with historically low nominal interest rates, in some cases even negative. This would have been unthinkable before the 2008 financial crisis.

The prevailing view is that real factors are responsible. Deep-seated forces – such as productivity growth, demographics and income distribution – unrelated to monetary policy have affected the balance between desired saving and investment. But the empirical evidence to support this view is less strong than commonly thought.

There is a broad consensus that market interest rates reflect a combination of central bank and market participants' actions. Central banks set the nominal short-term rate and influence the nominal long-term rate. Market participants adjust their portfolios based on their expectations of central bank policy, their views about the other factors driving long-term rates, their attitude towards risk and various balance sheet constraints. Given nominal interest rates, actual inflation determines ex post real rates, and expected inflation impacts ex ante real rates.

The prevailing view states that the influence of monetary policy on the real rate is only temporary: in the long run, it disappears. This view of the 'long run' embeds the broader notion that monetary policy is neutral: it does not affect any real variables. It is then appealing to define an equilibrium or so-called natural interest rate that is entirely independent of monetary policy.

Through this logic, market real interest rates tend to track the natural rate. The view is so ingrained that the argument is often short-circuited: it is simply stated that saving-investment balances determine real interest rates. But saving and investment balances do not influence market real rates directly. They affect those rates only insofar as they affect inflation or the setting of the nominal rates by central banks and market participants.

Put differently, inflation is the compass needle that is supposed to tell us the natural rate: control inflation and you will know that you have reached your destination. This is the most crucial relationship for monetary policy. If one takes the model as true, it becomes tautologous to say that, since inflation is not rising and economies are close to full employment, the natural rate must have fallen. Indeed, it is not uncommon for policymakers to revise their estimates of potential output or the non-accelerating inflation rate of unemployment – two other unobservable variables – assuming that the Phillips curve relationship holds. The main drawback of this approach is that the Phillips curve is a key component of the maintained hypothesis. And yet this is precisely the relationship that has proved so elusive. Inflation has remained subdued even though economies seem to be close to or beyond full employment.

Decline in real rates

One way to break out of this circularity and reduce the grip of maintained hypotheses is to let the data speak a bit more. Research at the BIS has developed two key findings. First, the relationships between real interest rates and factors such as demographics and growth break down when examining the historical data. No consistent pattern emerges, a sign that the relationships may be spurious. Second, there are economically and statistically significant differences in the level of interest rates across monetary policy regimes.

Monetary policy may have a bigger role than normally presumed. Two cases suggest that the Phillips curve relationship may have been weaker for longer than previously thought.

The classical gold standard is quite revealing. During this regime, central banks did not, as they do today, respond systematically with changes in interest rates to output and inflation. They simply tended to keep nominal interest rates constant unless the convertibility-into-gold constraint came under threat. Gold acted as a monetary anchor, but only over long horizons. Still, inflation remained range-bound, with the price level gradually falling or rising over long periods. As a result, nominal and real interest rates were stable and did not deviate much from each other. Given the behaviour of inflation, the standard approach would infer that the market rate tracked the natural rate closely. And yet factors like productivity growth and income distribution tended to vary just as much as they have in the last 30 years. Another possible interpretation is that monetary policy had a persistent impact on the real interest rate without exerting a strong influence on inflation.

The decline in real rates over the last three decades could be attributed to the combination of three factors, all related to monetary policy. The first is the gradual normalisation of interest rates after 1981. This suggests the starting point is unrepresentative and already embeds a key monetary policy imprint.

The second factor is an asymmetrical policy response to successive financial and business cycles in a context of prevailing disinflationary tailwinds linked to globalisation. Asymmetrical responses occurred around the financial boom and bust of the 1980s-1990s and the one that surrounded the 2008 financial crisis. As long as inflation remained low and stable, there was no incentive for central banks to tighten policy during the financial booms that preceded strains in both cases. But there was a strong incentive to respond aggressively to fight the bust and stave off any deflation threat.

The third factor, especially after 2008, is strenuous central bank efforts to push a stubbornly low inflation rate towards targets, as the disinflationary tailwinds before the crisis turned into unwelcome headwinds. Difficulties in generating second-round effects, with wages chasing prices, would imply that reductions in interest rates have a largely temporary effect on inflation. Thus, repeated cuts would end up reducing real interest rates, even as inflation remains persistently below target. These three examples raise the possibility that monetary policy may have a long-lasting impact on real interest rates.

> ***“Inflation is the compass needle that is supposed to tell us the natural rate: control inflation and you will know that you have reached your destination. This is the most crucial relationship for monetary policy.***

Influencing the financial cycle

If the influence of real factors on inflation and that of monetary policy on real interest rates have been underestimated, there are important implications for central banks.

First, with regard to the usefulness of the concept of the natural interest rate for policy. If monetary policy has an influence on financial booms and busts and, as evidence suggests, these cause serious macroeconomic instability, it might be unreasonable to define natural or equilibrium rates without any reference to the financial cycle. It might be more useful to adjust the definition to include equilibrium in the financial sphere.

But a broader issue concerns the usefulness of the concept. There are obvious risks in basing policy on unobservable variables, especially when the maintained hypotheses underlying their measurement are unreliable.

Second, Milton Friedman’s popular dictum, ‘Inflation is always and everywhere a monetary phenomenon,’ requires nuancing. No doubt, there is a sense in which this dictum is true. Inflation cannot continue for long unless the central bank accommodates it. The central bank can surely bring inflation down if it wants to. But real factors may have persistent effects, by influencing wage- and price-setting behaviour.

Third, markets should not overestimate central banks’ ability to fine-tune inflation. This follows in part from the previous implication. And it is reinforced by the possible importance of global, as opposed to purely country-specific, factors in driving inflation.

Fourth, this puts a premium on understanding the factors driving inflation. To the extent that disinflationary pressures result from forces such as globalisation or technological advancements, they should be generally benign: they would reflect favourable supply-side developments as opposed to damaging demand weakness. At a minimum, this suggests lengthening the horizon over which it would be desirable to bring inflation back towards target.

Finally, it would be desirable to use the additional room for manoeuvre to address the financial cycle more systematically. This could improve overall macroeconomic performance and reduce the risk of a ‘debt trap’. This could arise if it became harder to raise interest rates without causing economic damage, owing to the large debts and distortions in the real economy that the financial cycle creates.

As long as monetary policy has a material influence on the financial cycle, the costs of financial crises are simply too large to be ignored. Such a strategy would fully recognise the potential persistent impact of monetary policy on the real economy through financial instability, and would have a long-term focus. Over such a horizon, any trade-offs between price and financial stability tend to dissipate.

Markets may be underestimating the influence that real factors have on inflation, even over long horizons. Observers may likewise be underestimating the influence of monetary policy on real interest rates over similar horizons. If so, central bankers may need to adjust monetary policy frameworks.

The empirical evidence can be read in many ways. But while the answers may differ, the future of central banking, and monetary policy more specifically, depends on them. ■

Claudio Borio is Head of the monetary and economic department at the Bank for International Settlements. This article is based on the text of a speech given by Borio at an OMFIF City Lecture in London.

ECB dovish signals lack credibility

Draghi should draw inspiration from Japan

Danae Kyriakopoulou

Markets cheered the European Central Bank's decision on 26 October to keep the horizon for its quantitative easing programme open-ended even as it announced a slowing of the pace of asset purchases to €30bn per month from €60bn a month, effective from January to at least September 2018.

The ECB further strengthened its forward guidance, committing to keeping interest rates at present levels until 'well past' the new horizon of net asset purchases. It reiterated its intention to continue reinvesting the principal payments for maturing securities for an extended period after the end of QE. But there are questions over how credible these commitments are. Political, legal and technical constraints all put doubts over the ECB's ability to follow through with a dovish normalisation.

The parameters of the decision were widely expected and intended to react to a mixed macroeconomic background. Underlying economic performance has strengthened significantly across the currency union: the euro area economy grew by 0.6% over the second quarter of 2017, twice the rate seen in Britain over the same period. On an annual basis growth stood at 2.1%, the fastest pace since 2011. This has supported a pick-up in domestic demand which has put upward pressure on prices. Yet inflation remains below the ECB's target of 'below but close to 2%'. Investors, moreover, expect the ECB to keep missing its target for a decade, with market-implied inflation rates at around 1.8% for the next 5-10 years.

Mandate for price stability

Several hypotheses have been put forward to explain this persistent weakness in inflation even as the economy and labour market have strengthened, in Europe and other advanced economies. In a separate article (page 18), Claudio Borio of the Bank for International Settlements argues that the increasingly important role of globalisation and technology in influencing wage-setting weakens the control national central banks have over inflation.

These conditions have ignited a debate over the need to reconsider the appropriateness of the ECB's inflation target. This would have important distributional effects for creditors and debtors given the role inflation plays in determining the real value of creditors' net nominal claims on debtors. More importantly, a debate on the appropriateness of the definition of price stability should be kept separate to that regarding what would be the appropriate policy stance for the ECB given its current mandate.

According to the ECB, price stability helps support economic activity and employment by allowing businesses and individuals to 'make well-informed consumption and investment decisions' and by preventing 'an arbitrary redistribution of wealth and income because of unexpected inflation and deflation', among other channels. Specifically, the ECB's mandate instructs creditors and debtors to base their decisions on the expectation of a 2% inflation target. In this context, the unexpected and unintended undershooting of that target has increased the real debt burden facing debtors.

Constraints to dovishness

The political nature of these debates is one of the reasons why the ECB may not be able to follow through with dovish normalisation. As Draghi revealed during the 26 October press conference, the decision to leave the end date for QE open-ended was not taken unanimously. A day later, Bundesbank President Jens Weidmann expressed his opposition publicly in a speech at the German embassy in Paris, saying 'a clear end of net purchases would have been appropriate'.

Beyond such political pressures, technical constraints also weigh on the credibility of the ECB's pledge to an open-ended asset purchase

> ***"One country which the ECB may look for to inspiration for ways to take advantage of this flexibility is Japan. The Bank of Japan has been at the forefront of unorthodox monetary policy-making, and its experiments have often proved instructive for other central banks.***

programme. OMFIF's analysis suggests the issue limit that restricts the ECB to buying no more than one-third of any one country's sovereign bonds could be breached as early as the second quarter of 2018 for Germany, depending on how widely allocation deviates from the suggested capital key and on the fiscal policy path that determines the supply of debt to be bought.

When asked about the constraint of bond scarcity at the press conference, Draghi emphasised the bank's record of accomplishment in proving that 'both the design of the programme is flexible enough to cope with the potential limits, and that the governing council is committed to that.'

Following Japanese instruction

One country which the ECB may look for to inspiration for ways to take advantage of this flexibility is Japan. The Bank of Japan has been at the forefront of unorthodox monetary policy-making, and its experiments have often proved instructive for other central banks. In September 2016 it introduced its yield curve control policy which entails structuring bond purchases to keep the 10-year government bond yield at zero.

New tools were introduced by the BoJ to facilitate YCC, namely outright purchases of JGBs at yields designated by the BoJ (fixed-rate purchase operations) and fixed-rate funds-supplying operations for a period of up to 10 years (extending the longest maturity of the operation from one year at present). The measure was intended as an alternative way to use monetary policy to support the real economy. By targeting long-term rates directly and aiming at flattening the yield curve, the BoJ intended to encourage investment and bank lending. A similar practice was followed in 2011-12 by the US Federal Reserve, what became known as 'Operation Twist', although with very different effects on the yield curve (in the US it flattened by over 100bp by end-2011).

In the ECB's case, the absence of a euro area-wide sovereign bond would mean that a YCC policy would have to target a composite rate instead. This could be the average of a basket of euro area sovereign bonds, weighted for example by the size of their economy. Such a practice would help the ECB overcome the bond scarcity constraint, and at the same time address concerns about its growing balance sheet. While YCC, in theory, commits the central bank to buying unlimited debt, in practice the BoJ has managed to reduce its annual bond purchases by JPY15tn (around $130bn) since the introduction of the policy.

Still, such a policy could encounter substantial opposition in the euro area and the ECB would need to prepare responses to potential objections. But, overall, such an approach would be preferable to resigning to a second-best path of scaling back stimulus prematurely in the face of technical constraints. ■

Danae Kyriakopoulou is Chief Economist and Head of Research at OMFIF.

The logic of renminbi globalisation

International expansion a matter of political will

Elliot Hentov, Advisory Board

The path towards further liberalisation of the renminbi is firmly set, according to Zhou Xiaochuan, governor of the People's Bank of China.

Speaking at the 19th Communist party congress in October, where he revealed he would retire from his post this year or next, Zhou warned of the potential for heightened financial instability in China. He emphasised the need to continue with reforms to strengthen the country's financial sector and support the renminbi internationally.

In October of last year the International Monetary Fund introduced the renminbi into the special drawing right, its composite currency unit, in recognition of the currency's strengthening global reserve status. In the 12 months since, however, the renminbi's internationalisation has slowed down. Ensuring domestic stability, as well as a lower, more sustainable growth target, will need to precede the next phase of currency liberalisation.

Until 2015, the rise of the renminbi was considered a one-way trend. As China grew in importance, it embarked on a tightly controlled process of liberalising its capital account and currency. Extrapolating the upward trajectory suggested the renminbi was certain to become one of the world's major currencies, alongside the dollar and euro. However, that trend began to stall around August 2015.

Sceptics point to the challenges facing the Chinese economy as reasons why further liberalisation should not be expected, as the government appears unwilling to relinquish control to market forces. This, however, underestimates structural factors which make continued renminbi internationalisation inevitable.

Tolerating market vagaries

China has created the essential infrastructure to allow capital to flow through domestic financial markets, and therefore to accelerate the renminbi's global usage. The stock and bond market 'connects' with Hong Kong are key programmes which allow foreign investors to access Chinese markets. The timing of further capital account opening, therefore, is a question of political will. Increased reliance on market forces would lead to greater volatility in asset price movements. In exchange, markets would presumably impose more discipline on lending and investment decisions in China, thus helping to rebalance the overall economy in line with development needs.

Regardless of the economic rationale, the renminbi's progress will remain dependent on the government's tolerance of the vagaries of markets. It would require, too, the PBoC to secure greater autonomy, something that would run counter to current trends of institutional consolidation in the government.

Another challenge stems from the accumulation of substantial macroeconomic and financial imbalances. China has a high gross savings rate (close to 50% of GDP), which can lead to asset bubbles. Highly indebted state-owned enterprises with significant default risks present further dangers. Potential systemic risks such as these must be defused before the capital account is opened further.

> ***"China has created the essential infrastructure to allow capital to flow through domestic markets and to accelerate the renminbi's global usage.***

The government has a variety of tools at its disposal. It can resolve debts through bail-outs by shifting liabilities from the corporate to the stronger sovereign balance sheet. It can provide liquidity to struggling debtors to enable gradual deleveraging. It may impose soft restructurings, as state entities represent most borrowers as well as lenders. Or it could allow defaults and let defaulted debt be re-priced. A combination of these measures should enable a smooth overall deleveraging – a precondition for further integration with global capital markets.

Containing financial risks

Many governments can withstand controls on capital account flows because they do not lead to obvious costs. However, China is a net creditor to the rest of the world, which should produce higher net income. In China's case the costs to its domestic economy ensue not so much because of capital controls, but because the funds it channels abroad are invested suboptimally.

The former reflects the disproportionate share of low-yielding foreign reserves as a share of foreign assets. The latter is explained by the cheap lending practices of Chinese state-owned companies. These policy choices lead to high national costs, which would be lower if Beijing were to allow partial liberalisation of the capital account and promoted the renminbi as an international currency.

Over the last 12 months, a substantial portion of foreign reserves has been converted into foreign assets of Chinese banks and corporations, which should raise investment income in the future. If China wishes to project geopolitical power through its lending capacity, its ability would be enhanced by adopting the renminbi for these operations.

Another macrofinancial cost to China's capital account policies is the domestic effect of financial repression. As most financial products will offer only a zero-real rate of return and investment abroad is not permitted on a large scale, Chinese savers stock up unduly with domestic growth assets.

In response, in July the Beijing national financial work conference endorsed a tighter regulatory and institutional approach to containing financial risks. Such measures are welcome and necessary in the short term. Loosening the capital account to permit the greater influence of market forces would be a complementary long-term step. This would help remove some of the excess savings from China's financial markets.

Domestic rebalancing

The inefficiencies of credit allocation raise further problems. A state-owned banking system combined with the political economy of local governments generates an institutional bias towards channelling credit to state-owned enterprises. This leads to declining overall productivity, as state-owned businesses are less productive than the private sector.

The entry of foreign capital would help alleviate this problem by compelling state-owned enterprises to compete more fairly for credit and allocate funds more efficiently. Capital account liberalisation would promote faster growth in services at the expense of manufacturing. These trends would help rebalance the economy away from state-directed manufacturing enterprises, and lower the investment rate and the size of export capacity.

Excess savings pose systemic risks to China's domestic financial system. Such circumstances are unsustainable. Since imbalances grow year by year, further market opening will, inevitably, proceed sooner rather than later. The internationalisation of the renminbi may have stalled over the last 12 months, but the long-term trajectory shows it taking its rightful place as a major global currency. ■

Elliot Hentov is Head of Policy & Research, Official Institutions Group, at State Street Global Advisors.

Filling the infrastructure financing gap

Attracting investors to emerging projects

Otaviano Canuto, Advisory Council

There is a sizeable gap between the world economy's infrastructure needs and available financing. The shortfall is especially pronounced in emerging markets.

Infrastructure investment has fallen short of what is needed to support potential growth. At the same time, financial resources in world markets have contended with low long-term interest rates, while opportunities for greater returns from potential infrastructure assets are missed.

The development of properly structured projects, with risks and returns distributed in accordance with stakeholders' incentives, will help to close the gap between private sector financing and infrastructure. Worldwide infrastructure investment, including from international financial institutions, public investment and public-private partnerships, amounts to around $1.7tn per year. This leaves a funding gap of more than $1tn.

Global infrastructure financing has fallen short of its potential, (see Chart). Institutional investors and other private sector players could increase allocations under appropriate conditions. Private sector investment and institutional investor capital are often raised as possible solutions for filling the infrastructure funding gap. According to data from the World Economic Forum, institutional investors managed assets exceeding $50tn in 2015, compared to $30tn in 2007.

Defining attractive opportunities

Institutional investors must consider their own incentives, constraints and objectives when it comes to selecting countries, types of projects and at what stage of the investment project cycle to invest in. Inadequate coverage of risks is one of the most common reasons projects do not reach financial close. Defining attractive investment opportunities and matching investors to these prospects in a more systematic manner is one key way in which the shortfall in infrastructure funding should be addressed.

Heterogeneity in the set-up of projects is often named as a key barrier to pushing greater allocations of capital towards infrastructure investment. A lack of data, varied contractual structures and differing regulatory environments are all part of this puzzle. However, focusing on improving the breadth of products tailored specifically for different types of institutional investors is likely to reap greater near-term rewards.

Currency risk is a major factor which international investors face in emerging markets. Export credit agencies can help with that challenge, although often only at great expense. Other challenges frequently named are the scarcity and complexity of financial instruments and their high cost. Fixed-income instruments such as bonds – including project bonds, sub-sovereign bonds, green bonds and sukuk – as well as loans are likely to be a better fit for the appetite of a broad range of institutional investors in emerging economies.

> ***"The contrast between the dearth of investments in infrastructure and the savings-liquidity glut in the global economy must be confronted.***

Developing project pipelines

Development finance institutions are important catalysts for investment. They can draw private capital to long-term projects in countries and sectors in which, although the market may perceive higher risks, significant development results can be expected. Those institutions contribute their own funding and guarantees, providing improved creditor status. Bringing partners into specific deals through syndications can likewise generate additional financing. Furthermore, development finance institutions can support the advancement of longer pipelines of investable projects. Non-banking financial institutions frequently highlight the scarcity of such pipelines as an impediment to greater infrastructure investment.

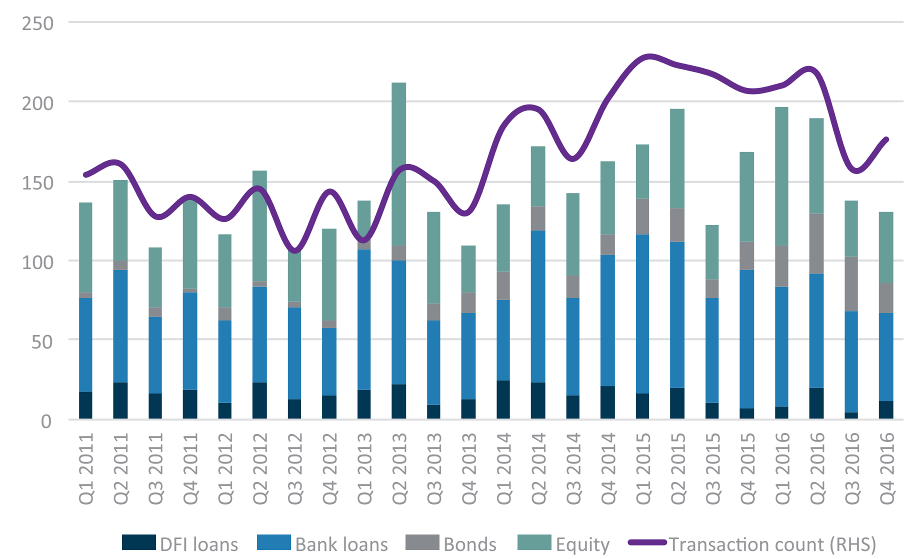
Development banks are trialling various mechanisms which can distribute risk among third parties through risk transfer and credit enhancement instruments. These include guarantees, insurance policies and hedging mechanisms under which, for a fee, the provider will agree to compensate the concessionaire in case of default or loss due to some specified circumstance.

The contrast between the dearth of investments in infrastructure and the savings-liquidity glut in the global economy must be confronted. Lowering legal, regulatory and policy risks are essential steps. Improving the availability of sophisticated, developed financial markets and instruments will help facilitate partnerships between different financial agents. Increasing private investor involvement and designing rational financing structures will both boost funding and improve the efficiency of infrastructure projects. Building such bridges is well within reach for resourceful financial actors. ■

Otaviano Canuto is an Executive Director of the World Bank and a Member of the OMFIF Advisory Council.

Global infrastructure finance falls in 2016

Global infrastructure finance including corporates, by source of funding, $bn and number of transactions



Source: Canuto and Liaplina, 'Matchmaking finance and infrastructure', Capital Finance International, 2017

Rousing Argentina's mortgage market

Public policy and fintech spur country's banks

Mario Blejer and Juan Cancelli, Banco Hipotecario

Founded in 1886, Banco Hipotecario is one of the most established and robust institutions in Argentina's financial system. It has granted more than 1.7m loans, financing housing throughout the country.

In 1997, Argentina's parliament approved the conversion of the bank from a purely public sector institution into a 'public limited company', entailing a mixed shareholder structure. The public sector retained 55% of the shares, but the agreement stipulated that the private sector would control the management of the bank.

Following the partial privatisation, Banco Hipotecario moved away from concentrating entirely on mortgage lending and established itself as a universal bank while maintaining its original mandate. This fixed the objective of providing integrated real estate solutions in the areas of credit, savings, and investments aimed at families, businesses and public organisations.

Public policy intervention

Argentina's mortgage market is small and problematic, given the country's history of inflation and instability. It accounts for no more than 1% of GDP. The key issue relates to the sources of bank finance, which lead to a mismatch of demand and supply terms and conditions. While the average time deposit has a duration of fewer than 60 days, mortgage loans require terms of 15-20 years to be attractive and affordable. In response, some public policy intervention is necessary and the government has implemented a variety of initiatives.

Banco Hipotecario oversaw ProCreAr, a federal initiative financed largely by public funds which sponsored building credits for landowners, as well as microcredits for gas connections and purchasing construction materials for home improvements. The programme was successful, but covered only a limited scope.

Revitalising digital tools

Banking and the mortgage market are experiencing extensive changes and a modernisation of procedures. Advances in financial technology are being used in various business areas. New technologies can help diversify funding sources to make the mortgage credit market sustainable. Part of this change includes more aggressive market participation, with the issuance of indexed debt and a concentrated effort to securitise mortgages. These developments are making competition among banks much more acute.

Given the increasing preference for online banking, Banco Hipotecario is revitalising its digital tools. For specific mortgage loans that require face to face procedures, the bank has incorporated an administration platform that allows the digitisation of credit bureaus and permanent interaction with more than 200 notary offices. The platform allows the bank to shorten the time for loan approvals to an average of 25 days, a record in the Argentine financial system. Banco Hipotecario maintains a balance, however, between its in-branch and remote banking services. Fintech is but one element of the bank's long tradition of service. ■

> *"Banking and the mortgage market are experiencing extensive changes and a modernisation of procedures. These developments are making competition among banks much more acute.*

Mario Blejer is Vice-Chair of Banco Hipotecario and former Governor of the Central Bank of Argentina. Juan Cancelli is Institutional Relations Manager at Banco Hipotecario.

Puerto Madero, Buenos Aires, Argentina

Financing sustainable projects

Balancing investment with environmental standards

Kat Usita

The world requires around $94tn to fund infrastructure between now and 2040, according to the G20-backed Global Infrastructure Hub. With tremendous investment needed, focus will be placed on how best to combine private, public and multilateral resources to fill the infrastructure gap. It is important, however, to be mindful of how a strong infrastructure push might compromise environmental sustainability goals.

One of the dangers of a substantial infrastructure catch-up is that too much attention will be paid to speed of delivery without enough consideration of related risks, such as greenhouse gas emissions. Developing most kinds of infrastructure generally takes time. Years may pass between conceptualisation and completion, and costs typically escalate. There are incentives to build as quickly as possible, sometimes at the expense of sufficient planning that adequately considers environmental impact.

In selecting infrastructure projects to finance, investors should consider both urgency and carbon footprint. Energy and transport are the two sectors which require the most investment, and both are among the largest contributors to greenhouse gas emissions. Together they account for around 40% of global emissions based on 2014 measurements from the Intergovernmental Panel on Climate Change. Reducing emissions from these sectors involves two key points: upgrading underlying technology, and urging changes to human behaviour.

Promoting sustainable networks

Energy innovation has rightly focused on moving away from the use of fossil fuels. Investments in renewable energy fell in 2016, in part because of declining costs as the industry became more competitive. But the capacity generated increased, indicating that returns will grow over time. Solar, wind and hydroelectric projects have gained traction and will need continuous financing before they can become primary sources of power.

Investors should consider financing infrastructure which promotes sustainable development generally. Building sufficient charging stations for electric vehicles is a crucial element in promoting greener driving. In the UK, where electric vehicles make up barely 1% of new car sales, there are around 14,000 charging stations in nearly 5,000 locations. To make electric cars more attractive to new car buyers, there must be sustained investment in developing an extensive charging network.

Aside from electrifying vehicles, greener transport includes encouraging a greater shift towards mass transit. Traditionally, this has meant building fewer roads and more railways, but there are transport modes which bridge the trade-off. Bus rapid transit systems feature dedicated lanes that high-capacity buses can pass through undisturbed by other vehicles. The terminals are typically spread out at the same distance as rail stations and can be built on existing roads where rail construction may be too disruptive or expensive.

> ***"The construction industry needs to be financially incentivised to modernise, otherwise it is unlikely to shift to low-carbon processes.***

Bus rapid transit systems began to operate in the 1970s and are today being developed in cities looking for low-cost alternatives to railways. Using electric buses would make these systems still more sustainable, and the environmental return on such an investment would be higher than electrifying fleets of private cars.

Reimagining infrastructure projects

Selectiveness in the types of projects to finance is crucial in maintaining high environmental standards for building. Ideally, construction activity should be as low-emission as possible, but transitioning from traditional to more sustainable processes can have high upfront costs. There may, too, be technological constraints depending on where the infrastructure is being built and what equipment is available in that location. The construction industry needs to be financially incentivised to modernise, otherwise it is unlikely to shift to low-carbon processes.

Policy-makers can influence construction standards when they tender infrastructure contracts and issue building permits, although regulatory enforcement can be difficult because of measurement challenges. A more simple policy to implement is to require all new publicly and privately financed infrastructure to have energy-saving features, such as efficient heating and lighting – not only in residential and commercial buildings, but in public spaces as well, including rail stations, bus terminals and airports.

To minimise financial and environmental costs, infrastructure should be built to withstand natural disasters. Often this means adhering to strict building codes to ensure the facility's structural strength, but it should likewise include reimagining the functionality of certain types of infrastructure. In Kuala Lumpur, a three-level tunnel caters to vehicles during normal weather conditions, but the lowest level is repurposed into a storm drain during heavy flooding.

Inevitably, there will be tension between meeting infrastructure needs and achieving emission reduction goals. By carefully selecting projects and being mindful of building standards, the infrastructure gap will be filled without causing undue environmental damage. ▪

Kat Usita is Researcher at OMFIF.

Fast lane: Bus networks offer cities low-cost alertnatives to rail construction

Sovereign bonds to aid refugee crisis

Creative public-private solutions for Middle East and Asia

Gary Kleiman, Kleiman International

The global refugee crisis, spreading from the Middle East to Asia, was in the spotlight at this year's annual meetings of the International Monetary Fund and World Bank in October. Jim Yong Kim, president of the World Bank, emphasised the development-lender mantra of 'turning billions into trillions' through innovations and risk management tools to better mobilise private capital. The Institute of International Finance says foreign inflows into emerging debt and equity markets will again reach $500bn in the light of their bullish performance this year.

The International Development Association estimates that $2bn may be needed to meet host-country needs in responding to the crisis. Bangladesh's finance minister submitted an initial request relating to the influx of Rohingya refugees which may cost $1bn. The World Bank may issue additional emergency bonds alongside the global concessional financing facility, created by the Bank, European Bank for Reconstruction and Development and the Islamic Development Bank, to allow discount borrowing by middle-income states like Jordan and Lebanon.

> *“The International Development Association estimates that $2bn will be needed to meet host-country needs in responding to the refugee crisis.*

However, conventional emerging market investors could more easily be drawn on for larger sums through dedicated 'refugee bonds', through which the World Bank should instead emphasise credit enhancement. Jordan's government has shown interest in a pilot programme which could raise hundreds of millions of dollars in long-term funding.

Drawing on private investors

Sovereign bonds are a logical starting point for refugee capital market development, but public and private equity participation through investment funds is feasible as well. Several large listed companies are already providing goods and services to refugees in affected cities and camps. Jordan has issued external bonds both cleanly and with US government guarantees. A $500m issue in April at 7% yield was oversubscribed, and fell within the guidelines of Jordan's IMF programme.

Preliminary discussions with traditional emerging market investors, as well as those focused on impact investing and 'socially responsible' instruments, suggest the Jordanian government could offer a lower yield for a refugee bond that ties the cost to detailed and independently-verified reporting on the allocation of proceeds. The instrument would be designed to promote best practice in relief and to identify revenue streams, such as tax-producing job entry and business creation, that generate repayment cash flow.

For collateral, buyers could potentially control limited ownership rights in housing, road, power and sanitation facilities built to handle extended refugee influxes into host countries. According to United Nations data, refugees remain resident in host countries on average for longer than 10 years.

Bangladesh, which has accessed international markets once, is a compelling candidate for development bank guarantees and risk support through an inaugural refugee bond. The Asian Development Bank could help arrange a local currency alternative as well, reflecting its mandate to strengthen domestic and intra-regional bond markets. Its work contributed to turning India, Indonesia, Malaysia, Pakistan and Thailand into mainstream fixed-income investor destinations.

Malaysia has become the global hub for sukuk activity, and a debut Bangladesh bond with sharia-compliant features could be structured through Kuala Lumpur. Annette Dixon, the World Bank's South Asia director, has said the Bank's bond policies relating to the refugee crisis are under review, as it continues to settle on the optimal public-private sector mix.

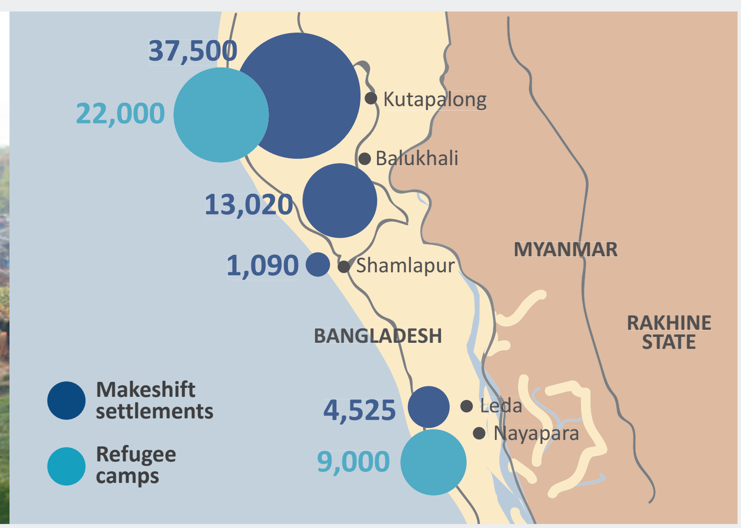
Several creative emerging financial market-based solutions have been presented. They await official, commercial or philanthropic sponsorship to help realise millions, if not billions, of dollars in available foreign investment.

Gary Kleiman is Co-Founder and Senior Partner at Kleiman International.

Global refugee crises stretch from Middle East to Asia

More than 123,000 people have crossed into Bangladesh from Myanmar since 25 August 2017

Kutupalong refugee camp, Bangladesh



Source: Inter Sector Coordination Group

Redd+ is the new green

Global standards will underpin carbon credits sales

Caroline Butler, Advisory Board

Reducing the amount of carbon dioxide in the atmosphere involves capital investment well beyond the richest philanthropist. Yet investors need quantifiable evidence before committing capital. An internationally recognised measure now exists to capture the levels of carbon dioxide in forests which will underpin a robust market in carbon credits.

One cause of carbon dioxide emissions is the destruction of forests around the globe. Each year, 73,000 square kilometres of forests are destroyed. Forest fires release back into the atmosphere the carbon dioxide which those trees had 'captured' over their life and eliminates their ability to absorb more carbon.

Around 36bn tonnes of carbon dioxide are emitted annually. Oceans absorb around 9.5bn tonnes and 10.9bn tonnes is captured on land by trees. So around 16bn tonnes annually is stuck, accumulating in the atmosphere, trapping an increasing amount of solar heat. The 2015 Paris accord of the United Nations climate change conference agreed that if total trapped greenhouse gases, currently at 2tn tonnes, rises above 3tn tonnes, the world will breach the two degrees Celsius rise in temperature.

These are huge numbers that need a massive influx of capital. But efficient markets need quantifiable returns to price assets correctly. For decades, without accurate measurements, saving forests was left to philanthropists and a small number of non-governmental organisations. However, their work has finally led to a UN-recognised measurement for carbon credits and a reliable market for verified emission reductions, leaving behind a chequered history of sometimes manipulated sales of carbon credits.

Building a carbon credit market

Enter Redd+, the greenest of all measurements. Redd (reducing emissions from deforestation and forest degradation) was introduced as a concept in 2007 by the UN framework convention on climate change. It took another decade to become the internationally recognised practical measure of the audited amount of carbon emissions arising from burning one acre of a given forest. Currently sold on the voluntary carbon market, Redd+ verified emissions reductions will from 2020 become part of the compliance market for carbon credits as agreed by the 2015 Paris agreement. Redd+ credits used by governments and major corporate emitters will be formally allowed to offset unavoidable emissions.

The vital plus sign in Redd+ signifies involvement by and contribution to the local community. One of the pioneers of Redd+ is Mike Korchinsky, an entrepreneur philanthropist who founded Wildlife Works in 1997 in Kenya's Kasigau corridor. This land between two national parks was steadily being depleted of trees and the wildlife hunted to extinction. Korchinsky realised that, to save wildlife and forests, his philanthropy alone was unsustainable.

It was his work, among others, with the UN and his practical implementation of Redd+ by engaging the community that revolutionised the outcomes in the Kasigau corridor.

> ***"The work of philanthropists and NGOs has led to a UN-recognised measurement for carbon credits and a market for verified emission reductions.***

Communities and landowners commit over 30 years to preserve their forests, and then Redd+ credits can be audited and sold each year. More than 70% of the sales proceeds are invested locally to build schools, create businesses and employ rangers. It is a clear case of 'poachers turned gamekeepers', and more than 150,000 locals benefit.

Independent auditors have evaluated that preserving the trees in the Kasigau corridor avoids emitting 1.5m tonnes of carbon dioxide per year. Since Korchinsky pioneered the Redd+ measurement, his sales team has sold 5m tonnes of Redd+ verified emission reductions to corporates such as Audi, Barclays and Microsoft, to name but a few.

Quantifiable returns for investors

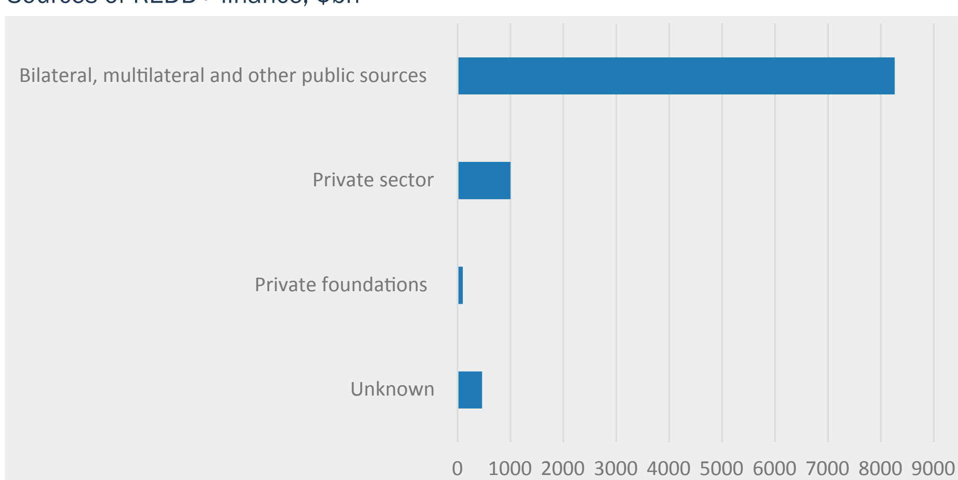
The UN target says global emissions must fall by 14bn tonnes by 2025 with 2bn tonnes of verified emission reductions coming from land use, the sector which Redd+ is concerned with. But around the world the 30 Redd+ project developers generate only 60m tonnes of annual credits. The good news is that the painstakingly diligent auditing of Redd+ programs under a global standard tells investors how many tonnes of carbon dioxide their capital has prevented going up in smoke, how many people benefited, and what wildlife was saved.

For the first time in this sector markets have with Redd+ a quantifiable return for investors to evaluate and a clear impact assessment for sustainable financiers to consider. Redd+ gives markets a number, an objective return. The increase of 'compliant' sales of audited and measurable carbon credits will drive stronger sales to corporates, the creation of a more robust and trustworthy carbon credit market, and the resulting sales proceeds will increase the supply of global Redd+ projects. A good case of Redd turning investors green. ■

Caroline Butler is a Member of the OMFIF Advisory Board.

REDD+ needs private capital

Sources of REDD+ finance, $bn



Source: Centre for Global Development, 'The State of Redd+ Finance'

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Dangers of cliff-edge EU exit too great

Majority promote prospect of some transitional agreement

This month's advisers network poll focuses on the state of the negotiations between Britain and the European Union on the UK's exit from the bloc. Members of the network were asked: 'What is the most likely outcome of the next round of Brexit talks?' The choices included were: a 'cliff-edge exit' in March 2019, when negotiations are scheduled to end; a transitional period running to 2021; a transitional period of three to four years after 2019; Britain remains in the EU; or another scenario.

More than two-thirds of respondents are confident a transitional period of some sort will be agreed, split almost equally between the likelihood of a two-year period running after March 2019 and a slightly extended period. 13% believe the UK will leave the EU at the end of the negotiating period without a suitable agreement in place; but a corresponding proportion of respondents argue Britain will ultimately stay in the union.

Other members of the network suggest the negotiations will, by one means or another, be extended beyond March 2019. Still more pessimistic respondents argue the British negotiating team will fail to deliver a deal which is sufficient to bind future governments. The next general election is scheduled for 2022, though may occur sooner in the event of a vote of no confidence or two-thirds majority vote in the legislature to dissolve parliament. An early election seems increasingly probable in the light of seemingly ever-present leadership challenges in the Conservative party.

Extended transitional period appears probable

Percentage of responses

What is the most likely outcome of the next round of Brexit talks?

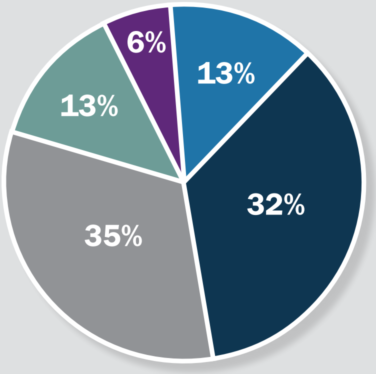
35% Transitional period of three to four years after 2019

32% Transitional period running to 2021

13% 'Cliff-edge' exit in March 2019, when negotiations are scheduled to end

13% Britain remains in the EU

6% Another scenario

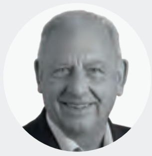


'I imagine there will be a three- or four-year transition period, but the road to this point will be a volatile one. There will be increasing pressure on UK negotiators as it becomes apparent that important long-term corporate investors are looking to hedge their position by increasing exposure into Europe in key sectors such as financial services and manufacturing.'

Mark Burgess, Jamieson Coote Bonds

'The current extremism, on both sides, is the enemy of compromise. More time is imperative to find a middle ground.'

David Smith, formerly United Nations



'There will be a cliff-edge exit papered over with individual fudged agreements in selected limited areas. The problem will be getting the 27 remaining members of the EU to agree on details.'

Brian Reading, independent economist

'The EU, the financial markets and the corporate sector can see that the British do not have a strong enough government to negotiate with, namely one that can deliver a deal which will commit future parliaments are one which future governments will abide by. The UK is heading for a steady erosion of financial sector business from London over the next several months. At some point this confusion and uncertainty will trigger a collapse in confidence in the British government and in sterling well before March 2019.'

Stewart Fleming, University of Oxford

'At the end of the day a transition period running to 2021 is most probable. The economic and political risks of other options for either one or both parties are simply too big to be credible.'

Laurens Jan Brinkhorst, University of Leiden

'I believe at the end of March 2019 some arrangement in allowing the parties "to kick the can ahead" will be found. But it will not be too productive.'

Miroslav Singer, Generali CEE Holding

'A transition period lasting three or four years would make Brexit the defining theme of the next general election. This would make a Remain situation possible, given the of flexibility on the legal issue of a "non-consummated exit".'

Olivier Rousseau, Fonds de réserve pour les retraites

These statements were received as part of the November poll, conducted between 4-23 October, with responses from 31 advisory network members.

December's question

Assets globally have benefited from a strong bull market in 2017. When will markets see a correction and what will be the cause?

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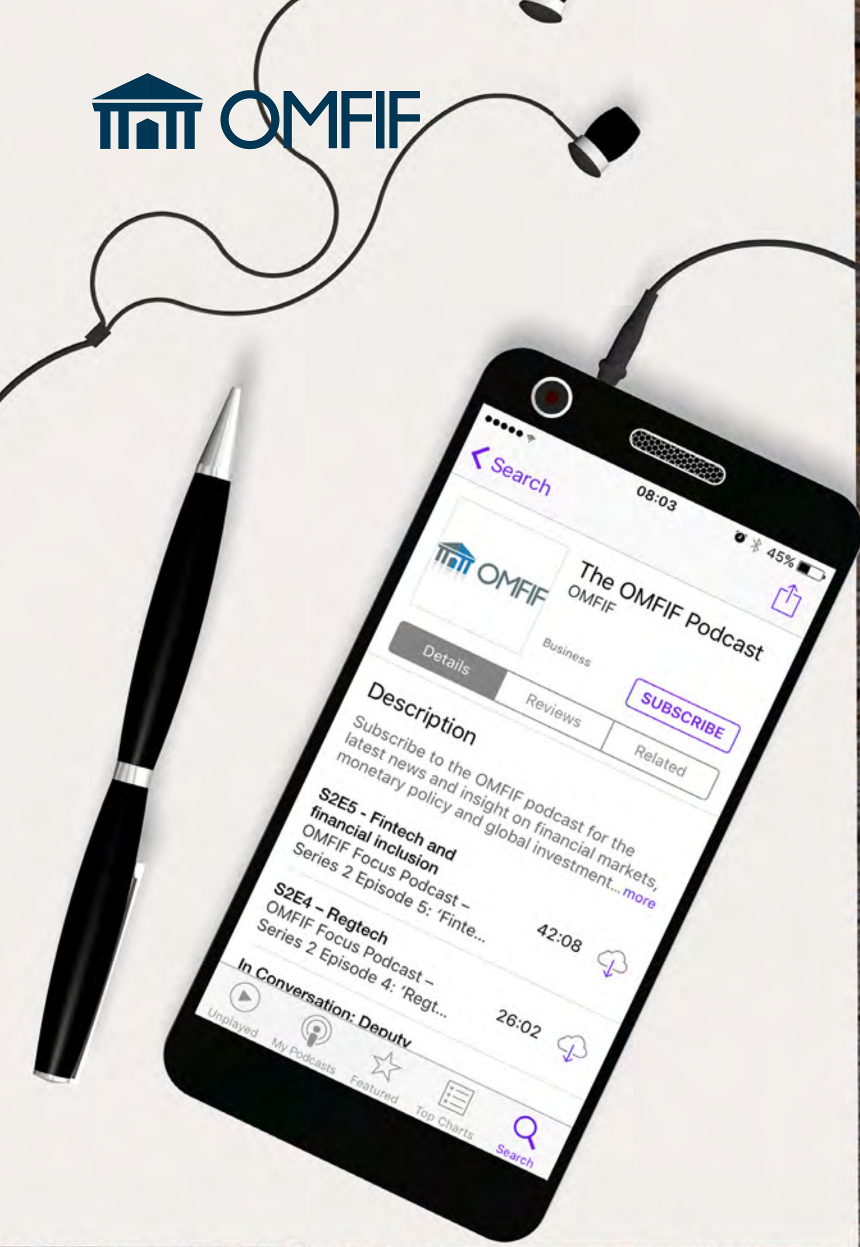

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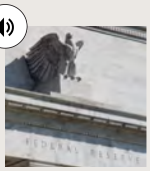

Ahead of the Fed

Danae Kyriakopoulou, head of research and chief economist at OMFIF, speaks with Chris Probyn, chief economist at State Street Global Advisors, and Nathan Sheets, chief economist at PGIM Fixed Income and former undersecretary for international affairs at the US Treasury. They examine the prospects of an interest rate rise at the November meeting of Federal Open Market Committee, as well as the potential candidates to take over from Janet Yellen as Fed chair.

Too much globalisation?

Harold James, professor of history and international affairs at Princeton University and Stephen King, economist and senior economic adviser at HSBC join Marcin Stepan, programmes manager at OMFIF. The discussion focuses on the rise of populism as resistance to globalisation in Europe and the US, making globalisation work for the benefit of all.

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