Personal

1. How has your experience to date prepared you for the role of Governor of the Bank of England, including chairing the Monetary Policy Committee (MPC) and Financial Policy Committee (FPC)?

As Governor of a G7 central bank, I have led a team with a proven track record of monetary policy management. I have extensive experience operating a Flexible Inflation Targeting regime. The Bank of Canada has consistently achieved its inflation target, while the Canadian economy has grown jobs and output at the fastest pace in the G7.

As Governor, I chair the Bank of Canada's monetary policy committee and serve as the Bank's principle spokesperson. As such, I must communicate complex economic and financial concepts to broader audiences through public speeches, outreach events with a wide range of domestic and international stakeholders, parliamentary testimony, press conferences and media interviews.

During my tenure, the Bank of Canada has renewed Canada's monetary policy framework. The new framework better defines Flexible Inflation Targeting and clarifies the role of macroprudential instruments and objectives. Through a targeted and persistent public communications strategy, these changes were introduced to public acceptance. In addition, the Bank has developed an unconventional policy framework, including its approach to conditional guidance.[1]

As Governor, I chair the Bank of Canada's Financial Stability Policy committee and am a member of the Canadian multi-agency committees for microprudential supervision, macroprudential oversight and deposit insurance.

As Chair of the Financial Stability Board (FSB), I have senior responsibility for developing and driving a broad-based multilateral agenda for strengthening the resilience of the global financial system. This work includes coordinating at the international level regulatory, supervisory and other financial sector policies of national financial authorities and international standard-setting bodies. I am fully engaged in the design, negotiation and implementation of some of the most complex current financial reforms ranging from OTC derivatives, Basel capital and liquidity accords and reforms to shadow banking as well as contingency planning for cross-border crisis management for globally systemically important institutions.

As FSB Chair, I jointly oversee the development of the FSB-IMF Early Warning Exercise, which presents emerging risks to the international financial system twice annually to Finance Ministers and Central Bank governors.

As Chair of the Committee on the Global Financial System at the Bank for International Settlements, I led senior central bank colleagues in identifying and assessing potential sources of stress in global financial markets and promoting improvements to the functioning and stability of these markets. I initiated working groups that led to reports addressing specific challenges such as: the interactions of sovereign creditworthiness and bank funding; the risks of fixed income strategies of insurers and pension funds in an environment of low interest rates for a long period; and the practical application of macroprudential instruments.

I have experience in risk management in the private sector and crisis management in the public sector. In Canada, I was part of a team, which rapidly assessed the risks and instituted an effective, coordinated response to the global financial crisis, despite Canada's deep integration with the U.S. economy and financial system. I have worked closely with

[1] Bank of Canada, "Framework for Conducting Monetary Policy at Low Interest Rates," *Monetary Policy Report*, April 2009.

Governor King and his colleagues throughout the crisis period on a series of unprecedented interventions, including a coordinated rate cut in October 2008, a series of coordinated provisions of emergency liquidity and a network of swap arrangements amongst major central banks.

I have a long history of close cooperation with the Bank of England on issues such as the reform of the international monetary system, cooperative oversight arrangements between our organisations (and with the FSA) and cross border liquidity arrangements. The Bank of Canada and Bank of England have also worked closely together in the design of a number of key financial reforms, ranging from OTC derivatives, Basel liquidity rules and bail-in debt.

2. What do you regard as the main challenges you will face as Governor of the Bank of England in the next five years? What criteria do you suggest should be used to assess your record as Governor?

The economic position and transformation of the Bank's responsibilities mean that the challenges I will face are many and varied. They fall into two groups: policy challenges and institutional challenges.

Policy Challenges

The first core policy responsibility is to deliver price stability while promoting a timely, sustained recovery and the highest sustainable level of employment in the UK economy.

To achieve this in an environment of large external shocks and the ongoing rebalancing of the UK economy, a range of subsidiary challenges must be met.

- First, the Bank must enhance its forecasting, building on the recent Stockton review to make forecasts more accurate, transparent and better integrated with policy analysis.
- Second, the Bank will need to design, implement and ultimately exit from unconventional monetary policy measures in a manner that reinforces public confidence.
- Third, the Bank must improve continually its understanding and management of the interaction between monetary policy and macroprudential instruments.
- Fourth, given the international dimension to the crisis, the Bank will need to support the Government as it engages in efforts of the Euro Area to re-found the European monetary union, address global imbalances and build a better functioning international monetary system (see question 27).
- Finally, the Bank will need to complement price stability with confidence in the integrity of the currency, by continuing to produce banknotes in which people can have the highest confidence.

The second core policy responsibility is to promote financial stability, by building a more transparently resilient domestic financial system that engenders confidence and is able to provide the credit growth necessary to support a sustained recovery. In this regard, there are several priorities.

- First, the Bank, through the PRA, must implement effective microprudential regulation. That means fully implementing the PRA's new judgement-based approach to supervision and establishing the new regime as tough but fair, transparent and accountable.
- Second, distinct from PRA judgement with supervision, we need to build understanding of the new regime as one in which it is understood that financial institutions can fail but that, if they do, their failure will be controlled and will not

threaten the system. The implicit state subsidy for banks needs to be removed. To do that, we need also to make the ICB proposals a reality and to establish a full and credible resolution regime to sort out failing banks without recourse to the taxpayer.

- Third, the Bank must, through the FPC, establish macroprudential policy as a complement to microprudential regulation. We need to embed a culture that assesses emerging vulnerabilities, stress tests the financial system, and monitors the boundaries of what activities are and are not regulated. The FPC needs to question whether, even if individual firms are doing the right thing, the system is structured in the most resilient way.
- Fourth, the Bank needs to continue to develop its market operations, building on the recommendations of the recent reviews by Bill Winters and Ian Plenderleith, so that those operations provide an effective liquidity backstop for the system in a way that does not encourage excessive risk-taking.
- Finally, as with price stability, the international dimension to financial stability means that the Bank will need to engage with European partners, including the ECB, EBA, and the ESRB to develop an effective working relationship between authorities. The Bank must continue to play an important role in ongoing efforts to develop a more resilient and efficient international financial system (consistent with the FSB priorities described in response to question 17).

An overarching policy challenge for me as Governor will be to maximise the synergies from the Bank's broad responsibilities, particularly through its new committee structure, while fully respecting the primary responsibility of each body. For example, the FPC can be an effective complement for the PRA, and both the PRA and the FPC can maximise the effectiveness of monetary policy stimulus, while minimising emerging vulnerabilities in a 'low for long' environment.[2]

Institutional Challenges

Transformed responsibilities will mean a transformed institution. The priority challenges here will be that:

- A clear shared vision for the Bank needs to be established, synergies from the collection of policy functions maximised and the expanded senior management team melded into a cohesive unit.
- Succession planning and talent management will be paramount. The Bank will need to attract, retain and promote an assertive, engaged, accountable staff at all levels. The Bank should develop its team culture that promotes timely, well-researched and consensus-based decisions.
- The Bank will need to build an effective, efficient central support function to serve all areas of the expanded institution and fully leverage a new organisational structure, including a new Chief Operating Officer role, to ensure value for taxpayers.
- The Bank must realise fully the complete potential of the accountability and governance changes instituted in the Financial Service Act to enhance the credibility of, and trust in, the institution.

Throughout, the Bank should reinforce its existing culture of excellence as a learning institution that engages with academia, other central banks and private sector experts in the pursuit of its core objectives.

[2] M. Carney, "Living with Low for Long" (speech to the Economic Club of Canada, Toronto, 13 December 2010).

Key Criteria to Measure Success

- Achieve price stability measured by consumer price inflation without creating undesirable volatility in output and employment. This will need to be achieved in a rebalanced economy growing as fast as the potential of the economy will allow.
- Confidence in banknotes as measured by surveys and counterfeiting statistics.
- A financial system that is transparently resilient and robust to shocks. The system should be well-capitalised to withstand plausible stress tests. Credit growth should meet the needs of the real economy. Micro- and macroprudential regimes should be widely understood and effectively enforced/implemented.
- Effective communications: monetary and financial policy that is well-understood by the public; trust is restored in the financial system and confidence that inflation will remain close to target.

More generally, I would like to achieve an exit in 2018 that is less newsworthy than my entrance. That can be achieved if:

- the Bank's existing functions are reaffirmed;
- its new functions are embedded and understood;
- a strong leadership team is in place;
- the credibility of, and trust in, the institution are entrenched; and
- there is increased recognition that while the Bank of England's actions provide the cornerstones of British prosperity—price and financial stability—these are necessary but not sufficient conditions for growth.

3. How would you describe your leadership style? How will the Bank look and feel different under your leadership?

Given my background, I believe I know how to lead, when to delegate and how to forge consensus. I have long and varied experience chairing committees of independent experts (ranging from economists to national policy-makers, heads of global standard setters and senior representatives of international organisations) to develop timely, substantive policy conclusions across a range of monetary policy and financial stability issues.

My leadership approach has been to develop a shared vision for the organisation, set out clear priorities to achieve that vision, ask critical questions to engage colleagues and spur analysis, and work towards consensus to take actions. I am comfortable adapting my opinions in the face of superior argument and analysis, but am also disciplined in the need to come to timely decisions (as my experience in crisis management demonstrates). I believe that this combination of flexibility and focus has enhanced my effectiveness as a leader.

Both of the organisations I currently head operate on the basis of consensus. In my experience consensus can only be truly achieved if there is a shared understanding of objectives and all parties feel their views have been considered. In the end, effective central bankers must appreciate the inherent challenge they constantly face of making timely decisions under uncertainty. I am a firm believer in central bank accountability and I intend to do my part to ensure that the new accountability measures in the *Financial Services Act* are fully and effectively utilised.

My experience as Governor of the Bank of Canada demonstrates a willingness and ability to implement significant organisational change. I manage an organisation of about 1,200 people across six offices, four time zones and in two official languages. Upon becoming Governor, I initiated a major reorganisation of our four policy departments, clarified the lines of responsibility of senior policy-makers, streamlined and delegated operating management.

With the Senior Deputy Governor, I led a process to re-engineer the Bank's administrative and support services. As a result of that process, the Bank has achieved ongoing annual savings of $15 million and reduced staff by 7 per cent.

Since becoming Governor, our employee satisfaction has increased and we were for the first time recognised as a Top 100 employer in Canada. We have now held that position for the past 3 years running. I believe this reflects an enhanced focus on workplace environment, clearer lines of authority, the opportunity for greater personal initiative and a sustained focus on internal talent management and development.

I have a track record of attracting and retaining senior external talent to public life including leading academics, several managing directors from the financial sector and senior IMF staff. Since becoming Governor, the Chiefs of our four main policy departments have been developed and then internally promoted. We have instituted and extended a comprehensive talent management strategy for the top 50 employees.

Based on recommendations of a senior working group, I helped shepherd through the FSB and the G20 Leaders process a major package of reforms to enhance the FSB's capacity, resources and governance. These substantial, detailed proposals are helping put the FSB on a more enduring footing, with clearer lines of accountability and formal governance, consistent with the proposals of Prime Minister Cameron at the Cannes summit.

I am not in a position to comment on differences in leadership style.

4. What is the reason for your decision to serve as Governor for five years rather than eight?

Serving as Governor of the Bank of England will mark the pinnacle of my career. I am a strong believer in the value of public service, and I firmly believe that this responsibility offers me the opportunity to contribute where I can make the greatest impact.

This is one of the most important positions in central banking. The Bank's responsibilities are immense and varied. The role comes during a unique period in the Bank's illustrious history as it takes on new responsibilities. The next five years will span a period that will be critical for the future development of the Bank of England itself, for the development of the British, European and global economies, as well as decisive for domestic and international financial reform.

My tenure will oversee a significant transition at the Bank. To be most effective, transitions need to be sharp, sustained and finite. A five-year term is the right managerial timeline to re-launch the Bank of England with its broader responsibilities, and to develop considerable talent, undertake targeted external recruitment, and build a succession plan. Over the five years, we can establish the full potential of the new institutional structure, which combines monetary policy, macroprudential and microprudential regulation. I can also give life to the crucial governance reforms promoted by the Treasury Committee and incorporated in the Financial Services Act.

As an outsider I can—for a period—bring different experiences and perspectives to help catalyse the necessary changes within the Bank to achieve these goals, and I look forward to working with employees of the Bank, the Court, the Government and the Treasury Committee to ensure that the full potential of all of these reforms is realised.

The next five years will also be a decisive period for domestic financial reform. By 2018, the ring-fencing of core banking activities recommended by the ICB should be well on the way to completion and, following agreement of the European Recovery and Resolution Directive, the UK's Special Resolution Regime will have been developed to allow bail-in of banks' unsecured creditors. We will have done much to solve the problem of banks that are too big to fail.

Over the next five years, the Bank has the ability to extend and broaden its position as a global leader (intellectually and effectively) amongst central banks. The next five years will be the decisive period for international financial reform after the crisis. By 2018, all elements of the Basel III reforms will be agreed and implemented, with capital requirements and the Liquidity Coverage Ratio supplemented with the Net Stable Funding Ratio and a common leverage ratio. A wide range of reforms to OTC derivatives trading will also have been introduced, including capital and margining requirements, measures to impose mandatory exchange trading and centralised clearing of standardised derivatives, and new transparency requirements. In addition, the framework that is being constructed for systemic institutions will have been extended to global insurers and key shadow banks.

Importantly, a five-year term corresponds with my maximum possible term as FSB Chair (terms are 3 years once renewable). Simultaneously serving in both roles will maximise intellectual, managerial and work process synergies at the Bank of England during the critical period for reform.

Finally, from a personal perspective, there are two considerations. First, at the end of a five-year the term, I will have served as a Governor of a G7 Governor central bank for over a decade. In my experience, there are limits to these highly rewarding but ultimately punishing jobs. Second, the five year term has advantages given the ages of my children and the disruption that is involved in moving schools and countries.

5. Which economist has influenced you the most, and for what reasons?

While I have been influenced by a very broad range of academic economists, I am not comfortable identifying a single one. No theorist captures, or would claim to do so, the complexities of modern central banking.

6. Which of your publications or papers are of most relevance to your future role as Governor?

Following are the more relevant speeches and papers while Governor of the Bank of Canada. I would add the obvious caveat that they naturally reflect Canadian institutional and economic perspectives and therefore are not simply transferable to the role and responsibilities of the Bank of England.

Monetary Policy

- Guidance, Toronto, 11 December 2012
- A Monetary Policy Framework for All Seasons, New York, 24 February 2012
- Renewing Canada's Monetary Policy Framework, Montréal, 23 November 2011
- Renewal of the Inflation-Control Agreement: Background Information —November 2011, Ottawa, 9 November 2011
- Some Considerations on Using Monetary Policy to Stabilize Economic Activity, Jackson Hole, 22 August 2009
- Inflation Targeting in a Global Recession, Halifax, 27 January 2009
- Flexibility versus Credibility in Inflation-Targeting Frameworks, Lucerne, 27 June 2008

Global Imbalances / International Monetary System

- Financing the Global Transition, Halifax, 21 June 2012

- The Paradigm Shifts: Global Imbalances, Policy, and Latin America, Calgary, 26 March 2011
- Restoring Faith in the International Monetary System, Calgary, 10 September 2010
- The Evolution of the International Monetary System, New York, 19 November 2009
- Rebalancing the Global Economy, Montréal, 11 June 2009
- The New International Monetary Order, Toronto, 23 November 2004 (Delivered while in role as Senior Associate Deputy Minister of Finance)

Financial Stability

- Growth in the Age of Deleveraging, Toronto, 12 December 2011
- Global Liquidity, London, 8 November 2011
- Living with Low for Long, Toronto, 13 December 2010From Hindsight to Foresight , Toronto, 17 December 2008
- Principles for Liquid Markets, New York, 22 May 2008
- Addressing Financial Market Turbulence, Toronto, 13 March 2008

Financial Reform

- Some Current Issues in Financial Reform, Montréal, 8 November 2012
- Some Current Issues in Financial Reform, Washington 25 September 2011
- Bundesbank Lecture 2010: The Economic Consequences of the Reforms, Berlin, 14 September 2010
- Looking Back, Moving Forward: Canada and Global Financial Reform, Geneva, 9 November 2010
- The G20's Core Agenda to Reduce Systemic Risk, Montréal, 10 June 2010
- Reforming the Global Financial System, Montréal, 26 October 2009
- What Are Banks Really For?, Edmonton, 30 March 2009
- Building Continuous Markets London, England, 19 November 2008

Monetary Policy

7. What is your view of the monetary policy framework in the UK, and what assessment have you made of the merits of altering it?

In my view, flexible inflation targeting—as practiced in both Canada and the UK—has proven itself to be the most effective monetary policy framework implemented thus far. As a result, the bar for alteration is very high. In any possible review, it would be vital to recognise that long and varied experience demonstrates that delivering price stability is the best contribution that monetary policy can make to the economic welfare of citizens.

I have not made an assessment of the merits of altering the monetary policy framework in the UK, and of course any change to the Monetary Policy framework would be the sole responsibility of HM government. I do think, however, that it is important that the policy framework is reviewed periodically. In Canada, the framework is reviewed every five years. That process helps to reaffirm our remit and to focus our research efforts. Our most recent review, completed in November 2011, intensively examined alternatives to our current framework, including a lower inflation target and moving to a price-level target. The Bank of Canada worked with the Government of Canada in a calm, reasoned examination of these options and in full consideration of the lessons of the financial crisis. At its conclusion, we reaffirmed Canada's flexible inflation targeting framework with a deeper collective understanding of the power as well as the interaction between monetary and macroprudential policies.

I can therefore report on my thoughts of the monetary policy framework in Canada and the assessment we made of the merits of alternative frameworks, recognising that the same assessment may not apply to the UK.

Bank of Canada's Monetary Policy Framework

The Bank of Canada conducts monetary policy aimed at keeping inflation, as measured by the total consumer price index (CPI), at 2 per cent, with a control range of 1 to 3 per cent around this target.

The inflation target is symmetric, which means that the Bank is equally concerned about inflation rising above or falling below the 2 per cent target. The Bank uses core inflation as an operational guide for its monetary policy because it is an effective indicator of the underlying trend in CPI inflation in Canada. Core inflation, along with other measures of inflationary pressures, is monitored to help achieve the target for total CPI inflation; it is not a replacement for the latter.

As in the UK, a flexible exchange rate is a core element of Canada's monetary policy framework. A floating Canadian dollar plays a key role in the transmission of monetary policy and allows the Bank to pursue an independent monetary policy. It also helps to absorb shocks to the economy. Movements in the exchange rate serve as automatic buffers, helping to insulate the economy from external and internal shocks (See response to question 10).

At the end of the process of review in Canada, we reaffirmed our commitment to this framework.[3] We did so because, in a complex and continuously evolving world that no one can predict with certainty, policy-makers need a robust framework; one that remains appropriate no matter the circumstances. Inflation targeting, as practised in Canada and the UK is disciplined but flexible. It allows central banks to deliver what is expected while dealing with the unexpected.

There are two crucial features of that regime. The first is that that the central bank must be flexible about the horizon over which it returns inflation to its long-run target. The second is clear and open communication.

A Central Bank Should be Flexible Regarding the Time Horizon to Return Inflation to Target

The way in which a central bank achieves its inflation target can be adjusted, depending on the circumstances.

Under flexible inflation targeting, the central bank seeks to return inflation to its medium-term target while mitigating volatility in other dimensions of the economy that matter for welfare, such as employment and financial stability. For most shocks, these goals are complementary. However, for shocks that pose a trade-off between these different objectives, or that tilt the balance of risks in one direction, the central bank can vary the horizon over which inflation is returned to target.

Typically, the Bank of Canada seeks to return inflation to target over a horizon of six to eight quarters. However, over the past twenty years, there has been considerable variation in the horizon, in response to varying circumstances and economic shocks. This flexibility is required because, when taking monetary policy actions to stabilize inflation at target, the

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[3] Bank of Canada, "*Renewal of the Inflation-Control Target: Background Information—November 2011*.

Bank must also manage the volatility that these actions may induce in the economy. These trade-offs will differ depending on the nature and persistence of the shocks buffeting the economy. For example, in the projections published since 1998 in its *Monetary Policy Reports,* there were 8 occasions when the Bank extended the horizon beyond 2 years and 9 times when it was shorter than a year and a half. In other words, more than a quarter of the time, the Bank has used greater-than-normal flexibility.

There are, broadly speaking, three sets of circumstances under which it may be desirable to return inflation to target, from above or below, over a horizon that is somewhat longer than usual.

First, the unfolding consequences of a shock could be sufficiently large and persistent that a longer horizon might be warranted in order to provide greater stability to the economy and financial markets. Stability considerations could lead the Bank to accommodate over a somewhat longer period, for example, the inflationary consequences of an unusually large and persistent increase in oil prices, or the disinflationary consequences of a severe global slowdown, including the possible constraints of the zero lower bound on interest rates.

Second, through a longer targeting horizon, monetary policy can also promote adjustments to financial excesses or credit crunches. For instance, there could be situations where, even though inflation is above target, ongoing monetary policy stimulus and a somewhat longer horizon to return inflation to target would be desirable in order to facilitate the adjustment to broad-based deleveraging forces that are unfolding.

On the flip side, a tighter monetary policy that allows inflation to run below target for a longer period than usual could help to counteract pre-emptively excessive leverage and a broader build-up of financial imbalances. In recent months, the Bank of Canada has used such guidance to reinforce macroprudential measures implemented by the Government of Canada. By indicating that some tightening of monetary policy may be necessary, a degree of prudence in household borrowing has been encouraged. For example, the rate of household credit growth has decelerated and the share of new fixed rate mortgages has almost doubled to 90 per cent this year.

Third, as the Bank of Canada has observed, the optimal inflation-targeting horizon will vary with the evolution of the risks to the outlook.[4] Shocks to the economy, both observed and prospective, are inevitably subject to a degree of uncertainty. In some situations, risks to the inflation outlook could be skewed to the downside. In these cases, a balance must be struck between setting monetary policy to be consistent with the most likely outlook and the need to minimize the adverse consequences in the event that downside risks materialize. This would warrant a more stimulative setting for monetary policy than would otherwise be desirable in the absence of the downside risks. However, if the downside risks fade away rather than materialize, the resulting stronger inflationary pressures would merit returning inflation to target over a longer horizon. The opposite would be true under circumstances where risks to inflation are skewed to the upside.

In short, changing economic circumstances could demand some flexibility in the horizon over which the Bank seeks to restore inflation to target.

There are limits to this flexibility. The Bank's scope to exercise it is founded on the credibility built up through its success in achieving the inflation target in the past, and its clarity in communications when it uses it. That links to the second important feature of a flexible inflation target regime – clear and open communication.

[4] Ibid..

Clear and Open Communication Matters

Clear and open communication enhances the effectiveness of monetary policy. In particular, successful monetary policy requires transparency around two aspects of the policy approach —what the central bank is trying to achieve and how it goes about achieving it.

With respect to the former, Canada has benefitted from a clear objective for monetary policy since the adoption of an explicit inflation target in 1991. As Canadians have come to understand the Bank's policy objective and have gained confidence in its attainment over time, inflation expectations have become firmly anchored around the 2 per cent target.

This confidence allows households and firms to make longer-term plans with greater certainty, aligning their savings, investment and spending decisions with a common inflation-control objective. These actions collectively serve to make the inflation target self-reinforcing. They also give the Bank greater latitude to respond aggressively to economic shocks without fear of dislodging longer-term inflation expectations. In short, the common understanding of our monetary policy objective makes its attainment easier.

Of course, it would be quite remarkable if simply communicating the monetary policy objective were sufficient to ensure its achievement. The conduct of policy obviously matters as well. The Bank of Canada implements policy through changes in the target overnight interest rate, which has a limited direct impact on saving, investment and spending decisions. Far more important is the impact the central bank's actions have on the broader spectrum of market interest rates, domestic asset prices and the exchange rate.

What matters to these asset prices, however, is not so much the current setting of the policy interest rate but, rather, its expected path over time. Thus monetary policy affects the economy primarily through policy-rate expectations.[5] The more those expectations are aligned with the policy path necessary to achieve the policy objective, the higher the probability the policy objective will be achieved.

One goal therefore of central bank transparency is to allow markets and the public to "think along with us," not only promoting the appropriate formation of policy expectations given current information, but also allowing those expectations to evolve efficiently as new information is received.

Central banks would have an easy time communicating our "reaction function" if they followed a simple mechanical rule. Unfortunately, life is not that simple. Achieving an inflation target thus requires that central banks take a flexible policy approach, one informed by considered analysis and judgement. That is one reason why transparency—and occasionally guidance—matters.

Monetary policy actions take time to work their way through the economy and to have their full effect on inflation. For this reason, monetary policy must always be forward looking, with the policy rate set based on the central bank's judgement regarding how inflation is likely to evolve in the future. Making that assessment requires a careful examination of the economic evidence pertaining to the balance of supply and demand in the economy and other factors affecting underlying inflationary pressures.

To exploit fully the power of this framework, guidance about future policy actions, leveraging central bank communications, may be effective. These I discussed in a speech in December.[6]

[5] J. Boivin, "How People Think and How It Matters" (speech to the Canadian Association for Business Economics, Kingston, Ontario, 23 August 2011).
[6] M. Carney, "Guidance"(speech to the CFA Society, Toronto, Ontario, 11 December 2012).

Fully Leveraging Central Bank Communications under Flexible Inflation Targeting

In a perfect world, guidance would be unnecessary. The inherent uncertainty in economic outcomes and thus in the policy path would be widely understood. With full information and efficient markets, monetary policy expectations would effectively take care of themselves—knowing a central bank's inflation objective and its reaction function would be sufficient for markets and the public to form and evolve their expectations, without the need for any direct guidance from the central bank.

In the real world, monetary policy guidance can be useful in providing additional information. This is particularly the case when policy is at the zero-lower bound (ZLB) on nominal interest rates.

When conventional monetary policy has been exhausted at the ZLB, the additional stimulus that is likely to be called for is impossible to achieve using the conventional interest rate tool. Extraordinary forward guidance is one unconventional policy tool, along with quantitative easing and credit easing.

The Bank of Canada used extraordinary forward guidance in April 2009, when the policy interest rate was at its lowest possible level and additional stimulus was needed. At the time, we committed to holding the policy rate at that level through the second quarter of 2010, conditional on the outlook for inflation (so-called "time contingent guidance"). In effect, we substituted duration and greater certainty regarding the interest rate outlook for the negative interest rate setting that would have been warranted but could not be achieved. The Bank's conditional commitment succeeded in changing market expectations of the future path of interest rates, providing the desired stimulus and thereby underpinning a rebound in growth and inflation in Canada.[7] When the inflation outlook—the explicit condition—changed, the path of interest rates changed accordingly.

The Bank of Canada's conditional commitment worked because it was exceptional, explicit and anchored in a highly credible inflation-targeting framework. It also worked because we "put our money where our mouths were" by extending the almost $30 billion exceptional liquidity programs we had in place for the duration of the conditional commitment. And it worked because it reached beyond central bank watchers to make a clear, simple statement directly to Canadians.

One shortcoming of conditionality is that it ultimately limits the effectiveness of the commitment. This is one reason why doing more may require overcoming the familiar monetary policy challenge of time inconsistency—but not as it has been conventionally understood.

To achieve a better path for the economy over time, a central bank may need to commit credibly to maintaining highly accommodative policy even after the economy and, potentially, inflation picks up. Market participants may doubt the willingness of an inflation-targeting central bank to respect this commitment if inflation goes temporarily above target. These doubts reduce the effective stimulus of the commitment and delay the recovery.

To "tie its hands," a central bank could publicly announce precise numerical thresholds for inflation and unemployment that must be met before reducing stimulus (so-called "state-contingent" guidance).[8] This could reinforce the central bank's commitment to stimulative policy in the future and thus enhance the impact of its policies in the present.

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[7] Z. He, "Evaluating the Effect of the Bank of Canada's Conditional Commitment Policy," Discussion Paper No. 2010-11, Bank of Canada, 2010; and M. Woodford, "Methods of Policy Accommodation at the Interest-Rate Lower Bound," paper presented at the Jackson Hole Symposium, "The Changing Policy Landscape," Jackson Hole, Wyoming, 31 August - 1 September 2012.

[8] See, for instance, C. L. Evans, "Perspectives on Current Economic Issues" (Speech to the Bank of Ann Arbor Breakfast, Ann Arbor, Michigan, 18 September 2012).

The Federal Reserve has done exactly this with its state-conditioned threshold, specifically committing not to begin to consider raising its federal funds rate "at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored."

Thresholds exhaust the guidance options available to a central bank operating under flexible inflation targeting. If yet further stimulus were required, the policy framework itself would likely have to be changed.

Beyond Flexible Inflation Targeting

If governments chose to go beyond flexible inflation targeting, there are two possible avenues. The first is to target a higher rate of inflation at all times. The second is to target not the growth rate of prices but the level of prices or nominal incomes.

Targeting a Higher Inflation Rate

Some have suggested that central banks should target an inflation rate higher than 2 per cent. Two arguments are put forward. First, a higher inflation target might reduce the frequency and severity of encounters with the ZLB in the future. Second, and more immediately, a higher inflation target may be a way out from the burden of excessive debt in those countries struggling with deleveraging.

In my view, moving opportunistically to a higher inflation target would risk de-anchoring inflation expectations and destroying the hard-won gains that have come from the entrenchment of price stability. Moreover, if inflation is both higher and more uncertain, a higher inflation risk premium might result, prompting an increase in real rates that would exacerbate unfavourable debt dynamics across public and private borrowers.

These problems have led some academics, policymakers and private sector analysts to propose other mechanisms that may allow a different path of inflation in the short term, but maintain a long-run commitment to a fixed low inflation rate. There are several mechanisms —including targeting the level, rather than growth rate, of prices or nominal GDP—that could allow greater flexibility and deliver better outcomes for inflation and growth without a permanent change to the inflation target. These policy frameworks have the potential to achieve better outcomes in part because they add 'history dependence' to monetary policy.

Price-Level Targeting

Our review of the Canadian policy framework considered this option. In contrast to inflation-targeting where bygones are bygones, under Price Level Targeting (PLT), monetary policy would seek to make up for past deviations in order to restore the price level to a predetermined path. For example, following a period of below-target inflation, policy would seek a period of above-target inflation in order to ensure that average inflation corresponds to targeted inflation (the desired rate of change in the price level) over time. The more the price level were to undershoot the target, the more the central bank would need to stimulate the economy to make up the undershoot, and the more inflation expectations would thus be expected to rise and real interest rates to fall, supporting spending and prices. This "automatic" provision of added stimulus could be particularly useful when conventional monetary policy is exhausted at the ZLB, while the rise in near-term inflation expectations would be self-limiting by design, unwinding as the price level approached the desired path.

PLT may merit consideration as a "temporary" unconventional policy tool in countries faced with extraordinary circumstances, notably those with policy at the ZLB and with a heavy burden of debt.[9] However, it also relies on inflation already having undershot the long-run target so that the price level is today below trend. That is not the case in the UK, where price pressures since the onset of the financial crisis have not, in fact, been weak.

Nominal GDP Level Targeting

The next step from Price Level Targeting is a target for the level of nominal GDP (NGDP). Under NGDP level targeting, the central bank is compelled to make up for deviations of the level of nominal GDP from some pre-determined trend. In theory, committing to restore the level of nominal GDP to its pre-crisis trend could raise expected inflation over the short and medium term but keep longer-term expectations well anchored. That would reduce real interest rates for a time, providing added stimulus to the economy.

Of course, the effectiveness of this strategy depends crucially on how expectations adjust. To reap the potential gains from NGDP-level targeting, expectations would have to adjust the way theory says they should. That requires the change in policy regime to be both credible and well understood. The public would need to be fully conversant with the implications of the regime and trust policy-makers to live up to their commitment. These conditions may not be met. In the worst case, if nominal GDP targeting is not fully understood or credible, it can, in fact, be destabilizing and damaging to the central bank's credibility.[10]

Bank of Canada research shows that, under normal circumstances, the gains from better exploiting the expectations channel through a history-dependent framework are likely to be modest, and may be further diluted if key conditions are not met. Most notably, people must generally understand what the central bank is doing—an admittedly high bar. However, when policy rates are stuck at the ZLB, there could be a more favourable case for NGDP-level targeting. The exceptional nature of the situation, and the magnitude of the gaps involved, could make such a policy more credible and easier to understand.[11]

Like flexible inflation targeting, NGDP-level targeting can be effective in dealing with so-called negative 'supply shocks', such as a sharp rise in oil prices. It may also deal well with positive supply shocks (a productivity-enhancing new technology, for example) that boost real GDP growth while lowering inflation. A central bank that targets the level of NGDP would to some extent look through this 'good deflation,' thus avoiding a potential problem of helping to sow the seeds of an asset bubble.

The main drawback of an NGDP level target in this regard is that it imposes the arbitrary constraint that prices and real activity must move in equal amounts but opposite directions. As potential real growth changes over time, either the nominal target will have to change or else it will force an arbitrary change in inflation in the opposite direction. The challenge of determining the UK's potential growth rate at present highlights that this is not an academic concern (see answer to question 23). Another consideration is that statistics like nominal GDP are subject to revision, and these revisions can be large.

Conclusion: The Bar for Change is Very High but Review and Debate can be Positive

There are reasons why central banks have preferred to support employment and output by targeting price stability, rather than more directly through an approach like nominal GDP targeting. Central banks can neither determine the appropriate path for these real variables nor control them over the long run, and to imply that they can, could have negative consequences for economic stability and central bank credibility.

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[9] C. Evans, "Monetary Policy in a Low-Inflation Environment: Developing a State-Contingent Price-Level Target"(speech to the Federal Reserve Bank of Boston's 55th Economic Conference, Boston, Mass., 16 October 2010).
[10] S. Murchison, "Consumer Price Index Targeting," Bank of Canada Working Paper (forthcoming).
[11] See footnote 10.

The benefits of any regime change would have to be weighed carefully not only against the potential risks but also against the effectiveness of other unconventional monetary policy measures under the proven, flexible inflation-targeting framework. Although the bar for change to any flexible inflation-targeting framework should be very high, it seems to me important that the framework for monetary policy—rightly set by Governments and not by central banks—is reviewed and debated periodically. That process, which in Canada is undertaken every five years, has yielded valuable insights on how we can best operate our framework in a way that maximises the welfare of Canadian citizens. Similar insights may be possible in the UK given both the length of time since the inception of the inflation-targeting framework and the current extraordinary economic circumstances, which could not have been envisaged at its inception.

8. What is your view of the measures of inflation used in the UK?

I do not yet have a well- developed view of this, and I would note that the choice of price index used to define the MPC's 'price stability' objective is for the Government. My preliminary view is that, in terms of methodology, the Consumer Price Index is the best available measure of price increases over a basket of goods and services typically purchased by consumers. Its main omission is of course that it excludes housing costs for owner-occupiers, but I understand that a new index – CPIH – will be launched next year incorporating these costs. This will be a useful development.

In general, my view is that to the extent possible the characteristics of a good measure of inflation to target are:

- It is representative of the costs facing households;
- It is well-understood and widely accepted as the relevant measure;
- It is produced by an independent statistical agency, and
- It is not subject to revisions.

In making judgements about the outlook for inflation, monetary policy should look through the temporary effects of, for example, energy and commodity price changes and variations in indirect taxes. At the Bank of Canada, we believe that measures of 'core' inflation, which exclude certain volatile items from a price index, can be useful operational guides for policy, even though they are not appropriate definitions of long run price stability. If movements in commodity and food prices, for example, are judged to be temporary, a core measure that excludes those items can be a guide to where inflation will head once the effect of those movements has passed. These can complement other measures of underlying inflation pressures, such as growth rates of pay and unit labour costs.

9. What consideration should be given to asset prices, including house prices, within the framework for inflation targeting? In particular, how should monetary policy react to asset price bubbles?

To the extent that asset prices, including house prices, contain useful information about the future evolution of inflation at the *usual* monetary policy horizon (normally one to two years), this information should be considered in policy decisions in a manner analogous to any other indicator. In other words, asset prices may contain unique information that, when correctly interpreted, can lead to better inflation outcomes. However, it is important to distinguish asset prices as a useful leading indicator for achieving the inflation target from asset prices as the central bank target. No explicit recognition should be given to asset prices in the target index, beyond that accorded via their direct weight in the consumer price basket, such as the price of housing services in the CPI.

Certain asset prices, but more importantly measures of credit growth, may also provide a useful signal about potential risks to price stability beyond the usual inflation target horizon. Indeed, experience has shown that imbalances fuelled by a credit boom, which may manifest themselves in asset-price movements, pose the greatest medium-term risk to the economy, because of the powerful deleveraging process they induce when they unwind.[12] In principle, this means that, in responding to financial imbalances such as excessive credit growth, the central bank should take into account not only their direct effect on output and inflation at the usual horizon, but also any macroeconomic effects that could materialize later on, when these imbalances unwind. There is thus no inherent inconsistency between inflation targeting and the use of monetary policy to counteract financial imbalances, provided the time horizon is long and flexible enough. From this perspective, a lesson from the recent crisis is not that we need a different policy framework to address financial stability concerns, but that we need better analysis of the macroeconomic effects of financial imbalances.

Experience suggests that prolonged periods of unusually low interest rates can cloud assessments of financial risks, induce a search for yield, and delay balance-sheet adjustments. There are several defences.

The first line of defence is built on the decisions of individuals, companies, banks and governments.

In this regard, the Bank of Canada's advice to Canadians has been consistent. Canada has weathered a severe crisis—one that required extraordinary fiscal and monetary measures. Extraordinary measures are only a means to an end. Ordinary times will eventually return and, with them, more normal interest rates and costs of borrowing. It is the responsibility of households to ensure that in the future, they can service the debts they take on today. Similarly, financial institutions are responsible for ensuring that their clients can service their debts. More broadly, market participants should resist complacency and constantly reassess risks. Low rates today do not necessarily mean low rates tomorrow. Risk reversals when they happen can be fierce: the greater the complacency, the more brutal the reckoning.

The second line of defence is enhanced supervision of risk-taking activities. Stress testing in major economies should focus on excessive maturity and currency mismatches, look for evidence of forbearance (such as ailing industries receiving a disproportionate share of loans or the loosening of standards for existing debtors) and analyse the impact of sharp moves in yield curves.

These efforts will be aided by the imposition of the new Basel III regulations. Measures, including a leverage ratio, new trading book rules and liquidity standards, will help curtail excessive leverage and maturity transformation.

The third line of defence is the development of and selected use of macroprudential measures. In funding markets, the introduction of through-the-cycle margining can help curtail liquidity cycles.[13] In broader asset markets, counter-cyclical capital buffers can be deployed to lean against excess credit creation.

In the housing market, the Canadian government has taken a series of important measures to address household leverage (see question 16). In addition, the Bank of Canada's interest rate increases reminded households of the interest rate risks they face. These have contributed to a more sustainable evolution of the housing market.

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[12] See for example, C. Reinhart and V. Reinhart ("After the Fall," *Macroeconomic Challenges: The Decade Ahead*, Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, Wyoming, 26–28 August 2010.

[13] See "The Role of Margin Requirements and Haircuts in Procyclicality," a report prepared by a Study Group chaired by David Longworth and published by the Committee on the Global Financial System of the Bank for International Settlements as CGFS Papers No. 36, 23 March 2010.

These defences should go a long way to mitigate the risk of financial excesses. But the question remains whether there will still be cases where, in order to best achieve long-run price stability, monetary policy should play a supporting role by taking pre-emptive actions against building financial imbalances.

The Interaction Between Macroprudential and Monetary Policies

The Bank of England has been assigned full responsibility for macroprudential policy. Specifically, the Financial Policy Committee (FPC) within the Bank is responsible for identifying, monitoring and addressing risks to the financial system as a whole. The FPC will address systemic risks using powers given to it by Parliament to make recommendations and directions. Alongside the FPC, the Prudential Regulatory Authority will be created as an operationally independent subsidiary of the Bank, responsible for supervising the microprudential soundness of individual firms. This institutional framework provides important advantages over other arrangements, including centralizing responsibility for macroprudential and microprudential regulation together within one institution, thereby reducing the risk of coordination failure between monetary and macroprudential policy institutions, as well as reducing the potential for “regulatory gaps” in which no single authority is in charge of controlling systemic risk. Such gaps are believed to have played an important role in the 2008 financial crisis.

The Bank of England’s institutional structure also facilitates coordination in the MPC to help ensure a complementary role, if this is required. To be clear, <u>I view monetary policy as the last line of defence against financial imbalances.</u>

The effectiveness of monetary policy in in this regard depends on the nature of the imbalances, the influence of monetary policy and prudential tools on these imbalances, and the interactions between them. When financial imbalances remain concentrated in a specific sector, well-targeted macroprudential tools should usually be sufficient. Monetary policy is not well suited to address such imbalances, since monetary policy affects the entire economy, meaning that the interest rate increase required to curtail sectoral imbalances would come at the cost of undue restraint on the economy as a whole.

A credit-fuelled housing bubble is a particularly relevant example of a financial imbalance. Bank of Canada research suggests that a significant increase in interest rates could be required to stem the build-up of credit, with material consequences for output and inflation.[14] This illustrates that monetary policy might be too blunt a tool to stem financial imbalances emerging in a specific sector.[15] By contrast, macroprudential policy is as effective in addressing financial imbalances in the housing market without causing any undershoot in output or inflation. Rather, macroprudential in this scenario acts as a complement to monetary policy dampening the increase to output and inflation generated by the shock.

In this way, prudential measures will go a long way to mitigate the risk of financial excesses, but in some cases, monetary policy may still have to take financial stability considerations into account. For instance, where imbalances pose an economy-wide threat and/or where the imbalances themselves are being encouraged by a low interest rate environment, monetary policy might itself be the appropriate tool to support financial stability. Such could be the case when the risk-taking channel of monetary policy is present. The stance of monetary policy may itself lead to excessive risk taking by economic agents, which, in turn,

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[14] See for example J. Boivin, T. Lane and C. Meh, “Should Monetary Policy Be Used to Counteract Financial Imbalances?” *Bank of Canada Review* (Summer 2010): 23–36,).

[15] See, for example, C. Bean *et al,* “Monetary Policy after the Fall,” (speech to Federal Reserve Bank of Kansas City Annual Conference, Jackson Hole, Wyoming, 28 August 2010).

can lead to financial instability.[16] Specifically, monetary policy could influence the degree of risk that financial institutions decide to bear by influencing their perception and pricing of risk.[17] This can take place through three broad types of mechanisms: (i) the perceived predictability of monetary policy, (ii) the search for yield, and (iii) the insurance effect of monetary policy. The first two mechanisms incite more risk taking in a low-interest-rate environment, while the third provides incentives for financial institutions to take more risks through the moral hazard created by the authorities' perceived reaction function. These three mechanisms can lead financial institutions and economic agents to take on too much leverage and the associated maturity mismatches, which, in turn, can generate financial imbalances.

Because the consequences of financial excesses may be felt over a longer and more uncertain horizon than other economic disturbances, the potential may exist for tension among output, inflation and financial stability considerations over the typical two-year monetary policy horizon. In these circumstances, it may be appropriate to bring inflation back to target over a somewhat longer horizon, consistent with the longer-run pursuit of low, stable and predictable inflation. But that flexibility does not exist in a vacuum, and should never be used by stealth. Open and transparent communication is essential.

This timing difference can be partially bridged in a couple of ways. First, housing prices can be incorporated in the consumer price index, as they are in Canada and as is under consideration in the U.K. Second, monetary policy communications can adapt to reflect the behavioural dynamics of financial systems, including clearly communicating any change in the expected time required for inflation to return to target as a result of financial stability considerations. This has been the case in Canada. The Bank of Canada's recent policy guidance does this when it states: "If the Bank were to lean against such imbalances, we would clearly say we are doing so, and indicate how much longer we expect it would take for inflation to return to the 2 per cent target."

To summarize, monetary policy should not target asset prices. Central banks, however, should be alive to the information contained in asset prices and wary of the impact on financial stability of excess credit growth.

Flexible inflation targeting is the standard approach to bridge the different time horizons for financial and price stability. However, there are limits. The time frame for inflation targeting can be stretched, but the credibility essential for its success may be undermined if such flexibility is taken too far or deployed too frequently. The paramount goal of monetary policy in Canada has been, and remains, price stability. The primary tools to deal with financial stability are micro- and macroprudential regulation and supervision. Macroprudential tools are not a substitute for monetary policy in controlling inflation, and monetary policy cannot substitute for proper micro- and macroprudential supervision and regulation in maintaining financial stability.

10. The UK has a flexible exchange rate. Are there circumstances where you might use Bank of England reserves to affect the exchange rate?

A floating exchange rate is, in both the UK and Canada, an important element of the monetary policy framework, allowing the central bank to pursue a monetary policy

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[16] M. Carney, "Some Considerations on Using Monetary Policy to Stabilize Economic Activity," (speech to symposium sponsored by the Federal Reserve Bank of Kansas City Annual Conference, Jackson Hole, Wyoming, 22 August 2009).

[17] See T. Adrian and H. S. Shin, "Money, Liquidity, and Monetary Policy," Federal Reserve Bank of New York Staff Report No. 360, 2009 and C. Borio and H. Zhu, "Capital Regulation, Risk-Taking and Monetary Policy: A Missing Link in the Transmission Mechanism?" Bank for International Settlements Working Paper No. 268, 2008.

appropriate to its own economic circumstances. A floating exchange rate provides a buffer, helping economies to absorb changes in the international environment. It also helps economies adjust to domestic and global economic forces, signalling to shift resources into sectors where demand is strongest and minimising adjustments needed in other areas of the economy.   The sharp fall in sterling since the onset of the financial crisis, for example, has helped to signal and promote the required shift in resources, away from domestic consumption and towards net exports. The necessary adjustment and rebalancing of the global economy would be assisted by the same degree of exchange rate flexibility in all major economies.

It is true that exchange rates can be volatile. However, countries cannot avoid adjustment; the question is simply *how* they adjust to global economic forces. With a fixed exchange rate, the adjustments would have to come through movements in overall output and in wages and prices. History has shown that these adjustments are more protracted and more difficult than exchange rate adjustments. For example, the current hybrid system of fixed and floating exchange rates in the international monetary system has not allowed the world economy to adjust efficiently to large shocks, such as the integration of China into the global economy, thus allowing the occurrence of large and unsustainable current account imbalances.

The absence of a target for the exchange rate does not mean a central bank should be indifferent to exchange rate movements. Inflation-targeting central banks care about the potential effect on output and inflation in order to set a course for monetary policy that keeps total demand and supply in balance and inflation on target. This means that they have to make judgements about the causes and likely persistence of exchange rate movements, the speed and degree to which the exchange rate changes "pass through" to domestic prices, and the possible impact of exchange rate movements on confidence and, through confidence, on consumption and investment.

A central bank's regular policy decisions, including both changes in interest rates and other measures such as asset purchases, will affect economic conditions through the exchange rate. In addition, the MPC has the right, in order to pursue its remit, to intervene in currency markets, either by drawing on, or adding to, the Bank's $6bn of foreign currency reserves. I do not, in general, think such action should be pursued when other instruments are available. In addition, consideration of any such action must take into account the G7 convention against unilateral currency intervention. The Bank must pursue concentrated and sustained efforts with its G20 partners to ensure all systemically important currencies adjust appropriately.

However, in an extreme scenario, if other avenues had been exhausted and the MPC were to judge that such intervention was necessary to achieve its objectives, I would recommend that the Bank of England exercise that right.

11. How important are current measures of inflationary expectations when considering the outlook for future inflation?

Perhaps most importantly, medium and longer-term inflation expectations are a key indicator of the confidence that households, firms and financial markets have in the ability and willingness of a central bank to meet its price stability objective. They can tell us whether the target is effectively 'anchoring' inflation expectations. As such, inflation expectations are key indicators of the credibility of the inflation target and the monetary regime.

The achievement of price stability in the medium term rests on the existence of a widely held belief that monetary policy will bring inflation back to target. Significant moves in longer-term inflation expectations away from target may indicate an underlying threat to price stability—especially if there is evidence that this is having an effect on wage and price setting.

Shorter-term measures of inflation expectations are in principle a guide to inflation in the near term because they will affect company pricing decisions and wage negotiations. But in a credible, flexible inflation-targeting regime, in which inflation is allowed to deviate from the target in response to temporary shocks, such as movements in commodity prices, short-term inflation expectations should move up and down without leading to significant changes in wages and other prices. For that reason, there tends not to be a strong relationship between measures of short-term inflation expectations and underlying inflation pressures.

More generally, inflation expectations affect real interest rates, and through that incentives to save, spend and invest. As such they are an important input to a consideration of the outlook for growth and inflation.

In view of the information inflation expectations contain about prospects and the credibility of the regime, monetary policy-makers should review a broad range of market and survey indicators when making their decisions. In practice we have to interpret measures of expectations with care.

Surveys can show a consistent bias in reported expectations. For these measures, short run expectations will naturally move around as near-term inflationary pressure varies, for example due to movements in commodity prices or the exchange rate. In fact measures of UK households' and companies' short-term inflation expectations have generally fallen back over the past year, reflecting the decline in actual inflation. Longer-term expectations measures suggest that UK inflation expectations are well anchored at present, despite current above-target inflation.

Financial market measures can also be distorted. In Canada, the market-based measures of inflation expectations rely on quoted Yields-to-Maturity (YTM) of Real Returns Bonds (RRBs) and YTM of nominal government bonds. The difference between the real and nominal yields, the so-called *break-even inflation rate (BEIR),* reflects long-horizon inflation expectations as well as duration mis-match, liquidity risk/market segmentation, inflation risk and variations in short-term expectations.

In this regard, caution must be used in interpreting short term market moves and changes in market-based measures can sometimes be more informative than absolute values.

12. Are there circumstances where you might tolerate higher than target inflation for wider economic reasons?

Please see answers to questions 7 and 9.

13. What is your assessment of the effectiveness of the policy of quantitative easing in the UK, and of what needs to be considered when preparing for the UK's eventual unwinding of quantitative easing? What is your view of the distributional effects of QE?

Asset purchases (QE), in addition to their direct effect of increasing the price of the purchased assets (e.g. gilts) and lowering their yields, affect the economy through multiple channels, including:

- Portfolio rebalancing—investors are incentivised to rebalance their portfolios towards riskier higher-return assets, thus exerting upward pressure on their prices and resulting in lower yields across a range of assets;
- Higher asset prices boosting financial wealth, supporting consumption and domestic demand;
- Lower yields feed directly to lowering debt-service costs and a lower cost-of-capital, spurring investment;

- Downward pressure on the exchange rate, which supports net exports and favours domestic demand for domestically-produced outputs;
- Improved confidence as the central bank demonstrates that it would do whatever is necessary to meet its objectives;
- Anchoring inflation expectations, thereby holding down real interest rates.

All of these channels are difficult to quantify, but it is very likely that had the Bank of England not introduced such unconventional measures as short-term interest rates reached their lower bound, the result would well have been a deeper recession, higher unemployment and very weak underlying domestic inflation pressures.

The studies by the Bank of England and Federal Reserve of their respective Asset Purchase programmes are broadly consistent. It is clear that the programmes have had some positive effects. They find the effects on financial markets to be material. Gilt yields were reduced. Corporate investment grade and high-yield spreads also fell markedly. The evidence is that the simulative effects then fed into equity prices. I do not think there is such a thing as a fixed 'multiplier' from asset purchases to other financial asset prices. It seems to me likely that the scope to influence financial markets varies with market conditions. Asset purchases probably have a greater effect when markets are functioning poorly and liquidity premia are high.

It is even more difficult to judge how those effects in financial markets, whatever their magnitude, have transmitted to the macroeconomy. The weakness of growth since QE was introduced is not itself a reason to doubt that it is an effective policy. There seems to be some evidence that large scale asset purchases have boosted the demand for riskier assets, allowing those companies with access to capital markets to access funds more cheaply than otherwise. That probably includes banks, who have benefitted both from higher demand for their debt and from an improved liquidity position through the boost to their holdings of reserves at central banks. What is less clear is the extent to which that has translated into an expansion of bank lending.

The benefits of large scale asset purchases, and indeed persistently low interest rates, need to be judged against the potential costs of having a very stimulative policy for a very long time. Such policies can encourage excessive risk taking, distort the functioning of sovereign debt markets, and build vulnerabilities in the financial sector. In addition, central banks need to be mindful of the potential impact of very large purchases on market functioning.

The potential costs of QE and the uncertainty about the effect of QE on bank lending behaviour are solid reasons for supplementing QE with the Funding for Lending Scheme.

Exit

Given the scale of the expansion of central bank balance sheets, it is understandable that there are concerns about the exit from unconventional policies. The primary objective of unwinding the stock of purchased assets is to maintain price stability as the economy recovers. A credible plan is needed in advance in order to maintain confidence. The exit needs to be achieved without disrupting the gilts market. Such disruption could lead to sharp movements in a range of other asset prices, or possibly threatens to financial stability.

The MPC has stated that its strategy will be to announce in advance a schedule of asset sales, co-ordinated with the Debt Management Office. That seems to me an appropriate way to manage down the balance sheet. To ensure the MPC retains adequate room to respond to developments in economic conditions, it will be sensible for any tightening in monetary conditions to come about first through an increase in Bank Rate that could, if necessary, be reversed easily. In systems like the Bank of England's, in which reserves at the central bank are remunerated, there is no obstacle to raising short-term interest rates before the size of the central bank's balance sheet is reduced.

It is my intention that the MPC periodically revisits its exit strategy and updates the public, reporting any changes in a timely and transparent manner.

Distributional effects

It is important to remember that all forms of monetary policy, conventional or otherwise, have unavoidable distributional effects. These effects, significant though they may be for individuals, are small when compared to the distributional consequences of the macroeconomic instability that would have ensued had policy not been so stimulative. In the absence of such policies, in the UK and the rest of the world the resulting collapse in demand, confidence and financial stability would have harmed almost everybody: young and old, savers and borrowers, rich and poor. Any assessment of distributional effects needs to be seen in the context of avoiding these outcomes.

In normal cycles, the distributional effects of monetary policy are not long-lasting. The difference now is that policy has been so stimulative for so long. Some of the biggest distributional effects now stem not from QE but from the 'conventional' monetary stimulus in the form of very low short-term interest rates, which have reduced the income of those who have deposits and boosted the incomes of those who have variable-rate loans.

Long-term interest rates and annuity rates have been driven down by the expectation that those low short-term interest rates will persist and, in addition, by the effect of asset purchases on term premia. That raises the cost of purchasing a given pension income at retirement, but at the same time, monetary policy has driven up the prices of a wide range of assets, so those about to retire have greater financial wealth than they would have had in the absence of the stimulus. Depending on the composition of the assets used to purchase the annuity, those two effects—the higher cost of an annuity and higher asset values—can be broadly offsetting for those about to retire.

For the same reason, those that operate defined benefit pension schemes need not have suffered as a result of the monetary stimulus. Both assets and liabilities have increased. However, for pension funds that are already in deficit, even proportional increases in the values of assets and liabilities will make that deficit worse. The burden of closing the deficits—the extent of which depends on accounting treatments—will fall on future employees and employers.

More generally, although the Bank of England's analysis for the Treasury Committee of the distributional consequences of QE seems valuable not least because monetary policy-makers need to be conscious of the effects of their actions, policy should always be set consistent with the remit from Parliament for the economy as a whole. It is for others to decide whether to offset the distributional effects using other instruments.

14. What do you regard as the strengths and weaknesses of the work undertaken by the interim Financial Policy Committee?

This is an area where I do not yet have a well-developed view. My initial impressions are that the Financial Policy Committee will fill an important gap in the pre-crisis regulatory architecture – macroprudential regulation. Although to date in non-statutory form, the FPC seems to have provided leadership in developing a framework for macroprudential policy in the UK and in developing the toolkit that it should have to achieve its objectives.

My understanding from future colleagues in the Bank of England and FSA is that the FPC has strengthened the interaction between the central bank and the regulators. That has been an important step in the transition to creating the Prudential Regulation Authority as part of the Bank, a key benefit of which will be close co-ordination between micro- and macroprudential policies. The most notable example of that co-ordination to date has been on liquidity buffers. In June 2012 the FPC and FSA provided clarity about how banks could expect to use their liquidity buffers; the FSA loosened its stance; and the Bank of England launched its extended collateral term repo operations to provide a more substantial liquidity backstop for banks.

There is no doubt that, in its infancy, the FPC has faced a challenging set of circumstances as the banking system moves along the Basel III transition path, from its weakened position after the crisis, towards a more transparently resilient position. That transition is taking place against a backdrop of large and persistent risks from the euro area and weak credit growth in the UK. The FPC has been forced to focus on the shorter-term need to tackle the difficult challenge of achieving greater resilience without holding back lending and growth. As time goes by, it should be able to move some of its focus towards ensuring the structure of the financial system is as resilient as possible – an issue that will not be the primary responsibility of micro supervisors. A key example will be the risks posed by institutions – such as shadow banks, discussed further in my answer to question 21—that are just outside the scope of regulation.

The FPC has necessarily been learning as it goes, designing and implementing policy at the same time. As it develops, we should seek to continue to improve the clarity and strength of the FPC's messages. That is not straightforward when recommendations are balancing objectives, for example to raise capital in ways that will not encourage deleveraging, and when Committee members – rightly – have a range of perspectives and are individually accountable. My approach, which I outline further in my answer to question 32, will be to work wherever possible towards consensus.

15. How do you propose to communicate financial stability policy and decisions, including the macroprudential tools? In particular, how will you communicate these to the general public?

Transparency will be extremely important to the success of macroprudential policy, for reasons of both effectiveness and accountability. Public understanding of macroprudential policy is presently low – the significance of, for example, "capital ratios" and "liquidity requirements" for banks are not widely understood and it will require a good deal of hard work, over a long period, to broaden public understanding.

Credibility demands that Parliament and the public have a clear understanding of why the FPC has taken particular actions. It is crucial that the FPC, even if its recommendations and directions to supervisors are complex, can present a straightforward, easily-digestible explanation of its policy decisions to others.

This will require a range of communications. The Financial Stability Report should provide the entire context to our decisions and a clear statement of what those decisions were. The publication of that Report will continue to be accompanied by a press conference to explain the decision. The Record of the FPC's meetings will give more detail on any range or differences of view.

I intend to engage widely, using speeches and media interviews, both nationally and in the regions of the UK, to explain our decisions to the public. My media interaction will include both written and broadcast media. I will need to explain the FPC's actions as much as I do those of the MPC and present them in such a way so people understand how they are affected by them. It is relatively straightforward for the public to see how a change in the Bank Rate affects them. Other policies, including on the monetary policy side, asset purchases, and in the sphere of financial stability, the FPC's recommendations, affect people less directly and so require more explanation.

I will make full use of the Bank's network of twelve agencies around the UK to engage with people on a regular basis. I also intend to develop further the use of social media for the Bank to broaden and deepen that engagement. For instance, the media strategy employed for the launch of the Bank of Canada's new polymer series of bank notes—using earned media and social media tools—garnered about 4 million web views of communication material on the polymer series. This successful strategy saved the Bank an estimated

$1 million in costs for advertising and promotional materials versus the previous series of Canadian bank notes.

The FPC must also communicate with more specialist stakeholders, such as market participants. We can do that through a mix of regular market meetings and more focused roundtable sessions. As the FPC becomes statutory, that process should be developed further to inform FPC and build a constituency for its strategy.

The scale of this task of explanation and building understanding and engagement will require a team effort from the FPC. I plan to co-ordinate the work of members of the FPC to ensure our coverage is complete and our messages clear and effective.

16: What is your assessment of the macroprudential tools that will be available to the FPC? Would you prefer the FPC also to have the ability to limit loan-to-value and/or loan-to-income ratios?

It is proposed that the FPC will have powers of direction over the countercyclical capital buffer and sectoral capital requirements. I think these are necessary to achieve the FPC's objectives, giving it a tool to vary over time and a tool to vary across sectors at each point in time.

The countercyclical capital buffer (CCB), which is embedded in Basel III, will give a tool for the FPC to use at the system-wide level to increase the capacity of the system to absorb losses and curtail excessive lending. Reducing the required buffer could help to mitigate the contraction in lending during a downturn. Decisions made to change the CCB in the UK will, up to a limit, be reciprocated by the home regulator of foreign banks active in the UK.

Sectoral capital requirements could target risks building in specific areas, such as real estate, more precisely than the countercyclical buffer. Changes in sectoral capital requirements would have more direct and transparent distributional consequences than changes in aggregate capital requirements. It will be important to justify clearly decisions over sectoral capital weights with respect to the FPC's objectives. The FPC will need to avoid an excessively 'fine-tuned' approach in setting sectoral capital requirements.

I do not yet have a developed view about whether those tools will be sufficient to meet the FPC's objectives. But I take great comfort from the fact that the FPC will be able to issue so-called 'comply or explain' recommendations on any issue to regulators. These will be an important way for the FPC to pursue its objectives and, with regulators working closely together, I hope that this ability will make the choice of specific directive tools for the FPC less important.

In time, as international standards evolve, the FPC's toolkit should be assessed. The FPC has said that it would be desirable to have directive powers over liquidity and margining requirements. I agree that these should be revisited in due course as, for example, the Basel III Net Stable Funding Ratio is developed and agreed.

LTV and LTI ratios

Research at the Bank of Canada suggests that a range of LTV ratios set at a lower level would dampen procyclicality in the housing market. Varying the LTV ratio countercyclically could mitigate procyclicality even further.[18] Some jurisdictions, such as Hong Kong, have used such tools to enhance to financial stability. Since 2008, the Government of Canada has taken a series of steps to strengthen the minimum standards for government-backed insured residential mortgages in order to support the long-term stability of the housing market.

[18] I. Christensen, "Mortgage Debt and Procyclicality in the Housing Market," *Bank of Canada Review* (Summer 2011): 35–42.

Among these measures were:

- A reduction in the maximum LTV for insured mortgages from 100 to 95 per cent in October 2008;
- A reduction in the maximum amortization period from 40 years in 2008 to 25 years in 2012;
- A lowering of the limit on the LTV for mortgage refinancing from 95 per cent in 2010 to 80 per cent in 2012; and
- A reduction in the LTV limit for investment properties from 95 per cent to 80 per cent.

These have contributed to a more sustainable evolution of the housing market. The cumulative effect of these measures, together with increased consumer awareness, is having an impact. In the past six months, the growth of household credit has moderated, with total household credit growth slowing to below 4 per cent in recent months. If this is sustained, the ratio of household debt to disposable income can be expected to stabilize later this year.

The uncertainties about the effect of macroprudential regulation mean that it is probably sensible to employ a range of complementary tools. The advantage of LTV and LTI tools is that they complement the countercyclical capital buffer in two ways. First, they can constrain the build-up of leverage in the private sector – the CCB prevents the build-up in the banking system,[19] Second, LTV and LTI restrictions would naturally apply to new lending *flows*, complementing the capital tools, which apply to banks' existing stocks of lending.

Nevertheless, LTV and LTI restrictions differ substantively from the directive powers of the FPC, which are focussed not on controlling the credit cycle directly, but in ensuring that banks hold sufficient capital to make them resilient to the exposures they take. These instruments will of course affect the incentives of banks to lend and to set the price of particular exposures, but they do not directly constrain the types of loans that can be offered to potential borrowers. LTV and LTI ratio constraints would do so and are therefore more intrusive. Such a degree of intrusion requires the tools either to be deployed by elected officials, as they are in Canada, or by Parliament agreeing to give unelected officials a clear mandate to use the tools. A decision whether to do so should consider that some of the benefits of LTV and LTI restrictions in making the financial system resilient are available to the FPC through the direction power over sectoral capital requirements, which might differentiate between LTV and LTI ratios when loans are extended.

17. What lessons have you drawn from your experience of chairing the Financial Stability Board? What further progress is required in international financial regulation?

Core lessons:

1. Ongoing need to <u>maintain consensus in favour of an open and resilient global financial system</u>

An open, resilient global financial system will be central to the transformation of the global economy. In order to achieve that, financial sector reform is a must. Over the last year, the main risk has been that a series of contingency measures could extend to a global scale the

[19] Bank for International Settlements "Operationalising the Selection and Application of Macroprudential Instruments," a report prepared by a Working Group chaired by José Manuel González-Páramo and published by the Committee on the Global Financial System as CGFS Papers No. 48, December 2012.

current European trend towards fragmentation. Concerns over the effectiveness of cross-border resolution arrangements could encourage uncoordinated unilateral actions, leading to greater ring-fencing of capital and liquidity, and reducing the efficiencies and financial capacity of the global system.

The financial reform agenda must also address legitimate emerging-market concerns over the resiliency of the advanced-economy financial systems. Because of these worries, there is pressure for localisation to protect domestic systems and renewed use of capital controls to dampen the volatility of cross-border flows. If allowed to persist, these nascent trends could seriously restrain the global capital flows necessary for economic growth and that have helped lift millions of people out of poverty in the emerging market economies.

2. The new, <u>stronger capital and liquidity framework for banks must be implemented</u>

With the new Basel III rules, the quantity and quality of bank capital are being improved immensely. These are to be phased in by January 2019, and the Basel Committee is closely monitoring and publicly reporting on countries' full and timely implementation. As a backstop to the inherent imperfections of a risk-based capital framework, a simple, but effective, leverage ratio has been introduced into the global standard. The leverage ratio sets a cap on how many assets a bank can hold for each unit [or pound] of equity. It protects the system from risks we might think are low but, in fact, are not.

3. Need to <u>build diversity in the system</u> (different load-bearing capacity for risk)

It is important that the financial system comprises agents with different investment horizons and risk perceptions. This helps absorb short-term volatility and smooth asset price swings. Furthermore, different risk perceptions are necessary to have vibrant markets and allow agents to exchange risks and bear only those they feel comfortable holding.

4. Value of <u>reinforcing market incentives</u>

There are several ways in which financial reforms are reinforcing market incentives. The new Basel capital and liquidity rules will encourage better risk management. New FSB compensation standards are better aligning incentives of bankers with the needs of the broader economy. More intensive and effective supervision will reinforce internal governance and risk management.

But no supervisory system can catch everything. The main responsibility for identifying and managing risk rests with each firm's Board and executive management, whose risk managers, compliance staff and internal audit personnel will always greatly outnumber the resources available to supervisors. And since regulation alone cannot optimise risk and return, the FSB is taking steps to enhance the role of the market in achieving the right balance:

- By reducing the mechanistic reliance on credit ratings, according to the roadmap agreed to by G20 Leaders in Mexico. Doing so will promote diverse private sector judgement, reducing cliff effects and building resilience.
- By improving risk disclosure, risk governance and risk management. The private-sector Enhanced Disclosure Task Force, formed at the initiative of the FSB, offered recommendations to banks to provide more, and more useful, information about their business models, key risks and risk-measurement practices to investors. This should contribute, over time, to improved market confidence in financial institutions and financial market functioning, complementing regulatory and supervisory actions by the public sector.

- By promoting the strengthening of risk governance frameworks in firms to enhance the roles of the Board, risk committee, CRO and internal audit in setting, implementing and monitoring a risk appetite framework within the firm.
- By addressing too-big-to-fail, thereby forcing shareholders and creditors to confront the risk of losses, and thus subjecting firms to the ultimate sanction of the market, with the result that discipline in the system will increase.

As the Basel capital rules are implemented, as market infrastructure changes, and as banks—and, crucially, their investors—develop a better appreciation of their prospects for risk and return, banks are beginning to change their business models. Already, a couple of banks have fallen off the list of global systemically important banks (G-SIBs) because they have simplified, downsized and de-risked their business models. Other institutions are de-emphasizing high-profile but risky capital markets businesses that benefited employees more than shareholders and society. As the reform process progresses, we can expect further adjustments that should ultimately lead to a more resilient, diversified sector with a more sustainable risk-return profile.

5. Fundamental importance of <u>timely and consistent implementation</u>

The focus on timely, full and consistent implementation of major reforms has increased as the policy work of developing standards in the priority reform areas has advanced. Consistent implementation is essential to preserve the advantages of an open and globally integrated financial system. Recent experience demonstrates that when mutual confidence is lost, the retreat from an open and integrated system can occur rapidly. A return to a nationally segmented global financial system would reduce both systemic resilience and financial capacity for investment and growth. The main objective of the FSB's Standing Committee on Standards Implementation (SCSI) is to promote timely, full and consistent implementation of global financial standards through disclosure and peer pressure by undertaking thematic and country peer reviews and other ongoing monitoring processes. The focus of SCSI's work is on the FSB's priority reform areas: Basel III framework, OTC derivative market reforms, the resolution framework [as specified in the FSB's *Key Attributes for Effective Resolution Regimes*], policy measures for global systemically important financial institutions (G-SIFIs), shadow banking, and compensation practices. SCSI coordinates this monitoring of implementation with the global standard-setting bodies, as appropriate, [as set out in the FSB's *Coordination Framework for implementation Monitoring*]. SCSI's workplan priorities for 2013 are:

- Thematic peer reviews on resolution regimes and risk governance frameworks in banks, which were started in 2012, and on actions to reduce reliance on credit ratings provided by credit rating agencies, which will start in 2013.
- Country peer reviews: US, UK, Indonesia and Germany, (which follow up on the key recommendations of recent assessments under the IMF Financial Sector Assessment Programs (FSAPs)).

<u>What further progress is required?</u>

The global financial system is safer today than before the crisis.

Despite the challenging economic environment, banks have substantially increased capital and liquidity. They are more actively managing risks. Countries are diligently implementing measures so that they can resolve failing institutions. The infrastructure of derivatives markets is being transformed to reduce systemic risks. The size of the shadow banking sector has fallen by 20 percentage points of GDP, back to levels last seen in 2004–05.

The case for reform remains as clear today as it did when the G20 began the process in 2008. Measures to strengthen financial stability support economic growth and create jobs rather than hold them back, even in the short term. Credit growth has resumed in most of those countries where financial institutions have decisively strengthened their balance sheets, refocused their core business activities, and improved their funding sources—in other words, returned to a more sustainable business model.

However, while progress has been made, the global financial system is still not as safe as it needs to be. While much has been accomplished, much more needs to be done.

The FSB's ambitious reform agenda described below will make a huge difference when fully implemented. That is why the FSB is increasingly focused on timely and consistent implementation of agreed reforms.

Building Resilient Financial Institutions

Achieving a stronger banking system is the overriding priority, hence the importance assigned to full implementation of Basel capital and liquidity standards.

With the new Basel III rules, the quantity and quality of bank capital are being improved immensely:

- The minimum requirement for common equity will rise from 2 per cent to 4.5 per cent under Basel III, and to 7 per cent when the new capital conservation buffer is added. This more than triples the required amount of high-quality capital.
- A new countercyclical capital buffer will compel banks to further increase capital by up to 2.5 percentage points if threats of system-wide disruptions are rising.
- For those banks whose failure would pose a risk to the global financial system, even more capital will be required. By 2019, these institutions will face a capital surcharge that rises from 1 per cent to 2.5 per cent of risk-weighted assets.

In addition, the new rules will bring more exposures on balance sheets and require more capital against riskier activities (e.g., trading activities and securitisations). For example, capital required for the trading book will be tripled.

The effective increase in capital is even larger once the tougher definition of capital is factored in. In total, the largest banks will have to hold at least seven times as much capital as before the crisis.

As noted above, a simple, but effective, leverage ratio has been imported from Canada into the global standard.

Banks will be safer as a result of Basel III capital and liquidity measures. Most importantly, the leverage ratio must be agreed and implemented. But much more is required. We need to ensure consistent implementation.

An extensive programme has been put in place by the Basel Committee on Banking Supervision, in coordination with the FSB, to monitor and assess the implementation of the Basel capital framework. There are 3 different levels of review.

- Level 1 determines whether members have put in place the legislation necessary to enact the Basel capital framework as per agreed timelines. Eleven FSB members have put in place the necessary legislation as of 1 January 2013, and almost all of the other members will do so by the end of the year.
- Level 2 assesses the consistency of the legislation with the Basel capital framework. To this point, Level 2 assessments have been conducted for the major jurisdictions of

the European Union, Japan and the US. The results for these jurisdictions were published in October 2012 and they identified some material deficiencies (for the US and the EU) that will need to be addressed. Six additional Level 2 reviews are underway or planned for 2013-2014 (including Singapore, Switzerland, China, Australia, Brazil and Canada).

- Level 3 assesses the effectiveness of the Basel capital framework in influencing bank behaviour to ensure that the framework is having the desired effect of increasing the quality and quantity of capital held by banks in a consistent manner across jurisdictions. The initial focus of Level 3 assessments is on banks' determination of risk-weighted assets (RWAs) because a bank's required capital holdings are a function of the amount and riskiness of its assets. There are two separate reviews of RWAs being undertaken, one for the banking (loan) book and the other for the trading book, in order to determine whether there are material differences in the way banks apply the rules for determining RWAs.

These measures have lowered the probability of failure. However, our goal is not a fully risk-proofed system. That is neither attainable nor desirable.

Ending Too-Big-To-Fail

Since failures will still happen, there remains the need to reduce their impact, which is one of the reasons to focus on ending too-big-to-fail. More fundamentally, we must address, once and for all, the unfairness of a system that privatises gains and socialises losses. Moreover, the moral hazard problems associated with implicit public support may amplify risk taking, reduce market discipline, create competitive distortions, and further increase the probability of distress.

By restoring capitalism to the capitalists, discipline in the system will increase and, with time, systemic risks will be reduced. Most importantly, the knowledge that major firms in markets far away can fail, without meaningful consequences at home, would restore confidence in an open global system.

First, the FSB has identified those banks that are systemically important at the global level, based on size, complexity and interconnectedness with other aspects of the financial system.[20]

Second, to address the systemic and moral hazard risks associated with these systemically important financial institutions (SIFIs), the FSB has developed a range of measures, which comprise: (a) higher loss absorbency; (b) enhanced resolution authority and planning; and (c) more intensive and effective supervision.

Higher loss absorbency – requiring SIFIs to hold bigger capital buffers, is intended both to reduce the likelihood that these firms will fail and to reduce the potential bill for taxpayers if they do. They also create incentives for these firms to downsize and simplify their operations so as to reduce their capital surcharge.

The FSB has developed a set of international standards for resolution known as the *Key Attributes*.[21] When implemented, these will help to ensure that any financial institution can be resolved without severe disruption to the financial system and without exposing the taxpayer

[20] The FSB has recently updated the list of global systemically important banks, reducing the number of such banks by one overall, from 29 to 28, as two banks have been added and three banks removed from the list.

[21] FSB, "Key Attributes of Effective Resolution Regimes for Financial Institutions," October, 2011.

to the risk of loss. Under the *Key Attributes*, bondholders, shareholders and management—rather than taxpayers—will have to bear the brunt of losses. Authorities will have bail-in powers that enable them to convert some private debt to new equity in order to re-capitalise, and share the losses among the creditors of, a failing institution. The knowledge that this could happen should enhance market discipline of private creditors who previously enjoyed a free ride at the expense of taxpayers.

FSB member countries will complete resolvability assessments and specific plans by mid-2013 to be able to recover or, if necessary, resolve each global SIFI. These plans will be evaluated through rigorous resolvability assessments and are to be to be supplemented by cross-border co-operation agreements between relevant resolution authorities. Finally, each SIFI should be subject to more intense and effective supervision.[22] Among other things, supervisors should hold these firms to higher standards in terms of their ability to identify, manage and control risk, the quality of internal control systems, and the ability of these firms to aggregate data about their far-flung operations.

While these measures are being implemented, the FSB is working to extend this framework to other systemic financial firms, including domestic systemically important banks, and global insurance companies, non-banks and core financial market infrastructure.

In particular, the FSB and the G20 have agreed to a principles-based approach to regulating domestic systemically important banks (D-SIBs) that complements the framework for global systemically important banks (G-SIBs) and provides for national discretion in the way that systemic importance is assessed and policy tools are applied. As countries implement their D-SIB frameworks, the frameworks will be subject to peer review to preserve a level playing field and ensure compatibility with the G-SIB framework.

While we have made solid progress, more is required. Some countries need to legislate, not merely propose. The EU's Recovery and Resolution Directive is an important development in this regard. Further measures are also required, including improving the effectiveness of cross-border agreements for handling a failure; and clearly identifying bail-inable securities and requiring a minimum amount of them.

When implemented, greater supervisory intensity and higher loss absorbency will ensure that the system is never again beholden to the fate of a single firm or group of firms.

Creating Continuously Open Markets

An important element of ending too-big-to-fail is ensuring that key markets can withstand the failure of systemic firms. It is unacceptable that core markets seized up during the crisis, and that relatively small firms had to be saved because of concerns that they would take markets with them if they failed. Creating continuously open core markets requires changes to the plumbing of derivative and repo markets, along with better data and tracking of exposures.

The G20 and FSB are fully committed to rapidly completing the agreed OTC derivatives reforms. In order to sustain momentum and bring about the necessary changes in market behaviour and infrastructure, issues that are impeding implementation need to be identified and addressed.

First, implementation will advance more quickly when key cross-border issues are resolved. Conflicts, gaps and overlaps in regulations across borders require immediate attention in

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[22] See "Increasing the Intensity and Effectiveness of SIFI Supervision," a progress report of the FSB to the G-20 Ministers and Governors, released on 1 November 2012.

order to minimise market disruptions and to promote effective implementation. Consistency in requirements across borders is also important.

Second, the reform process can be assisted through guidance to jurisdictions that are less advanced in the reform process on the prioritisation and phasing-in of their reforms. Experience indicates, for instance, that implementation of requirements for trade reporting should be a more immediate priority, because this will generate information that helps in the implementation of other OTC derivatives reforms. In addition, for practical reasons, full implementation is likely achievable in certain products and asset classes before others.

Third, FSB members need to carefully and holistically consider the incentives created by different aspects of the reforms. Incentives created should support the reform process and encourage sound risk management. Completion of the regulatory reform agenda will involve changes in market structure. Possible reactions by market participants to these changes must be considered in advance, and monitored and analysed once in place, to help to ensure that the reforms are successfully implemented and effective.

In 2013, the FSB will focus on three closely related strands of work:

- All jurisdictions must promptly complete their legislative and regulatory frameworks.
- International policy work needs to be completed. In some areas, international principles and standards have yet to be finalised, such as certain capital and margining requirements. International policy work should be coordinated across areas of reform, where appropriate. For instance, the FSB will coordinate closely with BCBS and IOSCO to address potential inconsistencies and scope for regulatory arbitrage between international principles for margining of non-centrally cleared derivatives and those for securities lending and repos.
- Regulators must immediately address conflicts between national rules that unduly increase costs for market participants and potentially impair market functioning. Inconsistencies, overlaps and gaps in regulations across jurisdictions should also be tackled. With the recent statement by senior securities regulators in early December, there is agreement on a basic approach to cross-border issues and priority areas have been outlined. This is an important first step. However it is essential that specific milestones and concrete timelines are set out for addressing these issues so that progress is measurable and accountable. In addition, jurisdictions should consider interim agreements or a moratorium on cross-border application of specific rules until a full solution is in place.

Moving from Shadow Banking to Market-Based Finance

There are valid concerns that as authorities take measures to make the traditional banking system safer, we will push risk into the shadow banking sector. That is one reason why the FSB has launched, and the G20 endorsed, a comprehensive reform of the oversight and regulation of shadow banking so that it is a source of competition (to promote efficiency) and diversity (to promote resilience) to the regulated sector.

The answer to Question 21 discusses this area in more detail.

18. What is your assessment of the adequacy of the crisis management arrangements set out in the Financial Services Act 2012?

The keys to effective crisis management are: a sense of shared responsibility amongst those responsible for meeting a common objective; open lines of communication; clarity of responsibilities; and appropriate powers for all those involved.

The new arrangements seem to me to do as much as possible to formalise this. The foundation is that the Bank will be responsible for managing a crisis and keeping the Treasury informed throughout. The Chancellor will be responsible for any decision about the use of public funds and the Governor has a duty to notify the Chancellor at the earliest possible stage of any risk of this happening. When public funds are at risk, the Chancellor and Treasury can direct the use of all of the Bank's tools of crisis management, namely, the use of the Bank's balance sheet to lend and the Special Resolution Regime for banks. These are sensible principles.

Effective crisis management cannot, however, be legislated. It requires contingency planning during 'peacetime', decisiveness if 'war' breaks out and, more than anything else, a good working relationship between the Bank and HM Treasury, and ultimately between Governor and Chancellor. That will be the focus of my efforts.

19. Would the new Prudential Regulation Authority benefit from a specific secondary competition objective?

I do not yet have a fully developed view of the PRA's objectives but I would be cautious about giving the PRA too many responsibilities. The PRA's focus should be on the safety and soundness of those firms it supervises and on the protection of insurance policyholders. Every additional objective runs some risk of diluting that focus, thereby putting at risk depositors, policyholders and financial stability in general.

That is not to say that promoting competition and reducing the concentration of the UK banking system do not deserve great attention. The Financial Conduct Authority will have an objective to promote competition—firms should not conduct themselves in ways that discourage competition. The PRA must have regard to competition in the way it pursues its objective to ensure the safety and soundness of firms. The PRA's approach – with which I agree – is not to operate a 'zero failure' regime. It is to ensure that firms, if they do fail, do so safely. With a deposit guarantee scheme and a resolution regime in place, banks, particularly smaller ones, will be able to fail without threatening the stability of the banking system as a whole. It follows that the prudential requirements on new entrants can, and should, be lighter than they have been in the past, although some minimum standards must of course be maintained. The PRA is therefore reforming its authorisation requirements for banks in ways that reduce barriers to entry. We all need to recognise and accept that, under this regime, new entrants to the banking market may, from time to time, fail, but that this the flipside of a market that is truly open to competition.

It is also vital that central banks do not encourage concentration. Liquidity facilities should be open to all authorised banks, not just large ones and, in addition, unconventional policy measures, such as the Funding for Lending Scheme, which now has more than thirty participants, should be designed in such a way as not to discriminate against new entrants.

20. Is the UK banking system too concentrated?

As the prudential regulator, my focus will be on the protection of depositors, policyholders and taxpayers. There is no direct relationship between banking concentration and financial stability. Some countries (Canada, Australia) with concentrated systems proved more stable during the crisis. Others (the UK, Netherlands and Switzerland) did not.

It is clear that concentration makes instability more costly. In concentrated systems, individual banks are more likely to be systemic and/or too big to resolve safely. In the UK, the six largest banks and building societies dominate UK deposit-taking and lending. The two largest lenders – Lloyds and RBS – account for 45 per cent of the total stock of lending. That concentration has meant that it has been difficult for other banks to fill the gap created in domestic lending growth caused by the adjustment at those banks. While larger corporate borrowers have had recourse to capital market funding, SMEs have seen their access to funds restricted. In that sense, the UK banking system was too concentrated prior to the crisis.

The PRA will make an important contribution to reduce concentration in two major ways. First, as described in my answer to question 19, it will lower barriers to entry. The second is through the implementation of the ICB's recommendations, embodied in the Banking Reform Bill, which should do much to remove any bias towards concentration in 'core' banking services.

21. What risks are posed by the shadow banking system?

The "shadow banking system" can broadly be described as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system" or non-bank credit intermediation in short. Such intermediation, appropriately conducted, provides a valuable alternative to bank funding that supports real economic activity. It achieves this by providing alternatives for investors to bank deposits; channelling resources towards specific needs more efficiently due to increased specialization; providing for alternative funding for the real economy, especially when traditional banking or market channels may be impaired and; providing for a source of risk diversification away from the traditional banking sector. For example:

- Money market funds and some credit hedge funds participate in direct lending, thus providing for alternative funding for the real economy and diversification of risk away from the traditional banking sector.
- Securities lending and repo markets can serve as a means to preserve principal and liquidity for risk averse institutions (repo) and facilitate alternative sources of funding to the real economy.
- The process of securitization can facilitate a more efficient distribution and allocation of risk among agents who want or are better able to bear them. Securitized products are used by institutions such as banks, hedge funds and money market funds in the course of their business.

The crisis demonstrates the capacity for some non-bank entities and transactions to operate on a large scale in ways that create bank-like risks to financial stability (i.e., longer-term credit extension based on short-term funding and leverage). Such risk creation was part of a complex chain of transactions, in which leverage and maturity transformation occur in stages, and in ways that create multiple forms of feedback into the regulated banking system.

Like banks, a leveraged and maturity-transforming shadow banking system can be vulnerable to "runs" and generate contagion risk, thereby amplifying systemic risk. Such activity, if unattended, can also heighten procyclicality by accelerating credit supply and asset price increases during surges in confidence, while making sharp declines in asset prices and credit more likely by creating credit channels vulnerable to sudden losses of confidence. These effects were powerfully revealed in 2007-09 in the dislocation of asset-backed commercial paper (ABCP) markets, the failure of an originate-to-distribute model employing structured investment vehicles (SIVs) and conduits, "runs" on money market funds and a sudden reappraisal of the terms on which securities lending and repos were conducted. But whereas banks are subject to a well-developed system of prudential regulation and other safeguards, the shadow banking system is typically subject to less stringent, or no, oversight arrangements.

In response, the FSB is working on a suite of reforms to strengthen the shadow banking system. The objective is to ensure that shadow banking is subject to appropriate oversight and regulation to address bank-like risks to financial stability emerging outside the regular banking system while not inhibiting sustainable non-bank financing models that do not pose such risks (indeed, a resilient system of non-bank credit intermediation would be welcomed.) The approach is designed to be proportionate to financial stability risks, focusing on those activities that are material to the system, using as a starting point those that were a source of problems during the crisis. It also provides a process for monitoring the shadow banking system so that any rapidly growing new activities that pose bank-like risks can be identified early and, where needed, those risks addressed.

The FSB has focused on five specific areas where policies are needed to mitigate the potential systemic risks associated with shadow banking:

1. Mitigating *the spill-over effect between the regular banking system and the shadow banking system*;
2. Reducing the susceptibility of *money market funds* to "runs";
3. Assessing and mitigating systemic risks posed by *other shadow banking entities*;
4. Assessing and aligning the incentives associated with *securitisation*; and
5. Dampening risks and procyclical incentives associated with *secured financing contracts such as repos, and securities lending* that may exacerbate funding strains in times of "runs".

In advancing these proposals, the FSB is conscious that shadow banking activities take a variety of forms. These have evolved in the past in response to changing market and regulatory conditions, and they will continue to evolve. So looking ahead, authorities must be mindful that, by strengthening the capital and liquidity requirements applying to banks (an essential pillar of the G20's financial reform programme), the Basel III framework may increase the incentives for some bank-like activities to migrate to the non-bank financial space. Other forms of regulatory reform may have similar effects. The FSB therefore believes that oversight and regulation for shadow banking must incorporate a system of "embedded vigilance" through on-going review and be capable of evolving in response to market changes.

22. What is your assessment of the outlook for UK growth? What do you regard as the major risks to the outlook for the UK economy?

The UK economy has not expanded for two years. That performance has occurred alongside a backdrop of a squeeze on incomes, balance sheet adjustment in both private and public sectors, restricted credit availability and very slow growth in the UK's main export market – the euro area. The outlook for UK growth depends on the persistence of these forces. Some seem likely to become less of a drag. There are some encouraging signs about credit availability on the back of the Funding for Lending Scheme (discussed in my answer to question 24). This should help to reduce constraints on supply that may be holding back business and household investments. Inflation, although still above the 2 per cent target, is lower than a year ago, supporting the growth of real incomes. The ECB's actions in the autumn have reduced tail-risks in the euro area.

At the same time, there appears to be three main sources of risk. The most obvious is the world economy. The near-term outlook in the euro area remains weak. A renewed deterioration in the outlook there has the potential to drag on UK growth through trade, confidence and via the banking sector. It is also a real threat to the rebalancing that the UK economy needs to undergo in order to put itself on a sustainable footing. More generally, the world economy as a whole has a long way to go before reaching a sustainable position. Large current account deficits and surpluses remain. The rebalancing is unlikely to be either smooth or rapid.

The second source of risk stems from the huge uncertainty about the pace of recovery that the UK economy is able to sustain. Unemployment remains well above its pre-crisis level, indicating that there is a degree of spare capacity in the economy as a whole that could support an expansion of demand, but productivity growth has been remarkably weak (discussed further in my answer to question 23), so it is difficult to assess either how quickly unemployment will fall as any recovery begins or, once unemployment has fallen back, the extent to which growth could be sustained without generating higher inflation.

The third risk is the extent of deleveraging in the banking system, households and companies. Although funding costs have fallen dramatically since the autumn, major UK banks are continuing along a difficult adjustment path. That process needs to continue if a recovery is to be supported. UK households, although saving more of their incomes than before the crisis, have a large stock of debt. With debt, the distribution matters. Debtor households have been able to service their debt at very low interest rates, but it is likely that they will wish to continue to delever their balance sheets. The extent of that process—which, other things equal, is helping to hold back the recovery in overall demand—is difficult to determine.

23. What is your current estimate of the extent of the output gap in the UK? What is your view of the UK's 'productivity puzzle'?

Output per hour worked in the UK private sector is some 15 per cent below an extrapolation of its pre-crisis trend and remains well below its pre-crisis peak. The combination since 2010 of an absence of output growth and the creation of a million new jobs in the private sector is particularly difficult to understand but suggests that the explanation of weak productivity growth is not a standard cyclical story that companies are simply 'hoarding' labour in the expectation that a temporarily low level of demand will recover.

The weakness of productivity growth is, in direction if not in scale, consistent with the experience of past financial crises around the world. It seems likely that the impaired banking system is hindering the efficient allocation of resources across the economy as it restructures. That is consistent with the fact that productivity performance has been weakest amongst smaller firms, which do not have access to capital markets and are therefore reliant on bank finance. Forbearance by banks, coupled with very low debt servicing costs, may also have impeded the necessary reallocation of resources by allowing firms that may not be viable in the longer term to continue to operate (although it should be noted that this type of forbearance is difficult to distinguish in real time from forbearance that allows businesses that do have a long-term future to continue operating through a period of weak demand). These reasons suggest that putting the banking system on a more resilient footing should help, to some extent, to restore the potential output of the UK towards its pre-crisis path.

It also seems likely that any recovery in demand and output will be accompanied by some recovery in productivity. In the present environment of weak demand, some companies may need to devote more resources to generating sales and others may need a minimum level of input in order to sustain operations. For these businesses, a pickup in demand will not need to be met by increasing employment.

In contrast, I have also seen evidence to suggest that, at least as measured, productivity growth in the UK before the crisis was unsustainable. The relative decline in the importance of both oil and gas extraction and financial services, which display high levels of output per employee, will push down the apparent trend rate of productivity growth. The low level of business investment and therefore capital deepening in the economy will also have held down the potential growth rate. For these reasons, I would not expect the full extent of the shortfall in productivity relative to its pre-crisis trend to be unwound, even in the long term, but these effects are not close to explaining the full extent of the productivity puzzle.

Overall, there seems to me to be scope for some of the productivity shortfall in the UK to be unwound during any recovery and as the banking system is restored to full health. It is impossible to be confident at this stage of the extent of that scope, and the possibility that potential output could recover alongside demand means that the standard output gap – the difference between today's output and today's potential output – is a less relevant guide to policy than central banks have sometimes treated it to be in the past. I would only note that it does seem clear that there is significant spare capacity today in the UK labour market, where the level of unemployment is significantly higher than its pre-crisis level of around 5½ per cent.

24. What is your assessment of the impact of the Funding for Lending scheme and the activation of the Extended Collateral Term Repo Facility on the UK economy?

I do not yet have a well-developed view of these operations. My preliminary view is that the introduction of the Extended Collateral Term Repo (ECTR) Facility served to emphasise that the Bank of England was ready to provide a liquidity backstop in a situation of heightened uncertainty around the euro area. Because it is a backstop, its impact cannot be judged solely by the usage of the facility, which has fallen back since its introduction. Moreover, its impact is also difficult to judge in isolation. As I noted in my answer to question 14, its introduction formed part of a co-ordinated set of actions by the FPC, FSA and Bank of England to discourage banks from holding excessive amounts of liquid assets. Its relative importance is obviously also affected by the success of European efforts to remove tail risks from the euro and refound the single European financial market.

The Funding for Lending Scheme seems to be well-designed to provide incentives for banks to lend more than they had planned. It will take time for the effects to be seen clearly, but, like the ECTR, it should not be judged solely on the amount borrowed by banks. The availability of the Scheme has helped to drive down bank funding costs, which since last autumn have fallen by more in the UK than in many other countries.

It is too early to evaluate the full impact of the FLS, especially on lending volumes, but the fall in bank funding costs seems to be beginning to feed through to the quoted terms and availability of credit. Spreads on fixed rate mortgages and unsecured personal loans have begun to fall and some have announced reductions in the price of corporate loans. In the Bank's Q4 Credit Conditions Survey, lenders reported significant increases in the availability of credit to medium and large corporates (although less so to small businesses) and secured lending to households. The early signs of the Scheme's impact are therefore encouraging.

25. Should the Bank of England have a role in commenting on fiscal policy?

In general, monetary policy can be set to achieve its targets taking fiscal policy as given. Policy-makers will of course have to make judgements about the effects of fiscal policies on growth and inflation. That requires calculating the fully worked-through – 'multiplied' – effects of tax and spending measures on demand and, because monetary policy will typically look through the temporary effects on inflation of indirect tax changes, it requires calculating and disclosing those effects.

The need to make these judgements is not equivalent to commenting on the merits or otherwise of individual tax and spending decisions, which are rightly matters for elected Governments and Parliaments.

If fiscal policies are credibly and transparently sustainable, central banks should not have any need to comment on the overall stance of fiscal policy, and they should avoid doing so. The Bank of England is not a fiscal monitoring authority – that role is played by the OBR. There can, however, be circumstances in which the overall stance of fiscal policy threatens the ability of the central bank to achieve its targets. In extremis, unsustainable policies can make price stability more difficult and costly to achieve by creating doubts about a Government's commitment to low inflation. Moreover, because of the interconnectedness of banks and sovereigns – so apparent in the euro area – unsustainable fiscal policies, by creating instability in sovereign debt markets, can threaten financial stability. In these circumstances, the central bank will need to comment – and indeed will have a duty to comment – to Parliament on the overall stance of fiscal policy.

26. Do you believe there are parallels between the recent Japanese economic experience and the situation of the UK?

There are some parallels, but they must be seen in the context of some very important differences.

There are three main similarities. First, the UK's measured productivity growth has, like that in Japan after 1990, been weak, both relative to its pre-crisis rate and in absolute terms. Second, the UK's private sector, like Japan's, has been deleveraging after the financial crisis (although in Japan deleveraging was primarily concentrated in the corporate sector while in the UK it has been more skewed towards households).

Third, the behaviour of the respective banking systems has also shared some similarities. In both cases banking systems appear to have been slow to recognise the full extent of losses in the aftermath of asset price correction. Partly as a result, credit supply was very weak in both economies.

Other differences include that trends in demographics were much less favourable in Japan, while the external environment has been less favourable for the UK as efforts to grow exports have been hampered by headwinds from weak world activity, an apparent preference shock against UK services exports, and the tail risks in the euro area, which have added to uncertainty and depressed confidence.

The key differences, however, are those which suggest that the UK, like other advanced economies, has learned from the Japanese experience. The UK, with a clear inflation targeting framework, has avoided deflation. The MPC was able to respond aggressively to the financial crisis with sharp interest rate cuts and, when short-term rates were close to zero, with large-scale asset purchases. There is some evidence that those asset purchases had more impact in the UK than they did in Japan, particularly on asset prices. In contrast to the Yen, the sterling exchange rate fell sharply.

The UK banking system was also recapitalised at an early stage of the crisis and the UK has not faced a prolonged slide in asset prices like the one seen in Japan. Real-estate and equity prices continued to fall for over a decade following the 1990 onset of the crisis in Japan. This was an important additional driver of the increase of non-performing assets over time.

All of these developments mean that the growth of nominal GDP in the UK has exceeded that of Japan; inflation expectations have not fallen to low levels; and real interest rates have not therefore risen as the economy has slowed.

27. When considering the UK economy, how much emphasis do you place on the international economic environment? How concerned are you about global imbalances? What is your view of the outlook for emerging market economies?

Developments in the global economy are profoundly important for the UK economy.

The UK, like Canada, is a very open economy, with exports and imports both amounting to around one-third of GDP. The collapse in global demand during the financial crisis amplified the UK recession. Subsequently, the UK recovery has been held back by the continued weakness in the euro area. That reliance on the euro area, and associated under-exposure to fast-growing EMEs, is why the UK has seen its share of world trade fall dramatically.

The importance of the international environment is not restricted to these direct effects on demand. Funding conditions for UK banks have been affected by developments in cross-border debt markets, particularly in the light of the uncertainty created by the euro area crisis. That uncertainty has also fed through to domestic investment and consumer spending and has encouraged 'safe-haven' flows into sterling assets, supporting the sterling exchange rate and adding to the challenge of rebalancing the UK economy.

The relative strength of EMEs has also influenced UK growth and inflation by driving up oil and other commodity prices. That has squeezed household incomes and consumer spending, and boosted headline inflation. With relatively limited exposure to these markets which are driving commodity prices, growth in UK exports has not been sufficient to offset these drags on growth.

More generally, there is a transformation under way in the global economy. Never in history has economic integration involved so many people, such a variety of goods and so much capital.

The financial crisis has accelerated the shift in the world's economic centre of gravity. Emerging-market economies account for roughly three-quarters of global growth—up from just one-third at the turn of the millennium.[23]

Although this shift to a multi-polar world is fundamentally positive, it is also disruptive. Labour, capital and commodity markets are changing rapidly. The effective global labour supply quadrupled between 1980 and 2005 and may double again by 2050.[24] Cross-border capital flows have exploded. Commodity markets are in the midst of a super cycle, reflecting both the expanding urban middle class in emerging economies and the fact that convergence to advanced-economy lifestyles is still a very long way off. Whether it is cars, airports or meat, consumption in major emerging markets is currently a fraction of that in advanced economies. Even though history teaches that all booms are finite, this one could go on for some time.

There are three consequences of these developments.

Changing Patterns of Trade

Patterns of trade are evolving rapidly. Merchandise exports now make up about 25 per cent of global GDP, compared with about 9 per cent at the height of the last great wave of globalisation.

The reorientation of production to Asia and the dramatic increases in its infrastructure spending have also fuelled an export boom of capital goods, which has supported the recoveries in major economies.

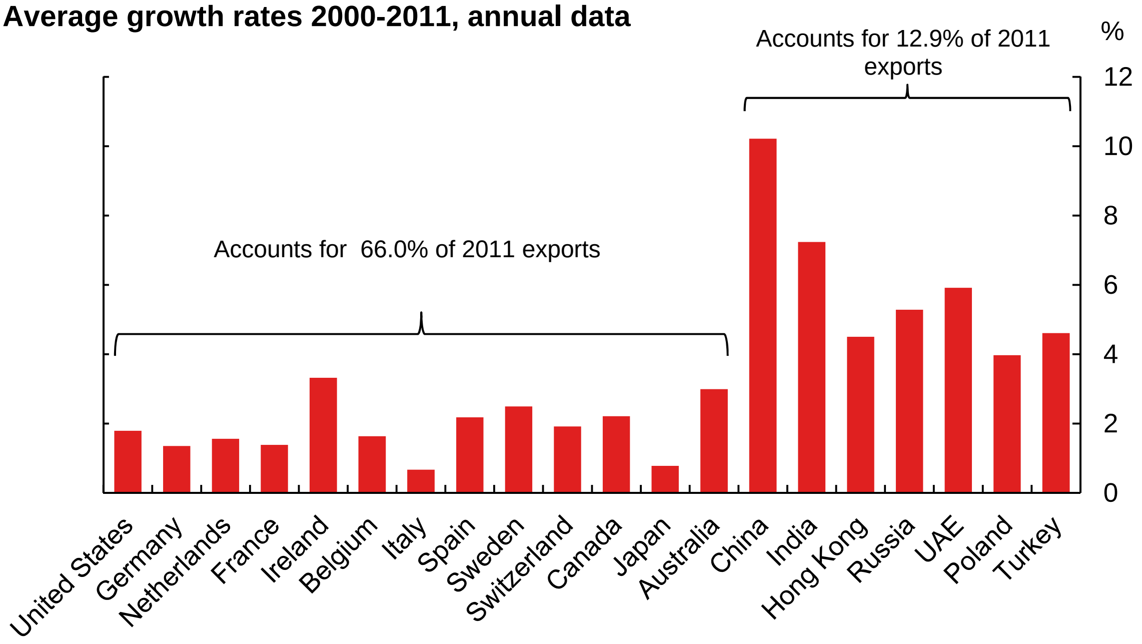
Currently, British exports are concentrated in slow-growing advanced economies, particularly in Europe, rather than fast-growing emerging markets (**Chart 1**). Going forward, exposure to emerging markets will be increasingly important.

[23]Based on annual data from 2011.

[24] Adjusted for the percentage of the population in the traded-goods sector. See M. Carney, "The Implications of Globalization for the Economy and Public Policy" (speech to the British Columbia Chamber of Commerce and the Business Council of British Columbia, Vancouver, British Columbia, 18 February 2008).

Chart 1: The United Kingdom's Trade Directed Toward Slow-growing Economies

Average growth rates 2000-2011, annual data



Source: International Monetary Fund World Economic Outlook. Last observation: 2011

Given the UK's poor export performance (**Chart 2**), increasing market share in emerging markets will require sustained efforts to develop trade, technical and academic partnerships. In tandem, business needs to improve its competitiveness, source new suppliers, and prepare to manage in a more volatile environment.

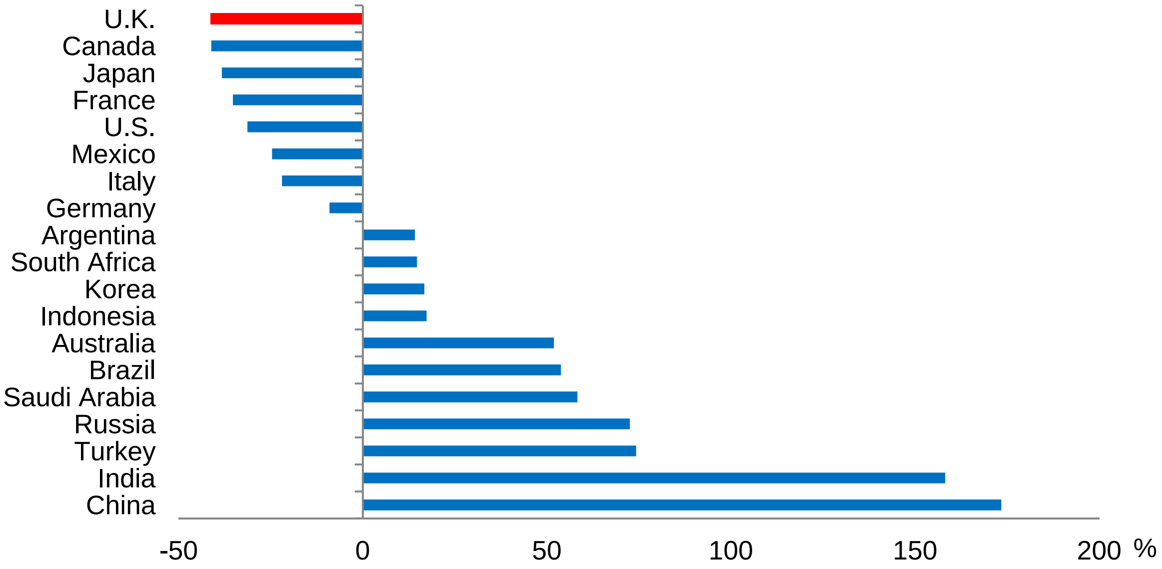
Changing Capital Flows

The second consequence of the shifting global landscape is dramatic changes in the scale, composition and direction of capital flows. These dynamics will have important implications for returns to British investors, the cost of capital for British businesses, and the risks to the UK economy. Given the expected growth differentials between emerging and advanced economies and the substantially underweight positions of most investors, the opportunities appear substantial. However, it will be a crowded field in the short term.

Investors from advanced economies are substantially overweight in their home markets: advanced economies represent half of current global GDP, but their equity market capitalisation is nearly three-quarters of the global capital market capitalisation. A

Chart 2: United Kingdom Export Performance Has Been Worst in the G20

% change in share of world exports, 2000 to 2011



Source: International Monetary Fund

reallocation of 5 per cent of advanced-economy portfolios to emerging markets translates into a potential flow of $2 trillion, or 30 times portfolio equity flows to all emerging markets.

Emerging markets are currently net capital exporters. In effect, there is a massive recycling operation under way: private capital flows from advanced to emerging economies are being partially offset by official outflows in the opposite direction. This has important implications for exchange rates and the speed of global rebalancing.

Global Imbalances

It is reasonable to expect capital to flow, on a net basis, from advanced economies towards higher expected returns in emerging-market economies. This is what happened during the last wave of globalisation at the turn of the 20th century when Canada, then an emerging economy, ran current account deficits averaging 7 per cent of GDP over three decades.

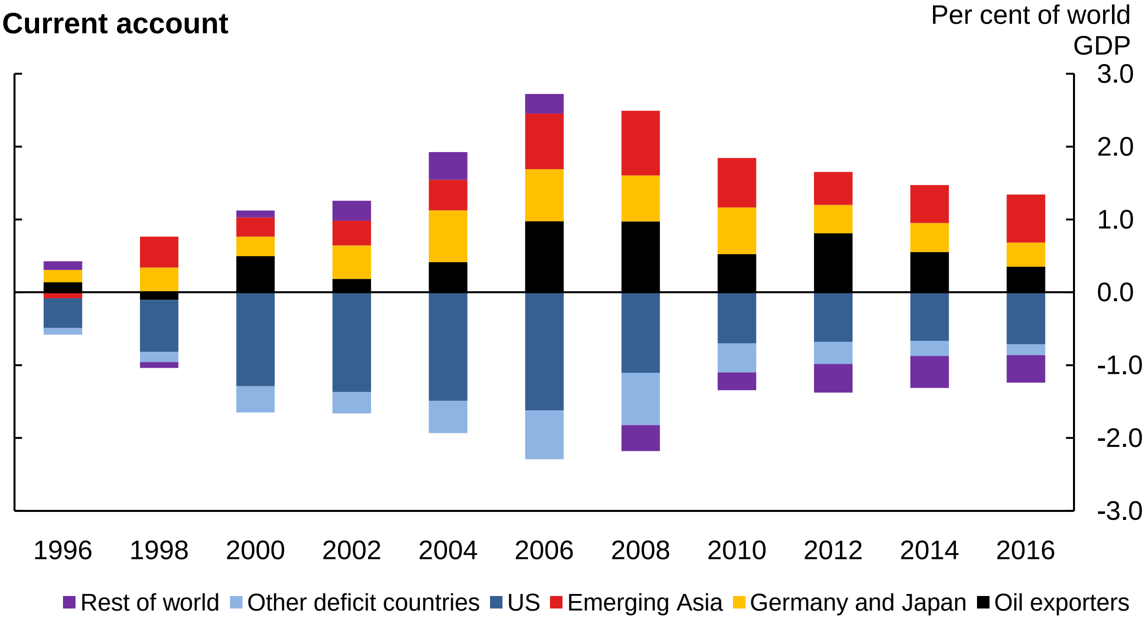
These were good imbalances. Imported capital was invested in productive capacity that later served to pay off the accumulated debts.

Global imbalances over the past decade have too often been bad. In some cases, public capital has flowed from emerging-market economies to advanced economies to be invested in non-tradable goods such as housing.

These bad imbalances were promoted by flaws in the current international monetary system. The current system is a hybrid of, on the one hand, mainly major advanced economies with floating exchange rates and liberalised capital flows and, on the other, a group of countries that actively manage their exchange rates. The result is a system that does not facilitate timely and symmetric adjustment to shocks or structural change. For example, despite its economic miracle, China’s real exchange rate did not appreciate in the two decades prior to the global financial crisis.

At first glance, global current account imbalances may appear to have improved since the crisis (**Chart 3**). The real effective exchange rates of several important surplus countries have appreciated, and their current account balances have generally fallen. Export sales have declined and domestic demand now accounts for a larger share of GDP growth in these countries.

Chart 3: Global Imbalances Appear to Have Declined, Temporarily



Sources: IMF WEO October 2012

This apparent progress is, however, somewhat misleading. While some of the observed changes represent legitimate structural improvements in current account imbalances, most of the "correction" that has occurred has been driven by demand compression in the deficit countries. Weak demand in these countries has led to lower imports and therefore narrower current account deficits.

There has been little progress on the rotation of demand and global imbalances. The rising share of domestic demand in many surplus countries is not a case of domestic demand growing significantly faster but, rather, declining export sales in the face of falling incomes and aggressive belt-tightening in deficit countries. In those instances where surplus countries have increased their contribution to global domestic demand, it has often been concentrated in fixed investment, which was already inordinately high and frequently misallocated. When growth returns to deficit countries, imbalances are likely to re-emerge. True progress would require greater exchange rate flexibility and underlying structural shifts in current account balances that allow for a more balanced global economy in a context of strong and sustainable growth.

Rebalancing the Global Economy

There are several imperatives to rebalancing the global economy.

First, maintaining an open global financial system is incredibly important. Sovereign borrowing needs and business investment requirements will be considerable. One of the tail risks at present is the possible repeat of the Great Reversal of globalization in the aftermath of the crash of 1929.[25] Rather than turning our backs on financial globalization, we need to build resilient globalization by changing the design and operation of both the international monetary and financial systems. Buttressing the institutions and rules that support cross-border finance is thus essential.

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[25] For a description of that process, see R. G. Rajan and L. Zingales, "The Great Reversals: The Politics of Financial Development in the Twentieth Century." *Journal of Financial Economics* 69 (2003): 5−50.

Second, while over the longer term it is possible to envision a system with other reserve currencies in addition to the U.S. dollar, a new reserve asset is not required. Importantly, the common lesson of the gold standard, the Bretton Woods system, and the current hybrid system is that it *is the adjustment mechanism, not the choice of reserve asset, that ultimately matters*.

The solution is not to change the current system, but rather to change policies to be consistent with it. There is no silver bullet. A constellation of policies across major economic areas is required.

The G20 Framework and Globally Coherent Policy

In this context, the success of the G20's Framework for Strong, Sustainable and Balanced Growth is important. The Framework has four key components:

- fiscal consolidation in those countries that need it;
- sweeping financial sector reforms;
- ambitious structural reforms to the real economy to foster higher long-run growth; and
- a rotation of global demand (facilitated by greater exchange rate flexibility).

As my colleague John Murray has noted, "It is important to understand that the four points of the G20 Framework … are mutually reinforcing." [26] The first three points, though they are essential for stable and welfare-improving outcomes in the future, were known to have deflationary effects in the short to medium term, depressing global demand. The fourth point, the rebalancing of global demand, was necessary to counter these sizable headwinds, supporting global growth until the positive effects from the other three kicked in."

The stakes are very high for the British and global economies. The Bank of Canada estimates that delaying implementation of the Framework by three years could lead to a $6 trillion shortfall in global economic output.

28. What is your assessment of the prospects for a solution of the eurozone's problems? How significant is the recent agreement on eurozone banking supervision? What are the minimum conditions for a banking union worthy of the name?

Euro area GDP is still more than 2 per cent below its pre-crisis peak, and private domestic demand sits 7 per cent below. The contraction is driving banking losses and fiscal shortfalls. These are understandably receiving much attention, but it should be remembered that these challenges are symptoms of an underlying sickness: a balance-of-payments crisis within the currency area.

The ECB is now directly addressing the existential risks that were surrounding the euro via its Outright Monetary Transactions (OMT) program. By ensuring that yields on any particular euro-area country's short-term government bonds reflect the credit risk of that sovereign, not the risk that the country will leave the euro, the ECB has improved the transmission of monetary policy, and thereby increased the prospects for economic recovery in Europe, but this action will not be sufficient to solve the balance of payments crisis. A comprehensive adjustment is necessary, which includes the following four elements.

[26] J. Murray, "The Great Frustration: Hesitant Steps Toward Global Growth and Rebalancing, New York" (speech to the New York Association for Business Economics, New York, 27 November 2012).

First, a sustained process of adjustment in relative competitiveness will be needed. The burden of that adjustment cannot be only on increasing unemployment and falling wages in countries like Spain. Deflation in the peripheral countries will not likely prove any more tolerable than it did in the United Kingdom under the gold standard of the 1920s. An increase in German wages and private demand (and inflation) would ease the transition. It is striking that German real wages barely grew in the two decades before the crisis. The process of adjustment would also be eased by reforms to enhance labour market flexibility and mobility, as well as measures to promote increased competition in product markets. Moreover, it is essential that the structural reforms, now under way across the deficit countries, serve to boost productivity.

Second, the European financial system has aggressively re-nationalised so further bold steps are required to restore the single financial market, including a true banking union. Although the steps taken in December to create a Single Supervisory Mechanism (SSM) under the auspices of the ECB are a necessary step towards that, they are not alone sufficient to reform the single financial market. A true banking union also requires a common resolution regime and a credibly funded and mutualised restructuring and deposit insurance fund, all at the level of the euro area rather than of its individual members. In this manner, European authorities can fully sever the toxic links between sovereign and banking sector positions.

It should be noted that the SSM will also have the benefit of simplifying cross-border supervisory arrangements in Europe, with most major banks being supervised either by the ECB or by the Prudential Regulation Authority of the Bank of England. The new arrangements for voting within the EBA safeguard the UK's interest and, beyond the legislation, I will work to ensure that the strong relationship between the Bank of England and the ECB continues, helping to maintain the co-operation that is necessary to ensure the stability of the pan-European financial system.

Finally, it would be helpful if European authorities would reframe the expectations of citizens and market participants regarding the time horizon over which European monetary union will be re-founded. Although there has been important progress at the seemingly endless series of Euro area crisis summits, there was never any chance any *one* meeting or single initiative could *solve* the issue. Ultimately, a viable currency union will require not just the reforms listed above, but also sustained fiscal consolidation in the periphery. By reframing expectations to a realistic timeline, and ensuring that any financing assistance program for countries is sufficient for this period, European authorities could arrest the cycle of crisis summits, and thereby reduce policy uncertainty.

29. What research priorities will you set the Bank in your first year?

I have not yet developed a view of this and intend to discuss it with the Deputy Governors and Executive Directors during my first few months as Governor.

The Bank's stated priorities are to advance understanding of each of: the macroeconomic environment; the impact of unconventional monetary policy; the linkages between monetary and macroprudential policy; the impact of macroprudential tools; and the functioning of the 'non-bank financial sector. In many respects, these priorities are shared by the Bank of Canada and seem to me to be appropriately focussed on the areas where existing academic research has relatively little to offer.

30. What is your view of the Treasury Committee's Reports on the Accountability of the Bank of England (21st and 27th Reports of Session 2010–12), and on the Financial Services Bill so far as it relates to the Bank of England (1st Report of Session 2012–13)?

Having not yet been able to discuss these reports with the Treasury Committee or with my future colleagues (both inside and outside the Bank), I do not have a well-formed view of the detailed recommendations in these reports. Based on my own experience as Governor, and Chairman of the Board at, the Bank of Canada, I would make two general points about accountability.

First, the key elements of accountability in policymaking are: clear mandates set by Parliament and/or Government; transparency in policymaking processes; and a requirement on the members of policymaking committees to explain themselves to Parliament and public through testimony, speeches and reports. Parliament has set the objectives of the Bank with respect to monetary policy, macroprudential supervision and microprudential regulation. As chairman of the three primary policy committees, I intend to work with my colleagues to promote transparency and with the Treasury Committee to ensure we are held properly accountable for the pursuit of our objectives.

Second, I agree with the thrust of the Treasury Committee's proposals to ensure the Bank of England has an effective and transparent governing body, with a clear majority of independent, non-executive members, and that is accountable for both the overall management of the institution and for ensuring that policymaking responsibilities are discharged effectively. In this regard, the non-executive directors' oversight of the process of retrospective review will be constructive. It will be important, however, to avoid clouding accountability arrangements by creating a governing body that seeks to influence policies that are delegated to committees of experts. The operational discharge of policy must be clearly understood to be the responsibility of the policy committees whose members are individually accountable. In the same vein, it is not appropriate for executive members of the governing body to oversee their own policymaking, so the structure of the new Oversight Committee, formed only of non-executives, seems to me entirely appropriate.

The Treasury Committee's report made specific recommendations on the role of the Court, the Committees of the Bank, the office of the Governor and crisis management arrangements. My views on those issues are described in greater length in my answers to questions 31, 32, 34 and 18 respectively.

31. What role should the Court of the Bank of England perform? How can it be made more effective?

My views in this area are based on my experience as chairman of the Board of Directors of the Bank of Canada. I expect those views to develop as I have a chance to observe the Bank of England.

Broadly, I believe the Court should—and does—have two sets of roles. The first group relates to the management of the institution and is best discharged by a group including both executives and non-executives. It should include:

- approving the strategy to achieve the Bank's objectives;
- approving the Bank's overall budget and its allocation between areas;
- ensuring efficient use of public funds and providing value for the taxpayer, including approving the remuneration of staff;
- approving senior appointments and overseeing talent management and succession planning;

- overseeing risk management and audit functions.

The second set of roles relates to the Bank's policy responsibilities. I do not believe that the Court should seek to manage, or even take a view on, the stance taken by each of the three statutory policy committees: MPC, FPC and PRA Board. Members of those Committees should be accountable to Parliament and to the public for their chosen policy stance. I do, however, believe that the Court should ensure that the policy committees are performing competently and executing their responsibilities in the right way. It can do this by:

- observing, and reporting on the effectiveness of, the way policy is made;
- giving assurance that the policy process is as transparent as possible and that information is not being withheld without very good reason, from Parliament or public;
- commissioning reviews, by independent experts and by policy-makers, of past policy settings;
- overseeing the response of policy committees to the lessons in any such review.

This set of roles will be performed by the newly formed Oversight Committee at the Bank, formed of the Bank's non-executive directors. I look forward to working with the non-executives as they establish these new roles.

I have not had a chance yet to meet members of the Court or to observe the work of the Court, so it would not be appropriate for me to form a view of Court's effectiveness.

32. What is your view of the structure and inter-relationship of the Bank's Committees? Could these be made more effective without loss of transparency?

The voting structure of the MPC seems to me to have served it well by making individual members publicly accountable for their views. A formal voting arrangement works particularly well when there are a small number of specific decisions to be made, such as on the current level of Bank Rate or on the scale of asset purchases. Each member of the Committee brings experience and expertise and the addition of external members can help to widen the range of perspectives.

Formal voting is less likely to work quite so well when there is a wide range of options for a Committee to consider, as could be the case, for example, with the MPC's forecasts, and will be the case for the FPC and PRA Board. I plan therefore to work towards policy decisions by consensus to the extent that it is possible. Consensus decision-making brings advantages of consistency of public message and strategy. That will help to build understanding of each committee's actions and to help people understand how each committee is likely to respond to events. It will maximise the effectiveness of policy decisions.

Consensus does not absolve Committee members of their individual accountability to Parliament and public. Votes will be required when consensus is not possible and individual members will have the right to express differences of view. Consensus absolutely does not mean 'group think'. It means going through a process of debating different views to reach a decision; not starting with the same common view. I fully expect the Treasury Committee and the Bank's new Oversight Committee to scrutinise that process.

The cross membership of the different policy committees seems to me to provide an adequate degree of consistency and co-ordination. It is the role of the group of Governors—myself and three deputies—to ensure that consistency. I agree with those who have argued that close co-ordination of MPC and FPC will be necessary, particularly in the current conjuncture. To my mind, the co-ordination of FPC and PRA is at least as important.

33. What lessons have you drawn from the three reviews commissioned by the Court and conducted by Ian Plenderleith, David Stockton and Bill Winters? What will you do about them?

Although I have seen the three reviews, I have not yet had a chance to discuss them either with the reviewers or with senior Bank executives, so my views are not yet well developed. I am arranging to meet the three reviewers as soon as possible. On taking up my post I will review the steps taken and plans in place to respond to the recommendations in the reviews. Six months into my tenure as Governor I intend to assess, with the Deputy Governors and non-executive directors, the steps that have been taken and to consider whether there are other areas in which reviews might be helpful to learn lessons for the future.

At a more general level, the process of review seems to me to be a valuable one. I expect the non-executive directors on the Oversight Committee to commission regular reviews and am pleased that the statutory process does not preclude the executive initiating its own reviews from time to time. My own views on the process are that it will be important for reviews to take place routinely, rather than only in instances of perceived mistakes or failure, and that such reviews need to be well-targeted so that they bring benefits in terms of lessons learned.

34. Does the role of the Governor in the governance and decision making structure of the Bank represent a single systemic point of risk? How can that risk be mitigated?

I do not think it does. The range of responsibilities that the Bank is acquiring will mean that the Governor cannot be dominant in any single one. The Governor therefore becomes less, not more, a point of systemic risk. I fully recognise that, to be effective, responsibilities have to be delegated and shared.

Each of the Bank's major policy responsibilities—monetary policy, macroprudential regulation and microprudential supervision—are conducted not by an individual but by a committee of experts. The objectives of each committee are set not by the Chairman but by Parliament and, although as Governor I will chair those committees, I will be only one voice on each committee.

The chairman can help to ensure consistency of strategy and co-ordinate between the committees, but I will not play that role alone—I will be assisted in that by three Deputy Governors.

Moreover, the accountability of the Bank is not exercised exclusively through the Governor. The Bank is subject to extensive and varied processes of scrutiny. The Governor is always likely to be the main voice of the Bank and its public figurehead, but other senior executives and independent policy committee members are also held to account in public and by Parliament.

Finally, the Governor is not alone in leading the Bank. I anticipate being assisted by the three Deputy Governors and the new Chief Operating Officer. In conducting the day-to-day management of the Bank, I will be able to delegate to a very able team of senior executives. The management of the Bank will be overseen by Court, of which I will be a member but which I will not chair, and I will not be a member of the new Oversight Committee, which will ensure that policy responsibilities are resourced appropriately and discharged effectively.