I am grateful to Clare Macallan and James Benford for their assistance in preparing these remarks.
Before I begin, I must emphasise that those who might be searching for cryptic central bank signals about future policy will be disappointed. I am speaking in the MPC’s quiet period, and my comments have no bearing whatsoever on the decision the MPC will announce on Thursday.

This wonderful evening celebrates an extraordinary individual. There should be, and will be, great joy and immense gratitude. But as with all such occasions there is also the melancholic feeling of an end of an era, the passing of the ancien regime.

Certainly, central banks face many challenges:

- Markets prone to severe bouts of illiquidity;
- A global economy that risks falling into a low growth, low inflation rut caused by deep structural forces, limited policy space, and growing concerns over the fracturing of the global trading system;
- Innovations in private payments encroaching on central banks’ very raison d'être, the provision of money; and
- A growing climate crisis that will affect every aspect of finance.

So it is tempting to ask: Après Benoît le déluge?

Fortunately, the financial guillotine is not preordained, for Benoît did not spend his days in power as did Louis XV. Where the king grew idle, Benoît remained frenetic (189 public speeches during his eight years). Where the king was conservative, Benoît was radical. Where the king became nostalgic, Benoît always looked forward.

If central banks are to rise to their challenges and serve our citizens, we will need to build on Benoît’s legacy.

I. Improving market functioning

Let me start with market functioning.

Before the crisis, financial alchemy appeared to have sliced, diced and distributed risk to those who wanted it most. The revolutions in securitised and derivative finance were cheered on by policymakers who saw more markets as the solution to any market failures and who believed the lie that markets always clear.

But of course markets always clear only in textbooks. In reality, people are irrational, economies are imperfect, and nature itself is unknowable. The pre-crisis system had merely spread risk, contingently and opaquely, in ways that often increased it.
Once the crisis began, risk quickly concentrated on the balance sheets of intermediaries that were themselves capital constrained. And with the fates of borrowers and lenders tied together via hyper-globalised banks and markets, problems at the core spread violently to the periphery.

The post-crisis response included major reforms to simplify markets and make them more robust. A vital plank was to encourage greater central clearing of OTC trades, which prior to the crisis had been largely unregulated, unreported and bilaterally settled. When Lehman fell, uncertainty about these exposures sparked panic.

Routing bilateral trades through central counterparties untangles this tangled web. Globally, the stock of centrally cleared derivatives has more than doubled since the crisis.¹ And around two-thirds of outstanding interest rate derivatives in the UK and Europe are cleared through CCPs.²

Of course, central clearing means that CCPs are sources of systemic risk, which is why Benoît led efforts to build their resilience and improve their resolvability.

As Chair of the Committee on Payments and Markets Infrastructure (CPMI), he oversaw the implementation of the Principles for Financial Market Infrastructure – a set of demanding, international standards for payment, clearing and settlement systems that ensure CCPs are robust to shocks. As a result, an additional $1 trillion of collateral is now held globally against all derivative trades.

Under Benoît’s leadership, the CPMI has worked with other authorities to finalise and implement global standards for resolution. And he has consistently encouraged greater cross-border cooperation, better information sharing and more coordinated stress testing.

Whilst the infrastructure that underpins our markets is now in much better shape, nascent risks remain that, if left unchecked, could bring new problems. Consider market liquidity.

During the crisis, liquidity dried up, particularly in the interbank market, as cash-rich banks hoarded excess funds. In parallel, a “run on repo”, triggered by increased haircuts on collateral to guard against counterparty risk, pushed the shadow banking sectors in advanced economies to collapse. In the euro area, the sovereign debt crisis compounded these problems, causing some markets to splinter along national lines.

Global reforms address the fault lines that caused this fiasco. New global standards for liquidity regulation are now in place including the Liquidity Coverage Ratio and Net Stable Funding Ratio. Bank capital standards now take into account exposures to shadow banks, including step-in risk, and through-the-cycle margining prevents Minsky cycles in secured lending.

These reforms are transforming banks’ approach to liquidity management and building the resilience of the system as a whole. For example, liquid assets – relative to liabilities that can readily run – are tenfold higher than before the crisis.

However, the recent volatility in US dollar repo markets suggest there are still frictions that need to be addressed. Contrary to expectations, banks did not step into the market to lend cash, viewing the profit opportunity to be insufficient to offset the impact on perceived regulatory liquidity requirements. The Federal Reserve’s open market operations have since calmed the market, but term repo rates remain elevated, as dealers are pricing in a higher likelihood of similar spikes in future.

While it may be tempting to conclude this is an isolated incident, there have been others, including the taper and bund tantrums. These could signal a broader problem of discontinuous market liquidity in stress.

The solution is not to unwind post-crisis liquidity regulation, a recidivism that would only recreate, with time, the enormous systemic risks of the past. Moreover, the limited systemic consequences of these events should be noted. After all, the riskiness of an asset depends on who holds it. A “crisis” in the periphery is a bad day in the markets; one in the core is an annus horribilis for the real economy.

Nevertheless, market infrastructure must evolve to take account of new dynamics. In one of Benoît’s (many) speeches last month, he identified one of the potential problems underlying the repo market stress: that what may look to be sufficient liquidity in aggregate can prove too little if it is asymmetrically distributed – either across institutions or national boundaries.

As Benoît noted, this may require central banks to provide more liquidity in aggregate, including by widening access to their balance sheets. Prompted by the potential risks that come with Brexit, the Bank of England has come to a similar conclusion: we are already running weekly auctions in sterling, US dollars and euros that could be used to absorb pressures as they arise. We also have a contingent term repo facility that we could activate at a higher frequency if needed; and we – like the ECB – can lend to a very broad range of counterparties against a wide range of collateral.

Central banks and regulators must also be clear that liquidity facilities and buffers are there to be used. For example, in October, the Bank clarified our supervisory expectations to re-emphasise our commitment to providing liquidity in the ordinary course of business. We do not expect firms to justify any usage, nor is there any presumption they would use their own buffers before our facilities. Next year’s first system-wide liquidity stress test will be another opportunity to demonstrate that liquidity buffers are fully useable.

Increased central clearing would be a capital-efficient way to further improve repo market liquidity; this would be most effective if smaller institutions participated directly. And a more holistic approach by firms to internal capital management would make them more agile, including not applying the leverage ratio at the desk level.
Liquidity concerns also go to the heart of otherwise immensely positive developments in market-based finance.

As is the case for banks, the institutions at the heart of market-based finance, particularly open-ended investment funds, must prudently manage their leverage and liquidity. Mismatches between redemption terms and the liquidity of some funds’ assets means there is an advantage to investors who redeem ahead of others, particularly in stress. This has the potential to become a systemic risk as first mover advantage could prompt a de-stabilising rush to the exits.

In response, the Bank of England and the FCA have decided that there should be greater consistency between the liquidity of a fund’s assets and its redemption terms. Specifically:

- The liquidity of funds’ assets should be assessed either as the price discount needed for a quick sale of a vertical slice of those assets or the time period needed for a sale to avoid a material price discount.
- Investors who redeem should receive a price for their units that reflects the discount needed to sell the required proportion of a fund’s assets in the specified redemption notice period; and
- Redemption notice periods should reflect the time needed to sell the required proportion of a fund’s assets without discounts beyond those captured in the price received by redeeming investors.

Our next steps are to consider how these principles could be implemented and, in particular, the stress against which liquidity measures and redemption terms should be calibrated. We expect to publish the review’s conclusions in the summer and these will, where appropriate, inform the development of UK standards for open-ended funds. Our conclusions will also inform our international engagement for example with the FSB, IOSCO and other competent authorities on the financial stability risks of asset management activity.

II. Creating monetary policy space

Effective market functioning matters for price stability as well as financial stability.

During the crisis, the impaired banking system and dysfunctional corporate debt markets muted the transmission of monetary stimulus and led to inefficiencies in risk-sharing and capital allocation. Ultimately, companies and households bore a heavy cost.

Strains in monetary policy transmission were particularly pronounced in the euro area, where the fragmentation of markets along national lines meant cuts to the ECB’s policy rates were not passed through equally in all countries. Households and companies of comparable credit worthiness faced different borrowing rates depending on their location. These problems worsened over 2012, when markets began to price in some redenomination risk in a few euro-area countries.

It fell to Benoît and his fellow members of the ECB’s Governing Council to fix the problem.
Throughout the crisis, the ECB rightly and swiftly injected huge quantities of additional reserves into the system, as asset-backed commercial paper and the interbank markets dried up.

In response to the worsening sovereign debt crisis in 2012, the Governing Council created Outright Monetary Transactions, a programme whose very existence eliminated the unwarranted and self-reinforcing fears of a euro-area break-up and restored sovereign bond spreads to levels more consistent with credit rather than currency risk.

During this time, Benoît added his voice to the calls for a capital markets union, not least because it would broaden the transmission mechanism and increase the potency of monetary policy.

He also recognised that the ECB’s actions could only tackle the symptoms of financial market fragmentation. Addressing their root causes required stronger banks, a more resilient financial system, solvent governments, and the delinking of bank and sovereign credit risk.

On the two of these imperatives, the EU has made welcome progress, with the establishment of the Single Supervisory Mechanism and the European Systemic Risk Board. These bodies are helping address a classic collective action problem by overcoming the inevitable temptation of national supervisors to ring-fence liquidity and capital within national boundaries to the detriment of a single market for capital.

Alongside improving the transmission mechanism, the ECB made important advances in the conduct of monetary policy. It has reduced the effective lower bound on policy rates and created additional stimulus through forward guidance, new lending facilities and innovative asset purchase programmes. These actions have helped shape the expectations of both market participants and the general public.

The challenge now facing the ECB – and monetary policy makers more broadly – is to provide sufficient stimulus to meet its price stability objective when powerful structural forces are pushing down equilibrium interest rates.

As I noted at Jackson Hole, the risk of a global liquidity trap puts a high premium on getting more than just monetary policy right. In a global liquidity trap, central banks cannot be the only policy makers who do “whatever it takes.” There are clear gains from coordination, with other policies – particularly fiscal policy – having important roles.

The biggest gains would come from lowering trade tensions. This is pushing up hurdle rates on investment, swamping the impact of lower policy rates. Reducing uncertainty would turn a vicious cycle – in which falling equilibrium interest rates eat into policy space, exacerbating downside risks and pushing down equilibrium rates further – into a virtuous one, of rising equilibrium rates, increased policy space, and stronger global growth.

III. Transforming payments

During Benoît’s time at the ECB, the public provision of money has faced challenges from Bitcoin to stablecoins.

The Bank of England has an open mind but not open door when it comes to such innovations. Unlike social media, for which standards and regulations are only now being developed after the technologies have been adopted by billions of users, the terms of engagement for any new systemic private payments system must be in force well in advance of any launch. And there are a host of issues that still need to be addressed – from maintaining the highest standards of operational resilience and managing financial risks, to addressing privacy and anti-money laundering concerns.

Like Benoît, we recognise that these initiatives were not conceived in a vacuum; rather they seek to address long-standing problems in payments. Despite the ongoing revolution in online commerce, payments are often more expensive than they need be and still take too long to clear.

UK card payments are convenient and they are now the most popular means of payment, but they can cost between 0.5% and 2% of the total transaction value, and it can take three days for the merchant to receive their money.

The scope for improving cross border payments is bigger still. These can cost up to 10 times their domestic equivalent. Anti-money laundering checks that are rightly required can be cumbersome. Settlement is slow, with money taking up to a week to reach the recipient.

During his time at the ECB, Benoît oversaw significant progress in building a pan-European payments system for the wholesale side.

Nonetheless, developments in retail payments have lagged. Euro-area customers are now starting to turn to non-European cards when making non-cash payments.

Last month, sensing the opportunity for another speech, Benoît announced that the ECB’s Governing Council was relaunching its retail payments strategy. The goal is to create a retail payments system that is as convenient, cost-effective, safe and secure when operating across borders as across the shop counter; and one that works as well for merchants outside the EU as it does for those within it.

Delivering a better retail payments experience will require the ECB and the Bank of England to provide the best-in-class payment infrastructure that can enable private innovators to deliver the payment products and services our citizens need. We intend to collaborate closely, sharing perspectives on policy issues and technical designs. And we look forward to leveraging advancements arising from Benoît’s new role leading the BIS Innovation Hub.
Innovation is best achieved by empowering competition. For the Bank, this means levelling the playing field between old and new by allowing new entrants access to the same resources as incumbents, while holding similar risks to similar standards. It also means updating our public infrastructure to enable state-of-the-art private sector solutions to emerge which will lower costs, increase speed and improve customer experience of domestic and international payments.

Any new payments system must be efficient, resilient and secure. A safe payment system is only useful if people use it, which means it must deliver fast, user-friendly and inclusive services. This in turn requires that payment systems are open to innovation and competition, and are built around the comparative advantages of central banks and the private sector.

**Addressing the Climate Crisis**

My final challenge facing central banks is the most fundamental. Indeed, it is existential.

Four years since the Paris Agreement, a more sustainable financial system is being built. It’s funding private sector innovation, it has the potential to amplify the effectiveness of government climate policies, and it could accelerate the transition to a net zero economy.

But we must go much further if the world is to reach net zero carbon emissions. Disclosure must become comprehensive. Risk management must be transformed. Sustainable investing must go mainstream.

In short, every financial decision must take climate change into account.

Achieving that requires improvements on three Rs: reporting, risk management and return.

- On **reporting**, TCFD standards must be enhanced to be as comparable, efficient and decision-useful as possible. And we need to develop pathways to mandatory climate disclosures.

- To manage **risks**, disclosures need to go beyond the static to the strategic. We must assess the resilience of the core of the financial system to transition risks, including through stress testing. The Bank will publish a discussion paper on our planned climate stress test tomorrow and we look forward to taking this forward internationally through the Network for Greening the Financial System (NGFS).

- On **returns**, asset managers and asset owners will increasingly have to assess the transition paths of their investments and report their impact to their clients. Our citizens need to be able to see whether their investments are consistent with the path to net zero.

Central banks cannot stand on the side lines of this revolution. And with Benoit’s research and Christine’s leadership, I am confident that the ECB will be at the vanguard.

**Conclusion**
Benoît, on behalf of everyone here tonight, I’d like to thank you for your tremendous work at the ECB and as Chair of the CPMI. The flood of acclaim you’ve received is rightly bestowed. You have provided exemplary leadership, driving progress on improving the functioning of payments systems and broader financial market infrastructure, both within the euro area and internationally.

If anyone has prepared us to withstand the coming deluge, it’s you.

Whether my remarks leave you seeing the world’s glass as half full or half empty, I’d ask you to charge yours now to toast, Benoît Cœure.