# Financial stability at your service – speech by Sarah Breeden

Based on remarks given at Wharton-IMF Transatlantic Dialogue, Washington DC

In these remarks – published alongside a companion <u>article</u> by Bank staff – Sarah Breeden talks about the Bank's work on financial stability. She makes the case for policymakers to focus on the provision of vital services, which requires a better understanding of the dynamics of the system not just a focus on individual institutions. She also talks about the relationship between financial stability and economic growth.

# Speech

I took over as the Bank's Deputy Governor for Financial Stability just under a year ago. Today I'll step back to offer some remarks on how we think about financial stability and some of the challenges we are considering in the current juncture. An accompanying article in the Bank's **Quarterly Bulletin** provides an overview of the full range of work that the Bank does to further its financial stability objective.

To preview the most important points, I hope to convince you of the following:

- The Bank supports financial stability in a range of ways, in close coordination with other authorities.[1] Microprudential regulators, such as the Prudential Regulation Authority and the Financial Conduct Authority, ensure that individual institutions or markets are resilient. The Financial Policy Committee (FPC) addresses risks to the system as a whole. You can't have macroprudential policy without the micro, but micro alone isn't enough. Indeed, systemic thinking can lead you to different answers.
- Our approach to financial stability must always have system-wide dynamics in mind, not
  just the individual entities in the system. But systemic thinking is only a means to an end:
  the end is service provision, with the system reliably providing the vital services to
  households and businesses, such as payments, loans and insurance, that matter to the
  economy as a whole.
- The best contribution we can make to sustainable economic growth is to ensure that the
  system provides vital services even as shocks occur. In doing so, we must avoid the
  stability of the graveyard. And while there are clearly limits to the contribution financial
  regulation can make to growth, in some cases, for some services, it may be possible to
  make small adjustments that increase growth potential without undermining financial
  stability.

# What is financial stability?

I'll begin my remarks by setting out in simple terms what we're trying to achieve. The Bank of England's statutory objectives are price stability and financial stability.[2] Price stability is well understood, and it is even specified in the form of a quantitative target by the Government. But financial stability is harder to pin down – it is most commonly understood as the absence of instability. Indeed, its precise definition has been the subject of much debate in policy and academic circles over the years.

So how do we define financial stability at the Bank? Financial stability means the financial system provides vital services to households and businesses reliably in all states of the world, even when shocks hit.[3] By shocks, we mean both structural – or longer-lasting – changes like climate events or cyber threats, and cyclical shocks like severe recessions. The Annex sets out a framework for thinking about what we're trying to achieve.

To maintain financial stability, we have to mitigate externalities, where market participants don't consider the impact of their actions on other participants. For example, a lender might have an incentive to lend more because their lending is secured by an asset, not considering that the borrower might have to quickly sell other assets to meet repayments if a shock hits, reducing the prices of assets held by others. Externalities can lead to fire sales, runs on financial institutions, and a worsening of economic shocks.[4]

Of course, one way to bring about financial stability would be to try to build so much resilience in the system that, as a byproduct, very little activity occurs. A previous Chancellor called that outcome the 'stability of the graveyard'. That wouldn't be optimal because it would directly limit the provision of services and damage the economy even in the absence of shocks. And so accountability for our actions and considering their costs as well as their benefits are important parts of the statutory regime.

At the same time, it's not our job to ensure all services are provided to all at all times. Most of our work aims to limit the negative consequences of disruptions in the provision of vital services in bad times, rather than expand provision in good times – so that the system absorbs rather than amplifies the inevitable shocks we face. For example, by limiting the build-up of total household debt in the mortgage market, we make sure people are well placed to meet their repayments and access further borrowing if needed when recessions hit. That said, and as I'll come on to, for some services we might be able to use regulation to increase service provision in a way that increases growth potential without undermining financial stability, consistent with our secondary objective to support the Government's economic policy.

We don't want to insure against every possible eventuality. Instead, we want to ensure resilience to severe but plausible shocks. That implies that a degree of vulnerability remains, and some disruptions can still occur. Therefore, we also have to stand ready to intervene

quickly and effectively when disruptions do occur, to limit their impact on financial stability now and in the future.[5] The Annex details some examples of financial *instability* in the past and the action we've taken in response.

#### Which services do we care about?

So which services are relevant to financial stability? Our focus is on services that are relied upon by households and businesses and have a material role in supporting the economy.[6]

That means we care about the vital funding, saving, insurance and payment services that support households and businesses and so economic activity. We want to make sure households and businesses can make transactions and manage and take risks. For example, payments, credit card, mortgage and insurance services for households, and corporate financing activity across a range of forms – bank lending, commercial paper, the bond market, leveraged lending, private debt, private equity and venture capital – have an important role in supporting the real economy. It is also important to facilitate the financing of the Government.

We also care about the financial markets and activities that support the provision of those services to end users, in an intermediate way. For example, the gilt market – and the associated repo market[7] – underpins a wide set of other transactions, through its role in pricing risk-free assets and in helping liquidity to flow around the system. That ultimately supports the provision of services that households and businesses use to borrow, save, invest, pay for things and insure themselves against shocks.[8]

Impact on services Safe deposits eg banks Transmission **Vulnerabilities** Credit to households eg banks Liquidity/maturity **Financing** Concentration mismatch eg corporate bond market, gilt market **Funding** eg repo market Correlation Leverage Risk hedging **Financial Initial shock** eg derivatives market system Low risk investment eg MMFs Contingent risk Jumps to illiquidity **Collective investment** eg OEFs Long term investment eg pension funds **Operational risk** connectedness Speculation/arbitrage eg hedge funds Risk management eg insurers **Amplification** Intermediation eg dealers

Figure 1: Shocks[9] to the financial system can disrupt the provision of vital services that the economy relies on

Source: Bank of England

# Macroprudential policy has to stay focused on systemic risk

The Financial Policy Committee (FPC) is the macroprudential authority for the UK. The FPC's job is to identify, monitor and take action to remove or reduce risks to the resilience of the financial system as a whole, thereby helping the Bank to maintain financial stability. Whilst the FPC is an important focal point, the Bank's work on financial stability goes much wider than the FPC (see figure 2).[10] And indeed other authorities, such as the Financial Conduct Authority (FCA) and The Pensions Regulator (TPR) which regulate many non-banks and markets, and HM Treasury which sets the regulatory perimeter, have important roles to play.

Macroprudential authorities need to understand what the activity of firms means for the markets they operate in, for the wider financial system, and ultimately for the provision of vital services to the real economy. We need to be deliberate in prioritizing the risks we should worry about. We have to stay focused on risks that could threaten the system as a whole, which is why we need a system-wide macro focus that ensures interactions, interconnections and the availability of alternative service providers are taken into account.

The Bank of England Protects and enhances the stability of the financial system of the United Kingdom **Financial Policy Committee (FPC)** Identifies, monitors and takes action to remove or reduce systemic risks that threaten the resilience of the overall financial system **Financial** The **Financial Prudential Regulation Markets** Market Resolution **Pensions** Conduct Infrastructure **Directorate Authority (PRA) Directorate** Regulator **Authority** Directorate Microprudential regulation and supervision firms Macroprudential policy Central Conduct for all counterparties Resolution of Market Other and other market financial Insurance **Pension** operations Banks infrastructure. nonfirms companies schemes including banks payments systems **HM Treasury** 

Figure 2: Functions that contribute to financial stability in the UK

Key: Aqua = Bank of England; Orange = Other regulator; Purple = Policy area; Gold = Firms. The chart focuses on prudential regulation and supervision. The PRA also regulates and supervises credit unions, building societies and large investment firms. FMID also regulates and supervises payment systems recognised by HM Treasury and central securities depositories. The Bank's functions as lender of last resort, both extraordinary and non-extraordinary, are divided between the Resolution Directorate and Markets Directorate. The Financial Conduct Authority regulates the conduct of financial services businesses and is supervisor for other firms that do not fall within the scope of the PRA. Source: Bank of England

Updates the regulatory perimeter where necessary

Ensuring that individual institutions are resilient – which is the job of the microprudential regulators – is necessary but not sufficient for financial stability. You can't have macroprudential policy without the micro, but micro alone isn't enough. And in some cases, systemic thinking can lead you to different policy answers than what you'd get from a purely microprudential perspective.

There are several reasons for this.

First, the financial firms themselves, and their microprudential supervisors, will understandably have a more focused perspective, centred on the part of the system they engage in and their own objectives.[11] They will not primarily think about how the services they provide could be provided by other parts of the financial system, nor how their actions impact other participants in the system.[12]

Second, individual resilience alone cannot ensure that the collective actions of financial firms in stress do not lead to outcomes that pose risks to financial stability. Indeed, firms might take actions to ensure their own stability but these might have knock on consequences for the system as a whole.

Third, in some cases, higher resilience for individual institutions might lead to new or different systemic risks, if risk is moved to parts of the system that are less able or equipped to manage it. You could call that 'Whac-A-Mole' risk.

One example of this phenomenon is the move towards greater collateralisation in the financial system since the global financial crisis.[13] In its most basic form, collateralisation is the use of an asset (the collateral) to secure a loan. This limits counterparty credit risk and makes the financial system safer. However, during a stress, collateral requirements can rise sharply. This can lead to sudden rises in liquidity demand, as counterparties need to find cash or high-quality assets at short notice. And this can result in fire sales of other assets when liquidity needs are sudden or unexpected and liquidity management is inadequate. In many cases an exogenous shock will act as a trigger that kicks off this process. During the 2022 LDI crisis that trigger was the announcement of changes to UK fiscal policy.[14]

# We have to continue to improve our understanding of the dynamics of the financial system

To focus our financial stability policy work we need to understand how different sources of risk could ripple through the financial system and quantify their potential impact on the vital services that the system provides, particularly for those common risks[15] that can affect the system as a whole and not just a corner of it.

#### This requires us to:

- Work out how systemic a risk is or could be: what is its potential impact on the system's overall provision of vital services.
- Consider the effect of shocks in a system-wide manner: how might risks be correlated with or cascade to other parts of the system.
- Be deliberate in our prioritisation of the risks to focus on: which matter most for vital services.
- Think about the effect of policies in a system-wide way: so that actions to reduce one systemic risk don't inadvertently create others.

To answer these questions, we need to be able to understand and model the financial system, and not just its component parts. The academic literature in this area has made great advances in recent years, both theoretically and empirically.[16] The latter has been supported by the increased availability and better usage of micro-financial data that cover key markets for bonds, repo and derivatives. The key challenge is to model accurately the dynamic behaviour and interactions of firms from different sectors – a highly complex endeavour.

# So, how are we applying systemic thinking in practice?

The System-Wide Exploratory Scenario (SWES) – where we have been working closely with the Financial Conduct Authority and the Pensions Regulator over the past year – is a novel exercise that illustrates the benefits of system-wide scenario analysis.[17]

For a long time, central bankers and academics have spoken about the importance of understanding feedback and interconnections in assessing financial stability risks. But we have struggled to run exercises that quantitatively explore these dynamics at a system-wide level in advance of a shock occurring. The SWES is our first attempt to do just that.

The SWES focuses on markets that are core to UK financial stability - markets for government and corporate bonds, repo markets for these assets and associated derivatives markets, such as interest rate, cross-currency and inflation swaps. Participants have been asked to consider how they would behave in a hypothetical market shock with price moves that are faster, wider ranging and more persistent than observed both in the March 2020 'dash for cash' and the 2022 LDI crisis. And we are analysing how those behaviours interact and cascade across markets to better understand the system-wide impact of such a shock. Indeed, it is system-wide analysis like this that helps firms to understand their dependencies on others' actions – and so whether their approach to risk management in theory will withstand stress in practice.

All of these markets ultimately support the provision of services to households and businesses. The gilt market – and the associated repo market – underpins a wide set of other transactions, through its role in pricing risk free assets and in allowing liquidity to flow around the system. Derivatives markets allow participants to hedge against the risks they face. And corporate bond markets directly provide a source of corporate financing.

The system wide thinking in the SWES is thus helping us to understand systemic risk as a means to an end – where the end is supporting reliable service provision.[18]

# What happens to our systemic thinking after the SWES?

We are on course to deliver the final report on the SWES in November this year. But how might we take this work forward as part of our overall approach to macroprudential policy and systemic risk assessment?

The SWES has illustrated the value of system-wide exercises.[19] And given the investment we have made into the first exercise, we think we could get much of the benefit of a further one through a leaner, more data-driven approach. Importantly, the SWES is now a proven addition to our toolkit for exploring risks where interconnections, feedback or data constraints are important. We could for example use this sort of exercise to explore risks to corporate

financing, where a range of market participants, including both banks and non-banks – with complex interconnections and interdependencies across the two – are involved in providing services to businesses.[20]

Many of the benefits from the SWES have come from the constructive engagement of participants. We have learned as much from discussions with firms about investment approaches and risk management as we have through data based work. And we will engage firms in our deliberations about what comes next, continuing the active dialogue about system-level risks.

But whilst scenario exercises are an important part of our work, our systemic thinking must extend beyond them, into our wider policy and risk assessment work.[21]

The normalisation of central bank balance sheets, for example, will affect bank funding and liquidity conditions in the UK banking sector in coming years. In that context, my colleagues have spoken recently about the critical role that central bank reserves play in the financial system to meet our objectives for price stability and financial stability, and the related thinking around how to structure our steady state balance sheet facilities.[22] A microprudential approach to that question might lead you to conclude that reserves should be abundant, to help banks to manage their liquidity risk. But a systemic approach would place more weight on the importance of providing incentives to manage liquidity well – endogenously reducing liquidity risk taking by banks – and making sure that liquidity flows freely around the financial system, including to non-banks, so that the system is more resilient in stress.

Operational resilience is another example of an area of our work where systemic thinking is important.[23] When individual financial firms are operationally resilient it helps them to provide vital services to households and businesses. However, sometimes this is not enough to prevent operational disruptions having an impact on the financial system as a whole, for example, because firm-level disruptions can lead to a widespread loss of confidence in the system or because firms are exposed to common vulnerabilities. A systemic approach ensures that financial firms consider how their operational weaknesses affect the stability of the system more widely, not just their businesses.

### How does the FPC decide where and when it should take action?

Given the wide range of potential vulnerabilities in the system and the large policy toolkit potentially available to the FPC, it has to be deliberate about where, when and how it takes action, including through working in concert with other regulators given the vital role they play in ensuring the resilience of individual institutions.[24]

First, the FPC has to take action where microprudential regulation has not adequately addressed systemic risks.

In most instances, building the resilience of individual firms – which is the role of microprudential policy – will build the resilience of the system. But in some instances, macroprudential policy has to build more resilience than microprudential policy otherwise might – as occurred with LDI funds given the correlated, concentrated nature of their positions.[25] In other instances, macroprudential policy has to intervene to lean against defensive actions to build individual resilience that would weaken the system as a whole. For example, the FPC can release the UK countercyclical capital buffer in downturns that would otherwise lead to unwarranted reductions in lending.

Second, the FPC must remain focused on the biggest risks to the provision of services.

Stress testing is an established way of sizing risks. The Bank is evolving its stress testing framework in a number of ways. I've already mentioned the SWES and the future work that may allow us better to take into account systemic risk arising from amplification and feedback channels and interconnectedness. We are also taking stock of our framework for concurrent bank stress testing – to embed the adaptability it has shown in recent years and allow us to make best use of it to reflect the risk environment. Importantly, too, where banks went first others have now followed: as well as the concurrent stress tests of the banking system, we now conduct stress tests of the insurance and CCP sectors.

Third, the FPC has continually to adapt to the changing shape of the financial system.

In the early years of the FPC almost all of its policy recommendations focused on banks.[26] Since then, reflecting the increase in bank resilience and the structural shift in activity towards non-banks, the FPC's recommendations have shifted away from banks – notwithstanding the greater difficulties in identifying risks in a more complex ecosystem and in tackling vulnerabilities in a global market.

Fourth, macroprudential authorities should be pragmatic and creative about where they can make a difference.

In some cases, the most effective way to change behaviour is by communicating privately or publicly with market participants. At the same time, the FPC must be deliberate and targeted in its public communications, focusing its public statements when it needs to get a particular message to market participants or the public, for example to encourage behaviour changes. [27] For example, the FPC's Brexit checklist encouraged others to take action to reduce the risks associated with the UK's departure from the European Union.[28]

Fifth, we invest time in engaging with international authorities, because shocks and financial markets are global. As an international financial centre and small open economy, the UK is particularly exposed to global shocks. That underlines the importance of pursuing strong

international standards to support UK financial stability. We also have learned that whilst global actions are sometimes needed, they need not hold up domestic action where it can be effective.

In many areas the cross-border nature of finance means that the most effective way to take action is in coordination with our global partners, through bodies like the Basel Committee or Financial Stability Board. But in some cases, we can take effective action to build resilience domestically or in coordination with smaller groups of jurisdictions, as we did for LDI funds recently.[29]

# How can the financial system contribute to growth?

As financial stability policymakers, the best contribution we can make to sustainable economic growth is to ensure the system has enough resilience reliably to provide vital services even as shocks hit. That is recognised by the FPC's primary objective. The FPC also has a secondary objective, which should be pursued 'subject to' its primary objective, to support the economic policy of the Government, including its objectives for growth and employment.[30] It is incumbent upon us therefore to remain open to the possibility that in some areas we might be able to increase the ability of the system to contribute to sustainable economic growth without undermining financial stability.[31]

To take one example, there has recently been some debate around whether the pensions sector can play a greater role in supporting growth in the wider UK economy. The Government recently launched a <a href="review">review</a> and is gathering evidence from interested parties. Previous Bank <a href="work">work</a> explored whether arrangements in the pension sector had struck an optimal balance between pensioner protection, economic growth and financial stability. More recent <a href="work">work</a> has looked at how the sector could facilitate greater investment in longer-term less liquid assets. There may be ways to increase the sector's contribution to economic growth without impacts on the resilience of service provision or financial stability.

Other specific aspects of the provision of financial services might have a particular impact on growth that we might want to consider as we go about our work. For example, the financial system's provision of services to small and medium enterprises (SMEs)[32], innovations in the money and payments landscape[33] and how the financial system supports the transition to a lower emissions economy.[34] Much more evidence is required before we can draw firm conclusions, but policymakers should take seriously any opportunities to increase the system's contribution to growth if it can be done in a way that doesn't undermine financial stability.

#### Conclusion

I'll finish by summing up what I've said today.

First, financial stability authorities must stay focused on risks that could threaten the system as a whole. Microprudential work is necessary but not sufficient for financial stability – systemic thinking can lead you to different answers to important policy questions.

Second, the Bank must make sure our work on financial stability always has the provision of vital services in mind because that is ultimately what matters to households and businesses. Systemic thinking is only a means to an end – the end is service provision. Financial stability must always be 'at your service'.

Third, the best contribution we can make to sustainable economic growth is to ensure that the system reliably provides vital services even as shocks occur. There are also clearly limits to the contribution financial regulation can make to growth. But in some cases, for some services, it may be possible to make small adjustments to increase growth potential without undermining financial stability.

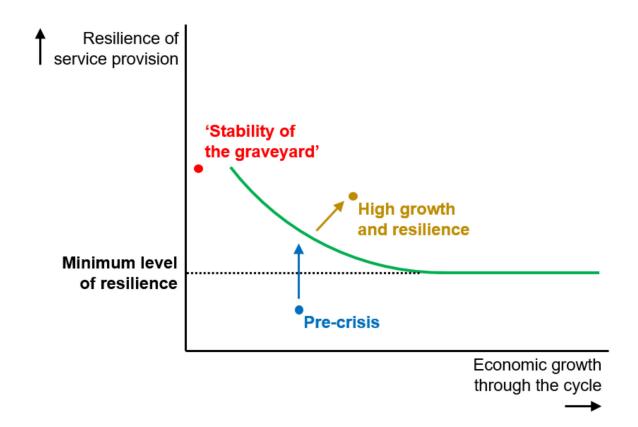
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#### Annex:

# Stylised framework: financial stability and sustainable growth

Figure A uses a highly stylised diagram to bring our approach to financial stability to life. The y-axis shows a measure of the resilience of the services provided by the financial system. (Although conceptually clear, this would be very difficult to quantify in practice, given that it should take into account the reliability of service provision even when future shocks hit.) The x-axis shows a measure of sustainable economic growth.

Figure A: Stylised policymaker indifference curve: the financial system must provide a minimum level of vital services



The chart shows a stylised example of an indifference curve for financial stability policymakers. The precise magnitudes are indicative. The y-axis is an abstract measure of the resilience of the services provided by the financial system and the x-axis is the level of sustainable economic growth through the cycle. Source: Bank of England

The green line should be thought of as a form of indifference curve for financial stability policymakers. Outwards shifts of this curve, if they were attainable, would bring about greater net benefits to policymakers. The chart does not include a budget constraint or possibility frontier, but of course some combinations of resilience and growth would be impossible to attain.

We want to make sure that the system provides a set of vital services that are essential for businesses and households in a reliable manner. That is shown in abstract form by the flat part of the indifference curve and the dotted line on the chart. Below that level of resilience, policymakers would not want to trade off lower levels of resilience even if it came with higher economic growth.

The blue dot on the chart depicts where the UK financial system might have found itself on this diagram before the post-global financial crisis reforms to the financial regulatory framework.[35] The resilience of service provision was shown to be lacking when the crisis struck, and services were rapidly withdrawn by important parts of the financial system. At the same time, the high growth in the economy in the lead up to the crisis was unsustainable, given it was associated with levels of credit growth that were unsustainable in the face of shocks.

Focusing on the situation that the financial system found itself in before the crisis, as financial stability policymakers we would have preferred an alternative situation where better regulation left us with more resilient service provision – and therefore greater financial stability – as well as higher growth potential in the economy. That increase in resilience (alongside a sustainable level of growth) has occurred as a result of our reforms since then, as shown by the blue arrow.

If the financial system were at a point exactly on the green line in figure A (the indifference curve), but above the dotted line on the y-axis, we may be willing to increase sustainable economic growth even if came with some reduction in the resilience of service provision. By the same token, we may be willing to decrease sustainable economic growth if it came with some increase in the resilience of service provision.

The red dot in figure A would come with a high level of resilience of service provision and very low sustainable economic growth. A high level of resilience of service provision is another way of saying a high level of financial stability. That combination of outcomes would be a version of what has been called the 'stability of the graveyard'. It would clearly be unfavourable relative to outcomes along the green indifference curve.

It is worth noting that the indifference curve depicted here does not imply that we need to trade off the resilience of service provision and sustainable economic growth. If it were possible to bring about a situation where both resilience and growth could be increased, that outcome would lie on a higher indifference curve than the one shown in figure A, indicating that it would be a preferred outcome for financial stability policymakers. That benign outcome is shown by the gold dot on figure A.

# What does financial instability look like?

The financial system has been hit by a number of shocks in recent years, some of which have led to disrupted service provision and some of which haven't.

Some of those shocks to the financial system have been systemic in part because we didn't have ex ante policy, but we have made sure to fill those gaps in response.

The global financial crisis exposed many systemic vulnerabilities, such as banks' vulnerability to macroeconomic shocks and the opaqueness and complexity of the OTC derivatives network.[36]

These policy responses have been effective at preventing recent shocks from becoming systemic. Two recent examples support this. First, the higher interest rate environment has been challenging for both mortgagors and lending banks, but the mortgage market tools as well as the bank capital regime and regular stress testing exercises have supported resilience. [37]

Second, UK banks have been resilient to the causes of other recent bank failures.[38] Silicon Valley Bank failed because it mismanaged its interest rate risk, but UK banks have an explicit capital charge for this.

Two examples relate to financial instability in markets. In March 2020, the actions of some NBFIs amplified the initial market reaction to the COVID19 pandemic to create a severe liquidity shock globally (the 'dash for cash').[39] And in late September 2022, the rapid repricing of long-dated UK government bonds generated stress and forced selling by leveraged LDI funds.[40]

Both instances severely disrupted gilt market functioning and threatened to harm the wider economy by tightening financing conditions for UK households and businesses.

That's because first and most directly, gilt yields are the benchmark for other borrowing rates for UK households and businesses. If gilt yields go up, mortgage rates tend to go up.

Second, the gilt market is vital to the functioning of other financial markets, such as repo markets, where gilts are commonly used as collateral. The firms providing financing to businesses and households will use the gilt and associated repo market for their cash and collateral management, so if these markets do not function smoothly, the service provision by these firms to end-users will be disrupted as well.[41]

Table A: Examples of financial instability

Category	Event	Vulnerabilities	Service	Policy
Shocks that weren't systemic because of ex ante policy	Higher rates for households and businesses (June 2024 FSR)	Interest rate risk	Banks help people manage their finances through the provision of bank accounts, loans and payments.	Ex ante: Mortgage market tools (affordability testing, leverage limits and collateral) and bank stress testing.
	SVB (Woods 2023)	Interest rate risk	Banks help people manage their finances through the provision of bank accounts, loans and payments.	Ex ante: - Supervision, stress testing, PRA rules Explicit capital charge for UK banks for interest rate risk in the banking book.
	Brexit  (Carney 2018 Report 2018	Weakening in both supply and demand, a lower exchange rate and higher inflation; risk of disruption due to changes in arrangements for the cross-border provision of financial services.	These vulnerabilities can affect the resilience of the entire financial system and the services it provides.	Ex ante:  - Preparatory work and contingency planning (checklist).  - Work to ensure that the impact of a worst case economic scenario was encompassed within the ACS stress test.

Event	Vulnerabilities	Comico	
	vullerabilities	Service	Policy
Banks in the GFC	Leverage, opacity, correlated asset prices	Banks help people manage their finances through the provision of bank accounts, loans and payments.	Policy response:  - Basel 3  - Bank resolution  - Stress tests  - Mortgage market tools
Derivatives in the GFC (Benjamin 2024)	Leverage and securitization, opacity, complex exposures	Range of market participants depend on derivatives to share and transform risk.	Key policy responses: Margin requirements in OTC markets and central clearing.
MMFs in the dash for cash  (FS paper 2021, Huser et al 2023 Bailey 2021)	Liquidity mismatch and funding stress	Widespread MMF distress would make short-term, low risk stores of value harder to access.	Policy response: - gilt purchases in large size and at high speed - activation of the Contingent Term Repo Facility
LDI (Breeden 2022)	Leverage, correlated asset prices, herding and operational risk	The gilt market underpins most financing markets through setting a risk-free rate. It directly provides finance to the UK Government and is vital to the functioning of financial markets and the transmission of monetary policy.	Policy response: - gilt market intervention - recommendations to sectoral regulators
	Derivatives in the GFC (Benjamin 2024)  MMFs in the dash for cash (FS paper 2021, Huser et al 2023 Bailey 2021)  LDI (Breeden	Derivatives in the GFC securitization, opacity, complex exposures  (Benjamin 2024)  MMFs in the dash for cash (FS paper 2021, Huser et al 2023 Bailey 2021)  LDI Leverage, correlated asset prices, herding and operational risk	Derivatives in the GFC (Benjamin 2024)  MMFs in the dash for cash (FS paper 2021, Huser et al 2023 Bailey 2021)  Leverage, correlated asset prices through the provision of bank accounts, loans and payments.  Range of market participants depend on derivatives to share and transform risk.  Widespread MMF distress would make short-term, low risk stores of value harder to access.  Leverage, correlated asset prices, herding and operational risk  The gilt market underpins most financing markets through setting a risk-free rate. It directly provides finance to the UK Government and is vital to the functioning of financial markets and the transmission of

Category	Event	Vulnerabilities	Service	Policy
Shocks that affected the financial system but weren't systemic	Archegos (Foulger 2023)	Leverage and opaqueness	Hedge funds were developed, in part, to help investors manage investment risk.	Possible responses:  More monitoring and stress testing of bank's exposures to NBFI

Source: Bank of England

The immediate policy response to the "dash for cash" and the LDI crisis was the Bank's gilt market interventions. The FPC followed up with more structural policy responses to build resilience in that market in the form of a recommendation to the sectoral regulator in the case of LDI and more work to assess and address the underlying vulnerabilities in NBFI.[42]

In some cases, shocks were anticipated, and we have prepared for them, which meant that they didn't become systemic. For example, the Bank thoroughly prepared for a range of possible Brexit scenarios. In the run up to the UK leaving the European Union, the FPC regularly updated a 'checklist' of arrangements that needed to be put in place to avoid disruption to end-users of financial services at the end of the transition.[43]

Sometimes, shocks are anticipated, but their exact timing and location is unknown, as for example in the case of operational resilience and cyber risks. Operational resilience has become more important to maintaining financial stability, particularly as the financial system has become more digitalised and interconnected. Recent operational incidents include the July 2024 outage at CrowdStrike (a security software provider) impacting many industries in the UK and other countries, as well as cyber-attacks on ICBC Financial Services (a US broker-dealer) and ION (a third-party provider of derivatives clearing services) in November and February 2023 respectively. The Bank thoroughly prepares for cyber risks by conducting regular cyber stress tests.

Finally, some shocks affecting the financial system aren't systemic. Another way of putting this is that financial stability doesn't mean market stability – some market corrections are perfectly healthy and necessary. For example, the failure of highly leveraged family office Archegos led to substantial losses for some banks but remained contained overall.[44] And the significant moves in global markets earlier in the summer did not precipitate a threat to global financial stability.

#### What action can the FPC take?

The FPC takes action in a few ways.

- Sizing vulnerabilities (ex-ante, or before disruptions occur). The FPC conducts a wide range of analysis of the financial system. One important source of analysis is stress testing, which examines the potential impact of a hypothetical adverse scenario on the health of the system and the individual institutions within it.
- Addressing vulnerabilities at source (ex-ante). It is not possible for the FPC or indeed anyone else to predict or prevent all potential threats to financial stability. But where it can spot areas of vulnerability, it acts to address them. It has a large toolkit (see figure B):
  - **Public communications** (eg Financial Stability Report) so that those exposed to the risks know the FPC's views on them.
  - Advice to firms, regulators and other authorities (eg Brexit checklist).
  - Powers of Recommendation over other regulators (e.g. LDI resilience policy, where the FPC recommended TPR).
  - Powers of Recommendation over the PRA and FCA, which are on a 'comply or explain' basis (e.g. mortgage market policies).
  - Powers of Direction (e.g. leverage ratio).
- Building resilience in the system (ex-ante). There are risks that the FPC can't address at source e.g. geopolitical risks, Brexit and Covid. The FPC can make sure it has built enough resilience in the system so the system can withstand those shocks. In some cases that means building the resilience of institutions but in some cases, it means building the resilience of markets and infrastructure.
- Making sure we are prepared to act counter-cyclically (ex-post). When risks crystallise and disruptions in service provision occur, policy shifts from building resilience to supporting the system, for example through decisions to relax regulatory requirements in a counter-cyclical manner, so that for example banks have the capacity to lend to households and businesses after shocks hit. The FPC has a role in making sure the Bank and the other regulators have the tools they need to support the system when disruptions occur.

Communication Advice Recommendation Recommendation 'comply or explain'

In order of increasing intervention

Figure B: The range of actions the FPC can take

Source: Bank of England

- 1. See this recent article for further detail.
- 2. See this recent article for more on the work the Bank does to further its financial stability objective.
- 3. This definition of financial stability aligns with that adopted by other financial stability policymakers, for example as set out in **this speech** which refers to 'the ability of the financial system to consistently supply the credit intermediation and payment services that are needed in the real economy.'
- 4. See **this paper** for further discussion of fire sale externalities and **this paper** for a framework that incorporates both fire sale externalities and aggregate demand externalities.
- 5. Of course, when we intervene, we have to do so in a way that limits moral hazard, to the extent possible.
- 6. There are other ways of looking at this question. Acharya et al. argue that any market that has required a central bank intervention must be systemic. Others, such as <a href="Acemoglu et al. (2015">Acemoglu et al. (2015)</a> or <a href="Battiston et al. (2024">Battiston et al. (2024)</a> focus on the services provided by institutions that act as important nodes in the financial system. Our definition looks through these issues and focuses on the services provided by the system, or in other words, in our view institutions matter for financial stability if they have an important role in service provision.
- 7. The market for repurchase agreements (shortened to repo) is essential for the short-term funding and liquidity management of many financial institutions. See **here** for more information on the market.
- 8. See the FPC's publication on operational resilience for more detail on the vital services we have in mind.
- 9. The initial shock, or trigger, could for example be a macro shock, including one that affects credit exposures, or an operational shock disrupting service provision or a global shock.
- 10. See this recent article for more on the Bank's regulatory architecture for financial stability.
- 11. The PRA's statutory primary objective is to promote the safety, soundness of regulated firms in the banking and insurance sectors; its secondary objectives are to facilitate effective competition and the competitiveness and growth of the UK economy. The FCA's primary objective is that relevant markets function well, its secondary objective is to facilitate the international competitiveness and growth of the UK economy.
- 12. This is less true for financial market infrastructures (FMIs), given their role in supporting markets.
- 13. See Late call speech by Nathanaël Benjamin | Bank of England .
- 14. See this recent working paper on the 2022 LDI crisis for more details.
- 15. Common risks could for example be economic downturns, interest rates, cyber and climate risks.
- 16. For an overview of the frontier of system-wide modelling, see <u>Macroprudential stress-test models: a survey | Bank of England</u>
- 17. See here for further details on the SWES.
- 18. See the latest Financial Stability Report for more information on our initial findings.
- 19. Indeed, the <u>Australian Prudential Regulation Authority (APRA)</u> has recently announced its intention to run a SWES-style system-wide exercise. This type of exercise might be useful in other jurisdictions too, including on an international basis.
- 20. See our recent Financial Stability Report for more detail on the highly complex private equity landscape, for example.
- 21. See for example Financial Stability in Focus: The FPC's approach to assessing risks in market-based finance and Financial Stability in Focus: The FPC's macroprudential approach to operational resilience.

- 22. See recent speeches by my colleagues <u>Vicky Saporta</u> and <u>Andrew Bailey</u>, and a speech by my former colleague Andrew Hauser, who touched on the micro and macro distinction I make in this speech.
- 23. See Financial Stability in Focus: The FPC's macroprudential approach to operational resilience.
- 24. See annex for further discussion of the range of actions the FPC can take.
- 25. The FPC's work on LDI funds has intervened to build resilience against these risks.
- 26. Note that recommendations are only one part of the FPC's policy toolkit. See the Annex for further details.
- 27. The FPC keep the impact of its communications under review and make changes as necessary. For example, the Committee will trial releasing a single, streamlined product in place of the Policy Statement and Record in non-Financial Stability Report quarters in upcoming rounds. This single product will make it easier for users to see the key changes in the Committee's risk assessment and judgements.
- 28. See page 91 of the August 2020 Financial Stability Report for an example of a checklist.
- 29. See the FPC's regulatory work on LDI funds, where we worked with Irish and Luxembourgish authorities.
- 30. See the **Bank of England Act** for further details. The Prudential Regulation Authority (PRA) also has a secondary objective to facilitate the UK economy's international competitiveness and its growth over the medium to long term, subject to alignment with international standards, and the Financial Market Infrastructure Committee (FMIC) has a secondary objective to act in a way that facilitates innovation.
- 31. Note that the literature has historically found an ambiguous relationship between the *aggregate* size of the financial sector and economic growth. See **this** paper for early empirical evidence or **here** for a comprehensive literature review. My colleague Vicky Saporta gave a **speech** last year touching on this topic.
- 32. There is tentative evidence that SMEs might be under-served by the UK financial system, and that this could be limiting the sector's investment, hiring and dynamism. See <u>this recent article</u> for evidence from a survey of SMEs and <u>this</u> paper for broader empirical evidence.
- 33. See the this recent paper on the Bank's approach to this form of innovation, and a recent speech.
- 34. See this speech by my colleague Catherine Mann on the trade-offs, and this paper on the macroeconomic implications of the energy transition.
- 35. See this article for more information on the reforms to the Bank of England post global financial crisis. Note that the wider improvements we have made to our policy toolkits, such as our resolution regime and balance sheet facilities, reduce the impact of severe disruptions like financial crises.
- 36. See Late call speech by Nathanaël Benjamin | Bank of England
- 37. See Financial Stability Report June 2024 | Bank of England
- 38. See Bank failures speech by Sam Woods | Bank of England
- 39. See Hüser et al, 2023, How does the repo market behave under stress? Evidence from the Covid-19 crisis, Journal of Financial Stability; The role of non-bank financial intermediaries in the 'dash for cash' in sterling markets | Bank of England
- 40. See Risks from leverage: how did a small corner of the pensions industry threaten financial stability? speech by Sarah Breeden | Bank of England
- 41. As my former colleague Anil Kashyap noted at Jackson Hole this year, the high yield bond market saw no issuance over the first 3 weeks of March 2020 during the 'dash for cash'.

See this recent article for further detail.
See Financial stability risks from the non-bank sector: thinking system wide – speech by Lee Foulger   Bank of England
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42. See Financial Stability in Focus: The FPC's approach to assessing risks in market-based finance | Bank of

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