NEW ECONOMICS FOUNDATION

STILL EXPOSED

THE UK'S FINANCIAL SYSTEM IN THE ERA OF BREXIT

CONTENTS

EXECUTIVE SUMMARY

It is now almost ten years since the onset of the global financial crisis, but its impacts are still being felt across the UK. Thanks to weaknesses and irresponsibility in the financial sector, millions of ordinary people were left to pay a huge price. And while measures were introduced – in the UK and other developed economies – to ensure that the tragic human cost of the crisis does not happen again, many believe these have not gone nearly far enough.

Now the UK's vote to leave the European Union raises new uncertainties around the future of the financial sector. In this context, three questions become vitally important:

- How resilient is the UK's financial system to potential future shocks?
- What might be the impact of different forms of Brexit on financial system resilience?
- How could different domestic policy choices improve or harm financial system resilience?

This paper sets out to answer these three questions. We begin by updating our Financial System Resilience Index, first published in 2015, and find that:

- The UK's financial system resilience has improved slightly since the financial crisis, but is still by far the worst performer among the G7 economies
- Despite seeing a reduction in intra-financial lending, cross-border claims, leverage, non-performing loans and household debt, the UK still has among the largest, most concentrated, complex and interconnected financial systems in the developed world, and therefore remains vulnerable to shocks.
- Household debt is now on the rise again, and the proportion of real economy lending is strikingly low, creating further systemic risks.

Looking ahead, we find that Brexit raises new uncertainties – and poses new risks – to financial system resilience. The form that Brexit takes could have significant consequences for the size, composition and activities of the financial services sector – and, in turn, for financial system resilience. We

consider the impact of three possible Brexit scenarios in the context of our financial system resilience framework, drawing on evidence from our expert interviews: a 'hard Brexit' scenario, a bespoke agreement and a 'soft Brexit' scenario.

Our analysis indicates that any outcome other than a 'soft Brexit' will likely involve significant disruption to the financial sector, as financial institutions respond by shifting some wholesale activities overseas. This alone could pose risks to financial stability, but it also raises the possibility that the UK starts to roll back financial regulation and cut taxes in a bid to stem the outflow of business – a strategy that both the Prime Minister and the Chancellor of the Exchequer have hinted at. This would be the worst possible outcome.

While we were promised that Brexit would allow us to take back control, a move towards financial deregulation would do the opposite. It would lock us into a future of low regulatory standards designed to serve the interests of international finance, and would be a clear sign that lessons from the financial crisis have not been learned. It would create a much riskier and less resilient financial system, leaving people at the mercy of damaging forces over which they have no control.

But this is not inevitable. Our analysis suggests that the consequences of Brexit for UK financial system resilience will depend heavily on the domestic policy decisions that accompany them. Rather than seek to replace the lost business by lowering standards and attracting even riskier and more dangerous financial activity, we recommend the UK should instead seek to improve resilience by refocusing its financial system to better serve the domestic real economy and the needs of people now. The process of reshaping our financial system to better serve society can, and should, start now – regardless of the final outcome of the Brexit negotiations. To this end, we recommend that:

- **A race to the bottom on financial regulation should be avoided at all costs.** Far from being bad for the economy, measures to promote financial stability are pre-requisites for long-term sustainable growth. Slashing regulation in a bid to curry favour with the City of London will create a less resilient financial system and jeopardise the long-term social and economic health of the UK.

- **The Bank of England should strengthen prudential and macroprudential regulation to mitigate risks posed by Brexit.** This should involve increasing the levels of capital that big, systemically risky, banks are required to hold and looking more closely at other factors when assessing financial system resilience, such as: what is actually on banks' balance sheets (asset and liability composition); the topography of the system as a whole (interconnectedness, transparency and complexity); and overall financial system size. Asset composition could be improved by developing forms of 'credit guidance' to boost lending to non-financial firms, in coordination with the UK's new industrial strategy.

- **The Treasury should urgently review options for addressing the lack of diversity in the UK banking system, and for promoting a more vibrant banking sector focused on lending to the domestic real economy.** This should include examination of the full range of options for the public's majority stake in the Royal Bank of Scotland (RBS), including transforming it into a network of local or regional retail banks with a public interest mandate to serve their local area, lend to small businesses and provide universal access to banking services. The Treasury should also examine policy options for establishing new sources of patient, long-term finance for strategic investment, such as establishing a new national investment bank.

- **In promoting competition in the banking sector the Competition and Markets Authority (CMA) should focus on diversity of provision, not just market share.** Genuine competition and choice requires a diversity of providers for consumers to choose from, rather than simply a larger number of major players following the same business model.

1. INTRODUCTION

In December 2015, Bank of England Governor, Mark Carney declared that "the post-crisis period is over"[1]. The UK's largest banks had all passed their stress tests – just – and the Bank was keen to reassure the sector that it was not planning any further strengthening of regulation. Against this backdrop, post-crisis reforms such as the ringfencing of retail from investment banking began to be revisited or watered down. The European Commission even brought forward proposals to revive securitisation markets, which had remained subdued since precipitating the global financial collapse. The message was clear: we had arrived at the promised land of financial stability, lessons had been learned, and it was time to move on. Business as usual was back.

Eighteen months on, the landscape looks very different. The post-crisis period most certainly does seem to be over, but perhaps not in quite the way Carney had in mind. The 2016 vote to leave the European Union ushered in a new period of uncertainty, with increased volatility in financial markets and signs that business investment was being put on hold. Consumer spending, initially surprisingly robust in the face of Brexit, now appears to be weakening along with falling house prices. More recently, the shock result of the 2017 general election has shattered the austerity consensus which had dominated UK politics since the crash, and put the prospect of a radical change of direction in economic policy on the agenda.

Both the outcome of the Brexit negotiations and the domestic policy agenda that accompanies it will shape the UK's financial system and the wider economy for decades to come. With old certainties increasingly being called into question, the exact shape of this future is difficult to forecast. But whatever the outcome, a significant reshaping of the financial sector seems likely.

Meanwhile, far from having reached safe harbour after the storms of 2008, the global financial system remains vulnerable to another crisis. The Systemic Risk Council, a group of global experts on financial stability, recently warned G20 leaders that any attempts to slash bank regulation "will lead to a worse crisis than 2008"[2]. It also warned that, with monetary policy already at its limits and public debts far higher, central banks and governments have far less firepower available to respond to a crisis than they did in 2009, meaning that the protecting the wider economy and communities from a shock could be much more challenging.

In this context, three questions become vitally important:

- How resilient is the UK's financial system to potential future shocks?
- What might be the impact of different forms of Brexit on financial system resilience?
- How could different domestic policy choices improve or harm financial system resilience?

This paper sets out to answer these three questions. First, we assess how financial system resilience has evolved in the UK compared to the other G7 economies, revising and updating our Financial System Resilience Index (first calculated in 2015). We then examine how Brexit could affect financial system resilience, drawing on a series of expert interviews. Finally, we offer a series of policy recommendations for building a more resilient financial system.

2. FINANCIAL SYSTEM RESILIENCE INDEX

In this section we update our comparative Financial System Resilience Index (FSRI) which covers the G7 major economies: the United States, Canada, Japan, Germany, France, the UK and Italy. Despite limited post-crisis reforms, the UK still performs worst on five out of our seven resilience factors, lagging behind other advanced economies.

In the six months preceding the Brexit vote, policymakers and central bankers insisted we had arrived at the promised land of post-crisis stability and could start looking to the future: after big banks scraped through their stress tests, Mark Carney famously declared that "the post-crisis period is over". Post-crisis reforms started to be watered down and unravelled.[3] Since then, the result of the referendum has ushered in a new period of uncertainty. But does the data bear out this assertion in the first place? Is there any evidence that the UK is now better placed to weather economic shocks than it was two years ago?

Ever since the 2008 financial crisis the term 'resilience', along with 'systemic financial risk', has been used widely by central bankers and policymakers. The Financial Policy Committee has an explicit remit to protect and enhance "the resilience of the UK financial system" while a whole suite of regulatory reforms have been designed with the goal of building a more resilient banking system. However, when policymakers and regulators talk about the importance of resilience, it is not always clear what they mean.

2.1 DEFINING FINANCIAL SYSTEM RESILIENCE

Financial system resilience is often equated with the ability of individual institutions to withstand short-term, external shocks without going bust. Often it is implicitly assumed that, by making individual banks hold more capital, we can reduce the chances of them ever getting into trouble – 'resilient' banks will equal a resilient system. But this narrow approach ignores our growing understanding that complex systems are about much more than the sum of their individual parts – a classic 'fallacy of composition'. Financial system resilience is about more than the ability of individual

banks to withstand shocks; it is about the system's propensity to generate shocks in the first place, and its ability to adapt and evolve in response to them.

In order to establish a basis for measuring progress towards a more resilient financial system, in 2015 the New Economics Foundation published *Financial System Resilience Index: Building a strong financial system*. Our approach to measuring resilience emphasises its evolutionary and dynamic nature, and looks beyond simply how much capital our banks holding. Our definition of financial system resilience is:

> *"the capacity of the financial system to adapt in response to both short-term shocks and long-term changes in economic, social, and ecological conditions while continuing to fulfil its functions in serving the real economy".*

Drawing on academic and policy literature and a series of expert interviews and roundtables, we identified six key factors that influence financial system resilience defined in this way:

- diversity
- interconnectedness
- financial system size
- asset composition
- liability composition
- complexity and transparency.

We compiled proxy indicators for each of these factors into a composite index to compare the financial systems of leading advanced economies, and whether they have become more or less resilient over time[4]. We also include the leverage ratio – the ratio of banks' capital to their assets – as a final resilience factor, because this has been a major focus of regulators post-crisis. This makes seven resilience factors in total.

We examine variables for each country through time on an annual basis from 2000 to the latest year when data is available[5]. Our composite index combines the six resilience factors plus leverage by averaging the index scores across all seven variables, giving equal weight to each. A brief description of each of the resilience factors, along with performance of the UK compared with other G7 countries, is outlined in the next section. For a more detailed discussion around the choice and definition of resilience factors, refer to section 2 of the original report published in 2015[6].

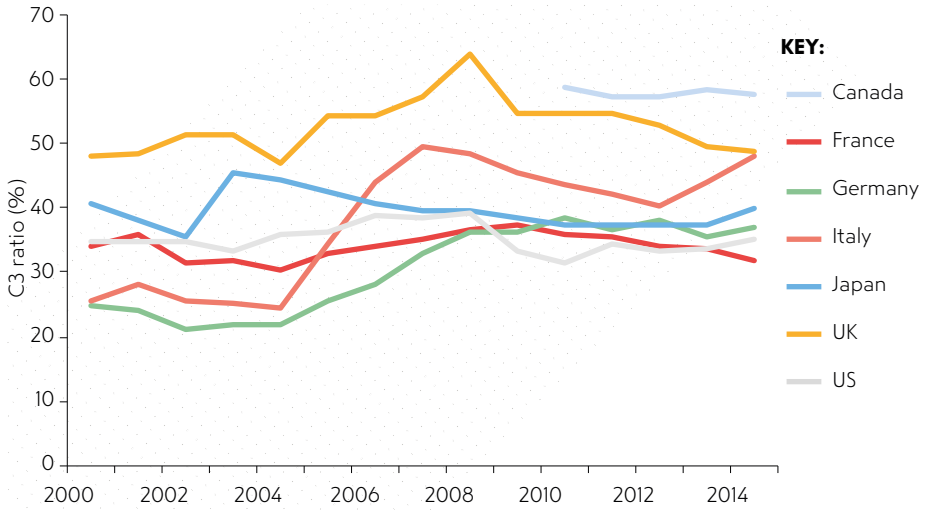
2.2 DIVERSITY

Diversity is important for financial system resilience because similar institutions with similar business models are likely to suffer from the same problems at the same time, increasing the chance of a systemic crisis. When a shock such as the 2008 financial crisis hits, if banks have different operating models, they are affected in different ways, reducing the risk of the contagion spreading throughout the entire financial system[7].

In assessing diversity we draw on Professors Michie and Oughton's work on the D-Index measure of diversity in financial services[8]. The D-Index measures diversity in four key areas: ownership diversity, market concentration, funding model diversity and geographical diversity. Data limitations mean that we have not been able to replicate the funding model concentration index or the diversity index internationally, but we have included indicators of market concentration and ownership diversity.

We measure market concentration using the ratio of top three bank assets to total assets[9]. This is sometimes referred to as the "C3 ratio" and shows the extent of market dominance by the largest firms in an industry[10]. The results are shown in Figure 1.

FIGURE 1: RATIO OF TOP THREE BANK ASSETS TO TOTAL ASSETS (C3 RATIO)



Source: Bankscope[11], International Economic Policy[12], World Bank[13]

On this basis, the UK has the second most concentrated banking sector in the G7, with the largest three banks controlling almost half of all bank assets. A number of factors have helped to produce a UK banking system which is dominated by a handful of large, shareholder-owned universal banks, the most important of which were the process of demutualisation and the 'Big Bang' deregulation in the 1980s[14].

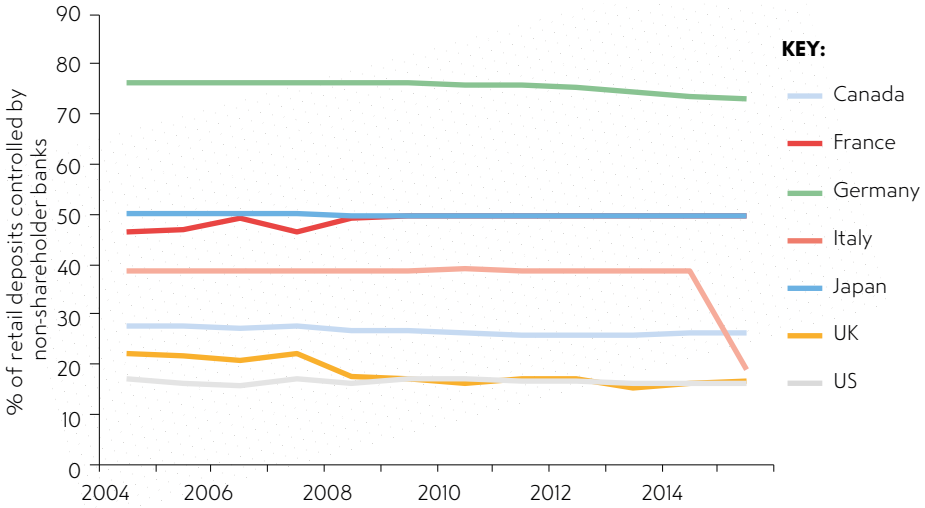
By 2010, what had been 32 separate entities in 1960 had become consolidated into six major groups – Barclays, HSBC, Lloyds, Nationwide, RBS, and Santander – which together had an 89% market share of the current account market[15].

When we originally published the Financial System Resilience Index we calculated each measure until 2012, which was the latest year when international data was available. Since then, UK policymakers have taken steps to encourage greater competition in the banking sector. In 2013 the Bank of England simplified the process for acquiring a banking licence, and lowered capital requirements for new bank entrants. As a result, there has been an increase in the number of so-called 'challenger banks' entering the market. Since 2012 there have been 16 new retail and commercial banking licenses issued, with at least eight more currently pending[16]. If these banks are successful at winning market share from the larger banks, then our measure of concentration may continue to fall in future years.

However, genuine competition and choice requires a diversity of providers for consumers to choose from, rather than simply more banks following the same business model. Different corporate forms follow different business strategies, cater to different customers and provide different products and services. This is why it is also important to consider corporate diversity when measuring resilience.

Our measure of corporate diversity reflects different forms of ownership in the retail deposits market. Based on current data availability for the G7 countries we distinguish two types: commercial banks and non-commercial banks. Non-commercial banks include co-operatives and mutuals, credit unions, and public savings banks (see box 1).

FIGURE 2: % OF RETAIL DEPOSITS CONTROLLED BY NON-SHAREHOLDER BANKS



Source: National central bank and banking association data and NEF calculations

BOX 1: TYPES OF NON-COMMERCIAL BANKS[17]

Co-operative banks are owned and controlled by members on the basis of one member one vote, rather than by shareholders in proportion to their shareholdings. Any customer can choose to become a member by investing a small amount of money in the co-operative. Unlike commercial banks, however, members of co-operatives cannot sell their stake to a third party and do not have any legal claim on the profits or capital accumulation of the bank. Cumulative profits are owned by the co-operative itself and used to reinvest in the business.

Mutuals are similar to co-operatives, but customers of mutuals automatically become members without having to buy a share. Building societies in the UK are a type of mutual that traditionally focus on providing mortgages, although they also provide other retail banking products and services.

Credit unions are a type of non-profit financial co-operative that offer a restricted range of financial services to members within a community that shares a common bond, such as living or working in a particular geographical area, or working for the same organisation. These close relationships help them to assess loans and ensure repayment. They often focus on the needs of the most financially marginalised.

Public savings banks also have much in common with co-operative banks, but have key differences in ownership and governance. Their ownership structures often reflect a public interest mandate, meaning that they have a dual financial and social mission. Their assets are managed by trustees, often under a stakeholder governance structure. Crucially, however, nobody has ownership rights over profits or capital – the capital is in essence 'unowned'. The UK used to have many savings banks, but over time these were consolidated into larger commercial banks.

Germany has long been ahead of the other advanced economies in terms of corporate diversity, with non-shareholder banks controlling over 70% of retail deposits. This is due to the strength and resilience over time of Germany's co-operative banking sector and its public savings banks, the *Sparkassen*. The success of the German Sparkassen has meant that the model is currently being explored by other countries, including in Ireland where government is examining proposals to establish up to ten Sparkassen across Irish regions with backing from the European Investment Bank[18].

Italy's banking sector has traditionally performed well on diversity, but this reduced substantially in 2015 following the demutualisation of the *Banche Popolari* (popular co-operative banks) by government decree[19]. The changes meant that ten co-operative banks were forced to become joint stock companies with voting rights based on the size of each shareholder's share, rather than the co-operative principle of one member one vote.

By contrast, the UK has a much less diverse retail deposit market. Shareholder-owned banks control around 85% of deposits. Part of the reason for this is that unlike almost every other major advanced country, co-operative banking has faced legal restrictions in the UK. While building societies have long been a key part of the UK's financial landscape, they are legally required to put 75% of their assets into UK residential mortgages and do not serve businesses. It has not, until recently, been possible to set up a fully-fledged co-operative bank that is owned by its customers.

The institution that most closely resembled a co-operative model was the Co-operative Bank, which until 2013 was a wholly owned subsidiary of the Co-operative Group – the retailing group which was owned by its customers. However, in 2013 the Co-operative Group's stake was reduced to 20% after it was rescued by a consortium of US hedge funds after running into financial difficulties, ending its status as a non-shareholder owned bank. Then, in August 2017, the Co-operative Group's stake was reduced further to just 1% after the bank was forced to raise a further £700m from hedge funds after running into regulatory issues[20].

However, recent changes to the law open up the prospect of genuine co-operative banking in the UK for the first time. In 2014 the Co-operative and Community Benefit Society Act was passed, which allows co-operatives to hold a deposit-taking banking licence[21]. In response to these legal changes, the Community Savings Bank Association (CSBA) was established with the aim of establishing new co-operative banks that are fully owned by their customers[22]. The CSBA aims to set up a network of 18 regional co-operative banks across the UK with a mission to serve SMEs, community groups and households.

Looking ahead, if initiatives like the CSBA are successful then we may start to see a reversal of the trend towards greater concentration and less diversity in UK banking, which would help to significantly improve overall resilience.

2.3 INTERCONNECTEDNESS AND NETWORK STRUCTURE

Before the financial crisis of 2008, conventional wisdom held that greater interconnectedness led to more stable systems by dispersing risks: in the event of a shock, each bank takes a small hit, the impact is dispersed and there is no contagion[23]. However, whilst this may be true for small standalone shocks, it is now acknowledged that highly interconnected structures can

in fact be more vulnerable to extreme shocks cascading around the system. As the 2008 crisis demonstrated, it is particularly dangerous when large, too-big-to-fail banks are highly interconnected with the rest of the financial system and act as 'super spreaders' of contagion.

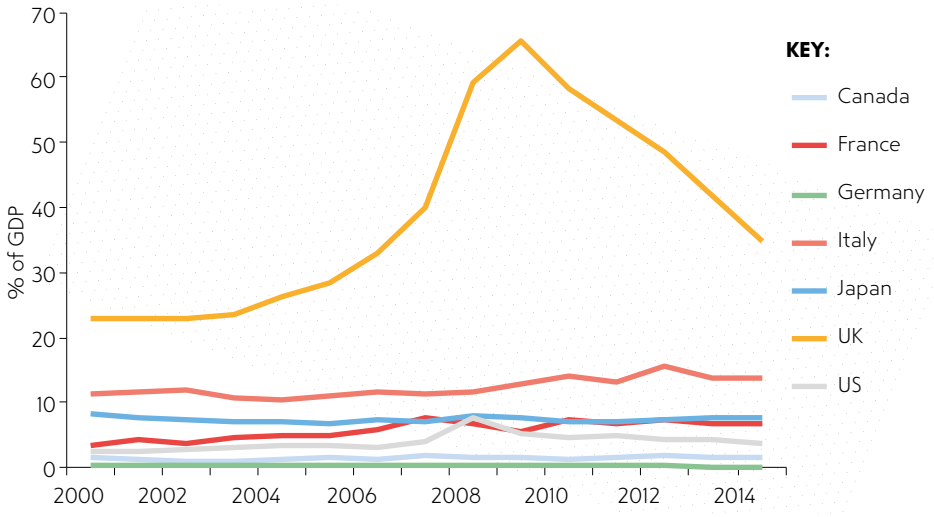
While there is no precise way to measure the exact pattern of connections most favourable to resilience, we use the proxy measure of bank lending to other financial corporations (OFCs) as a proportion of GDP[24]. While not perfect, this measure does provide an indication of the level of interconnectedness in the system.

As shown in Figure 3, the UK has long been an outlier with lending to other financial corporations far exceeding that of other G7 countries. However, since we first published the Index, loans to other financial corporations have been falling sharply in the UK from a peak of 65% of GDP in 2009 to 34% in 2014. Despite this, the average among other G7 nations (excluding the UK) is just 6% of GDP.

There is also evidence that cross-border linkages may be more vulnerable in the event of shocks, as foreign branches often have a more fragile funding structure and concentrate lending in more procyclical sectors, such as commercial real estate[25]. To capture this, we look at banks' exposures to the international financial system via the amount of foreign claims to all sectors (other financial corporations, households, businesses and governments) using data collected by the Bank for International Settlements (BIS)[26].

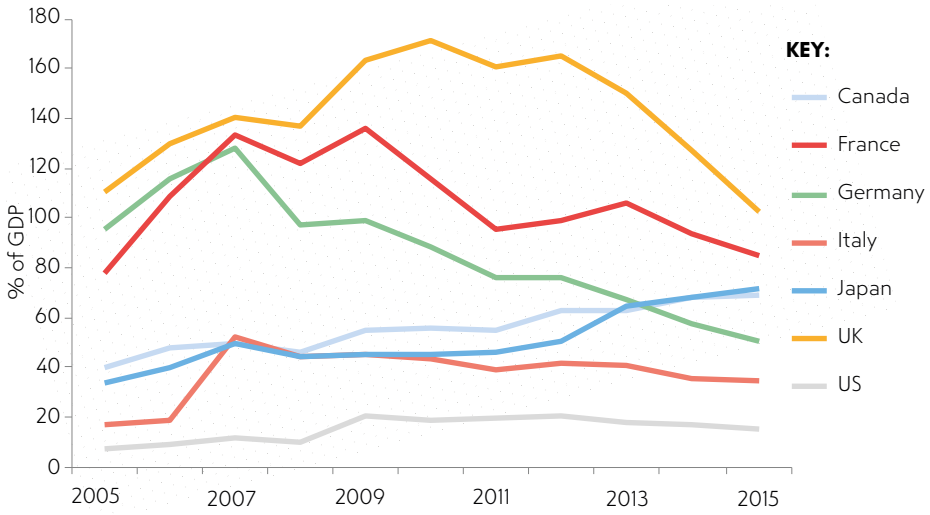
As shown in Figure 4, UK banks' cross-border claims peaked at around 170% of GDP in 2010, but have been falling considerably since, particularly in the years since 2012 (the last year included in the original Financial System Resilience Index report). This mainly reflects the steps that UK banks have taken to reduce their exposure to the euro-area periphery following concerns around financial stability and sovereign debt[27]. Despite this, the UK financial system's foreign exposure is still considerably larger than most of the other G7 countries.

FIGURE 3: LENDING TO OTHER FINANCIAL CORPORATIONS (EXCLUDING BANKS, AS A % OF GDP)



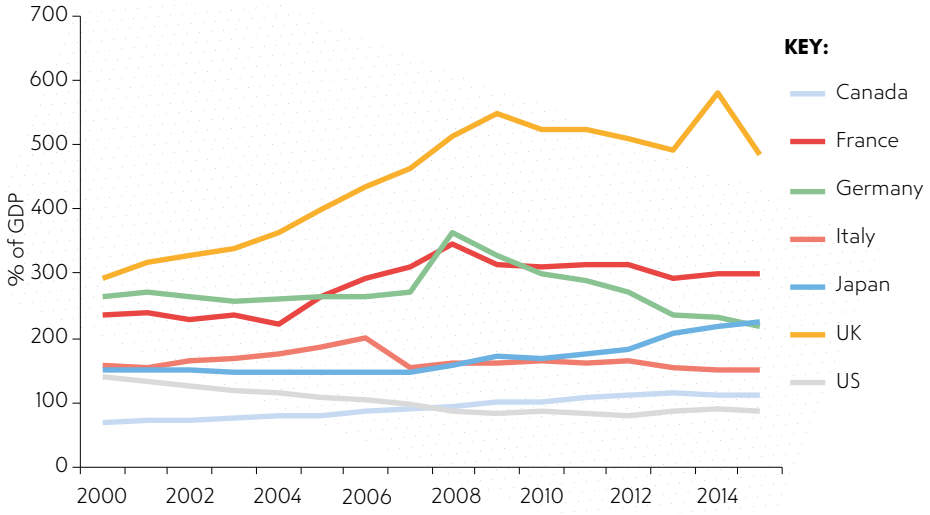
Source: National central banks

FIGURE 4: BANKS' FOREIGN CLAIMS BY COUNTRY AS A % OF GDP



Source: BIS, locational banking data

FIGURE 5: TOTAL BANK ASSETS TO GDP (%)



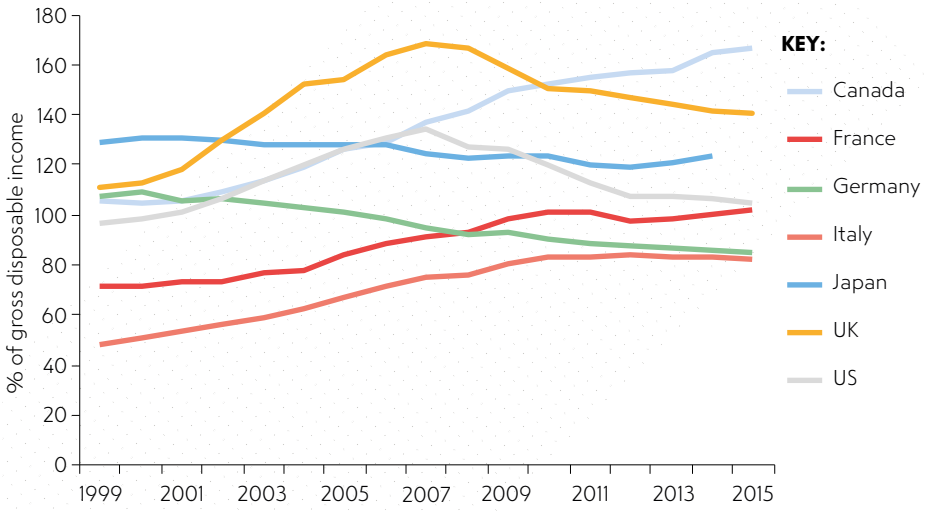
Source: International Monetary Fund (IMF), European Central Bank (ECB), Canadian Statistics (CANSIM)

2.4 FINANCIAL SYSTEM SIZE

Larger banking sectors require greater fiscal support when they fail, and impose greater costs on the real economy in times of crisis[28]. In the UK, the cost of bailing out the banks peaked at over £1 trillion[29], while the cost to the economy in terms of loss of income and output has been much greater. According to Andrew Haldane, the Bank of England's Chief Economist, the cost may be as high as £7.4 trillion[30]. There is also evidence that larger financial systems are associated with financial instability because they have a greater tendency to generate shocks in the first place[31].

We measure financial system size by calculating total bank assets relative to the size of the domestic economy (measured as a percentage of GDP). On this measure, the UK has one of the largest financial systems in the world, as shown in Figure 5, with little change relative to other countries since we last published the Index. Notably, it is only since the turn of the millennium that the size of the UK's banking system has materially departed from the other G7 countries.

FIGURE 6: DEBT OF HOUSEHOLDS AS A % OF GROSS DISPOSABLE INCOME



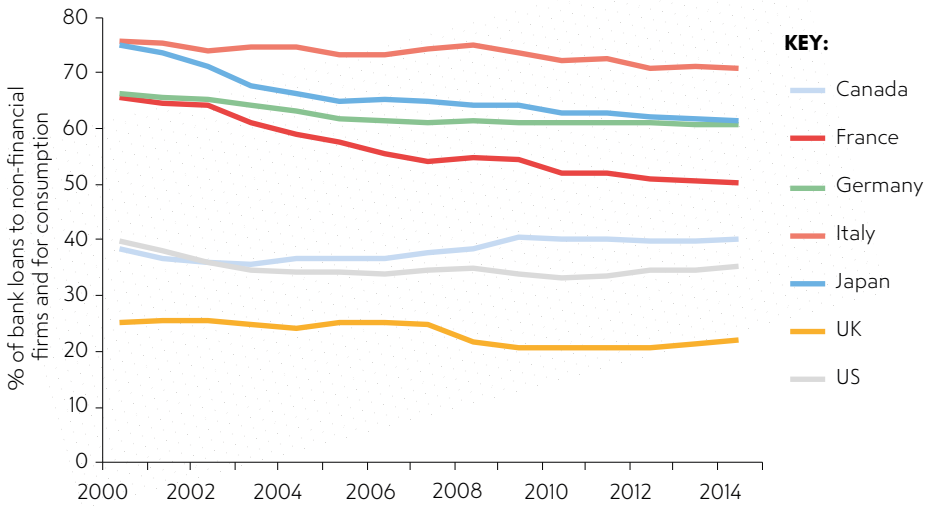
Source: OECD[32]

Our second indicator of financial system size is the level of private household debt as a percentage of gross disposable income, using data from the Organisation for Economic Co-operation and Development (OECD). Household debt is often a good measure of the fragility of an economy, and an indication of its vulnerability to macroeconomic shocks. As shown in Figure 6, in the run up to the financial crisis the UK had the highest household-debt-to-income ratio in the G7. However, after the financial crisis in 2008 UK households started to pay down debt, while the government ran large deficits to offset the effects of the crisis. This trend has continued since 2012, the last year examined in in the original Financial System Resilience Index report.

However, after a sustained period of de-leveraging, recent data shows that household debt is now increasing once again. Underpinning this has been a rapid increase in unsecured consumer lending – credit cards, overdrafts and other forms of consumer borrowing such as payday loans and vehicle finance. With real wages falling, households have only been able to maintain consumption levels by borrowing more in aggregate. The Office for Budget Responsibility now forecasts household debt as a proportion of GDP to exceed 150% by 2019[33] – a major concern for future resilience.

In recognition of the risks posed by the rapid growth in consumer credit, in June 2017 the Bank of England's Financial Policy Committee (FPC) announced that it would bring forward the part of its annual stress tests that looks at banks' exposure to consumer credit[34]. In July 2017 the Prudential Regulatory Authority published a review of consumer credit lending, which concluded that "the resilience of consumer credit portfolios is reducing". The FPC is monitoring this risk closely and has hinted that it may act to dampen growth in consumer lending in the near future.

FIGURE 7: REAL ECONOMY CREDIT RATIO



Source: National central banks

2.5 ASSET COMPOSITION

The composition of assets is significant for resilience because of the risks that different types of lending pose to bank balance sheets. Excessive lending to financial or asset-market transactions enhances the risk of asset bubbles developing as increasing quantities of credit chase limited quantities of assets.[35]

To measure this, we calculate a 'narrow real economy credit ratio' which is the stock of lending to non-financial corporations plus the stock of lending to households for consumption, divided by total bank lending[36]. Mortgage lending is excluded from our 'real economy' measure for assessing resilience, because although mortgages serve a socially useful purpose, most mortgage lending does not increase the nation's stock of productive capital. Similarly, we do not consider lending to other financial corporations as real economy lending.

As shown in Figure 7, the UK has the lowest real economy credit ratio of the G7 nations at just over 20%. While there has been a slight increase in real economy lending since 2012, the UK still remains a significant outlier. As well as posing risks to financial stability, such a low proportion of real economy lending is also holding back the UK's economic performance. A recent Bank of England survey found that lending to small to medium enterprises (SMEs) accounts for only around 4% of total lending, while 20% of firms are under-investing because they can't access the bank credit they need to expand[37].

The composition of credit aggregates is also significant for resilience because of the risks which bad debt poses to bank balance sheets. High levels of non-performing loans (i.e. loans which will never be repaid) can pose risks to the stability of the financial system. This was not considered in the original Financial System Resilience Index published in 2015, but we include it in this update by adding a new proxy measure: the ratio of bank non-performing loans to total gross loans, based on data from the World Bank[38]. This provides an indication of bank health and efficiency by identifying problems with asset quality in the loan portfolio.

As shown in Figure 8, the UK performs relatively well on this measure, with the second lowest rate of non-performing loans among the G7 nations. Italy is a clear outlier, as Italian banks have amassed €360 billion of non-performing loans in recent years. These are mostly loans which were made to small companies who have been unable to pay them back under the strain of a weak Italian economy, and are estimated to account for around 18% of all loans in Italy, and a third of all non-performing loans in the entire euro area[39].

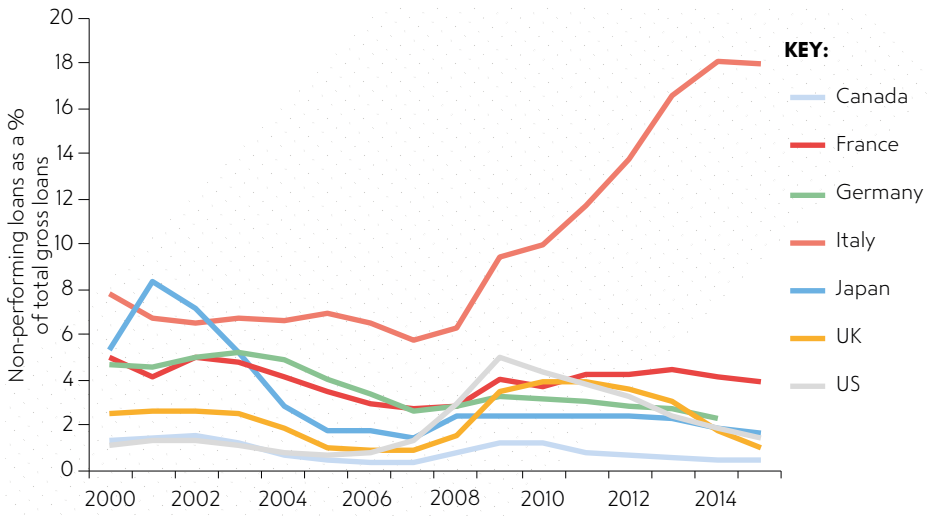
2.6 LIABILITY COMPOSITION

Bank business models are based on leverage (i.e. turning a small base of capital into a much larger portfolio of loans) and 'maturity transformation' (i.e. matching short-term liabilities, such as customer deposits, with loans that are repaid over a longer period. Because of this, they are exposed to solvency risks (their capital is not sufficient to cover losses on their assets) and liquidity risks (they do not have enough liquid assets to cover short-term outgoings such as deposit withdrawals). The way banks fund themselves (also known as their liability composition) is critical to their resilience to such risks, both individually and at a system level.

During the financial crisis several large banks, including Northern Rock in the UK, suffered a so-called 'liquidity crisis' due to an over-reliance on short-term risky funding sources. To capture this risk, we include a measure of 'risky' funding – the ratio of 'non-core' to 'core' liabilities – using definitions established by the IMF[41].

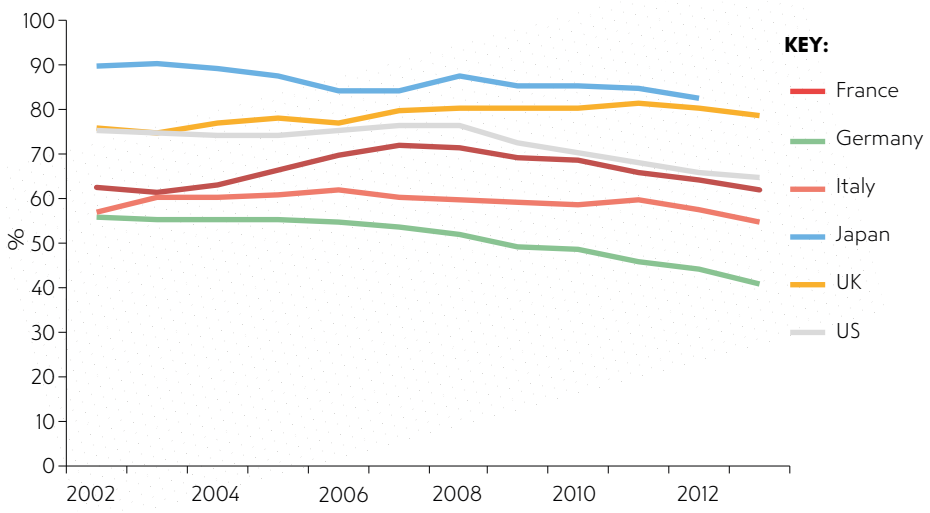
'Core liabilities' are defined as regular retail deposits from domestic creditors, whereas 'non-core' liabilities are defined as foreign deposits, funds raised by issuing debt securities, loans, Money Market Fund (MMF) shares, and from "certain types of restricted deposits, which due to their nature do not qualify as core funding (e.g. compulsory savings deposits)"[42]. Core liabilities are deemed to be much safer and stable than non-core liabilities. In addition to serving as an indicator of funding risk, the ratio of non-core to core liabilities also gives an indication of the size of the shadow banking system, and of intra-financial interconnectedness.

FIGURE 8: RATIO OF BANK NONPERFORMING LOANS TO TOTAL GROSS LOANS



Source: World Bank[40]

FIGURE 9: BROAD NON-CORE LIABILITY RATIO (EXCLUDING CANADA)



Source: IMF[43]

As shown in Figure 9, the UK banking system's ratio of non-core to core liabilities is among the highest in the G7, and has stayed relatively stable since 2012 (the last year examined in the original Financial System Resilience Index report) . This indicates that UK banks may be more vulnerable to a liquidity crisis stemming from financial shocks generated within the domestic and international financial system.

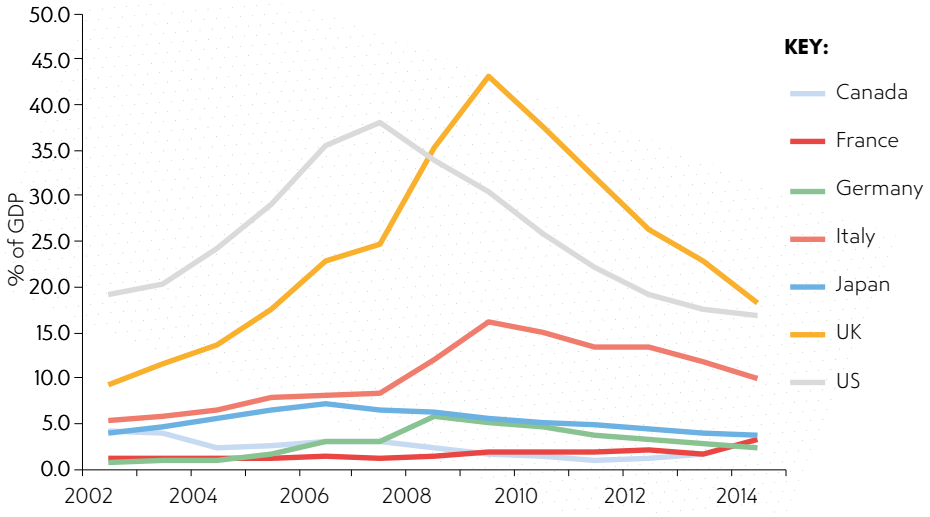
In order to address the risks posed by over-reliance on risky funding, in 2014 the Basel Committee for Banking Supervision introduced a 'net stable funding ratio' as part of its package of regulatory reforms known as "Basel III". The ratio aims to ensure that banks always have enough long-term, stable funding available relative to their assets[44].

2.7 COMPLEXITY AND TRANSPARENCY

Complexity and transparency is significant for resilience because an abundance of complex and opaque financial instruments exacerbates the risk of mispricing (where assets are valued at more than they are really worth). It can also create the risk of 'systematic mispricing', as occurred with sub-prime mortgage-backed securities before 2008[45].

We consider that derivatives exposure and securitisation are reasonable proxies for this, given the particular risks associated with these instruments and their role as a barometer of financial system complexity. We were unable to find a good cross-country measure of derivatives exposure, therefore we only look at securitisations (the process whereby banks package up loans into financial securities backed by the stream of loan repayments and sell them on to investors). We use a proxy measure of outstanding securitisations as a percentage of GDP[46].

FIGURE 10: SECURITISATION OUTSTANDING AS A % OF GDP



Source: Europe and US: Securities Industry and Financial Markets Association (SIFMA), Canada: Canadian Statistics Office, Japan: Bank of Japan

As shown in Figure 10, the UK has the largest level of securitised assets relative to GDP in the G7, however the securitisation market has been declining rapidly in most countries since 2009.

Following the financial crisis, European regulatory authorities took a number of steps to make securitisation transactions safer and simpler, and to ensure that appropriate incentives were put in place to manage risk. This included higher capital requirements and mandatory risk retention for the originator bank.

However, since then, authorities have come under significant pressure from the industry to revive securitisation markets. This has become a key pillar of the EU's Capital Markets Union project, and in 30 September 2015 the Commission published two legislative proposals to this end[47,48]. Up until the Brexit vote the UK had been one of the leading proponents of the revival of securitisation. The UK's Commissioner, Jonathan Hill was in charge of overseeing the new proposals, which the UK government and Bank of England strongly endorsed.

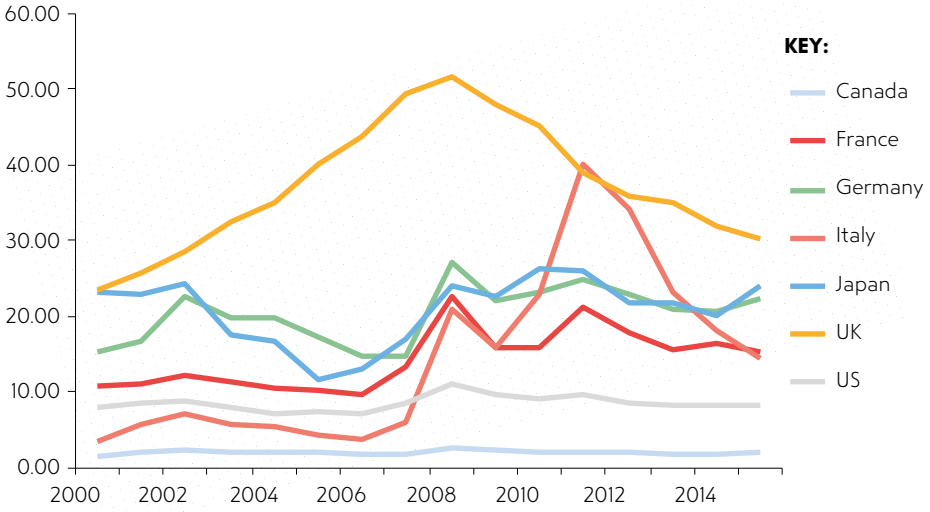
However, analysis from Finance Watch[49] and the New Economics Foundation[50] has found little evidence that households and businesses across Europe will benefit from the revival of securitisation. Instead, the main beneficiaries will be large banks who stand to profit from the manufacturing of securitisations and collection of fees. The key underlying motive behind the push to revive securitisation appears to be fears around banks' profitability and lower EU competitiveness for banks compared to the US.

As discussed in the next section, the future of securitisation in the UK, and its likely impact on financial system resilience, will to a great extent depend on the UK's future relationship with the EU.

2.8 LEVERAGE

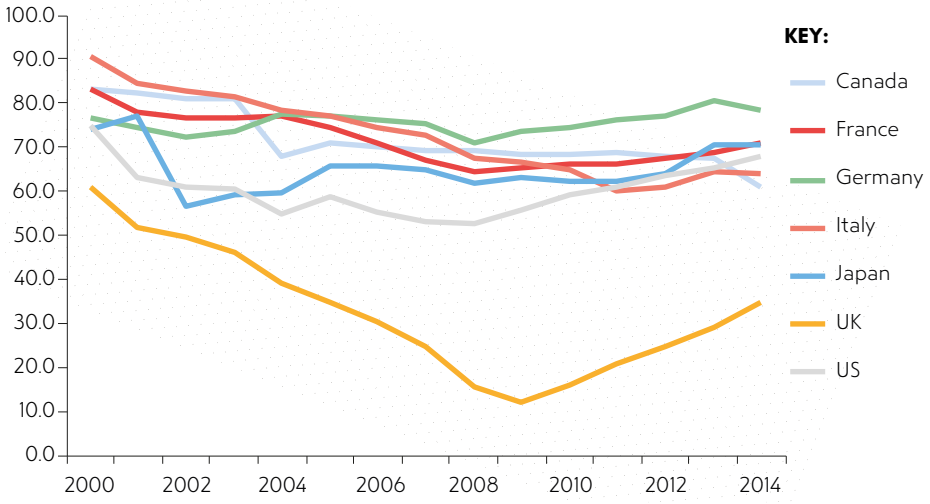
Ensuring that banks hold enough capital to withstand shocks has been a major focus of post-crisis regulation, particularly via the new Basel III package of reforms. One of the most widely accepted measures of bank resilience to shocks is a simple leverage ratio: the ratio of a bank's capital (or

FIGURE 11: BANK ASSETS TO EQUITY (LEVERAGE RATIO)



Source: OECD[51]

FIGURE 12: OVERALL FINANCIAL SYSTEM RESILIENCE INDEX



equity) to total assets. Simple leverage ratios tend to perform better than complex risk-weighted capital ratios as a predictor of bank failure[52], while research has also shown that high leverage is associated with financial instability[53].

We use the OECD's definition of banking sector leverage to compare across countries[54,55]. As shown in Figure 11, the UK banking system is the most highly leveraged among the G7 group of nations, although leverage declined steadily after the financial crisis thanks in part to government bailouts and various recapitalisation measures. Since 2012, leverage has fallen further as banks have responded to new higher capital requirements introduced as part of the Basel III regulatory reforms.

2.9 OVERALL INTERNATIONAL FINANCIAL SYSTEM RESILIENCE INDEX

Our composite International Financial System Resilience Index combines all seven resilience factors, giving equal weight to each. Each indicator has been indexed on a scale of zero to 100, with the worst (least resilient) score across all countries for all years equal to zero and the highest score equal to 100. The results are shown in Figure 12.

When we first published our Financial System Resilience Index in 2015, we found that the UK's overall financial system resilience deteriorated rapidly in the period leading up to the financial crisis. Decades of consolidation and a huge expansion of credit and complex financial instruments left a system that was unusually large and homogenous, highly interconnected (both domestically and internationally), highly complex, and highly reliant on wholesale market funding when compared to other countries.

Since then, resilience has improved in some areas. Banks have successfully reduced international exposures, leverage and non-performing loans, while levels of household debt have also fallen. But although there have been signs of improvement, there still remains a very large gap in comparison to other advanced economies on many resilience factors.

The UK still has the largest, least diverse, most complex and interconnected financial system in the G7 group of nations, and therefore remains vulnerable to shocks. Worryingly, household debt is on the rise again and the proportion of real economy lending is abnormally low, leaving businesses starved of investment.

TABLE 1. FINANCIAL SYSTEM RESILIENCE INDEX: COUNTRY RANKING (2014)

COUNTRY	RANK	RESILIENCE RATING (MAX = 100)
Germany	1	78.5
France	2	70.9
Japan	3	70.6
United States	4	68.2
Canada	5	64.3
Italy	6	61.2
United Kingdom	7	34.9

Experts agree that when the next crisis comes, the government will have far less ammunition available to step in and limit the damage. Public debt is much greater than it was before 2008, and monetary policy is already approaching its limits. The fact that the UK remains an outlier on many of our resilience factors should therefore be a major cause for concern. This is especially the case given the uncertain road ahead – and the significant challenges raised by the UK's vote to leave the European Union.

3. THE IMPACT OF BREXIT ON FINANCIAL SYSTEM RESILIENCE

The UK's vote to leave the European Union has raised significant uncertainties around the future of the UK's financial services sector. In this section we consider the potential consequences for UK financial system resilience – and the key policy decisions that will shape these consequences.

The UK's vote to leave the European Union presents the biggest challenge to the financial services sector in decades. The UK is the key financial centre of the EU, and is highly integrated into the European financial system. As a member of the EU, the UK has full access to the single market – a market of over 500 million customers and an economy over five times bigger than the UK's. This has been key to London's role as a global financial centre. The UK government and the Bank of England have also been influential in shaping EU prudential regulation.

The form that Brexit takes could have significant consequences for the size, composition and activities of the financial services sector and, in turn, for financial system resilience.

Here we consider the impact of three possible Brexit scenarios in the context of our financial system resilience framework, drawing on evidence from our expert interviews: a 'hard Brexit' scenario, a bespoke agreement and a 'soft Brexit' scenario. We find that while the 'soft Brexit' scenario is likely to substantially maintain the status quo, both of the other scenarios have significant consequences for financial system resilience.

But we also find that the most important question is what kind of economy the government overseeing Brexit wants to build. The consequences of Brexit for UK financial system resilience will depend heavily on the domestic policy decisions that accompany them. Put simply, the UK could face a fork in the road: either building a financial sector that is less complex, less risky and more focused on serving the UK real economy, or 'doubling down' on our existing liberal economic model – effectively turning ourselves into the tax haven of Europe.

3.1 SCENARIO 1: HARD BREXIT

The scenario
The UK cuts all ties with the European Union and fails to negotiate a new trade arrangement in the two-year time period, therefore defaulting to World Trade Organisation rules. The UK also fails to agree a "regulatory equivalence" regime with the EU for financial services, therefore losing all previously held passporting rights (see Box 2).

Potential impacts on financial system resilience
Under a hard Brexit it is likely that some large, shareholder-owned banks may move some operations out of the UK to ensure that they can continue to serve the EU market. This may have the effect of reducing **concentration**, although this would come at the expense of a potentially disruptive transition which may pose risks to financial stability. Operations at risk are mainly wholesale banking activities – retail activities are less likely to be affected. The impact on **diversity**, as measured by the proportion of retail deposits controlled by non-shareholder banks, is therefore less clear.

Some interviewees pointed out that the challenging economic environment created by a hard Brexit may make it harder or more expensive for smaller 'challenger' banks to raise capital and compete effectively with the larger incumbent banks. Meanwhile, loss of profits from wholesale activities may lead the large shareholder banks to compete more aggressively in the domestic retail banking market. These factors could pull in the opposite direction and cause greater **concentration** and less **diversity**.

BOX 2: 'PASSPORTING' AND REGULATORY EQUIVALENCE

The EU's financial services 'passport' is a shorthand term for a collection of measures in EU secondary law which minimise regulatory, operational and legal barriers that would otherwise arise. It provides for free movement of financial services across the Single Market, but is only available to firms authorised in the EU or EEA (European Economic Area) countries. International firms need to establish a subsidiary in at least one member state in order to benefit from the passport. The passport works because all EEA countries, including the UK, adhere to the same regulatory standards.

The passport means that financial services firms authorised in the UK can provide their services across the EU, without the need for further authorisations. It also means that the main regulatory responsibility for UK firms' activities across the EU/EEA remains with UK regulators rather than moving to other EU/EEA regulators[56].

In some areas the EU has 'equivalence regimes' to allow financial services firms outside the EU to trade with the Single Market in a way that is similar to the EU financial services passport. It does this through assessing whether a country's regulatory regime is equivalent to EU rules in the area. There are currently nearly 40 equivalence requirements in place covering areas such as investment banking and derivatives clearing. But some EU regulations offer no equivalence at all. The largest gap is the Capital Requirements Directive (CRD IV) – which covers a number of key wholesale and retail banking services such as deposit-taking, commercial lending, and payment services[57].

The requirements that come with equivalence arrangements can be significant, and many are yet to be tested in practice. For example, countries are required to keep their financial regulation similar to the EU's, despite not having a say over the substance of the regulation. In addition, equivalence is granted at the discretion of the European Commission, and can easily be revoked at just 30 days' notice.

Most interviewees agreed that **interconnectedness** via intra-financial lending and exposure to the international financial system would likely decrease in the event of a hard Brexit, due to diminished links with the European financial system. While this may help improve resilience in a narrow sense, some expressed a view that this could be offset if the UK becomes more interconnected with financial systems in riskier emerging markets.

Loss of continental European business under a hard Brexit would reduce the **size of the UK financial system**, and bank assets relative to GDP would likely fall as a result of some banks shifting some operations abroad. One interviewee urged caution when comparing the size of the financial sector relative to GDP in the years before and after the 2008 financial crisis, as prior to 2008 governments and central banks were better able to support large financial sectors. Another expressed a view that the UK's financial system is currently substantially larger than the point at which the IMF has found that "too much finance" begins to hurt economies rather than helping them,[58] therefore a slight reduction in the size of the financial sector may not adversely affect the UK's long-term economic performance. However, this would need to be accompanied by a coherent industrial strategy to rebalance the UK domestic economy away from relying so heavily on financial services.

In terms of **asset composition**, a hard Brexit would likely see intra-financial lending reduce more than business and consumption lending, meaning that the proportion of bank balance sheets relating to real economy assets may increase. But the impact on the supply of credit to the real economy depends on how banks choose to respond. One possibility is that reduced wholesale activities may lead large shareholder banks to allocate more of their capital towards domestic assets in order to find new sources of profit.

Whether this is positive for resilience or not depends on whether any new domestic lending focuses on financial or property asset transactions, or lending that stimulates new productive activity, e.g. lending to SMEs. Some interviewees expressed a view that structural and regulatory reforms are needed to reduce reliance on large universal banks and refocus the UK financial system towards the domestic real economy. Without this, it is likely that large banks will continue to allocate capital towards intra-financial and property lending, which would have a negative impact on resilience.

In other words, a hard Brexit might 'level down' some forms of risky lending associated with the European market, but without domestic reforms to 'level up' more socially useful forms of banking, this spare credit could simply end up being pumped into the UK housing market or chasing other potentially destabilising forms of speculative activity.

Asset composition may also be affected by the macroeconomic impact of a hard Brexit. Some interviewees said that the economic shock of a hard Brexit may reduce demand for loans and, in the worst case scenario, trigger a credit crunch, which would have a negative impact on financial system resilience.

With regards to **liability composition**, a hard Brexit may see cross-border wholesale funding drying up or becoming more expensive, forcing banks to increase reliance on deposit funding. Taken in isolation, less reliance on risky wholesale funding would be positive for resilience. This could be somewhat offset if banks seek wholesale funding from other non-European markets, which may be more risky.

The impact of a hard Brexit on **complexity** and **transparency** is more uncertain. While some interviewees thought that a hard Brexit would force banks to return to a more traditional form of banking, others expressed a view that reduced demand for financial services in London may encourage firms to seek new ways of generating fees, for example through more exotic types of securitisation.

As discussed in the previous section, in recent years the European Commission has sought to revive securitisation markets in Europe through its 'simple, transparent and standardised' (STS) securitisation framework which forms a key building block of the Capital Markets Union (CMU). The UK has been one of the leading proponents of the revival of securitisation, with Commissioner Jonathan Hill overseeing the new proposals, and the UK government and Bank of England endorsing them.

The impact of a hard Brexit on complexity and transparency depends on whether the UK government chooses to adopt the same standards as the EU, or take a more liberal approach towards complex financial instruments. Given the UK's prominent role in promoting the revival of securitisation at EU level, and indications from government ministers that a hard Brexit would leave the UK free to undercut EU regulation, it is possible that the UK may decide to allow more complex and risky forms of securitisation than the EU. This could have dangerous consequences for financial system resilience.

With regards to **leverage**, bank capital requirements are set internationally by the Basel Committee on Banking Supervision (BCBS), and could only get materially worse if the UK was to depart from internationally agreed standards.

Two sub-scenarios: tax haven Britain vs finance as servant

The long-term impact of a hard Brexit on financial system resilience will be shaped most decisively by how the UK government responds to the negotiations with the EU. One potential scenario is that the government responds by rolling back financial regulation in a bid to retain the attractiveness of London as a financial centre and stem the outflow of business to elsewhere in Europe.

In the absence of single market membership or an equivalence agreement with the EU, the UK government would be free to depart from European regulatory standards. Embarking on a deregulatory path would likely benefit incumbent large banks, potentially increasing

concentration and reducing **diversity**. It would also create more risky global linkages which could worsen **interconnectedness**, and encourage the proliferation of complex and opaque financial instruments, which would increase **complexity** and reduce **transparency**. The government could also seek to loosen capital requirements in an attempt to persuade banks to locate in the UK, which would increase **leverage** (although the extent to which this is possible is likely to be limited by international standards).

Overall, pursuing an aggressive deregulatory path risks repeating the mistakes of the past, leaving the UK even more vulnerable to another financial crisis.

Another scenario is that the UK government takes steps to refocus the UK's banking system towards supporting the domestic real economy. This could be achieved by promoting new and existing institutions with a local and regional focus and strengthening regulation to encourage productive lending. For example, the government could break up the Royal Bank of Scotland into regional banks focused on real economy lending, or create a sizeable national investment bank that would provide patient, long-term finance for strategic investment in the real economy[59].

This would help improve financial system resilience by improving **diversity** and **concentration**, **asset and liability composition**, **complexity** and **transparency**. Many interviewees supported this approach, but it was acknowledged that it would require a substantial shift away from the government's current direction of travel.

The impact of a hard Brexit on the resilience of the UK financial system could also be affected by the actions of the EU. One interviewee noted the possibility that the EU introduces a financial transactions tax (FTT) while the UK does not, which could lead to money flowing through the UK to circumvent the tax. This has the potential to affect **interconnectedness**, **asset composition**, **financial system size** and **complexity and transparency** in a way that would be detrimental to the resilience of the UK financial system.

3.2 SCENARIO 2: BASE CASE (BESPOKE AGREEMENT)

The scenario

The UK leaves the single market and the customs union, thus losing automatic passporting rights, but concludes a bespoke agreement with the EU that delivers mutual market access, including transitional arrangements to allow time to implement the new relationship. This agreement would include a framework for the mutual recognition of regulatory regimes, building on the existing "equivalence" regimes, and continued close co-operation between the Financial Conduct Authority (FCA)/ Prudential Regulation Authority (PRA), the European Supervisory Authorities, the Bank of England and the ECB. It would include the ability to market and provide agreed services to existing and new customers as applicable, transact business with them, and manage their money efficiently. It would also include non-discriminatory access to market infrastructure and free cross-border data flows.

Potential impacts on financial system resilience

By agreeing to an equivalence arrangement with the EU, the UK would have to adhere to the same regulatory standards as the EU. While this may secure mutual market access, it is likely that some banks will conclude that the vulnerability of the equivalence arrangement to political pressures does not provide a solid foundation for long-term investment plans. As a result, it is possible that some of the large, shareholder-owned banks may still move some wholesale operations out of the UK to ensure that they can continue to serve the EU market, albeit to a lesser extent than under a hard Brexit. As with a hard Brexit, this may have the effect of reducing **concentration**, but may come at the expense of a disruptive transition which may pose risks to financial stability.

Most interviewees agreed that **interconnectedness** would still decrease under a bespoke agreement, but to a lesser extent than under a hard Brexit. Mutual recognition of regulatory regimes and close co-operation between the UK and European regulatory authorities would likely mean that intra-financial lending and exposure to the international financial system would suffer a less dramatic reduction. This would in turn mean that changes to the **size of the UK financial system** and to **asset composition** would likely be less dramatic than under a hard Brexit, although some large institutions would likely still move some wholesale operations out of the UK.

Whether or not this is positive for resilience or not depends on whether banks increase lending towards domestic productive activity. As with a hard Brexit, some interviewees said that structural and regulatory reforms were needed to refocus the UK financial system towards the domestic real economy. Without any proactive intervention, a bespoke agreement would have a long-term economic cost versus maintaining the status quo which may reduce demand for productive loans, with negative impacts on financial system resilience.

With regards to **liability composition**, it is likely that a bespoke agreement would aim to prevent wholesale funding from drying up or becoming more expensive. However, most interviewees agreed that it is likely that leaving the single market would cause some disruption to wholesale funding markets, though there were competing views on how significant this would be.

Because the UK would have to adhere to the same regulatory standards as the EU, a bespoke deal is likely to have little impact on **complexity** and **transparency** versus the status quo. The UK would be subject to the 'simple, transparent and standardised' (STS) securitisation framework which is currently being approved by the European Parliament. Similarly, the UK would have to comply with the EU Capital Requirements Directive (CRD) IV, which stipulates a minimum leverage ratio of 3% of total managed assets, meaning that **leverage** is also likely to be unaffected.

As with a hard Brexit, the long-term impact of a bespoke agreement on financial system resilience will be shaped most decisively by how the UK government responds to the negotiations with the EU. By agreeing to an equivalence arrangement, the UK government would have limited ability to roll back financial regulation, as it would have to adhere to the same regulatory standards as the EU. However, it could still take steps to improve resilience by refocusing the UK's banking system towards supporting the domestic real economy, for example by promoting new and existing stakeholder banking institutions, so long as this was done within European regulatory and state aid constraints.

3.3 SCENARIO 3: SOFT BREXIT

The scenario
The UK stays in the single market under membership of the European Economic Area (EEA) or similar arrangement and thus retains all present passporting rights.

Potential impacts on financial system resilience
There was broad agreement among interviewees that staying in the single market would not have a major impact on any of the resilience factors, as it would enable the status quo arrangements to continue, all else being equal. The retention of passporting rights would likely mean that few, if any, financial institutions would need to relocate operations, and the macroeconomic implications of leaving the EU would be far less significant. The UK would have to continue adhering to EU regulation, and would therefore be unable to pursue a deregulatory agenda.

However, the government could still take steps to improve resilience by refocusing the UK's banking system towards supporting the domestic real economy, for example, by promoting new and existing stakeholder banking institutions, so long as this was done within European regulatory and state aid constraints.

CONCLUSION AND POLICY IMPLICATIONS

To build a more resilient financial system, we recommend that policymakers focus on structural and regulatory reforms to promote banking diversity and refocus the UK financial system towards the domestic real economy.

While post-crisis reforms have helped improve the resilience of the UK's financial system in recent years, there remains a very large gap in comparison to other advanced economies on many resilience factors. With Brexit upon us, there is a risk that the limited progress made is now reversed.

But this is not inevitable. Our analysis suggests that a huge amount rests on the kind of post-Brexit economy the UK government's chooses to build. If we leave the single market – as the government is currently committed to doing – most realistic Brexit scenarios involve some shrinking of the financial sector as complex wholesale activities shift overseas.

This leaves the UK with a stark choice: do we seek to replace the lost business by lowering standards and attracting even riskier and more dangerous financial activity? Or do we seek to refocus our financial system on serving the domestic economy, rather than relying on it to generate prosperity as a sector in its own right – a strategy whose failure arguably helped to precipitate the Brexit vote in the first place following the financial crisis and years of falling real incomes?

Both the Chancellor and the Prime Minister have repeatedly suggested that the UK is willing to 'change its economic model' and embark on a deregulatory path if it doesn't get its way in the negotiations with the EU, and it has been widely reported that bank executives and lobbyists are working behind the scenes to try to turn Brexit to their advantage[60].

We were promised that Brexit would allow us to 'take back control', but a move towards financial deregulation would do the opposite. It would lock us into a future of low regulatory standards designed to serve the interests of international finance, and

would be a clear sign that lessons from the financial crisis have not been learned. It would create a much riskier and less resilient financial system, placing taxpayers on the hook.

As the negotiations between the UK and the EU begin, it is more urgent than ever that regulation does not get remoulded around the demands of bank lobbyists. At the same time, we need to begin the process of transforming our financial system into one that serves the long-term interests of society. We recommend that:

- **A race to the bottom on financial regulation should be avoided at all costs.** Underpinning the threat of deregulation is an often heard but misguided belief that regulation somehow limits banks' ability to lend which, in turn, hurts the economy. This is a myth: far from being bad for the economy, measures to promote financial stability are prerequisites for long-term sustainable growth. In practice, there is no trade-off between financial stability and economic performance. Slashing regulation in a bid to curry favour with the City of London will create a less resilient financial system and jeopardise the long-term social and economic health of the UK.

- **The Bank of England should strengthen prudential and macroprudential regulation to mitigate risks posed by Brexit.** For example, the Financial Policy Committee should increase the levels of capital that big, systemically risky banks are required to hold. John Vickers, the architect of the ringfencing regime to separate retail from investment banking, has recommended introducing a 3% systemic risk buffer for all major ring-fenced banks to provide extra protection against future market turbulence[61]. More broadly, the Bank of England should look beyond bank capital and consider other factors relating to the risks posed by the financial sector itself when assessing financial system resilience, including what is actually on banks' balance sheets (asset and liability composition), the topography of the system as a whole (interconnectedness, transparency and complexity) and overall financial system size. One option to improve asset composition would be to boost lending to non-financial firms by developing forms of formal or informal 'credit guidance' in co-ordination with the UK's new industrial strategy[62].

- **The Treasury should urgently review options for addressing the lack of diversity in the UK banking system, and for promoting a more vibrant banking sector focused on lending to the domestic real economy.** This should include examination of the full range of options for the public's majority stake in the Royal Bank of Scotland (RBS), including transforming it into a network of local or regional retail banks with a public interest mandate to serve their local area, lend to small businesses and provide universal access to banking services[63]. The Treasury should also examine policy options for establishing new sources of patient, long-term finance for strategic investment, such as establishing a new national investment bank[64].

- **Competition policy in banking should focus on diversity of provision, not just market share.** In its recent investigation into the retail banking market the Competition and Markets Authority (CMA) focused on demand-side solutions such as increasing customer engagement and making

better information available to customers. While these may help assist customers once they have chosen to engage, they will do little to affect customers' underlying motives to engage or to switch in the first place. With the UK market dominated by a small number of large, universal, shareholder-owned banks who all behave in similar ways (and who have been hit by repeated scandals), it is hardly surprising that customers feel little motivation to switch between them. Genuine competition and choice requires a diversity of providers for consumers to choose from, rather than simply a larger number of major players following the same business model. Competition policy in banking should be updated to focus on diversity of provision, not just market share.

Leaving the EU entails a once-in-a-generation reshaping of our laws, relationships and economy. When it comes to finance, whether this change is for the better or the worse still hangs in the balance. But one thing is clear: regardless of the final outcome of the Brexit negotiations, the process of reshaping our financial system to better serve the domestic economy can, and should, start now.

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Robert Jenkins,
Senior Fellow at Better Markets and former member of the Bank of England Financial Policy Committee

Christian Stiefmüller,
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