BANK OF ENGLAND

Speech

‘Debt Strikes Back’ or ‘The Return of the Regulator’?

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Monday 24 July 2017

I am grateful to David Baumslag, Jonathan Bridges, Liam Kirwin, Iren Levina, Vas Madouros, David Seaward, Sagar Shah, Gavin Wallis and Mina Yau for their help in preparing these remarks.

It is an honour to be invited to contribute to this lecture series here at the Institute for Risk and Uncertainty.

Thinking about risk sometimes has a more derogatory description: worrying.

And worrying has a bad name for itself as an unproductive, possibly harmful, activity.

But intelligent worry – worry about what could go wrong and action to deal with it before it does – is central to the aim that this Institute and the Bank of England share: creating a safer world.

So in much the same way that Star Wars fans must enjoy conventions that bring together like-minded people, whose interest is not always appreciated by others, it is a pleasure to be here with fellow intelligent worriers. [1]

With household debt at high levels and after a period in which consumer debt has increased very rapidly, my theme this evening draws inspiration from the Star Wars films.

I'll ask whether the economic galaxy is destined to be upended as Debt Strikes Back, or whether there is New Hope and the galaxy can be a safer place thanks to the Return of the Regulator.

My conclusion will not surprise you. But before we get there, I want to take you back to a galaxy that may now seem far, far, away...

Crisis and recovery

Ten years ago, an unsafe financial system caused financial crisis and economic disaster.

The Western banking system had expanded rapidly. Banks - and their regulators - had been blind to the basic fact that more debt meant greater risk of loss.

After years of stability and good performance, few had considered what could go wrong.
A false sense of security grew up. At Royal Bank of Scotland – the most egregious case – that illusion meant the bank could be toppled by losses of less than one per cent of its assets.

And so, come the reckoning, the Western banking system just wasn't able to absorb the losses it faced. In fact, it was structured in complex ways that magnified those loan losses.

[1] This phrase was used by my colleague, Martin Taylor, in evidence to the Treasury Committee of the House of Commons: "Being an FPC member is one of those jobs, more common nowadays than before, where one is charged with worrying. I find this comes quite naturally – it's worrying intelligently that's hard."

Complacency gave way to crisis.

Confidence in the banking system was destroyed. Although public bailouts – totalling $500bn across the G10 – shored it up, banks took emergency measures to protect themselves.

The supply of loans collapsed.

Companies and households were unable to refinance their debts.

The result was economic disaster. In this country alone, close to a million jobs were lost and more than 100,000 businesses failed.

Too much debt made the financial system, and the economy, unsafe. Too many people paid the price when those risks materialised.

Since then there has been a programme of repair and reform.

Britain's households have paid down debt.

The financial system has been made safer, simpler and fairer.[2]

Banks, in particular, are much stronger. British banks have a capital base – their own shareholders' money – that is more than 3 times stronger than it was ten years ago.

They can absorb losses now that would have completely wiped them out ten years ago.

During the repair of banks, there were suggestions that the repairs would hold back lending to the economy. That's a bit like arguing that stopping to repair a punctured tyre holds back your progress towards your destination.

Only once the puncture in the banking system was repaired was it able to get back to serving the economy.

With stronger banks, credit is flowing again, helping businesses with new ideas and families looking for a home.

In the past 2 years, lending by banks has grown in line with the economy: credit supply looks neither too cold - as it was after the crisis - nor too hot - as it was in the build-up to the crisis (Chart 1).

[2] Carney (2017) 'FSB Chair letter to G20 Leaders – building a safer, simpler and fairer financial system', 3 July. http://www.fsb.org/wp-content/uploads/P030717-1.pdf

Sadly we can never declare 'mission accomplished'.

Vigilance is needed because too much credit – the flipside of which is of course too much debt – poses economic dangers. The financial system has a habit of creating too much of it.

And even when the overall temperature is just right, there can be pockets of debt that are too hot.

The economic dangers of debt

Household debt – like most things that are good in moderation – can be dangerous in excess.

Dangerous to borrowers, lenders and, most importantly from our perspective, everyone else in the economy.

Let's begin with mortgage debt. It doesn't take a genius to know that households with big mortgages are more vulnerable to the unexpected.

In Britain, they do everything they can to pay their mortgage debts through thick and thin. That is why banks did not take large losses on mortgages in the crisis. But that does not mean there is no risk to the wider economy.

Far from it. In the face of unexpected events, they cut back sharply on all other spending to keep paying the mortgage.[3]

Although no individual household can shape the wider economy, if large numbers feel forced to behave like this, they can affect everyone by making economic downturns deeper.

The evidence from the financial crisis is that households with big mortgages cut their spending six times more aggressively than households with no, or at least small, mortgages (Chart 2).

This effect of high mortgage debt on economic risks is reinforced by another. By making downturns deeper, high levels of mortgage debt raise the risk to banks of losses on all their non-mortgage loans, from company debts to credit cards.

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[3] Cunliffe, J. (2014) 'Momentum in the housing market: affordability, indebtedness and risks', remarks given at the Worshipful Company of International Bankers dinner, London, on 1 May 2014.
http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech725.pdf

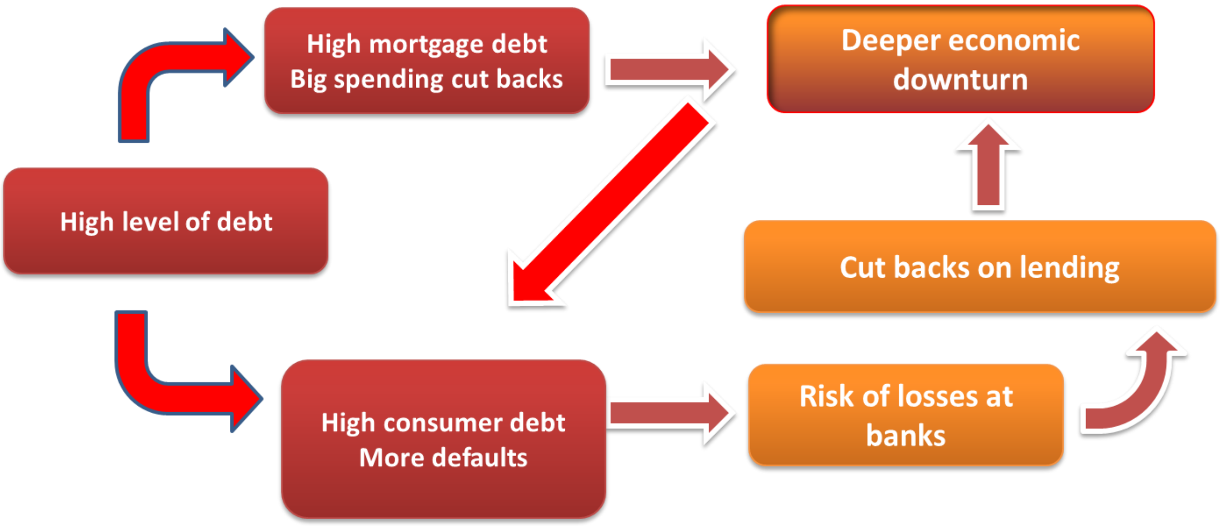
Without the strength to face those risks, banks are more vulnerable to the unexpected. When the unexpected happens, they do what they did in the financial crisis. They cut back their lending, making downturns even deeper.

Unlike mortgages, high levels of consumer debt are a danger to the wider economy primarily through this channel of losses to banks.

Borrowers are much more likely to default on their consumer debt than their mortgages and, of course, there is no security backing these credit card and personal loans.

Over the past 10 years, write-off rates on consumer credit by UK banks have been ten times higher than on mortgages (Chart 3). And those defaults are much more sensitive to economic conditions.

Widespread defaults can, by damaging the financial system, affect the wider economy.



These dangers of debt mean countries with more of it, and particularly those that have built up debt quickly, can have more vulnerable banks and deeper recessions (Chart 4).

In the jargon, more debt makes the distribution of economic risks skewed and ‘fat tailed’.

Work by teams at the Bank of England has looked back at how the distribution of economic risks was shifting through time as debt and financial risks ebbed and flowed in the past.

It shows an estimate of what, at each point in time, was the distribution of possible future paths of economic growth.

A pronounced downside skew to that distribution was developing from the early 2000s. By the time of the crisis, the probability of a fall in economic activity of more than 2% was about 1 in 5. That's five times more likely than normal (Chart 5).

The spiral of complacency

Why do these dangers arise? Why does the financial system lead the economy down a path that risks much deeper recessions?

All borrowers want to consider carefully their ability to make the payments they're signing up to, but no individual can be expected to take into account the spillover effect of their debt on the wider economy.

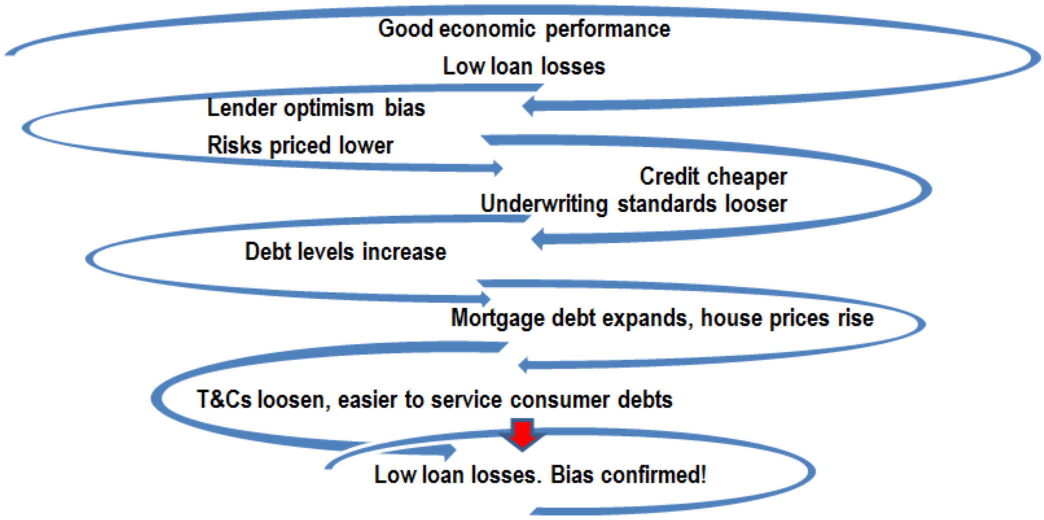
After all, no individual will really make a difference. These spillover effects are – in the language of economists – an 'externality'.

So lenders are the first line of defence against the wider economic risks of high debt levels.

An enlightened lender should factor in the risks of losses on the rest of their business from high levels of mortgage debt. And they should factor in the risks of losses from the consumer credit they've extended.

The emphasis there was on 'should'.

Because in reality, the opposite can happen; lenders can enter a spiral of complacency.



It begins with a period of good economic performance and low loan losses.

Lenders extrapolate that into the future, attributing success to skill rather than chance. [4]

Nowhere is this clearer than page 8 of the 2006 Annual Report of Northern Rock:

"The credit quality of our assets remains strong…The reason for this improvement is … because we have further improved our credit scoring …Our scorecards are highly predictive…which gives an early warning of potential default - so we are confident that the current historically low level of default will continue."

Within three years, the arrears rate on its mortgage book had increased ten-fold.

It is this complacency that prompts lenders to make credit cheaper. They think they need less compensation for risk. Interest rates on their loans come down and terms become looser.

As it becomes cheaper, credit is taken up more widely.

As mortgage debt expands, house prices rise. Lenders think borrowers have more valuable houses against which to secure mortgages.

And as terms and conditions ease up, it becomes easier to service debts. More borrowers get access to consumer debt and make their repayments. Credit scores improve.

Lenders then think they've really cracked it. What Governor Carney has described as the four most expensive words in the English language start to be heard: "This Time Is Different".[5]

The spiral continues and borrowers rack up more and more debt. Lending standards can go quickly from responsible to reckless.

The sorry fact is that as lenders think the risks they face are falling, the risks they – and the wider economy – face are actually growing.

So the safety of the economy needs a further defence line beyond the lenders; a defence line that guards against this spiral of complacency, and that takes account of the full, collective effect of individual decisions on the wider economy.

That line is regulation – a defence line that was, frankly, missing in action in the run-up to the financial crisis.

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[4] This is a form of the 'optimism bias' documented by Daniel Kahneman. Kahneman, D (2012) 'Thinking, Fast and Slow' Penguin
[5] See Carney (2015) 'Three Truths for Finance', Remarks given at the Harvard Club UK Southwark Cathedral dinner, London. http://www.bankofengland.co.uk/publications/Pages/speeches/2015/843.aspx

It has been bolstered by two important institutional innovations since the crisis.

The first is the handing of responsibility for the supervision of individual banks and building societies to the Bank of England. That has meant a change in approach to supervision, to one that's prepared to make judgements about risks and act pre-emptively.

The second is the creation of a new authority in the Bank – the Financial Policy Committee – with new powers, tasked by Parliament with monitoring risks in the financial system that could cause problems for the wider economy and with doing something about them.

This has been christened 'macroprudential policy'. Macro because it's focussed on the wider economy; prudential because it's about protecting that wider economy from excesses in the financial system.

It is the institutional memory of the financial crisis; designed to hardwire into the system the vigilance to growing risks and the imagination of their consequences that were so dangerously absent before the crisis.

In short, someone has the job of worrying intelligently.

Is the same movie already playing again?

Now let's turn to the movies.

The old classic, Debt Strikes Back, in which the spiral of complacency upends the economic galaxy, has been seen many times before.

Some say the film is being screened again now; that households are simply addicted to debt and lenders are enabling that addiction.

Let's put things in context.

Since the financial crisis, helped by low interest rates, Britain's households have reduced their debt.

Nevertheless, we do still have a high level of household debt by historical and international standards.

As a share of incomes, consumer loans are actually smaller than they've tended to be in the past twenty years. It is mortgage debt that explains why debt levels are so high (chart 6).

Mortgage debt is high, in large part, because housing costs are high. Across the nation, the average house costs 4.5 times income (Chart 7).

An imbalance of demand for, and supply of, homes means it's not just expensive to buy a home, it's expensive to rent one too.

Those who rent in the private sector typically spend a third of their income on rent.[6] How much would a first time buyer be willing to pay for a house financed with a mortgage if the alternative is to spend a third of their income on rent?

The payments on a mortgage of 4 times income, paid off over 30 years, at an interest rate of 7% (rather higher than the prevailing Standard Variable Rate of about 4%) would cost the buyer a third of their income.[7]

With a 10% deposit, that means they'd be buying a home worth 4.5 times their income.

In short, the high levels of both mortgage debt and house prices in this country are a reflection of the high cost of housing in general. They are not the result of an addiction to debt or of reckless mortgage lending.[8]

So Britain doesn't have a high level of consumer debt. It doesn't have a debt-driven housing market. And as we've seen, it doesn't have rapid growth of credit overall.

Debt Strikes Back isn't yet screening again.

But there are pockets of the galaxy where it may be.

In the past year, outstanding car loans, credit card balances and personal loans have increased by 10%. Household incomes have risen by only 1.5% (Chart 8).

On credit cards and personal loans, terms and conditions have become easier. The average advertised length of 0% credit card balance transfers has doubled to close to 30 months (Chart 9).

Advertised interest rates on £10,000 personal loans have fallen from 8% to around 3.8% today, even though official interest rates have hardly changed (Chart 10).

These are all classic signs of lenders thinking the risks are lower.

[6] Department for Communities and Local Government (2017) 'English Housing Survey, Headline Report 2015-16' 2 March. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/595785/2015-16_EHS_Headline_Report.pdf

[7] The effective mortgage interest rate was last at 7% in 2001. Since then, a number of structural forces have probably pulled down the 'equilibrium' level of global and domestic real interest rates, making this a conservative calculation. See, for example, Vlieghe (2016) 'Debt, Demographics and the Distribution of Income' http://www.bankofengland.co.uk/publications/Pages/speeches/2016/872.aspx

[8] This point was made back in 2012 by my colleague Ben Broadbent. See Broadbent, B. (2012) 'Deleveraging', remarks given at Market News International, London, on 15 March 2012. http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2012/speech553.pdf

Lenders' own assessments of how risky these loans are, which they use to calculate how much capital they need to withstand losses, have fallen. Over the past two years, these 'risk weights' on credit card loans have fallen by 7% and those on other consumer loans by 15% (Chart 11).

This improved performance doesn't reflect a tightening up of lending standards. Credit scores of new borrowers are actually a little lower than they were 2 years ago (Chart 12). Instead, the improved performance of borrowers reflects the environment of continued employment growth and easier credit terms.

Lenders have been the lucky beneficiaries of the benign way the economy has evolved.

In expanding the supply of credit, they may be placing undue weight on the recent performance of credit cards and loans in benign conditions.

Car finance

Car finance has drawn particular attention, with growth of 15% in the past year and more than 100% in the past 4 years.

The way we buy cars has been transformed. Personal Contract Purchase (PCP) plans accounted for one in five new car purchases in 2006. Now they finance almost four in five (Chart 13).

At the aggregate level, PCP is the new cash purchase.

The Financial Conduct Authority, which regulates car finance, has expressed its concerns about a lack of transparency, potential conflicts of interest and irresponsible lending in parts of the car finance industry. It will explore and address those practices. [9]

The Bank of England's role is to manage any risks to the wider economy from this growth.

And those should be kept in perspective.

On average, those taking out PCP plans tend to have higher incomes and more savings than the population as a whole. 70% of PCP borrowers have above average income (Chart 14). Arrears rates on banks' car finance deals are lower than on other forms of consumer credit.

Moreover, the true burden of car finance to households overall is much lower than it seems at first glance.

[9] Financial Conduct Authority (2017) 'Business Plan 2017/18'. https://www.fca.org.uk/publication/business-plans/business-plan-2017-18.pdf

PCP plans commit the car buyer to around three years of fixed monthly payments with an option - not an obligation - to make a final balloon payment at the end of that period, to own the car outright (Chart 15).

If those optional balloon payments are excluded, this car finance debt accounts for only 1.2% of aggregate household income. Outstanding debt on other forms of consumer credit is ten times that.

The main risks are with the finance companies offering these contracts – typically arms of car manufacturers.

Unlike credit cards or personal loans, the lenders here are predominantly the finance arms of car companies. Their losses – however painful to them – pale in significance for the wider economy next to situations in which it's the banking system making the losses.

Nevertheless, the banks that are involved, as well as the shareholders of car companies, will want to think very carefully about the risks. While the borrower knows the monthly payments they are committing to, the lender does not know with any certainty whether they will make money on the deal.

The initial deposit and the monthly payments are set to cover the expected depreciation in the value of the car, plus a margin. The final balloon payment is therefore less than the expected value of the car at the end of the contract.

But if used car prices were to fall, the PCP purchaser has every incentive to give the car back after making the monthly payments, skipping the final balloon payment and instead buying the same car from a used car dealer for a lower price.

The finance company is left with a car that has depreciated by more than they've been paid.

Unlike a credit card or a personal loan, the borrower does not need to miss payments for the lender to lose money. The lender is taking a risk on the option it offers the borrower to buy the car at a fixed price three years down the road.

It's not difficult to see how this could be self-reinforcing. If used car prices were to fall, and PCP purchasers opt to give back their cars as their contracts expire, the supply of used cars onto the market could increase substantially, pushing prices down further.

The advent of PCP means – as the small print always says – the past may not be a good guide to the future.

Mortgages

Developments in mortgage debt are much less striking than those in consumer debt and car finance. Mortgage lending has increased by just 3 % over the past year.

But even here there are some tentative signs of boundaries being pushed.

Lenders have been reporting that their objectives to grow market share are pressing them to make credit more available (Chart 16). But of course, not everyone can gain market share.

Some of that fierce competition for business has shown up in reduced fees for those taking out a new mortgage. Nearly a half of mortgages were extended without fees in the first part of 2017 – four times the rate in 2011 (Chart 17).

Boundaries are being pushed in less benign ways too. Lending at higher loan to income multiples has edged up. Over the past 2 years the share of lending at loan to income multiples above 4 has increased from 19% to 26% (Chart 18).

In part this reflects a lengthening of mortgage loan terms. In the past 2 years the proportion of new mortgages with terms of 30 years or more has risen to more than a third of all new mortgages. That lowers initial monthly payments on a given mortgage but means the debt hangs around for longer, in some cases beyond possible retirement ages.[10]

The Return of the Regulator[11]

Drawing it all together we have: signs of complacency emerging in credit cards and personal loans; a risk that the past may not be a good guide to the future in used car prices; and some tentative pushing of mortgage lending standards.

Within the overall picture of credit growing in line with the economy, a pocket of risk has emerged.

Lenders have not entered, but they may be dicing with, the spiral of complacency. The trailers to the movie have started. The question is: which one are we going to watch?

Are we to endure another re-run of Debt Strikes Back or can we instead enjoy a new – and altogether more uplifting – movie: the Return of the Regulator?

[10] Woods, S. (2017) 'Looking both ways', remarks prepared for the May 2017 Building Society Association Annual Conference, published 10 July 2017. http://www.bankofengland.co.uk/publications/Documents/speeches/2017/speech988.pdf
[11] 'The Return of the Regulator' here is not a reference to the west coast gangsta album, released in December 2001, by Warren G.

We're using our powers – which, alas, don't extend those of Jedis – to ensure it's the latter.

We are putting defence lines into the economy. Lines that guard against the spiral of complacency by lenders. There are three.

The first is **pro-active supervision of the banks and building societies** to avoid the spiral of complacency.

Banks and building societies regulated by the Bank of England account for 80% of credit card and personal loan credit and 40% of car finance.

We have asked the boards of all lenders to prove that they have safeguards against entering the spiral;

Safeguards against being unduly influenced by current good performance;

Safeguards to ensure rising levels of debt are taken account of when they assess whether a borrower can repay;

And safeguards against assuming the used car market will behave as it did in the past.

The second defence line is regular **'stress-testing' of lenders** to make sure they have the strength to deal with very severe recessions without cutting back their lending.

These tests ask what would happen to lenders' balance sheets in a very severe recession in the UK and the rest of the world, coupled with market turmoil and falling property prices.

The tests are tough and they get tougher as the actual economic situation gets better; as unemployment falls, house prices rise, and credit expands. So just when lenders might be thinking risks have fallen, they are faced with the need to pass tougher tests by getting stronger.

As the actual unemployment rate falls, the lenders have to be able to pass a test with a bigger rise in unemployment. And where debt levels rise, the test gets even more severe.

This means that as the risks to the economy grow, the tests get tougher for everyone. All banks need to strengthen their balance sheets – funding themselves with more capital – to pass the tests. And those banks that have taken on the most risk will need to do even more than others.

That concentrates the mind of the shareholders about any contribution their lending may be making to growing risks.

Most importantly, it means the financial system can absorb very severe economic shocks without cutting back on its lending, cutting off one of the channels by which debt affects the wider economy.

Last year's stress test showed the major banks make losses of £44bn; that's substantially more than their losses at the height of the financial crisis.

Even after those losses, the system would have a capital base more than twice as strong as it had before the financial crisis (Chart 19).

Losses on consumer debt were an important driver of the test results. 20% of their consumer loans went bad in the test, costing them £19bn, and adding to mortgage losses of £12bn (Chart 20).

Very sharp falls in used car prices would result in only small losses for the banking system. Banks haven't been the major players in this arena. Even allowing for the loans they've made to car finance companies as well as to car buyers, their exposures to the car market are just 1/5th of their credit card and personal loan books.

Having reviewed their practices, we know the banks' PCP deals tend to have a cushion between expected used car values and the final balloon payment. Even a 30% fall in used car prices, with all PCP contract cars handed back at the end of their term, would leave them with a loss of just £2bn.

Because they need to pass rigorous stress tests, the wider economy is being protected from the rapid growth of consumer debt. But it's important that this defence line keeps pace with the risks.

Lower interest income on their loans, more interest free balance transfers and less capital allocated to consumer debt, may mean banks may have become, at the margin, a little weaker.

And the rising level of consumer debt means it would be reasonable to expect greater losses on it in our future stress tests.

That might mean the system has a bit more difficulty passing future tests. If that were the case, a further strengthening of the defence line would be needed.

We have already, in recent months, taken steps to strengthen banks' defences against losses by raising the capital buffers they are required to hold on all their lending.[12]

[12] That was achieved by increasing the 'Countercyclical capital buffer' that banks must hold against their UK-related lending, from 0% to 0.5% of risk-weighted assets, and expect to raise it further, to 1%, in November.

And to make sure this defence line is kept robust in the face of rapid consumer credit growth, we are accelerating this year's test of banks' consumer credit loans. By September we will have assessed whether the rapid growth has created any small gap in the line.

If it has, we'll plug it.

The third of our three defence lines is **direct restrictions on high loan to income mortgage lending.**

Lenders should not extend more than 15% of their new loans at or above 4.5 times the borrower's income. And borrowers are subject to an affordability test that effectively varies that loan to income limit for their individual circumstances.[13]

A borrower with a short mortgage term or with lots of other spending commitments will effectively face a lower loan to income limit.

And borrowers using lenders with a high Standard Variable Rates will also face a lower LTI limit. These borrowers run the risk that, if they can't refinance their mortgage deal, they will be flipped into paying these higher rates.

These measures complement stress tests.

They're needed because, were we to rely on stress tests alone, we might end up with a resilient banking system, but wouldn't necessarily end up with a resilient economy. There would be no guarantee that we'd stop excessive mortgage lending.

So these direct measures contribute to the safety of lenders in a way that also addresses the direct risks that high levels of mortgage debt pose to the wider economy.

These defence lines may be starting to kick in.

Loan to income ratios on new mortgage lending are bunching up a little against our 4.5 limit.

The supply of consumer debt may be tightening up. Lenders are now reporting that credit scoring criteria are toughening up and interest free balance transfer periods are expected to be shortened (Chart 21).

The growth of car finance is slowing and new car registrations have fallen.
Will this hold the economy back?

[13] This borrower-specific Loan to income limit is the effective outcome of affordability tests for new borrowers. Those affordability tests specify that new borrowers must be able to afford the mortgage repayments if their mortgage rate, within the first five years of their contract, moves to their Standard Variable Rate plus 3%. For a typical borrower this caps loans at 4.5 times income.

The facts are that: the run-up in car spending has added only 0.6% to consumer spending; and the increase in consumer debt of all types is equivalent to only 1.5% of spending.

Moreover, it is not at all clear how any slowing in consumer credit will affect the consumer. 40% of households with consumer debt actually have savings bigger than their outstanding debt. Their spending is not constrained by their access to credit.

The far more important effect of these defence lines on the economy is that they help to avoid very bad outcomes in the future. Like a good insurance policy, any premium today is outweighed by the benefit if and when the unexpected happens.

The economic dangers of debt can be so costly that all else pales in comparison. As the credit card advert did not say: "A safer economy, priceless; for everything else, there's Mastercard".

Sit back and enjoy the movie

The defence lines we've put in place are the result of intelligent worry about what could go wrong; about the risk household debt poses to the economy, and about how lenders can be drawn into the spiral of complacency.

They don't eliminate the risks that borrowers and lenders take on when entering into a loan. All debt carries risk. Our role is not to protect individuals from their own actions, whether they are borrowers or shareholders in lenders like car companies or banks.

Our defence lines safeguard everyone else - the wider economy - from collateral damage.

They mean there's every prospect that we can make the economy a safer place than it has been in the past and that we can stop watching endless repeats of Debt Strikes Back.

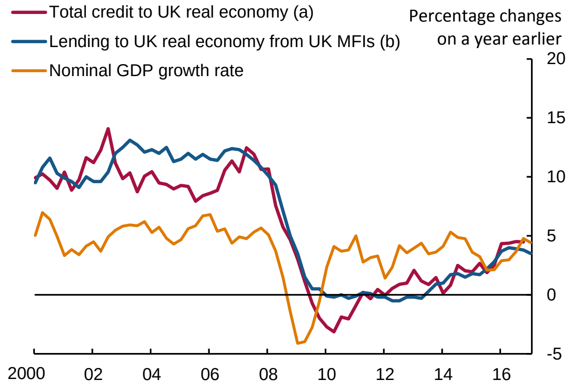
I look forward to collaborating with my fellow worriers here at the Institute in future.

And the Bank of England looks forward to hearing from the people of Liverpool at our Future Forum in November. We'll be engaging with local schools and the public to talk about – and crucially, listen to – how the financial world affects your life.

For now, settle back with your popcorn and watch the – oddly, not yet highly grossing – new blockbuster: the Return of the Regulator.

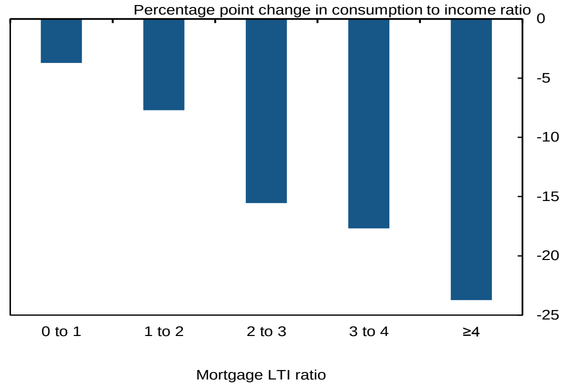
Annex

Chart 1. Annual growth in UK real economy credit and UK nominal GDP



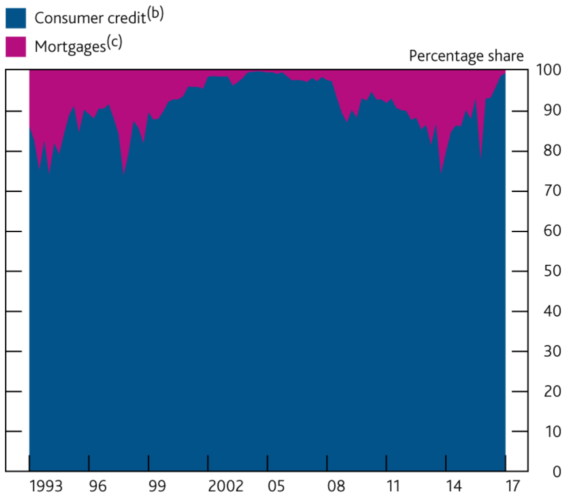
Sources: Bank of England, Office for National Statistics and Bank calculations.
(a) Twelve-month growth rate of nominal credit. Credit is defined here as debt claims on the UK private non-financial sector. This includes all liabilities of the household and not-for-profit sector and private non-financial corporations' (PNFCs) loans and debt securities excluding derivatives, direct investment loans and loans secured on dwellings.
(b) Sterling M4 lending by UK MFIs to the household sector and PNFCs. Data cover loans and MFIs' holdings of securities. Seasonally adjusted.

Chart 2. Change in consumption relative to income among mortgagors with different mortgage loan to income ratios between 2007 and 2009[(a)(b)(c)]



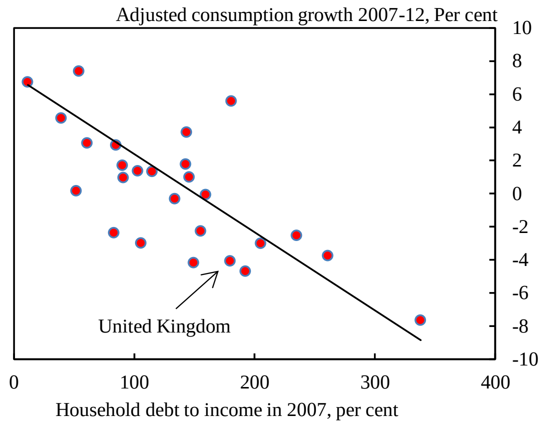
Sources: Living Costs and Food (LCF) Survey, ONS and Bank calculations.
(a) Change in average non-housing consumption as a share of average post-tax income (net of mortgage interest payments) among households in each mortgage LTI category between 2007 and 2009.
(b) LCF survey data scaled to match National Accounts (excluding imputed rental income, income received by pension funds on behalf of households and FISIM). LTI ratio is calculated using secured debt only as a proportion of gross income.
(c) Repeat cross-section methodology used, with no controls for other factors, or how households may have moved between LTI categories between 2007 and 2009.

Chart 3. UK banks' sterling write-offs on lending to individuals[(a)]



Sources: Bank of England and Bank calculations.
(a) Write-offs of sterling lending by UK MFIs to UK individuals. Write-offs are net of recoveries. Non seasonally adjusted.
(b) Consumer credit consists of credit card lending and other unsecured lending (other loans and advances) and excludes student loans.
(c) Lending secured on dwellings.

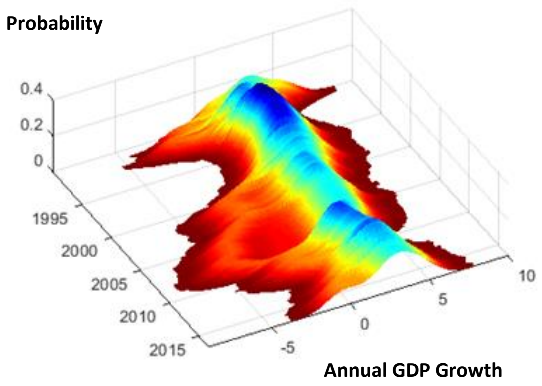
Chart 4. Household debt to income ratio and consumption growth over 2007-12[(a)]

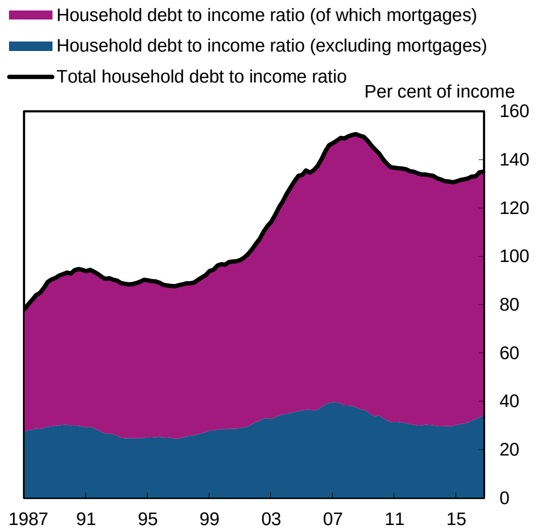


Sources: Flodén (2014) and OECD National Accounts.
(a) Change in consumption is adjusted for the pre-crisis change in total debt, the level of total debt and the current account balance. See Flodén, M. (2014), 'Did household debt matter in the Great Recession?', available at http://martinfloden.net/files/hhdebt_supplement_2014.pdf.

Chart 5. GDP distributions through time, conditional on composite indicators of indebtedness and asset prices

Chart 6. UK household indebtedness is high by historical standards [(a)(b)(c)(d)]

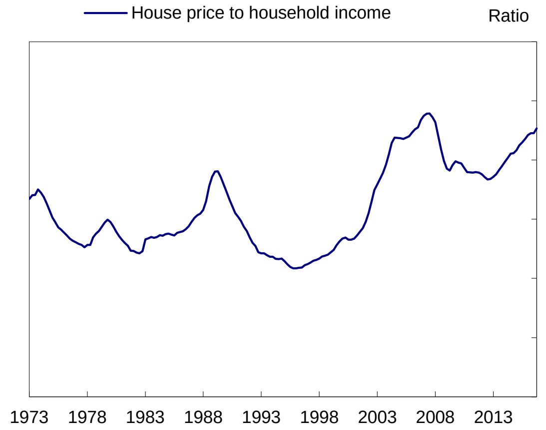




Sources: ONS and Bank of England.
(a) Distribution in each quarter is derived from quantile regressions of Real GDP growth on composite measures of real economy leverage and asset prices. Methodology follows quite closely that of Adrian et al (2016), 'Vulnerable Growth'.

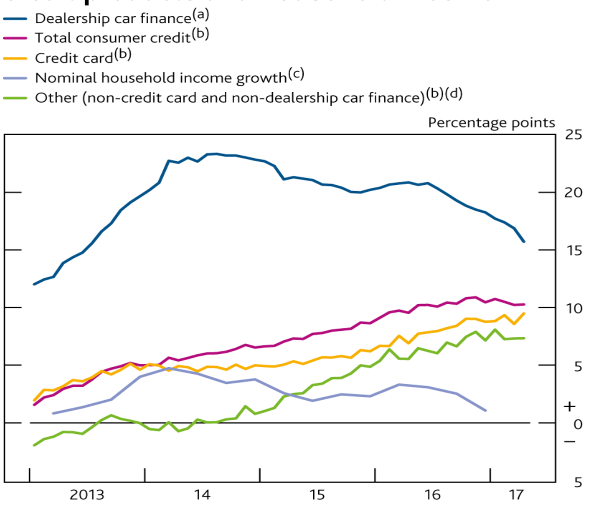
Sources: ONS and Bank calculations.
(a) Total household debt to income ratio is calculated as gross debt as a percentage of a four-quarter moving sum of gross disposable income of the UK household and non-profit sector. Includes all liabilities of the household sector except for unfunded pension liabilities and financial derivatives of the non-profit sector.
(b) Mortgage debt to income is calculated as total debt secured on dwellings as a percentage of a four-quarter moving sum of disposable income.
(c) Non-mortgage debt is the residual of mortgage debt subtracted from total debt.
(d) The household disposable income series is adjusted for FISIM and changes in pension entitlements.

Chart 7. UK house price to household income ratio[(a)(b)]



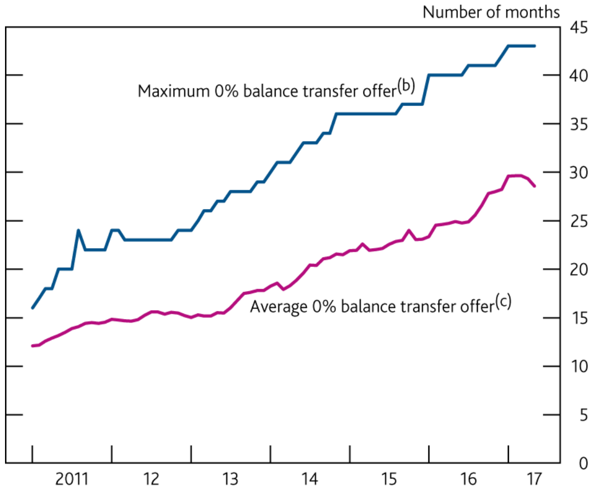
Sources: Department for Communities and Local Government, Halifax, Nationwide, ONS and Bank calculations.
(a) The ratio is calculated as average UK house price divided by the four-quarter moving sum of gross disposable income of the UK household and non-profit sector per household. Aggregate household disposable income is adjusted for financial intermediation services indirectly measured (FISIM) and changes in pension entitlements.
(b) House price is an average of the Halifax and Nationwide indices.

Chart 8. Annual growth rates of consumer credit products and household income



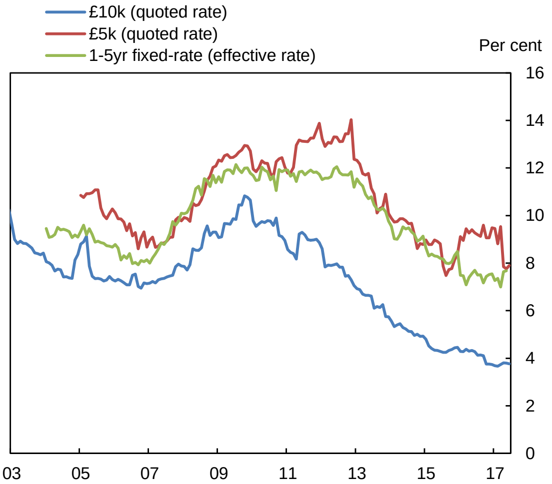
Sources: Bank of England, ONS and Bank calculations.
(a) Identified dealership car finance lending by UK monetary financial institutions (MFIs) and other lenders.
(b) Sterling net lending by UK MFIs and other lenders to UK individuals (excluding student loans). Non seasonally adjusted.
(c) Percentage change on a year earlier of quarterly nominal disposable household income. Seasonally adjusted.
(d) Other is estimated as total consumer credit lending minus dealership car finance and credit card lending.

Chart 9. Interest-free periods of credit card balance transfer offers [(a)]



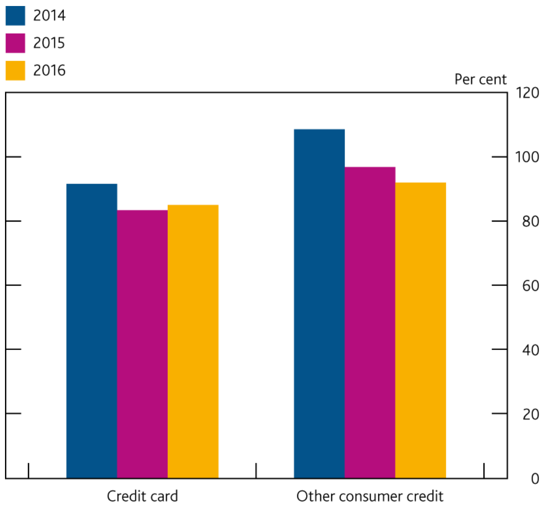
Sources: Moneyfacts and Bank calculations.
(a) Whole market end-month data, excluding values of zero and nil returns.
(b) The maximum 0% balance transfer term available across all lenders.
(c) The average 0% balance transfer term is the average of the maximum 0% balance transfer term available for each lender.

Chart 10. Interest rates on personal loans



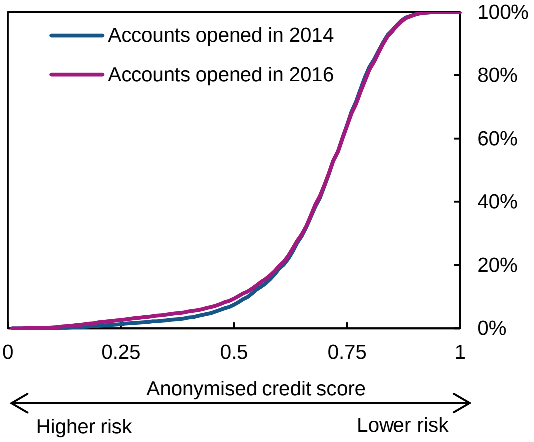
Source: Bank of England.

Chart 11. Major UK banks' average risk weights on consumer credit exposures [(a)]



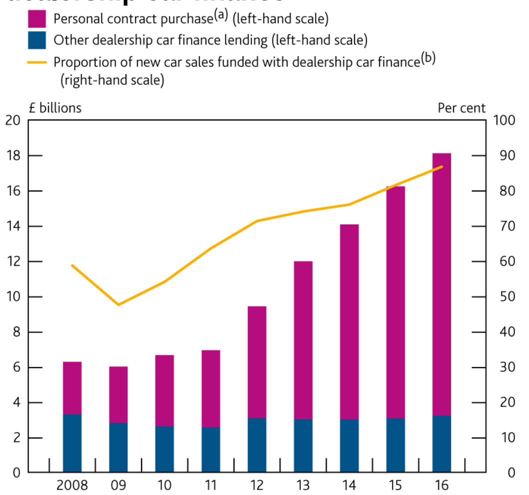
Source: Bank of England.
(a) Risk-weighted assets include both IRB and standardised exposures and are measured as a percentage of drawn balances for end-year periods 2014 to 2016.

Chart 12. Cumulative distribution of credit scores on the flow of new consumer credit lending



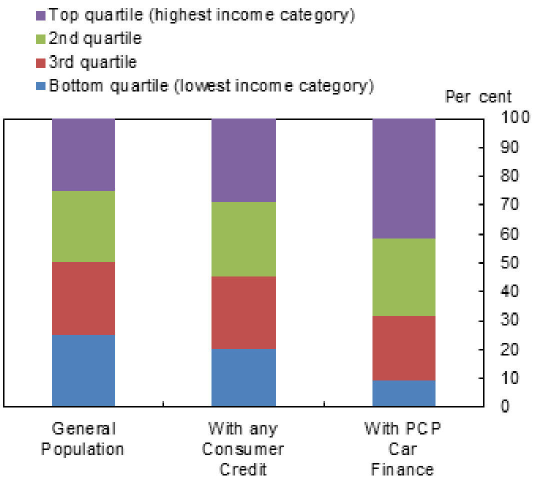
Source: FCA CRA data.
(a) Credit scores have been anonymised.
(b) Blue lines represent distribution of scores at January 2015 on accounts opened between November 2013 and November 2014, weighted by balances as at November 2014. Purple lines show distribution of scores at January 2017 on accounts opened between November 2015 and November 2016, weighted by balances at November 2016.

Chart 13. Value of annual dealership car finance for new car purchases, and proportion of private new car purchases funded with dealership car finance



Sources: Finance & Leasing Association, Society of Motor Manufacturers and Traders (SMMT) and Bank calculations.
(a) Annual sterling gross lending to individuals on dealership car finance for new car purchases provided by Finance & Leasing Association members, attributed to personal contract purchase (PCP).
(b) Annual transactions on dealership car finance for new car purchases provided by Finance & Leasing Association members, as a proportion of SMMT new car registrations.

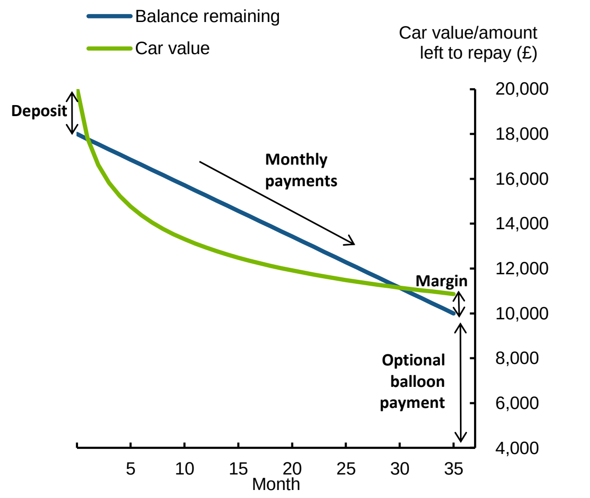
Chart 14. Income distribution of consumer credit borrowers relative to the general population



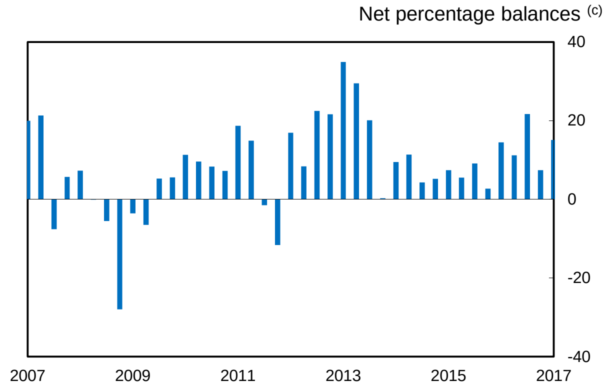
Sources: NMG Survey and Bank calculations.

Chart 15. Stylised PCP deal

Chart 16. Market share objectives as a factor



contributing to changes in secured credit availability[(a)(b)(c)]

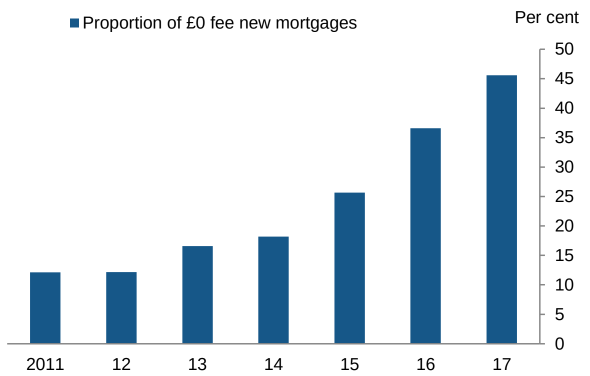


Source: Bank calculations.
Example shown:

- Car value at new is £20k. Car value depreciates 45% after 3 years with most of the depreciation occurring in the first year.
- Initial deposit of 10%.
- 36 month contract with monthly repayments of £229 per month.
- Optional balloon payment of £10k at the end of the contract.

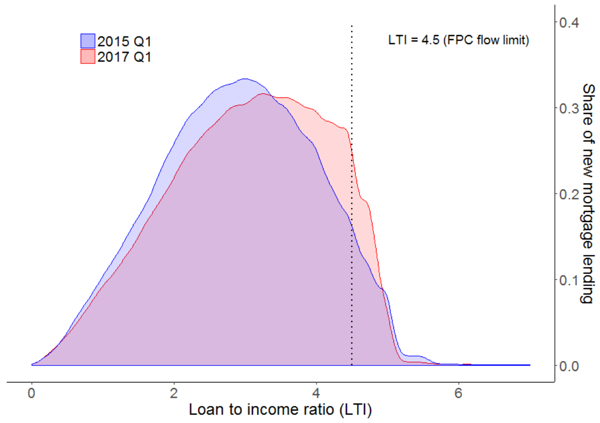
Source: Bank of England 2017 Q2 Credit Conditions Survey (CCS).
(a) A positive balance indicates that the changes in the factors described have served to increase credit availability.
(b) Question: ‘How have the following factors affected overall secured credit availability to households over the latest three months relative to the previous three months?’ The chart shows responses to the option 'market share objectives'.
(c) Net percentage balances are calculated by weighting together the responses of those lenders who answered the question by their market shares.

Chart 17. Proportion of new mortgages with no fees[(a)]



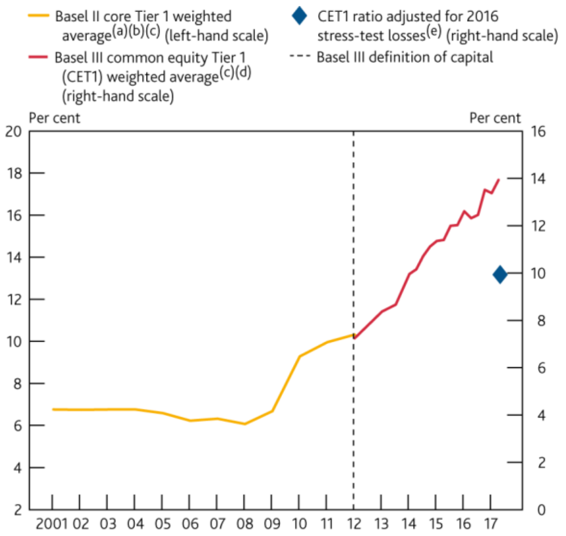
Sources: Moneyfacts and Bank calculations.
(a) The proportion of £0 fee products in each year is calculated relative to the total number of new mortgages offered during the year. The proportion in 2017 is calculated based on data from January to April 2017.

Chart 18. Loan to income distribution of new mortgage lending[(a)]



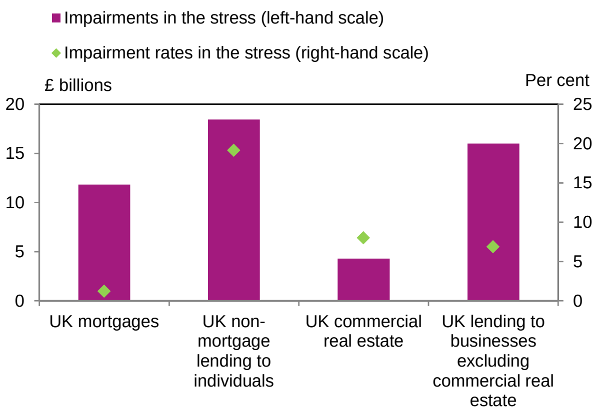
Sources: FCA Product Sales Database and Bank calculations.
(a) The Product Sales Database includes regulated mortgages only.

Chart 19. Major UK banks' capital ratios



Sources: PRA regulatory returns, published accounts and Bank calculations.
(a) Major UK banks' core Tier 1 capital as a percentage of their risk-weighted assets. Major UK banks are Banco Santander, Bank of Ireland, Barclays, Co-operative Banking Group, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, RBS and Virgin Money. Data exclude Northern Rock/Virgin Money from 2008.
(b) Between 2008 and 2011, the chart shows core Tier 1 ratios as published by banks, excluding hybrid capital instruments and making deductions from capital based on FSA definitions. Prior to 2008 that measure was not typically disclosed; the chart shows Bank calculations approximating it as previously published in the Report.
(c) Weighted by risk-weighted assets.
(d) From 2012, the 'Basel III common equity Tier 1 capital ratio' is calculated as common equity Tier 1 capital over risk-weighted assets, according to the CRD IV definition as implemented in the United Kingdom. The Basel III peer group includes Barclays, Co-operative Banking Group, HSBC, Lloyds Banking Group, Nationwide, RBS and Santander UK.
(e) CET1 ratio less the aggregate percentage point fall projected under the Bank of England's 2016 annual cyclical stress scenario for the six largest UK banks.

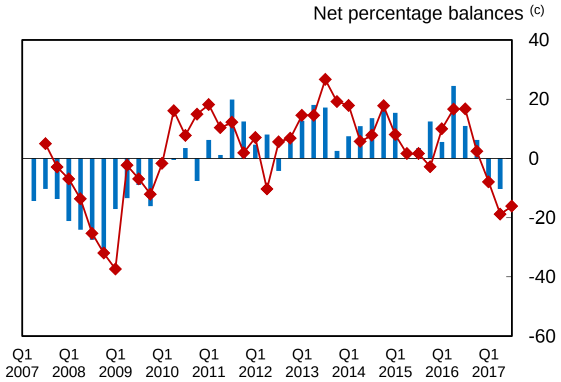
Chart 20. Aggregate cumulative UK impairment charges over the five years of the stress [(a)]



Sources: Participating banks' FDSF data submissions, Bank analysis and calculations.

(a) Cumulative impairment charge rates = (five-year total impairment charge) / (average gross on balance sheet exposure), where the denominator is a simple average of 2015, 2016, 2017, 2018, 2019 year-end positions.

Chart 21. Household unsecured credit availability[(a)(b)(c)]



Source: Bank of England 2017 Q2 Credit Conditions Survey (CCS). (a) Net percentage balances are calculated by weighting together the responses of those lenders who answered the question by their market shares. The blue bars show the responses over the previous three months. The red diamonds show the expectations over the next three months. Expectations balances have been moved forward one quarter so that they can be compared with the actual outturns in the following quarter.
(b) Question: 'How has the availability of unsecured credit provided to households changed?'
(c) A positive balance indicates that more unsecured credit is available.