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# CENTRAL BANKING FOR ALL:

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A MODEST PROPOSAL  
FOR RADICAL CHANGE

Nick Gruen  
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# FOREWORD

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*“The case for a radical transformation of the banking sector is strong.”*

Martin Wolf

**There’s widespread dissatisfaction with the state of banking in the UK. Customers have little choice. Getting a mortgage is hard. Reports of excessive bonuses or sluggish business lending fill the papers. And the spectre of another banking crisis looms over everything.**

But proposals to reform the system have so far been only incremental. Project Merlin, Funding for Lending and Help to Buy have tried to nudge the banks in the right direction. The Treasury wants to preserve the value of the taxpayer’s stake in Lloyds and RBS. Softly-softly is the watchword.

This report, by Australian economist Nick Gruen, proposes a more radical solution, one that would reshape the UK’s financial sector and deliver a far better deal for customers.

But while radical, it is based on one simple principle: that citizens should not get a worse deal from government than banks themselves do. Specifically, it proposes extending to all citizens a privilege that so far has only been accorded to banks: use of the Bank of England’s services.

Allowing people to open bank accounts paying Bank Rate, through an existing service like National Savings, and providing direct government guarantees for very safe mortgages may sound like a form of nationalisation. But Gruen argues that the Government already provides multibillion pound guarantees for these activities; this proposal is simply cutting out the middleman.

This will undoubtedly result in hardship for the big banks, who have come to rely on these virtually riskless lines of business. But this then raises a bigger question: why do we have banks – for their own sake, or for the sake of the wider economy?

We hope this report provides food for thought as the UK struggles to reform its banking sector.

**Stian Westlake**

Executive Director of Policy & Research

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# CENTRAL BANKING FOR ALL:

## A MODEST PROPOSAL FOR RADICAL CHANGE

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# OVERVIEW

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## Introduction

Since the global financial crisis, debate has raged about the appropriate architecture for the monetary and banking systems, yet opinion remains divided about what should be done, even amongst those sharing broad ideological sympathies. Thus, some support ‘narrow banking’ with strong separation between banks’ ‘utility’ role in facilitating payments and straightforward lending from more speculative activities.<sup>1</sup> Others, like Paul Krugman are not convinced that this solves our problems.

This paper takes a different tack, beginning by asking questions from further afield. We consider developments in other areas of the economy that have reflected the massive changes taking place in information technology (IT) – for banking is dominated by IT. We then ask what might be obstructing similar transformations in banking and what economic reform principles might guide our removal of those obstacles. This approach yields recommendations worth pursuing in their own right as economic reform. But it also moves us towards a stronger, lower cost financial system in which the respective roles of private and public endeavour are better crafted so as to play to their respective strengths.

This approach yields the system-wide benefit of making utility banking safer. It also provides a powerful new source of monetary stimulus to a depressed British macro-economy. And not only can this be done without expanding the budget deficit, it can in fact generate substantial government revenue which will rise with economic recovery.

## Competitive neutrality within a public-private partnership

New business models in IT, media, publishing, travel, entertainment and other industries have mostly come from the growth of new entrants, rather than the transformation of incumbents. Given that, it is a sobering thought that all the major British banks today are the merged descendants of the British banks of a century ago. New business models are emerging, but consigned to the world of ‘shadow banking,’ they are not given access to the central banking system and the liquidity it provides. Thus they are at a perpetual competitive disadvantage against the ‘official family’ of the banks and the central banking system.

Further, within the banking system, larger banks enjoy funding advantages arising from market expectations that their creditors will be bailed out if necessary. This resulting implicit subsidy involved in market perceptions that banks are ‘too-big-to-fail’ – running at tens of billions of pounds annually – confers such advantages on the largest five banks that competition from smaller banks cannot properly discipline the majors. But while the desirability of intensifying competition between banks is an important theme of this paper, it is ultimately secondary to a more fundamental point.

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Governments will always be at the apex of the banking system. Amongst other things they:

- Determine the unit of account.
- Maintain price stability.
- Sell sovereign debt which constitutes the bond market.
- Stabilise financial markets with regulation.
- Stabilise and improve the efficiency of banking by providing liquidity and exchange settlement services from the central bank.

Given this, the policy task is not to minimise the government's role any more than one would minimise the government's role in the provision of law enforcement as an end in itself. Indeed such aspirations helped generate the financial crisis that plunged us into our current woes. The central point of this paper is to argue that banking is a public-private partnership, the efficacy and efficiency of which can be dramatically improved by reconfiguring it to capture the new possibilities thrown up by the internet.

And that reconfiguration is not based on government subsidising innovation or second-guessing the desirable structure of the industry. It is based on extending access to central banking services as widely as practicable according to the time-honoured principles of competitive neutrality. For the advent of the internet enables us to make some core central banking services available not just to commercial banks or even to other non-bank providers of financial services but also to individuals and firms throughout the economy. In this regard, the proposals set out in this paper are quite conservative in principle. They are straight from the economic reform playbook. However, because our current banking system strays so far and so arbitrarily from competitive neutrality, the benefits our proposals can produce are large.

### **Our motivating ideas can be summarised as follows:**

Modern technology enables us to extend some core central banking services to individuals and businesses. Doing so would produce a banking system that better played to the respective strengths of public and private sectors. The changes would lower costs, and increase system stability and safety, whilst generating a substantial new source of government revenue as an engine of money creation alongside commercial banks.

### **Retail central banking services**

Central banking evolved at a time when service provision in local branches was integral to providing banking services. In that world it made sense for the central bank to 'wholesale' its core exchange settlement and liquidity support services to banks which would then 'retail' them to individuals and businesses via their branches, passbooks and cheque accounts. It was impracticable for central banks' services to be provided to individuals. Yet this was also an age in which books and tickets for travel and entertainment were distributed through local retail outlets. Today retailing is being reconfigured, much of it migrating to the web. Today, for a substantial proportion of banks' utility services involving lending, holding reserves and settling payments, the internet enables the central banking system to wholesale directly to consumers.<sup>2</sup>

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### Savings and payments

Just as banks have exchange settlement accounts with the central bank enabling risk free transfers between them, so all Britons who wanted them could easily be provided with similarly risk free means of transferring money between one another electronically. They already have access to government savings accounts at National Savings and Investments (NS&I), and it would be straightforward to enable payments to be made between those accounts. Because, according to the principles of competitive neutrality, governments should not be prevented from competing with non-government service providers, those accounts should be connected to the wider bank payments systems to enhance their convenience and so attractiveness as a vehicle for Britons to save and its government to borrow.

Further, the Bank of England pays banks Bank Rate on its reserves.<sup>3</sup> Likewise users of what is proposed here as 'retail central banking services' via NS&I or some similar agency would receive a similar interest rate on sight deposits less some fee or interest margin to fund the costs of running the system. Care should be taken to ensure that whoever is providing these services does not receive unfair advantages regarding taxes and government charges vis-à-vis private competitors. However, because we want to facilitate the market's search to minimise costs, this should not extend to preventing a government agency from providing products to the public on more attractive terms than others if that reflects their true costs of operation. Governments are likely to enjoy lower costs in the provision of some aspects of utility banking than private service providers. Indeed it is the central bank's lower cost of liquidity that has made it an integral part of banking.

### Lending against assets

In law, being unable to pay one's bills as they fall due constitutes insolvency. However, banks regularly become illiquid and so unable to meet their obligations as they fall due. In this situation, central banks supply liquidity against bank assets judged to be sound if carried to maturity. This distinction between liquidity and solvency courts moral hazard and systemic risk. Big banks are complex to regulate. But if liquidity and solvency can be distinguished on a bank balance sheet, they can also be distinguished for other assets, particularly simpler ones.

A universe of simple 'super-solvent' or 'super-collateralised' assets could be identified which involve negligible risk of loss if held to maturity. This paper proposes that prime mortgages with loan to valuation (LTV) ratios below – say – 60 per cent meet this criterion, though the line between safe and super-safe assets might vary through the cycle and by geography as occurs now in the commercial market. Be that as it may, such assets are immensely safe, requiring both falls in property prices of greater than 40 per cent and some loss of income from the borrower to generate any risk of loss. One could do the same with mortgages against commercial property, though the loan to valuation ratios would generally be lower to reflect higher risks in commercial property markets. For illustration's sake we suggest a loan to valuation ratio of 40 per cent. In each case, such assets are clearly much safer than A1 and lower rated British banks to which the Bank of England currently lends.

One could reconfigure a substantial portion of the central banking system's liquidity support around the support of such assets themselves, rather than limiting that support to the same assets (usually with lower margins for safety than are proposed here) but only where they repose on bank balance sheets. The central banking system could offer to insure such assets or a similarly safe pool of assets and to lend against them for cost and risk reflective fees and/or margins.

## Recommendation One

NS&I's mission should be to use its resources in a cost-effective way to provide basic banking services to the British public. Accordingly, NS&I should remove quantity restrictions on its accounts and establish facilities that give its account holders direct access to pay each other and other accounts within the payments system.

## Recommendation Two

The central banking system should guarantee and/or lend against super-collateralised mortgages. The demarcation between such mortgages and other mortgage credit should depend on the specific characteristics of those mortgages, particularly the extent of collateral, and should vary according to macro-prudential principles. Such services should be provided by a government agency at arm's length from the government of the day.

## Recommendation Three

The central banking system should take Bank Rate as the appropriate return on sight deposits and on its own lending on super-collateralised assets with appropriate margins or fees being charged to reflect any residual credit risk and the full resource cost of service provision.

It should be made clear that virtually all the additional work that would be done by the central bank would be sub-contracted to businesses in their various marketplaces. There are competitive markets in the provision of such services as conveyancing, valuation, mortgage management and so on. It is not envisaged that the central banking system do more than contract for the provision of such services, although of course some expansion of operations would be necessary to manage the contracting of such services and provide appropriate IT systems at the core of the system.

Central bank loans would also be available on prime loans with LTVs above the level of super-collateralisation. Thus, borrowers could fund an 85 per cent or higher proportion of their home's value by raising the first 60 per cent as a super-collateralised central bank loan as the senior or 'first mortgage' debt with less senior or second mortgage rights for the remaining debt. To ensure a competitive market in the provision of mortgage management and in keeping with the principles of competitive neutrality, commercial banks and other lenders, and indeed other service providers such as supermarkets, telcos or ISPs would be permitted to 'package' central bank loans to their customers – either with or without additional less senior debt from themselves – adding their own margins.

In effect, what is being proposed is to allow super-collateralised loans to be treated as part of the monetary system rather than the financial system. And governing the government-mandated medium of exchange has far lower transactions costs than the financial system in which the maxim caveat emptor should generally apply to all players. For within today's banking system, however safe assets are, the private sector cannot fund them without funding a vast series of market connections which begin with individual funders and end with individual users of those funds. And in the passage of those funds from provider to user they must be aggregated and disaggregated as they pass through the banking and

wider financial systems, often between different firms which must bear the costs of due diligence on each transaction. Such costs include marketing, account management, audit, custodianship, insurance, legal costs and the management of liquidity.

By contrast, as an integrated entity and the issuer of legal tender, the central banking system can simply issue liquidity against an asset, up to the point at which it ceases to regard it as presenting negligible credit risk. The potential efficiency gains over this being done by multiple firms within a lengthy and complex production chain are large.

Further, there is little to lose in so dealing with super-collateralised assets because to a substantial extent any guarantees such arrangements tend to formalise and make explicit guarantees that are implicit in any event. Thus the circumstances in which it would be called upon to make good on the risks it is explicitly taking by guaranteeing super-collateralised assets are those in which the government's implicit guarantee of the financial system would be drawn on in any event. Yet, where such guarantees are implicit, they are unpriced, which is both inequitable as taxpayers get drawn into bailing out bank funders, and inefficient because the margins at which banks provide their products are not reflective of the risks they draw the community into. In addition, large banks judged too-big-to-fail enjoy this implicit subsidy disproportionately. Thus much of it remains within those banks and their shareholders rather than being competed away and so recycled to their customers and the rest of the community as lower fees and margins.

### Micro-economic impacts

The central micro-economic impacts of these recommendations would be to displace a substantial portion of private banking with utility central banking services providing finance at substantially lower resource cost to the economy and so to borrowers. Other things being equal, the provision of extended retail deposit services by government would tend to somewhat lower the cost of debt to governments and to reduce banks' access to such deposits while a substantial portion of lending currently being underwritten by banks would be underwritten by the central banking system. This would reduce employment in banking, though some of this would be offset by additional employment in both the public and private sectors in delivering utility central banking services.

In addition to on-selling central bank services to their customers, commercial banks would migrate to taking a higher risk part of the market - in higher LTV mortgage lending. This would be a riskier proposition than is currently the case because the less senior tranche of lending would no longer have super-collateralised lending to cross subsidise its costs and mitigate its risks. With such cross subsidies being removed, one would expect the cost of that debt to rise as would the returns required to attract deposits and wholesale funding.

However, one would expect the former margin reducing effect would strongly outweigh the latter margin increasing effect because falling margins for services now provided by the central banking system would reflect the much lower resource costs faced by the central banking system in supplying liquidity to super-collateralised loans compared with commercial banks' costs in doing so. The market financing of the higher, less senior tranches of loans would likely require higher interest rates, but with the possible exception of some additional credit enhancement such as private mortgage indemnity insurance, the provision of such funds would have similar resource costs as they do now.

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## Macro-economic impacts and implications for macro-economic management

These proposals come with additional large benefits, particularly during the current sustained downturn, for they represent a powerful and very direct form of quantitative easing. With Bank Rate close to its zero bound, bank margins hold their borrowers to variable interest rates on home loans which are mostly over 2 and often over 3 per cent. In these circumstances, the Bank of England has described its 'quantitative easing' policies – its creation of new money to purchase high quality assets like gilts from private investors such as pension funds and insurance companies, as 'designed to circumvent the banking system'.<sup>4</sup>

Yet it has also found itself pursuing quantitative easing through the banking system with the Funding for Lending Scheme (FLS). This has lowered lending rates, but it is unclear how much of the benefit is being passed on and how much is being captured by banks themselves. FLS appears to have brought down the cost of super-collateralised home loans somewhat – by up to 50 basis points in some cases. But this has been nowhere near enough to make large inroads into the obstacles that bank margins impose on the operation of monetary policy near the zero lower bound. And because of their lower resource cost, the kind of proposals set out here would achieve substantially greater margin reductions. Accordingly, in the present circumstances, the introduction of the proposed central banking services for citizens would open a new and much more direct front of quantitative easing.

Governments could finance super-collateralised mortgages within the traditional disciplines of fiscal policy by borrowing money which is then re-lent to mortgagees. (The development of NS&I proposed above will assist in this process.) However, in the current circumstances, the central banking system could also fund mortgages by the creation of new money as it is doing with existing quantitative easing exercises. Where it does so, this would mostly displace existing money previously created within the fractional reserve banking system. However, the lower interest rates charged on the super-collateralised portion of mortgages would stimulate borrowing. It would also generate revenue as borrowers' interest payments would be paid to the central banking system rather than to banks and their funders. Unlike other quantitative easing measures, the quantitative easing described here does not involve purchasing interest-bearing assets, which can be expected to suffer capital losses for governments as interest rates rise to more normal levels. Rather, Bank Rate increases would produce large increases in government revenue.

It is beyond the scope of this paper to elaborate in detail, but under the new regime proposed here, to the extent that the central bank's additional lending against super-collateralised mortgages is financed by quantitative easing, the relationship between monetary and fiscal policy would change in important ways. Changes in Bank Rate would generate substantial corresponding changes in government revenue. If these were not sterilised from the domestic economy – with corresponding changes in the fiscal stance, possibly involving sterilisation via foreign financial markets – they would dilute the macro-economic effect of Bank Rate changes. Once recovery is underway, it may also be necessary to soak up additional liquidity via varied reserve requirements for commercial banks or by 'fiscalising' any central bank money creation with additional government borrowing. Further work would be necessary to sketch out alternative scenarios in this regard.

## Existing central banking retail services

As Shiller (2008) points out, the centrality of government to banking has meant that many of the most important financial innovations in modern banking have fallen to governments. One innovation stands out. Amid the Opposition warnings that ‘anything that tends to connect the state with banking has always been productive of disastrous consequences’,<sup>5</sup> the Banking Charter Act of 1844 moved to freeze existing English private note issue and so to ultimately phase in the monopoly of note issue of the Bank of England, something realised in 1921 with the last note issued by Fox, Fowler and Company when it was acquired by Lloyd’s.

In some respects it is to be regretted that the transition was made by legislative fiat. For it might have been made in the way proposed in this paper, by allowing the Bank of England and private banks to compete with each other, as far as possible on a level playing field. For it can hardly be doubted that, at least if the central bank is soundly governed, its notes offer a superior technology for storing value and effecting payments in everyday situations than private notes. Why did this method of physical settlement come to replace all private bank notes? Because the involvement of parties other than the guarantor of the monetary system – the central bank system – simply injected additional complexity and counterparty risk into the transaction without commensurate gain.

Remarkably, over 90 years since the Bank of England’s monopoly over English bank notes became complete and over 40 years since the birth of the internet, there exists no simple and easily accessible electronic analogue of this process. Yet it could be built from the existing infrastructure of NS&I relatively quickly and cheaply.

The proposals set out here involve substantially greater government involvement in banking than is the case today. But it is greater government involvement in precisely the way the Bank Charter Act of 1844 contemplated greater government involvement in the provision of the most ‘utility like’ aspects of banking. And as in 1844, they do so by extending to citizens the services the central banking system currently provides to banks. They also generate government revenue by capturing seigniorage in money creation previously enjoyed by private banks. The paper does not propose the establishment of a government-owned bank to compete with private banks. To do so would involve governments in the provision of services such as local bank branches which can be competitively and competently provided by the private sector. It is unclear what the point is of governments providing services to the community and then charging them to act in essentially the same manner as private businesses.

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## Summary and conclusion

The proposals outlined in this paper:

- Use existing infrastructure.
- Achieve their objectives simply by enabling government agencies to compete in the marketplace on their own merits rather than by preventing or impeding competing private service providers.
- Involve no subsidies.
- Preserve the important principle that government agencies' commercial dealings should be at arm's length from the government of the day.
- Generate a powerful new form of 'direct' quantitative easing and a new source of revenue for the future.

All this from simply building the means by which individual Britons can access the central banking services already provided to British banks.

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# 1. INTRODUCTION: OUR METHOD

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**Since the outbreak of the global financial crisis, debate has raged about the appropriate architecture for the banking system, yet opinion remains divided as to what should be done, even amongst those in broad ideological sympathy with each other.**

Thus for instance, some, such as John Kay, support ‘narrow banking’ with strong separation between the ‘utility’ role of banks – most particularly straightforward lending where risk is relatively well understood and easily pooled, and the facilitation of payments – and more speculative and risky activities such as market making and other merchant banking functions.<sup>6</sup> Others, like Paul Krugman for instance, are sceptical that this solves our problems. Indeed Krugman is even sceptical that limiting the size of banks is a particularly useful idea.<sup>7</sup> Others seek more radical change such as Kotlikoff’s Limited Purpose Banking, while others cite Irving Fischer’s advocacy of full reserve banking (Benes and Kumhof, 2012).

Though the protagonists for each of these positions make compelling points, there are downsides attached to each approach and each is tied into the hubris of comprehensive redesign and the coercive imposition of wholesale reconfiguration of the existing system. Clearly some coercion – which is inherent in any change of regulation – is called for, not least the increase in bank reserves that is underway globally. Nevertheless this study does not immerse itself in debates on the theory of bank regulation in the hope of arriving at a definitive view from which correct policy can be deduced and then imposed.

It follows another approach which has succeeded elsewhere. We pursue what might be called ‘the logic of reform’. We ask what principles we have successfully applied to other parts of the economy in pursuing economic reform that might be applied with advantage to banking. Rather than claim sufficient knowledge to reengineer the banking sector, we do what economic reformers have typically done when considering the structure of industries in need of reform. We ask where and how the cost of provision can be lowered within the industry. Taking care not to subsidise any supplier of financial services so that prices broadly reflect costs, we then leave those consuming financial services to decide who supplies them. This offers efficiency benefits and consumer gains, but only to the extent that it reflects consumers’ choices in the marketplace. As we shall see, the potential efficiency benefits are very substantial, yet because our method involves the use of competition to drive changing industry structure this reduces the scope for unintended consequences.

For this reason, the changes we propose are worth pursuing in their own right as cost-minimising economic reform. But they also move us towards a financial system in which private and public activities are better balanced with each sector more fully playing to its strengths. The private sector would focus on innovation and on servicing financial needs that require higher levels of skill in building relationships and assessing credit risk. Meanwhile, the public sector is likely to take a greater role in facilitating ‘utility’ banking and to induce more competitive pricing from the private sector.

The end result is no less than a reconfiguration of the policy architecture of the monetary system for the internet age. Not only would the resulting banking system cost less, it would achieve more being a safer and more rational system and so one that could make good – at least to a substantial extent – on the aspirations of those who would urge upon us more comprehensive and riskier redesign of the banking system.

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## 2. BANKING AND THE PAYMENTS SYSTEM

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**Banks establish networks of customers to whom they provide, not single services – like deposit taking – but closely related bundles of services. Amongst other things, banks:**

- Keep their customers' funds safe.
- Generate earnings on those funds.
- Facilitate maturity transformation – enabling long-term lending to be funded from short-term borrowing by a pool of borrowers.
- Facilitate payments between bank customers.

Where two persons hold deposits with a single bank, and with the bank holding deposits and possibly paying interest on the money of two customers, a £100 payment can be facilitated between them by the bank altering its accounts to record that the first client now holds £100 less, with the second now holding £100 more, with the total deposits held by the bank remaining unchanged.

In the absence of malfeasance or technical error, this represents an instant and risk-free transfer. However, where the transfer takes place between two parties each banking with different banks, the process requires interbank payments with the £100 being taken from the payer's bank and transferred to the payee's bank. At this point counterparty risk enters the picture like the serpent in paradise. For now risk is not just to the individual parties involved, but also becomes part of an immense network of payments, all tightly coupled so that the failure of one draws into question the success of many others. With each payment dependent upon others, one bank's irresponsibility, fraud or simple misadventure can halt the cycle of payments and so compromise the entire structure.

Banks take their clients' deposits and reinvest them in loans or other investments. This trade occurs with maturity mismatches between the banks assets and liabilities, that is, between the banks' obligations to its depositors and to those with whom it invests the money. Fractional reserve banking also enables this process to be geared up. There are efficiency gains to be had from such activity, but this is unstable.

These flaws in the clay of banking systems have been ameliorated by two means. Central banks have been established to provide a lynchpin to this system with unimpeachable credit quality. This then provides a party to the system that can provide an account by which banks can settle liabilities between themselves – as they must when making transfers to facilitate payments between their clients. And the central bank also lends to banks against good collateral to address any liquidity shortfalls of individual banks needing to make payments to other banks.

Over time, with various banking crises threatening and sometimes causing wider economic damage, stronger guarantees were demanded of this system. This drew governments into the management of the central bank and thence ultimately to its ownership. And with the development of the role of the Bank of England as lender of last resort, and ultimately its nationalisation, governments also insisted on the prudential regulation of banks.

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Still, there are profound problems with supervision. Though far from alone, John Kay (2009, p. 9) is one of the most colourful in expressing his scepticism as to its efficacy:

The relevant criterion is the potential loss from the varieties of economic exposure in a bank's balance sheet. Banks sought to address this problem for their own internal purposes through sophisticated and complex calculations using data specific to their own experiences and practices. They failed in that endeavour even though these banks were seriously attempting to find the answer, not seeking to find ways round structures which had been imposed on them externally. No rules on capital adequacy, however complex, can account even approximately for the varying circumstances of all the banking institutions in the world. This problem is fundamental and is not soluble, even if committees sit in Basel until the River Rhine, or at least the local hostelrys, run dry.

As with other countries and within international banking arrangements, the UK is pursuing a range of reforms to strengthen existing arrangements. Opinions differ on how successful this will ultimately be. Unfortunately, evidence of some inadequacies of the reforms may be many years in emerging. The memory of losses from the financial crisis will remain vivid throughout financial markets for some time, and it looks like being some time before economic growth will be strong and sustained enough to rekindle the kinds of conditions that underpin the psychology that can be loosed with a fully fledged boom.

Further, we deceive ourselves if we adopt too 'technocratic' an approach. The incentives on regulators in charge of bank supervision are often aligned with the boom/bust cycle in ways that subtly mirror those in the private markets (see Box 1 for a compelling presentation of the argument).

### Box 1: The pro-cyclical incentives on bank regulators

It is almost impossible for bank regulators to be 'tough' in good times, for the same reason it is almost impossible for mutual fund managers to be bearish through a bubble. A 'conservative' bank examiner who lowballs valuation estimates will inevitably face angry pushback from the regulated bank. Moreover, the examiner will be 'proven wrong', again and again, until she loses her job. Valuations can remain irrational much longer than a regulator can remain employed.

Bad times, unfortunately, follow good times, and regulatory incentives are to do the wrong thing yet again. The miracle of competition ensures that many of the most important and successful banks will have balance sheets like helium balloons at the end of a boom. Then, like a pin from outer space, somebody somewhere fails to repay a loan. When this happens, bankers beg for forbearance. They ask regulators to allow them to write down assets gently, slowly, so that they can let ongoing earnings support or increase their regulatory capital. If that doesn't work, they suggest that capitalisation thresholds be temporarily lowered, since **what good is having a buffer against bad times if you can't actually use it in bad times?** They use any forbearance they extract to 'gamble for redemption', to make speculative investments that will yield returns high enough to save them, if things work out. If they don't, the bankers were going to lose their banks anyway. The additional losses that fall to taxpayers and creditors needn't concern them.

If a small bank is in trouble, they swoop in like superheroes and 'resolve' it with extreme prejudice. But when very large banks, or a very large number of banks are in trouble, the incentives change. Resolving banks, under this circumstance, will prove very expensive.

It will reveal regulators to have been asleep at the wheel, anger the public, and alienate nice people whom they've worked closely with, whom they like, who might otherwise offer them very nice jobs down the line.

(Now) regulators' incentives are suddenly aligned with bankers: to deny and underplay, to offer forbearance, to allow the troubled banks to try 'earn' their way out of the crisis. Regulators, in fact, can go a step further. Bankers can only 'gamble for redemption', but regulators can rig the tables to ensure that banks are likely to win. And they do. A central bank might drop short-term interest rates very low to steepen the yield curve. It might purchase or lend against iffy assets with new money, propping up prices and ratifying balance sheets. It might pay interest to banks on that new money, creating de novo a revenue stream based on no economic activity at all. Regulators might bail out prominent creditors and counterparties of the banks, suddenly transforming bad bank assets into government gold.

Source: Steve Waldman at <http://www.interfluidity.com/posts/1258156478.shtml>

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### 3. THE SCOPE FOR UNBUNDLING AND DISINTERMEDIATION IN THE SAVINGS AND PAYMENTS SYSTEM

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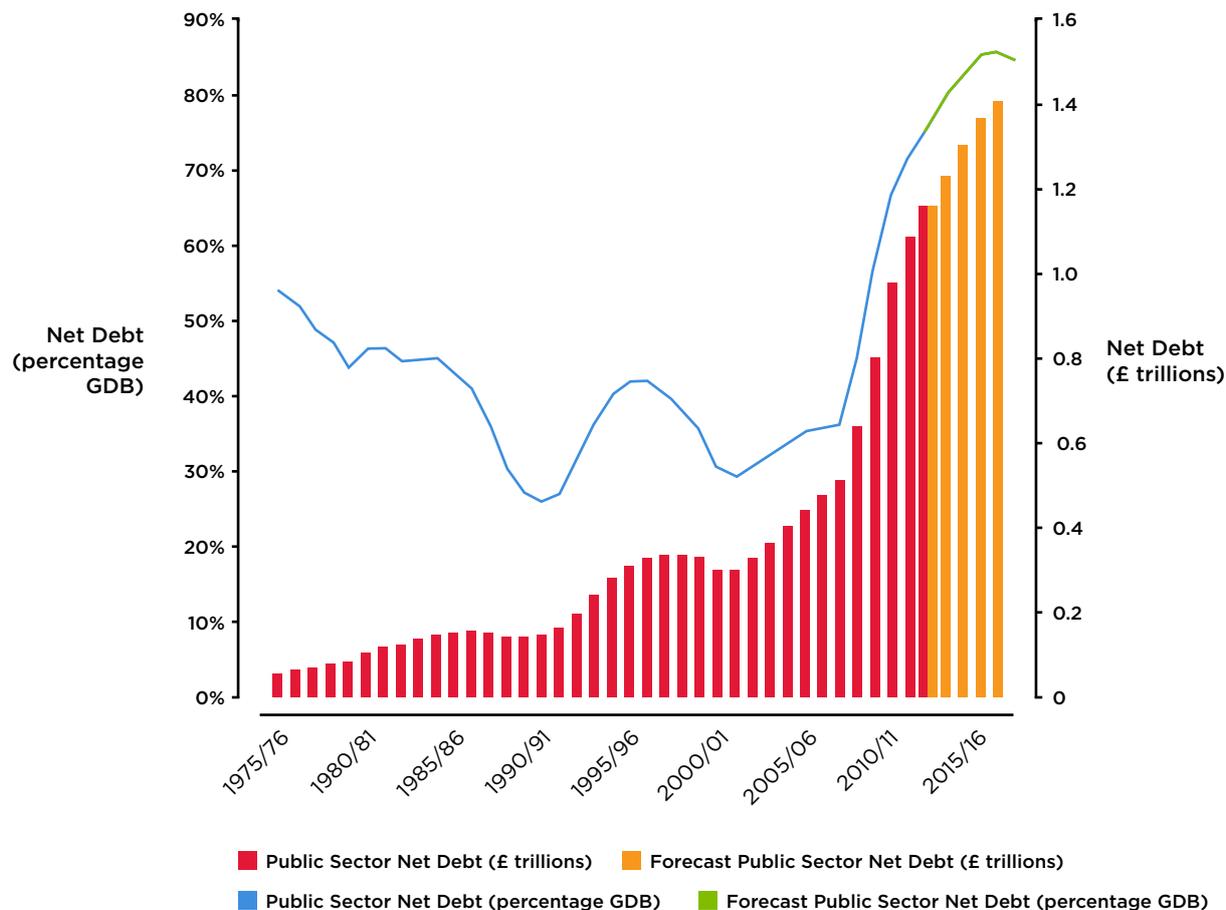
**As Martin Wolf puts it so compellingly, modern finance is a ‘pyramid of promises’ (2008). With the bond market and central bank at the apex of the pyramid, one might call them the wholesalers of financial promises from government. This ‘wholesale layer’ also comprises large systematic funding flows including interbank lending and wholesale funding markets. Commercial banks then provide a retail layer by which the liquidity generated at the apex is conveyed to businesses and individuals who consume financial services to meet investment, trade, working capital, consumption smoothing and other needs.**

The clear separation of wholesale and retail layers suited the technology of the time during which it emerged – in which ‘calculators’ were humans with pencils and books were physical books that were reconciled with matching interbank loans and repayments at the end of each day. Today, however, all this occurs electronically. If the institutions at the top of the apex were not either direct creatures of government or heavily regulated by them, ‘wholesalers’ including the central bank would have explored where the new technologies might enable them to market direct to retail customers. Where this could be successfully engineered without subsidies or other perverse effects in the system, one would expect it to reduce costs and/or improve service quality. Further, the threat of such action would also exercise a salutary effect on contestability and margins throughout the system.

That no such attempts at disintermediation have been made should not surprise the attentive student of modern political economy. For it would upset existing arrangements and put the government and/or the central bank into competition with incumbent banks, which would elicit strenuous and well funded political resistance. Be that as it may, two recent developments have increased the benefits and reduced the costs of some level of disintermediation of retailers by wholesalers of financial services – that is a more direct financial relationship between government and its citizens.

- First, the internet has enabled direct connections between consumers and wholesalers which has lowered costs in numerous industries. Thus for instance, where once tickets for travel or entertainment were exclusively sold through specific retail intermediaries – such as agents or branches of airlines or box offices – such tickets can now be purchased directly from the provider of the service online. In banking itself, bank customers may do their banking through the traditional intermediation of the branch or the more recent intermediary of a mortgage broker or post office acting as their bank’s agent. On the other hand, they may cut out those intermediaries to the extent that they move their banking online.
  - Second, since the global financial crisis and the great recession, government debt has grown strongly, increasing the benefits to government of obtaining its finance more cheaply and efficiently. (Figure 1). Public sector net debt was £1,185.3 billion at the end of April 2013 – just over three-quarters of annual gross domestic product (GDP).<sup>8</sup> In 2011/12, the debt interest payments on UK debt are anticipated to be £48.6 billion (3 per cent of GDP).
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Figure 1: UK public sector net debt



Source: collated from the Office for National Statistics, forecasts are from the Office of Budget Responsibility and HM Treasury.<sup>9</sup>

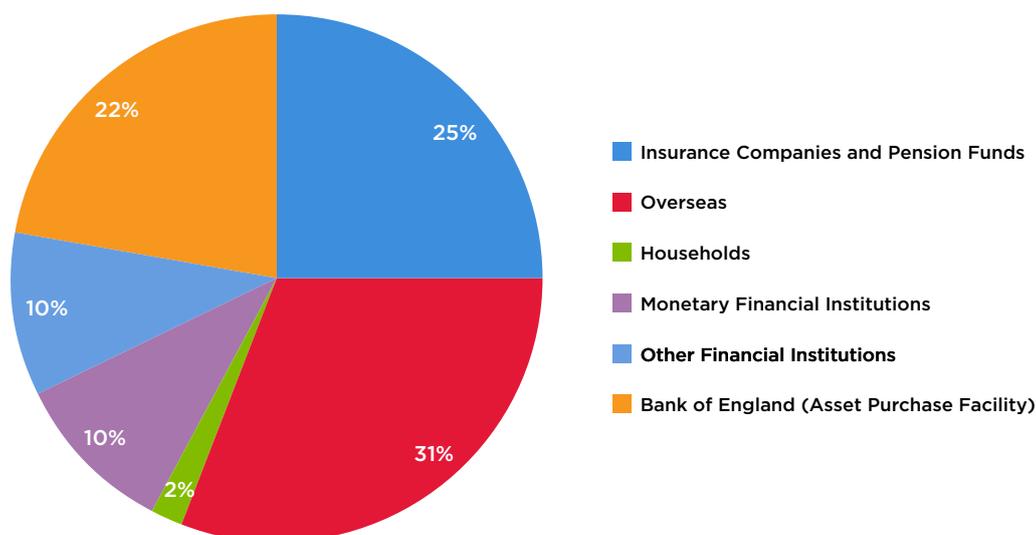
### The falling rate of direct household lending to government

This section documents the extent to which governments have vacated the field of borrowing directly from households. Where this foregoes cost-effective options, it raises the government’s costs of borrowing. The section begins by discussing direct household holdings of gilts and goes on to discuss government borrowing through dedicated retail savings vehicles such as National Savings and Investments (NS&I).

#### Household ownership of gilts

If Figure 1 above demonstrates the increasing importance of debt in the management of the UK budget, Figure 2 below demonstrates how little of that money is raised through retail channels, how much relies on ‘wholesale’ markets and financial institutions.

Figure 2: Distribution of UK gilts holding, Q4-2011.



Source: Debt Management Office. <http://www.dmo.gov.uk/index.aspx?page=Gilts/Data>

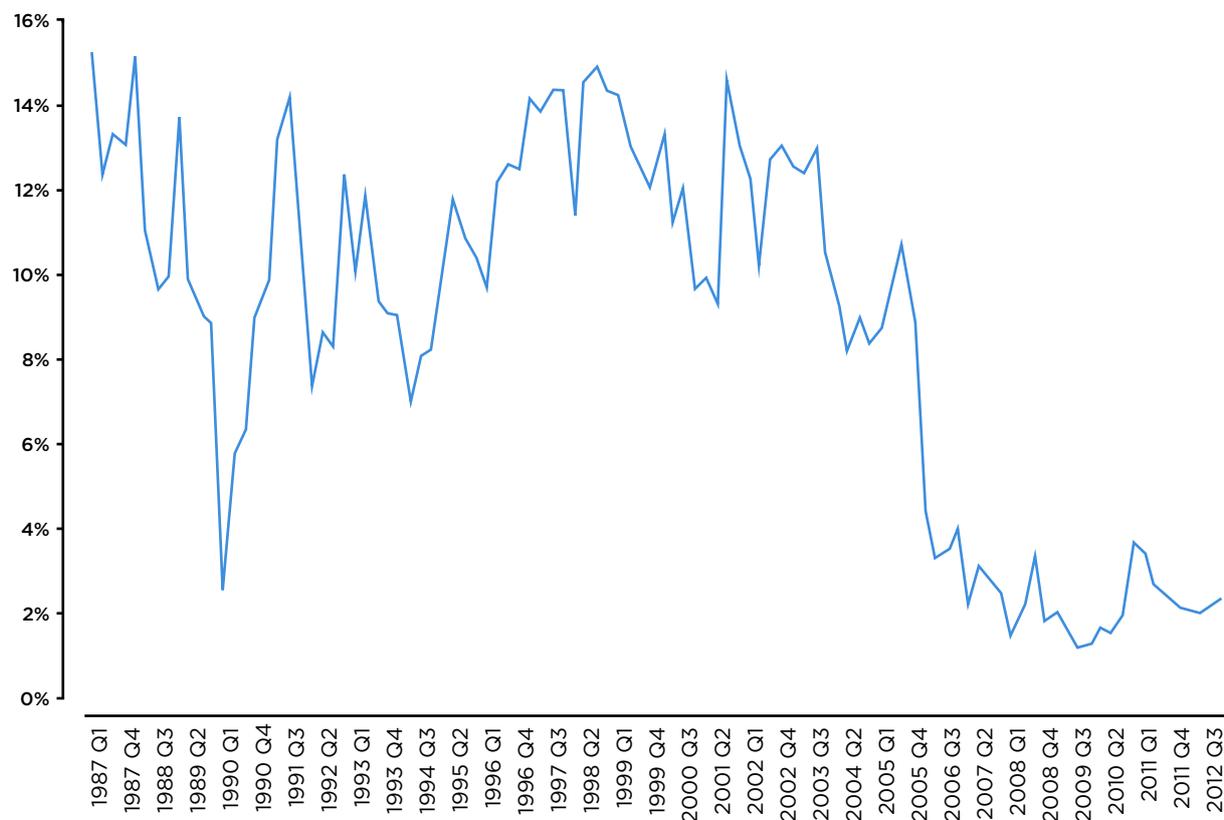
Though households would hold a substantial portion of this debt indirectly – through their exposure to financial institutions that invest in British gilts – they hold just 2 per cent of British gilts directly. Though it is not possible to say what the efficient level of direct holding should be, we can make these claims:

- The extent to which households hold government debt has fallen markedly.
- Limited efforts have been made to maximise convenience for British nationals lending to their government.

Accessing the bond market is inconvenient for citizens compared to their alternative investment opportunities. Further, given the increasing convenience of alternative options in banking and other investment markets, the relative inconvenience of the bond market has been increasing in recent years. The bond market itself provides no opportunities for lenders to provide governments with ‘at call’ deposits and no easy means to use the value in bonds to make payments to others.

In fact, British households’ financial exposure to the bond markets has declined sharply even as the size of transactions through those bond markets has surged to fund the bailouts and deficit budgeting since the financial crisis. Household gilt ownership has gone from over 20 per cent of central government liabilities in the decades after WWII to between 10 and 15 per cent from the mid 1980s, with a precipitate collapse just before the financial crisis leading to a new level of around 2.3 per cent today.

Figure 3: Proportion of gilts held by households as proportion of central government liabilities



Source: Distribution of gilt holdings, DMO accessed at <http://tinyurl.com/GiltDistribution> on 3 June 2013. See also Steely, 1989, Table 2.1, p. 40.

## Box 2: Buying gilts in the UK

Since April 1998, the UK Government's Debt Management Office has issued gilts (DMO) on behalf of HM Treasury. The DMO took over gilt issuance from the Bank of England, following the transfer of responsibility for setting interest rates from HM Treasury to the Bank in May 1997.

Gilts can either be purchased directly from the DMO at its outright gilt auctions or through the secondary market. Secondary markets are trading exchanges like the stock market, and there is active trading in gilts of all age structures from recent issues to War bonds last issued in 1917.

Whilst buyers in the secondary market can buy in a similar way as they do for the purchase and sale of company shares, the process for buying gilts directly from the government is slightly more regulated. Bidders at auctions can choose to participate through a Gilt-edged Market Maker (GEMM), a list of approved firms who can bid directly by telephone to the DMO on the bidder's behalf, or by completing an application form, providing that they are members of the DMO's Approved Group of Investors. Members of the approved group are persons who have satisfied the criteria concerning identity and source of funds established by the DMO to meet its statutory obligations under the Money Laundering Regulations 2007.

Whilst this is not a difficult hurdle to overcome, it does add a further layer of bureaucracy to the process and does not make it easy for households to buy gilts as investments.

A key means by which governments made bonds more convenient for citizens in the past was by issuing 'zero coupon' bonds in relatively low denominations. Such bonds are issued at a discount to their face value and the interest paid on them is paid by allowing them to mature towards their face value over time – often with relatively convenient means of redeeming the bonds at progressively smaller discounts against their face value as time passes. This obviates the need for bond-holding households to track and ensure receipt of periodic small interest payments on the bonds. Sometimes tax is also deducted from the bonds' income so that there is no further tax accounting to be done on income from the bond.

### Box 3: Borrowing from households: US Savings Bonds in the Great Depression

In 1935, the Roosevelt administration needed to raise over \$5 billion to finance public works expenditure as part of the New Deal. Though bonds were typically sold to financiers and those with relatively large amounts of money to invest, the government developed US Savings Bonds. These bonds were deliberately marketed to households and so their designers redesigned their traditional offerings to enhance their convenience to smaller households. They were denominated in small amounts (\$25 being the smallest purchase which saw them christened 'baby bonds') and marketed through post offices.

They were also structured in ways that took into account the convenience of the purchaser. Thus 'baby bonds' paid zero interest and were sold at a discount to their par value. A \$25 baby bond was sold for \$18.75 and matured in ten years when the government would return its full nominal value of \$25 to the bond holder. The government would also purchase the bonds at a progressively smaller discount as its maturity approached. This was clearly much more convenient for small holdings of bonds by households than the payment of annual or quarterly interest on bonds denominated in units of \$25.

The essential elements of targeting households are:

- Re-denomination of the amounts that can be purchased to permit much smaller amounts than typical bond purchases.
- Convenient means of purchasing and redeeming bonds.
- Providing a savings vehicle that is convenient to household lenders.

Today the internet creates new ways of delivering on these objectives.

Sources: Kimble, (2006) p. 18 ff and Wikipedia.

The UK has one of the lowest shares of household funding of government bonds in Europe. Where the European average is around 5 per cent – or around three times the UK share – some European countries sustain much higher direct household bond holdings. Thus,

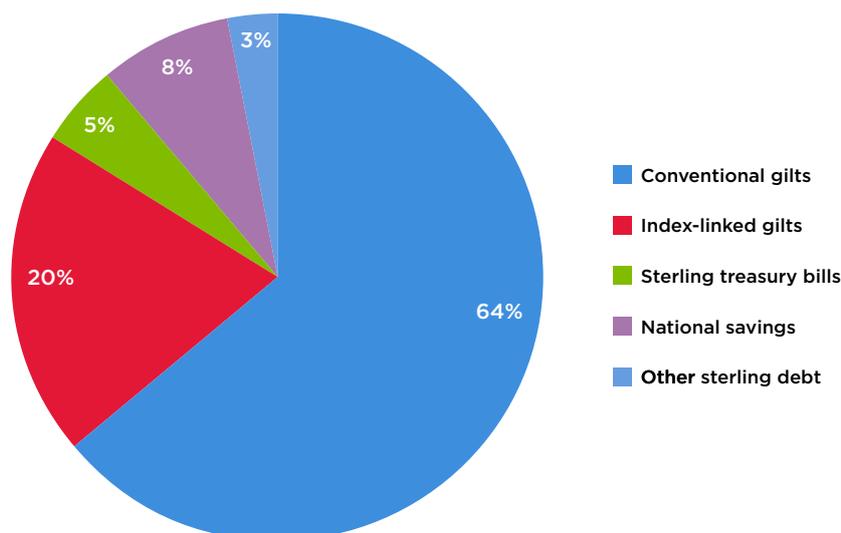
for instance, Italian households hold 20 per cent or more of government bonds on issue or more than €12,000 per household. In Germany the figure is between 10–15 per cent or around €6,000 per household.<sup>10</sup>

It is notable that the Italian government markets bonds that are convenient for small holdings. Thus, as the US Government did to encourage households to lend it money in the first half of the 20<sup>th</sup> century (Box 3), it offers low denomination ‘zero-coupon’ bonds and also bonds on which tax is paid at the outset which minimise the transactions costs associated with tax payments on small payments of interest.<sup>11</sup>

### Household deposits with government

National Savings and Investment (NS&I) is the major means by which the UK government directly taps the ‘retail’ market for deposits. It is the institutional descendent of the Post Office Savings Bank which became the world’s first postal savings system launched by the Palmerston Government in 1861. Deposits with the NS&I directly fund around 8 per cent of the government’s debt.

Figure 4: Sources of UK Government debt (April 2012)



Source: Office for National Statistics United Kingdom Economic Accounts Q1 2012 Release date: 28 June 2012.

### Box 4: National Savings Movement in the UK

During World War I, government expenditure rose from 8 per cent to nearly 40 per cent of GDP with borrowing moving from 14 per cent to 48 per cent.<sup>12</sup> The National Savings Movement was established in 1916 to encourage the British people to ‘save and prosper’ which continued into the 1970s. It was instrumental in the development of savings products, including saving stamps, certificates, and bonds sold by the Post Office Savings Bank, and by banks and financial institutions.

In World War II, the War Office set up the War Savings Campaign in November 1939 and Regional Savings Committees were re-organised. War savings were not only limited to the purchase of certificates and bonds, but also used local collections to raise money for aeroplanes, tanks and any items which were urgently needed for the war effort.

The post office network became a vitally important element in government borrowing. By 1969, the Post Office Savings Bank had become a separate government department accountable to treasury ministers and was renamed National Savings. From this time, local and main post offices became a distribution outlet for the products of National Savings.

Source: <http://www.lightstraw.co.uk/gpo/nsm/index.html>

NS&I's most popular product is Premium Bonds, which distribute lottery-style winnings to randomly selected account holders, funded from the interest on other accounts. However, NS&I also offers a more orthodox savings account, which is easily accessible over the internet and pays interest. All savings products offered by NS&I have a government guarantee. NS&I holds around £100 billion in the savings of UK households or approximately 10 per cent of the government's gross debt.

### Box 5: UK Girobank

In the early 1960s, many Britons had no personal bank account and many small communities lacked a local branch. In contrast, post offices were widely distributed across the nation and opened longer hours. Given this, in 1968, Girobank was founded to provide widely-accessible banking services through the postal system.

In addition to improved accessibility, Girobank delivered significant payments efficiencies. Transferring money between traditional bank accounts required the signature of both the transferor and transferee and, unless both accounts were held at the same branch, could take up to five days to process. Girobank required only the signature of the payer, and through specifically designed communication hubs, had 24-hour payments processing.

In the 1970s, losing money from its investment in its growing network and under pressure from the new Conservative Heath Government, Girobank cut costs; introduced 'girocheques' that could be cashed in a bank or a post office; encouraged the government to make pension and welfare payments using girocheques; and competed with the banks to attract cash deposits. By the late 1970s, Girobank was highly profitable holding over a quarter of deposits and at a higher rate of return than commercial banks. It introduced completely free banking to UK personal customers, removing fees for standard account transfers, cheques and deposits. As a result, the number of accounts continued to grow.

Commercial banks responded by establishing a similar credit transfer system called Bank Giro and new services such as credit cards, personal loans and revolving credit accounts. Girobank countered by offering its own additional services such as overdrafts, revolving credit accounts, credit cards, and by helping to establish an ATM system with a syndicate of small banks and building societies. This forced commercial banks to start linking their ATM services which they had previously resisted doing.

Although Girobank's competition had driven cost reduction and innovation in banking, by the late 1980s the services offered by commercial banks and Girobank had converged and were largely indistinguishable. In 1989, the Thatcher government privatised Girobank, selling it to the Alliance & Leicester Group where it was operated like any of its other banks. Initially, it retained an exclusive contract with the post office to accept Girobanking services, but the UK general post office's cash services were opened up to other commercial banks.

Further, though NS&I appears to try to offer its customers interest rates that are commensurate with the rates savers can get on bank deposits, it then imposes quantity constraints on its borrowing from the public in such vehicles to avoid 'unfair' competition with the banks. If NS&I's offering such rates on an unlimited basis is 'unfair' to the banks,<sup>13</sup> it is hard to see why offering such rates on a restricted basis is not also 'unfair' even if it is limited in its extent. It could certainly be regarded as unfair to those individuals who find themselves unable to access NS&I's product of their choice once it has been removed from the market.

Further, if it is regarded that there is some level of borrowing beyond which further NS&I borrowing is 'unfair', it would seem to be more efficient, and indeed more fair as between individual depositors with NS&I for it to reduce the interest rate it pays on deposits to some level judged to raise the desired amount of funds. Not only would this be likely more efficient from an economy-wide micro-economic perspective, but it would save the government substantial interest payments. With Bank Rate – which is a benchmark of policymakers' desired opportunity cost of risk free short-term credit – it is hard to see any justification for NS&I offering depositors more than this on sight deposits. Indeed, according to the logic being set out in this paper it should pay Bank Rate less some margin or fees to allow for operational and transactions costs.<sup>14</sup> With £100 billion of British savings under management, every 1 per cent lower NS&I offers its depositors saves the budget £1 billion.

In fact, in more normal times, the interest rates banks offer for sight deposits will generally sit somewhat below Bank Rate. Consistent with the logic set out here, this would mean that if NS&I offered sight depositors Bank Rate less some margin or fees to meet its costs, it would substantially increase its market share of deposits vis-à-vis other commercial deposit takers. In most circumstances this would further lower public debt interest costs for government.

Further, despite the revolution in retail banking and in the way people manage their savings over the last two decades, NS&I has not broken out of the world from which it came. It does provide its customers with internet access to its services, but it clearly envisages itself as a stand-alone savings vehicle as all savings accounts were when the banking system strictly separated interest bearing 'savings' accounts and cheque or transactions accounts with the former paying interest and the latter being prohibited from doing so. Today, banks parlay their interest-bearing accounts directly into the payments system, to optimise customer convenience and maximise the extent to which a single account can be used for multiple savings and trading purposes and to ensure that savings can earn interest right up until they are used in transactions. Given the economies of scope at the producer level and convenience for consumers in the joint provision of deposit taking and the facilitation of payments, citizens would gain far more convenience from NS&I's accounts if they were integrated with the payments system so that payments could be made directly to and from their accounts.<sup>15</sup>

Both the government and individuals using NS&I's services would gain from the economies of scope thus realised: the government by increasing the pool of lenders lending to it, thus reducing the interest rate necessary to attract any given quantity of funds, and citizens who would have access to a new, government guaranteed and convenient vehicle for their savings, working capital and payments.

### Recommendation One

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NS&I's mission should be to use its resources in a cost-effective way to provide basic banking services to the British public. Accordingly, NS&I should remove quantity restrictions on its accounts and establish facilities that give its account holders direct access to pay each other and other accounts within the payments system.

## 4. COMMODITISING VERY LOW RISK HOME LENDING

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**‘Commoditisation’ of business services occurs as standard ways of doing things are established and come to dominate their industry. Much finance is ‘commoditised’ in this way. The market for prime home loans is the largest and best example. Here the essential financial aspects of the vast bulk of activity do not differ between market competitors.<sup>16</sup> Thus in the British housing market, where properties are considered satisfactory collateral and serviceability has been demonstrated, home lenders typically lend up to 75 per cent of their value with each lender lending against very similar criteria for appropriate serviceability and security quality. They will typically require the borrower to fund a mortgage indemnity guarantee (MIG) if they wish to lend more. Banks and insurers price the additional risks of higher loan to valuation (LTV) ratios via higher interest rates and higher MIG premiums.**

Commoditisation in any industry is a powerful driver of economic progress. To the delight of consumers and the dread of business managers and shareholders, the stability and commonality of product offerings sets the stage for competition to drive prices towards cost plus a normal return for profit. In substantial sectors of our economy – for instance, in large areas of software, web services and media – marginal cost and price have fallen to zero. Economists often see the way in which competition equilibrates prices and costs as its greatest contribution to economic progress because this optimises ‘allocative efficiency’ around which so much of the discipline is oriented. But these gains are often relatively small and static. The larger prize will often be the way in which commoditisation of one activity drives those in the marketplace who are seeking to preserve their margins to add value in other ways, by migrating to new activities or innovating regarding old ones.

Yet, the price of prime home lending (the margins between the cost of funds and the rate at which they are lent out) remains well above cost in major parts of the market. This is most clearly demonstrated in that part of the market we will call here ‘super-senior’ or ‘super-collateralised’ home loans.<sup>17</sup> We define such loans as prime loans with LTV ratios that are sufficiently low to offer negligible credit risk. Such loans comprise a large portion of many home lenders’ books as borrowers who might have taken out a loan at 75 to 90 per cent LTV some years ago have made principal repayments and/or their home values have appreciated.<sup>18</sup> Yet, below LTVs of 75 per cent, this lack of risk for the lender has generally gone unreflected in credit pricing.<sup>19</sup> For the purposes of illustration, this paper assumes that loans at 60 per cent LTVs are super-collateralised and offer negligible credit risk to lenders, though in line with the principles of ‘macro-prudential policy’ it may make sense to allow this ratio to move inversely with the rise and fall in house prices and/or the business cycle more generally.

### Regulatory capture and the problem of competitive neutrality

To fully work their magic, markets should be dynamic. Ideally there should be vigorous entry by newcomers so that new approaches compete with old ones or at the very least the threat of new entry so that incumbents are unable or unwilling to rest on their laurels and to charge excessive margins. And there needs to be exit so that unsuccessful firms can

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be winnowed out. Further, competition between firms in an industry needs to be vigorous and fair or, as we say today, on a 'level playing field' so that those firms that survive in the market are the best, rather than the most favoured.

But banking is another country. They do things differently there. In banking, competitive non-neutralities are layered upon one another. There are several related reasons why banking remains (only) monopolistically competitive even where the conditions exist to commoditise it. Firstly, being a public-private partnership, the public involvement in banking has imposed constraints on change. For things to happen they must be consistent with elaborate regulation or that regulation requires change and that takes time, may invite political opposition all of which increases costs on entrants.

The most powerful effect in suppressing entry, however, is not so much in the direct costs and inconveniences of complying with bank regulation. The larger costs are indirect. With the best will in the world, prudential supervision will not always be as responsive as it ideally should be. As John Kay argues (Kay, 2011) bank regulators come to see the world through the eyes of those they regulate and this, together with the time inconsistency problems of banks being too big to fail (see below) provides incumbents with disproportionate advantages over other operators. Yet, new entrants almost invariably pursue the most disruptive and potentially beneficial innovation rather than incumbents. None of the companies that drove innovation in the personal computer revolution of the late 1970s and early 1980s were incumbents just as none of the new IT incumbents of the 1990s established any of the dominant platforms of Web 2.0 such as Google, Facebook, Twitter, Skype or LinkedIn. In light of this, it is sobering to note that all the major UK banks today are the product of mergers and acquisitions of banks that led the market at the turn of the 20<sup>th</sup> century (Kay, 2009, p. 45).

### Competitive neutrality with shadow banking

In addition to traditional banking, lending can also be funded directly from wholesale markets. Thus, on securing adequate short-term finance, non-banks can write a pool of loans and then 'securitise' the obligations from those loans into wholesale markets for asset-backed securities.<sup>20</sup> If securitisation competed on a level playing field with bank finance, it might well come to dominate aspects of lending - particularly home lending.

In many ways securitised funding is better suited to home lending than bank lending. For instance, it typically involves less asset-liability mismatch than banking finance. A substantial portion of banks' long-term lending is supported by at call and short-term finance whereas the terms of the bonds supporting securitisation are typically for several years. And, because they have been crafted for the external scrutiny of investors, mortgage-backed securities (MBS) are transparent to outsiders. By contrast, large complex banking institutions are difficult - indeed many argue impossible - to supervise effectively.

Nevertheless, like any financial market, market-backed finance depends on confidence. As was evident before the crisis, and then demonstrated vividly during it, both banking and shadow banking systems are susceptible to sudden losses of confidence. But during the crisis, banks had the advantage of several centuries of institutional evolution, which had given us central banks as risk takers of last resort when other sources of funding headed for the exits. Securitisation markets required something similar to preserve their liquidity. Though central banks are typically referred to as 'lenders of last resort', in circumstances of distress, they are technically purchasing assets subject to repurchase agreements from the banks that are selling them. This both relieves the banks they provide liquidity to

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from trading while technically insolvent and also places the central bank ahead of other creditors in the event of ultimate insolvency (Admati and Hellwig, (2013) p. 164.). Thus, to speak more precisely, central banks have a buyer of last resort role in their support of banks. And this is the role the central banking system would need to adopt if it were to stabilise financial assets of a similar quality to those it buys on bank books in the wholesale MBS market. It would be a market maker of last resort; which is to say a buyer of last resort during crises and a seller in better times.

### Too big to fail

“*What are the chances that TD Bank is not going to be bailed out if it did something stupid?*”

CEO of Toronto Dominion Bank, speaking to investors, 2009.<sup>21</sup>

The non-neutrality with ‘shadow banking’ would be much less important if it were not for a further huge tilting of the playing field within the banking sector itself. Because of the centrality of the banking system to the payments and other aspects of finance, even if bank shareholders lose money, it becomes widely disruptive for banks to dishonour debt, not just of retail depositors (for whom a separate deposit insurance scheme exists) but also of their wholesale funders. For this reason wholesale funders are often ‘bailed out’ by the state where there are no viable alternatives to have them absorbed into a larger private institution. Thus most banks benefit from some implicit guarantee of wholesale funding and, as we have seen, large banks benefit to a very great degree.

The past is casting a long shadow over the present and the future. Regulatory attention and financial support has been lavished on the banking system with inadequate thought given to enhancing the safety, efficiency and dynamism of the financial sector as a whole. As Haldane explains, bank bailouts are a problem embedded deep within the political economy of banking and the time inconsistency of incentives on the various actors in the drama raises the spectre of things getting progressively worse. ‘State support stokes future risk-taking incentives, as owners of banks adapt their strategies to maximise expected profits.’ Whether by accident or design, banks ‘game the state’.

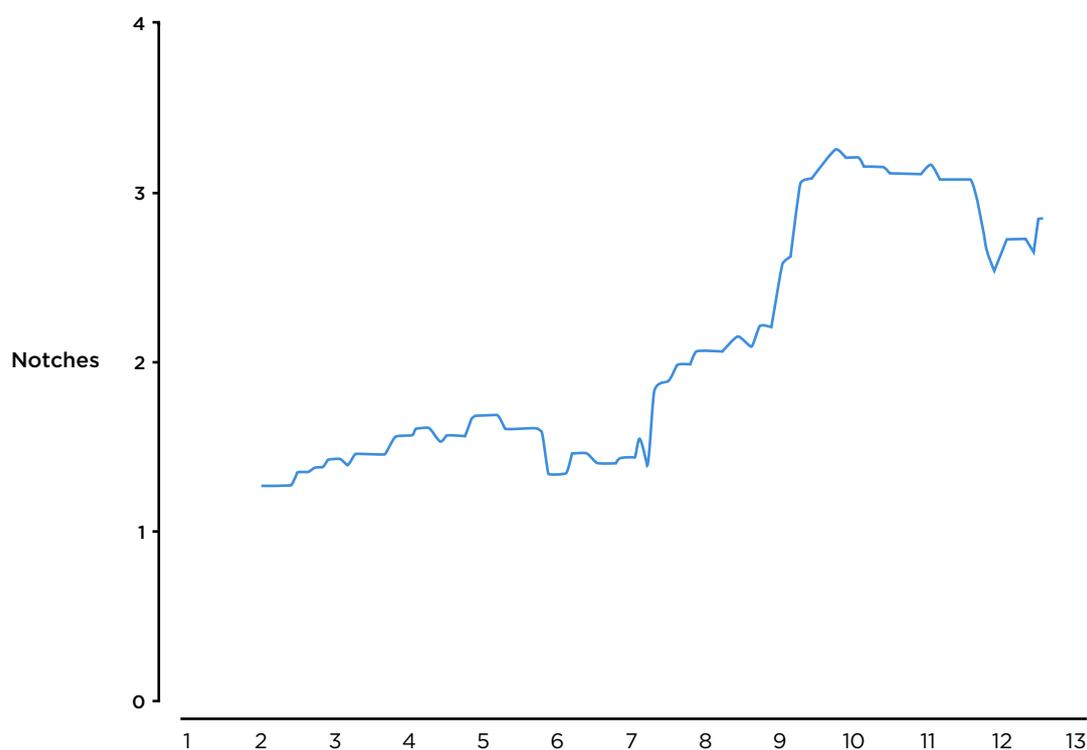
*For the authorities, it poses a dilemma. Ex-ante, they may well say ‘never again’. But the ex-post costs of crisis mean such a statement lacks credibility. Knowing this, the rational response by market participants is to double their bets. This adds to the cost of future crises. And the larger these costs, the lower the credibility of ‘never again’ announcements. This is a doom loop.*

Haldane, (2009) pp. 5-7

This is a long-term problem of immense proportions on which, if Haldane is right, we may well be going backwards. However, bank collapses and the bailouts following them tend to occur after boom times and, with markets chastened by recent crises and their aftermath, the next boom seems a long way off. If so, the next banking crisis is likely to be some time coming. Yet bank bailouts, and more particularly the anticipation of them has direct and immediate consequences for banking right now.

For the banks most susceptible to bailouts are the banks that governments and the community cannot afford to have fail. These are the biggest, most systemically important banks. Being forward looking, markets anticipate the likelihood that such firms will be bailed out in their preparedness to fund them. And this gives them a lower cost of funds than their smaller competitors. Though econometric studies suggest that operational economies of scale tend to be outweighed by organisational 'diseconomies of scale' at scales much lower than we observe in the largest banks, as the scale of banks rises above this 'minimum economic scale' their 'too big to fail' status, and the funding advantages which attach to it grow.

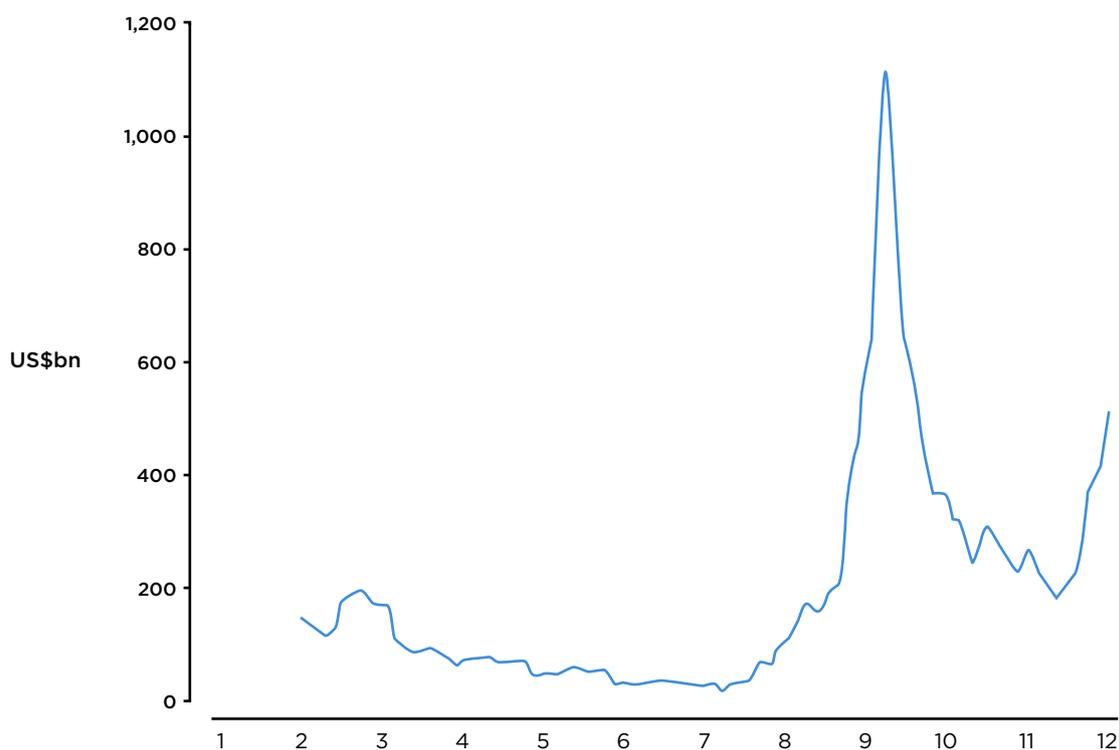
Figure 5: Ratings uplift for systemic institutions



Source: Moody's, Bank of England Calculations (Haldane, 2012, p. 14)

The commercial advantages conferred by 'too big to fail' status are dramatic. The Bank of England calculates the annual too big to fail taxpayer subsidy for the world's 29 biggest banks at about \$70 billion before the crisis. Spiking to around three-quarters of a trillion dollars in 2009, today the subsidy stands at around a third of a trillion dollars annually (Haldane, (2012) p. 4).

Figure 6: Implicit subsidy for systemic institutions



Source: Bank of England calculations. (Haldane, 2012, p. 14.)

In 2010, Haldane calculated the annual subsidy to the five largest UK banks at £9 billion for 2007. But as the financial crisis unfolded, this figure rose to £52 billion for 2008 and an astonishing £103 billion in the subsequent year, though subsequent work suggests both that that amount has fallen and also that the 2009 figure may have been too high. More recent work by Bank of England researchers based on a more sophisticated methodology – refined from an original methodology proposed by Oxera – suggests implicit subsidies of between £41 and £123 billion in 2010. Haldane’s methodology has been used by the New Economics Foundation to both update Haldane’s original work and to disaggregate the numbers for the five major UK banks. These numbers are reported in Table 1.

Table 1: Implicit too big to fail subsidy for major banks (£ million)

Bank	2011	2010	2009	2008	2007
Barclays	9,982	10,143	12,958	16,134	2,574
RBS	10,934	13,190	18,923	19,317	3,261
HSBC	4,506	6,556	9,231	11,822	2,583
Lloyds	8,937	14,771	12,871	3,155	1,120
<b>Total</b>	<b>34,359</b>	<b>44,660</b>	<b>53,983</b>	<b>50,428</b>	<b>9,538</b>

Source: New Economic Foundation at <http://www.neweconomics.org/toobigtofail> and see New Economic Foundation, 2011.

As John Kay has put it:

*At present, the principal objective of regulation appears to be to stabilise the existing structure of financial institutions. The declared purposes of the new regulatory institutions in Britain are to promote stability and maintain confidence. This approach is not surprising, since the institutions of financial services regulation are mostly captured by the industry. In some cases they are directly controlled by it; more often, they are manned by people who see the industry through its own eyes because they have no other perspective. The regulatory goal is the health of the industry, which is in turn interpreted as the health of the particular firms from which it is today composed. The purpose is the achievement, not of financial stability, but of industry stability, as if these were the same thing: but since the sources of instability are to be found in the structure of the industry, accomplishment of this goal is in fact a guarantee of further, and potentially more damaging, crises.*

This gloomy prognostication prompts the search for alternatives. For it is possible to refocus some fundamental aspects of the state's role in shoring up liquidity in our financial system in such a way that its field of action is oriented around specific assets rather than specific institutions. We turn to this option in the next section.

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## 5. LIQUIDITY AND SOLVENCY

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**In law, being unable to pay one's bills as they fall due constitutes insolvency. Except, that is, for banking. Banks regularly become illiquid, which is to say that they are frequently unable to meet their obligations as they fall due.<sup>22</sup> But this is a feature of the banking system, not a bug. Banks borrow for short periods – much of their deposit base is 'at call' with depositors' money only a mouse-click away. Banks also manage their balance sheets to reduce the chances of substantial liquidity mismatches between the liquidity of their own balance sheets and the liquidity needs of their depositors. Thus some of their borrowing is for specific fixed terms, some of it for many years. Nevertheless, it is not efficient that they completely cover themselves against bank runs from their own resources because the maturity transformation and liquidity that they supply to the economy has strong 'public good' characteristics. Both liquidity and illiquidity in a market is self-reinforcing.<sup>23</sup>**

For this reason, banking practice and policy has evolved towards an arrangement in which central banks supply liquidity to banks that experience short-term liquidity problems. That liquidity is supplied against assets that the central bank judges to be sound if carried to maturity (even though such assets may currently be unsaleable at a reasonable price in a distressed market). And, so long as the central bank's judgement proves sound, its supply of liquidity to the bank thus vouchsafes the free public good of successful maturity transformation. With the central bank effectively guaranteeing the liquidity of the banking system, the public-private partnership of banking enables businesses to make productive investments for the short-, medium- and long-term future, with those lending to them each doing so for periods they find convenient after which they pass the burden onto others.

In the absence of mishaps this lowers costs for all concerned. But a moment's thought reveals the problem. The only incontrovertible evidence of solvency is liquidity – the meeting of obligations as they fall due. But though it cannot be incontrovertible, this distinction between the solvency and liquidity of an asset is fundamental to central banking (as indeed it is fundamental to the provision of virtually all liquidity services) and is reflected in institutional design. Thus the operational function of central banking is focused on the provision of liquidity with the regulation of banks vouchsafing solvency or the adequacy of bank assets to the ultimate meeting of liabilities – even in the absence of the liquidity to do so on time. Indeed, in an increasing number of countries, this distinction between the requirements of liquidity and solvency is reflected in the demarcation between institutions with the central bank providing banks with liquidity with some other organisation – or some subsidiary of the central bank – administering prudential regulation to vouchsafe bank solvency.

As elegant as it is, this easy distinction courts moral hazard and systemic risk. Big banks are complex to regulate.<sup>24</sup> Central banking and bank regulation will continue to wrestle with this dilemma with the two competing considerations being the cost of supplying liquidity to the economy as a public good on the one hand and the risk of moral hazard and the bailouts to which it can lead on the other. The additional benefit of more forcefully avoiding moral hazard is that a more conservative approach to providing banks with liquidity would improve competitive neutrality between banking and shadow banking. After the trauma of the global financial crisis and its aftermath, the great ongoing slowdown, it seems reasonable to err on the side of reducing moral hazard and increasing competition between banking and shadow banking.

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In fact, the crisis pre-empted a change of approach from central banks around the world. As Haldane notes, 'during the course of the crisis, there has been a radical, if underplayed, rethink of the Bank (of England's) approach to supplying liquidity to the banking system. This allows banks to access the Bank's facilities against a much wider range of collateral' (2012, Bank, p. 10). The Bank of England is conservative in its lending, applying appropriate 'haircuts' to the amount it will lend against collateral. As Kearns and Lowe (2008, p. 159) stress in defence of the Australian central bank, the Reserve Bank of Australia's similar actions, this departure was in no sense 'bailing out' the banks but was rather reducing its own call on the most liquid assets at a time when liquidity was at a premium in the private sector and in so doing reducing 'the amplitude of swings in the price of liquidity... without taking significant risks'. Incipient in this reasoning is the prospect of taking the same approach in more normal times. Kearns and Lowe (2008, p. 161) go on to advert with some sympathy to the view that:

*...in principle, all assets on the balance sheets of financial institutions should be eligible, subject to the risks to the central bank being adequately addressed. By accepting all assets, illiquidity premia that exist because of a lack of market infrastructure or market turmoil would be reduced, and the banking system would be less susceptible to liquidity crises, with both effects potentially increasing welfare. According to this perspective, the risk issue is best addressed, not by the central bank refusing to deal in some asset classes, but by setting appropriate haircuts, advancing fewer funds against more risky assets.*

Certainly such a view raises the spectre of a pool of assets becoming available to increase the stock of liquidity. Further, where such assets are held by non-bank financial institutions, it is hard to see why they should not be permitted to provide liquidity services as banks do today, with the central bank standing behind them assisting them in providing that liquidity. If the central bank took this more open approach with only super-collateralised loans it would augment liquidity – and the competitiveness of the market for providing liquidity – at an exceptionally low risk of loss to itself or of increasing systemic risk. And in the age of the internet, such preparedness need not stop at non-bank financial institutions, thus intensifying competition in banking services, but can also stretch to providing services directly to British individuals and businesses.

### **A new approach to mediating the liquidity/solvency distinction**

If it is possible to support liquidity through the banking system by identifying assets on bank balance sheets that are solvent if temporarily illiquid, it is also possible to do this in a way that is more broadly based, more systematic and more competitively neutral. Regulators or central banks could identify a universe of common assets that were 'super-solvent', which is to say involve negligible risk of loss if held to maturity. In this paper, it is proposed that a prime residential mortgage with a loan to valuation ratio of less than – say – 60 per cent meets this criterion, though, consistent with the macro-prudential principles, where one might draw the line between safe and super-safe assets might vary through the cycle. Be that as it may, such assets are immensely safe requiring both falls in property prices of greater than 40 per cent and some loss of income from the borrower to generate any risk of loss. This is fairly obviously substantially safer than the A1 and lower rated British banks that the Bank of England currently lends to.

One could reconfigure a substantial portion of the central banking system's support of liquidity around the support of such assets, rather than supporting such assets only on condition that they were held on the balance sheets of banks in need of liquidity. (The expression 'central banking system' is used here so as not to prejudge the precise institutional configuration that would be best suited to implementing the banking architecture proposed in this paper. The government institution supplying guarantees and/or lending against super-solvent assets could be the central bank or another institution established at arm's length from government for the purposes of doing so.)

The central banking system could offer to insure such assets or a similarly safe pool of assets. The insurance premium would be at a cost-reflective rate set at arm's length from government that met the (very small) expected cost of the risk being underwritten. Once that fee had been paid, the asset would be government guaranteed and would accordingly acquire the credit quality of a bond. (Indeed, with three sources of recovery – the creditor, the disposal of the collateral and the government as guarantor of last resort – the asset is arguably safer against default than bonds which have only the latter source of security.)

The advantages of governments providing such a guarantee are manifold. First, the guarantee exposes the government to losses only after the market has fallen very substantially. It is likely that, in circumstances where assets had fallen by the amount envisaged – say 40 per cent or so – a private insurer could well be insolvent. Further, the prospect of private default could undermine demand for the product where it was privately provided. Second, the credit and liquidity enhancement provided by the government is done in a manner that is competitively neutral between sources of finance thus maximising competition between banks and firms in the shadow banking system.

Perhaps most importantly of all, it makes sense for the government to offer explicit insurance for such assets because the circumstances in which it would be called upon to make good on its premiums are circumstances in which the government's implicit guarantee of the financial system would be drawn on in any event. As we have just witnessed, in such times, the state is invariably drawn into guaranteeing the liabilities of major players in its financial system. Yet where such guarantees are implicit they are unpriced, which is inequitable as taxpayers get drawn into bailing out bank funders. It is also inefficient because the margins at which banks provide their products are not reflective of the risks they are drawing the community into. And as we have seen, this implicit subsidy is especially damaging because it is enjoyed disproportionately by large banks judged too big to fail, something that has its own powerfully chilling effect on competition within banking.

The largest super-solvent asset class would be residential mortgages with low loan to valuation ratios (LTVs). Below a certain LTV ratio – which has admittedly fallen since the advent of 'Funding for Lending' – further reductions in LTV do not lead to falling interest margins. Yet margins are way above other 'risk free' assets such as gilts. This is particularly important at times such as the present, where there is huge demand for low risk liquid financial assets and when policy is up against the zero lower bound of interest rates (see Section VI below).

Providing such guarantees would remove barriers to entry and thus enable anyone to provide the commodity services of writing a super-solvent mortgage providing they verifiably met appropriate standards. In fact what is proposed already occurs in Canada under the auspices of the Canada Mortgage and Housing Corporation (CMHC) which guarantees housing loans, though it guarantees much riskier loans than is proposed here. For mortgage insurance on individual loans with LTV ratios of less than 65 per cent are around 0.5 per cent.<sup>25</sup>

We are unaware of any official figures indicating the proportion of British mortgages that are super-collateralised as we have defined it, but based on discussions with banks and experience in Australia, we think a reasonable estimate is that well over half of all mortgages are super-collateralised and that, because super-collateralised mortgages tend to be older and smaller, the total lending represented by such mortgages is around half of all mortgage lending.

### **Box 6: CMHC guaranteed loans and the efficiency of funding super-collateralised loans**

The CMHC's role as a guarantor of Canadian home loans means that margins on such loans are typically amongst the lowest amongst comparable countries (RBA, 2010, p. 16). But for loans that have the credit quality of government bonds, if not the liquidity, it is remarkable that margins are not much lower. Margins on Canadian home loans are typically over 100 basis points.

We can expect that the profit margins on many of these loans represent the excess margins fuelled by the funding cost advantages of larger banks. But the margin also funds all the real activities necessary for the private sector to move funds from savers to borrowers. The interest margin on CMHC-guaranteed home loans in Canada must fund a vast series of market connections which begin with individual lenders and end with individual borrowers but which must be aggregated and disaggregated as they pass through the banking and wider financial systems, often between different firms which must bear the costs of due diligence on each transaction. Such costs include marketing, account management, audit, custodianship, insurance, legal costs and the management of liquidity.

Compare this with the central banking system which, as an integrated entity and the issuer of legal tender, can simply issue liquidity against an asset up to the point at which it ceases to regard it as presenting negligible credit risk. The potential efficiency gains over this being done by multiple firms within a market are large.

### **Competitive neutrality in super-solvent lending**

If the central banking system lent against super-solvent prime mortgages, it would be important to do so in a way in which the costs of specific services were charged for at rates that reflected risks and costs, so that private service providers could participate to the maximum extent desired by the consumers of the service – home borrowers. Accordingly, individual home borrowers with super solvent loans should be able to get a government guarantee on their mortgage on paying the relevant premium but so too should banks on the same mortgages. The lack of credit risk on the insured loan would then enable banks to secure cheaper funding which they would be free to pass on to their customers. They could also borrow those funds directly from the central banking system – as could their customers. Because banks could do this en masse, the transactions costs they would face in dealing with the Bank of England should be somewhat lower than individuals, which may enable banks to continue to provide the account-keeping services necessary to maintain those mortgages even though the underwriter of the loan would be the Bank of England. However, the margins they could charge for doing so would be a fraction of the margins charged now.

In its mature form, the arrangements proposed here would not just be available on loans with low LTVs but would be available on that part of a larger loan that was super-collateralised. Thus, where a borrower sought to fund a 75 per cent LTV loan, it would be able to raise the first 60 per cent from the central banking system as the most senior debt against the mortgage with what would effectively be a second mortgage for the next 15 per cent of the value of the property.<sup>26</sup> This would be a riskier proposition than is currently the case because the less senior tranche of lending would not have the super-collateralised lending to cross subsidise it and to reduce its risk. With such cross subsidies being removed, one would, therefore, expect the cost of that debt would rise somewhat, although it is likely much of the lost cross subsidy would be offset somewhat from lower profits for commercial banks which would be doing much less underwriting of loans, having been disintermediated by the central banking system.

Just as in the case of super-collateralised loans, commercial banks and other lenders would be able to 'package' this structure to the borrower, with the borrower facing a service provider which would access a government guarantee and/or government borrowing up to the point at which 'super-solvency' was exhausted and passing as much of the cost savings from doing so onto the borrower as they chose. Because other financiers could do the same, and the home borrowers themselves could arrange the borrowing as first and second mortgages with separate providers, competition would be greatly enhanced with net interest margins over the whole loan falling accordingly.

## Recommendation Two

The central banking system should sell mortgage indemnity guarantees to and lend against super-collateralised mortgages. In each case such services should be provided by a government agency at arm's length from the government of the day and should price its insurance and lending in a manner that reflects the costs of supply with allowance being made for the bearing of risk and transactions costs. The demarcation between those loans that are super-collateralised and those that are not should be allowed to vary as determined by macro-prudential principles.

## 6. THE STATE WE'RE IN

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*“Official interest rate changes are intended to influence short rates on money market instruments and retail products, such as deposit accounts and mortgages, and complete pass-through is often simply taken for granted.”*

Mizen and Hofmann, Bank of England (2002) Abstract.

To this point, this paper has addressed the micro-economics of banking. We have argued that a financial sector reconfigured in the form proposed would operate more effectively and efficiently. Risk would be more transparently handled and better allocated so as to play to the relative strengths of public and private endeavour in our economy. Prices would also be more reflective of costs with the public sector charging fees and margins that were cost reflective and competition driving prices closer to true costs in the private sector. The arguments set out above thus reveal ‘a case for all seasons’, as it were. A more efficient and effective financial sector would be beneficial for Britain’s economy whether it was in sickness or in health.

However, in this section we outline how the proposed system would operate in the current circumstances for two reasons. Firstly, those circumstances are sufficiently unusual that the policies have their impact in unusual ways that require explication. Secondly, the cost and margin reducing aspects of the proposed arrangements have an additional benefit in the current circumstances. In addition to the micro-economic dividends outlined above, they would enable traditional monetary policy to operate effectively closer to the zero lower bound of Bank Rate. The result would be a powerfully expansionary monetary stimulus to Britain’s macro-economy. Thirdly, it would be possible to combine the policy outlined with quantitative easing. If this path were chosen, not only would it have additional powerful expansionary effects but it would generate ongoing government revenue.

### The zero lower bound

As Keynes’ notion of the liquidity trap showed, the zero lower bound of monetary policy is a phenomenon of great macro-economic significance. Once Bank Rate falls to zero it becomes impossible to apply monetary expansion using traditional monetary policy instruments. Though in the presence of inflation it is possible for the central bank to target negative short-term real interest rates, it cannot engineer a situation where bondholders receive negative nominal interest rates or pay the government to take money off their hands in any volume. For they can always hold cash which bears a zero interest rate. In these circumstances, authorities may pursue quantitative easing with the goal of reducing interest rates on other assets, including longer-term bonds.

However, even with Bank Rate at or close to zero as it has been in the UK since March 2009, the economy generally experiences interest rates well above this rate for two reasons. The first is bank margins whilst the second is the way in which deposit rates have defied their traditional relationship with Bank Rate. These two subjects are discussed in turn.

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## Bank margins and the transmission of monetary policy near the lower zero bound

The central arm of monetary policy is the manipulation of Bank Rate. This governs the cost of short-term credit to banks which in turn affects the cost of credit to bank customers in the wider economy. It follows that the extent to which banks pass through such changes to their customers and the speed with which they do so is an important determinant of the efficacy of monetary policy at any given time. Thus it is not surprising to read Leuvensteijn et al.'s (2013, p. 1359) finding that:

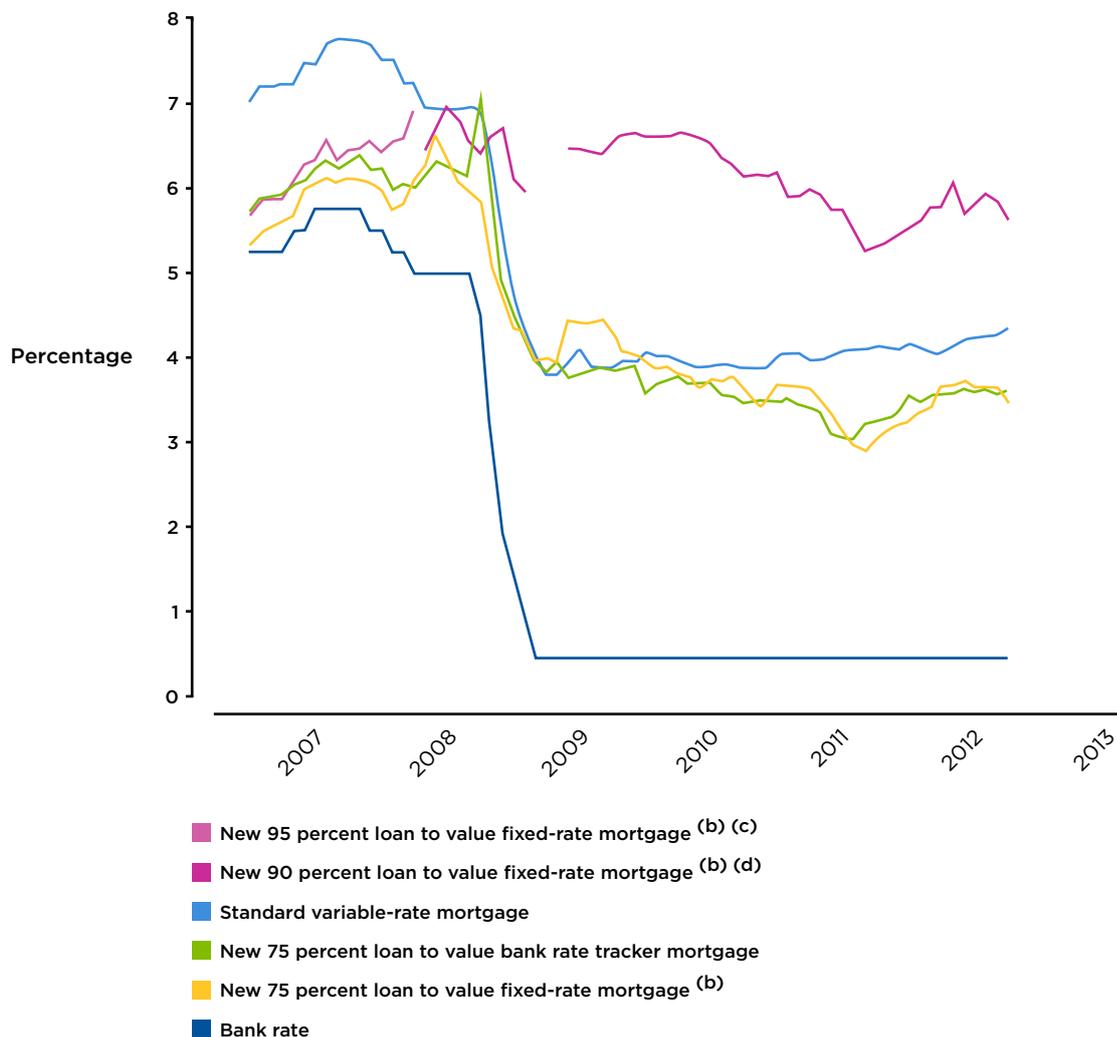
*stronger competition implies significantly lower spreads between bank and market interest rates for most loan market products, in line with expectations. This result implies that stronger competition causes both lower bank interest rates and a stronger pass-through of market rate changes into bank rates. Our findings with respect to the loan market rates have important monetary policy implications, as they suggest that measures to promote competition in the European banking sector are likely to render the monetary policy transmission mechanism more effective.*

This is just one way in which micro-economic efficiency facilitates better macro-economic performance. Nevertheless, the point is not hugely significant where Bank Rate is in the 'normal' band in which it was operating in the years before the crisis. Where Bank Rate is comfortably greater than the margin on bank's loans – as it was before the crisis – officials can lower Bank Rate more aggressively than otherwise to compensate for incomplete pass-through or Bank Rate cuts. Thus if the Bank of England wished to engineer a rate cut of around 1 per cent for bank customers, but it feared that banks would capture a fifth of any rate cut for themselves as higher margins, it could cut Bank Rate by 1.25 per cent and achieve the same macro-economic effect though there could be some modest microeconomic losses from higher margins. However, the option to do this becomes progressively attenuated as Bank Rate moves towards zero. And so it has proven.

More importantly still, at the lower zero bound of monetary policy, the rates faced by private sector borrowers never fall below a floor of banks' margins. This may be efficient where those margins fund risk taking. But as we have argued, super-solvent or super-collateralised loans are virtually risk-free, and certainly are as risk-free as bonds once guaranteed by the government as proposed here. Accordingly, the proposals set out here offer the means of bringing the cost of a large proportion of home lending down to the risk-free Bank Rate plus some appropriate margin and/or fees to fund account handling and other transactions costs.

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Figure 7: Bank Rate and mortgage interest rates(a)



(a) Sterling-only end-month average quoted rates. The Bank's quoted interest rates series are weighted averages of rates from a sample of banks and building societies with products meeting the specific criteria (see: [www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household\\_int.aspx](http://www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household_int.aspx)).

(b) Two-year fixed-rate mortgage.

(c) Series has not been published since April 2008 as fewer than three products have been offered in that period.

(d) Series is only available on a consistent basis back to May 2008, and is not published for March to May 2009 as fewer than three products were offered in that period.

Source: Bank of England, Inflation Report, Nov. 2012, Chart 1.11, p. 16. <http://www.bankofengland.co.uk/>

The initial effects in the market would be similar to, but much more dramatic than, the results of the government's recent quantitative easing. Competition would dramatically intensify for low LTV loans driving margins way down. [publications/Pages/inflationreport/ir1204.aspx](http://www.bankofengland.co.uk/publications/Pages/inflationreport/ir1204.aspx) accessed on 25 February 2013.

### Box 7: The Funding for Lending Scheme

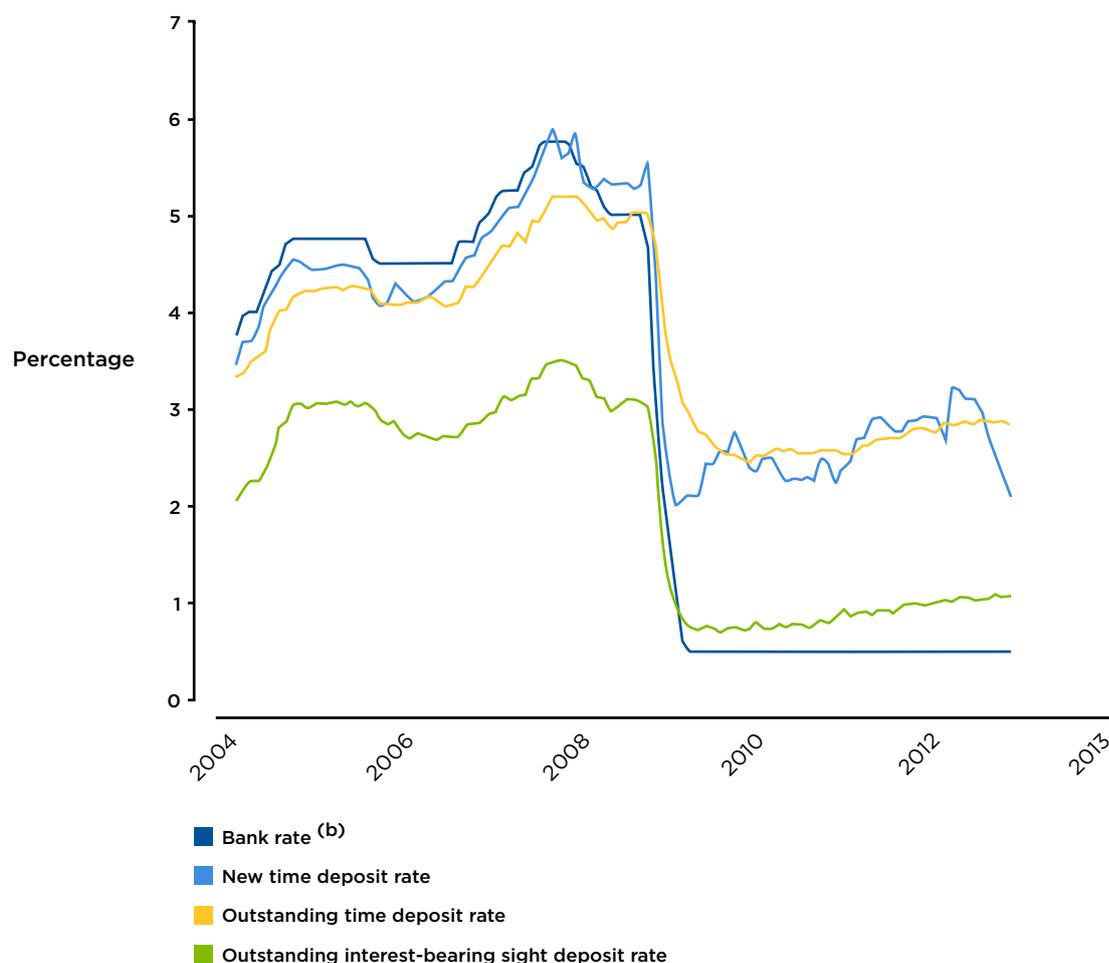
The Funding for Lending Scheme (FLS) seeks to increase borrowing by subsidising commercial banks that expand their lending. Launched on 13 July 2012, the Bank of England provides credit to banks and building societies at below market rates providing they expand lending to households and business. The scheme has produced the largest falls in interest rates on the safest products with the most aggressive lenders reducing rates on loans at 60 per cent LTVs falling by 48 basis points. Loans at higher LTVs have fallen by much less – around nine basis points.<sup>27</sup>

Implemented at a time when lending was expected to contract, the FLS has presumably stimulated lending compared with whatever would have happened in its absence, but the results appear to have been modest.<sup>28</sup> As might have been expected during an economic slowdown in which there is considerable excess capacity in the economy, though the scheme has lowered some business lending rates, this has spurred little additional demand for business lending. The scheme appears to have been more successful in stimulating lending for housing.<sup>29</sup> There, falling market rates along with the FLS recently saw some products fall to within around 190 basis points of Bank Rate on super-collateralised loans.<sup>30</sup> The arrangements proposed here would see those margins cut to well below half this amount.

### Deposits

As Bank Rate fell following the crisis and heading into the Great Recession, bank competition for deposits has meant that the margin between new and outstanding time deposits and Bank Rate has fallen by much less. To some extent and during the earlier part of the post crisis period, this may have been a reflection of the yield curve and market expectations that Bank Rate may rise in the future. However, even sight deposit rates have gone from sitting around two percentage points below Bank Rate to sitting around half a percentage point above Bank Rate reflecting lender's competition for deposit funding.

Figure 8: Household effective deposit interest rates and Bank Rate(a)



(a) Monthly average of UK-resident MFIs' sterling household deposit rates. The Bank's effective interest rate series are compiled using data from 24 UK MFIs.

(b) Monthly average.

Source: Bank of England Inflation Report, Chart 1.15, p. 16, February 2013, accessed on 23 February 2013, at: <http://www.bankofengland.co.uk/publications/Pages/inflationreport/2013/ir1301.aspx>

In an environment such as this, governments offering to pay the cash rate minus some margin for costs would be offering lower rates than banks. In this environment, offering more convenient NS&I accounts with more extensive integration with the payments system will provide some benefits for those who wish to avail themselves of them, but would be unlikely to lead to any major expansion in the service. Indeed, under the reasoning proposed in this paper, NS&I would offer lower interest rates on its sight deposits than it does now, though quantity constraints on its acceptance of deposits would be lifted. In more normal times, NS&I or some similar institution would offer the British public sight deposit rates that sat at Bank Rate less a margin to cover the cost of administration. In most circumstances this would lower the cost of meeting public debt interest costs.

In more normal times the government's sight deposit rate is likely to be above that currently offered by the banks. This would produce a 'narrow banking' system as proposed for instance by John Kay, but it would be government run with absolutely safe deposits which funded government debt and super-collateralised home loans. To compete, banks and other deposit takers would have to offer higher deposit rates on less safe products which would fund the less senior tranches of home loans and other credit. One would expect the cost of this credit to rise as the cross subsidy it receives from super-collateralised loans was unwound. This repricing of riskier debt would reduce the economy's appetite for such debt improving macro-economic stability.

If such outcomes were regarded as unsatisfactorily disrupting the status quo, access to NS&I accounts could be rationed as now, although it would be more efficient simply to lower sight deposit rates with NS&I to some level commensurate with sight deposit rates in the private market.

### The prospect of funding the scheme through quantitative easing

Governments could finance the arrangements proposed in this paper within the traditional disciplines of fiscal policy by borrowing money which is then re-lent to super-collateralised mortgagees. (The development of NS&I proposed above would assist in this process.) However, they could also be funded through quantitative easing.

With Bank Rate close to its zero bound, the Bank of England has described its current 'quantitative easing' policies – its creation of new money to purchase high-quality assets like gilts from private investors such as pension funds and insurance companies – as 'designed to circumvent the banking system'.<sup>31</sup>

Yet it has also found itself pursuing quantitative easing through the banking system with the Funding for Lending Scheme. This has lowered lending rates, but it is unclear how much of the benefit is being passed on and how much is being captured by banks themselves. FLS appears to have brought down the cost of super-collateralised home loans somewhat – by up to 50 basis points in some cases. But this has been nowhere near enough to make large inroads into the obstacles that bank margins impose on the operation of monetary policy near the zero lower bound.

In addition to any conventional financing of super-collateralised mortgages through fiscal policy, the central banking system could also fund mortgages by the creation of new money as it is doing with existing quantitative easing exercises. Where it does so, this would mostly displace existing money previously created within the fractional reserve banking system. However, the lower interest rates charged on the super-collateralised portion of mortgages would stimulate borrowing. It would also generate government revenue as borrowers' interest payments were paid to the central banking system rather than to banks and their funders. Unlike other quantitative easing measures, the quantitative easing described here does not involve purchasing interest-bearing assets, which can be expected to suffer capital losses for governments as interest rates rise to more normal levels. To the contrary, as recovery-underpinned Bank Rate increases, this would increase government revenue as the receiver of interest on the super-collateralised loans it has made.

It is beyond the scope of this paper to elaborate in detail, but under the new regime proposed here, to the extent that the central bank's additional lending against super-collateralised mortgages is financed by quantitative easing, the relationship between monetary and fiscal policy would change in important ways. Changes in Bank Rate would generate substantial corresponding changes in government revenue. If these were not sterilised from the domestic economy - with corresponding changes in the fiscal stance possibly involving sterilisation via foreign financial markets - they would dilute the macro-economic effect of Bank Rate changes. Once recovery is underway, it may also be necessary to soak up additional liquidity via changed reserve requirements for commercial banks or by 'fiscalising' any central bank money creation with additional government borrowing. Further work would be necessary to sketch out alternative scenarios in this regard.

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## 7. CONCLUSION

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**Public policy analysis permits few hard and fast conclusions. The banking system is an immensely complex apparatus which ministers, or should minister, to the needs of an economic system that is orders of magnitude more complex again. In such a world, it is reassuring when a particular policy conforms with several principles by which economic reform and competitive dynamics have been guided in recent decades.**

Banking is an information technology business. It is also a ‘commodity’ business in the sense outlined at the outset of this paper, in which routines are well documented and understood and fundamentally common across the industry. And yet margins do not reflect this and except recently in the face of direct subsidisation by the Funding for Lending Scheme, have shown little sign of coming to reflect it. The degree of risk embodied in super-collateralised loans, which make up a substantial portion of the banking sector’s assets and around half of its mortgage assets, is exceptionally low and can be removed by the state guaranteeing such assets for a very low fee. It follows that margins on this part of banking are substantially higher than they would be in a truly efficient market and further, that such margins are swelling bank returns and/or cross-subsidising riskier activities of banks.

Of course, it will be argued by some that even if this is the case, we should let the market sort it out, that we should not involve governments in doing so. However, modern banking is necessarily a public-private partnership in which the government and private competitors are deeply enmeshed. The government is not only the architect of our monetary system. It is the participant at its apex. It determines how legal tender is denominated and generated. Its financial obligations – its bonds traded in the bond market – operate as benchmarks and indicators for the money market and as an anchor, a source of risk-free investment and liquidity for banks and other investors. Its central bank is the ultimate guarantor of liquidity for commercial banks and, in consequence, prudential supervision is imposed to address the moral hazards that result from such privileges.

In such circumstances the policy task should never be to simply minimise the government’s role in some crude way any more than one would minimise the government’s role in the provision of law enforcement. Indeed, one might argue that such an approach helped generate the financial crisis that plunged us into our current woes. The challenge is rather, to optimise government’s role alongside the role of private endeavour so as to play to the strengths of each. In this regard this paper proposes that the role that falls to the public sector by default – the vouchsafing of liquidity and the bearing of systematic risk – be better defined and that a larger portion of it be priced transparently via cost-reflective insurance premia, interest margins and/or fees for its services. This leaves the private sector to compete more vigorously where it has an advantage – in understanding and bearing the credit risk of individual clients. As Leland and Pyle (1977), and Diamond (1984) have argued, banks add value by choosing appropriate borrowers and monitoring their behaviour.

Another critical principle is competitive neutrality. The aim is to make government involvement as neutral as possible between technologies, business models and levels of vertical integration and indeed between business and individuals. By removing some of the government’s implicit guarantee of banks and instead providing explicit guarantees

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on super-collateralised assets which guarantees can then be priced, the proposals set out above would improve competitive neutrality between banking and its non-banking competitors which finance lending through the markets.

This principle becomes more important when new technologies are disrupting old business models and making new configurations of service delivery possible. Today, just as national transport providers sell tickets directly from their national operations to customers, bypassing local branches and/or agents, just as music and book publishers sell content directly to consumers, so the internet is disrupting banking in a similar way. Increasingly, bank customers' needs are being met online via services provided from national hubs rather than from local branches. And the same technology provides the means by which central banking services can be provided to British individuals and businesses as well as to banks.

Modern central banking evolved at a time when service provision in local branches was integral to providing banking services. In this world it made sense for the central bank to 'wholesale' its liquidity services, as it were, with the banks then 'retailing' it to their customers via their branches, passbooks and cheque accounts. It was impracticable for central banks' services to be provided to individuals. For many services, though not for all, the internet changes all that.

As Shiller (2008) points out, the centrality of government to banking has meant that many of the most important financial innovations in modern banking have fallen to governments – from Post Office savings accounts to Girobank, both of which involved building on existing governmental infrastructure. But one innovation stands out, for it offers the perfect precedent for what is proposed here. To the objections of some, the Bank of England's notes gradually acquired a monopoly of bank note issue in England from 1844 when the Bank Charter Act removed new banks' note-issuing rights and prevented existing note-issuing banks from expanding their issue. The last private bank note in England was issued in 1921 by Fox, Fowler and Company when it was acquired by Lloyd's.

Today bank notes entail a liability of the Bank of England (itemised on the banknote), which can then be transferred between individuals and businesses as a means of settlement. Importantly this transfer is instant and involves no intermediary and thus is subject to no counterparty risk. Bank of England notes give individuals and businesses the physical analogue of what commercial banks have, which is to say exchange settlement accounts by which they can trade the ultimate settlement asset in the UK – liabilities of the Bank of England. Thus, where one bank could settle with another through their exchange settlement accounts, individuals and business could make final settlement physically by exchanging the liabilities of the Bank itemised on the bank notes they physically transferred.

Why did this method of physical settlement come to replace all private bank notes? Because the involvement of parties other than the guarantor of the monetary system – the central bank system – simply injected additional complexity and counterparty risk into the transaction without commensurate gain. Remarkably, more than 90 years since the Bank of England acquired its monopoly over bank notes in England, there exists no simple and easily accessible electronic analogue of this process. Yet, as Section III has argued, it could and should be established. Section IV has argued that likewise, just as governments lend to banks to meet their liquidity needs, that the technology exists today to do the same for individuals and businesses with super-collateralised loans and that doing so would be the appropriate vehicle to 'commoditise' such lending so that the margins charged for it are commensurate with the costs of its supply.

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In each case the relevant infrastructure would be straightforward to establish. National Savings and Investment already provides individuals with access to government retail savings vehicles and it could facilitate payment between accounts. Likewise the services necessary for governments to guarantee and fund super-collateralised mortgages could be sub-contracted to existing or new local and/or national service providers in home lending and its supplier industries such as mortgage managers, mortgage broking, valuing and conveyancing.

Further, though they involve substantially greater government involvement in areas of banking that involve the least risks and are most easily commoditised, the proposals here expand government service in the provision of basic banking infrastructure which governments already provide to banks. Thus the paper proposes facilitating payments and also providing liquidity on satisfactory provision of extremely safe levels of collateral. It does not propose the establishment of a government-owned bank to compete with private banks. To do so would involve governments in the provision of services such as local bank branches, which can be competitively and competently provided by the private sector. One wonders what the point of government ownership of assets is if their managers are charged to act in essentially the same way that private businesses act.

In summary, the proposals outlined above:

- Use existing infrastructure.
- Achieve their objectives simply by enabling government agencies to compete in the marketplace rather than by preventing or impeding private service provision which competes with government agencies.
- Do not involve subsidies – though on account of governments being at the apex of the monetary system, government agencies enjoy some natural advantages over private competitors. In this way efficiency is promoted and if governments wish to influence equity outcomes they should do so transparently.
- Preserve the important principle that government agencies' commercial dealings should be at arm's length from the government of the day.

They conform to these principles but they also represent a logical development of the historical trajectory of the central banking system in precisely the way that the increased issuance of central bank notes came to extend central banking services to individual members of the British public. Extending central banking services to the public over the internet as proposed here will lead to ongoing micro-economic benefits of the kind that are being forged in many industries being disrupted and disintermediated via the internet. But in the UK's current circumstances they will also lead to a substantial relaxation of the 'lower zero bound' of monetary policy and so engineer a new front on which monetary expansion can underpin an economic recovery.

All this from simply building the means by which individual Britons can access the central banking services already provided to British banks.

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# ENDNOTES

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1. <http://www.johnkay.com/2009/09/15/narrow-banking>
  2. In what follows, we refer to the 'central banking system' to avoid prejudging the precise institutional configuration best suited to implementing the banking architecture we propose. Suffice it to say that some or all tasks could be provided by the Bank of England but even here that might be subject to side agreements and guarantees provided by other arms of government – as is the case with the Bank of England's quantitative easing operations today. It may also be expedient to provide some or all services via other government agencies such as National Savings and Investment (NS&I) which already provides services to the public.
  3. Or in some circumstances Bank Rate less 25 basis points (Bank of England, 2010, p. 5).
  4. Bank of England 'Quantitative Easing Explained.' Accessed at: <http://www.bankofengland.co.uk/monetarypolicy/Pages/qe/default.aspx> on 16 September 2012.
  5. Mr. Benjamin Hawes, a Whig politician, in the House of Commons on 13 June 1844, during the second reading of the 'Bank of England Charter Bill'. HC Deb 13 June 1844, vol. 75 cc777-871, accessed at <http://hansard.millbanksystems.com/commons/1844/jun/13/bank-charter-the-currency> on 10 February 2013.
  6. <http://www.johnkay.com/2009/09/15/narrow-banking>
  7. <http://krugman.blogs.nytimes.com/2010/01/21/glass-steagal-part-deux/>
  8. Figures for April 2013. Source: ONS: <http://www.ons.gov.uk/ons/rel/psa/public-sector-finances/april-2013/stb---april-2013.html>
  9. Data accessed 3 June 2013. Source: ONS: <http://www.ons.gov.uk/ons/rel/psa/public-sector-finances/april-2013/stb---april-2013.html#tab=Net-debt-and-net-borrowing--time-series> & series YBHA in <http://www.ons.gov.uk/ons/datasets-and-tables/downloads/xls-download.xls?dataset=pn2>, HMT: <http://www.hm-treasury.gov.uk/d/201211forcomp.pdf> & <http://www.hm-treasury.gov.uk/d/201304forcomp.pdf>, OBR: <http://budgetresponsibility.independent.gov.uk/wordpress/docs/March-2013-EFO-press-notice-final-45345345.pdf>
  10. <http://www.investinginbonds.eu/Pages/LearnAboutBonds.aspx?folderid=464>
  11. See: 'BTPs - Italian Government Bonds.' At: <http://www.investinginbonds.eu/Pages/LearnAboutBonds.aspx?id=6274>. Note it is possible to purchase 'zero-coupon' gilts in the UK market, but only by purchasing instruments from third parties that have 'packaged' synthetic zero-coupon bonds from 'strippable' bonds from which coupon payments have been stripped. <http://www.dmo.gov.uk/index.aspx?page=Gilts>AboutGilts>.
  12. Source: Kirkaldy (1921: 214-5); Mallet and George (1929: 392-393)
  13. See <http://www.nsandi.com/media-centre-nsi-withdraws-savings-certificates-sale>
  14. This would be consistent with a broader move to a 'floor system' of managing monetary policy, (see Keister et al., 2008), though this is beyond the scope of this study.
  15. The way to maximise convenience and minimise cost may be to enable banks and other private sector providers to access an application programming interface (API) with NS&I.
  16. Often regulation reinforces existing industry practices and makes it difficult, if not impossible, for competitors to vary basic routines. Even in the absence of explicit regulation of these points, of which there is plenty, 'accepted industry practice' becomes an important means by which bankers protect themselves from subsequent claims of unfair, irresponsible or negligent lending.
  17. That is loans against good collateral to credit-worthy borrowers whose income is sufficient to service them.
  18. Such loans also have the benefits of 'seasoning' which is to say several years of payments history which the market takes as an additional benchmark of credit quality.
  19. Very recently the Bank of England's 'Funding for Lending' programme has led to some margin reductions as lenders have competed to fund super-collateralised loans. Their strategy is to minimise the additional risk they take on while expanding their own lending to qualify for funding discounts.
  20. Lack of integrity in the US securitisation market was an important trigger for the global financial crisis, but that fact alone should not damn it per se any more than the failure of one bank demonstrates the inadequacy of all banking systems. Done properly, securitisation is a sound method of finance with unique strengths with an important role to play in any sophisticated financial system.
  21. In Boone and Johnson, 2010, p. 259.
  22. As discussed earlier, one way around this in a legal sense is for trading banks to sell their assets to the central bank – rather than lend them to it – with the commercial bank retaining the right to repurchase that asset at a pre-agreed price. This arrangement produces the same payments between the parties as would be produced by a loan against collateral and its repayment with interest.
  23. Thus, where a market is liquid, it becomes more attractive for others to buy and sell in that market, which adds to its liquidity, and contrariwise, as the market loses liquidity, it becomes less attractive to traders whose departure exacerbates the original loss of liquidity.
  24. Recently the Bank of England has called for less complexity in the emerging Basel III standards for supervising banks. See for instance: <http://www.bobsguide.com/guide/news/2013/Jan/22/basel-iii-too-complicated-boe-policymaker-claims.html>.
  25. See: [http://www.cmhc.ca/en/co/moloin/moloin\\_005.cfm](http://www.cmhc.ca/en/co/moloin/moloin_005.cfm). Though this figure varies depending on circumstances (Correspondence with CMHC).
  26. Clearly there would be considerable savings in administration and transactions costs if there were standard terms in mortgages enabling alternative lenders – including the central banking system – to, in effect, establish both first and second mortgages from the one set of legal documents and to reassign such rights between each other when consumers wished to change their financial services provider.
  27. <http://www.thisismoney.co.uk/money/mortgageshome/article-2239914/Mortgages-offer-leap-17-Funding-For-lending-launch.html>
  28. <http://www.guardian.co.uk/business/nils-pratley-on-finance/2013/mar/12/funding-for-lending-flop>
  29. <http://www.ft.com/intl/cms/s/0/ff679b2c-8a7b-11e2-bf79-00144feabdc0.html#axzz2NhrMfZga>
  30. <http://www.thisismoney.co.uk/money/mortgageshome/article-1687576/What-mortgage-rates.html>
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