



# **BANKING, FINANCE AND INCOME INEQUALITY**

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## **SUMMARY**

Within society, a moderate degree of inequality is considered to provide a stimulus to economic progress and general prosperity. When taken to extremes, however, the forces of envy and fear that it harnesses can undermine the system of norms and sanctions regulating social stability. This study presents a framework mechanism for understanding how two potentially self-reinforcing circuits of money and wealth on the one hand and debt and hardship on the other are linked, through behaviour motivated by envy and the desire to emulate peers, to exacerbate inequality, and how the resulting anxiety and fear feeds through to policy choices which can mitigate or magnify the problem. Key interactions within the mechanism are identified as is the nature of the causative connection between credit creation and asset prices and the importance of social norms affecting remuneration and desired levels of consumption. Discussion of the framework draws attention to the importance of moral authority and institutional design in securing stable social and economic development.

## INTRODUCTION

This study forms part of a wider project to raise awareness of the impact that the current banking and financial system has on inequality, indebtedness and social injustice.

According to the OECD the gap between the incomes of the most highly paid individuals in society and the rest has been increasing markedly over the 30 years since 1980.<sup>1</sup> The aim of the present study is to establish a framework for investigating the reasons for this. This will help identify policy targets for effective remedial action. The study has drawn on the published work of many research teams to formulate a causative mechanism that generates extreme income inequality. This paper presents the overall picture that emerges from that work. It opens with a brief outline of the importance of inequality to the dynamics of society. This is followed by the presentation and discussion of a framework mechanism for understanding the growth of income inequality, broken down into four component circuits and linkages which are described in turn. The paper concludes by considering pointers to further work suggested by the framework. The publications drawn on are cited and full references are given at the end of this paper, but the underlying research is not discussed in any detail.

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## WHY DOES INEQUALITY MATTER?

Many academics and commentators have been exploring the links between income inequality and economic performance in the run-up to and especially the aftermath of the global financial crisis. Andrew Berg and Jonathon Ostry, two senior staff in the IMF's Research Department, measured the impact on economic growth of a range of different factors commonly felt to be conducive to economic performance.<sup>2</sup> They found that once a country had entered a period of growth, income distribution was by far the most important factor associated with how long that growth lasted. The more equal the distribution in the country during the period of growth, the longer the growth period lasted. This was found both across many countries, and in successive growth periods within individual countries. They concluded that "...sustainable economic reform is possible only when its benefits are widely shared."

In the same paper, Berg and Ostry suggested that extreme inequality may not just shorten periods of economic growth but trigger financial collapse:

*"... the increase in U.S. income inequality in recent decades is strikingly similar to the increase that occurred in the 1920s. In both cases there was a boom in the financial sector, poor people borrowed a lot, and a huge financial crisis ensued ... The recent global economic crisis, with its roots in U.S. financial markets, may have resulted, in part at least, from the increase in inequality."*

Inequality is important, therefore, because it may provide human society with its dynamism but, if

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1 OECD (2011)

2 Berg and Ostry (2011)

allowed to become extreme, threatens established norms and social and financial stability.

## WHAT IS THE CURRENT SITUATION?

The World Economic Forum (WEF) conducts an annual survey amongst world leaders in business, government, academia, NGOs and other institutions. Respondents are asked to assess the likelihood of occurrence, within the following ten years, of 50 global risks, and the degree of impact in the event of occurrence. Respondents in both the 2012 and 2013 surveys ranked extreme income disparity as the highest likelihood, highest impact risk.. In their 2012 report<sup>3</sup> WEF describe the impact of income disparity as follows:

*“When social mobility is widely perceived as attainable, income disparity can spur people to reach for success. However, when ambitious and industrious young people start to feel that, no matter how hard they work, their prospects are constrained, then feelings of powerlessness, disconnectedness and disengagement can take root. The social unrest that occurred in 2011, from the United States to the Middle East, demonstrated how governments everywhere need to address the causes of discontent before it becomes a violent, destabilizing force.”*

They go on to warn of a

*“potentially potent combination of chronic labour market imbalances, chronic fiscal imbalances and severe income disparity. When amplified by extreme demographic pressures, these conditions could lead to a retrenchment from globalization and the emergence of a new type of critical fragile states – formerly wealthy countries that descend into a spiral of decay as they become increasingly unable to meet their social and fiscal obligations.”*

Oxfam are now calling for a global goal to end extreme wealth by 2025. In a recent media briefing <sup>4</sup> they listed five ways in which “wealth and income extremes hurt us all.” Extreme wealth was found to be:

- **inefficient** because it depresses demand: the super-rich simply don’t buy the quantity of goods and services that the majority would with the same money;
- **politically corrosive:** the concentration of surplus money can be used to secure political change to the advantage of the rich, either through the legal means of lobbying or through corruption;
- **socially divisive:** the rich buy private access to services which parallel those provided to the majority by the state, and then seek to withdraw support from public provision;
- **environmentally destructive:** the rich are more profligate with scarce resources;
- **unethical.**

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3 World Economic Forum (2012)

4 Oxfam (2013)

As Oxfam puts it:

*“There has been great progress in the fight against extreme poverty. Hundreds of millions of people have seen their lives improve dramatically - an historically unprecedented achievement of which the world should be proud. But as we look to the next decade, and [the] new development goals we need to define progress, we must demonstrate that we are also tackling inequality - and that means looking at not just the poorest but the richest.”*

## UNDERSTANDING INEQUALITY

To approach the task of reducing inequality by reducing extreme income disparity, it is useful to identify how the highly paid become extremely highly paid and why the situation seems to be getting progressively worse. This report brings together disparate strands of research on the emergence, extent and propagation of extreme income. It considers the effects on income inequality of the following factors:

- credit expansion
- asset prices
- household and corporate debt
- remuneration practices in the finance and other sectors
- peer group pressure
- political interventions.

These processes are combined into the mechanism shown in Chart 1. This mechanism consists of two cyclical circuits, a money circuit and a debt circuit, connected by two linkages driven by envy and peer group pressure on the one hand, and fear and anxiety on the other. Each of these components is separately illustrated and described below.

The money and debt circuits are each presented as the work of single teams of researchers and describe processes with feedback mechanisms which amplify the trend to rising inequality. These two circuits are connected together by the linkages, collections of mechanisms identified by several different teams of researchers which transmit the inequality arising from the money circuit through to the debt circuit and then on to the consequential political interventions with their own feedback effects on inequality.

## BANK CREDIT AND THE MONEY SUPPLY

The working measure of money supply used in the UK is Sterling M4. This consists of sterling coins and bank notes held by the private sector (i.e. firms and households) plus their holdings of deposits at UK banks and building societies. Currently, notes and coin constitute just 2.8% of M4. Over 97% of money consists of bank deposits. These are created when banks make loans, and they are depleted when borrowers repay loans. The details of this process are explained in books such as *Where does money come from?*<sup>5</sup> and *Modernising money*<sup>6</sup>. Over the 30 years since August 1983, bank deposits have grown from £158bn to £2,069bn, a thirteen-fold increase.<sup>7</sup> Therefore, loan creation by banks over that period has been taking place at a considerably greater rate than loan repayments. In that same period, the quantity of goods and services produced each year (real GDP) has about doubled,<sup>8</sup> but retail prices have tripled,<sup>9</sup> house prices have increased six-fold<sup>10</sup> and the stock market is up nearly eight-fold.<sup>11</sup> When banks create money by lending, this increases the amount of money available to buy the goods, houses and investments for which the loans were made, and the result is rising prices.

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5 Ryan-Collins et al. (2011)

6 Jackson and Dyson (2012)

7 Figures from the Bank of England Statistical Interactive Database at <http://www.bankofengland.co.uk/boeapps/iadb/BankStats.asp>

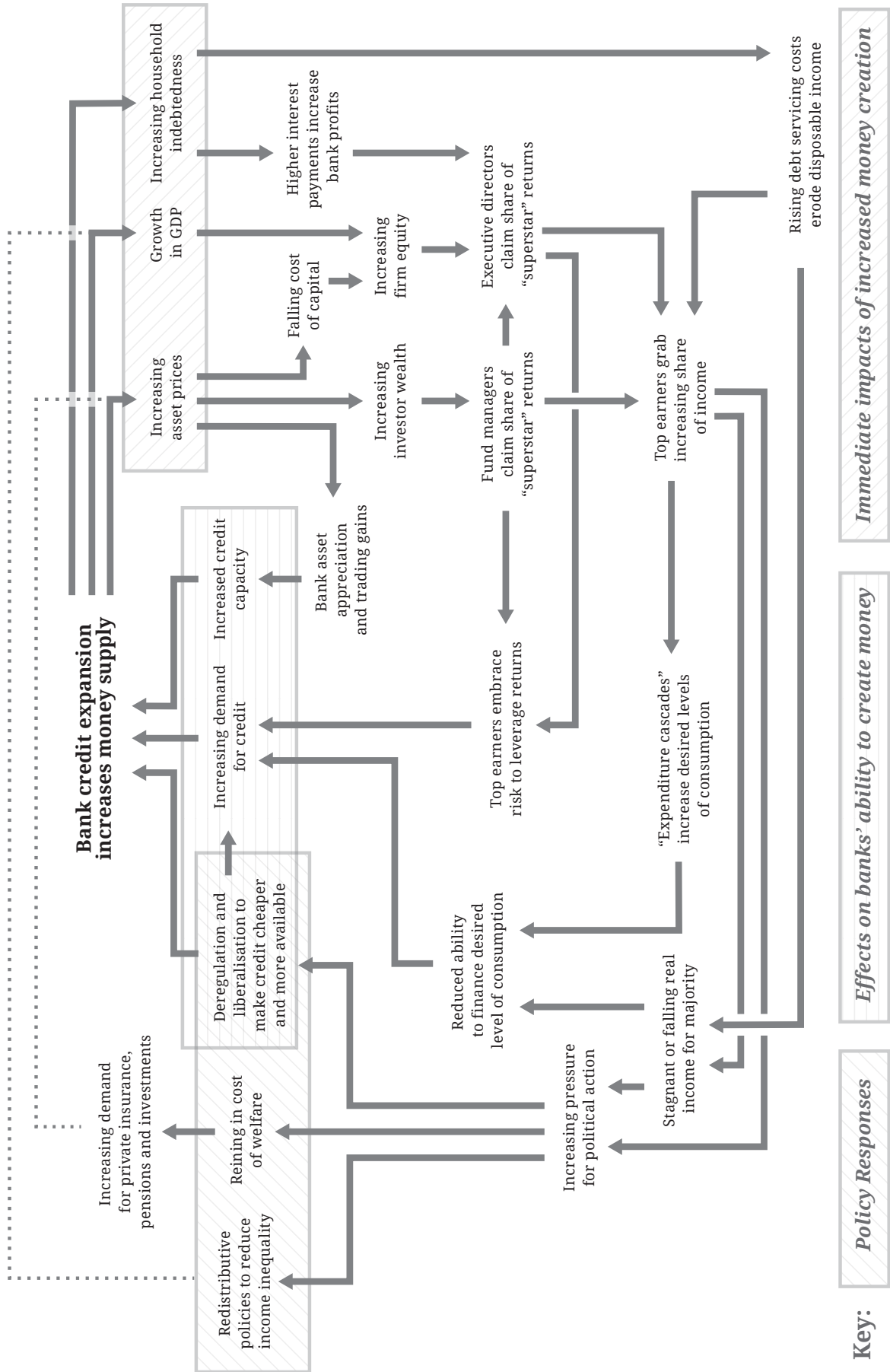
8 <http://www.theguardian.com/news/datablog/2009/nov/25/gdp-uk-1948-growth-economy#data>

9 <http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/august-2013/consumer-price-inflation-reference-tables.xls>

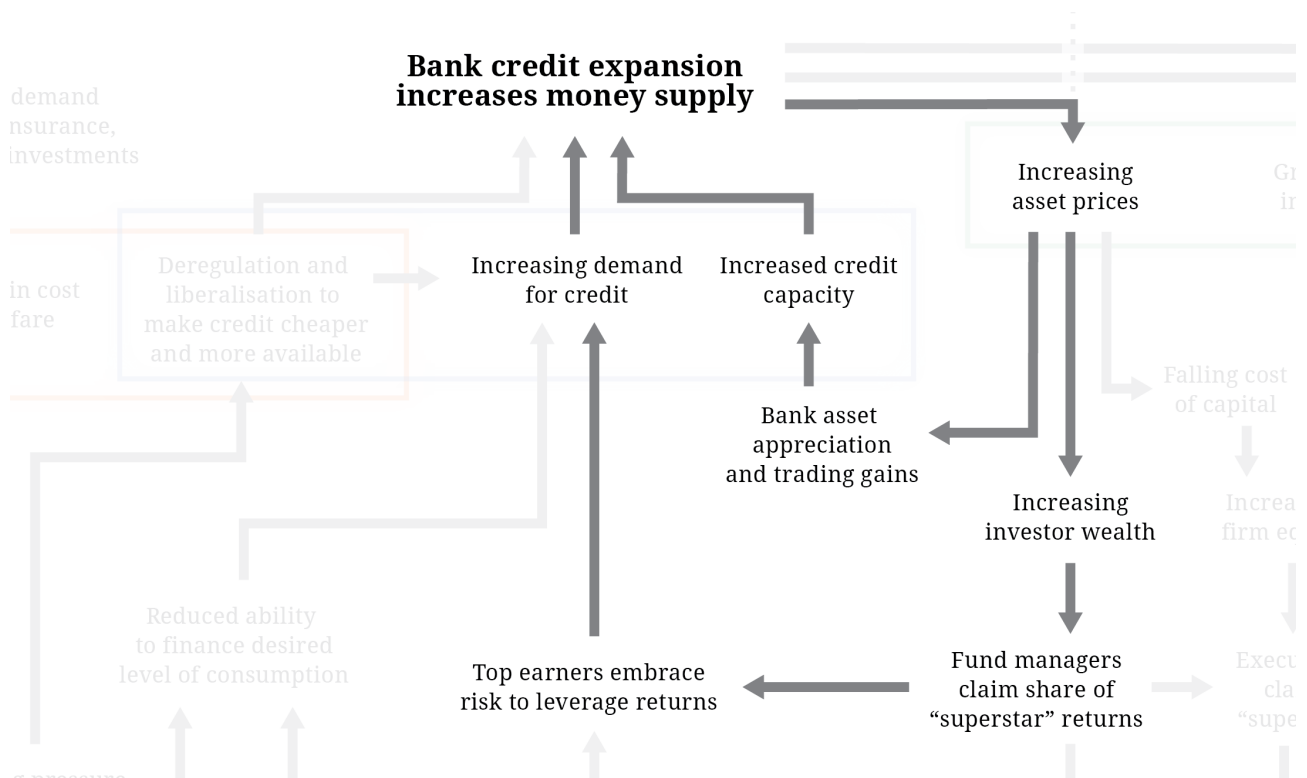
10 [http://www.nationwide.co.uk/hpi/downloads/UK\\_house\\_price\\_since\\_1952.xls](http://www.nationwide.co.uk/hpi/downloads/UK_house_price_since_1952.xls)

11 <http://uk.finance.yahoo.com/q/hp?s=^FTAS>

CHART 1 - INEQUALITY TRANSMISSION MECHANISMS



## CIRCUIT 1 - MONEY <sup>12</sup>

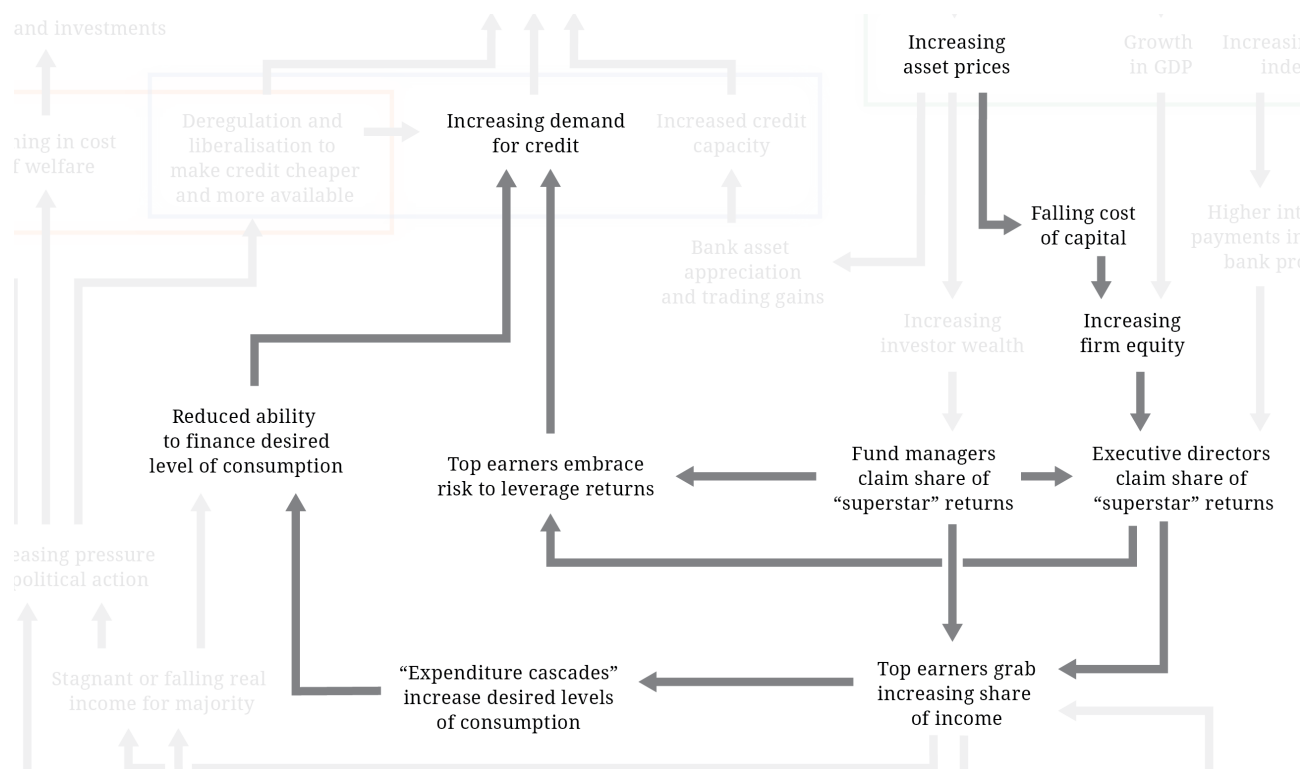


The Money Circuit is driven by the injection of additional money into the markets for financial assets and real estate. This bids up the prices of these assets. The additional money includes both existing money diverted from the market for goods and services (e.g., as companies and households divert earnings into pension funds, insurance policies and the like) and also new money created by banks lending to house purchasers, finance companies and investors. As prices rise, those investing in these markets become wealthier. They are persuaded to attribute their increasing wealth to the expertise of those managing their investments and reward them accordingly. In an extended period of rising prices, the incomes of some financial managers, swelled by the growing size of the funds they manage (of which they take a percentage each year in fees), accelerate away from those of most other people.

With continued increases in asset prices, it becomes profitable to borrow to speculate on the rising prices, gambling that the gains to be made from selling for profit (rather than holding the asset for income) will more than meet the costs of borrowing and return even more profit to the investors. The increased demand for credit attracts banks and other lenders who provide additional money to perpetuate rising prices. Banks and other lenders will even accept that the assets to be bought with the loans will act as their own security for the loans. Meanwhile banks also benefit from the rising prices and increased fee-earning trading activity, which increases their capital base and expands their capacity to provide even more credit. Investment funds which are boosted (leveraged) by borrowed money in this way seem to promise consistently higher returns, for which investors are prepared to pay substantial performance bonuses, further inflating fund managers' earnings.

<sup>12</sup> This section draws substantially from Blair (2010) who acknowledges that this circuit largely corresponds to the bank lending or credit channel component of the transmission mechanism from monetary policy to the real economy

## LINKAGE 1 - ENVY



The Money Circuit thus generates the rising asset prices and trading volumes from which fund managers and traders extract extraordinary incomes. At this point Linkage 1 kicks in, marshalling the forces of envy, peer pressure and the desire to emulate role models. The rising price of company shares reduces the cost of capital and permits companies to make increasingly profitable investments. Executive directors argue they should be given the credit for the rising fortunes of their companies and be rewarded accordingly. Board members point to the fortunes being made by high earners in the finance sector. Compliant remuneration committees concur and substantial portions of corporate earnings are earmarked for the salaries and bonuses of senior executives.<sup>13</sup>

As with financial investment, the returns on corporate investment can be increased (leveraged up) by borrowing, rather than by issuing and selling new shares. Successful investments financed by debt – rather than by an equity-diluting share issue – have a far greater impact on earnings per share and therefore on senior executive remuneration. This “financialisation” of corporate executive pay thus gives the Money Circuit a further spin.

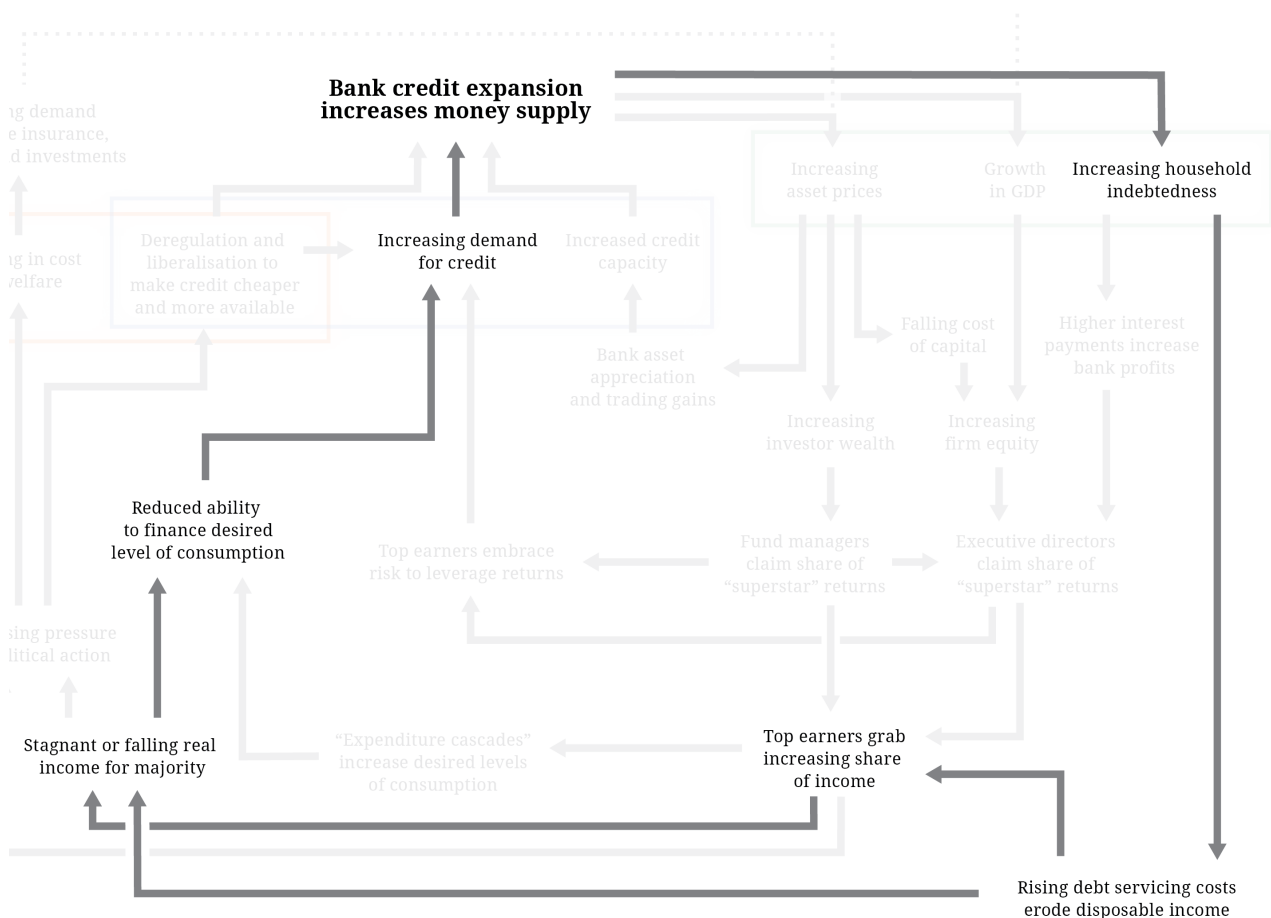
With corporate executives joining fund managers and financial traders in the extreme income bracket, an increasing share of the national income comes to be taken by the very rich. The lifestyles of the very

<sup>13</sup> Levy and Temin (2007), who argue that for the first thirty five years after the Second World War economic policy in the US was directed by concerns for social cohesion, characterised by government oversight, collective bargaining, norms of equality and moderation and high tax rates on top incomes. This state of affairs finished in 1980 when the “Washington Consensus” set in, a term they borrowed from the development field to describe a period of neo-classical liberalism characterised by government withdrawal from involvement in the private sector, deregulation, competitive remuneration, lower tax rates on top incomes and the growth of “winner-take-all” markets.



rich then become benchmarks for others in their social circles. Just as corporate executives set their income aspirations to match their counterparts in the finance sector, so they in turn set the pace for those within their various social circles (colleagues, associates, friends, extended family, neighbours, etc). As their rising affluence becomes apparent from their lifestyles, others who regard themselves as their peers will commit more of their incomes to emulating them.<sup>14</sup> But they in turn serve as role models for their own social circles, and so the process, which has been dubbed “expenditure cascades”<sup>15</sup>, continues through the population. Inevitably, some will resort to borrowing to help finance their increased expenditure, further increasing the demand for debt.

## CIRCUIT 2 – DEBT<sup>16</sup>



With an increasing share of national income being taken by the extremely highly paid, there is less remaining for everyone else, and real incomes for the majority of households start to stagnate or even fall. This effect kicks off Circuit 2 - Debt. As these households struggle to attain or maintain their desired levels of consumption, they resort to borrowing to fill the gap. Increasing indebtedness means an increasing portion of their remaining income is swallowed up in debt charges and interest. Part of these payments are used by banks and other lenders to pay interest to their depositors, who are mostly

14 Frank et al. (2010) see also Frank (2005) for a discussion of Duesenberry's relative-income hypothesis

15 Frank et al. (2010)

16 This section draws substantially from Kumhof and Rancière (2010)

other householders in similar positions. But loan interest and charges are also used to pay salaries and bonuses to bank and finance company staff, some of whom are very highly paid, and to pay dividends to the holders of their shares, most of which are held in managed funds from which managers take their fees. Thus the payment of interest and debt charges by borrowers largely enriches the better off.

**FIGURE 1 - NET PAYERS AND RECIPIENTS  
OF BANK INTEREST FLOWS<sup>17</sup>**

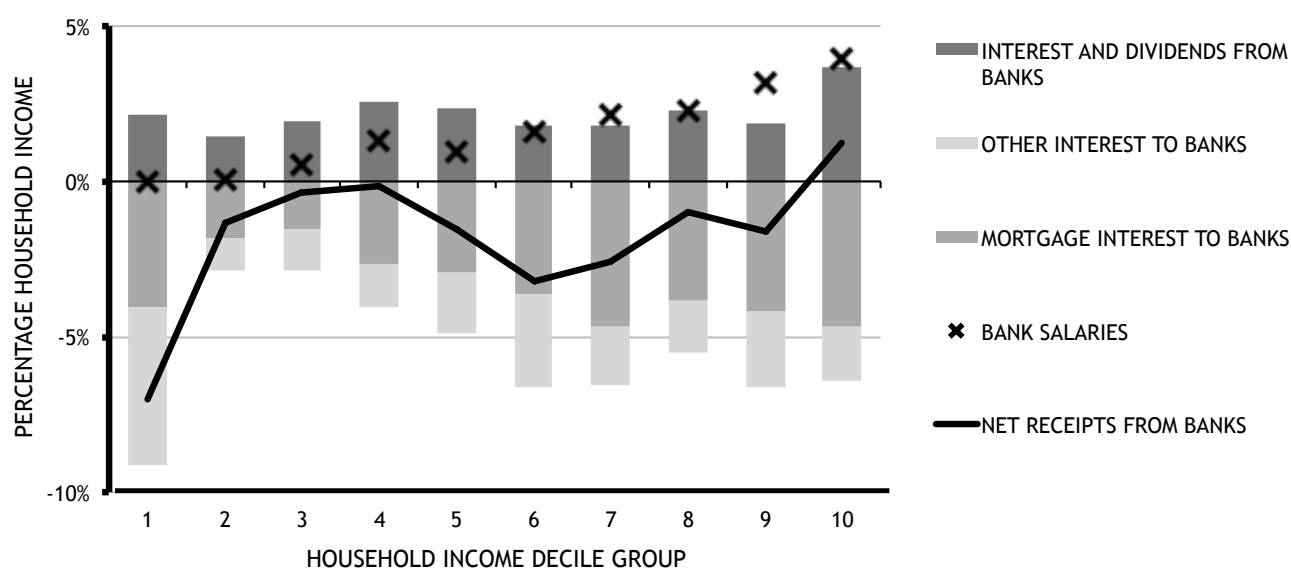


Figure 1 illustrates how households in different income brackets fare as banks redistribute the interest paid by borrowers to savers and bank employees. It draws on the 2005 British Household Panel Survey<sup>18</sup>, which gathered data on consumer and mortgage debt, savings and investments, and earnings from employment. The data was matched with Bank of England data<sup>19</sup> from the corresponding period that covered banks' income and expenditure. The levels reported for household debt were used to attribute pro rata payments to match the banks' reported revenue in loan interest from indebted households. Banks' reported expenditure on salaries and dividends and on the interest paid on household deposits were allocated pro rata to households on the basis of their reported levels of savings and of earnings from bank employment. The households were grouped in deciles in ascending order of total income from all sources. The payments and receipts attributed to households were totalled for each decile and expressed as a percentage of the total income for all households in that decile.

This illustration only covers the payments made directly between households and banks. Much of the interest paid by households is paid out to bank suppliers and institutional investors and in taxes, while some is retained by the banks. Households are consequently net contributors to banks. Only the 10%

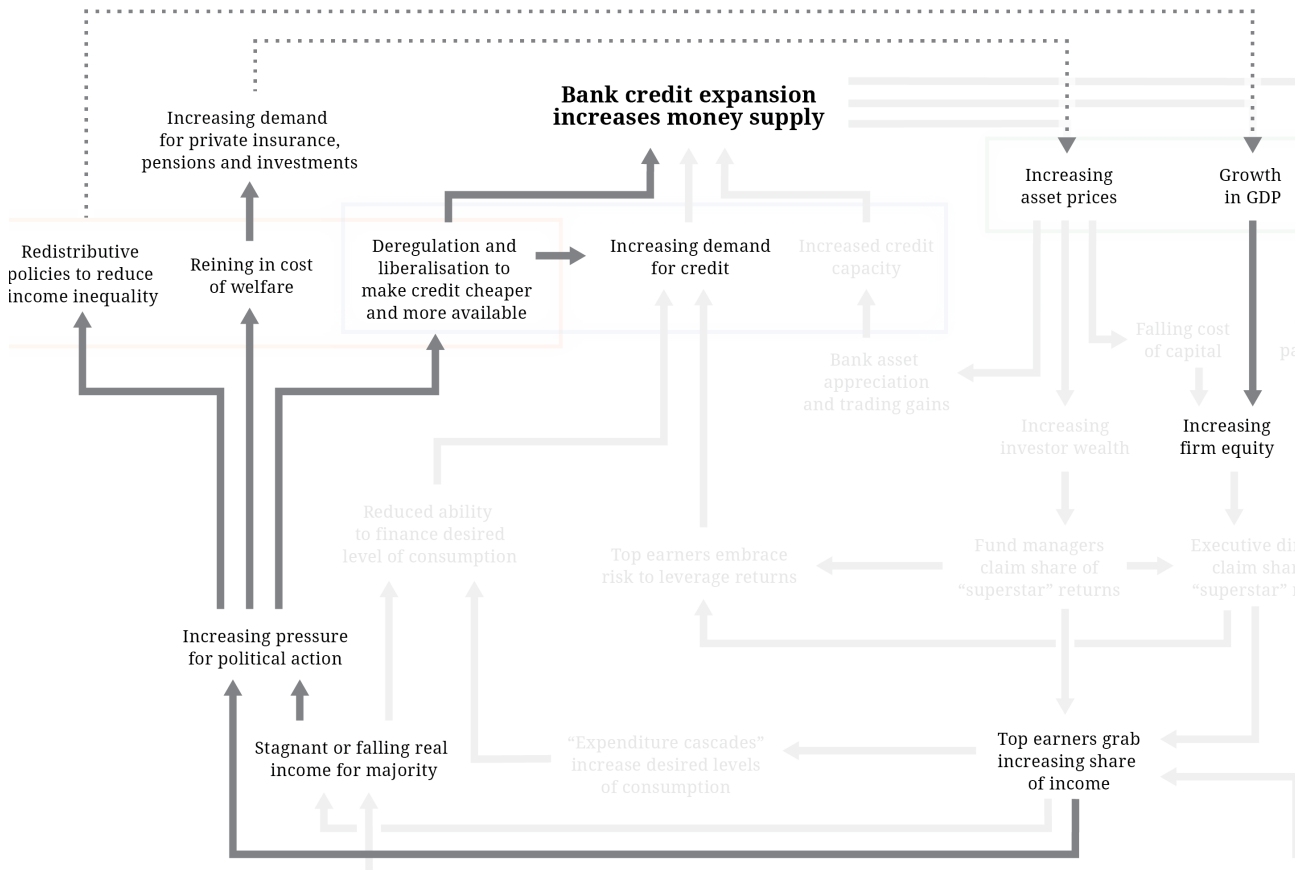
<sup>17</sup> Source: Bank of England, British Household Panel Survey 2005 and author's calculations

<sup>18</sup> BHPS (2010)

<sup>19</sup> Bank of England Statistical Interactive Database at <http://www.bankofengland.co.uk/boeapps/iadb/BankStats.asp>

of households with the highest incomes are net beneficiaries of the interest paid by the rest. For the majority, the continued erosion of their incomes by interest payments can lead to increasing anxiety and, ultimately, fear.

## LINKAGE 2 - FEAR



The Money and Debt Circuits, connected and amplified by the Envy Linkage, lead to growing financial pressure on the majority of households and an increasingly apparent and problematic separation between the life chances of the majority and those of the extremely highly paid. This leads to growing fear and anxiety on both sides of the divide. The majority fear that they will be unable to achieve what they regard as their reasonable expectations for prosperity and well-being. The extremely highly paid fear that their wealth and lifestyle will be taken from them. This fear sparks calls for political action amidst the increasing threat of social disruption of the kind envisaged by the World Economic Forum as reported above.

## POSSIBLE POLICY RESPONSES

In response to calls for political action, three classes of policy options are considered here. The most direct is to address the issue of income inequality by policies of restraint and redistribution. Oxfam<sup>20</sup> suggests measures such as statutory limits on pay or capital accumulation, progressive taxes on income, international agreements on corporation tax and tax havens as well as expanded social provision of health, education and income protection services. Options such as these are most likely to reduce inequality and deliver the benefits for sustained growth as reported by Berg and Ostry<sup>21</sup> by reducing and reigning in existing high incomes. For this reason, these options are generally opposed by the extremely highly paid, who propose a second class of policy options. These further the view that inequality is best addressed by targeting social provision specifically at those least able to improve their position by their own efforts and provide greater regulatory support for market-based alternatives for those capable of becoming able to afford them. This has the pleasant (for them) side-effects of reducing the overall costs of social provision, and therefore the contribution demanded from them, whilst increasing demand for the financial assets in which their wealth is held, boosting the value of their holdings.<sup>22</sup>

The third class of policy options, favoured by the banking and finance sectors, aims to make borrowing cheaper and easier and credit more widely accessible and available. Such options can also seem least politically contentious and tend to be favoured by governments. But of course they set the money-debt circuits in motion once more<sup>23</sup> and have been implicated in the ongoing Global Financial Crisis.<sup>24</sup> As Lord Turner, then chairman of the UK Financial Services Authority, put it:

*“ ... in the upswing of the cycle we should have been massively more worried than we were pre-crisis about the excessive creation of private debt and private money; and ... we should be wary of relying on a resurgence of private debt and leverage as our means of escape from the mess into which excessive debt creation landed us.”*<sup>25</sup>  
(emphasis in original)

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20 Oxfam (2013)

21 Berg and Ostry (2011)

22 Atkinson and Morelli (2011). See also Hudson (2012) who sees this privatisation of social provision as a stage (“pension fund capitalism”) in a continuum of economic rent-seeking from the 18th century landlords, through the industrial monopolists of the 19th and 20th centuries to the interest-extracting financiers of the 21st century.

23 Philippon and Reshef (2009) who show how remuneration in the US financial sector closely follows the increasingly strict regulation of the finance industry between the 1930s and the 1960s and the rapid deregulation from the 1980s.

24 Rajan (2010) and see Barlas (2012) for a review of the book

25 Turner, A (2013)

## IN CONCLUSION

Inequality has many more aspects than income, and income inequality can arise through circumstances and behaviours other than those considered here. No mention has been made, for example, of the widespread prevalence of predatory and sometimes fraudulent behaviour amongst lenders, borrowers and traders in recent decades.<sup>26</sup> What this paper makes clear is how the operation of the current banking and financial system encourages the perversion of the behavioural traits of aspiration and emulation (which can otherwise be socially beneficial) into greed and envy, and a socially destructive distancing of the majority from an increasingly wealthy and powerful elite. As Levy and Temin argue, the rise in extreme income inequality coincided with a wave of deregulation and financial innovation marking a shift in official attitudes from a concern for social responsibility and moderation to a championing of individualistic acquisition.<sup>27</sup>

Speaking at a conference at the Philadelphia Fed in April 2013, Professor Jeffrey Sachs, co-founder and Chief Strategist of Millennium Promise Alliance<sup>28</sup>, told participants:

*"I meet a lot of these people on Wall Street on a regular basis right now. I'm going to put it very bluntly. I regard the moral environment as pathological. And I'm talking about the human interactions that I have. I've not seen anything like this, not felt it so palpably. These people are out to make billions of dollars and [believe that] nothing should stop them from that. They have no responsibility to pay taxes. They have no responsibility to their clients. They have no responsibility to people, counterparties in transactions. They are tough, greedy, aggressive, and feel absolutely out of control, you know, in a quite literal sense. And they have gamed the system to a remarkable extent, and they have a docile president, a docile White House, and a docile regulatory system that absolutely can't find its voice. It's terrified of these companies.*

...

*I have waited for four years, five years now, to see one figure on Wall Street speak in a moral language, and I've not seen it once. And that is shocking to me. And if they won't, I've waited for a judge, for our president, for somebody, and it hasn't happened. And by the way it's not going to happen anytime soon it seems."*<sup>29</sup>

This highlights the combined importance of the exercise of moral authority and of the detailed design at the operating level of the institutions of finance in combating the kind of socially disruptive economic behaviour considered here.

However, while it is moral authority which moderates aspirations and expectations and devises sanctions to encourage constructive and discourage destructive behaviour, it is institutional design which ensures that sanctions, when applied, act as intended rather than perversely. From the design per-

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26 See, for example, Akerlof and Romer (1993) and Black (2012)

27 Levy and Temin (2011) and see footnote 9

28 Wikipedia entry "Jeffrey Sachs"

29 Sachs (2010)

spective, we have seen that asset price inflation, leverage and debt are the key operational factors that encourage the emergence and persistence of extreme income inequality.

Leverage and debt are not peculiar to the financial system as currently constituted. Credit has been a central feature of human society since earliest history<sup>30</sup> and with the credit of others, anyone can reap rewards (and risk losses) in excess of their own resources. What is peculiar to the current banking system is the *creation* of money through debt. Banks don't lend money in the sense of removing it from the possession of one to place it in the possession of another. They create liabilities against themselves which serve as money. The central role of rising asset prices in creating both the climate and the funding for extreme remuneration suggests that the money-creating consequences of bank lending is a driving factor in the generation of extreme income inequality.

There are two questions to be considered:

- Do asset prices rise because more money is created through bank lending, or is more money made available by banks because asset prices have risen? If causation can be shown to flow from money creation to rising prices, then reforms to moderate or eliminate money creation by bank lending can be expected to neutralise asset price inflation as one driver of income inequality.
- What would be the difference if the extra money were made available by being diverted from other uses, rather than being created by banks? Without money creation to accommodate asset price inflation, greater reliance would need to be placed on access to the money saved by others. This would limit price rises and so mitigate inequality but it needs to be determined what impact this would have on other parts of the economy.

These are questions for further research and deliberation.

## ANNEX - THE EVIDENCE CONSIDERED

### Credit and inequality

*“Finance is different from other sectors because what it creates is credit, and credit acts like a monetary stimulus to the economy, pushing up prices in the same way that printing excess money would be expected to drive up inflation. Unregulated financial firms can create an almost endless supply of credit simply by operating at higher degrees of leverage.” (Blair, 2010)*

In the wake of the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, which consolidated US regulatory agencies and extended their powers, Blair (2010) reviewed the role of financial innovation, credit and leverage in the generation and distribution of wealth and income.

Credit is the acceptance of a promise to make money available at the appointed time. Such promises are usually extended in exchange for actual delivery of goods and services (trade credit), or for reciprocal promises to make payments over a different timescale (loans). Anybody can extend credit, but only credit extended by a bank functions as money. This is because banks have agreed amongst themselves to accept from each other, pound for pound and dollar for dollar, transfer of their obligations to make good on these promises, on receipt of balancing assets in the form of central bank reserves. However, similar agreements operate between institutions active in the financial markets on behalf of their customers. Thus stockbrokers will generally allow their customers to buy securities on the strength of the proceeds from securities they have just sold, even though payment may not be due from the purchaser for several days (the settlement period), since the stock exchange which regulates the trade indemnifies brokers against non-payment. Furthermore, brokers will extend credit to customers in good standing secured not on payments due from previous sales but on some fraction of the market value of the securities to be bought (trading on margin). The availability of credit such as this from financial institutions which are not banks enables their customers to compete for and bid up the prices of the assets in which the institutions deal just as if they had borrowed from banks, except that in the case of a bank loan, extra money would have been created to be spent in the market. However, in the absence of bank lending or an influx of money from new investors, institutional credit does not increase the amount of money in the market, so as prices rise transaction volumes must decrease, which would limit the scale of any price bubble. Of course, reports of rising prices would attract in new money to stoke the bubble.

Blair’s main theme is the considerable advantage to be gained on behalf of shareholders by financing trading and investments on credit rather than relying on shareholders’ funds alone, “leveraging up” the earnings power of shareholders’ equity. It was the prospect of this advantage which sparked a wave of financial innovation starting in the late 1970s in the design and structuring of new vehicles for transferring credit between institutions - “junk” bonds, asset securitization, credit default swaps, currency and interest rate swaps and repos. This innovation was facilitated by a wave of deregulation which followed soon after. As these new securities flooded onto the market, institutions were able to mobilise their low-yielding cash holdings to a far greater extent without substantial loss of liquidity. As President Clinton’s Council of Economic Advisers reported in 1998: “The 1980s wave [of mergers



and acquisitions] was unique in the prevalence of cash purchases (as opposed to acquisition through stock).”<sup>1</sup>

By that time the US was in the midst of another wave of mergers and acquisitions, and activity elsewhere in the financial sector was accelerating:

*“From 2000 onwards the packaging and reselling of financial assets through securitization proceeded at an extraordinary pace, and financial institutions found that, if they could sell off their loans as soon as they made them, they would capture the transaction fees for creating the individual loans, and the servicing fees for serving as the collection agent for those loans, but they could quickly recover their investment dollars, enabling them to turn round and do it again, and again, and again. This process made a virtual avalanche of credit available to individuals and businesses.” (Blair, 2010)*

High leverage in boom times greatly increased the returns on investments, and small savers and institutional investors, even though traditionally risk averse, became more willing to entrust their finances to fund managers who employed leverage to boost returns:

*“Investors were repeatedly willing to turn resources over to people who work in the financial sector who were using high levels of leverage. Moreover, they allowed financiers to take money out in the form of wages and bonuses for creating and trading securities that were exceptionally risky.”<sup>2</sup>*

*“As long as the bubble had not yet burst, the illusion of value creation ... caused investors to accept higher leverage and to justify extraordinary compensation packages for the participants in the financial sector. In this way, bubbles redistribute wealth and income to the people whose actions, collectively, are causing the financial bubbles.”<sup>3</sup>*

But when the bubble does finally burst, financiers do not have to pay back the wages and bonuses so

“... cyclical instability in the financial markets acts as a one-way ratchet for financial sector compensation, and a bubble-prone economy is an economy in which the distribution of income and wealth is likely to be widening.”<sup>4</sup>

The causative mechanism evinced by Blair thus runs through increasing availability of credit which stimulates rising asset prices which increases the value of financial institutions’ assets relative to their liabilities thereby increasing their shareholders’ equity which allows them to make more credit available, repeating the cycle. Alongside this, rising asset prices make savers and investors feel wealthier and more inclined to reward financiers handsomely for enhanced leveraged returns, increasing income and wealth inequality and encouraging those financiers to seek more leverage by taking up the extra availability of credit. As Blair points out, her explanation of the role of leverage in economic expansion is similar to the view referred to by macroeconomists as the bank-lending or credit channel.

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1 CEA (1998)

2 Blair (2010)

3 Blair (2010)

4 Blair (2010)



### Emergent Inequality

Many researchers have found that however a group is defined, over time the degree of income inequality amongst them increases.

*“A similar pattern of inequality growth is observed when we look within occupations and educational groups. It shows up, for example, among college graduates, dentists, real estate agents and high school graduates. ... [A]vailable evidence suggests that no matter how we partition the population, income gains are highly concentrated among top earners within each group.”<sup>5</sup>*

*“The inequality growth of the last forty years is mostly attributable to growing gaps within social groups, however those groups are defined.”<sup>6</sup>*

It is also found where groupings are strictly geographical:

*“It is ... striking that inequality in earnings and income is greater the more prosperous an area. The earnings and income of those in the poorest tenth within all areas, whatever the level of area deprivation, are similar - it is the middle and high incomes within the less deprived areas that are much higher than elsewhere, and so the range within them is greater.”<sup>7</sup>*

Figure 1 demonstrates this effect with data from the British Household Panel Survey.<sup>8</sup> This was a survey of the residents of 5-8,000 households interviewed each year between 1991 and 2008, following these interviewees as they moved. Figure 1 relates to around 5,000 residents who were 16 or over in 1995 and who completed questionnaires on personal and household finances for each of the years 1995, 2000 and 2005. This allows us to track the development of income inequality amongst households. In Figure 1, residents are gathered into ten groups depending on the total income of their households in 1995 averaged over each adult then resident. Groups with the lowest average income are to the left, those with the highest to the right. Within each group, residents were further subdivided on the basis of their per capita share of the total income of the households they were to become residents of five years later. The pattern is strikingly consistent. All the residents in each group start out in households with approximately the same per capita income but for every group, five years later each shows a remarkably similar degree of income disparity. The same patterns occur when the residents are further grouped by age or gender or both and also for the subsequent period of 2000 to 2005.

Such observations make it very clear that income inequality is not simply a case of the rich getting richer. There is a complex interaction of processes at work.

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5 Frank, Levine and Dijk (2010)

6 National Equality Panel (2010)

7 National Equality Panel (2010)

8 BHPS (2010) - author's calculations from survey data

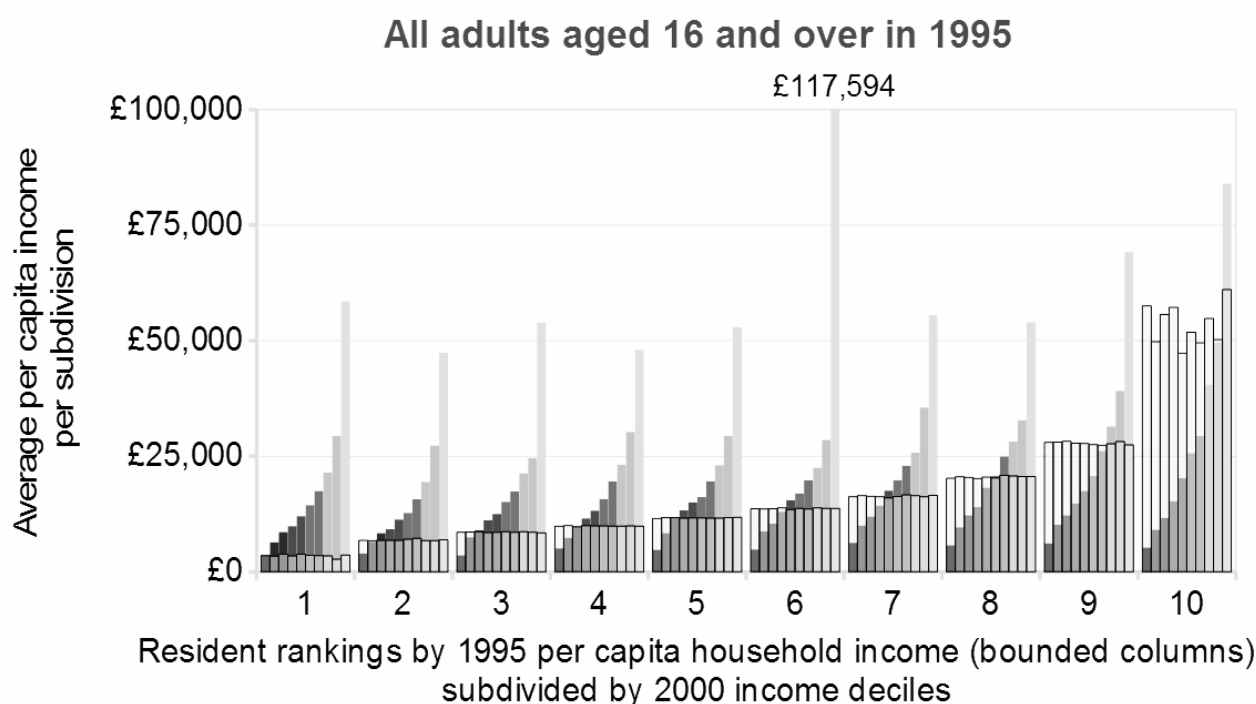


Figure 1 - Income Mobility: Residents of UK Households 1995 to 2000

### Explaining inequality

Levy and Temin (2007) analysed the growth of inequality in the US, and argue that for the first thirty five years after the war economic policy was directed by concerns for social cohesion, characterised by government oversight, collective bargaining, norms of equality and moderation and high tax rates on top incomes, a period they name “Treaty of Detroit” after a seminal labour-management agreement of the period. This state of affairs finished in 1980 when the “Washington Consensus” set in, a term they borrowed from the development field to describe a period of neo-classical liberalism characterised by government withdrawal from involvement in the private sector, deregulation, competitive remuneration, lower tax rates on top incomes and the growth of “winner-take-all” markets, which they define as follows:

*“A winner-take-all market is one where the highest ranked participants get rewards far larger than those ranked even slightly lower. Such markets often arise in the provision of a complex high stakes service that must be done right first time - a legal defence, a delicate surgery, a financial merger - where small differences in skills that cannot be taught can have big consequences.”<sup>9</sup>*

The 1980s was marked in the U.S. by a wave of mergers as markets including banking were deregulated<sup>10</sup>, and pay levels in the finance sector started to escalate followed by CEO pay more generally,

<sup>9</sup> Levy and Temin (2007) fn.14

<sup>10</sup> CEA (1998) A 1998 briefing note from the Council of Economic Advisers describes five waves

with the CEO-to-worker compensations ratio doubling from 29 in 1978 to 58 in 1989<sup>11</sup>. With the onset of the Washington Consensus, as Levy and Temin put it,

### Unadjusted and Size-Adjusted Indexes of Pay-to-Performance

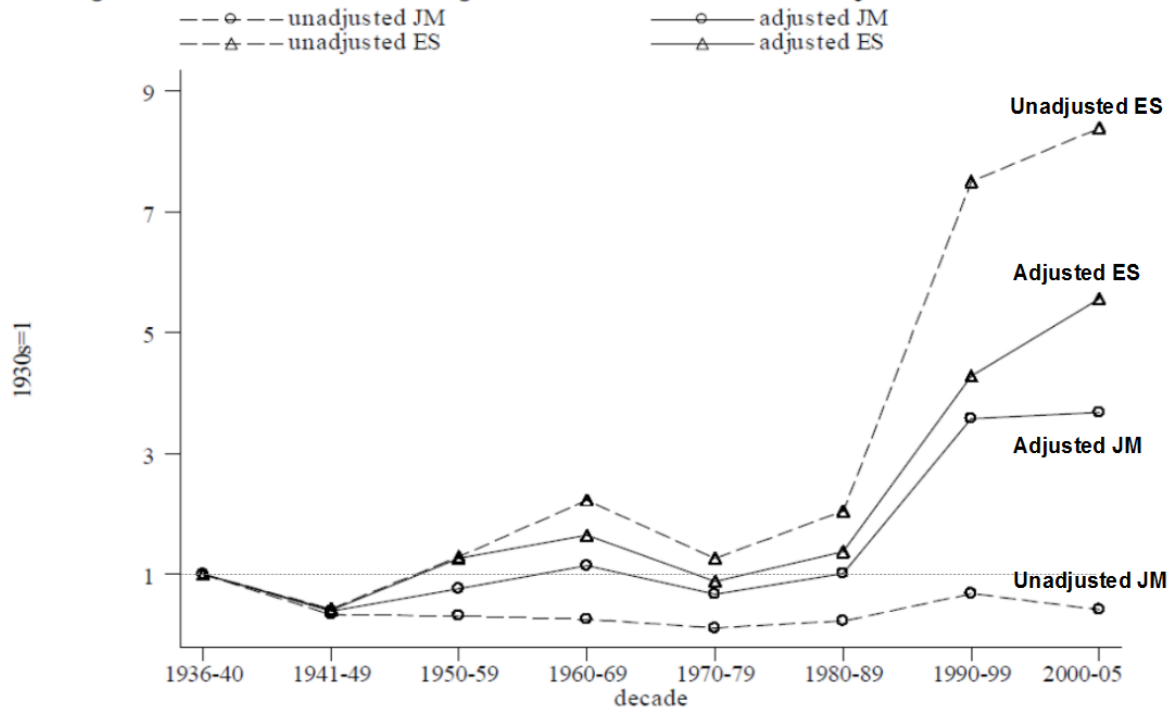


Figure 2 – from Frydman and Saks (2008)

What is plotted in these charts is the change in the value of the executives' remuneration in dollars for each percentage change in the firm's market value (ES) and return on market value (JM), relative to the values of those measures in the period 1936-1940 which are set to 1. Since these measures change depending on the size of the firm, alternative figures are given adjusted for firm size. What we see from this chart is that, although the measures adjusted for firm size stay around the same values as for the reference period until the 1970s, during the 1980s they rise fourfold so that senior executives are earning four times as much in relation to the performance of their firms (adjusted for firm size) at the end of the 1980s as they were throughout the period between the late 1930s and the start of the 1980s. This seems to suggest that forces other than performance on the job came into play during the 1980s.

Other research narrowed the focus down to the determinants of remuneration in the finance sector. Philippon and Reshef (2009) covered the period from 1909 to 2006 in the US and found correlations between levels of remuneration, financial innovation, educational attainment and degrees of regulation. Specifically, in periods of light regulation, financial innovation flourished demanding greater

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of merger booms in the US, from 1887 to 1904, during the 1920s, the 1960s, the 1980s and the late 1990s. The 1980s boom in merger activity was "marked by an explosion of hostile takeovers and financial innovation (such as junk bonds and leveraged buyouts)."

11 Economic Policy Unit (2012) <http://stateofworkingamerica.org/chart/swa-wages-table-4-43-ceo-compensation-ceo/>

12 Levy and Temin (2007)

intellectual skills and a higher degree of educational attainment for which higher remuneration was required. These relationships are depicted in Figure 3 which combines Figures 1 and 6 of the cited work.<sup>13</sup>

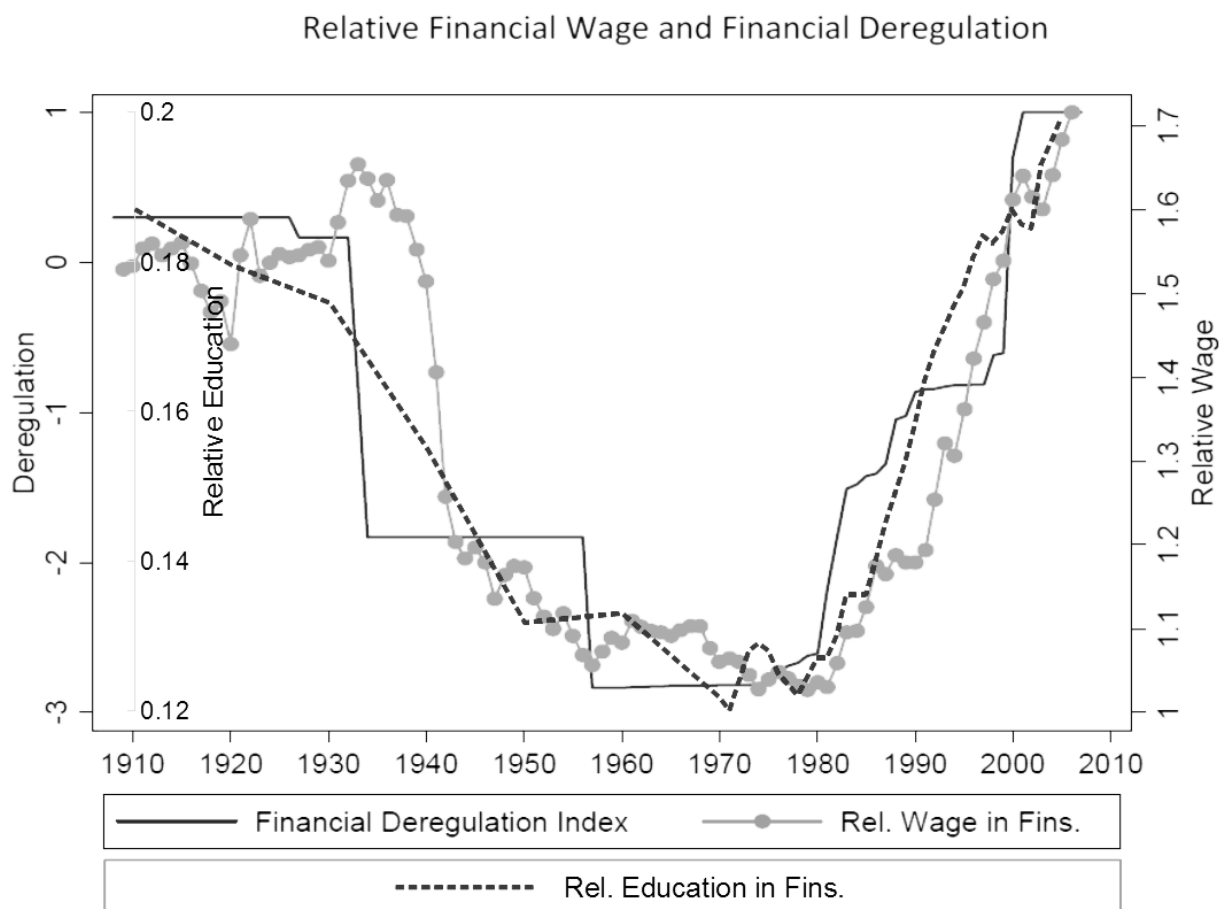


Figure 3 - from Philippon and Reshef (2009)

As Philippon and Reshef summarise their findings:

*“From 1909 to 1933 the financial sector was a high skill, high wage industry. A dramatic shift occurred during the 1930s: the financial sector rapidly lost its high human capital and its wage premium relative to the rest of the private sector. The decline continued at a more moderate pace from 1950 to 1980. By that time, wages in the financial sector were similar, on average, to wages in the rest of the economy. From 1980 onward, another dramatic shift occurred. The financial sector became once again a high skill, high wage*

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The relative wage index expresses wages in the finance sector as a multiple of those in the non-farm private sector. The relative education index is the difference between the proportion of employees with more than high-school education in the finance sector and the proportion in the non-farm private sector. The deregulation index is a composite of four variables each between 0 and 1 marking the introduction and progressive removal of federal legislation separating commercial from investment banks and banking from insurance and imposing ceilings on interest rates, and the progressive removal of state restrictions on intra-state bank branching.

*industry. Strikingly, by the end of the sample [period] relative wages and relative education levels went back almost exactly to their pre-1930s levels. “*

They analyse the relative wage ratios in more detail by constructing a baseline wage for the financial sector taking account of the changing mix of educational attainment, skills and job security in the private non-farm and financial sectors, and they demonstrate two periods, the 1920s and post-1990, where financial sector pay appears to be particularly excessive relative to baseline, as reproduced in Figure 4. They conclude that these findings are “prime facie evidence” of rent extraction by finance employees.

Figure 11: Historical Excess Wage in the Financial Sector



Figure 4 - from Philippon and Reshef (2009)

Bell and Van Reenen (2010) examine the distribution of earnings amongst financial sector employees and relative to workers in other sectors in the UK and find that only the most highly-paid 10% improved their lead over non-finance workers in the period between 1999 and 2008.<sup>14</sup>

All of this improvement was accounted for by incentive payments and most of it accrued to the top 1%, of whose total remuneration the topmost 5% took 23%. They conclude that financial sector workers in general do not enjoy rent-extraction privileges but ascribe this extreme concentration of remuneration to the “superstar” status of top traders and executives:

*“Because only a few traders possess exceptional ability, investment banks will be willing to pay a substantial premium for their services. ... As markets have become more globalized and liquid, traders have witnessed a substantial rise in the number of different markets and asset types that they can trade. In addition, large increases in the size of assets under management allow for superstars to trade with much larger capital.”<sup>15</sup>*

As they acknowledge in a footnote, extensive evidence exists showing that individuals can rarely consistently outperform the market, which could be interpreted as suggesting that two factors are in play in setting extreme remuneration: rewarding the trader or executive with a share of the actual increase in profits, as if that was a consequence of the exercise of their “exceptional ability”, and placing a bet on the continuation of their lucky streak. Garbaix and Landier (2008), whom they cite, propose an interpretation based on extreme value theory<sup>16</sup> for the magnitude of CEO pay which depends on the possibly erroneous perception of CEO talent and the possibly erroneous calculation of the value of non-cash remuneration such as stock options, and demonstrate that if it were the case that top pay distributions are merely following the pattern of random distributions at their extremes then CEO pay is determined primarily by the market valuation of the companies they control, and that if the CEO of the largest company were to transfer to the 250th largest company, then the expected impact on that company’s market capitalisation would be an increase of only 0.016%. Furthermore, contagion between companies greatly exacerbates extremes of pay:

*“If 10% of firms want to pay their CEO only half as much as their competitors, then the compensation of all CEOs decreases by 9%. However, if 10% of firms want to pay their CEO twice as much as their competitors, then the compensation of all CEOs doubles.”<sup>17</sup>*

These works support the “winner-take-all” market interpretation of extreme pay coupled with gratuitous contagion as proposed by Levy and Temin, and suggest that this outcome is the inevitable consequence of the unfettered market when coupled with how randomly distributed values behave at the extremes, which reinforces the necessary role of norms against excessive pay rigorously expressed through official policy which Levy and Temin find contributed to financial sector wage moderation during their “Treaty of Detroit” period. Different norms in different countries can be expected therefore to lead to different patterns of inequality and this is strikingly demonstrated by New Economics Foundation in their 2011 report “Why the Rich are Getting Richer”, from which Figure 5 is reproduced.

They suggest three principal factors to explain the different trends. Overwhelmingly, of course, is the difference in relative strength of the finance sector, but also significant could be the moderating effect of progressive taxation in the Netherlands, and the language barrier restricting contagion from English speaking Anglo-American norms of extreme remuneration.

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15 Bell and Van Reenen (2010) p.14

16 Examining the relationships between values at the extreme tails of random distributions

17 Gabaix and Landier (2008) p.31 emphasis in original

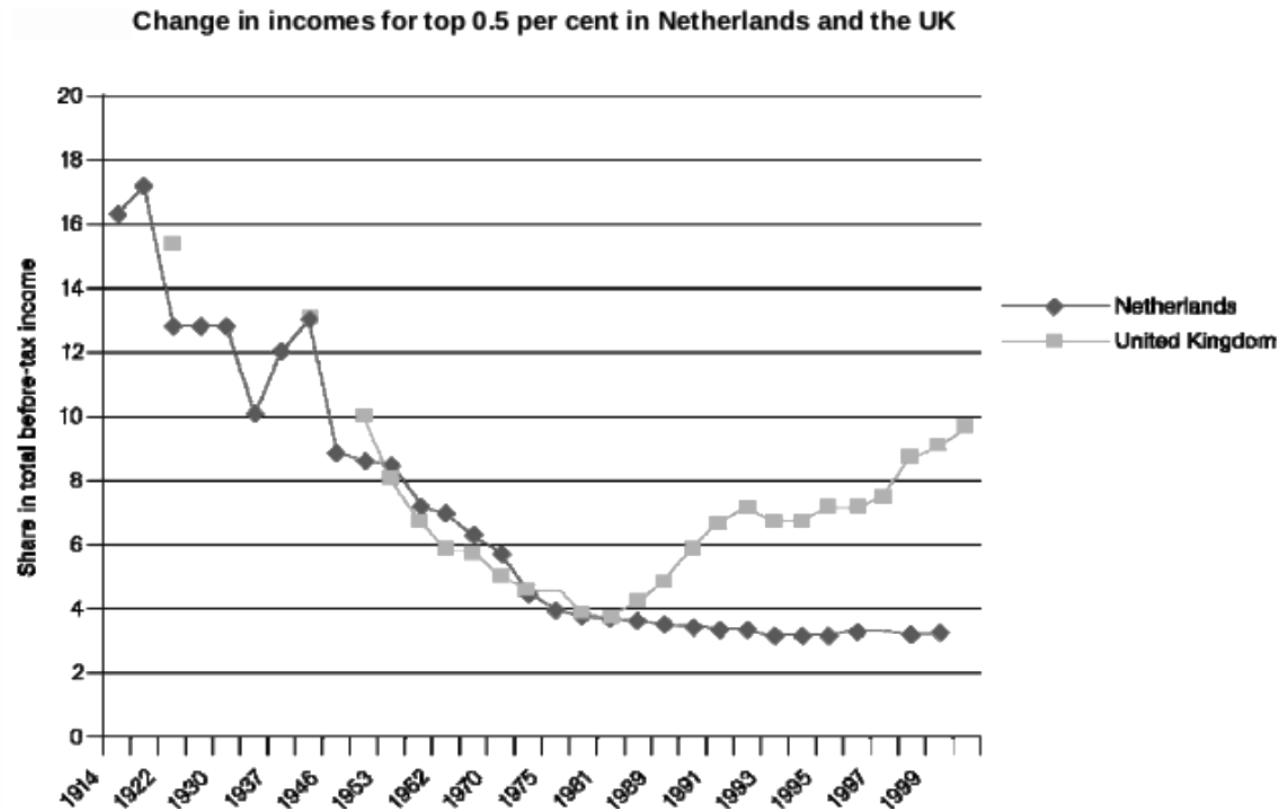


Figure 5 - from nef (2011) - figure 9

In summary, amongst those of working age, changes in income inequality can be seen as deriving from a combination of the disparate changing fortunes of those within groups, however those groups are defined, changes in the relative demand for different skill sets and in the opportunities afforded by regulatory regimes and norms of behaviour for people to capitalise on the time invested in developing them, and from the way that all distributions behave at the upper extremes of their ranges.

Frank, Levine and Dijk (2010) investigated the effects at the local level arguing from the psychological impacts of the perception of increasing inequality. They built on the observation discussed earlier that groups that were relatively homogeneous initially can come to experience inequality of income distribution as extreme as that of the population as a whole and that this would affect how individuals responded to their changing status, suggesting that:

*“... almost irrespective of the identities of the members of a person’s personal reference group, income inequality within that group is likely to have grown sharply in recent decades. Even for the wealthiest groups, for which average incomes have risen most sharply, most members are thus likely to have seen their incomes decline relative to those of their most prosperous associates.” (their emphasis).<sup>18</sup>*

Drawing on Darwin and Veblen, they hypothesise that the increasing prosperity of these more fortunate associates will become apparent through changes in consumption patterns which other members



of the group will attempt to emulate, even to the extent of running down their own savings or incurring debt. Since people are each members of several reference groups these changed consumption patterns, whether prosperity-fuelled or debt-fuelled, will influence others also. Thus growing income inequality sets off a cascade of expenditure and debt.

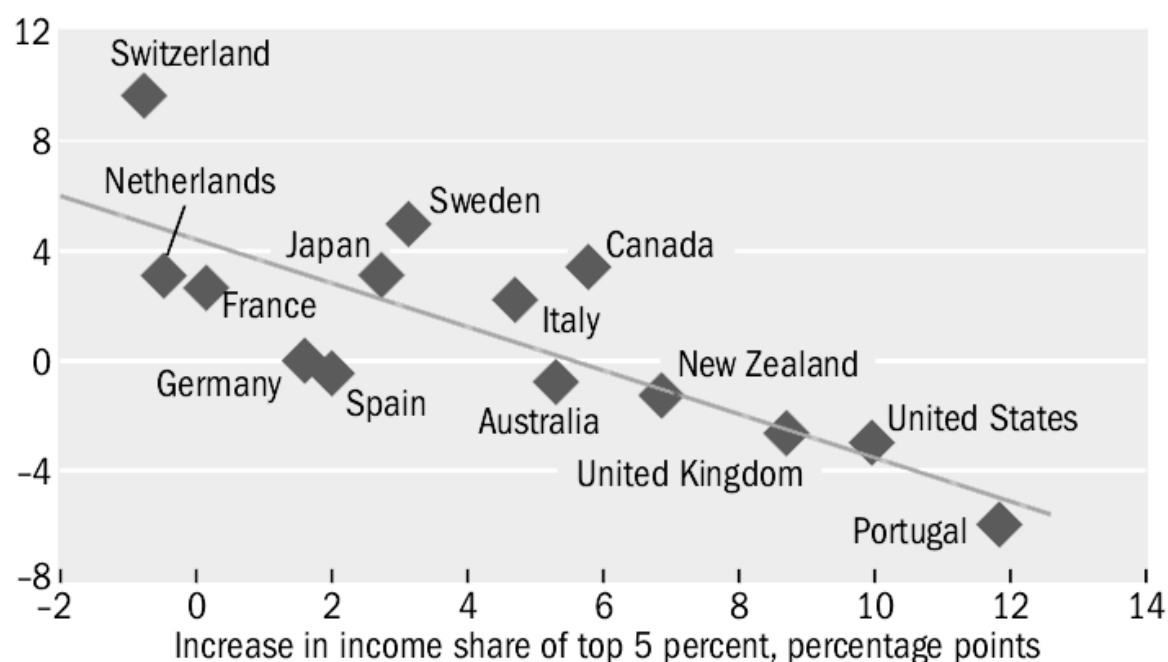
This “expenditure cascade” hypothesis links inequality and debt through Darwinian drives “selected for their capacity to motivate behaviours that contribute to reproductive success. In the Darwinian framework, reproductive success is all about relative resource holdings.” Veblen covered the sublimation of these drives in his “Theory of the Leisure Class” (1899) and his concept of conspicuous consumption. What matters under this view is to signify command over material wealth, and that command comes through income, savings and access to credit.

Chart 1

## Unequal imbalances

Countries whose inequality increased saw a corresponding worsening of their current account.

(change in ratio of current account to GDP, percentage points)



Sources: Penn World Tables, and Top Incomes Database (Atkinson, Piketty).

Note: Change between 1979 and 2000 for all countries except Germany (1980–98), Netherlands (1981–99), and Switzerland (1979–95).

Figure 6. - from Kumhof and Ranciere (2011)



## Inequality and debt

In 2011, Kumhof and Rancière found that:

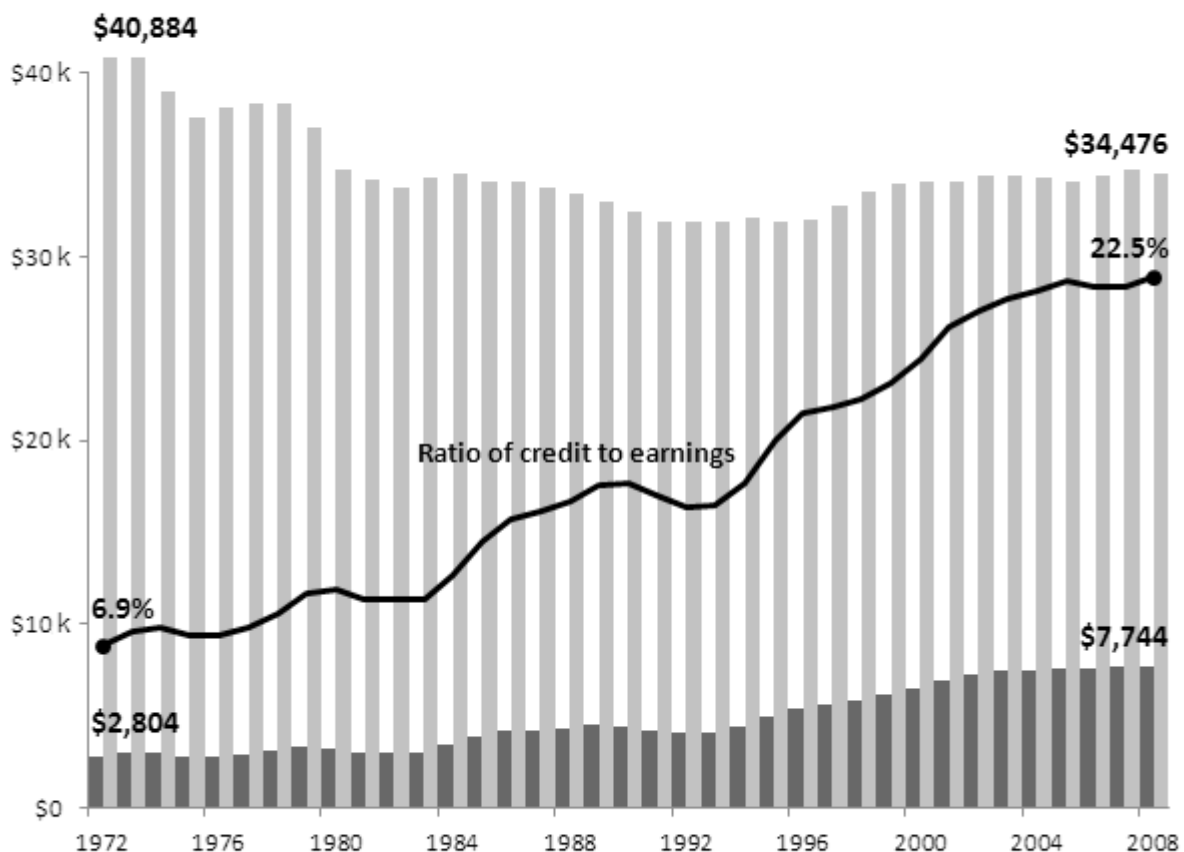
*“... what unites the experiences of the main deficit countries is a steep increase in income inequality over recent decades, as measured by the share of income going to the richest 5 percent of the country’s income distribution.”<sup>19</sup>*

They illustrated this with the chart reproduced in Figure 6. They link this increasing inter-country indebtedness with increasing domestic debt and falling savings and propose a model in which the increasing income share taken by the top 5% leaves the remaining 95% progressively unable to finance their desired levels of consumption from the remaining share of income without drawing down their savings or borrowing surplus balances from the rich. Figure 7, taken from Landy (2012)<sup>20</sup> graphically illustrates this dynamic in US households.

### Households increased debt to offset stagnant wages

Consumer credit outstanding per capita and average annual earnings in 2005\$

■ Household debt ■ Average annual earnings



Note: Average annual earnings are for production and nonsupervisory workers

Source: Federal Reserve, Bureau of Labor Statistics

<sup>19</sup> Kumhof and Rancière (2011)

<sup>20</sup> <http://tcf.org/blog/detail/graph-did-income-inequality-cause-the-financial-crisis> accessed: July 2013

In countries with poorly developed financial intermediaries, borrowing is less accessible to the general population, who are therefore able to consume less of their countries' output, which shifts the focus of production from domestic consumption to exports and necessitates investment abroad to provide the rich with a return on their surplus funds. Thus for these authors, rising inequality plus a developed finance sector leads to rising domestic debt and current account deficits, whilst rising inequality with a poorly developed finance sector leads to current account surpluses and standards of living which fall behind growth in output.

They consider how this link between inequality, debt and trade would affect the impact of various policy options for alleviating problems of poverty and deficits and conclude that financial liberalization in surplus countries would increase domestic demand there and reduce cross-border financial imbalances but at the cost of a growing global debt crisis. Addressing the underlying problems of inequality through redistributive taxes on unearned income would threaten capital flight but they suggest revenue neutral redistribution through progressive taxes on earned income, or taxes on profits from land, natural resources and the finance sector.

The linkages between inequality and debt for Kumhof and his colleagues thus starts with a shift in the bargaining power between the rich and the rest of the population which results in an increase in the share taken by the rich, leaving the rest to borrow to maintain their levels of consumption, and generating pressure for policy action to ameliorate the situation. If this action takes the form of further deregulation and liberalization of the finance sector this would simply add to the growing debt problem, where debt servicing costs reduce even further the ability of the majority to finance their consumption from their incomes.

This model is presented by its authors as contributing to an explanation of credit crises. Two teams of researchers, Atkinson and Morelli in 2010 and Bordo and Meissner in 2012, attempted to measure the strength of this effect by investigating changes in inequality running up to and following numerous economic crises over the course of 100 years or more in many different countries, but could detect no consistent pattern, finding that "economic crises differ greatly from each other, and that different types of crises may have different causes and outcomes"<sup>21</sup> and that any causative link between inequality and credit growth was swamped by the effects of rising GDP and falling interest rates which overall "seem to be the most robust determinants of credit growth"<sup>22</sup>. At the national level, therefore, it may be that the aggregate effects of other economic factors drown out the impact of inequality.

### **Inequality and power**

As seen above, Kumhof and his associates anticipate that rising inequality would lead to political pressure to ameliorate the problems of the poor, which would take the form of financial liberalization to increase access to credit. Atkinson and Morelli (2011) also consider that this solution would be likely as a consequence of pressure from those who benefited from increasing debt and inequality. Such pressure may result however in moves to reduce taxes at the expense of welfare provision, encouraging increasing private provision for income protection, health and pensions which would increase the

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21 Atkinson and Morelli (2011) p. 49

22 Bordo and Meissner (2012) p. 16

demand for and therefore the prices of financial assets and further privilege the rich. Blair (2010) also highlighted the power that inequality can hand to the rich:

*“Finally, one of the most troubling aspects of the fact that the financial sector takes such a large share of total national income and wealth is that wealth captured by financiers (or by any special interest group) can be used to influence policy and resist reform. In this way, income inequality (as well as a bubble-prone economy) may be able to perpetuate itself because wealthy financiers have much greater access to the halls of power ...”*<sup>23</sup>

### From banking to inequality

To summarise, we have seen how emerging income inequality is discernible in every social group and, unless constrained by effective public pressure or official action reflecting norms of moderation, this will lead through contagion between people at the top of different sectors, to growing shares of national income being seized by a very small number of people so placed as to be able to intercept much of the money that flows through the economy. This process is greatly assisted by the availability of credit which enables income-yielding assets to be acquired in excess of those which shareholders’ or clients’ investments are able to finance, encouraging greater indebtedness to chase “leverage.” Meanwhile, whether through growing impoverishment of the majority due to their reduced share of the national income, or through an escalation of their expectations for future consumption, increasingly people find themselves unable to finance their desired lifestyles from their incomes alone, and easy credit helps reduce the shortfall but leads to greater indebtedness, the servicing burden of which reduces even further the purchasing power of their residual incomes. In time, as the widening gaps between the very rich and the majority, and between them and the very poor become increasingly obvious, pressure for political action mounts to close the gaps, with the poor and some of the majority pressing for equitable redistribution from the rich, and the very rich and rest of the majority calling for greater trust in the markets to raise all incomes through the privatisation of welfare provision. The easy response has been to remove constraints on financial innovation and ease access to credit, financial liberalization and deregulation, which eases constraints on consumption in the short term and creates the illusion of increasing wealth, but which keeps the money flowing through the rent extractors and stokes up a debt crisis further down the road.

Can anything be added to the arguments presented here that the activities of the finance sector are themselves the cause of the asset price bubbles leading to the generation of spurious wealth from which financiers are able to extract excess remuneration, or that households in financial distress incur debt whilst households in debt face financial distress?

Taking debt first, we can turn back to the BHPS database of UK household residents.<sup>24</sup> We can compare the change in the levels of debt experienced by each resident over a five-year period (the period between interviews on this topic) with how far up or down the household income scale their households had moved in that time. We would expect to see rising debt levels as households slipped further

23 Blair (2010) p. 6

24 BHPS (2010) - survey data and author’s calculations

down the income scale. The findings are shown in Figure 8, for working age residents to the left and those above state pension age to the right, and for the period 1995 to 2000 at the top and 2000 to 2005 below. The top left chart shows a pattern pretty much as expected. The residents of all households which slipped down the income rankings experienced a greater increase in debt than did those whose households remained at the same rank. But the same can also be said for those whose households moved up the rankings. Residents of households which had improved their income rankings also saw their share of debt increase relative to those whose rankings had not changed. A similar picture is present, though much less apparent, for working age residents between 2000 and 2005. Here, all residents of households which had improved their rankings had taken on more debt, but of those which had become relatively poorer only those who had slipped fewer than five deciles (although this was 90% of the total) took on more debt over the period, the 10% falling the furthest paid off debts.

There is clearly no inevitable connection between household debt and poverty. Some take on more debt as their incomes fall, as Kumhof et al. surmise, some who may be taking on more debt, perhaps due to the expenditure cascades hypothesis of Frank et al., find their circumstances change and their incomes fall. Others may find that increasing prosperity takes them into new peer groups with higher expenditure norms, which their increased income is not yet sufficient to finance, but which is high enough to service a greater debt burden, and finally there are some who take on debt to invest in a business or a rental property, for example, and find their income increasing as a result, which fits in with Blair's leverage dynamic.

Alongside each of these dynamics is the relation between household debt and savings. The simple assumption that people only take on debt once they have exhausted their savings does not hold in real life. People continue to save out of their current income even as they are incurring debts, and the right-hand panels of Figure 8 demonstrate clearly how as earnings income ceases after retirement age debts are paid off, necessarily out of savings.

Accordingly, the fact that cross-sectional econometric studies such as those of Atkinson and Morelli, and of Bordo and Meissner, do not reveal in the aggregate data discernible evidence of a transmission mechanism from rising inequality to the growth of debt and credit does not mean that such a mechanism is absent at the operational level. Other mechanisms are also in operation which may at times, or entirely, swamp its effect, and the findings of Atkinson and Morelli that the strongest detectable links were between rising credit growth, falling interest rates and rising output suggest that at the national level it is the leverage aspect of debt that has the greatest aggregate effect.

Turning now to the bank-lending channel for creating the opportunity for rent capture by financiers and the key role of this in initiating extreme inequality at the top of the income range, two facts are critical to this proposed mechanism: the fact that bank credit creates the money made available for the borrower's use, and the extent to which the economic activity mediated by the finance sector depends on this bank-created money, rather than the redistribution of already existing money made available for investment by savers.

The process by which bank lending results in the creation of money has been thoroughly researched and documented in two recent books, "Where does Money Come From?"<sup>25</sup> and "Modernising

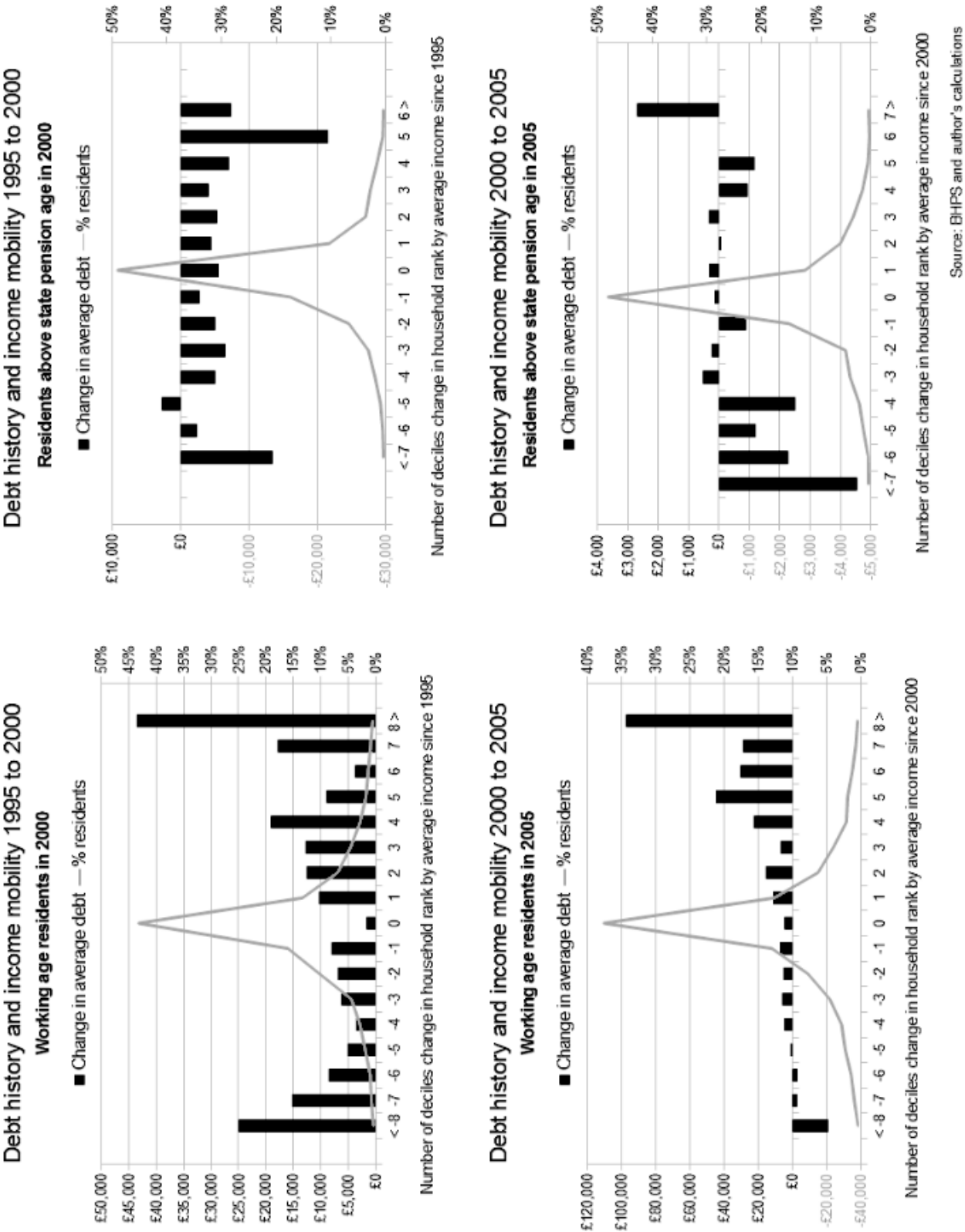


Figure 8.

Money.”<sup>26</sup> The consequence is that in the market for the goods which the borrower wishes to purchase, the amount of money available to pay for the goods increases, with no reduction in the amount available to pay for goods in other markets, as would be the case if it were existing money which was being lent. This means that prices in other markets do not reduce as they would if money were withdrawn to lend to the borrower, but prices in the market of interest to the borrower tend to rise due to the influx of new money. This tendency can be tempered if more goods can be produced to meet the increased demand, but overall it builds a one-way inflationary ratchet into the economy. Counterbalancing that is the fact that money is withdrawn from the economy and cancelled when bank loans are repaid which has a generally depressing effect on prices. The overall effect of moderate bank credit is that prices generally would fall as existing bank loans are repaid, but that fall would be countered in the markets for goods and services whose purchase was financed by new bank loans and conventional theory has it that those islands of rising prices would attract investment in productive resources drawn from elsewhere, reducing output there and hence stabilising prices in those markets, to increase the supply of these highly demanded goods and services, ultimately reversing the rise in prices as demand is satisfied.

Considering the markets in which the financial sector operates, the issue is the extent to which these rely on bank lending, with its inflationary implications, and to what extent they are financed by the mobilisation of savings drawn from other markets. The most familiar finance sector market for the general public is the provision of mortgage finance for house purchase. In the UK this is predominantly through bank lending which feeds directly into house prices. Three possibilities are considered: that mortgage lending and house prices change together but neither follows the other; that mortgage lending increases because house prices increase, which would mean that changes in mortgage lending would broadly follow earlier changes in house prices; and thirdly, that it is the change in mortgage lending which leads to the change in house prices, by allowing borrowers more easily to agree to pay speculative asking prices, or to bid up prices already agreed with others.

The other principal market in which the finance sector operates is the origination and transfer of exchange-traded securities, such as company shares, which transfer the ownership of companies, and corporate bonds, which are a means for companies to borrow money without resorting to the banks. Companies can also raise money by selling to others the rights to receive future payments to which they are contractually entitled, such as instalment payments of principal and interest on loans they have made to others (securitisation). It is the role of the finance sector to find purchasers for newly-issued shares (initial public offerings, “IPOs”), bonds and securities, and to assist companies to raise the money needed to take over other companies (mergers and acquisitions, M&A) or the directors of companies to buy the company from its shareholders (management buy-outs, MBOs).

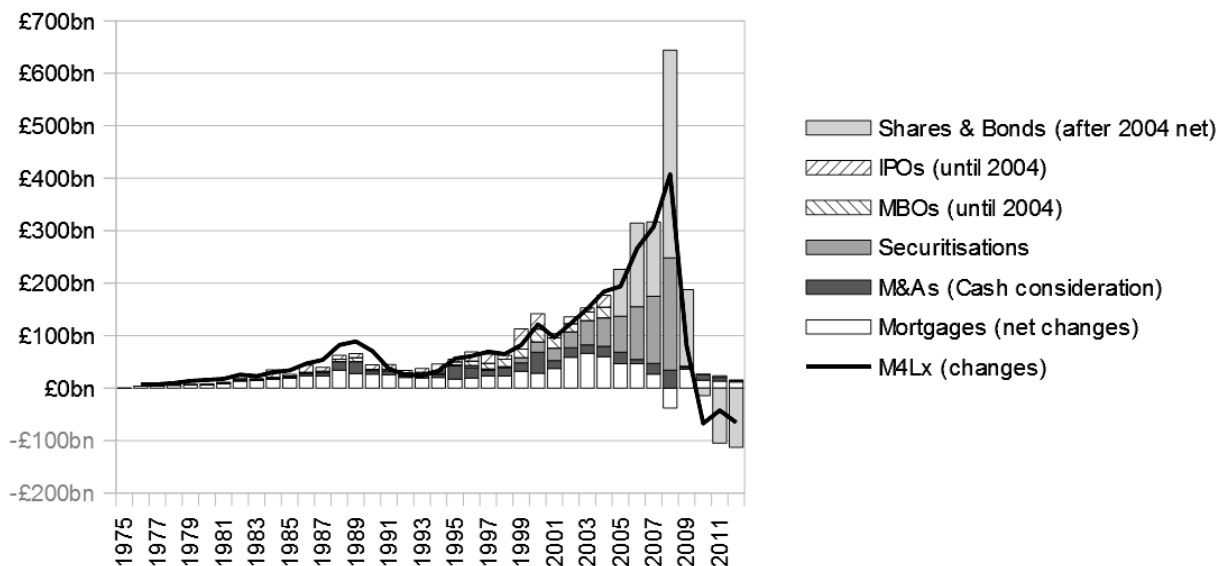
The presumption is that an actively trading market for such securities will contain a pool of cash “between investments” which can be tapped for the purchase of new securities issued as above by companies needing to raise money for maintaining or expanding their businesses, thereby providing an alternative to money-creating bank borrowing. Figure 9 records the extent to which this has been achieved over the last 35 years. What is shown is the cumulative value of the various finance-raising operations mediated each year by the finance sector, compared with the amount of money newly cre-



ated each year through bank lending.<sup>27</sup>

Prior to the onset of the financial crisis almost all of the money diverted to finance new investment in businesses was matched by newly-created bank money. There has been no withdrawal from one sector to finance growth in another sector, there has just been money creation to finance new issues whilst insulating the prices of existing issues. Overall, the finance sector has recycled negligible amounts of existing money into economic investment. The money provided by investors effectively remains in the second-hand market chasing up prices, whilst banks are called upon to create the money needed to buy the securities issued to finance new economic investment. Only in 2008 and 2009, when banks were desperately issuing their own shares and bonds to shore up their capital, was existing money tapped to any significant extent.

### UK Finance Sector Activity and Monetary Expansion



Sources: Gregory et al. (2009) (IPOs), Renneboog, L. (2007) (MBOs), BoE, ONS and author's calculations

Figure 9.

<sup>27</sup> M4Lx represents sterling lending by UK resident banks to the private sector, including other financial corporations but excluding inter-bank lending and the effects of securitisations. That is to say, money created by banks in extending loans is considered still to be in circulation even if securitisation vehicles have collected from investors and paid over to the banks equivalent amounts of money to buy the loans from the banks and sell securities backed by them. This treatment puts the securities backed by bank-originated lending on a par with bank deposits for monetary policy purposes.

Finally, it should be noted that finance sector involvement in the sort of activity considered above is routinely remunerated not on the basis of effort contributed, such as scale fees and hourly charges as is the practice in other professions, but as commission, a percentage of the monetary value of the deal. It is also frequently the case, as a close reading of the prospectuses will often reveal, that a not inconsiderable portion of the finance raised will be earmarked for consulting and other fees claimed by senior executives of the companies involved. Thus behind the operations of the finance sector, supposedly matching peoples' savings to the financing needs of businesses, stand the banks, hosing in cascades of money, from which all involved can siphon off remuneration.



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