Monograph:
Baker, A., Epstein, G. and Montecino, J. (2018) The UK's finance curse? Costs and processes. Report. Sheffield Political Economy Research Institute (SPERI) , University of Sheffield.

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The UK's Finance Curse? Costs and Processes.

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Executive Summary

- This report is the **first attempt** of which we are aware to generate a **comparative assessment of the costs of 'too much finance' for particular individual countries,** arriving at **a total price tag** for the **United States** and **United Kingdom** from the 1990s to the current period.

- The report builds on existing peer reviewed econometric studies on the growth costs associated with "too much finance" applying general estimates in this literature to specific countries.

- Our calculations suggest that the total cost of lost growth potential for the **UK** caused by 'too much finance' between **1995 and 2015 is in the region of £4,500 billion. This total figure amounts to roughly 2.5 years of the average GDP across the period.**

- If we add an additional category of excess rent to these calculations as a wider distributional cost with potential negative social implications, the costs rise to £5,180 billion, or 3 years of GDP averaged across the 20 year period.

- The data reports a much more pronounced effect than the earlier application of this method to the United States (Epstein and Montecino, 2016), which identified costs of $22,300 billion between 1990 and 2023, or slightly more than one year's worth of 2018 US GDP.

- This data suggests the negative costs of too much finance might be **two to three times higher for the UK than for the US**. This in turn requires further research to verify these costs and the processes through which they occur.

- We present these figures on the basis of the construction of a counterfactual growth path derived from the too much finance data sets that identifies an optimum financial sector size.

- The costs we report are those **over and above those levied if the financial system were operating at a more efficient and optimum level.**

- The data suggests that the UK economy, may have performed much better in overall growth terms if: **(a) its financial sector was smaller; (b) if finance was more focused on supporting other areas of the economy,** rather than trying to act as a source of wealth generation (extraction) in its own right.

- This evidence also provides support for the idea that the UK suffers from a form of **'finance curse'**: a development trajectory of financial overdependence involving a crowding out of other sectors and a skewing of social relations, geography and politics.

- A focused and systematic interdisciplinary research agenda using the finance curse framing, could help to further dig behind the numbers presented here and deepen our understandings and implications of the 'too much finance' phenomenon on a country by country basis.

- The most striking component of the initial estimations are **UK misallocation costs at £2,700 billion over the period, or 147.4 per cent of 2015 UK GDP**.

- The results reveal that misallocation effects are much larger in the UK than in the US, accounting for between **52.1% and 60% of total UK costs**, as opposed to between **17.48% and 20.5 % of total US costs.** Further investigation into these seemingly large UK misallocation costs is very much required.

- We propose a framework for further excavating and disaggregating the black box of misallocation that draws on 'finance curse' ideas and recognises that misallocation can take at least three forms: *1) Harmful financial agency* (conscious intentional financial allocation decisions that result in short termism and rent extraction)*; 2) Structural gravitational pull* (largely unintentional brain drain and rent attraction caused by the presence of an extensive financial infrastructure); *3) Unintended distortionary price spillovers* (Dutch disease – exchange rate and property price inflation that impedes alternative tradable sectors and exports).

- The findings and ideas we present here should mark the start of a process of more carefully debating and considering the potential social and economic costs of excessive finance in the UK and should be of both interest to researchers and of concern to policy makers.

- The findings also point to a need to change the terms of the public conversation about finance in the UK, involving a recognition that where finance is concerned more can sometimes be less, and less could be more?

The UK's Finance Curse? Costs and Processes

Can societies be harmed by hosting too much financial activity? This big question hangs over ten years on from the 2008 financial crisis. A strand of econometric research known as the 'too much finance thesis' does provide some evidence to support such a proposition. This thesis holds that finance starts to retard an economy and its performance once it goes beyond a certain size, usually a turning point of around 90% of GDP (Arcand, et al, 2015, Cecchetti and Kharroubi, 2015, 2012, Epstein and Montecino, 2016, Philippon, 2015[1]). Another formulation and possible explanation for these findings goes further in suggesting countries with large active financial sectors suffer from a finance curse effect (Christensen and Shaxson, 2013, Christensen, Shaxson and Wigan, 2016). This purported finance curse effect has a number of parallels with the infamous resource curse identified by development political economists, which blights some developing countries with plentiful natural resources (Karl, 1997, Ross, 1999). The finance curse identifies a crowding out dynamic, where a large active financial sector assumes priority in economic life, damaging other sectors, harming productivity and causing poor macroeconomic performance, while also spilling over to shape the social, political, cultural and geographical wiring of affected countries.

This research report takes two new steps to make two main points. First, the 'too much finance' literature has focused and relied on aggregate data sets across a range of countries. In this report, we present the first efforts, of which we are of aware, to put a price tag on the total costs of 'too much finance' for individual countries on a comparative basis. We begin with an earlier study by Epstein and Montecino (2016) on the United States and apply their methodology to the United Kingdom. We present an estimation of the total cost of 'too much finance' for the UK between 1995-2015 of £5,180 billion (3 years of average GDP during this period), or **£4,500 billion**, **2.5 years of GDP**, when we exclude the category – 'excess rent' from the calculations. A similar method applied to the United States revealed financial sector costs of $22,300 billion between 1990 and 2023, which is slightly more than one year's worth of 2018 GDP. The effect is therefore far larger for the UK and we provide some comparative discussion of the differences. Second, the 'too much finance' literature and its econometric methods generate some very interesting findings, but the literature and the estimations reported here also raise many questions, as to the underlying processes and their veracity in the UK context, as well as their social welfare implications. In the second half of this report we present the 'finance curse' concept and framing as a means of digging behind the numbers. We suggest a focused and systematic interdisciplinary research agenda using the finance curse framing, can amplify and deepen our understandings and implications of the 'too much finance' phenomenon.

1 It is worth noting that the too much finance literature draws on earlier work (Minsky, 1974, Kindleberger, 1978, Easterly, Islam, and Stiglitz 2000), showing a convex and non-monotone relationship between financial depth and the volatility of output growth. It builds on Tobin's (1984) fears that the social returns of the financial sector are lower than its private returns and that a large financial sector may "steal" talents from productive sectors.

Part 1: The cost of oversized, overactive finance: UK and US estimations

The major point to emerge from the 'too much finance literature' is that past a certain threshold financial sector growth starts to harm economic performance and overall growth. Arcand et al, found that finance starts having a negative effect on output growth when credit to the private sector goes above 90% of GDP (in the UK in 2016 credit to private sector was 134% of GDP, but during 2008-11, was over 180% GDP). This 'non-monotone' relationship between financial depth and economic growth was found to be robust when controlling for macroeconomic volatility, banking crises, and institutional quality (Arcand et al, 2015). The former head of the Monetary and Economics Department at the Bank for International Settlements (BIS), reported similar findings concluding that there is a point where more banking and credit results in lower growth, with excessive growth in the financial system being particularly bad for employment, or value added real productivity growth, precisely because the financial sector starts to compete with the rest of the economy for resources (Cecchetti and Kharroubi, 2012). In later work, the same authors found that financial growth, disproportionately harms research and development intensive industries, echoing earlier findings on the effects of shortening time horizons in the financial industry by researchers at the Bank of England (Cecchetti and Kharroubi, 2015, Davies et al, 2014). However, to date we have little sense of how the effects reported in the 'too much finance' literature, reduce economic performance and growth in particular national contexts and to what extent over time.

In earlier work, Epstein and Montecino set out to calculate the 'excess costs' the US financial system imposed on the American economy and society, 'over and above those charges and costs levied if the financial system were operating at a more efficient and optimum level' (Epstein and Montecino, 2016, p.2). They arrived at their estimation by looking at three components: i) *rents or excess profits* defined as excess incomes that operators and investors in the financial sector receive over and above the incomes they would need in order to induce them to supply their financial products or services in an efficient, competitive, capitalist economy (lower bound $3680.5 billion, upper bound $4,235.2 billion); ii) *misallocation costs*, - defined as the price of diverting resources away from non-financial activities and into finance through lost productivity and lower investment of skills and capital in R&D intensive areas in particular ($2,568.5 billion lower bound, $3.981 billion upper bound); iii) *costs of crisis and recession* (of 2008) ($6556.5 billion lower bound, $14,549.7 billion upper bound). Aggregating these costs together for the United States the overall cost was found to be in a range $12.905.6 billion to $22.765 billion, between 1990-2023. This amounts to between 0.56 and 1.11 years worth of 2018 US GDP over that period. In what follows we follow a modified version of this methodology to provide estimations of UK costs over a 20 year period from 1995 to 2015.

Table 1: US Costs 1990-2005 billions of 2014 US dollars (from Epstein and Montecino, 2016, p.27)

		Lower bound	Higher bound
(1)	Excess Income & Rents (1990-2005)	3,680.5	4,235.2
	Excess wages	1,397.2	–
	Excess profits	2,283.3	–
(2)	Growth costs from misallocation (1990-2005)	2,658.6	3,981.0
(3)	Recession Costs	6,566.5	14,549.7
	Grand Total	12,905.6	22,765.9

Note: The excess income & rents calculations (row 1) are based on estimates reported in Philippon and Reshev (2012) and Philippon (2015). Excess wages are calculated as the difference between average wages in finance and a competitive benchmark based on relative human capital levels between the financial and non-financial sector. Excess profits assumes that half of all financial sector profits reflect non-productive activities. The higher bound of excess income was calculated based on figures on the user-cost of finance reported by Philippon (2015). Row 2 reports the cumulative costs due to slower growth as a result of having "too much finance." Estimates are based on the results reported in Arcand et al (2012) and Cecchetti and Kharroubi (2012). The lower bound figure is based on specification 1 of Table 1 in Cecchetti and Kharroubi, while the higher bound figure is based on specification 2 of Table 2 in Arcand et al. The cumulative sums in rows 1 and 2 assume a rate of return 2 percent. Row 3 reports the cumulative output loss due to the 2007-9 financial crisis based on Atkinson et al (2013).

The costs documented above in table 1 for the United States are a combination of zero and negative sum costs. Excess rents and profits, the first category, are zero sum re-distributive costs. These costs represent a redistribution from the majority of members of society (90-99%), to a smaller group of financial elites (1-10%), or the primary direct beneficiaries of excess profits and compensation in the financial sector. In contrast, the other two categories, costs of crisis and misallocation are **negative sum**. Unlike excess rents, **they shrink the overall size of the economy**, though they too will have a distributive element, in terms of who bears the highest relative costs and losses. As with the original research for the United States we add together both zero and negative sum costs to provide a total figure for the UK. However, for the UK we also provide **a figure for solely negative sum costs (misallocation + cost of crisis)** and emphasise this lower number **£4,500 billion**, or approximately **2.5 years of GDP,** (or 2 years of GDP, using the 2018 GDP figure).

The reason we emphasise the lower negative sum cost number for the UK, is the possibility that costs in the rent category (in the form of excess fees, profit and remuneration) are taken almost entirely from the rest of the world, rather than from the wider UK economy. This is a very generous assumption and such an absolute pattern is unlikely to exist in reality. Nevertheless to remove ambiguity, we remove the rent category from our headline UK figure, to provide what we consider to be a conservative estimation[2]. For this reason, we reverse the order employed for the United States calculations. For the UK, we start with misallocation, move on to costs of crisis, and report excess rents last. Table 2 below shows the cost of all 3 categories and replicates the US table in Table 1. It is the middle two components misallocation costs and crisis costs that form our headline figure of **£4,500 billion**. The table shows were we to include the rent categories of excess compensation and excess profits the number would be higher still.

Table 2: Cumulative Financial Sector Costs United Kingdom (1995-2015)

	Billions of Pounds	*Percent of 2015 GDP*
Excess Compensation	280	15.3
Misallocation Costs	2,700	147.4
Crisis Costs	1,800	98.3
Excess Profits	400	21.8
Grand Total	**5,180**	**282.8**

Note: Authors' calculations. Amounts are in terms of the cumulative net present value over the period 1995-2015 assuming a 2 percent rate of return. Monetary values are expressed as constant 2013 Pounds.

Methodology

The 'too much finance' literature calculates negative sum costs using counterfactuals. For misallocation costs, we use the cross-country empirical analysis developed in the 'too much finance' literature. We construct a path, or trajectory the economy would follow if the financial sector was optimal in terms of size and operation, derived from the data in this literature. We then effectively measure the gap between this hypothetical path in a given year, and the line or path actual GDP takes in that year, to arrive at aggregate figures of misallocation costs across the time period 1995-2015. Another hypothetical line would be the trajectory GDP would take if there were no finance. In this case, we would expect that line to be substantially lower than actual GDP, illustrating that finance aids growth up to a certain point, but starts to hamper economic performance when it goes past that point. We refer to the gap between actual GDP and the enhanced trajectory derived from the too much finance literature data as *a net cost at the margin*. In this respect, what we are measuring is the cost of having too "big a financial sector" (due to misallocation) compared with having the "optimal" financial sector, over a period of time.

2 It could also be argued that the misallocation category for the UK leans towards a slight over estimation because one of the constituent processes of 'misallocation' referred to in the too much finance literature is the attraction of highly educated scientists, mathematicians, engineers into the financial sector, when they might be more usefully employed in technology based, R&D intensive sectors that do most to boost the productivity of an economy (Arcand et al, 2015, Cecchetti and Kharroubi, 2015). In the UK case it could be asserted that because these individuals are attracted from a global labour pool, they do not deprive the UK economy of their skills. This assumes that the senior most skilled, and most highly trained people employed in the City are almost entirely foreign nationals. Some recent rudimentary Office of National Statistics data (with no accompanying skill profile breakdown) reports that 59% of City workers were UK nationals in 2016, and that figure has actually reduced in recent years https://news.cityoflondon.gov.uk/record-number-of-european-workers-in-the-city-of-london/. Ten years earlier towards the middle of the financial crisis period and our time period the numbers were higher still. Recent CV analysis by the efinancial careers website found that of staff working in mergers and acquisitions and investment banking in the City of London, 65% were UK nationals https://news.efinancialcareers.com/dk-en/231364/percentage-of-city-of-london-staff-from-the-eu. Even if the brain drain part of misallocation is a slight over-estimation, this is only one element of misallocation costs and when it comes to the headline figure we compensate be leaving out potential excess rent costs.

By aggregating both the too much finance misallocation costs, with our calculations for the costs of the financial crisis and how it affected the path of GDP, we are effectively creating a further hypothetical growth path. This is what GDP would look like if there were both no financial crisis and finance was an optimum size so that misallocation costs were avoided. This creates a new counterfactual top line path of GDP. The headline negative sum costs we present (misallocation + cost of crisis) is effectively arrived at by subtracting actual GDP in a given year from these new top line figures for each year. Figure 1 shows that the headline figure of £4,500 billion is the gap between lines A and C. Excess rent would constitute a separate additional category again on top of these negative sum costs.

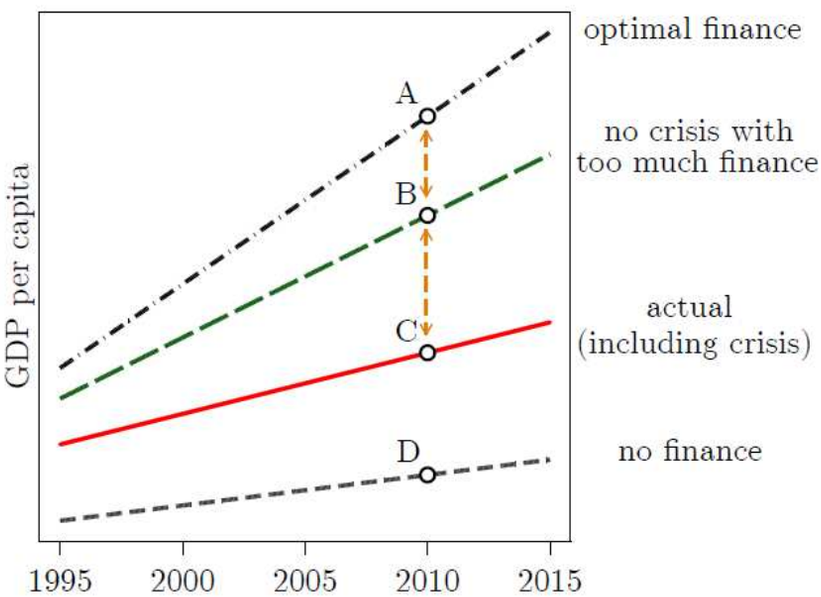

Figure 1: The counterfactual pathways of 'too much finance'

One question arising from our method is whether it risks double counting, by including some of the crisis costs in misallocation figures? We use lower bound misallocation estimations to try to avoid this, but research has already shown the misallocation data is robust even controlling for financial crisis costs (Arcand el at, 2015). The data used in the too much finance literature under the misallocation category controls for business cycles associated with financial crises. Moreover, additional research by one of the authors of this report has also shown that there are longer-run resource allocation costs associated with large active financial sectors, which exist independently and on top of the costs of financial crises (Sturn and Epstein, 2014.) Adding the two together, especially when conservative lower bound estimations are deployed, is therefore unlikely to produce double counting[3]. In short, we believe the figures we present and the methodology we deploy are conservative, and likely to underestimate the true macroeconomic costs associated with excess finance.

3 Neither technically speaking is adding rent extraction costs to misallocation costs, double counting, because although they are related they are not the same thing. Rent extraction is zero sum, in that it measures how one group in society (retirees, pension, insurance, mortgage holders, or borrowers/ debtors) lose income through excess payments to another group (bankers, rentiers, traders). Misallocation results because of lost productivity, less employment and lower wages, resulting from finance taking labour that could be employed more effectively elsewhere, with all the lost growth and tax revenue implications that flow from that. This is not the same thing as excess rent. Rather it is an additional cost of a macroeconomic nature, on top of any rent extraction.

UK Misallocation Costs

The biggest cost we found in the UK case was misallocation. The too much finance literature uncovers an inverted u-shaped relationship between credit to the private sector and GDP growth (Arcand et al, 2015, Cecchetti and Kharroubi, 2012, 2015). This literature puts the threshold turning point where credit starts to impact negatively on growth at around 90-100 per cent GDP. In the UK, average credit to the private sector during 1995-2015, was 160 per cent of GDP. Such estimates can be used to construct a counterfactual path of growth, assuming credit was at an optimal growth maximising level. Dynamic growth costs are quite large using this method showing that cumulative GDP would have been around **14 percent higher** with a leaner financial system. Indeed, the cumulative price tag for the years 1995-2015 are in excess of **£2.7 trillion or roughly 1.5 times annual output** (also see table 2). This is shown in figure 2 below.

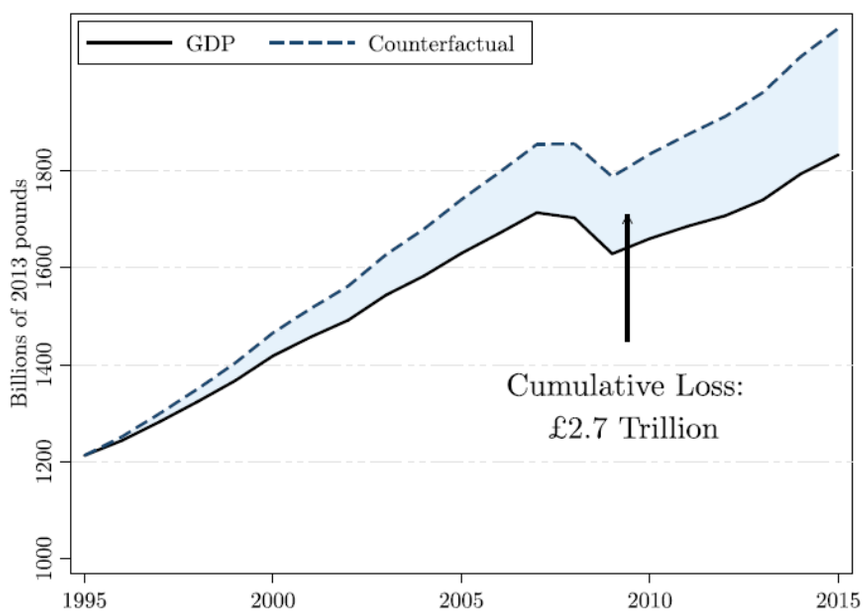

Figure 2: Too Much Finance 1995-2015 UK misallocation estimate

We build on Arcand et al (2012) and Cecchetti and Kharroubi (2012), who investigate the relationship between the size of the financial sector and economic growth. Both studies estimate regressions of the following form:

$$g = \beta_1 C + \beta_2 C^2 + e$$

Here g is the real growth rate of GDP per capita and C is the ratio of private credit to GDP and thus stands for the size of the financial sector. The key result from both papers is that the coefficient $\beta 1$ is positive, indicating that an increase in finance is associated with faster growth, but that the coefficient $\beta 2$ is negative, indicating that finance becomes detrimental to growth after a certain point. There is such a thing as too much finance on the basis of this regression.

To approximate the negative growth effect from having too much finance, we start by calculating the maximum growth rate that could be obtained, holding all else constant, where the financial sector at its optimal size. This maximum growth rate can be obtained by plugging in the growth maximizing credit to GDP ratio, $Cmax=-\beta 1/2\beta 2$, into the regressionequation. We can then calculate the cost to growth from having an inefficiently large financial system as the difference between the growth maximum and the average growth rate that results from the observed size of the financial sector between 1995-2015.

Table 3: Too Much Finance Co-efficients and Maximum Credit Threshold

	Arcand et al. (2012)	Cecchetti and Kharroubi (2012)
β_1	5.3	3.6
β_2	-2.6	-1.8
C_{max}	101.9	100

The next step is to define a counterfactual per capita growth rate:

$$g^{CF} = actual\ growth + cost$$

The counterfactual growth rate is the growth rate that would have prevailed if the financial sector were not inefficiently large. Finally, to arrive at a counterfactual measure of GDP it is necessary to extrapolate a per capita income series beginning in 1990 using the counterfactual growth rate and then multiply by the population each year[4].

Costs of Crisis

Where costs of the crisis for the UK are concerned, it could be claimed the crisis of 2008 originated in the United States and was therefore not attributable to the UK financial sector. However, London came to specialise in many of the securitization techniques and financial innovations implicated in the 2008 crisis. For example, in the well documented case of America International Group (AIG), most problems were centred around AIG Financial Products, - the London arm of the insurance giant that took big positions in credit default swaps with little oversight. Moreover, London's integration into world financial circuits has meant the UK's own vulnerability to crisis is in part a function of its integration into these global circuits of capital through the City of London. For these reasons, we maintain that cost of crisis calculations in the UK, are a reflection of both the City's prominent position in world markets and the vulnerabilities the rest of the UK economy has to financial crises as a consequence.

To put a price tag on the amount of lost output due to the crisis, we compare the path of real GDP to a simple no-crisis counterfactual where the UK continued to grow at its pre-crisis trend. Specifically, we consider the pre-crisis trend as the average growth rate for the period 1980-2007, which amounted to around 2.8 percent annually. This trend growth rate can then be used to construct a simple no-crisis counterfactual where the UK economy would have continued to grow at 2.8 percent per year after 2007. Had GDP continued to expand at its pre-crisis trend it would have reached around £2.1 trillion by the year 2015. This is about a 16 percent higher compared with the actual post-crisis

4 Series for GDP, GDP per capita, and total population for the United Kingdom were obtained from the UK Data Service.

path of GDP, which stood at **£1.8 trillion** in 2015. As above, we can also calculate the cumulative net present value of the output loss. This amounts to roughly **£1.8 trillion**, or approximately 100 percent of 2015 output. In figure 3, the blue zone represents this £1.8 trillion[5].

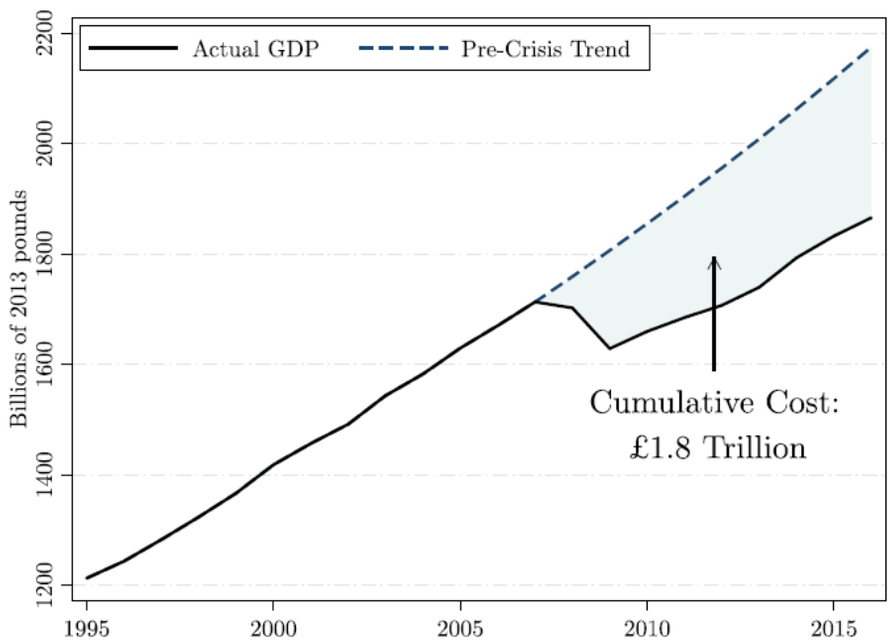

Figure 3 Real versus Actual UK GDP

For the pre-crisis period 1980-2007, the following regression model was used.

$$\ln(GDP_t) = \alpha + \beta \cdot t + e_t$$

Our estimates indicate that the trend real growth rate between 1980-2007 was around 2.8 percent annually.

We then calculate the no crisis counterfactual as:

$$CF_t = \prod_{t=2007}^{2015} \left(1 + \hat{\beta}\right) \cdot GDP_{2007}$$

Where *GDP*2007 denotes the level of real GDP in 2007. This expression simply states that the counterfactual real GDP is equal to the level of GDP on the eve of the crisis times the cumulative counterfactual growth between 2007 and 2015.

5 This figure is an aggregate crisis cost. It could be argued that a true figure should exclude the costs of fiscal consolidation, because this was a conscious choice made by UK politicians, and not an inevitable outcome of the crisis. However crises always involve choices that become part of and construct a crisis trajectory. Such choices reflect the wider environment in which they are made and austerity in the UK became a function of and part of the crisis trajectory. Moreover, the data on costs of fiscal consolidation is still emerging. Simon Wren Lewis's latest estimates put the cumulative cost of fiscal consolidation at 12.1% of UK GDP in 2015, or £228.5 billion. https://mainlymacro.blogspot.com/2018/03/the-economic-and-political-cost-of-uk.html In short, the data indicates costs of crisis go far beyond austerity costs. We include them here as part of the UK's crisis trajectory.

Excess Rent

Our third category is excess rent. As table 2 shows the excess rent category for the UK has been divided into: i) an excess compensation category; and ii) an excess profit category. On average, those working in finance earn about 15% more than people with similar educational backgrounds in other sectors. However, this changed in the lead up to the financial crisis, where the finance premium rose to above 20 percent in the year 2000 and subsequently reached 40 percent in 2005 (implying 40% of all financial sector income immediately before the financial was rent). Total excess compensation amounted to roughly £3 billion per year between 1985-1995. Total excess compensation subsequently increased markedly, peaking at around £22 billion in 2005, or 1.5 percent of GDP. Excess compensation appears to have fallen since the beginning of the global financial crisis and remains at around £8 billion per year between 2010 and 2015. The chart for excess compensation in the UK looks as follows in figure 4.

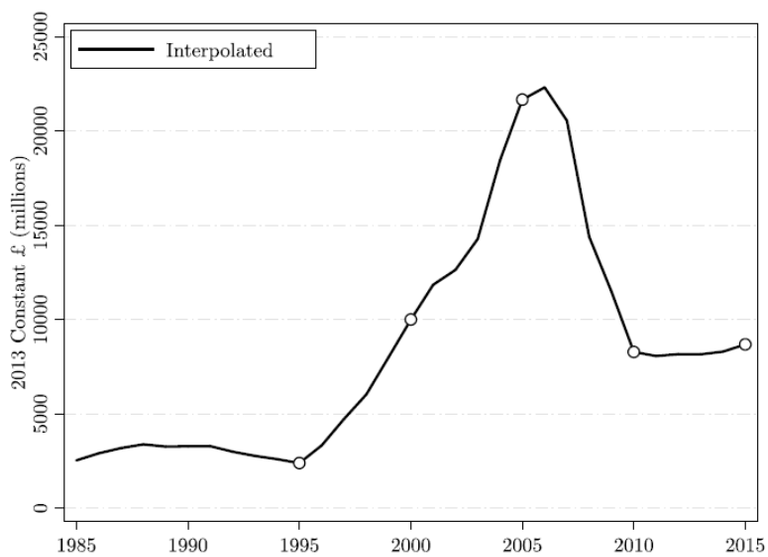

Figure 4 Excess Compensation 1985-2015.

To calculate the amount of excess compensation in the UK financial sector, we estimated a series of regressions using a large set of UK household surveys between 1970 and 2015. In particular, we use several vintages of the Family Expenditure Survey (FES), the Expenditure and Food Survey (EFS), and the Annual Population Survey (APS). From these regressions we derived a figure of **£280 billion**.

The excess profit data reported in table 2, involves financial sector profits peaking at roughly £110 billion immediately before the global financial crisis in 2007 and subsequently remaining between £60 and £70 billion. To put a total price tag on the amount of excess profits, we applied the lower bound 25% excess profits share suggested by Colangelo and Inklaar (2012), and compute the cumulative net present value. Carrying out this calculation for the 1995-2015 period, the total cost of the financial sector embodied in excess profits amounts to roughly **£400 billion** in real terms, or around 22 percent of 2015 GDP. Some of this will be a product of fees charged to foreign investors availing of City of London expertise. As explained earlier we discount the excess rent category from our headline figure, to err on the side of caution and forward what we consider to be a conservative total estimation of **£4,500 billion**.

Part 2: Explaining the Costs and their Implications: An Interdisciplinary Finance Curse Research Agenda

On the surface the total numbers for the UK are staggering. When we set out to replicate the earlier exercise undertaken for the United States for the UK we did not expect to see such a pronounced pattern. We should caution of course that any estimates of this nature will always be approximations. Other approaches could lead to different results. The estimates have however been carefully constructed, with caution. In this sense they do merit both further research and the start of a process of more carefully debating and considering the potential social and economic costs of excessive finance in the UK.

In this respect, the numbers reported here should be of both of interest to researchers and a cause of concern for policy makers alike, but they also suggest a need to dig behind the numbers. First to further establish and test their veracity, and second to explain what might be causing any such effects, identifying the precise mechanisms at work. The 'finance curse' concept is a framework that can inform and assist these research efforts.

Unpacking UK Misallocation Costs

One particularly interesting trend revealed by the data is that misallocation costs are the biggest single contribution to UK costs at 147.4 per cent of 2015 GDP. The higher bound figure for misallocation for the United States is only 22 per cent of 2015 GDP. For the UK, misallocation accounts for between 52.1% and 60% of total UK costs, whereas for the US misallocation is only 17.48% and 20.5 % of total costs.

The too much finance literature alerts us to a potential problem of macroeconomic underperformance and dysfunction, but has told us little about the contributions of precise mechanisms in particular countries. Cecchetti and Kharroubi's study essentially considers two misallocation effects: the misallocation of skilled labour to the financial sector, detrimentally impacting productivity levels, by disproportionately harming finance dependent R&D intensive industries; and financial sector growth disproportionately benefitting high collateral, low productivity projects such as real estate and construction (Ceccheti and Kharroubi, 2015, p.3). The Arcand et al, study merely alludes to the fact that the financial industry can misallocate resources even in good times, suggesting their results indicate this does occur because the costs they record are greater than simple financial crisis costs (Arcand et al, 2015, p.23.) Consequently, the category of misallocation costs remains something of a black box. This second part of our report calls for a more thorough excavation of the black box of the misallocation category through more detailed UK country based research in response to the data presented in part one.

The finance curse concept provides us with a potential framework or apparatus for further excavating the black box of misallocation. It identifies seven overlapping and mutually reinforcing processes that characterise financial over dependence. These are: Dutch disease; brain drain; rent extraction and attraction; financial volatility and crisis; uneven regional development; inequality and social segregation; political privilege and concentrations of power. The first three combine to produce a net crowding out effect in which other sectors are depleted of resources and are potentially at the nub of the misallocation costs suggested by the UK data.

We suggest that three different dynamic effects might contribute to misallocation costs.

1. Harmful financial agency – the intentional conscious decisions made by financial actors about how to allocate their resources, reflecting market incentives, that results in the selection of high collateral financial assets (such as property, or liquid financial instruments,) often contributing to price volatility, at the expense of longer term productive investments in technological and R&D intensive areas. Proportions of loans going to the UK manufacturing sector for example, have traditionally been low with one former IMF official estimating this to be as low as 1.4% in 2016 (Kaminska, 2016[6].) Such low figures potentially shed some light on why misallocation figures for the UK are so high. Establishing and interrogating such a pattern will require detailed investigations of the risk models of major financial institutions, how this is affected by the regulatory and tax environment and how that in turn feeds into the investment decisions made, including proportions going to different sectors. It might also be illuminated by a survey of the attitudes of financiers to different forms of risk and to different types of investment.

A further effect or process is how financial institutions demand returns (rent extraction) from firms whose core business is not finance, and the various time horizons this involves, including the extent to which it might restrict investment and expansion opportunities for the firms concerned. Both accounting practices and corporate law will shape these time horizons and the sets of incentives they involve. A deeper understanding of how financial institutions and financial risk models divert financial resources away from high productivity projects will therefore require an inter-disciplinary effort.

2 Structural gravitational forces - involving the pull that a buoyant growing financial sector, with multiple asset and investment opportunities, (often unintentional) can exert within an economy by attracting both financial and human capital away from other areas where it may be more profitably deployed (rent attraction and brain drain). This is effectively the suction, or vacuum cleaner effect identified by the Bank of England's chief economist (Haldane, 2012). Brain drain is a key element of the finance curse formulation and involves highly skilled workers, often with science, technology, engineering and mathematics backgrounds being attracted away from potentially more productive areas, into the dominant sector (finance) because of the lucrative financial rewards and compensation available. The 'too much finance' literature has identified this effect (Cecchetti and Kharroubi, 2015, p.4, Cecchetti and Kharroubi, 2012, pp.1-2, Kneer, 2013). However, aggregate econometric data tells us relatively little about the extent to which it is happening in particular locations, or the problems it may be producing in terms of labour and skill shortages in R&D intensive sectors. Uncovering this will require a more qualitative research effort involving CV analysis of samples of senior financial sector employees, and the staffing and personnel issues other sectors face. Where a pattern of brain drain can be identified, we will also need to know more about why highly skilled individuals chose to enter finance rather than alternative industries. Programmes of qualitative interviewing may provide insights.

6 Bank of England data puts this around 3.5% in 2018 https://www.bankofengland.co.uk/statistics/tables

A further effect reported by Cecchetti and Kharroubi is that manufacturing sectors that are either R&D-intensive or dependent on external finance suffer disproportionate reductions in productivity growth during financial booms. In such a scenario, rising financial asset values and rising property prices, attract investment away from long-term productivity enhancing projects. Several factors could drive this: the ready availability of assorted financial assets; cultural attitudes to property ownership and financial risk; high numbers of financial experts and advisors who ease the process of converting capital into holdings of financial instruments and assets; the extent to which regulatory and tax provisions facilitate and encourage this. In short, further country level analysis needs to consider these broader range of factors.

3. Unintended distortionary price spillovers, - the incidental consequences of financial inflows and the fees derived from handling financial transactions, which spillover to inflate local prices most notably the exchange rate, but also property prices, making it harder for alternative tradable sectors and exporters to compete in world and local markets, often known as *Dutch disease* (Corden, 1984, Botta, 2015). The 'too much finance' literature makes no reference to this process but it is an integral part of the finance curse concept. In the UK case, while systematic research, or precisely estimated costs, have been lacking to date, a number of expert observers have identified symptoms, where the 'persistent overvaluation of sterling', caused by the UK banking sector crowds out other sectors (Buiter, 2008). Ashoka Mody, formerly of the IMF's European Department, identified how the City's unrivalled position as a financial centre draws speculative flows from abroad, inflating sterling and allowing leverage by global banks in London, that benefits 'a bank-property nexus,' but leaves 'the rest of the country to suffer', including an under-funded manufacturing sector (Kaminska, 2016.) Paul Krugman, similarly claimed the City's financial exports crowded out manufacturing by keeping the currency strong, making the 16% depreciation in sterling since the Brexit referendum vote a necessary adjustment (Krugman, 2016). Unfortunately, other misallocation costs might mean the UK's capacity to respond to the potential advantage of such an exchange rate adjustment, might be limited, due to depleted manufacturing capacity, a poor record on R&D, low levels of productivity, and depleted and distorted pools of skilled labour. Again further research into Dutch disease in the UK is required, including an econometric stream estimating total macroeconomic costs, but also a more qualitative stream considering the experiences of export businesses with the price constraints brought about by the exchange rate and high property prices and rents.

Investigating these three different processes potentially provides us with a much better sense of the sources of UK macroeconomic underperformance and will help to unpick the full scope and nature of the misallocation problem the UK faces, as suggested by the data presented in part 1 of this report. If these effects are found to be at work, the finance curse concept suggests a need to go much further through an interdisciplinary effort investigating how they affect the social fabric of the UK. This would include: how high level financial rewards together with property investment and competition shape the built environment, community configuration and life opportunities; what it means for disparities between regions and the causal mechanisms at work; political and policy mind-sets, including why politicians of major parties are so reluctant to consider how a large financial sector can come with costs (Baker and Wigan, 2017, pp.199-200).

Summary

While further research is required, the evidence presented here indicates that the UK economy, may have performed much better in overall growth terms if: (a) its financial sector was smaller; (b) if finance was more focused on supporting other areas of the economy, rather than trying to act as a source of wealth creation and extraction in its own right. The timing of these findings could not be more important. As the UK's tortuous Brexit negotiations draw to a close, attention turns to what kind of economic model the UK will have in a post-Brexit world. If the UK has been suffering from a form of finance curse, and there is strong evidence that financial crowding out and misallocation effects have been present, UK political parties and public authorities face a choice. They can try to maintain the role and pre-eminence of UK financial services, promoting this sector and the City of London, at a time when exit from the European Union, will make maintaining the current status more difficult. Or they can try to take advantage of the opportunity of a permanently lower exchange rate by pursuing an alternative path. This would require more concerted efforts to identify, address and reduce the misallocation costs that the evidence presented here suggests are a particular UK problem. Certainly, the lower level of sterling provides some platform to reduce the UK record current account deficit. Any adjustment is unlikely to happen automatically through a market led process. A more proactive UK economic strategy will need to begin with an understanding of misallocation costs, how they arise and the 'crowing out' dynamics they entail. In turn, this will need to lead to a greater willingness to identify speculative short-term investments and processes of rent extraction that cause such effects, and to design regulation and public policy with an eye to discouraging and disincentivising such activity. At the very least the research and results reported here suggests a need to change the terms of the public conversation about finance in the UK. This will need to involve a more explicit recognition that where finance is concerned, more can sometimes be less, and less could be more. The data presented suggests that more careful consideration and debate of the potential social and economic costs of excessive finance in the UK, is long overdue.

Bibliography

Arcand, J. L., Berkes, E., & Panizza, U. (2015). Too much finance?. *Journal of Economic Growth*, *20*(2), 105-148.

Atkinson, A. B, Alvaredo, F, Piketty, T., & Saez, E. (2013). The top 1 percent in international and historical perspective. *Journal of Economic perspectives*, *27*(3), 3-20.

Baker, A., & Wigan, D. (2017). Constructing and contesting City of London power: NGOs and the emergence of noisier financial politics. *Economy and Society*, *46*(2), 185-210.

Botta, A. (2015). The macroeconomics of a financial Dutch disease. Working Paper, Levy Institute, No.850.

Buiter, W (2008) Could the UK face a sterling crisis, or are we in one already? Mavrecon, Financial Times.

Cecchetti, S. G., & Kharroubi, E. (2012). Reassessing the impact of finance on growth. BIS Working Paper, no.381.

Cecchetti, S. G., & Kharroubi, E. (2015). Why does financial sector growth crowd out real economic growth?. BIS Working Paper, no.490.

Christensen, J & Shaxson, N. (2014). The finance curse. *How Oversized Financial Centres Attack Democracy and Corrupt Economies. Chesham, UK: Tax Justice Network*. https://www.taxjustice.net/cms/upload/pdf/Finance_Curse_Final.pdf

Christensen, J., Shaxson, N., & Wigan, D. (2016). The finance curse: Britain and the world economy. *The British Journal of Politics and International Relations*, *18*(1), 255-269

Corden, W. M. (1984). Booming sector and Dutch disease economics: survey and consolidation. *oxford economic Papers*, *36*(3), 359-380.

Colangelo, A., & Inklaar, R. (2012). Bank output measurement in the euro area: a modified approach. *Review of Income and Wealth*, *58*(1), 142-165.

Davies, R, Haldane, A. G., Nielsen, M., & Pezzini, S. (2014). Measuring the costs of short-termism. *Journal of Financial Stability*, *12*, 16-25.

Easterly, W., Islam, R. & Stiglitz, J. E. (2000). Explaining Growth Volatility. *World Bank, Washington*.

Epstein, G and Montecino, J (2016). Overcharged: The High Cost of High Finance. http://rooseveltinstitute.org/overcharged-high-cost-high-finance/

Haldane, A. (2012). A leaf being turned. A speech given by Andrew G. Haldane, Executive Director, Financial Stability and member of the Financial Policy Committee, Bank of England to Occupy Economics, "Socially useful banking" at Friend's House, Euston, London on, 29.

Kaminska, I (2016) Brexit and Dutch Disease. *Financial Times*. *https://ftalphaville.ft.com/2016/10/12/2177179/brexit-and-britains-dutch-disease/*

Karl, T. L. (1999). The perils of the petro-state: reflections on the paradox of plenty. *Journal of International Affairs*, 31-48.

Kindleberger, C. (1978). *Panics and crashes. A History of Financial Crises.* (sixth edition, Palgrave Macmillan, 2011).

Kneer, C. (2013). Finance as a Magnet for the Best and Brightest: Implications for the Real Economy. DNB Working Paper. No.392. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.411.9794&rep=rep1&type=pdf

Krugman, P (2016) Notes on Brexit and the Pound. Opinion Pages. *New York Times. https://krugman.blogs.nytimes.com/2016/10/11/notes-on-brexit-and-the-pound/*

Minsky, H. P. (1974). The modeling of financial instability: An introduction. *Modelling and Simulation*, *5*(1), 267-272.

Philippon, T. (2015). Has the US finance industry become less efficient? On the theory and measurement of financial intermediation. *American Economic Review*, *105*(4), 1408-38.

Philippon, T., & Reshef, A. (2012). Wages and human capital in the US finance industry: 1909–2006. *The Quarterly Journal of Economics*, *127*(4), 1551-1609.

Ross, M. L. (1999). The political economy of the resource curse. *World politics*, *51*(2), 297-322.

Sturn, S., & Epstein, G. (2014). *Finance and growth: The neglected role of the business cycle* (Vol. 339). PERI Working Paper.

Tobin, J. (1984). On the efficiency of the financial-system. *Lloyds Bank Annual Review*, (153), 1-15.

September 2018

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