A Puzzling Rise in Financial Profits and the Role of Capital Gain-Like Revenues

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Abstract

The paper provides an explanation for the puzzling decoupling between the rate of growth of financial profits and GDP in the 2000s. Drawing on the insights from Keynes, Minsky, and Hilferding, the paper identifies a peculiar type of profit – capital gain-like revenues that take the form of profits from underwriting, mergers and acquisitions, securitization, and trade in financial assets. These capital gain-like revenues come from the redistribution of monetary assets and lack a counterpart in current GDP. They can be thought of as wealth transfers. Based on an empirical analysis of revenues of U.S. bank holding companies, these capital gain-like revenues are shown to have contributed significantly to the decoupling between the rate of growth of financial profits and GDP. The paper identifies characteristics of these revenues that explain the puzzles around this decoupling – its very possibility, sustainability over long time, and lack of losses sufficient to offset the pre-crisis financial gains. These characteristics of capital gain-like revenues also allow one to reconcile two seemingly incompatible approaches to a rise in financial profits – as transfers (rent) and as an illusion (mirage).

Introduction

An increase in financial profits and incomes is one of the hallmarks of the changing role of finance in the modern economy. For example, profits accruing to the U.S. financial sector have increased from 13 percent of total domestic profits in the 1950-60s to 32 percent in 2000-11, on average, with the historical record level of 40 percent in the early 2000s (Figure 1). In 1970-2011 U.S. GDP has been growing steadily and reached 15 multiples of GDP in 1970 while the non-financial sector profit growth fluctuated around that trend. By contrast, between 1970 and 2006, the financial sector profit increased by 28 times (Figure 2). It dropped in 2008, but very quickly recovered, and already in 2010-11 exceeded the pre-crisis level by having reached 30 multiples of the 1970 level, on average. This decoupling between the rate of growth of financial profits and GDP has been sometimes interpreted as accumulation of "excess profits" by the U.S. financial sector (Reid 2008). From this perspective, cumulative excess profits – profits above the rate of growth of GDP – amounted to $1.2 trillion between 1998 and 2008.

Such a trajectory of financial profits poses several questions. First, what can explain a decoupling of financial profits from non-financial profits and GDP since the

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mid 1990s? How can financial profits grow faster than GDP? This behavior differs from 1970-1990, when these three indicators moved together. Second, how can this rise in financial profits be sustained over more than a decade? Finally, how could these excess profits not be balanced by losses of an equal magnitude borne by the financial sector in crisis? In the words of Jim Reid (2008), what prevented "a trillion dollar mean reversion"?[2] The main goal of this paper is to shed some light on these questions.

This paper contributes to the literature in three ways. First, it identifies a specific type of financial profit that has become prominent over the last few decades – capital gain-like revenues. By doing so, the paper provides a theoretical foundation for understanding gains associated with capital markets and demonstrates how the mechanism of financial profit making holds for a broader range of financial gains than just trading gains and gains from mergers and acquisitions that have attracted some attention lately. A similar mechanism also holds for gains from initial public offerings, underwriting fees, and securitization gains. Second, it is shown that capital gain-like revenues have contributed significantly to a recent increase in financial profits. An empirical analysis below demonstrates that in 2001-2010 almost half of the detachment between the rate of growth of US bank holding companies' revenues and the rate of growth of GDP is explained by capital gain-like revenues. Specific characteristics of these revenues can shed some light on the three questions above about the trajectory of financial profits. In particular, certain features of capital gain-like revenues make a decoupling between the rates of growth of financial profits and GDP less surprising, explain how this decoupling can be sustained over a significant period of time and why these gains do not need to be offset by subsequent losses of the recipients of the gains. An important contribution here is an emphasis that capital gain-like revenues involve transfers of not only current income, but also accumulated wealth, which makes possible transfers on a much larger scale than just transfers of current income and profits. Third, this approach also suggests a possible way to reconcile two views on financial profits prevalent in the literature – as transfers (rent) and as an illusion (mirage).

Section 1 reviews the literature explaining an anomalous growth of financial profits. Section 2 analyzes income statements of the U.S. bank holding companies and shows that simple accounting categories are not very helpful for answering the question of what has caused the rise in financial profits. To address this problem, section 3 draws on Keynes, Minsky, and Hilferding to identify a range of financial profits that differ from profit from production. These insights are used in section 4 to revisit the empirical analysis of the U.S. bank holding companies, the results of which are then deployed in section 5 to explain the rise in financial profits. The final section discusses social implications of the findings and concludes.

1. Literature review: illusory profits, mirages, and rents

Literature on financialization has discussed the rise in financial profits, although this phenomenon has not received as much attention as one might have expected in light

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[2] Reid (2008) expected that a crisis should wipe out the $1.2 trillion "excess profits" received by the U.S. financial sector in 1998-2008: "Given that the WDCI function on Bloomberg reports that $184bn has been written down by US financials so far in this crisis, if one believes that the size of the financial sector should shrink to levels seen a decade ago then one could come to the conclusion that there is another trillion dollars of value destruction to go in the sector before we're back to the long-run trend in financial profits".

of the evidence from Figures 1-2. Arrighi (1994) was probably one of the first to notice the trend of the rising financial profits in the US economy since the 1970s. For him, a rise in financial profits is a periodically occurring phenomenon, signifying a decline – what he called an "autumn" – of a particular empire and a change in the hegemonic power in the world economy as a whole. He observed a similar pattern in Genoa, Netherlands, and Britain at a time of their decline as world hegemonies. Krippner (2005, p. 174) put the question of financial profits at the heart of her study by defining financialization as "a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production".[3] She provided comprehensive empirical evidence of a rise in both financial incomes received by the non-financial corporations and a share of financial sector profits in total domestic profits in the US. Epstein and Jayadev (2005) documented an increase in profits of the financial firms and interest income of non-financial private units in the OECD countries since the 1980s, whereas Stockhammer (2004) and Orhangazi (2008) examined a relationship between financial profits of non-financial corporations and capital accumulation.

The rise in financial profits has no doubt been a hallmark of financialization, but what is the macroeconomic source of these profits? Where do they come from? This question was emphasized by Pollin (1996, p. 115) in his review of Arrighi (1994). Pollin argued that financial profits should be treated as a transfer, or rent, because they represent redistribution of the value added in the sphere of production and exchange. More recently, van Treeck (2009, p. 911) also stressed the significance of examining financial profits from the perspective of their macroeconomic sources.

This literature sets a broader context for a more recent discussion of the rise in profits of financial institutions in the 2000s. A number of studies focus on a peculiar character of these profits. Although approaching the question from different angles, these studies have a common thread: they treat the recent explosion of financial profits either as somewhat illusory (based on a mirage), or as rent extraction. This literature questions the social benefits of some of the new banking activities and casts doubts on the value added by them.

One strand of the literature focuses on illusory profits associated with failures in accounting. Bank profits can be overstated due to accounting standards treating uncertain future gains as current profits, making these profits illusory, or fictitious. According to Kerr (2011), banks overstate profits in a number of ways. First, uncertain future cash flows can be turned into current profits by selling credit default swaps (CDS) that would however leave an insurer exposed to potential future losses. Second, an increase in value of assets, or a decrease in value of liabilities, is treated as profit due to mark-to-market accounting, mark-to-model accounting, or due to other estimations of the net present value based on implausibly optimistic forecasts. Third, inadequate provision for expected losses can also boost current profits by lowering loan loss provision set aside out of revenues.

Crotty (2008, p. 174), on the other hand, explains high profitability of financial institutions by excessive risk taking.[4] He views securitization, derivative creation and

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[3] By financial channels Krippner means activities related to provision of liquid capital in expectation of future dividends, interest, or capital gains.
[4] Entitling his book *False Profits*, Baker (2011) also hints toward the illusory character of the financial sector profits, although he never explains in what sense these profits were false.

trading, and trade on own account as examples of such high-risk strategies that became prominent in the 2000s. A similar argument was developed in greater detail by Haldane, Brennan and Madouros (2010). Aiming to explain a rise in the financial sector share in gross value added and profits, they conclude that this rise comes not from a productivity miracle in the financial sector, but is rather a mirage reflecting a consistent under-pricing of risk in the context of increased risk-taking.[5] For them, excess returns are a "risk illusion". If profits were properly adjusted for risk, returns would have been significantly lower. These excessive returns come from a number of strategies. First, they come from increased risk taking through increased leverage, rising trading books, and writing insurance for tail events. Returns from the last two strategies are subsequently offset by losses. Second, some activities considered to be low-risk and low-return (e.g., asset management, securities services, retail finance) actually yield high returns, due to risk under-pricing, price inelastic demand, and reputational equilibrium. Mergers and acquisitions (M&A) generate even more puzzling returns because while being value-destroying (Bodnaruk, Massa, Simonov, 2009; Kosnik, Shapiro, 1997) they nevertheless yield advisory fees for investment banks amounting to 0.5-1.5 percent of the value of the deal. Similarly, underwriting fees are as high as 3-4 percent in Europe and even higher in the U.S. The level and persistence of these fees remain a puzzle for Haldane, Brennan and Madouros (2010, p. 105) who consider a reputational equilibrium to be one possible explanation.

Both approaches focusing on fictitiousness of bank profits – either due to accounting practices (Kerr 2011) or risk illusion (Crotty, 2008; Haldane et al, 2010) – emphasize mismeasurement of value added of the financial sector and, therefore, of GDP as a whole. Furthermore, the illusory character of financial profits implies that these "paper profits" would be subsequently offset by losses of their recipients, as it happened during the crisis that started in 2007.

An alternative though less developed explanation looks at bank revenues from individual activities (e.g., trading or M&A) and considers them as rents extracted from the rest of the economy. For example, Turner (2010, p. 6) suggests that "it is possible for financial activity to extract rents from the real economy rather than to deliver economic value". He views profits from trade in financial assets as an example of such rents, because they represent a return on superior knowledge of the markets.[6] Similarly, following Minsky, Bezemer (2012, p. 36) stresses that the modern economy has become more concerned with capital gains, rather than profits[7]. Although the two forms of income do not differ at a microeconomic level – for their recipient, both represent purchasing power – there is a difference between the two at a macroeconomic level. In particular, unlike profit from production, the existence of capital gains requires either increased indebtedness in the economy or an income transfer. The strength of this approach, compared to the literature on fictitiousness of profits, lies in bringing to the surface the macroeconomic source of financial profits, as opposed to accounting

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[5] The argument by Haldane, Brennan and Madouros (2010) builds on studies by Wang, Basu and Fernald (2004), Wang (2003), Mink (2008), and Colangelo and Inklaar (2010).
[6] Rajiv Sethi also treats capital gains as return on information. Although he is right that capital gains cannot be treated as a return on capital, a return on information is not a good starting point for analysis of capital gains either, for they can accrue to both informed and uninformed traders.
[7] For Bezemer (2012, p. 29), fees from M&A is a particular form of capital gains.

standards and mismeasurement of risk. In this sense these approaches are similar to the earlier arguments by Pollin (1996) and van Treeck (2009). On the other hand, the approach based on rents is usually explicitly applied only to a narrow set of revenues – capital gains, trading gains, and sometimes also gains from M&A. When it comes to other financial activities, it remains unclear whether they are a form of rent extraction or value creation.

      The two approaches to financial profits – as illusions and as transfers – do not sit comfortably together. If financial profits are rents, they hinge on transfers of real resources from one party to another. On the other hand, a focus on the fictitious, illusory character of profits – if pushed too far – might suggest they would have no real implications. Can these two approaches be reconciled? And if so, how? To answer these questions, a closer look at the decomposition of financial profits is a good starting point. As it will become clear below, a change in composition of financial profits can help shed light on their rise.

2. Income of the U.S. bank holding companies: An empirical analysis

      To have a better understanding of the different sources of financial profits, one would need to examine their composition. Unfortunately, such data are not available for the U.S. financial sector as a whole. For this reason, this section focuses on the U.S. bank holding companies (BHC).[8] BHC are quite representative of the U.S. financial sector as a whole and their income statements also have a necessary level of detail. BHC profits trace the general trend of financial profits in the U.S. and account for a significant share of them (Figure 1). BHC pre-tax profit[9] rose from the average 26 percent of the total financial sector profit in 1986-1992 to 67 percent in 1993-2005, with a maximum of 83 percent in 2000. Given the relative share of the BHC profit in the total financial profit, and given the long-term increase in both, briefly interrupted by the recent crisis, the rest of the section focuses on an empirical analysis of BHC.

      In addition to BHC being a good lens for studying the transformation of profits of the U.S. financial sector as a whole, BHC profits are a worthwhile object of analysis on their own account as they have been growing even faster than profits of the financial sector as a whole. By 2005 the financial sector profits rose to 28 multiples of their 1970 level, and commercial bank profits closely followed this trend, while the BHC profits peaked at 47 multiples of their 1970 level (Figure 3).[10] The significantly higher rate of growth of the BHC profits is partly due to a faster rise of profits of the existing BHCs and their subsidiaries, and partly – due to creation of new BHCs and acquisition of new banks and non-bank subsidiaries by the already existing BHCs. The percentage of banks owned

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[8] A bank holding company is a company which has control over any bank. In December 2010, 80 percent of banks in the U.S. were owned by BHC.

[9] BHC pre-tax profit is reported as income (loss) before income taxes, extraordinary items, and other adjustments. It is a sum of net interest income, total noninterest income, realized gains (losses) on held-to-maturity securities and realized gains (losses) on available-for-sale securities, less total noninterest expense, less provision for loan and lease losses, and less provision for allocated transfer risk.

[10] The data for BHC are available only since 1986. To make the BHC profit index comparable with the other indices, it is assumed that in 1970-1985 the BHC profits rose at the same pace as commercial bank profits. Thus, for the BHC profit index 1986 is taken as a base year, with an index number set at 3.19 – the value of the profit index for the commercial banks that year. This is a reasonable assumption, given that until early 1990s BHC and commercial bank profits were almost equal (Figure 1).

by BHCs in the U.S. more than doubled in the 1980s – from 34.3 percent in 1980 to 72 percent in 1990.[11] Although since then it increased at a much slower pace, this process still contributed to an increase in BHC profits. By 2000 the percentage of banks owned by BHCs reached 80.1 and in the 2000s it fluctuated around 83 percent. Regardless of the specific reasons behind a sharp increase in BHC profits, this increase indicates a rising significance of this type of financial institutions in the U.S., which in turn makes an examination of the structure of their revenues even more relevant.

The data for the U.S. bank holding companies come from the FR Y-9C Reports filled out by BHC, collected by the Federal Reserve Bank of Chicago and available through Wharton Research Data Services (WRDS), The Bank Regulatory Database. The database includes income statements and balance sheets for BHC in 1986-2010. For the purposes of this study, I aggregate these data to arrive at an aggregated income statement and balance sheet for the BHC sector as a whole.

The usual argument about the evolution of sources of bank revenues stresses a long-term increase in the non-interest income, in absolute terms and as a share of total revenues. Figures 4 and 5 confirm this. Total non-interest income of the U.S. BHC increased from $36 billion in 1986 to $401 billion in 2005. After a decline to $209 billion by 2008, non-interest income doubled and reached its historical record of $420 billion in 2009-2010. Banking activities generating non-interest income have been growing at a faster pace than the traditional banking business. As a result, between 1986 and 2003, non-interest income has increased from 15 to 38 percent of total revenue, and after a decline in the pre-crisis years reached unprecedented 43 percent in 2009-2010. In 1986-2010, non-interest income has increased from 30 to 50 percent of total revenue net of interest expense. It means nowadays almost a half of total BHC revenue and a half of revenue net of interest expense are generated through non-interest income. The composition and the nature of non-interest income, therefore, call for analysis.[12]

A closer look at the non-interest income merely reveals the multiplicity of activities and bank services hidden behind it (Figure 6). Non-interest income includes trading revenue, income from fiduciary activities, service charges on deposit accounts, fees from investment banking, insurance commissions and fees, venture capital revenue, net servicing fees, net securitization income, and net gains on sales of various assets.[13]

An empirical analysis based on the accounting categories, however, does not provide a straightforward answer to the questions: how could financial profits decouple from GDP and how could that decoupling be sustained? Income statements merely indicate that there is a large number of ways in which BHC make revenues these days, that the shares of different types of non-interest income have not changed much in 2001-

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[11] Data come from http://www.fedpartnership.gov/bank-life-cycle/charts/bank-ownership-by-bhcs.pdf.

[12] Another important trend in bank revenues is a change in composition of the interest income of the U.S. BHC. In 2008-2010, about 19 percent of their total interest income came from residential mortgage lending. This change lies beyond the scope of the present analysis.

[13] Prior to 2001, non-interest income was sub-divided into income from fiduciary activities, service charges on deposit accounts, trading revenue, and other non-interest income. The latter was rising and since at least 1996 accounted for more than a half of total non-interest income. Therefore, a meaningful decomposition of non-interest income useful for our purposes is only possible after 2001, when methodology was changed to further decompose other non-interest income. For this reason, the remainder of the empirical analysis will focus on 2001-2010.

2010, and that none of these types of revenues are significant enough to explain the overall trend. The puzzle of the causes of the rise in financial profits remains.

3. Capital gain-like revenues: Insights from Keynes, Minsky, and Hilferding
  If a rise in financial profits cannot be explained on the basis of accounting categories, we need a theoretical framework that could help interpret the results. This section will show that Keynes, Minsky, and Hilferding have some insights that can help explain the puzzling rise in financial profits.

3.1. From the dual price system to theories of investment: Keynes, Tobin, and Minsky
  Keynes offered a distinct conceptualization of capital goods that lies at the heart of his theory of investment further developed by Tobin and Minsky. Keynes (1973 [1936], p. 135-137) suggested that capital goods – what he called "capital-assets", or investment – have two sets of prices, the demand price and the supply price. The demand price of the investment is determined by the prospective yield from an asset and the current rate of interest. The prospective yield is the difference between the selling price of the goods produced with the aid of the capital asset and the running expenses during the life of the asset. The supply price of the capital-asset is its replacement cost. For Keynes, investment is carried out up to a point when the supply price of investment is equal to its demand price. In other words, it is the gap between the two sets of prices that constitutes an inducement to invest.
  This approach was subsequently formalized by Brainard and Tobin (1968) as a q-theory of investment and entered a general equilibrium model developed by Tobin (1969). Given that the required rate of return for investors can diverge from the marginal efficiency of capital, the market value of the physical capital can diverge from its reproduction costs in the short run (Tobin, 1969, p. 29). Nevertheless, a long run equilibrium requires equalization of the two sets of prices. Similarly, Minsky (2008 [1986], pp. 160, 195-205) also used the dual price system as a basis of his theory of investment, although for him, unlike Tobin, the market value and the replacement costs do not have to equalize, even in the long run.
  The debate around the empirical and theoretical validity of these theories of investment gives reasons to believe that the approaches to investment developed by Keynes, Tobin, and Minsky have a limited explanatory power. Comparative econometric and case studies find mixed or weak support for the q-theory of investment (e.g., Bosworth, 1981; Fisher, Merton, 1984) and show it to be inferior to other investment theories (Clark, 1979; Kopke, 1982). For Crotty (1990), the inability of these theories of investment to stand empirical tests is not surprising due to the conceptual problems at the heart of these theories, most notably – the conflation of managers and shareholders, as in the case of Tobin and Minsky, or the domination of owners over managers, as in Keynes. For Crotty (1990, pp. 535-537), by contrast, investment decisions can be relatively independent of the gap between the two sets of prices, especially given that these decisions are made by managers, not shareholders.
  Debates about the validity of the theories of investment developed by Keynes, Tobin, and Minsky suggest that even though these theories can explain investment behavior under certain conditions, the gap between the market value of the capital assets and the replacement costs cannot be a foundation of a general theory of investment. That

alone, however, does not make the idea of the two sets of prices of capital goods irrelevant. The importance of the dual price system goes beyond the theory of investment, and a look at the history of thought can offer insights into other possible questions that can be addressed with the aid of the dual price system.

One such set of questions is the theory of capital and the capital controversies. Hicks (1974) argued that a possible way of looking at the history of capital controversies – from Ricardo and Malthus to the Cambridge capital controversy – is to understand it through the lens of evolution of two distinct approaches to aggregation of the real capital for the economy as a whole. These two approaches are called by Hicks "fundist" and "materialist".[14] For "materialists", capital is a stock of physical goods. The "volume of capital" is aggregated using prices of capital goods themselves. By contrast, for "fundists", capital is a capacity of producing goods in the future which is embodied in these physical goods. The "value of capital" can thus be measured as capitalized values of future net products. Thus, for Hicks (1974, p. 315), the "fundist" concept of capital is forward-looking, whereas the "materialist" concept is backward-looking. [15]

Viewed from the perspective of the debate between "fundists" and "materialists", the relevance of Keynes's two prices of investment lies in the fact that Keynes explicitly acknowledged the concept of capital as simultaneously forward- and backward-looking, making him both a "fundist" and a "materialist".[16] Capital is both a sum of values necessary for reproduction of the given stock of capital and a discounted future flow of value accruing to this stock. Keynes's two sets of prices suggest that the two approaches to capital, which represent two opposing camps in some of the capital controversies, are in fact not mutually exclusive.

In the 20th century the forward-looking concept of capital became dominant, shifting the backward-looking concepts to the margins. In Merhling's (2006) words, "the economics view" of capital has given way to "the finance view". That is why the scholars of the end 19th – early 20th century are interesting in their appreciation of both the economics and the finance view, and Keynes was only one of them. For example, Irving Fisher was also "caught with one foot in the 19th century and the second in the 20th" (Mehrling, 2006, p. 73). Fisher inherited the classical political economy view, according to which "the accumulation of capital-wealth from the past determines the flow of future income-services", but also anticipated the development of the modern theories of finance (CAPM) and the modern macroeconomic theory (DSGE models), according to which "future income flows determine current capital valuations". A similar appreciation of both modes of valuation of capital can be found earlier in Marx (1977 [1894], p. 320) and Veblen (1904).

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[14] Hicks (1974, pp. 309, 315) considers Smith, British classical economists, Marx, Jevons, Boehm-Bawerk, Taussig, and Hayek to be "fundists", and Cannan, Walras, Marshall, Pigou, and J.B.Clark – "materialists".
[15] Tobin (1969, p. 19) and Minsky (2008 [1986], pp. 227-228) treat the nominal value of capital as determined by the present conditions of its reproduction, not its historical costs. Their concept is therefore not backward-looking, as in Hicks, but "present-looking".
[16] Hicks (1974, p. 309) treats Keynes as mostly a "materialist" with "no more than slight signs" of "fundism". Hicks thus underestimated the essential role Keynes attributed to investment as capital assets yielding future revenues, and on these grounds treated only Irving Fisher as simultaneously a "materialist" and a "fundist". Similarly, Hicks was one-sided when he treated Marx as a "fundist", whereas Marx was in fact both a "materialist" and a "fundist".

But why does it matter that capital can be valued in two distinct ways simultaneously? What matters is not necessarily the co-existence of the two sets of prices per se, but the fact that a gap between these two sets of prices creates a new range of profit opportunities. Hilferding (1910) was the first one to notice that, but his idea got lost in the history of thought.

3.2. From the dual price system to founder's profit: Hilferding

Hilferding (1910, chap. 7) associated the gap between the two sets of prices with a particular type of profit – founder's profit. Being concerned with a rise of the corporate form of business organization and joint stock capital, Hilferding considered money capital K invested in purchasing the means of production and labor power. If the average rate of profit is r, the expected flow of surplus value generated per period in the process of production would be equal to $\pi = r \cdot K$. Following Marx, Hilferding assumed that the rate of profit systematically exceeds the interest rate, $r > i$, due to a different social status of money lenders and active capitalists. Given that from the perspective of an owner of money capital buying shares is akin to lending, Hilferding argued that shareholders would be satisfied with the rate of interest, as opposed to the rate of profit, and that they would be willing to pay π/i for the shares.[17] From the rate of interest being lower than the rate of profit ($i < r$), it follows that discounting the future stream of surplus value with the former would result in the market value of an incorporated enterprise standing above the value of the actual capital invested ($\pi/i > \pi/r$). The difference between the market value paid by investors and the initial capital invested, $\pi/i - \pi/r = \pi/i - K$, constitutes founder's profit that is shared between an initial owner of enterprise and an investment bank facilitating floating equity shares.[18]

In other words, founder's profit is the difference between the two sets of prices of capital – between the market price of the capital asset and the cost of reproduction. Even if the dual price system does not offer a general theory of investment, the conceptualization of capital goods as having two sets of prices at least sheds some light on the nature of a peculiar form of profit. What are the characteristics of this form of gain?

First, founder's profit is made possible by a rise of the stock market that transforms expected future cash flows associated with capital assets into a price (Minsky, 2008 [1986], p. 194). Without the stock market, founder's profit would not be possible as a common form of gain.

Second, for the founder's profit to exist, the market price of capital asset should be higher than its cost of reproduction. Why would equity buyers pay more than the reproduction costs of capital? One can think of two reasons. Hilferding (1910, chap. 7)

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[17] Hilferding also considered risk premium that would bid the rate of return on shares above the interest rate. However, he assumed that competition would eliminate the risk premium. On these grounds he dropped the risk premium in his ultimate analysis of founder's profit.

[18] Thus, founder's profit cannot exist without the difference in the rates of return:

$$KG = \frac{r \cdot K}{i} - K = \left(\frac{r}{i} - 1\right) \cdot K > 0,$$ if and only if r > i, for any positive value of capital.

explains founder's profit by the security buyers willing to accept a lower rate of return than the rate of profit in the sphere in production.[19] One possible explanation of that difference in the rates of return would be a difference in power of insiders and outsiders. Insiders have control over enterprise and can, therefore, refuse to sell equity shares unless outsiders accept a lower rate of return. Outsiders would in turn accept it, because even though the rate is lower, it would still be profitable for them.

This difference in the required rates of return due to shareholders' lack of control over enterprise can be further magnified by information asymmetry between insiders and outsiders. Information asymmetry, which is also conducive to fraud, was emphasized by Veblen (1904, p. 29-30, 77-80) as a key reason for existence of the founder's gain. Given that outsiders do not know the actual earning capacity and that insiders can, furthermore, manipulate or withhold relevant information, it is not surprising that outsiders might expect higher cash flows and, thus, be willing to pay more. Although information asymmetry and fraud are frequent explanations of lucrativeness of initial public offerings (IPOs), they cannot be the only reason. It becomes quite clear, once one recognizes that in the early days of IPOs and mergers the shares were distributed mainly among capitalists themselves who had skills and knowledge of business (Navin and Sears, 1955, pp. 123, 132-133). Among the buyers of securities were often commercial distributors of an enterprise going public, yet their knowledge of business did not eliminate founder's gain. In Hilferding's (1970, p. 112) words, founder's profit is "not itself a swindle, although it certainly makes swindles possible".

A third feature of founder's profit is its peculiar macroeconomic source. For Hilferding, this gain represents future profit received in a lump sum. Even though this gain is indeed justified by investors' expectations of future profits distributed in the form of dividends, Hilferding's argument does not explain where founder's profit come from at the moment when it is received by an entrepreneur. After all, future profit is not yet created, hence, it can form a basis of a financial transaction but it cannot be a macroeconomic source of financial gains. From a macroeconomic perspective, if financial markets transform expected future cash flows associated with capital assets into a set of current prices (Minsky, 2008 [1986], p. 194), then at the moment of such transformation there is no increase in the current output. This current price is merely a reflection of expected future output. Hence, unlike profit from production, founder's profit is not a part of current GDP. Not being a counterpart of current GDP, founder's profit can only arise in the sphere of circulation from redistribution of stocks of money of the asset buyers, and in this sense it is a form of "profit upon alienation" (Steuart, 1770a, p. 206) – redistribution of wealth within the society. As shown in greater detail by Lapavitsas and Levina (2011, pp. 21-25), by accepting a lower rate of return, asset buyers give up some of their monetary assets that form a source of founder's profit. Founder's profit is a cost for the ultimate shareholder – a cost formally similar to the cost of capital, K. Stocks of money redistributed in this way are not related to the ultimate asset holders' current income and can therefore exceed it. Some of founder's profit can come from redistribution of the current income, but it does not have to be limited by the current flows and can instead come from the pool of savings or through borrowing against future income and savings. At the macroeconomic level, this makes founder's profit incommensurable with current GDP.

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[19] The difference between the rate of profit and the rate of interest is also appreciated by Tobin (1969).

Given that equity shares are bought with money, from now on monetary assets will be referred to as the immediate source of founder's profit. Needless to say, even though at the moment of transaction it is monetary assets that are being redistributed, this money can come from a previous sale of some other (financial) asset, from current income, or from borrowing. Thus, broadly speaking, one can think of founder's profit as involving a wealth transfer, or redistribution of assets of the buyer of the equity shares, regardless of the form in which wealth had been held prior to the transaction.

The wealth transfers associated with founder's profit are not a zero-sum game, which in turn explains how the gain can be sustained over significant periods of time. Accepting different rates of return on future cash flows allows both parties to profit from the transaction. Sellers receive an immediate gain (founder's profit), whereas buyers acquire a claim on future cash flows generating return on their investment. In this sense founder's profit can be seen as a positive-sum game.[20]

Finally, founder's profit also does not have to be offset by subsequent losses, either for those who receive this profit or those who buy the corresponding equity shares. The former "lock in the gains", to use Lazonick's (2007, pp. 1006, 1010) expression, and are no longer exposed to risks associated with an enterprise. That is why they have no risk of losses. The equity shares buyers might or might not bear losses. If actual cash flows are such that the investors cannot recover even the amount of money invested, the ultimate asset holders would bear losses. But these losses would be a second-round effect, in addition to the first-round wealth transfer due to a difference in the rates of return.

3.3. Many forms of capital gain-like revenues

Insights from the discussion on founder's profit can be used to understand a broader range of financial profits. There are several forms of gain that have characteristics of founder's profit – they are made possible by the existence of capital markets and involve redistribution of the stock of monetary assets, as they lack a counterpart in current GDP. These forms of profit can be called capital gain-like revenues, among which are underwriting revenues, fees from mergers and acquisitions, securitization revenue, trading gains (both proprietary and on behalf of clients), fees from asset management, and even managerial bonuses in the form of stock options.

Consider, for example, mergers and acquisitions (M&A) – buying and selling of bundles of capital assets and market positions as embodied in firms and parts of firms. Underwriting can be seen as a logical origin of mergers, because, first, a merger involves issuing equity shares as claims on future revenues of an enterprise, with a difference from an IPO being that this enterprise is a newly created entity consisting of at least two previously independent firms. Second, even though historically IPOs and mergers developed at around the same time, and some mergers were among non-incorporated enterprises, the majority of modern mergers are among the already incorporated businesses. This was summarised by Minsky (1986, p. 348; see also Minsky, 1993, p. 11) who argued that "the starting point for bids on existing firms is the market valuation of the equity and debt liabilities".

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[20] Founder's profit can be seen as a zero-sum game only at the moment of transaction (IPO). As soon as the asset buyer receives return on the purchased shares, the founder's profit is no longer a zero-sum game.

Locking in a specific form of profit was an important motive behind M&A at various stages of history. For example, it played a role in the origin of mergers in the late 19th century (Chandler, 1977, pp. 332, 339), in the conglomeration movement in the U.S. in the 1960-70s (Lazonick, 1992, pp. 464-466), and in the leveraged buy-outs (LBOs) in the second half of the 1980s (Lazonick, 1992, pp. 472-473). Gains from M&A are similar to founder's profit. Just like founder's profit requires the existence of the stock market, gains from M&A require the market for corporate control. In both cases a financial reorganization results in a new enterprise whose market valuation increases, opening an opportunity for a lump-sum gain.[21] Financial markets transform future increases in market power or in labor productivity into immediate capital gains (Minsky, 1986, pp. 348-351). Lacking a counterpart in current GDP and reflecting expected future gains, these profits come from redistribution of monetary assets of the ultimate asset holders.[22] These gains accrue to institutions and individuals having control over the enterprises under reorganization and to institutions facilitating this process – investment banks.

Due to their role in liquidity provision banks are well suited to facilitate these transactions and, hence, to share in gains associated with them. Thus, bank fees from underwriting and M&A represent a particular form of financial profit due to the gap between the two sets of prices of capital – capital gain-like revenues. Fees for M&A are an important source of revenues for investment banks. For example, in 2003 in the U.S. investment banks facilitated M&A transactions worth $386 billion and received fees that exceeded $596 million (Walter, Yawson and Yeung, 2008, p. 342). In 2008 investment banks received $44 billion worldwide in fees for facilitating M&A, with $12.5 billion captured by six largest investment banks in the U.S., led by Goldman Sachs at $3.1 billion (DiNapoli, 2008, p. 6).

Securitization income also has characteristics similar to funder's profit. Securitization is a process of bundling loans and selling them to special purpose vehicles (SPVs), bookkeeping entities created by banks. SPVs use these loans as collateral to issue long term bonds sold to institutional and individual investors. One can think of securitization as a form of underwriting applied to bank lending, as opposed to non-financial corporations' process of production. Similar to investment banks providing liquidity to companies by floating claims on their future profits, securitization is a form of liquidity provision to banks themselves by floating claims on their future revenues – interest received on loans. It is therefore not surprising that some insights from an analysis of founder's profit are also helpful to understand securitization revenue. There are two forms of revenue associated with securitization – profit from the loan sale due to a rise in the value of the loan and profit from servicing loans.

When loans are bundled and sold to investors, the revenues received by a bank and an SPV come directly from monetary assets of the ultimate investors who in turn

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[21] By contrast to IPO, gains from M&A can also come from an increase in the expected future profits of the two enterprises combined – due to economies of scale, eliminating inefficiencies, achievement of market power as seller and/or monopsony power as buyer, economies of vertical integration, benefits of access to free cash flows of another enterprise, and other possible advantages.

[22] In this context Minsky (2008 [1986], p. 220) noticed that "the income of Wall Street operators in the mergers and acquisitions business is part of national income and output. Thus, while the meaning of the above is clear, it is not technically correct. In our type of economy, there is a peculiar output called mergers and acquisitions… The "golden parachutes" of the 1980s yield "incomes" that are hard to relate to the standard economic view of incomes".

receive a claim on future revenue.[23] A loan is typically sold at a price above its par value, and this difference can be explained by differences in the rates of return. Similar to underwriting, outsiders do not have control over bank business making them accept a lower rate of return, which can further be magnified by asymmetric information and fraud.

Empirical studies of securitization in the U.S. and Europe confirm that the coupon on asset-backed securities (ABS) is normally lower than the average interest rate on the underlying assets.[24] For instance, in 1988-2001 the ratio of the weighted average coupon rate of the mortgage-backed security (MBS) pool to the 30-year mortgage rate has 0.97 mean and 0.96 median, implying that on average the coupon on MBS is lower than the interest on underlying securities (Xu and Fung 2005, p. 405). These findings are consistent with the time series for Ginnie Mae ARM coupon and 30 year mortgage rate in 1986-2000 (Fabozzi, 2001). The same results hold for the 2000s. Interest margin between the 1-5 year housing loans and the 4-year ABS/MBS in the euro area was positive from January 2003 till June 2008, and turned negative only in 2008 – after the outbreak of the crisis (Colangelo and Inklaar, 2010, p. 18). The interest margin between mortgage loans and related MBS in the U.S. was 0.8 percent in 2002-2007 (Basu, Inklaar and Wang, 2008, p. 18).

Finally, trading gains and realized capital gains can also be seen as a form of capital gain-like revenues coming from the gap between the two sets of prices. Lapavitsas and Levina (2011) show that gains from trade in financial instruments are possible because of the differences in the rates or return, and these gains come from redistribution of the monetary assets of the ultimate asset holders. A lack of counterpart in current GDP for capital gains is acknowledged by national accounting that excludes capital gains from income and GDP on the grounds that capital gains represent changes in the price of already existing assets rather than current production (U.S. Bureau of Economic Analysis 2005, 2006, p. 5). These gains, therefore, also represent a wealth transfer.

4. Income of the U.S. bank holding companies: Empirical analysis revisited

The idea that capital gain-like revenues have peculiar characteristics and take many forms can be used to revisit an empirical analysis of the U.S. BHC. Founder's profit would correspond to fees from investment banking activities, including IPOs, underwriting, and M&A. Total securitization income would comprise net securitization income, net servicing fees, and net gains (losses) on sales of loans and leases. Realized capital gains would include trading revenue and two types of income not being a part of non-interest income – realized gains (losses) on held-to-maturity securities and realized gains (losses) on available-for-sale securities. A sum of these three forms of capital gain-like revenues – founder's profit, total securitization income, and realized capital gains – would represent total capital gain-like revenues of BHC. Figure 7 shows a decomposition of BHC non-interest income based on these theoretical categories.

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[23] The difference between founder's profit and securitization income lies in the character of cash flows that are expected to remunerate the ultimate asset holders. In the case of founder's profit, it is profit from production, in case of securitization – interest payments on loans.

[24] This is consistent with the mainstream theories of finance, according to which mortgage note rate is expected to exceed the MBS coupon rate by the amount of servicing fee and guarantee fee (Bhattacharya, Berliner and Fabozzi, 2008, p. 5; Wang, Uryasev, 2006, p. 23).

This decomposition brings to the surface several facts. First, in the run-up to crisis, realized capital gains were the smallest revenue associated with the dual price system. For the BHC sector as a whole, trading gains were not as significant as it might appear based on how much attention they have attracted. This is probably due to the fact that some of these gains represent redistribution within the BHC sector itself, so that gains of some BHC were losses of others. In 2009-2010 trading gains more than doubled compared to their average pre-crisis level of $29 billion per year. Amounting to $70 per annum in 2009-2010, realized capital gains became the second largest source of revenue, after founder's profit.

Incidentally, although "paper profits" associated with fair value accounting have been an important factor in determining behaviour of individual banks and generating leverage cycles (Adrian, Shin, 2010), from the macroeconomic perspective these revenues have not been an important source of the total bank revenues in the years for which the data are available. One cannot infer the role of "paper profits" in the run up to crisis, but in 2007-2010, the only years when the data are available, net change in the fair values of financial instruments accounted for under a fair value option was close to the value of realized capital gains, with the exception of 2008 (Table 1). Nevertheless, in 2009-2010 trading gains increased significantly, yet "paper profits" were substantially smaller than trading revenue. Revenues associated with mark-to-market accounting amounted only to 0.33-3.95 percent of total non-interest income in 2007-2010.

Second, in 2001-2006 total securitization income was a more important source of BHC revenues than realized capital gains. Averaging to $58 billion during those years, this form of revenue was the single largest form of BHC capital gain-like revenues. In particular, it was twice as high as realized capital gains and trading gains. Although securitization income has declined since the onset of the crisis, it still generates for BHC $20-40 billion per year.

Finally, prior to 2009, founder's profit averaged $52 billion per year, with the crisis years not being an exception. In 2009-2010 it rose to $91 per annum and thus became the single largest form of BHC capital gain-like revenues, having taken the place of securitization income.

Overall, total capital gain-like revenues averaged 40 percent of BHC non-interest income and 63 percent of their pre-tax profit in 2001-2007 (Figure 8).[25] It means that almost a half of what is normally known as non-traditional banking activities – activities generating non-interest income – are driven by pursuit of capital gain-like revenues. Since the crisis the share of the capital gain-like revenues in total BHC revenues has increased. After a $0.64 billion net loss from these activities combined in 2008 – a loss driven by losses from trading and capital losses – capital gain-like revenues quickly recovered and reached a historical record level of $202 and $185 billion in 2009 and 2010, respectively. As a result, total capital gain-like revenues rose to 46 percent of non-interest income in 2009-2010, on average, and 156 percent of pre-tax profit in 2010.[26]

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[25] Insurance commissions and fees, service charges on deposit accounts, and income from fiduciary activities are the other largest components of the non-interest income.

[26] In 2009 BHC pre-tax profits have not recovered after the crisis as quickly as capital gain-like revenues and amounted only to $15.5 billion. As a result, in that year capital gain-like revenues reached 13 multiples of the value of pre-tax profits. To avoid a distortion of the scale of the graph, this "outlier" is not depicted on Figure 8.

This quick recovery of the capital gain-like revenues and their rise above the pre-crisis levels stands in sharp contrast to the fact that profitability of the U.S. BHC still has not reached its pre-crisis level. Return on equity (ROE), which averaged 19 percent in 2001-2006, dropped to -4.7 percent in 2008 and rose merely to 7.6 percent by 2010. Return on assets (ROA) followed the same trend by falling from 1.7 percent in 2001-2006, on average, to -0.4 percent in 2008 and recovering only to 0.7 percent in 2010.

5. Rise in financial profits through the lens of capital gain-like revenues

How can these findings about the size of the capital gain-like revenues of the U.S. BHC explain the puzzling rise in financial profits in the 2000s? What do these gains have to do with the rise in financial profits? It was shown in section 3 above that capital gain-like revenues do not have a counterpart in current GDP and instead come from redistribution of monetary assets of the ultimate asset holders. Given that these gains are incommensurable with the size of current GDP, a logical step would be to find financial profits excluding capital gain-like revenues, to make a comparison between financial profits and GDP meaningful.

What would have a rise in financial profits been, if it were not for the capital gain-like revenues? To answer this question, I construct an index of BHC profits with and without capital gain-like revenues. To make the results comparable with Reid (2008), 1970 is chosen as a base year. Given that the data for BHC are available only since 1986, I assume BHC profits rose at the same pace as commercial bank profits in 1970-1986. Thus, the BHC profit index in 1986 is set at 3.19 – the value of the profit index for the commercial banks that year. This is a reasonable assumption, given that until early 1990s BHC and commercial bank profits were almost equal (Figure 1), and given that financial profits, non-financial profits, and GDP had a similar long-term trend in 1970-86 resulting in values of all these indices being close to each other in 1986 (Figure 2). For each

subsequent year the profit index is calculated as $\dfrac{\pi_t}{\pi_{1970}} = \dfrac{\pi_t}{\pi_{1986}/3.19}$, where π_t is BHC pre-tax profit in year t.

Profit index excluding capital gain-like revenue is calculated as

$\dfrac{\pi_t - \kappa_t}{\pi_{1970} - \kappa_{1970}} = \dfrac{\pi_t - \kappa_t}{\pi_{1986}/3.19}$, where π_t is BHC pre-tax profit in year t and κ_t is total capital

gain-like revenue in year t. Given that data for 1970 are not available, two assumptions are made. First, as before, BHC profits are assumed to rise at the same pace as commercial bank profits in 1970-1986, hence, $\pi_{1970} = \pi_{1986}/3.19$. Second, capital gain-like revenues are assumed to be equal to zero in 1970. In the absence of data, this is a reasonable assumption given that capital gain-like revenues rose to prominence since the 1990s, with a rise of non-traditional banking activities, and were insignificant even in 1986 when the data begin. Nevertheless, this assumption might introduce a bias. The denominator of the index might be overestimated, thus, underestimating the index as a whole.

The results are shown on Figure 9. BHC profits rose faster than the financial sector profits. In 2005 BHC profits were 47 times higher than their value in 1970, sharply declined the following three years, turned negative in 2008, and started recovering in 2009-10. By contrast, pre-tax profits excluding capital gain-like revenues rose faster than

GDP only in 2002-05, reached only 22 multiples of their 1970 value in 2005, and dropped significantly the following years. In other words, once the capital gain-like revenues are excluded from the BHC profits, the trillion dollar excessive profits disappear. Cumulative excess profits calculated as profits corresponding to a gap between the growth rate of BHC profits (excluding capital gain-like revenues) and GDP would be equal to $155 billion in 2002-2005, not $1.2 trillion, as in Reid (2008). But those cumulative excess profits would also be more than offset by $590 billion losses in 2006-2010. In a nutshell, there is no longer pronounced and sustained decoupling between financial profits and GDP, suggesting that capital gain-like revenues have significantly contributed to the dramatic rise in financial profits.

Notice, constructing the index excluding capital gain-like revenues, one would like to estimate the difference between pre-tax profits and capital gain-like profits, not revenues. In other words, one would like to add expenditures out of capital gain-like revenues to the numerator of the index, to make the two series comparable. Unfortunately, it is impossible to map capital gain-like revenues onto corresponding expenditures, as such data are not available. For this reason, the numerator of the index constructed above captures the difference between profits and capital gain-like revenues, which is a second-best solution, because it underestimates the numerator and the index as a whole.

To address this problem and to evaluate the robustness of conclusions drawn from Figure 9, I construct indices of BHC revenues including and excluding capital gain-like revenues, with 1986 as a base year. Revenue index is calculated as $\dfrac{R_t}{R_{1986}}$ and index of revenue excluding capital gain-like revenue as $\dfrac{R_t - \kappa_t}{R_{1986} - \kappa_{1986}}$, where R_t is BHC total revenue and κ_t is total capital gain-like revenue in year t. In the absence of data for capital gain-like revenues prior to 2001, I assume that capital gain-like revenues were zero in 1986. It is a reasonable assumption given that non-traditional banking activities rose to prominence in the 1990s, although this assumption might underestimate the value of the index excluding capital gain-like revenues. The results are shown on Figure 10. There is a decoupling between the rate of growth of BHC revenues and GDP, similar to that between profits and GDP. Once the capital gain-like revenues are excluded, the decoupling between the rate of growth of BHC revenues and GDP is less pronounced, especially after the crisis.

One can estimate "excess revenues" – a difference between actual revenues and what they would have been if they were to rise with the rate of growth of GDP since 1986. Excess revenues received by the BHC amount to $4.2 trillion since 1986, but they are highly concentrated in the 2000s. In 2001-2010 excess revenues equal to $2.9 trillion, whereas in the same years cumulative capital gain-like revenues amount to $1.3 trillion. Thus, 45 percent of the excess revenues of the US BHC can be explained by capital gain-like revenues, which suggests that almost half of the decoupling of BHC revenues from GDP in 2001-2010 was driven by capital gain-like revenues.

Conclusion

Drawing on the insights from Keynes, Minsky, and Hilferding, this paper identifies a peculiar type of profit – capital gain-like revenues – and demonstrates that this form of gain has contributed significantly to the decoupling between the rate of growth of financial profits and GDP. In 2001-2010 almost half of the detachment between the rate of growth of the US bank holding companies' revenues and the rate of growth of GDP is explained by capital gain-like revenues. The paper also identifies several peculiar characteristics of these gains that help solve three puzzles around this decoupling.

First, precisely because capital gain-like revenues do not have a counterpart in current GDP and instead come from redistribution of the stocks of monetary assets, it is not surprising that these revenues can grow at a pace unrelated to the rate of growth of GDP. It also explains how these profits can recover quickly and rise significantly during a recession. Although GDP has been sluggish, the stock of accumulated monetary assets still constitutes a pool that can be redistributed in spite of a recession. Second, the positive-sum character of the capital gain-like revenues explains how these profits can be sustained over a significant period of time. The fact that a seller of financial assets locks in a gain, whereas a buyer receives a claim on future cash flows yielding positive return on investment, makes a wealth transfer sustainable. Finally, third, capital gain-like revenues do not need to be offset by subsequent losses of the recipients of these gains. The gains are "locked in", so even if there are losses, they would be borne by the ultimate asset holders.

The approach developed in this paper can also help reconcile two perspectives on financial profits prevalent in the literature – as an illusion and as rent. Both views have important insights that need to be retained to explain the nature of some of financial profits. On the one hand, the first approach rightly stresses that some financial profits lack a counterpart in current GDP, and treating them as contributing to GDP would be an illusion. As it was shown above, capital gain-like revenues are monetized expected future gains locked in as current profits, and in that sense they do not have a counterpart in current GDP. Contrary to the approaches emphasizing the fictitious character of financial gains, these gains, however, do not have to be offset by subsequent losses or be associated with increased risk-taking of those who make the gains. The risks and potential losses do not stay with those who make capital gain-like revenues, instead, they are passed onto the ultimate assets holders. Moreover, a focus on fictitiousness of financial gains, if pushed to the extreme, can obscure a real resource transfer.

For these reasons it is important to retain the emphasis of the approach to financial profits as rents. There is indeed a redistribution of real resources associated with capital gain-like revenues. This paper contributes to the literature on financial profits as transfers (rents) by providing a theoretical foundation for understanding gains associated with capital markets, by demonstrating how the mechanism of financial profit making holds for a broader range of profits than trading gains and gains from M&A, and by emphasizing that capital gain-like revenues involve transfers of not only current income, but also accumulated wealth. Because of the latter, financial markets create space for redistribution on a much larger scale than redistribution of merely current incomes and profits.

To understand the social implications of the rise in BHC capital gain-like revenues, this trend needs to be considered in context of a rise in the pool of net wealth

held in the form of financial assets since the mid 1990s. This holds especially for households, whose wealth has become increasingly exposed to this form of redistribution. It was shown above that capital gain-like revenues represent wealth transfers. In general, the greater is the pool of wealth held in the form of financial assets, the greater are the opportunities for this pool being redistributed in the form of capital gain-like revenues. Net wealth of the US economy held in the form of financial assets, i.e. financial assets net of liabilities, was declining in 1973-79, then stabilized through the early 1990s, and rose sharply after 1995. Financial assets less liabilities have more than doubled as a multiple of GDP – from 1.15 in 1973-79, on average, to 2.37 in 1995-2011.[27] The implications for households are even more significant, as they hold a substantial share of the total pool of financial assets. The past several decades have witnessed the slashing of state social programs (and a resulting rise of the private pension system), coupled with stagnant real wages, even in spite of growing labor productivity. As a result of these two trends, net wealth held by households in the form of financial assets, i.e. financial assets net of liabilities, has increased from the average 2.46 multiples of disposable personal income in 1973-1979 to 3.32 in 1995-2011.[28] A rising exposure of households to wealth transfers, which is moreover higher than for the economy as a whole, is reinforced by changing composition of the household assets in favor of non-depositary instruments, which increased from the average 75 percent of the household total financial assets in 1973-84 to 84 percent in 2000-11. These trends leave households relatively more vulnerable than other sectors to wealth transfers in favor of the financial sector, and this exposure has been rising over time. As a result, it is households' net worth that increasingly forms a source of the capital-gain like revenues of financial institutions.

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Figure 1: Pre-tax financial sector profit as a share of total pre-tax domestic profit (US, 1945-2011, different sectors).
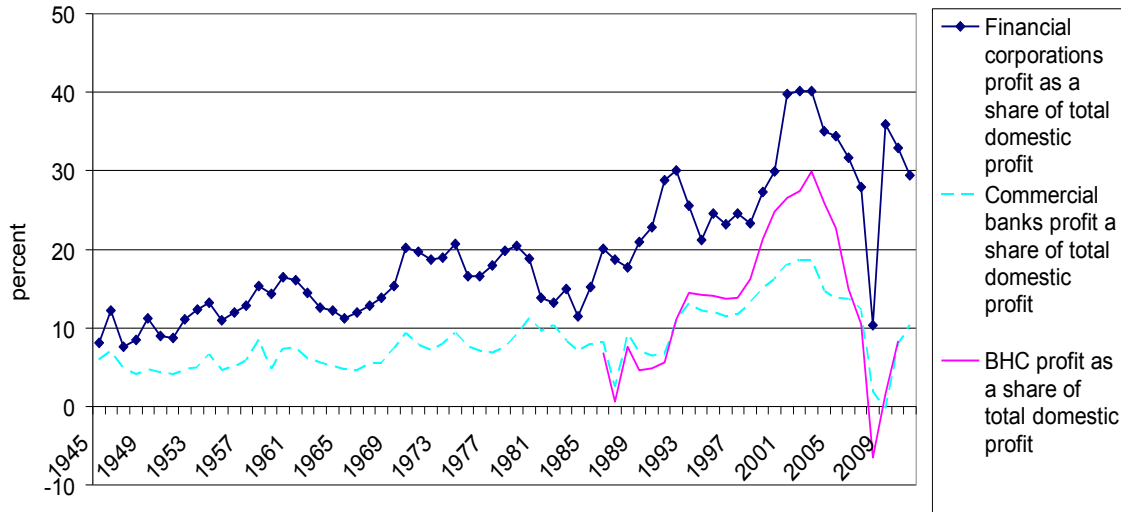
Source: calculations by author, NIPA, Table 6.16; FDIC, Historical Statistics on Banking, Table CB04; FR Y-9C Reports. Domestic profit is with IVA and CCAdj. BHC and CB profit is after provision for loan losses, with realized capital gains included.

Figure 2: Pre-tax financial sector profit, nonfinancial sector profit, and GDP (US, 1970-2011). Index: 1970 = 1.
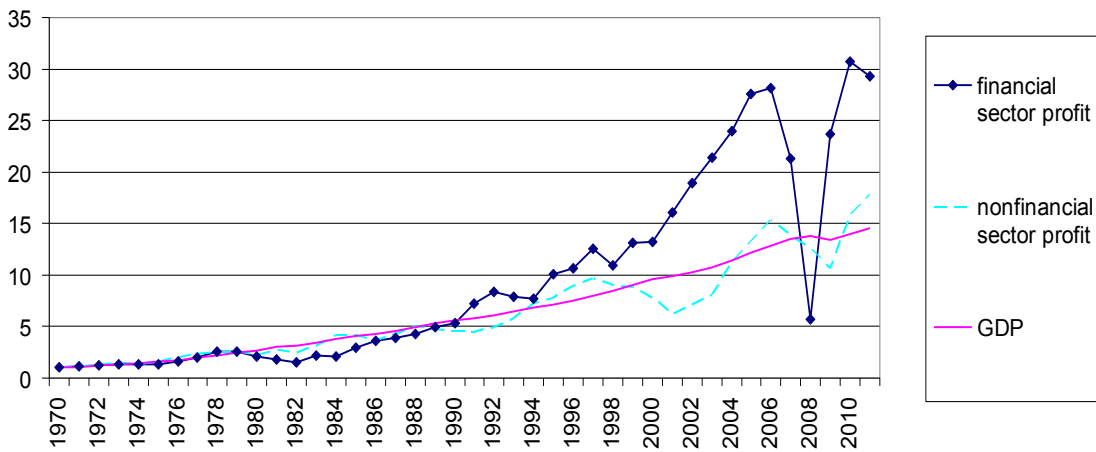
Source: calculations by author, NIPA, Tables 1.1.5, 6.16. Domestic profit is with IVA and CCAdj.

Figure 3: Pre-tax profits of the financial sector, commercial banks, and BHC (US, 1970-2011). Index: 1970 = 1.
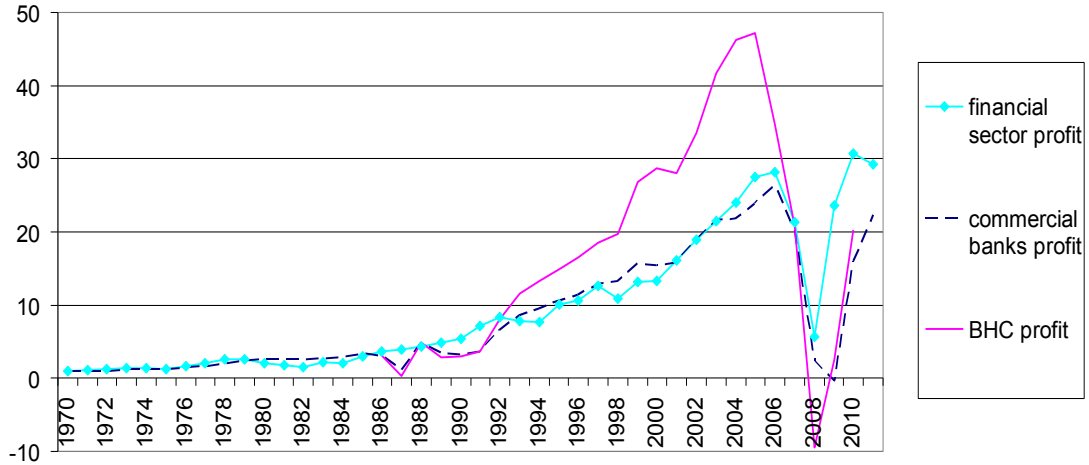
Source: calculations by author, NIPA, Table 6.16; FDIC, Historical Statistics on Banking, Table CB04; FR Y-9C Reports. Financial sector profit is with IVA and CCAdj. BHC and CB profit is after provision for loan losses, realized capital gains included.

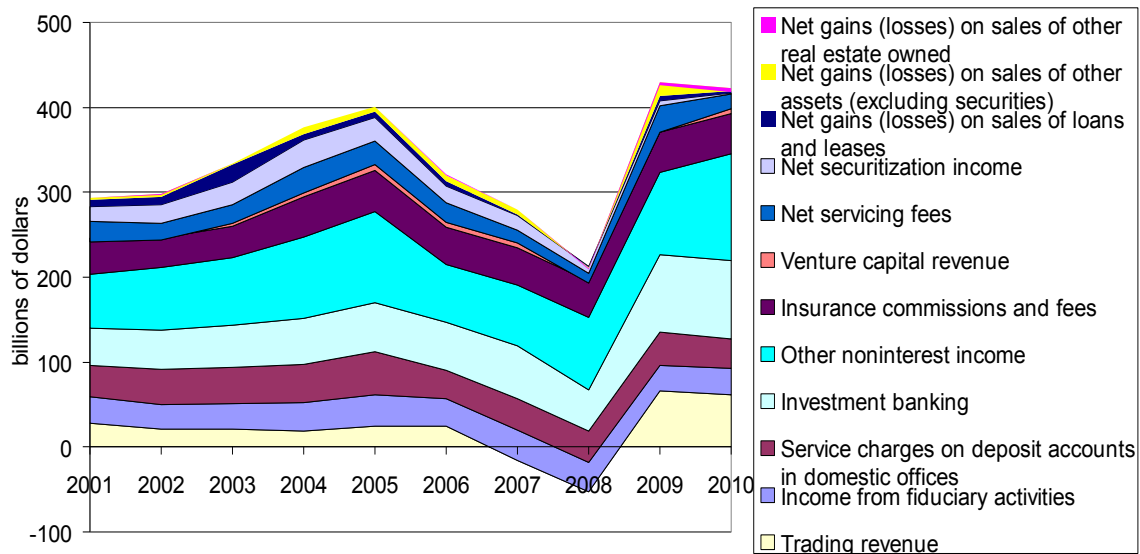Figure 4: Total interest income, non-interest income, and realized capital gains (US BHC, 1986-2010).
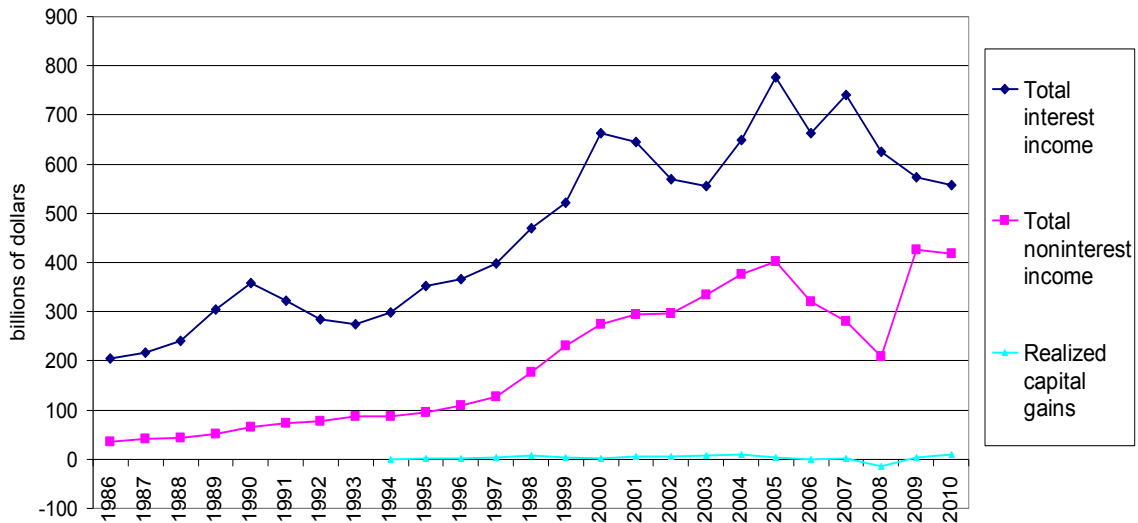
Source: calculations by author based on FR Y-9C Reports, available through Federal Reserve Bank of Chicago and WRDS.

Figure 5: Non-interest income as a share of total revenue, revenue net of interest expense, and GDP (US BHC, 1986-2010).
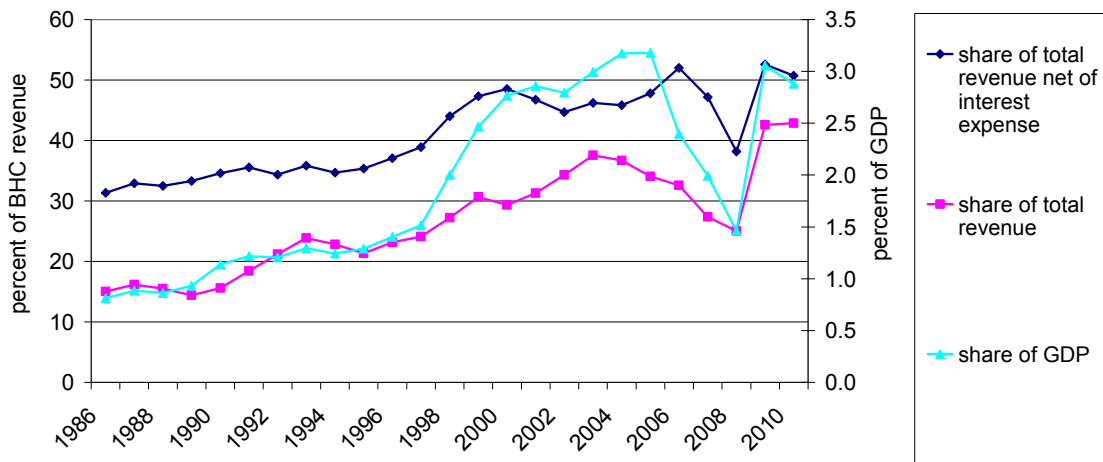
Source: calculations by author based on FR Y-9C Reports, available through Federal Reserve Bank of Chicago and WRDS; NIPA, Table 1.1.5.
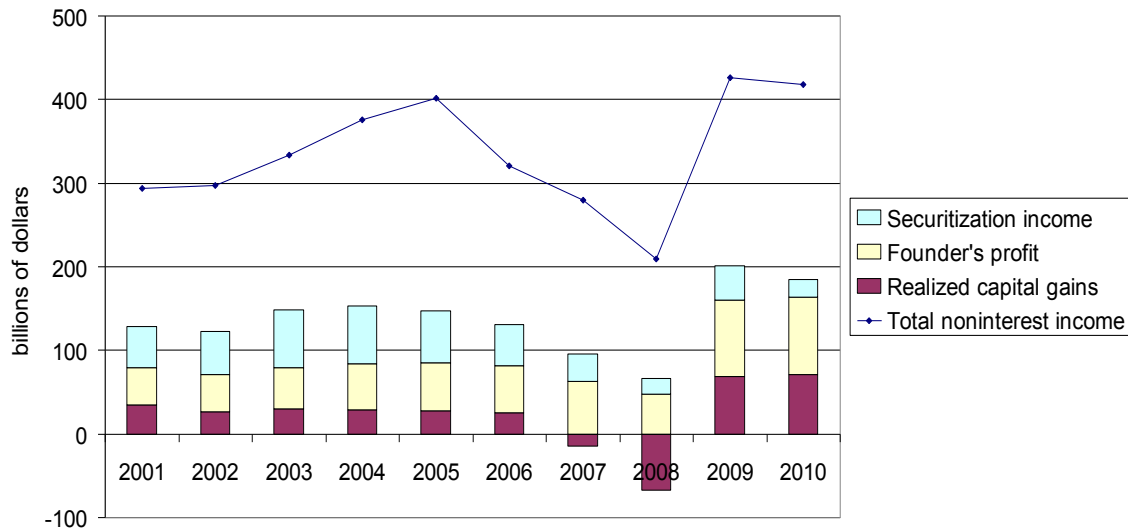
Figure 6: Composition of non-interest income of the US BHC, 2001-2010.[29]

Source: calculations by author based on FR Y-9C Reports, available through Federal Reserve Bank of Chicago and WRDS.

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[29] Net gains (losses) on sales of other real estate owned are visible on the graph only in 2009-2010, and even then they are hardly recognizable. In other years they do not appear on the graph at all due to their negligible size. In 2001-2008, net gains (losses) on sales of other real estate owned averaged -$0.32 billion, with a maximum loss in the period being $1.48 billion in 2008 and a maximum gain of $0.27 billion in 2006.

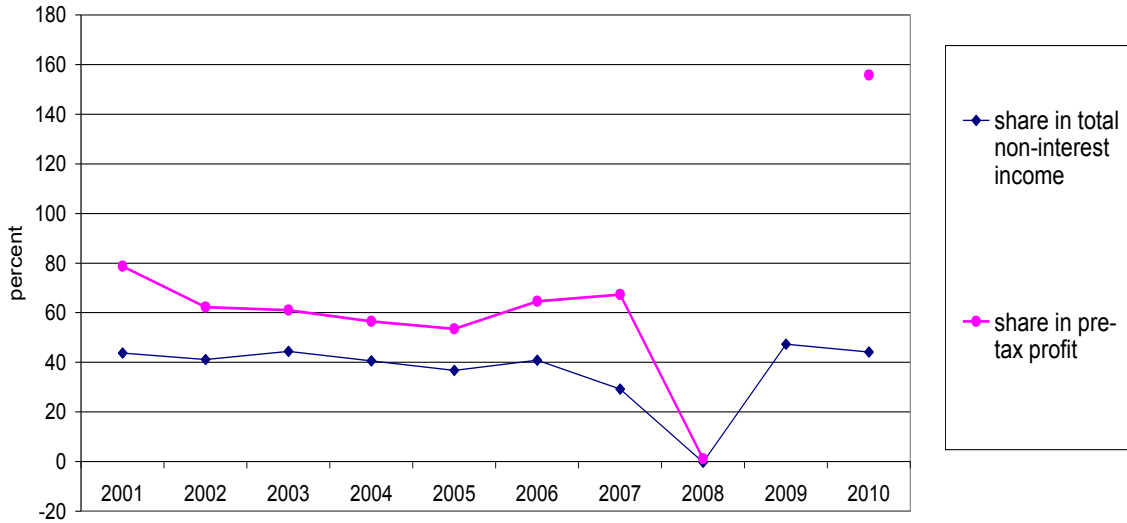Figure 7: Capital gain-like revenues (U.S. BHC, 2001-2010).

Source: calculations by author based on FR Y-9C Reports, available through Federal
Reserve Bank of Chicago and WRDS.

Table 1: Net change in the fair values of financial instruments accounted for under a fair
value option in comparison to other capital gain-like revenues (billion of $) and as a share
of non-interest income (in percent).

|	2007	2008	2009	2010
Net change in the fair values of financial instruments accounted for under a fair value option	0.92	8.26	2.49	10.65
Realized capital gains	1.50	-14.40	2.89	10.12
Trading revenue	-15.70	-53.14	66.18	61.11
Net change in the fair values of financial instruments accounted for under a fair value option as a share of non-interest income	0.33	3.95	0.58	2.54

Source: calculations by author based on FR Y-9C Reports, available through Federal
Reserve Bank of Chicago and WRDS.

Figure 8: Total capital gain-like revenues as a share of non-interest income and profit (US BHC, 2001-2010).
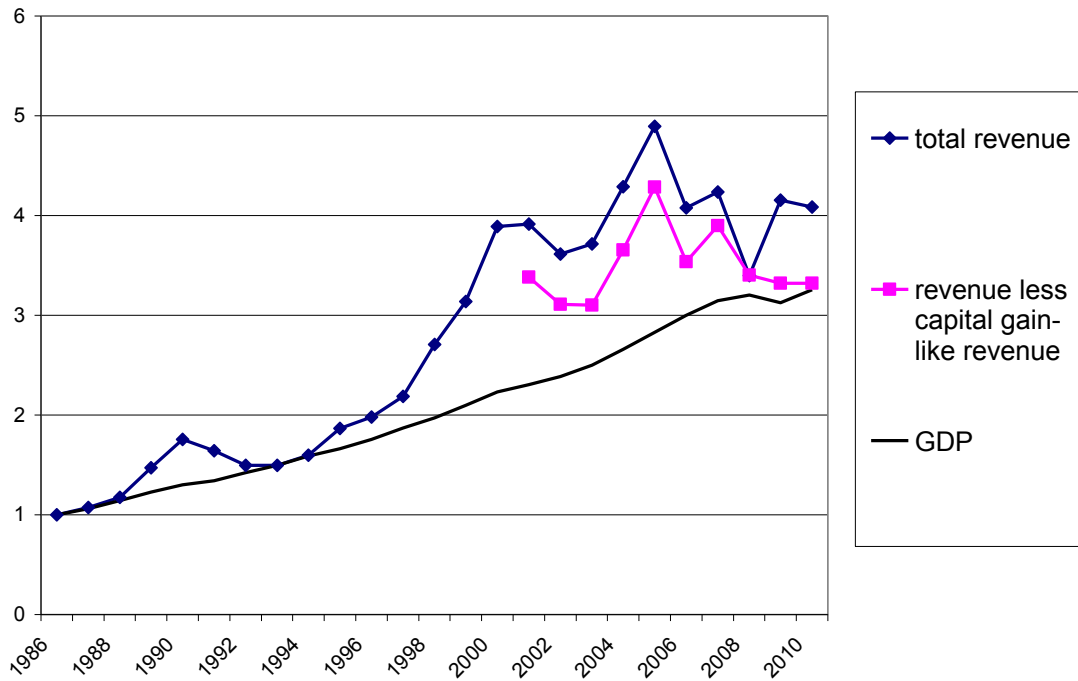

Source: calculations by author based on FR Y-9C Reports, available through Federal Reserve Bank of Chicago and WRDS.

Figure 9: Pre-tax BHC profit excluding capital gain-like revenues, BHC profit, financial sector profit, and GDP (US, 1970-2011). Index: 1970 = 1
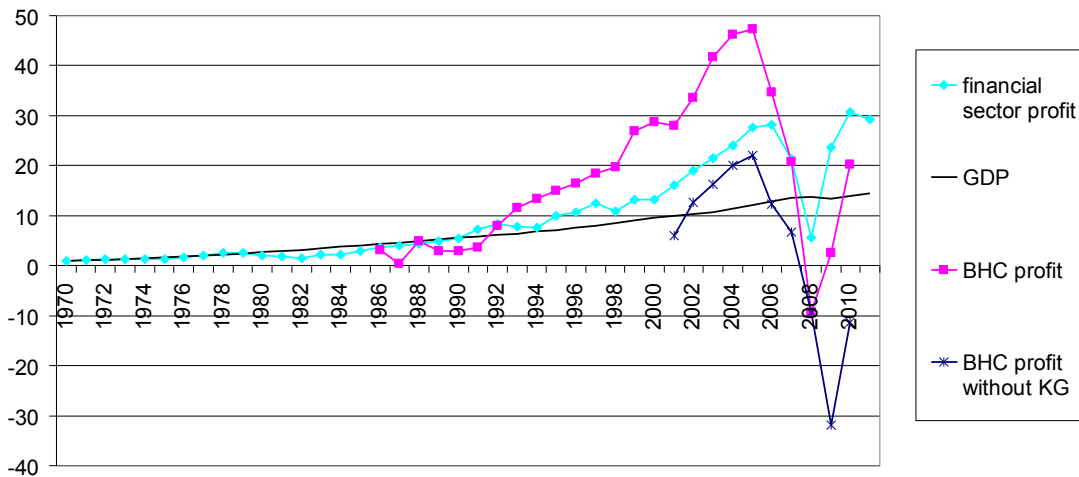
Source: calculations by author, NIPA, Tables 1.1.5, 6.16; FR Y-9C Reports. Domestic profit is with IVA and CCAdj.

Figure 10: BHC total revenue, revenue less capital gain-like revenue, and GDP (US, 1986-2010). Index: 1986 = 1

Source: calculations by author, NIPA, Table 1.1.5, FR Y-9C Reports.