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The Invisible Leverage of the Top 1 Percent: Absentee Debtors and Their Hedge Funds

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CITYPERC Working Paper No. 2024-01

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The invisible leverage of the top 1 percent: Absentee debtors and their hedge funds

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Abstract

The existing literature on finance, debt and inequality depicts economic elites as a creditor class. According to a popular thesis, over the past four decades, the rich and ultra-rich households in the top 1 percent have experienced a saving glut (excess income), which they have invested in the debts of the poor and their governments. While it is undeniable that the rich have expanded their income share at the expenses of the poor, to refer to them as ‘creditors’ or ‘lenders’ is a misrepresentation of how they actually expand their wealth and income shares by financial means. For it conceals the fact that a great deal of their investments is *leveraged*, that is, carried out with *borrowed money*. This article shows that the debts generated by individuals and households in the top 1 percent easily surpass those of all other households and even exceed those of the most indebted states in the world. However, these debts are hard to estimate, and indeed they are not accounted for in statistics on household debt. This is because households in the top 1 percent do not borrow from banks, like normal households do, but they are instead *absentee debtors* who borrow through the hedge funds, private equity firms, personal investment trusts, and big banks of which they are dominant shareholders and ultimate beneficiaries. To gain an insight into their invisible leverage, the article looks at how much hedge funds borrow, and why their leverage matters.

Keywords

Elites – Finance – Inequality – Leverage – Hedge Funds

Introduction

Over the last two decades, critical social theorists and mainstream economists alike have come to share a common sense on the relationship between debt and inequality: since the 1980s, impoverished households have borrowed part of the extra income that enriched households – the top 1 to 5 percent of the wealth and income distribution – have been able to save due to a variety of reasons. This has been recently referred to as the ‘saving glut of the rich’ (Mian *et al*, 2021), a theory that complements and expands on the ‘Asian’ or ‘global saving glut’ hypothesis first formulated in 2005 by Ben Bernanke. More specifically, the current received wisdom is that excess saving by higher-income households has progressively pushed interest rates down and eased access to credit starting from the mid-1980s. Lower-income households have taken advantage of cheap credit to compensate for stagnant or declining income and access housing ownership – whence the early 2000s subprime mortgage bubble¹. For some, the saving glut has contributed to greater financial inclusion and even a democratisation of finance (for a critique, see Erturk *et al*, 2007). For others, it was the opposite: credit has served as an apparatus of predation and capture on the indebted poor (e.g. Soederberg, 2014; Lazzarato, 2015). Others still have seen it as a trade-off where the poor were offered cheap credit in lieu of higher wages and more progressive income taxation systems (e.g. Rajan, 2010). Either way, scholars broadly agree that this new social compromise where the rich fund the leverage of the poor has caused greater financial instability: on the one hand, as the poor got hooked on cheap credit, they overextended themselves and increased their family debt burdens; on the other hand, as the rich struggled to generate returns on their capital, they were incentivised to take on more speculative, high-yield strategies (a ‘search for yield’). Altogether, these twin dynamics have led to an environment of risk, moral hazard, and economic sluggishness.

Notably, the idea that a saving glut of the rich is bound to lead to a doom loop of leverage and financial instability is not at all incongruent with early Marxist analyses of

¹ See for instance the seminal IMF working paper *Inequality, Leverage, Crises* (Kumhof and Ranciere, 2010) and Piketty’s *Capital in the Twenty-First Century* (Piketty, 2014, p.297).

financialization as an offshoot of the ‘overaccumulation of capital’ or else the persistent emergence of ‘surplus capital’². The latter is a pool of excess saving that cannot be profitably reinvested in production or, to use the language of proponents of the saving glut, the manifestation of a ‘chronic tendency of private investment to be insufficient to absorb private saving’ (Lukasz and Summers, 2019, p.1). In effect, surplus capital forms as the overall capacity for saving, or else the general desire for liquidity, exceeds the willingness to reinvest due to falling profitability across the economy. Taking the shape of ‘fictitious capital’, ‘interest-bearing capital’ and ‘money-capital’, surplus capital (which is often simply referred to as ‘finance capital’) becomes the matrix for the mass production of financial claims on the income generated by an already sluggish economy – claims that function as a private tax that syphons value off industries and further stifles growth in the long term. In this process, financial intermediaries and markets take the centre stage as the primary drivers of *both* money-making and secular stagnation. Financial expansion, or financialization, is therefore the sign of the Autumn, as Braudel (1984) famously put it: a *belle époque* for creditor-rentier elites that nevertheless preludes to the breakdown of a maladapted capitalist system plagued by a cancerous proliferation of debt, permanent financial instability, and recurring crises.

The parallels between the mainstream scholarship on the saving glut and the Marxist tradition should not be overstated, as the perspectives and policy recommendations informing these two literatures may vary dramatically. However, both convey an image of present-day capitalism as a struggle between creditor elites and mass debtors: a fragile compromise whereby the rich and ultra-rich have come to lend money to everyone else as a temporary fix to an inequality crisis they refuse to address. Alas, this consensus view is missing a crucial point: as it is argued in this article, over the past forty years, and especially in the last quarter century, the rich and ultra-rich in the top 1 percent have been generating more debt than anyone else, as they have massively leveraged their investments in both property and financial markets. It is estimated that between 10-14 percent of the wealth of global ‘high net worth individuals’ (HNWIs) is invested in highly levered alternative

² For a review of Marxist theories of financialization, see Lapavitsas (2013).

investment firms – hedge funds, private equity, real estate investment trusts – while another 20-30 percent is invested in equity shares of both financial and non-financial corporations (Capgemini, 2023, p.10), which have increased their leverage ratios over the past decades as part of shareholder value maximisation strategies³. On this ground, to call the global rich ‘creditors’ or ‘lenders’ is to mystify the fact that when they invest, they do so *through* the agency of highly levered-up funds, trusts, and corporations of which they are dominant shareholders and ultimate beneficiaries.

In this article, I will refer to the levered-up rich as *absentee debtors*, an original take on Veblen’s famous notion of ‘absentee ownership’. The latter is sometimes used as synonymous with ‘rentierism’, ‘shareholderism’, ‘patrimonialism’ (e.g. Piketty, 2014; Mazzucato, 2018; Christophers, 2020). All these notions similarly point to a *passive* role for economic elites who are thought to extract value from society by merely owning assets (directly or through the asset management complex). Veblen, however, did not think of absentee owners as mere rentiers, shareholders, or patrimonial capitalists. Instead, they were businesspeople, *both* owners *and* managers of ‘going concerns’ which they treated as ‘investments of funds’. While they had lost any technical understanding of the industrial processes their businesses superseded, absentee owners were nevertheless *active* on the financial end of things, as their ‘attention and energies were taken up more and more exclusively with the run of the market, with margins of cost and profit, and especially with ever-increased exactions and opportunities of credit investment’ (Veblen, 1997, p.257). Their being absent (from the industrial process) did not make them any passive or ‘functionless’ (to say it a la Keynes), but on the contrary allowed them to take the lead as ‘captains’ and ‘lieutenants’ of finance, purely focusing on money-making through the ‘larger use of credit’ (Veblen, 1997, p.326).

It goes without saying, things have changed since Veblen’s time. The financial sector has grown bigger and is far less leverage constrained. In the wake of institutional transformations in banking – innovations in asset and liability management, leading to the

³ Some of the largest non-financial corporations have increased their leverage ratios to fund mergers and acquisitions, leveraged buyouts, and stock buyback programmes (see Baines and Hager, 2021).

institutionalisation of what scholars have called ‘shadow banking’ and ‘market-based banking’ (Mehrling, 2010; Hardie *et al*, 2013) – big banks have vastly increased their infrastructural capacity to expand their balance sheets through capital market leveraging and money market funding, to accommodate the ever-growing demand for credit by governments, households, corporations and, not last, *the financial sector itself* (Author XXXb; Knafo, 2021). The plethora of alternative investment funds available to HNWIs that have sprouted out over the past decades have generated tremendous pressures for higher levels of leverage within the financial sector, both on- and off-balance sheet (through derivatives and shadow banking). One baffling outcome is that today’s economic elites have become the largest borrowers on earth, except their debts are invisible for the most part, unaccounted for by statistics on household finances, even brushed off the balance sheets of both the big banks and the hedge funds, private equity firms, and (real estate) investment trusts to which big banks lend.

The article makes a conceptual-theoretical contribution to the current debate on finance, debt, and inequality by bringing to the fore the agency of absentee debtors and their elite funds – in particular, through an analysis of hedge fund leverage. To this purpose, the article is organised as follows: in section one, it provides a methodological-theoretical critique of the saving glut or the rich. In section two, it empirically substantiates this critique by presenting the latest findings of a revisionist literature on household finance and the subprime mortgage crisis in the US. This literature strongly suggests that both the secular growth of household leverage and the subprime bubble of the early 2000s were driven, not by the poor, but by an affluent society of higher-income borrowers. In section three, the article brings forth its main thesis: the rich and ultra-rich individuals inside the top 1 percent are by far the largest generators of debt, except they do not borrow *from* banks, like normal households do, but they are instead absentee debtors who borrow *through* the alternative investment funds, trusts, and corporations of which they are dominant shareholders and ultimate beneficiaries. It goes without saying, a comprehensive analysis of how absentee debtors leverage their investments in property, business and financial markets is beyond the

scopes of this article. Instead, to gain a first insight into their largely invisible leverage, this article will only focus on hedge funds. Its objective is to (a) show that a sizeable amount of financial sector debt is the outcome of leverage strategies that are mandated by, or are anyway for the benefit of, rich and ultra-rich households, and (b) discuss why hedge fund leverage matters. To this purpose, section three addresses the question of *how much* hedge funds borrow. Finally, section four takes stock of recent debates in financial economics to discuss why hedge fund leverage matters for our understanding of present-day finance and the power struggles it arouses. In particular, it sheds light on a specific types of hedge fund investment strategies ('relative value' and 'fixed income arbitrage') to explain how some of the largest and most levered hedge funds generate high returns by investing in low-yield, safe assets.

1. The problem with the saving glut of the rich

The saving glut of the rich (Mian *et al*, 2021) is a latest iteration on the common theme that those with excess money – the rich – are the ones who lend (at progressively lower rates) while those who lack money – the poor – are the ones who borrow (sometimes beyond their means). The study points to a secular increase in the share of savings by the top 1 percent households in the US that has not been accompanied by a rise in net domestic investment but has instead gone along with a substantial dissaving by the US federal government and the rest of the household sector. The authors conclude that the growing debt of both government and non-rich households has been financed by rich households. In this respect, they clarify that the rich do not directly lend to the non-rich and the government. Instead, “they hold a variety of assets which ultimately finance borrowing by others” (Mian *et al*, 2021, p.25). In particular, the rich own money market and mutual fund shares, which in turn own portfolios of public debt and agency securities (which fund mortgages). Significantly, they also finance the borrowing of others indirectly, through their shareholdings of nonfinancial corporations, which “have increased their holdings of money market funds and

time deposits substantially since the mid 1990s, and these time deposits and money market funds are claims on debt through the financial system” (Mian *et al*, 2021, p.2)⁴. To operationalise their argument, the authors develop a methodology that purports to ‘unveil’ the financial sector through a detailed decomposition of the Financial Accounts of the United States (the ‘flow of funds’). Their ‘basic idea is to remove the veil of financial intermediation to see who ultimately holds claims on financial assets such as household and government debt’ (Mian *et al*, 2021, p.2). This unveiling exercise ‘allows for a calculation of net household debt positions across the wealth distribution’, defined as ‘household debt held as a financial asset minus household debt owed as a liability’ (Mian *et al*, 2021, p.2).

The fundamental problem with this accounting methodology is that it only focuses on *net* financial flows. The study’s starting point is national disposable income, and indeed its goal is to determine the income ‘contribution to aggregate savings from different parts of the distribution of US households’ (Mian *et al*, 2021, p.5). Finance, however, is not limited by the availability of disposable income but is instead the total volume of *gross* lending and borrowing, which are always a multiple of disposable income. If we were to account for *the total money supply* in the US, therefore all types of cash holdings in narrow and broad money forms, these would still be a small fraction of total outstanding dollar-denominated liabilities across sectors. In other words, the availability of finance as credit is *never* constrained by the supply of disposable income as saving, but rather by the prospect to discount and crystallize future income flows into present assets: finance monetises debt as it capitalises on future, not present, cash (Author, XXXa). As Borio and Disyatat (2015, pp.1-2) have pointed out in this respect,

Saving, a national accounts concept, is simply income (output) not consumed; financing, a cash flow concept, is access to purchasing power in the form of an accepted settlement medium (money), including through borrowing. Investment, and expenditures more generally, require financing, not saving. And financing is a gross, not a net, concept: financing

⁴ This point is relevant because by the same logic it could be argued that non-financial corporations have substantially increased their borrowing volumes and leverage ratios in the last quarter century with a view to maximising shareholder value.

is necessary for all sorts of purchases, well beyond those associated with income flows, including those of existing financial and real assets.

To be clear: there cannot be a logical identity between financing and saving. As heterodox economists have long argued, and mainstream economists have acknowledged in recent years, investment is dependent on credit, not saving, and credit is a function of the money-creating capacity of banks to meet the demand for loans (e.g. McLeay *et al*, 2014; Jakab and Kumhof, 2015). The saving glut, by contrast, is aligned with an outdated yet persistent notion that finance is a complex of intermediaries constrained by the availability of loanable funds. In other words, it works on the assumption that one's saving is a determining factor of another's borrowing. In this connection, it conceives of capital in neo-classical terms as a fund of saving and, in so doing, it confuses saving with financing: within its net-only accounting framework, having a net worth is analytically equivalent to being at once a saver *and* a creditor. Its underlying logic is simple: the rich save therefore they lend; the poor dissave therefore they borrow (from the rich).

The problem with this logic is twofold: first, it assumes that debt is equivalent to negative saving or dissaving. This is in line with the mainstream notion that household debt is a 'consumption-smoothing' device articulating a trade-off between spending more income today and saving less income tomorrow (due to interest payments). However, in the real world, most household debt is generated, not for consumption purposes, but to finance the acquisition of property and financial assets (Mason, 2018). In other words, taking on debt is predominantly a strategy by which households leverage their investments to *acquire*, rather than squander, wealth. This is linked to a second issue: insofar as the saving glut argument conceives of one's borrowing as a function of another's saving, it excludes in principle the rather obvious fact that *one's borrowing may be a positive determinant of one's own saving*. In effect, while existing saving and wealth are not a determinant of bank lending, they are certainly a determining factor of bank borrowing, as bank loans are normally issued

against eligible collateral (that is, wealth) and they require a downpayment or margin (that is, excess income saved for the purpose of borrowing). Stated otherwise, in a financial system where purchasing power and leverage can be generated *ex nihilo* by the banking system, the significance of disposable income and wealth is not that they can be loaned out at interest, but that they can be posted as collateral and/or margin to leverage one's investments in property and financial assets. In such a system, leverage allows for incremental wealth gains over time due to its procyclicality⁵.

Just consider the following hypothetical example: person A (Jones) has zero assets and \$1,000 debt. Person B (Gates) has \$1.2 billion assets and \$1 billion liabilities. Within the net-only methodological framework of the saving glut, Jones is a debtor while Gates is a creditor. More importantly, the saving glut assumes that the \$1,000 debt owed by Jones is financed out of the \$200 million net worth owned by Gates. However, it says nothing as to who or what financed Gates' \$1 billion debt. Since proponents of the saving glut are only concerned with net financial flows, this question never surfaces, even though it is clear that Gates' liability is far more consequential than Jones' as it strongly suggests that the assets held by the alleged 'creditor' have been acquired through borrowing. This is, for instance, what hedge funds do on a regular basis. The 'net worth' of a hedge fund is called 'net asset value' (NAV). This value roughly corresponds to the hedge fund's 'assets under management' (AUM), or else the overall value of the equity claims held by investors in the fund (IOSCO, 2020). The fact that a hedge fund typically enjoys a positive NAV does not make it a 'lender' or 'creditor' by any stretch of the imagination. On the contrary, a hedge fund is by definition a highly leveraged fund that uses its investors' equity capital as a margin against which it can borrow several times the value of its NAV to magnify return on equity (I will return to this issue in sections 3 and 4).

⁵ In aggregate terms, using leverage to acquire collateralizable assets has a positive effect on their value: it pushes their price up and, reciprocally, eases overall credit conditions. This is because when collateral asset values increase, loan-to-value ratios decrease, and lenders become more eager to renegotiate credit at lower rates. Hence leverage becomes not only cheaper, but all the more lucrative, as further money can be borrowed at lower costs (including through equity extraction from initial investment) to increase one's position in rapidly appreciating assets and/or refinance one's existing investments. Macro-financial scholars refer to this process as the 'credit cycle', 'leverage cycle', 'financial cycle' (Geanakoplos, 2010; Jorda *et al*, 2011; Borio, 2014).

Alas, proponents of the saving glut of the rich are not the only scholars who confuse wealth and credit and equate savers with lenders. This theme runs deep in today's characterisations of contemporary finance and the power struggles it arouses. Creditor-debtor relations are usually understood from a net-only perspective. Creditors are thought to be individuals who have more assets than liabilities, while debtors are just the opposite. The two cancel each other out, and '[t]he difference between these two analytical categories is that some – the net creditors – receive more income from capital than they pay out, while others – the net debtors – pay out more interest than they receive' (Di Muzio and Robbins, 2016, p.13). As I have explained, this net-only view is narrowly focused on income and overlooks the significance of leverage as a mechanism by which borrowers empower themselves. In so doing, it inadvertently delivers an upside-down image of the function that today's finance is called upon to perform, which is not at all to lend the excess money of the rich to the poor and their governments, but to generate leverage for the rich themselves.

2. An affluent society of borrowers

A historical analysis of the rise of US household debt from 1949 to 2013 found that, contrary to common sense, the share of total debt owed by richer American households has actually *increased* since the 1950s and '[t]his increase is mainly driven by the top 5 percent'; stated otherwise, 'on a household level, the correlation between debt and income has become more *positive* over time' (Kuhn *et al*, 2017, p.8). Another study of US household debt and income distribution over the 1983-2013 period presents similar findings: '[m]ost stories that link rising debt to increased income inequality imply that the largest rises in debt should be found down the income distribution' and this is true 'if the question is framed in terms of the top 5 percent and the bottom 95 percent' (Mason, 2018, p.24). However, if we look at the wider distribution of household debt, we learn that '[m]ore than three-quarters [...] is owed by the top 40 percent of the income distribution; less than 10 percent is owed by the bottom 40 percent' (Mason 2018, p.30). In general, 'the absolute level of debt rises monotonically

with income' to then 'fall somewhat at the very top of the distribution' (Mason, 2018, p.32). The positive correlation between debt and income also applies to UK and EU, where most households in the top quintiles owe the largest shares of household debt in absolute terms and are relatively more levered up than households in the bottom quintiles, many of which have no debt at all (Harari, 2018; ECB, 2020, pp.17-23).

The subprime mortgage bubble of the 2000s is no exception in this respect. While it was initially thought to be a case of financial inclusion gone wrong, recent scholarship has shown that, in fact, the subprime bubble was driven by higher-income borrowers, in line with long-term dynamics in household debt. This evidence runs against the early literature on the great financial crisis of 2007-08, which saw in the origination and securitisation of subprime mortgages (via the shadow banking complex) a decoupling of bank mortgage credit and household income, resulting in cheap credit to lower-income borrowers. A central piece in the construction of this narrative was a study by Mian and Sufi (2009) – later proponents of the saving glut of the rich – in which the authors analysed ZIP-code level data in the US and found that the sharp increase in mortgage defaults in 2007 was especially amplified in areas with a disproportionately large share of subprime borrowers. Prior to the default crisis, these subprime areas had experienced an unprecedented relative growth in mortgage credit which became negatively correlated with per capita income growth between 2002 and 2005. The authors concluded that the bubble was the consequence of 'an expansion in mortgage credit to subprime ZIP codes and its dissociation from income growth [which was] closely correlated with the increase in securitization of subprime mortgages' (Mian and Sufi, 2009, p.1449).

Later scholarship has demonstrated that no such decoupling ever occurred (Adelino *et al*, 2016). On the contrary, the correlation between subprime mortgage credit and income became more *positive* in the heydays of the subprime bubble as a relatively growing number of 'non-occupant housing investors' (NOHIs) in the top quintile of the income distribution got highly levered up via prime *and* subprime channels to speculate in the housing market

(to rent or flip properties). Many of these NOHIs were active agents of gentrification in lower-income areas who tapped on subprime credit to maximise their leverage. Mortgage borrowing by NOHIs grew much faster than that of owner-occupants in the build-up of the 2007-08 financial crisis and, in the subsequent downturn, 'non-occupants accounted for 65 percent of the decline in home sales' (Robinson and Todd, 2010, p.7). At the peak of the housing boom, between 2003-2005, home purchases by NOHIs 'increased almost 50 percent, while home purchases to owner occupants just 6.4 percent' (Robinson, 2012, p.117). The majority of NOHIs were amateur investors and petit rentiers 'who had not previously purchased investment properties, and who purchased only one or two properties during the boom' (Goldstein, 2018, p.1109). These investors, particularly 'buy-and-flip' ones interested in short-term capital gains, were less sensitive to interest rates and debt service costs, therefore more willing to incur higher loan-to-value mortgages with as little downpayment as possible, including interest-only mortgages, for these mortgages allowed them to bid more aggressively for property and reduce to a minimum their equity stake (Geanakoplos, 2010). Unsurprisingly, when they could not obtain maximum leverage through prime mortgages due to their more stringent downpayment requirements, they tapped onto subprime ones (Haughwout *et al*, 2011).

This explains why subprime mortgages included a substantial share of NOHIs who were nowhere close to being poor. In fact, over the 1997-2012 period, subprime borrowers in the US were on average only marginally less rich than prime borrowers: mean income values were respectively \$125,100 versus \$117,500 for the two groups (Ferreira and Gyourko, 2015, p.39). In other words, both groups were part of the top 10 percent of the income distribution and included a similar proportion of NOHIs (this was 21 percent among prime borrowers and 19 percent among subprime borrowers). Also, there is no evidence that subprime borrowers purchased smaller or less valuable properties (Ferreira and Gyourko, 2015, pp.17, 38). To make things murkier, data cannot truly account for the misreporting by borrowers of their true expected home-occupancy status: due to the general relaxation of documentation standards at the peak of the bubble, an indefinite number of NOHIs might have purchased

properties under more favourable terms by pretending to be home occupants (Haughwout *et al*, 2011, p.11). Disaggregated data on foreclosure rates provide further confirmation of the primary role played by higher-income households in the housing bubble. While the contribution of delinquencies in the lowest quintile of the income distribution declined, higher-income households saw their default rates increase dramatically and, what's more important, their defaults had a much greater impact on the aggregate stock of delinquent mortgages as they held much larger mortgages compared to lower-income households (Adelino *et al*, 2016, p.1636; p.1667).

Finally, while the initial narrative was that subprime lending exploded as the prime market got saturated, empirical evidence today suggests that the growth of subprime lending did not occur at the expenses of prime lending. Instead, between 1997 and 2007 *both* prime and subprime mortgages grew steadily at the expenses of GSE-conforming mortgages insured by the Federal Housing Administration and Veterans Administration. Unlike both prime and subprime mortgages, these FHA-insured mortgages were typically issued to middle- and low-income households (Ferreira and Gyourko, 2015, pp.2-3). All in all, this strongly suggests that the subprime bubble further aggravated the financial exclusion of the poor, while easing credit conditions for upper and upper-to-middle income households (including the offspring of wealthy boomers) eager to join an affluent society of indebted investors. In this respect, one should not be surprised to find that while home ownership rates in the US jumped from 40 percent in the 1940s to 60 percent or higher in the 1960s, they have been stagnating ever since. In 1980, the US homeownership rate was 65.8 percent; in 2022, it was 65.9 percent⁶. Meanwhile, the US residential mortgage sector has grown exponentially. Total mortgage debt stood at about \$1.5 billion in 1980. At present (October 2023), it has reached above \$17 trillion. These unsettling facts beg us to reconsider our understanding of how debt and inequality relate in contemporary times. Scholars have grown comfortable with explaining the phenomenon of household leverage as the rich lending to the poor. In reality, the poor continue to lack collateral assets and remain unworthy of cheap credit, while the

⁶ FRED Economic Data, St. Louis Fed, at <https://fred.stlouisfed.org/series/RHORUSQ156N>

rich have been actively borrowing at historically low interest rates to acquire assets and cash in capital gains.

To be sure, one could still argue that the debts of the rich are bankrolled by the excess saving of the HNWIs (or ultra-rich) at the very top of the wealth pyramid. After all, household debt in advanced economies grows monotonically together with income to collapse near the very top of the income distribution. However, as I am going to explain in the next section, the ultra-rich borrow too: in fact, they are incomparably more levered-up than any other household, rich or poor, except their debts are not accounted for in statistics on household debt. This is because, unlike normal households, including many rich household in the top 1 percent (the ‘millionaires next door’ with only \$1-5 million net worth), the very rich and ultra rich do not borrow money directly *from* banks, but rather *through* the highly leveraged ‘alternative investments’ offered by hedge funds, private equity firms, personal investment trusts, as well as through the big banks of which they are dominant owners and ultimate beneficiaries. In this article, these elite borrowers are referred to as ‘absentee debtors’. Due to its limited scopes, the remaining of this article will focus on hedge funds to gain a first insight into the largely invisible leverage of absentee debtors.

3. Absentee debtors: the invisible leverage of hedge funds

Hedge funds are a major blind spot in existing studies of finance and inequality. While the long arm of their leverage has been found behind virtually every financial crisis of the last quarter century (e.g. Eichengreen and Park, 2002; Brunnermeier and Nagel, 2004; Erturk *et al*, 2010; Lysandrou, 2011), only a few scholars have paid sufficient attention to their activities (an exception is Fichtner, 2013). One reason for this oversight is that hedge funds have been eclipsed by the rise of passive index funds and giant asset managers. At the end of 2022, after experiencing a major decline in AUM from a peak of \$10 trillion assets at the height of the pandemic, the largest index-fund manager in the world, BlackRock, still commanded \$8.6 trillion assets, which is almost twice the amount of total AUM for the

entire hedge fund industry globally, estimated at \$5 trillion in 2023⁷. Having said this, asset ownership alone is neither the best indicator of power in finance, nor is it a predictor of one's ability to generate profits through financial market investing. Just consider the following: with a portfolio of \$8.9 trillion AUM, BlackRock's operating income in 2022 was \$6.7 billion and the company was able to return \$4.9 billion to shareholders plus \$1.9 billion of share repurchases⁸. In the same year, Goldman Sachs returned \$3.5 billion to shareholders in dividends plus \$3.2 billion of share repurchases out of \$14 billion operating income (more than twice BlackRock's income), based on a balance sheet of just \$1.4 trillion⁹. Even more tellingly, BlackRock's CEO Larry Fink took a 30 percent pay cut in 2022 and only earned \$25.2 million¹⁰. By contrast, Kenneth Griffin, CEO of Citadel Investment Group, one of the largest hedge funds in the world with \$62.3 billion AUM in 2022 (142 times smaller than BlackRock's AUM), earned in the same year \$2.5 billion after Citadel posted a \$16 billion profit¹¹.

Though they have far less assets under management, top hedge funds generate higher profits than the largest asset managers on earth and, as a result, their CEOs get paid several times more (see also Fichtner and Morgan, 2023, 21). This hardly makes any sense unless we factor leverage in. Giant asset managers are managers of unlevered funds. They are *passive* investors that do not aim to 'beat the benchmark' but are more than happy to just 'follow/buy the market' and charge very low fees to millions of institutional and retail investors in exchange for ensuring average returns. Hedge funds are the opposite. They are *active* traders responsible for thirty to sixty percent of financial market turnovers. Their aim is to generate above-benchmark returns and, to that purpose, they routinely employ complex

⁷ <https://www.barclayhedge.com/solutions/assets-under-management/hedge-fund-assets-under-management/hedge-fund-industry>

⁸ <https://www.blackrock.com/corporate/newsroom/press-releases/article/corporate-one/press-releases/blackrock-reports-fourth-quarter-2022>

⁹ <https://www.goldmansachs.com/investor-relations/financials/current/annual-reports/2022-annual-report/multimedia/annual-report-2022.pdf>

¹⁰ <https://www.businessinsider.com/recession-ceo-pay-larry-fink-blackrock-asset-manager-aum-2023-4?op=1&r=US&IR=T>

¹¹ <https://www.forbes.com/sites/hanktucker/2023/01/22/citadels-16-billion-gain-in-2022-makes-ken-griffins-firm-the-top-earning-hedge-fund-ever/>

investment strategies entailing both long and short positions as well as the use of derivatives. While the hedge fund industry has become more ‘institutionalised’ over the past two decades¹², hedge funds continue to be for the most part elite funds that charge high management fees and collect up to 20 percent of gross investment profits, and which are only available to accredited or sophisticated investors – that is, HNWIs and their trusts. What is more important, hedge funds rely on leverage like no other financial market investor (with the exception of big banks). Their leverage ratios normally range between 1 and 10 times the value of their AUM or NAV. In some cases, hedge fund leverage may reach astronomical heights as layers of debt can build both on- and off-balance sheet through derivatives exposure. The invisible leverage implied in derivatives contracts is also referred to as ‘synthetic leverage’, ‘embedded leverage’, and ‘instrument leverage’ (Breuer, 2000; Ang *et al*, 2011; Barth *et al*, 2020; McGuire and Tsatsaronis, 2008).

Crucially, whether it is on- or off-balance sheet (or a combination of both), the gross exposure of a hedge fund is always greater than the equity capital supporting it (Barth *et al*, 2020, p.13). A fund whose gross exposure is lower than its AUM is simply *not* a hedge fund for practical purposes, but something else. For instance, US mutual funds are allowed to lever their portfolios up to a fraction (one third) of their equity capital or AUM. No limit applies to hedge funds. Historically, hedge funds have faced little legislative and regulatory restrictions on their use of borrowed funds and securities (Eichengreen and Park, 2002, p.3), and even if legislation has become more stringent over time, they can easily go around rules (for instance, the Federal Reserve Board’s Regulation T which allows stock investors to only borrow up to a maximum 50 percent of a position on margin) as they can establish offshore investment vehicles and obtain leverage on margins as low as 1 percent of the borrowed funds. Prime broker-dealer banks have offshore facilities that provide for derivatives contracts that are bespoke and ‘over the counter’ (Ang *et al*, 2011, p.104). These contracts likely make up the great bulk of the hedge funds’ gross exposure in financial markets, the

¹² This is due to a growing share of funds by institutional investors (such as pension funds) being channelled into ‘alternative investments’ including hedge funds, private equity firms, and real estate investment trusts.

true extent of which is hard to estimate. In this respect, a 2000 IMF study acknowledged that ‘empirical measures of off-balance-sheet leverage are difficult to implement’ (Breuer, 2000, p.11). Likewise, a 2008 BIS working paper claimed that estimates of leverage for certain types of hedge funds ‘are implausibly low even when the synthetic options factors are included’ (McGuire and Tsatsaronis, 2008, p.2). More recently, a 2016 study authored by economists in the Board of Governors of the Fed pointed out that ‘because of the growth of the derivatives market, leverage has become more difficult to measure’ (Aikman, Lehnert, Liang and Modugno, 2016, p.5). To be clear, the magnitude of leverage embedded in OTC derivatives is simply off the charts. According to the latest BIS statistical release for 2021-22¹³, the global OTC derivatives market has a gross market value of \$20 trillion, and a staggering notional value of \$600 trillion.

Considering the intrinsic difficulties with measuring leverage that is embedded, over the counter, offshore and off-balance sheet, it should come as no surprise that the US flow of funds (which is a major source of data for proponents of the saving glut of the rich) grossly underestimates and effectively misrepresents the true magnitude of hedge fund liabilities. As of 2021, the total assets under management of US hedge funds are estimated to stand at \$2.75 trillion while their overall liabilities only amount to a mere \$0.83 trillion. These are mostly in the form of repurchase agreements and broker-dealer loans (the flow of funds also reports \$1 trillion derivatives) (Financial Accounts of the United States, 2022, p.78). To be clear, this figure is unrealistically low: even if one were to include the \$1 trillion derivatives exposure, the total gross exposure of US hedge funds would still be a fraction of their total NAV. In contrast, most analyses of hedge fund leverage – where leverage is broadly defined as gross notional exposure (GNE) divided by net asset value (NAV) – suggest that hedge fund liabilities far exceed their equity capital. For instance, a 2015 survey by the Financial Conduct Authority (FCA) found that 52 very large hedge funds that collectively managed the equivalent of \$623 billion AUM in the UK had an average mean leverage of 27.9; this was

¹³ Bank for International Settlements, OTC derivatives outstanding, table D5.1 at <https://stats.bis.org/statx/srs/table/d5.1?f=pdf>

mostly in the form of synthetic leverage, as balance-sheet leverage alone (which in the survey is referred to as ‘financial leverage’) was only 2.3 (FCA, 2015, p.19). The survey covered a five-year period, from October 2009 to September 2014. Over this period, gross leverage varied dramatically from a peak of 45.6 in April 2010 to a low of 20.3 in September 2012, with the ten largest funds in the sample controlling 38 percent of total NAV and a staggering 83.2 percent of total GNE (FCA, 2015, pp.12-13). A 2020 hedge fund survey by the International Organization of Securities Commissions (IOSCO) similarly estimated hedge fund leverage to be *on average* a multiple of NAV. Based on a large sample of 2,139 hedge funds operating in nine major jurisdictions (France, Germany, Hong Kong, Ireland, Luxembourg, Singapore, Switzerland, the United Kingdom and the United States) and managing a total of \$3.84 trillion AUM, the survey found that gross exposure was on average 7.8 times the NAV of a hedge fund (IOSCO, 2020, p.13). The gross exposure of sampled hedge funds operating in the US was by far the largest: in absolute terms, it amounted to a total of \$22.7 trillion¹⁴.

The IOSCO survey’s findings are compatible with those of a 2020 working paper on hedge fund leverage and risk, authored by economists from the US Office of Financial Research (Barth *et al*, 2020). This study’s sample is “representative of large funds with at least one US investor” (Barth *et al*, 2020, p.11). Notably, the study restricts its sample to funds with leverage less than 10, and it mostly focuses on balance-sheet leverage, which is “easy to compute from accounting statements” (Barth *et al*, 2020, p.13). Balance-sheet leverage is defined as gross asset value (GAV) divided by NAV, where GAV stands for the regulatory assets of a hedge fund and effectively corresponds to the actual size of its balance sheet (excluding derivatives). The average GAV is \$2.61 billion while the average NAV is \$1.60 billion. What is more interesting, the study also offers four measures of synthetic leverage: long leverage, short leverage, gross leverage, and net leverage. Of the four measures, gross leverage, defined as GNE/NAV, is deemed to be the most accurate measure of a hedge fund’s

¹⁴ This figure is obtained by summing all long and short positions under the ‘Market Exposure: United States’ table part of Appendix B (IOSCO, 2020, p.26).

economic footprint and investment exposure in financial markets. The average GNE in the study's sample is \$5.88 billion, which is 3.6 times the average NAV (Barth *et al*, 2020, p.11; p.37). The study also presents disaggregated statistics on both balance-sheet and synthetic leverage, focusing in particular on 50th, 90th, 95th and 99th percentiles over the 2013-2019 period. Two main elements stand out: first, while the leverage ratios of funds in the 50th, 90th and 95th percentiles are fairly stable over time, those of top 1 percent funds are volatile. Second, the leverage of top 1 percent funds is mindbogglingly higher than the leverage of all other funds, including funds in the 95th percentile. More specifically, the average balance-sheet leverage of 95th percentile funds is 4, while their synthetic leverage is about 9. By contrast, the average balance-sheet leverage of top 1 percent funds ranges between 8 and 12, while their gross synthetic leverage is simply off the charts, ranging between 35 and 65 (Barth *et al*, 2020, p.52).

These empirical findings are no doubt astonishing, as they point to quantities of balance-sheet and synthetic debt that might as well exceed total household debt and public debt *combined* in the US. Yet, what is more significant about the literature on hedge fund leverage is that virtually all studies point to the fact that these debts are not evenly spread out across the hedge fund industry but are concentrated at the top. In particular, a study by Kruttli *et al* (2019, p.16) presents compelling evidence that '[t]he hedge funds that borrow the most also tend to be the largest and the most levered'. Looking at a large sample of US hedge funds and broker-dealers over the 2012-2017 period, the study found that '[t]he hedge fund-prime broker credit network exhibits a core-periphery structure, with most of the total credit concentrated among 10% of the hedge funds and prime brokers' (Kruttli *et al*, 2019, p.25). In other words, while the largest hedge funds might not be as big as BlackRock in terms of AUM, they might be holding a lever long enough to move entire markets, or anyway to generate profits that would be otherwise inconceivable. Even more significantly, the study also present evidence that the largest and most levered-up funds also enjoy the *most liquid* and *least risky* portfolios, and yet they generate much higher quarterly rates of return compared to all other funds in the sample. More specifically, quarterly rates of return for

hedge funds in the top 10 percent are 7.44 percent while they are 4.19 percent for hedge funds in the top quintile. They are -0.65 percent for those in the bottom quintile and -3.89 percent for the funds in the bottom 10 percent (Kruttili *et al*, 2019, p.37). Even in the elite domain of alternative investing, inequality reigns supreme, as the smaller and mildly levered funds operate in a make-or-break situation, ought to take higher risks, and are always one quarter away from bankruptcy, while some of the largest and most levered up funds rack up record profits out of portfolios of (more or less) *safe assets*. As I am going to argue in the final section, this is precisely why hedge fund leverage matters.

4. Why hedge fund leverage matters

From a financial investing perspective, leverage and risk are known to be *negatively* associated, and indeed the largest and most levered hedge funds also tend to control the most liquid and least risky portfolios. In the extant literature, this paradox is known as the ‘low-beta anomaly’, or else the strange phenomenon of low-beta assets yielding high alpha (Frazzini and Pedersen, 2014; Boguth and Simutin, 2018; Gonzales-Urteaga and Rubio, 2021). In financial jargon, ‘alpha’ is a measure of the profitability of an investment, while ‘beta’ measures the volatility and overall riskiness of an investment. A typical low-beta asset is a G10 sovereign bond, which naturally yields a low alpha (low return). In theory, only a high-beta asset should yield a high alpha (high return). In practice, when a position in a low-beta asset is levered-up, it is possible for the investment to generate high alpha. In other words, all other things being equal, leverage gives investors more ‘bang for the buck’. This practically means that while funds that use little or no leverage are likely to tilt their portfolios towards higher-risk assets in order to generate above-benchmark returns, ‘funds that use the most leverage invest in securities with the lowest market betas’ and these ‘low market-beta assets have high alphas’ (Barth *et al*, 2020, p.32). As a result, ‘[a] leveraged portfolio of highly rated corporate bonds outperforms a de-leveraged portfolio of low-rated bonds’ (Frazzini and Pedersen, 2014, p.3).

We may call ‘leverage premium’ this unique ability to generate high returns out of portfolios of low-risk, short-term, and highly liquid assets. The premium can be quite substantial. A recent study of US treasuries trading during the Covid-19 pandemic (Krutli *et al*, 2021) presents disaggregated data on relative-value hedge funds with at least \$1 million invested in US Treasuries. The study found that while median NAV, GNE and quarterly returns over the 2013-2020 period are respectively \$1.39 billion, \$5.95 billion and 2.3 percent, hedge funds in the 90th percentile have on average \$6.8 billion NAV and a staggering \$59.2 billion GNE (synthetic leverage of 8.5). More to the point, their quarterly rates of return are 8.2 percent on average, or else 37.05 percent annualised (Krutli *et al*, 2021, p.38). This is quite the feat considering that, between 2013 and 2020, the annual return of the highest-yield US treasury security – the 30-year bond – was around 3 percent¹⁵.

Because of the leverage premium it yields, relative-value trading is a most popular strategy among hedge funds. Typically, a relative-value fund manager would take a long position in an undervalued security and sell short an overvalued security of the same or similar kind (Dikaranov *et al*, 2017, pp.242-3). For example, fixed-income funds would go long ‘off-the-run’ (OFFR) securities and short ‘on-the-run’ (ONR) securities¹⁶. *Ceteris paribus*, OFFR securities have a relatively shorter maturity date and therefore a lower beta. Conversely, ONR securities are relatively more sought-after and therefore have a marginally higher cost. To be clear, this is a general feature of fixed-income instruments: other things equal, the price of new issues is higher – and their yield lower – than the price of previously issued securities of the same maturity. It goes without saying, for relative-value strategies that seek to exploit minimal price discrepancies among securities, fund managers must use extremely high levels of leverage. Fixed-income funds (which typically pursue relative-value strategies in bond markets) are reported to have reached \$973.1 trillion AUM in 2023¹⁷ and *average* leverage ratios ranging between 5 and 15 (see Ang *et al*, 2011; Singh and Alam, 2018). For

¹⁵ <https://www.ustreasuryyieldcurve.com/charts/treasuries-time-series>

¹⁶ ONR securities are the most recent issue; OFFR securities are older issues. This strategy is effective when interest rates remain unvaried or are expected to increase.

¹⁷ <https://www.barclayhedge.com/solutions/assets-under-management/hedge-fund-assets-under-management/Fixed-Income/>

these funds, leverage is at once a factor of profitability, risk reduction and hedging. The lower the interest rates, the cheaper it is for them to make money out of safe assets.

The importance of this point cannot be stressed enough: safe assets have been described as a means to store value (and basically *save* money) in normal times and, especially, in times of stress, when investors ‘fly to safety’. However, this is only partly true. For while in normal times safe assets do serve as the collateral security for money market funds and are indeed a means by which investors save/store money as liquidity, they are also a major source of yield for hedge funds. For this very reason, they become a major factor of instability for the wider financial system in times of stress. As a BIS bulletin from March 2020 pointed out, during periods of heightened volatility, broker-dealer banks have limited balance-sheet capacity due to tighter risk constraints. To mitigate risk, they call or raise margins on the loans they have made to hedge funds (Schrimpf *et al*, 2020, p.2). To meet the margin calls, hedge funds can use their free cash, liquidate their short positions and, if this is not enough, unwind their long positions (Gerasimova and Jondeau, 2018). In this case, liquidation is achieved at a higher cost because securities trade at a higher-than-usual discount or haircut. As safe assets are the least affected by the scythe of haircuts during a crisis, they are the first ones to go when hedge funds and other levered-up financial market investors are forced to unwind their long positions and deleverage. For example, in March 2020, relative-value funds invested in US treasuries suddenly reduced their exposures by some 20 percent (Kruttili *et al*, 2021). Crucially, fire sales of safe assets during a crisis feed a cycle of generalised market illiquidity, price dislocation and tighter margin requirements, also known as a ‘margin spiral’ (Brunnermeier and Pedersen, 2009). This is for instance what happened during the UK gilt panic of September 2022, when UK pension funds found themselves heavily exposed in levered-up ‘liability-driven investments’, or during the US banking crisis of early 2023, when Silicon Valley Bank and Signature Bank could not avoid collapse after liquidating their portfolios of US treasuries.

Conclusion

Leverage is a factor of wealth and income inequality, not because the rich and ultra-rich lend at interest to the rest of the world, but because they themselves take advantage of highly levered funds and corporations generating unparalleled amounts of financial sector debt – both on- and off-balance sheet. In this respect, the notion of ‘absentee debtor’ has been used to describe a peculiar type of borrower, one whose debts are conspicuously marked by their absence from statistics on household debt. This is because the multi-millionaire and billionaire household or individual does not borrow *from* banks, but *through* a plethora of highly levered funds and corporations (including banks) of which the absentee debtor is a dominant owner and beneficiary. To shed light on the invisible leverage of the absentee debtors inside the top 1 percent, the article has strategically focused on the hedge fund industry. While there exist thousands of hedge funds pursuing all sorts of investment strategies, the industry is highly concentrated, with top 10 percent funds controlling most of the AUM and enjoying remarkably higher leverage ratios compared to all other funds. Fixed-income funds alone – many of which specialise in making money out of safe assets – are estimated to have close to \$1 trillion AUM and *average* leverage ratios of 10-15. If synthetic leverage is accounted for, the hedge fund industry is no doubt responsible for generating short-term debt that far exceeds total US household debt and US public debt outstanding combined. This is without considering the debt generated by other alternative investment funds, such as private equity firms and real estate investment trusts. While these funds are on average not as levered as hedge funds, they nevertheless operate on thin margins of equity (with leverage ratios ranging between 1 and 10). This is also without accounting for the leverage of the big banks that provide credit and brokerage services to alternative investment funds, and which earn fees in the process that ultimately accrue to their dominant owners. Finally, this is without taking under consideration the rather obvious fact that the debt of non-financial corporations, too, benefits their dominant owners, as growing quantities of corporate debt are incurred to finance mergers and acquisitions, leveraged buyouts, and

stock repurchase programmes that altogether increase shareholder value and hype the stock market.

All in all, the overwhelming evidence is that, in the 21st century, those who borrow the most are also those who stand to make the most money and wealth gains. Absentee debtors thrive on low interest rates: while a substantial part of their portfolios is entrusted with traditional wealth management, the lion's share of their profits comes from active trading in secondary and derivatives markets via alternative investment funds. Procyclical leverage fuels property and stock market inflation and at once exerts downward pressures on interest rates, contributing to the liquidity of bond markets, making it all the more advantageous for absentee debtors to gear portfolios of low betas to produce high alpha. It's worth noting in this respect that, as we bring levered-up *trading* rather than mere asset *ownership* to the fore, we also learn something about unlevered investing by giant asset managers. The likes of BlackRock do not simply 'buy the market': they also lend it out for a fee to the broker-dealers and the hedge funds speculating in securities and derivatives markets, and as they do so they take a cut on the leverage premium. More generally, they benefit from the hype in financial markets generated by active traders, and therefore should be seen as the recipients of a trickle-down effect of leverage. Even so, their profits are no match to those of the largest hedge funds and big banks that actively 'make the market' and effectively leverage on behalf of the investor class at large. Take their leverage away, or make it very costly, and all the money and wealth in the portfolios of the global rich and ultra-rich will immediately vanish into the thin air from whence it came.

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