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The rise of corporate net lending among G7 countries: a firm-level analysis

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Abstract

In recent decades, corporate net lending has been increasing in several developed countries. This paper discusses the impact of financialisation and income distribution on the level of corporate net lending among G7 countries. We argue that financialisation affects the level of corporate net lending through firms' re-organisation towards a model of accumulation based on the maximisation of "shareholder value" and through the negative impact on investment. Moreover, the reduction in the wage share can increase the capacity of accumulation of liquidity of corporations, increasing the gap between corporate savings and investment, leading to the rise in net lending. We test our hypotheses using panel data of publicly listed non-financial corporations for the period 1990-2015. According to our findings, the process of financialisation has a positive impact on the level of net lending after 2001, while the wage share at the firm-level has a strong negative impact on the level of net lending throughout the whole period.

Keywords: Net lending, Financialisation, Functional income distribution, Firm-level analysis

JEL codes: O16, E21, G30

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1. Introduction

In the last two decades, the corporate sector in many developed countries has shifted from net borrowing to net lending positions. Corporate net lending (net borrowing) is defined as the difference between corporate savings and investment in physical capital.² Broadly speaking, the increase of this gap is associated with firms accumulating a huge amount of cash that is not matched by the expansion of productive investment. This quite unprecedented situation has raised the attention of media around the globe.³ Despite this interest there are, however, only few academic studies have addressed the issue.

The existing academic literature on net lending explored hypotheses such as economic volatility, uncertainty and financial constraints (Brufman et al., 2013) and deleveraging (Saibene, 2018). Remarkably, these hypotheses are often not supported by empirical tests. This leaves the door open on the exploration of additional explanations behind the rise of net lending.

This paper focuses on two alternative and vastly unexplored hypotheses behind the rise of corporate net lending. First, it evaluates the role played by financial payouts in the rise of net lending. Some authors (Gruber and Kamin, 2015) consider the possible link between financial payouts and net lending. However, an exhaustive exploration of this link is still missing. The paper contributes to fill this gap analysing the rise of net lending through the lenses of the financialisation literature. It is argued that this stream of literature offers relevant insights that should be considered when explaining the rise of corporate net lending. Among other aspects, the financialisation literature stresses that the maximisation of shareholder values contributed to a modification of the traditional role and functions of the firm (Lazonick and O'Sullivan, 2000) and altered the pattern of accumulation of physical capital (Orhangazi, 2008a). Coherently with this literature, the paper appraises to what extent financial payouts (in the form of dividends and share repurchase) affect the level of net lending. The rationale behind this hypothesis is that the modification brought by the process of financialisation of the functioning of contemporary firms, in particular with respect to the increased desire to increase financial payouts (Froud et al., 2006; Lazonick, 2015) together with the lower level of investment (e.g. Stockhammer, 2004; Tori & Onaran, 2018a), contributed to increase the gap between savings and investment resulting in the rise of net lending.

The second aspect analysed is the role played by profits and income distribution. There is some evidence that the level of net lending for the whole corporate sector is positively related to the profitability for the corporate sector at the aggregate level (e.g. Cesaroni et al., 2017). The paper extends this analysis by focusing on the level of income distribution at the firm level. As is well known, in the last four decades the share of wages over GDP decreased in all developed countries. The shift in the distribution of income from labour to capital has implied a growth in profits and corporate savings that, it is argued in the paper, has boosted the level of net lending. In a nutshell, the idea behind this hypothesis is that a lower wage share favours the accumulation of profits that affect positively the level of net lending.

To test these hypotheses, the paper employs the *Worldscope* database to extract balance sheet data of thousands of non-financial corporations (NFC) for G7 countries during the period 1990-2015. As far as can be established, this is the first time that these hypotheses have been tested employing a similar sample. Our analysis shows that there was a widespread increase in net lending and in financial payments among listed NFC in most countries, especially after the

² Net lending is sometimes referred to as “excess savings” (e.g. Brufman et al., 2013). The two terms are used interchangeably in the paper, although net lending is preferred.

³ E.g. Krugman on the *New York Times* (2013), Wolf on the *Financial Times* (2015), or *The Economist* (2016).

dotcom crisis. At the same time, the wage share in our sample of firms exhibits a generalised reduction in all countries. We further test our hypothesis through an econometric exercise. According to our results, both financialisation and the wage share impact on the level of net lending. Financial payouts are positively related with the level of net lending, while the wage share is negatively associated to it.

The remainder of the paper is organized as follows. Section 2 reviews the existing literature on net lending. Moreover, we discuss the literature on financialisation and income distribution and how these approaches can provide powerful arguments to explain the rise in net lending. Section 3 presents the dataset and provides a descriptive analysis of the variables of interest. Section 4 presents the econometric analysis and section 5 summarises the main results, including some policy implications that raise from this paper.

2. The emergence of corporate net lending

The System of National Accounts (UN, 2009) defines corporate net lending (net borrowing) of the corporate sector as the difference between corporate savings and investment.⁴ Traditionally, the private corporate sector is thought to be a net borrower from the rest of the economy (Cesaroni et al., 2017, p. 5), which implies that capital expenditure is higher than corporate savings. This situation, however, has reversed in recent times when, corporate savings recorded higher values than capital expenditure. Table 1 shows that among G7 countries the whole corporate sector was net lender for most of the years and countries since the 2000s. Except for France, this pattern continued also after the Global Financial Crisis of 2007-2008.

Table 1. Evolution of non-financial corporations' net lending among G7 countries, 1990-2015. Average values by period as share (%) of GDP.

<i>Year</i>	USA	UK	Germany	Italy	France	Japan	Canada
1990-1993	-0.5	n.a.	n.a.	n.a.	0.3	n.a.	0.1
1994-1997	-0.6	-2.2	1.3	0.1	1.7	0.6	2.0
1998-2001	-2.0	-4.5	-3.1	0.2	-0.1	4.2	0.9
2002-2005	1.4	1.1	1.3	0.1	0.3	7.8	4.9
2006-2009	1.0	2.3	1.5	-0.7	-0.5	5.9	3.1
2010-2013	3.0	2.3	2.7	1.3	-1.0	7.8	1.9
2014-2015	0.8	0.5	2.6	2.6	-2.1	5.5	-0.4

Source: OECD.

Available at: <https://data.oecd.org/natincome/net-lending-borrowing-by-sector.htm>

A first hypothesis explored by existing studies on the rise of net lending is that excess saving represents a reaction to the level of indebtedness accumulated during the 1990s. The high levels of indebtedness recorded during this decade may have motivated a desire to reduce leverage ratios. However, Cardarelli and Ueda (2006) discard this hypothesis using firm-level data of listed NFC. The authors maintain that “debt repayment [...] has not been the primary reason for companies' excess savings. Rather, [...] non-financial corporations have tended to invest their excess cash flow primarily into equities and cash, rather than repaying debt” (Cardarelli and Ueda, 2006, p. 146). More recently, Saibene (2018) tests the

⁴ At the aggregate level, corporate savings is equal to net disposable income (UN, 2009, p. 182).

deleveraging hypothesis using a sample of American listed firms. He concludes that only small firms are concerned with decreasing their leverage while at the aggregate level total leverage is largely unaffected.

An alternative hypothesis regards the role played by uncertainty and economic volatility. The idea behind this hypothesis is that firms hoard savings for precautionary reasons. A more uncertain economic environment pushes firms to accumulate cash if firms fear they will have to face unpredictable economic downturns. This argument is borrowed from the literature on cash holding, where this hypothesis has been explored extensively. Numerous studies find a positive relationship between uncertainty and volatility and the level of cash holding (Alfaro, 2016; Bates et al., 2009; Baum et al., 2006; Sanchez and Yurdagul, 2013). This evidence may lead to extend these findings to the rise of net lending. However, as noted by Gruber and Kamin (2016),

there is no direct relationship between corporate net lending and cash hoarding. For example, if corporations desired to strengthen their liquidity positions, they could issue long-term liabilities and acquire liquid assets, without any change in their net lending positions. By the same token, if corporations boosted their saving relative to investment but used these extra resources to repay debt, this would show up as a rise in net lending but no change in their cash holdings (Gruber and Kamin, 2016, p. 786)

Similarly, Wolf (2015) states that

It is also important not to confuse the excess of corporate savings over investment with the widely noticed accumulations of cash by many companies. Businesses can acquire cash not only by hoarding retained earnings but also by borrowing or by selling assets.

Contrarily to the literature on cash holding, the literature on corporate net lending has mostly discarded the validity of this hypothesis. Brufman et al. (2013) show that highly volatile firms in five countries⁵ have lower levels of excess savings and not higher as it would be expected. These authors also find that financial constrained firms record lower levels of net lending. Gruber and Kamin (2015) test this hypothesis for the aggregate corporate sector of G7 countries for the period 1995-2014. The authors conclude that the path of investment did not change substantially because of uncertainty motives, but rather because of low economic growth that followed the Global Financial Crisis. Evidence against this hypothesis is also found by Saibene (2018). Most of volatility and uncertainty measures are negatively related to net lending levels. Out of nine different indicators considered by the author, only two are positively and significantly related to net lending, while the others show a negative or non-significant relationship.

In conclusion, the existing literature is not conclusive on the causes that determine the level of net lending. The next subsection proposes two alternative drivers of net lending: the process of financialisation and income distribution. The literature on these topics maintain that financialisation and changes in income distribution can impact on different aspects of the firms, such as profitability, capital accumulation, internal organisation and operativity of corporations. Once it is established these factors can have an impact on different economic spheres it is possible to argue that they could also influence net lending. For these reasons, drawing from the existing literature on financialisation and income distribution we elaborate

⁵ UK, Germany, France, Italy and Japan.

hypotheses that contribute to explain how these two elements could also play a significant role in the determination of the level of net lending.

Alternative interpretations of the rise in net lending

Financialisation

The first aspect explored in this paper is the link between financialisation and net lending. By drawing from the existing literature, we will argue that the financialisation literature accounts with the theoretical and empirical tools that help to explain part of the rise in corporate net lending. Despite the growing importance of the financialisation literature, the literature on corporate net lending has, so far, ignored this motive.

Financial payouts are usually not included in the debate on net lending. To the best of our knowledge, the only exception is Gruber and Kamin (2015), who note that the increase in financial payouts is inconsistent with the precautionary motive mentioned in the previous section. However, these authors do not attribute a direct link between payouts and the rise of net lending. To discuss the theoretical nexus between financial payouts and net lending we draw on the financialisation literature.⁶ This stream of literature argues that crisis of accumulation of the seventies and the subsequent deregulation the economy and the financial market had a deep impact on different spheres of economic activity and in the modality that firms operate. These changes attracted the attention of scholars who studied this phenomenon from a variety of angles (see van der Zwan, 2014; Karwowski et al., 2016). For the purpose of our paper, we focus on two complementary channels through which the process of financialisation could impact on the level of net lending, (1) changes in firm governance and (2) in corporate investment patterns.

The financialisation literature on firm governance, originating from the work of Lazonick and O'Sullivan (2000), maintains that since the 1980s there has been a major change in the internal organisation and operation of the firm. These modifications were reflected in the redefinition of the priorities followed by private companies. Until the 1980s, firms were characterized by a "retain and reinvest" business model in which earnings were mainly spent in acquiring physical capital to expand production. With the process of liberalisation and deregulation of the financial sector firms progressively moved towards the so-called "downsize and redistribute" regime. Within this paradigm, physical accumulation and output growth ceased to be the only aim of the firm. In order to satisfy shareholders' interests "top managers downsize the corporations they control, with a particular emphasis on cutting the size of the labour forces they employ, in an attempt to increase the return on equity" (Lazonick and O'Sullivan, 2000, p. 18). Big corporations devoted a higher share of earnings to financial payouts to shareholders. As a result of this process, managers' interests allied with those of shareholders (Froud et al., 2002). As a result, the rise in shareholders rights had a positive impact on the payouts strategy of firms (Adjaoud and Ben-Amar, 2010). Under the downsize and redistribute regime, real growth of production is considered as subsidiary or complementary to financial well-being and shareholders satisfaction in the short-run (Orhangazi, 2008b, p. 61).

These considerations are linked to the second channel through which financialisation can affect net lending, i.e. the impact on investment. Orhangazi (2008b, chap. 5) highlights two main modalities through which the financialisation of the economy impacts on capital accumulation.

⁶ To define financialisation we can refer to Epstein, who characterises financialisation as "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels" (Epstein, 2002, p. 3).

The first one refers to the crowding out effect of investment. If profit opportunities in financial markets increase compared to those in productive activities, firms will have an incentive to devote a higher share of their disposable funds to financial operations. The second modality through which financialisation can harm capital accumulation of NFC corporations is linked to the desire of financialised-firms' managers (whose compensation depends on the shares' price) to accrue financial payments in the form of dividends and share repurchase.

As a result of the intensification of the process of financialisation and the consolidation of shareholders' power, the demand for distributed dividends and other financial instruments, such as buybacks, is expected to rise (Hein and van Treeck, 2010, p. 215). Eventually, this is what happened in most developed countries. Between the beginning of the 1990s and 2007, the amount of dividends paid in relation to the gross operating surplus more than doubled (Onaran et al., 2011). At the same time, share repurchases became a useful tool to manipulate shares prices (Lazonick, 2017). In this respect, Almeida et al. (2016) find that firms are more likely to repurchase their shares if share prices fall below the earning per share forecast. More importantly, the authors find that it is not the lack of profitable investment projects that drives this behaviour, but the will of firms to increase the earnings per share. Additionally, this process also affects real variables, as it has a negative impact on investment, employment and R&D. Note that this reduction would not have occurred in the absence of shares repurchase since companies "are willing to trade off employment and investment for stock repurchase" (Almeida et al., 2016, p. 184). Overall, the alignment of interests between managers and shareholders pushes the former to nurture and maintain high the level of financial payments. The negative link between financialisation and investment is corroborated by numerous studies that explore the relationship between the rise of financialisation and capital expenditure (Stockhammer, 2004; Orhangazi, 2008b, 2008a; Tori and Onaran, 2017, 2018b, 2018a; Davis, 2018).

Our study aims at exploring in more detail the role played by financial payments in the rise in net lending. From our perspective, the change in firms' behaviour and investment patterns in conjunction with the rise of net lending represent two complementary channels through which the process of financialisation boosts firms net lending. According to the "downsize and redistribute" regime of accumulation, the desire of firms to increase financial payments should be reflected in higher disposable liquidity in the hands of corporations that is employed in the payments of financial payouts. Consequently, the difference between savings and investment increases, determining the rise in net lending. This process is accentuated by the negative impact of the process of financialisation on physical investment which contributes to increasing the level of net lending. As mentioned, the process of financialisation is accompanied by higher financial payouts. Therefore, a positive relationship is hypothesised between the process financialisation, that can be proxied by financial payouts, and net lending.

Functional income distribution

The second aspect considered in the paper deals with functional income distribution. The idea that changes in functional income distribution may influence the level of net lending is not entirely new in the literature. Among the first studies to deal with the topic, André et al. (2007) suggest that savings are connected to the evolution of profits and changes in income distribution: "corporate saving was mainly driven by increasing profit shares in most countries, possibly related to a degree of wage moderation, and lower interest rates" (André et al., 2007, p. 5). Apart from this insight, however, the authors do not explore in detail this hypothesis, leaving it open to further testing. A more detailed analysis is provided by Cesaroni et al. (2017) who use fixed effects regression using data for the whole corporate sector of 16 countries between 1995 and 2014 to test the role played by the internationalisation of production on the

level of net lending. They find that part of the increase in net lending can be associated to firms that move production in third countries to exploit lower production costs allowing firms to grow their profit margin. Another relevant study was published by Behringer and van Treeck (2018). While discussing the relationship between income distribution and the current account, the authors find econometric support to the negative relationship between the wage share and corporate net lending at the aggregate level for 20 countries.

Looking at the broader picture, it is to ask for the factors that impact on functional income distribution and how these distributive changes can impact on corporate net lending. Since the 1970s, the labour share has decreased in most developed countries with almost no exception. Amongst G7 countries the wage share in 2014 was between 5 and 13 points lower than it was in 1970 (OECD, 2015, fig. 3). It is not easy to isolate specific factors that have contributed to the evolution of income shares. Part of this difficulty is due to the fact that potential causes are interconnected to each other so that changes in income distribution represents a multifaceted phenomenon in which intervene numerous factors (ILO, 2012, p. 49). Some authors maintain that the decline of the labour share derives from a fall in the relative price of investment goods that has induced firms to shift their input mix towards capital (Karabarbounis and Neiman, 2014). If the elasticity of substitution between capital is higher than one, the wage share will decrease when the capital intensity increase. This is the scenario to be expected if it is assumed that lowering the price of capital contributed to the reduction of the wage share. On the contrary, the wage share would decrease if the elasticity of substitution is lower than one. The empirical evidence on this relationship is mixed. Some works (e.g. Karabarbounis & Neiman, 2014) find support for a mechanism of substitution between capital and labour among developed and developing countries. Other studies dispute these conclusions and estimate coefficients of elasticity around or below one, contradicting the idea that the reduction in the wage share is linked to the rise in capital intensity (Rowthorn, 1999; Chirinko, 2008; Chirinko & Mallick, 2017).

Another group of literature focuses on the different channels through which changes in the last decades in the economic architecture affects the labour share. These interpretations are open to the idea that changes in income distribution are not purely technical issues derived by the price of capital, but are also affected by labour diminished bargaining power (Guschanski and Onaran, 2017). This mechanism can be amplified by the role played by globalisation and capital account deregulation, which are considered important drivers of the decline of the wage share (IILS, 2011).

Considering our research focus, a first channel to highlight it may be expected that the rise in the profit share may drive up profits, which translates into higher savings, with a final positive effect on the level of net lending. The reduction in the wage share is consistent with the increase in profits recorded in the last 30 years (Barkai, 2016). Therefore, we expect a negative relationship between the level of wage share at the firm level and their net lending.

The impact on profits and corporate savings is not the only way that income distribution can affect net lending. Changes in income distribution could also impact on the process of capital accumulation. The final impact on investment, however, can be ambiguous and depends on the assumptions regarding the mode of accumulation (Behringer and van Treeck, 2018). For some authors, higher profitability can drive up the level of investment and growth (Ranciere et al., 2012; Onaran and Galanis, 2014). If this is the case, a reduction in the wage share can result in higher investment, so that the final effect on net lending is not necessarily positive. On the other hand, if the increment in savings is not equally translated into investment, firms experience an expansion in net lending. In this case, fall in the wage share could also affect negatively the rate of physical accumulation because of the lower aggregate demand and

consequent investment associated with it (Lavoie and Stockhammer, 2013). To sum up our point, the reduction in the labour share can affect the level of net lending in multiple ways, inducing the rise in the level of savings and changes in investment. One of the objectives of this paper is to corroborate these mechanisms at the firm level, whether income distribution played a significant role in the level of net lending of listed NFC.

In conclusion to this section, the possible impact on the level of net lending deriving from the process of financialisation and the reduction in the wage share are summarised in Figure 1. Both financialisation and income distribution alterations possibly affect savings and investment. However, as discussed above, the effects of distributive changes on investment (and net lending) depend on the assumption regarding the reaction of investment to the rise of the wage share at the aggregate level. The diagram assumes a reduction of investment following the reduction in the wage share which is one of the possible outcomes (since this relationship is not univocal it is represented by a dashed line).

Figure 1. Financialisation and income distribution as driver of the rise in net lending.

Source: Author’s elaboration

3. Dataset and stylized facts

Two hypotheses have therefore been established. First, the increased financial activity of the firms has spread mechanisms that could have contributed to determine higher levels of net lending. Second, income distribution may be related with the level of net lending. In order to test the link between net lending, financial payouts and income distribution, we use yearly data based on balance sheets of listed NFC among G7 countries. Data were collected from the Worldscope database. This database reports balance sheet information for all listed companies around the world and it is widely employed in firm-level studies (e.g. Kroszner et al., 2007; Beck et al., 2008; Eije and Megginson, 2008). The final dataset includes information for active

and inactive non-financial firms only (SIC codes 100-5999) for G7 countries between 1990 and 2015.

Net lending is equal to the difference between savings and physical investment. The benchmark definition of savings followed in our analysis is equal to the sum of net income and depreciation and amortisation (D&A).

$$Savings = Net\ Income + D\&A$$

This definition follows that employed by the existing literature (e.g. Brufman et al., 2013; Saibene, 2018) which, at the firm-level, define saving as net income plus D&A and dividend payments. In contrast to their definition of savings, our measure does not subtract dividend payments from net income to obtain corporate savings. The reason for this decision rests on the treatment given to financial payouts, represented by dividends payments and share repurchases. According to Juach (2012), dividend payments and share repurchases can be viewed as alternative ways of returning savings to shareholders which, from our perspective, are both constitutive elements of the financialisation narrative (Milberg, 2008). Coherently with this idea, Grullon and Michaely (Grullon and Michaely, 2002) hold that share repurchases can be used as substitutes of dividends. Moreover, the practice of grouping together dividends and share repurchases to constitute firms' financial payouts is a common practice in the literature (Floyd et al., 2015). Therefore, it is our intention to determine savings *before* shares repurchase and dividends payment are realised, as we consider dividend payments and shares repurchases two constitutive elements of the same process, financialisation. Accordingly, it would be inconsistent to let the dividends affect the measure of savings (and net lending) since “a change in preference for buybacks vs. dividends would somewhat arbitrarily increase measured corporate net lending. Grouping dividends and buybacks into ‘payouts’ avoids this arbitrary distinction” (Gruber and Kamin, 2015, p. 8).

In the case of capital accumulation, the definition of investment is more straightforward. Investment is defined here as the addition to fixed assets of the firms. It is now possible to calculate net lending at the firm level by subtracting investment from savings

$$Net\ Lending = Savings - Fixed\ Capital\ Investment$$

Once we obtained the level of net lending at the firm-level, it is possible to present some descriptive trends of our main variables. Figure 2 shows the evolution of savings, capital expenditure and net lending for the G7 countries among our sample of firms. It can be appreciated that savings exceed capital expenditure in all countries in the sample. The rise in net lending is clear since the beginning of the new century when average savings start growing significantly faster than investment. The levels of net lending decrease during the global crisis years mainly because of the collapse in savings. The aftermath of the financial crisis shows a very diverse scenario among countries. In the US, Italy and Japan, savings and investment increased at a similar pace and net lending maintained stable. In Germany, the recovery of savings was accompanied by a decline in capital expenditure, while French firms show the opposite situation. An exception is represented by Canada, where savings and investment had similar magnitude until 2011, which determined small fluctuations between net lending and net borrowing positions. Overall, our sample shows an average positive net lending for almost the entire period in all countries. Moreover, the level of net lending increases during the period, so that it is significantly higher now than it was in the nineties.

Figure 2. Average net lending by firm in each country (millions of US\$).

Source: Author's calculations based on Worldscope data

Figure 3 displays the percentage of net lending observations for the whole period. In most of the countries there is a clear majority of net lender observations, which is expected given the quantitative evolution of savings and investment. Canada is the only country where the great majority of observations are of net borrower firms. This could be expected given the trend shown in Figure 2. In the US the observations of net lending are slightly less numerous than net borrowing ones (49% to 51%) even though the level of net lending constantly increases through time. This aspect suggests that, despite a certain equilibrium between the number of firms that are net lenders and those that are net borrowers, firms of the first group are bigger and assume more relevance in the determination of the general trend.

Figure 3. Shares of Net Lenders-Net borrowers firms among G7 Countries.

Source: Author's calculations based on Worldscope data

These insights are confirmed by matching net lending data with the size of the firm. The total sample of firms was divided into quintiles based on the volume of sales. For each quintile and country, we calculated the average level of net lending (net borrowing) expressed in millions of dollars and as ratio of total assets (Table 2). The gap between savings and capital expenditure clearly increases with the size of the company. Firms in the smallest quintiles (Qt. 1) tend to be net borrowers while the biggest firms are, in all countries, net lenders. The table also shows

that there is a sizable gap between the 4th and 5th quintile. In all countries the difference between these two quintiles is more than twenty times. These trends are also valid when net lending is expressed as share of total assets. This confirms that bigger firms tend to have higher levels of net lending.

Table 2. Net lending by quintiles of sales.

	Millions of US\$					Net Lending over Total Assets (Average by quintile, %)				
	Qt. 1	Qt. 2	Qt. 3	Qt. 4	Qt. 5	Qt. 1	Qt. 2	Qt. 3	Qt. 4	Qt. 5
US	-8.2	-9.5	-11.8	-5.1	326.9	-30.6	-6.1	-1.7	0.2	1.9
UK	-4.0	-3.0	1.3	8.3	400.8	-16.3	-1.2	1.1	1.8	2.5
DE	-1.5	-1.3	1.3	9.4	245.4	-10.8	-2.6	0.1	0.8	1.6
IT	-7.3	-2.3	-2.4	11.2	276.9	-7.5	-1.6	-0.3	1.6	1.4
FR	-2.7	1.6	4.1	13.3	396.9	-10.3	0.5	1.6	2.1	2.3
JP	-2.5	0.1	2.1	7.9	86.2	-5.6	0.3	0.9	1.3	1.2
CN	-7.8	-16.1	-21.7	-20.6	23.4	-28.7	-8.1	-2.3	-0.4	0.3

Source: Author's calculations based on Worldscope data

As mentioned in section 2, financial payments represent one area of inquiry of our research. Figure 4 displays the evolution of average payouts among firms with positive payouts. The figure shows an impressive increase in the sum of dividends and share repurchases, which more than double during the period in most of the countries. The graphs also show that payouts start to surge from the 2000s and drop during the financial crisis. After this slowdown payouts recovered in all countries except for Germany and Italy. In the case of the US, the UK and Canada, payouts even overcome the peak of the pre-crisis years. Contrarily, in Germany and particularly in Italy, there was no recovery in the volume of average payouts by firm. This picture does not change comparing the volume of payouts to that of sales. The payouts over sales ratio follows closely the total payouts trend, which indicates that the average expansion in payouts was not matched by a proportional swelling in sales.

The composition of payouts varies considerably depending on the country. The volume of share repurchase is usually very low among continental European countries. This is partly due to the different legislation on buybacks across the world. It is only at the end of the 1990s that most European countries legally allowed companies to buy their shares (see Kim et al., 2005). In these countries, payouts are represented in the great majority by dividends, in line with what shown by other studies (ECB, 2007). However, even among continental European countries, buybacks are not totally negligible in the period 2000-2007 when they record a rapid growth. The picture is quite different for the rest of the countries. Here, shares repurchase occupy a relevant proportion of total payouts, particularly after 2000. In the case of the US, the level of share buybacks is above that of dividends in different years, before and after the crisis, which is consistent with what reported by the literature on the increasing role of shares buybacks in the US (Lazonick, 2015b).

Figure 4. Quantitative evolution of dividends, buybacks, payouts (dividends + buybacks) and payouts over sales ratio (% - right axes) by country. Average values (in millions of dollars) of firms with positive payouts.

Source: Author's calculations based on Worldscope data

Figure 5 proposes a first look at the link between payouts and the net lender condition. For the whole period, there are slightly more net lender observations than net borrowers. More importantly, there is a clear difference regarding the net lender status. More than 70% of net lenders observations are also firms that make payouts. This result is the opposite in the case of net borrowers' observations. In this case, only one third among net borrowers have positive payouts. In other words, what emerges is that there is a clear divide between having positive payouts and being a net lender.

Figure 5. Payouts status vs. net lenders and net borrowers firms.

Source: Author's calculations based on Worldscope data

Regarding the evolution of functional income distribution at the firm-level, Figure 6 shows the evolution of the median of the ratio of staff costs⁷ over sales and total assets among our sample.⁸ The figure shows that the decrease in the share of wages over sales is clear in most of the countries of the sample, particularly before the financial crisis. However, the level of wages

⁷ Staff costs include wages and other contributions to employees such as health insurance and pension schemes contributions.

⁸ The figure shows data only for those years in which there are at least 100 observation by country. For this reason, Japan is not reported, and other countries do not have a complete series.

over sales are lower at the end of the period than in 1990, even in those countries where the wage over sales ratio increased after the crisis (Italy, UK, France). It is important to highlight that these results need to be treated with caution. The availability of remuneration data is limited for some countries and period (see appendix Table 1A), in particular for non-European countries.

These stylized facts reveal that net lending has been increasing considerably within firms of the sample and that these changes are more pronounced in bigger firms compared to smaller ones. The average payouts paid by firms have grown too, especially in the new century. Firms that are net lenders also tend to have positive payouts. As to functional income distribution, the wage share at the firm level has been decreasing in most countries of the sample, particularly during the nineties. The next section provides further analysis of the relationship between net lending, income distribution and payout payments.

Figure 6. Wages over sales and total assets by country. Median values by country.

Source: Author's calculations based on Worldscope data

4. Econometric tests

This section proposes an econometric exercise to test the impact of income distribution and financialisation on net lending in our sample of firms. In all specifications, we control for a set of covariates including firm's size, leverage, and R&D expenditure. Drawing from the existing literature on net lending (Brufman et al., 2013; Cesaroni et al., 2017; Dao and Maggi, 2018; Saibene, 2018) the model is then run according to the following equation:

$$NL_{it} = \beta_1 F_{it} + \beta_2 ID_{it} + \gamma X_{it} + \alpha_i + \rho_t + \varepsilon_{it}$$

where NL_{it} is the value of net lending over total assets of firm i in year t , measured as the difference between savings and investments in fixed capital level in the same period. F_{it} and ID_{it} capture, respectively, a set of variables of interest connected to financialisation and to income distribution at the individual firm level in year t while X_{it} is a vector of control variables. α_i represents firms fixed effect and ρ_t is the year fixed effect which is thought to capture effects common to all firms such as business cycles.

We built three variables of interest associated to financial payouts of the firm. As commented above, the financialisation literature associates dividends payments and share repurchases to capture the rise in the financially driven orientation of the firm (Milberg, 2008; Lazonick, 2010). Coherently with this perspective, the first variable of interest is payouts over total assets (*PAYOUTS*) which is equal to the sum of dividends and shares repurchase at the firm level. This measure reflects a common practice in economic and financial literature studies to group together dividends and shares repurchase into financial payouts (Brav et al., 2005; Haw et al., 2011; Floyd et al., 2015). The second and third variables of interest are represented by the decomposition of total payouts into, respectively, dividends paid (*DIVIDENDS*) and shares repurchase (*BUYBACKS*) over total assets. This allows us to grasp the specific role played by each one of these variables in influencing the level of net lending. According to the financialisation hypothesis, all these variables are expected to have a positive sign, as the increase in financial payouts pushes the firms to increment savings and net lending.

To test the role played by income distribution at the firm level we propose four variables. Even though the majority of the studies that employ the wage share are performed at the country level, in recent years different works have implemented estimations of the labour share at the at the firm-level (Growiec, 2012; Autor et al., 2017; Hounghonon & Da Costa, 2017). The first variable is the ratio of wages at the firm level over total assets (W_TA). The second one is the ratio of wages at the firm level over sales (W_SALES). The third variable is that is the ratio of wages over value added (W_VA), where value added is defined as sales in goods sold plus the change in inventories. As mentioned above, data on wages at the firm level is limited among non-European countries in some years. For this reason, the labour share at the country level is used (*LABSHARE*). It is to expect that all the income distribution variables are negatively associated to the level of net lending.

In order to avoid omitted variables and exploit heterogeneity, our control variables includes current and total liabilities (respectively, *CURRLIAB* and *LEVERAGE*) and Tobin's Q (*TOBINQ*), similarly to the specification proposed by Brufman et al. (2013). Higher indebtedness levels are expected to have a negative relationship with net lending, since debt repayment reduces the amount of savings of the firm, while Tobin's Q accounts for growth opportunities of the firm. In addition to these variables, the level of sales (*SALES*) controls for firm's size since, as argued above (Table 2), net lending levels seem to be correlated with the size of the firm. Research and development (*R&D*) expenditure is included as a proxy of intangible capital. Recent literature focuses on the rise of intangible capital (Shipman, 2015)

and some authors argue that physical capital may be substituted by intangible capital expenditure (Orhangazi, 2018). For this reason, it is necessary to control for the possible role played by intangible capital in the rise of net lending. R&D expenditure is one of the main proxies to capture intangible investment (Haskel & Stian, 2017; Dao & Maggi, 2018; Döttling, Ladika, & Perotti, 2018). Coherently with this literature, it is the variable employed in our specification. Finally, the ratio of inventories over sales (*LIQNEEDS*) is added as a proxy of liquidity needs (Raddatz, 2006). This variable accounts for the possible increase in savings due to changes in the process of production requiring more liquidity for their standard operations. All variables are normalized by total assets unless specified.⁹

Before running the regressions, different steps of data cleaning are followed. This procedure is usual in the literature on firm behaviour and with firm-level data (e.g. Haw et al., 2011; Kusnadi & Wei, 2011). Because of inconsistency, excluded observations with negative values for the following variables: sales, capital expenditure, current and total liabilities, *R&D*, dividends, wages and inventories stock. Firms with less than four consecutive years of observations were omitted. This procedure guarantees that all the firms experience a common minimum period of permanence in the sample. To deal with presence of outliers, we removed extreme results from the sample employed in the regressions. Since the removal of the 1st and 99th percentile was not enough to eliminate all the outliers, we opted to drop the observations below the 5% and above 95% of the distribution.

Estimation results

Given the nature of our model, we performed the Hausman test to identify the best model of regression. This test indicates that fixed effect model should be employed. Table 3 shows the outcomes of the regressions employing different specifications, each one using the variables of interest for our hypothesis. Standard errors were corrected for heteroscedasticity and autocorrelation. Columns (1)-(3) present the results for the financialisation variables. In section 2 we considered the argument that higher financial payments may increase the level of net lending. Consistent with this perspective, all three variables of interest have positive and significant signs. The higher the allocation of financial payments that the firm decides to incur, the higher the level net lending. Notice that these effects are slightly higher in the case of share repurchases than in the case of dividends.

Columns (4)-(7) show the impact of income distribution variables on net lending. According to our hypothesis, it is expected that a lower labour share is associated with higher levels of net lending at the firm level. The results confirm this hypothesis as all the income distribution variables have negative values and significant signs. This confirms the idea that firms that allocate a lower share of output to wages also have a higher capacity of accumulation of cash, which drives up savings and net lending. In historical perspective, the decline in the wage share experienced in the last decade has favoured the increase in net lending. Finally, column (8) reports the regression including both payouts and the ratio of wages over total assets. Also in this case, the effect of financialisation and income distribution variables (*PAYOUTS* and *W_VA* respectively) impacts on the level of net lending.

The coefficients associated to our control variables indicate that higher indebtedness is associated to lower level of net lending. This result can be associated to the lower capacity of excess savings accumulation of more indebted firms and is consistent with other studies (Brufman et al., 2013). As it could be expected from Table 2, the size of the firms (*SALES*) impacts positively on the level of net lending. *R&D* is strongly negatively associated with net

⁹ The full list of variables can be found in Table 2A in the appendix.

lending. This may indicate that firms devote internal funds to *R&D* expenditure which has a negative effect on net lending by reducing the amount of savings held by firms.

Table 3. Regression results; dependent variable NL; estimation period 1990-2015.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CURRLIAB</i>	-0.121*** (0.00848)	-0.123*** (0.00856)	-0.120*** (0.00843)	-0.0915*** (0.0126)	-0.0906*** (0.0117)	-0.0859*** (0.0230)	-0.123*** (0.00826)	-0.0924*** (0.0130)
<i>LEVERAGE</i>	-0.149*** (0.00622)	-0.149*** (0.00627)	-0.152*** (0.00616)	-0.140*** (0.0113)	-0.156*** (0.0109)	-0.166*** (0.0214)	-0.147*** (0.00594)	-0.138*** (0.0118)
<i>SALES</i>	0.0580*** (0.00258)	0.0590*** (0.00261)	0.0575*** (0.00256)	0.117*** (0.00695)	0.0253*** (0.00461)	0.0455*** (0.00863)	0.0579*** (0.00249)	0.119*** (0.00713)
<i>R&D</i>	-0.620*** (0.0542)	-0.616*** (0.0547)	-0.619*** (0.0551)	-0.285*** (0.0683)	-0.321*** (0.0708)	-0.369* (0.222)	-0.606*** (0.0537)	-0.296*** (0.0706)
<i>TOBINQ</i>	-0.000692 (0.000734)	-0.000803 (0.000724)	-0.000305 (0.000719)	-0.00136 (0.00195)	0.00200 (0.00156)	0.00520** (0.00223)	-0.000271 (0.000699)	-0.00228 (0.00204)
<i>LIQNEEDS</i>	-0.0445*** (0.0139)	-0.0448*** (0.0139)	-0.0442*** (0.0139)	-0.0421* (0.0235)	-0.0381* (0.0226)	-0.0436 (0.0434)	-0.0477*** (0.0136)	-0.0341 (0.0242)
<i>PAYOUTS</i>	0.329*** (0.0337)							0.443*** (0.0652)
<i>DIVIDENDS</i>		0.377*** (0.0655)						
<i>BUYBACKS</i>			0.477*** (0.0743)					
<i>W_TA</i>				-0.418*** (0.0266)				-0.424*** (0.0271)
<i>W_SALES</i>					-0.379*** (0.0217)			
<i>W_VA</i>						-0.0841*** (0.0159)		
<i>LABSHARE</i>							-0.000231 (0.000344)	
Constant	0.0263*** (0.00533)	0.0229*** (0.00549)	0.0319*** (0.00524)	0.0299** (0.0142)	0.141*** (0.0152)	0.140*** (0.0260)	0.0466** (0.0212)	0.0215 (0.0148)
Observations	119,650	119,185	118,265	35,533	35,634	12,491	126,411	34,075
R-squared	0.078	0.078	0.077	0.112	0.128	0.099	0.076	0.117
Number of firms	13,918	13,793	13,960	6,037	5,808	3,422	14,014	5,973

Note: Fixed effect estimation. Robust corrected standard errors in parentheses. Coefficients for the year dummies are not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

As shown in Figure 2, the level of average net lending increases remarkably after the dotcom crisis. Therefore, the dataset was further divided into two sub-periods, 1990-2001 and 2002-2015. Table 4 shows interesting differences with the regression at the aggregate level of analysis. All the three financial payouts variables do not show any statistically significant relationship on net lending between 1990 and 2001. These results change in the following period, after 2002 and 2015 all the variables of interest are significantly correlated with the level of net lending, consistently with the evidence of Table 3. These results suggest that the strong increment in financial payouts from 2002 (Figure 4) is strictly connected with the boom in net lending recorded during the same period. The increasing role of financial payouts during the more recent period is also confirmed by the smaller size of the coefficients of the control variables.

Table 4. Sub-periods analysis: Financialisation variables only; dependent variable NL.

	1990-2001			2002-2015		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>CURRLIAB</i>	-0.141*** (0.0120)	-0.147*** (0.0122)	-0.153*** (0.0133)	-0.0969*** (0.0131)	-0.0971*** (0.0132)	-0.117*** (0.0152)
<i>LEVERAGE</i>	-0.195*** (0.00989)	-0.194*** (0.00982)	-0.192*** (0.0102)	-0.172*** (0.00981)	-0.173*** (0.00970)	-0.174*** (0.0106)
<i>SALES</i>	0.0544*** (0.00396)	0.0560*** (0.00401)	0.0551*** (0.00422)	0.0604*** (0.00410)	0.0610*** (0.00411)	0.0635*** (0.00498)
<i>R&D</i>	-0.874*** (0.0878)	-0.891*** (0.0853)	-0.931*** (0.0931)	-0.650*** (0.0767)	-0.645*** (0.0764)	-0.692*** (0.0876)
<i>TOBINQ</i>	0.00367*** (0.00135)	0.00334** (0.00131)	0.00377*** (0.00139)	-0.00265** (0.00128)	-0.00256** (0.00129)	-0.000833 (0.00127)
<i>LIQNEEDS</i>	0.00583 (0.0213)	0.00941 (0.0215)	0.00362 (0.0235)	-0.0963*** (0.0209)	-0.0965*** (0.0210)	-0.147*** (0.0252)
<i>PAYOUTS</i>	0.0244 (0.0559)			0.271*** (0.0492)		
<i>DIVIDENDS</i>		-0.0288 (0.115)			0.211** (0.0976)	
<i>BUYBACKS</i>			0.125 (0.0815)			0.339*** (0.0727)
Constant	0.0656*** (0.00826)	0.0632*** (0.00846)	0.0654*** (0.00845)	0.0302*** (0.00739)	0.0307*** (0.00739)	0.0378*** (0.00865)
Observations	46,564	45,758	40,425	62,410	62,310	48,025
R-squared	0.103	0.104	0.104	0.077	0.077	0.082
Number of firms	9,121	9,007	7,596	10,863	10,734	9,794

Note: Fixed effect estimation. Robust corrected standard errors in parentheses. To avoid the volatility associated with the Global Financial Crisis, years 2008 and 2009 were omitted. Coefficients for the year dummies are not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

With respect to income distribution variables, the econometric analysis shows that there are not significant differences between the first and second sub-period (see Table 3A in the appendix). Except for the ratio of wages over sales, the coefficient of the variables of interest is lower in the first sub-period than in the second, but this difference is negligible. Overall, the role played by income distribution between the two sub-periods is similar.

Finally, Table 5 shows country-level results to account for possible differences among the sample.¹⁰ For each country, we run seven regressions, each one including one different variable of interest at the time. The table shows that total payouts have a positive and significant impact among all countries, with the only exception of Japan. It is to note that there is some variation between countries with respect to dividends and shares repurchase. Dividends have a positive impact on the level of net lending in the US, UK and Italy, while shares repurchase in the US, UK, Germany and France. The US and the UK are the only two countries where both dividends and share repurchases have a positive sign and are statistically significant. These results also

¹⁰ For the sake of simplicity Table 5 reports only the values and standard errors of our variables of interest, omitting the coefficients of control variables and other statistics

suggest that, while financial payments have a positive impact on net lending in the great majority of the countries, not all kinds of payouts are equally significant among G7 countries. The coefficients for Japan are consistent with the idea that NFC in this country underwent limited financialisation during the period (Shabani and Toporowski, 2013). Despite this exception, the financialisation hypothesis is generally confirmed at the country level.

The negative relationship between wage share and net lending is confirmed throughout all countries with variables of interest. Given the availability of data, firm-level measures of income distribution are more representative among European countries. In these countries the number of observations of distributive observations at the firm-level equals that on net lending, while in non-European countries data on labour compensation are less abundant. In order to deal with this issue, the last specification includes *LABSHARE*, the wage share at the country level. This variable is negative and statistically significant in three countries (US, UK and Japan) and not significant in the other countries. Overall, findings on income distribution at the country level confirm the results for the aggregate sample.

Table 5. Country analysis. The table reports the coefficients for the variables of interest and robust standard errors only. Dependent variable NL.

	USA	UK	Germany	Italy	France	Japan	Canada
<i>PAYOUTS</i>	0.281*** (0.0450)	0.602*** (0.108)	0.327** (0.104)	0.662*** (0.144)	0.269* (0.112)	0.00724 (0.0897)	0.562*** (0.126)
<i>DIVIDENDS</i>	0.282** (0.109)	1.007*** (0.152)	0.208 (0.170)	0.815*** (0.201)	0.271 (0.183)	-0.298 (0.164)	0.583* (0.287)
<i>BUYBACKS</i>	0.485*** (0.0968)	0.862** (0.271)	0.709* (0.342)	0.719 (0.427)	0.704** (0.215)	0.0964 (0.145)	0.343 (0.271)
<i>W_TA</i>	-0.510*** (0.102)	-0.523*** (0.0456)	-0.215*** (0.0424)	-0.112* (0.0453)	-0.279*** (0.0499)	-0.520*** (0.130)	-0.985*** (0.145)
<i>W_SALES</i>	-0.486*** (0.0928)	-0.428*** (0.0324)	-0.348*** (0.0419)	-0.147** (0.0457)	-0.315*** (0.0488)	-0.763*** (0.130)	-0.341*** (0.0748)
<i>W_VA</i>	-0.422*** (0.0999)	-0.0830** (0.0304)	-0.0237 (0.0569)	-0.0872*** (0.0207)	-0.0382* (0.0154)	-0.155*** (0.0361)	n.a. n.a.
<i>LABSHARE</i>	-0.00325** (0.00124)	0.00418 (0.00512)	-0.0157*** (0.00258)	-0.00219 (0.00203)	-0.0408 (0.0895)	-0.00106 (0.00111)	-0.0138** (0.00531)

Note: The table show the results of the coefficients of the variable of interest only. In every regression we included one variable of interest at the time. Fixed effect estimation. Control variables employed in each regression are: *CURRLIAB*, *LEVERAGE*, *SALES*, *R&D*, *TOBINQ*, *LIQNEEDS*. Robust corrected standard errors in parentheses. Coefficients for the year dummies are not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

5. Conclusions

One of the major novelties observed in the contemporary financial world is the rise in corporate net lending. As highlighted in section 2, the causes that determine net lending are still open to debate. The paper attempts to contribute to this discussion, proposing alternative interpretations of net lending, drawing from the existing literature on financialisation and income distribution.

The analysis employed a dataset of listed NFC that covered the period 1990-2015. Different relevant elements emerged from descriptive statistics section. Net lending grew substantially between 1990 and 2015 among all G7 countries, the only exception being Canada. Yet, this increase has not been linear. Until the beginning of the century, net lending was positive in most of the countries, but it maintained a relatively small and stable level. Since 2002, net

lending soared, with the exception of the financial crisis period when it fell, mostly because of the drop in savings. A closer look at the data highlights that the level of net lending is not uniform among firms. Larger firms tend to have higher levels of net lending, while smaller firms are net borrowers.

This study contributes to the limited literature that considered the role played by financial payouts (Gruber and Kamin, 2015) and does so by providing a, so far, unexplored key of interpretation, i.e. financialisation. Following this framework of analysis, the desire to expand financial payouts, in line with the “retain and reinvest” model of accumulation (Lazonick and O’Sullivan, 2000), induced firms to accrue the gap between savings and physical investment. The econometric tests reveal that dividend payments and share repurchases generally have a positive and significant impact on the level of net lending. This is consistent with the already documented negative relationship of financial payouts on investment highlighted by the financialisation literature (e.g. Orhangazi, 2008b).

Even though our evidence supports the financialisation motive, there are some additional remarks to be made. During the 1990s, the relationship between financial payouts and net lending is statistically not relevant, suggesting that the link between financial payouts and net lending consolidated only in the new century, with the intensification of financialisation. Additionally, the role of financial payments is statistically significant in all countries (except Japan) when we consider the joint role played by dividends and shares repurchase. However, in the disaggregated analysis, *both* dividends and buybacks are statistically relevant only in the US and in the UK. This suggests that despite the generalised increase in payouts, the variables employed in this paper do not play the same role in the determination of corporate net lending in all countries.

The econometric outcomes also established that the level of the wage share at the firm level is negatively related to the level of net lending. Firms that distribute a lower share of their output to workers also have higher net lending. The estimations are robust in most specifications and apply to all the countries of the sample, providing support to the idea that swelling profits contributed to the rise in savings accumulation (André et al., 2007; Dao and Maggi, 2018) and supports other studies performed at the aggregate macro level (Behringer and van Treeck, 2018). In conclusion, part of the rise in net lending can be considered a consequence of the distributive dispute between wage earners and capital earners, implying that net lending should not be viewed only as the mere outcome of technical features of the firms, but the outcome of power relation within the firm and in the rest of the economy.

Our findings have important implications in policy terms. As long as the financialised regime of accumulation stays in place, the difference between savings and investment may well continue to be positive. Cyclical economic slowdowns tend to reduce the level of net lending (as it occurred during the global crisis), but the more recent trend suggest that net lending is becoming a permanent characteristics of large companies in developed countries, complementing the contribution of other studies (Dao and Maggi, 2018). Furthermore, the results on income distribution seems to corroborate the idea that a lower wage share tends to be accumulated rather than being reinvested (in the same proportion) into capital accumulation. This aspect indirectly provides further evidence of the weakening of the profit-investment nexus highlighted elsewhere (e.g. Durand and Gueuder, 2018).

These findings do not exhaust the scope of the research. Further research is needed to explore in more detail the role played by the size and concentration of the firms, as well as the complementarities between the increase in net lending and other production strategies characterising listed firms, such as the role of offshoring and market concentration.

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Appendix

Table 1A. Number of observations of the wage variable in each country and year. Absolute number of observations (N.) and share of the number of net lending observations (% NL.).

	USA		UK		Germany		Italy		France		Japan		Canada	
<i>Year</i>	N.	% NL	N.	% NL	N.	% NL	N.	% NL	N.	% NL	N.	% NL	N.	% NL
1990	2	0.1	23	2.5	35	10.1	8	5.8	50	23.3	1	0.4	0	0
1991	12	0.6	47	5.0	74	20.6	14	10.0	80	35.9	1	0.4	0	0
1992	28	1.4	242	26.3	359	96.8	115	84.6	348	157.5	1	0.4	2	0.6
1993	40	1.9	727	78.9	439	119.6	125	100	379	159.9	0	0	2	0.6
1994	69	2.3	911	97.2	428	127.4	133	104.7	368	157.9	0	0	6	1.9
1995	77	2.4	922	98.9	425	116.1	132	103.1	363	150.6	0	0	7	1.9
1996	84	2.3	918	99.1	419	106.6	133	102.3	348	145.6	0	0	5	1.3
1997	95	2.3	889	98.1	413	101.5	132	108.2	333	141.7	0	0	12	3.0
1998	143	2.7	935	97.5	408	100.2	138	106.2	323	135.1	0	0	29	4.6
1999	168	3.2	870	96.7	395	99.7	139	101.5	321	130.0	0	0	35	4.7
2000	322	6.5	872	97.5	396	104.5	155	104.7	419	115.7	36	1.8	64	8.7
2001	300	6.3	928	97.9	383	108.5	156	102.6	430	106.4	41	1.4	63	8.0
2002	232	5.1	946	98.3	419	102.4	184	102.8	453	104.1	20	0.7	82	8.3
2003	215	4.7	972	97.3	472	107.3	189	106.2	485	107.5	11	0.4	114	10.1
2004	326	7.1	1019	97.2	496	107.6	208	110.1	478	111.4	13	0.4	138	11.3
2005	402	8.5	1056	96.6	494	105.8	207	106.7	482	108.6	15	0.5	637	31.2
2006	360	7.5	1084	96.8	496	105.3	207	103.5	469	108.3	13	0.4	772	36.0
2007	389	8.3	1054	96.2	498	104.8	205	102.5	461	109.0	8	0.3	914	39.4
2008	427	9.5	983	96.4	484	105.4	200	101.0	462	113.2	7	0.2	1047	44.0
2009	435	10.1	908	95.5	469	106.3	193	99.0	440	112.2	32	1.1	1071	45.2
2010	450	10.7	846	93.5	453	106.3	191	99.5	431	112.8	36	1.3	1159	47.9
2011	422	10.3	836	92.2	436	106.3	190	101.1	430	113.2	51	1.9	1293	53.6
2012	489	12.7	755	86.4	382	98.7	190	102.2	395	107.9	284	10.4	1288	56.2
2013	456	12.7	629	75.4	346	92.8	185	97.4	377	104.7	2575	95.5	1019	52.9
2014	437	13.0	651	83.0	348	98.6	181	98.9	387	107.5	2652	98.7	804	51.5
2015	396	12.6	583	78.8	326	97.6	176	98.9	363	106.1	2652	98.4	713	52.3

Source: Author's calculations based on Worldscope data

Table 2A. Variables definitions and Worldscope codes

Symbol	Definition	Worldscope code
<i>NL</i>	Corporate savings minus addition to fixed assets over total assets	$\frac{(WC01651 + WC01151 - WC04601)}{WC02999}$
<i>CURRLIAB</i>	Current liabilities over total assets	$\frac{WC03351}{WC02999}$
<i>LEVERAGE</i>	Total Liabilities over total assets	$\frac{WC03101}{WC02999}$
<i>SALES</i>	Net sales over total assets	$\frac{WC01001}{WC02999}$
<i>R&D</i>	Research and Development expenditure over total assets	$\frac{WC01201}{WC02999}$
<i>TOBINQ</i>	Tobin's Q: (Market share price * common share outstanding + total liabilities) over total assets	$\frac{(WC08001 + WC03351)}{WC02999}$
<i>LIQNEEDS</i>	Inventories over total assets	$\frac{WC02101}{WC01001}$
<i>PAYOUTS</i>	Dividends plus shares repurchase over total assets	$\frac{(WC04551 + WC04751)}{WC02999}$
<i>DIVIDENDS</i>	Dividends over total assets	$\frac{WC04551}{WC02999}$
<i>BUYBACKS</i>	Shares repurchase over total assets	$\frac{WC04751}{WC02999}$
<i>W_TA</i>	Wages over total assets	$\frac{WC01084}{WC02999}$
<i>W_SALES</i>	Wages over net sales	$\frac{WC01084}{WC01001}$
<i>W_VA</i>	Wages over values added	$\frac{WC01084}{(WC01001 - WC01051 + WC04826)}$

Table 3A. Sub-periods analysis: Income distribution variables. Dependent variable NL.

	1990-2001				2002-2015			
	(1A)	(2A)	(3A)	(4A)	(5A)	(6A)	(7A)	(8A)
<i>CURRLIAB</i>	-0.0876*** (0.0226)	-0.0938*** (0.0217)	-0.0779** (0.0390)	-0.141*** (0.0118)	-0.0885*** (0.0185)	-0.0905*** (0.0171)	-0.0720** (0.0306)	-0.102*** (0.0127)
<i>LEVERAGE</i>	-0.173*** (0.0216)	-0.173*** (0.0205)	-0.175*** (0.0402)	-0.188*** (0.00939)	-0.140*** (0.0167)	-0.168*** (0.0168)	-0.199*** (0.0284)	-0.166*** (0.00918)
<i>SALES</i>	0.104*** (0.0107)	0.0304*** (0.00653)	0.0436*** (0.0131)	0.0539*** (0.00379)	0.129*** (0.0102)	0.0151** (0.00753)	0.0505*** (0.0123)	0.0603*** (0.00390)
<i>R&D</i>	-0.341** (0.159)	-0.293** (0.115)	-0.457 (0.367)	-0.864*** (0.0893)	-0.310*** (0.0976)	-0.394*** (0.109)	-0.561** (0.282)	-0.639*** (0.0738)
<i>TOBINQ</i>	0.00116 (0.00553)	0.00385 (0.00279)	0.0120* (0.00674)	0.00376*** (0.00129)	-0.00120 (0.00249)	0.00242 (0.00234)	0.00319 (0.00346)	-0.00183 (0.00121)
<i>LIQNEEDS</i>	0.0298 (0.0358)	0.0349 (0.0357)	0.0685 (0.0619)	0.00303 (0.0210)	-0.0995*** (0.0372)	-0.111*** (0.0355)	-0.0649 (0.0645)	-0.0973*** (0.0203)
<i>W_TA</i>	-0.310*** (0.0391)				-0.551*** (0.0391)			
<i>W_SALES</i>		-0.430*** (0.0421)				-0.367*** (0.0322)		
<i>W_VA</i>			-0.0588*** (0.0226)				-0.100*** (0.0210)	
<i>LABSHARE</i>				-0.00199*** (0.000577)				-0.000520 (0.000667)
Constant	0.0552*** (0.0180)	0.167*** (0.0215)	0.117*** (0.0358)	0.186*** (0.0358)	0.0613*** (0.0146)	0.170*** (0.0164)	0.110*** (0.0220)	0.0640 (0.0400)
Observations	11,760	12,059	2,724	48,814	20,775	20,566	8,944	66,294
R-squared	0.105	0.126	0.108	0.101	0.125	0.126	0.112	0.074
Number of firms	2,347	2,333	933	9,201	5,012	4,814	2,848	10,995

Note: Fixed effect estimation. Robust corrected standard errors in parentheses. Coefficients for the year dummies are not reported. * significant at 10%; ** significant at 5%; *** significant at 1%