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Mostly Good Robin Hood: Impact of Financial Transaction Tax on Corporate Investment

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Abstract

We exploit the 2012 French introduction of a financial transaction tax (FTT) levied on stock purchases to examine its impact on corporate investment behavior. We find an overall positive effect of the FTT on corporate investments, hence inconsistent with the prediction that the FTT would impede investment due to increased cost of capital. We also find that firms with a significant increase in long-term ownership improved investment sensitivity to growth opportunities, were more likely to make acquisitions with better performance, and reduced earnings management. These results are in line with the prediction that the FTT helps to alleviate short-termism by inducing long-term ownership. For some firms, however, the FTT might hinder information about investment opportunities from financial market to corporate decision makers, causing the investments to be less sensitive to growth opportunities.

JEL classification: H23, G14, G31, G32

Keywords: Financial Transaction Tax, Corporate Investment, Short-termism.

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"[T]ax on all transactions might prove the most serviceable reform available with a view to mitigating the predominance of speculation over enterprise... [But] if individual purchases of investments were rendered illiquid, this might seriously impede new investment... This is the dilemma." – Keynes (1936).

1 Introduction

Since the 2008 crisis, financial transaction taxes (FTTs), also known as Robin Hood taxes, have received substantial attention again, especially in the European Union (EU) and G20 countries. FTTs are levies on financial transactions such as trades in securities.[1] They are deemed to stabilize the financial markets by curbing speculative trading (Stiglitz, 1989), to lessen short-termism (Summers and Summers, 1989), and at the same time to bring a significant revenue that could be used to fund public services and compensate for the damage from the financial crisis (Hemmelgarn and Nicodeme, 2012). Opponents are, however, concerned about the adverse effects that FTTs have on quality of financial market (Kupiec, 1996; Song and Zhang, 2005) or real economic variables such as cost of capital and investment (Lendvai et al., 2012). While the FTT proposal at EU level is currently still under discussion in the Council, France and Italy already introduced their own national FTTs in 2012 and 2013, respectively, and Spain just passed a draft bill in October 2018.[2] These policy experiments, together with contemporary data availability, have allowed researchers to resolve the debate on the impact of FTTs on the financial market. The purpose of this paper is to investigate whether the FTT on stock transactions is beneficial or harmful in respect to real investments by firms.

Some empirical work confirms that the FTT leads to decreased asset prices and increased cost of capital (e.g. Umlauf, 1993; Fraichot, 2017). Research that focuses on market quality generally finds an increase in volatility and reductions in trading volume, liquidity and price efficiency, although some effects may differ depending on tax design and structures of financial markets in each country (e.g. Becchetti et al., 2014; Colliard and Hoffmann, 2017; Deng et al., 2018). Regarding responses at individual level, Colliard and Hoffmann (2017) find a shift in security holdings from short-term to long-term investors as short-term investors reduced both their portfolio turnover and some of their holdings of taxed securities to alleviate the impact of the FTT.

Therefore, the FTT can, on the one hand, cause a reduction in corporate investments by increasing the

[1] Like value-added taxes, FTTs are imposed at the time of a transaction and based on the value of transaction, i.e. market value of the securities. Schwert and Seguin (1993), Matheson (2011) and Hemmelgarn et al. (2016) provide surveys on this topic.

[2] In February 2013, the European Commission suggested a proposal aimed at introducing an FTT in 11 Member States through the instrument of enhanced cooperation after the failure to obtain unanimous agreement on a previous proposal for an EU-wide FTT in 2011. See http://www.europarl.europa.eu/legislative-train/theme-deeper-and-fairer-internal-market-with-a-strengthened-industrial-base-taxation/file-financial-transaction-tax.

cost of capital. The cost of capital rises because investors require higher rates of return to compensate for not only the amount of taxes they have to pay but also the higher implicit costs such as lower liquidity (wider bid-ask spreads). On the other hand, the FTT can help to increase investments by alleviating short-termism. The intuition is that short-termism, which can stem from traders on financial market and/or myopic managers, causes corporate underinvestment. If the FTT can induce long-term ownership, relieving some short-termist pressure from financial market and/or improving governance, the underinvestment problem will be mitigated and thus investment will increase.

We test these opposing predictions using the French FTT introduction in 2012. Purchases of stocks of French listed firms with capitalization above one billion EUR are subject to the FTT. Using a difference-in-differences approach, we find that firms whose stocks were subject to this tax increased their investments after being affected by the FTT compared with unaffected firms. Results are robust to alternative control groups and measures of investment. We still find positive effects of the FTT on corporate investments in a group of firms that arguably suffered from a larger increase in cost of capital. These results are inconsistent with the prediction that the FTT can lead to a lower level of investment due to the increased cost of capital. The absence of negative effect on investments might be partly due to a rather low tax rate (Matheson, 2011; Lendvai et al., 2012). Furthermore, that negative effect can be dominated by the positive effect from alleviated short-termism.

Indeed, we find a pool of evidence supporting the alleviated short-termism channel. First of all, this mechanism relies on the assumption that the FTT can curb short-term traders, inducing long-term ownership. Therefore, we first test this assumed premise by analysing fund ownership. We find an increase in long-term ownership in treated firms, laying foundation for short-termism channel. This evidence is consistent with Amihud and Mendelson (1986) implication that investors with longer holding periods select assets with higher transaction costs and also consistent with portfolio-level evidence in Colliard and Hoffmann (2017).

Secondly, short-termism theory suggests that a myopic manager or a manager under short-termist pressure would forgo positive NPV projects, leading to lower investment levels and lower sensitivity to changes in investment opportunities (Asker et al., 2015). Therefore, if the FTT affects corporate investment behavior through alleviating short-termism, we will observe an increase in not only investment level as documented but also investment sensitivity to changes in growth opportunities. We find that investment sensitivity indeed improved in a group of treated firms that experienced a significant increase in long-term ownership, supporting alleviated short-termism channel. Meanwhile, investments became less sensitive in a group of treated firms with a substantial reduction in stock liquidity and price efficiency and without a significant increase in long-term ownership. It seems that for these firms the FTT crowded out "useful" trades that might contain information about investment opportunities (Schwert and Seguin, 1993; Colliard and Hoffmann, 2017).

Next, one may argue that investments increased because lower liquidity and higher transaction costs due to the FTT harmed blockholder governance (Edmans, 2009; Admati and Pfleiderer, 2009), giving room for managerial empire-building and overinvestment. We investigate this possibility by looking at acquisition activities since managers who have empire-building preference tend to not only overinvest but also be attracted to certain types of investments such as acquisitions (Amihud and Lev, 1981; Stein, 2003). Acquisitions are also one of the biggest corporate investments, examining the effect of the FTT on acquisition activities is thus in and of itself interesting. Under the empire building explanation, we expect that managers are more likely to make acquisitions and these acquisitions are value-destroying. We may also observe a higher likelihood of making acquisitions under alleviated short-termism channel but these acquisitions should be value-enhancing, or at least not value-destroying, thanks to the beneficial role of long-term shareholders. We find that treated firms were more likely to make acquisitions without detriment to the deals' quality, with a group of affected firms that underwent a significant increase in long-term ownership even making better deals. These results are in line with the alleviated short-termism explanation rather than the empire building one.

Finally, as there could be alternative theories of investment explaining our results, we investigate earnings management behavior which goes hand in hand with underinvestment under short-termism theory but seems irrelevant in other theories of investment. We argue that less short-termist pressure reduces motives for managers to manage earnings and/or better governance limits managers' leeway to do so. Indeed, we find supporting evidence that earnings management decreased in affected firms. Again, the effect is largely driven by firms with a significant increase in long-term ownership. The fact that we find the expected effects on investment sensitivity, acquisition activities and earnings management particularly strong among firms with the significant increase in long-term ownership but rather muted among firms without it reinforces the existence of alleviated short-termism mechanism.

We contribute to the literature on the costs and benefits of financial transaction taxes. Firstly, we do not find evidence on the FTT's most concerning drawback which is the decrease in investment due to higher cost of capital. Conversely, we provide evidence on its merits linked to reduced corporate short-termism. Specifically, by inducing long-term ownership, the FTT orientates firms towards long-term value created through more and better investments. In addition, as previous studies find a negative impact of the FTT on stock liquidity and price efficiency, our study suggests that this negative impact on financial market can translate into a few suboptimal investment decisions in some firms that did not experience a significant increase in long-term ownership. Our findings are informative to the discussion in many countries on the FTT design and introduction.

This paper is also related to the literature on short-termism and shareholder investment horizon. There is increasing evidence on short-termism of public firms (e.g. Asker et al., 2015; Edmans et al., 2017a; Agarwal et al., 2017). Our results suggest that public firms have different level of short-termism and the FTT is more beneficial for those that suffer more from short-termism. This paper complements

existing literature on the impact of long-term shareholders on corporate decisions (e.g Bushee, 1998; Gaspar et al., 2005; Chen et al., 2007b; Harford et al., 2018). Our evidence suggests that long-term shareholders can have positive influence over investment decisions, acquisition activities, and earnings management.

The rest of this paper is organized as follows. Section 2 discusses the French policy and related literature. Section 3 presents data and empirical strategy. Section 4 and 5 analyze the effect of the FTT on corporate investments and mechanism behind it. Section 6 presents additional analyses and we conclude and discuss implications in Section 7.

2 Institutional context and related literature

2.1 French policy

Being a proponent for imposing the FTT at EU level, France introduced a national FTT of 20 basis points on stock purchases on August 1, 2012 as a pilot program.[3] The purchases are liable for the tax if they result in an actual transfer of share ownership, which means intra-day transactions are not subject to the FTT. Listed firms that are incorporated in France with a market capitalization above one billion EUR at the end of the previous year are subject to this tax during the following year.

The tax applies to trades on all trading platforms, OTC markets, and to all investors, regardless of their country of residence. There are exemptions such as share issuance in the primary market, intra-group transactions, securities financing transactions (e.g. repurchase agreements, securities borrowing and lending agreements), and transactions carried out by market makers or clearing houses and central securities depositories.[4] These exemptions are in place to avoid double taxation or taxing transactions that are not involved in an actual transfer of share ownership.

Apart from this tax on stock purchases, French authorities also introduced two other financial taxes at the same time, namely a tax on naked CDS on bonds issued by governments of EU Member States and a tax on cancelled orders. We believe that the effect of these two taxes does not contaminate our analysis for the following reasons. Firstly, the actual impact of these two taxes seems trivial. The revenue from the former was 1 million EUR and the latter did not yield any revenues in 2012, whereas the tax on stock purchases brought in 198 million EUR.[5]

[3]The tax rate was increased to 30 bps in 2017 with the aim of raising more revenue. See https://www.euractiv.com/section/euro-finance/news/france-strengthens-financial-transaction-tax-to-fund-development/.

[4]For market makers, clearing houses and central depositories, only transactions that are in accordance with their operational functions are exempt. For instance, the exemption covers purchases of securities by a clearing house due to a failed delivery of sales or intermediate transactions in which a market maker buys from a seller and then sells to a buyer. By contrast, there is no exemption if they trade on their own accounts with the aim of seeking profits (AMAFI, 2018).

[5]See http://www.assemblee-nationale.fr/14/rap-info/i1328.asp.

Secondly, the tax on naked sovereign CDS obviously does not apply to firms, hence has no direct impact on them. Had it affected corporate decisions due to changes in investors' behaviors, we expect all firms, not just those whose stocks subject to the FTT, would have been affected. Therefore, changes in behaviors of firms that are subject to the stock purchase tax in relation to firms that are not, if any, are more likely due to the stock purchase tax rather than the CDS tax. The tax on cancelled orders, which primarily targets high-frequency trading with the ratio of cancelled orders to all orders surpassing 80%, also has narrow scope as it is only levied on very few HFTs residing in France (Colliard and Hoffmann, 2017).

In March 2014, French government passed the Florange Law that gives double voting rights to long-term shareholders unless shareholders specifically voted to opt out. It might be the case that it is this law rather than the FTT triggered changes in behaviors of investors and firms. We believe that this is very unlikely for several reasons. Firstly, any French listed firms can be affected by this law, hence it fails to explain the changes in firms subject to the FTT compared with French control group. Secondly, the facts that many firms had already adopted this policy before 2014 and firms can opt out explain in part the minor change after the law came into force. For example, according to Financial Times, among CAC 40 firms, 22 members had double-voting rights before the law, with just 4 additional firms after the law became effective.[6]

2.2 FTT and corporate investment behaviors

The "dilemma" that Keynes (1936) had pointed out initiated the debate over the costs and benefits of the FTT. On the one hand, the FTT is argued to curb trading by speculators, helping firms focus on long-term performance instead of short-term earnings and stock appreciation. On the other hand, the tax may increase the cost of capital and hence impair corporate financing and investment.

Specifically, opponents concern that the introduction of the FTT can have a negative impact on corporate investments because of the increased cost of capital. Schwert and Seguin (1993) argue that a transaction tax would raise required rates of return, which in turn would have real effects on the economy such as reductions in capital investment and levels of real production. Investors require higher rates of return to compensate for the increases not only in the explicit transaction cost equivalent to the amount of tax but also in the implicit costs such as higher bid-ask spread (Amihud and Mendelson, 1986). Using a closed economy dynamic stochastic general-equilibrium model that incorporates financial frictions, Lendvai et al. (2012) investigate the impact of a FTT on trading activities and prices on the financial market and real economic variables. They show that the introduction of the FTT results in a decline in the price of the traded equity and a rise in stock return in the long term, which implies an increase in firms' financing costs, leading to a drop in investment. Empirically, Umlauf (1993) finds

[6] See https://www.ft.com/content/807fe086-5326-11e6-9664-e0bdc13c3bef.

a decline in stock prices after the introduction of transaction taxes in Sweden. Using another approach that makes use of the connection between credit default swaps and equity derivative markets, Fraichot (2017) finds evidence suggesting an increase in corporate cost of capital as a response to the French FTT.

Arguably, marginal investment projects, which could be accepted if their stocks were not taxed, would be turned down as a result of higher required returns that make their NPV negative. This line of argument leads us to the prediction that after being affected by the FTT, affected firms invest less relative to unaffected ones.

Proponents, however, argue that FTTs can encourage corporate investments by lengthening the shareholder investment horizon and hence reducing short-termism.[7] Asset pricing models posit two mechanisms through which the FTT can extend shareholder investment horizon. First, as the FTT penalizes short-term investors with frequent trading more than long-term investors, short-term investors will sell some of their holdings in affected assets to long-term investors (Stiglitz, 1989; Amihud and Mendelson, 1986), implying an increase in long-term ownership. Second, investors reduce their trading frequency as a response to higher transaction costs (Constantinides, 1986), which is equivalent to longer investment horizons. Colliard and Hoffmann (2017) find evidence supporting both mechanisms for the French FTT case. And the lengthened shareholder investment horizon can help to alleviate short-termism that stems from both financial market and management.

Regarding financial market, because short-term investors prefer short-term price appreciation, they pressure managers to pursue myopic goals and forgo long-run investments (Summers and Summers, 1989; Schwert and Seguin, 1993).[8] According to a survey by Graham et al. (2005), managers of public firms are willing to forgo positive NPV projects to boost current earnings by cutting "depreciation charges to earnings or other start–up charges". Formally, Stein (1989) model shows that when managers maximize the shareholder value of average shareholders, putting some weights on the current stock price and some on future earnings, they underinvest to generate additional current income at the expense of long-term value.[9] Stiglitz (1989) and Summers and Summers (1989) believe that when FTTs discourage short-term traders who care more about immediate price appreciation or quarterly earnings, managers will be influenced less by this short-termist pressure and focus more on investments.

[7] In a perfect world, we have shareholder unanimity, which implies investor horizon does not affect corporate investment because both short-term and long-term investors care about the present value of all future cash flows and managers choose the investment policy that maximizes firm value regardless of the ownership structure of the firm (Froot et al., 1992; Derrien et al., 2013). But when either irrational agents, informationally inefficient markets or agency problem is present, shareholder investment horizon may matter.

[8] Agarwal et al. (2017) find evidence suggesting that pressure from institutional money managers to generate profits in the short run drives corporate myopia.

[9] Empirically, Bushee (1998) find that large institutional investors with high portfolio turnover encourage managers to cut R&D investments to meet short–term earnings targets.

Under the agency framework (Jensen and Meckling, 1976), long-term shareholders can play an active role in restraining managers from investing myopically and extracting private benefits at the expense of long-term shareholder value.[10] When managers are concerned about their labor-market reputation, they have incentives to take unobservable actions such as underinvesting in intangible assets or projects that do not yield immediate results to boost short-term earnings (Narayanan, 1985; Stein, 2003). Asker et al. (2015) find that public firms, which arguably suffer more agency problems than private firms, invest substantially less due to short-termism. Shareholders with long-term horizons have incentives to monitor because they have naturally lower monitoring cost functions and higher monitoring benefits including the potential financial gains (Chen et al., 2007b). Therefore, the FTT can potentially lead to more active governance, inducing mangers to behave in longer-term manner.

To summarize, short-termism, which can stem from traders on financial market or myopic managers, causes underinvestment. As the FTT can potentially alleviate short-termism from these sources by relieving some short-termist pressure from financial market and/or improving governance, underinvestment problem will be mitigated and thus investment will increase.

3 Data and empirical strategy

3.1 Data and variables

At the end of each year, French authorities publish a list of listed firms with the capitalization above 1 billion EUR whose stocks are subject to the FTT during the following year. These lists were published by The Ministry of Economy and Finance in 2012, 2013 and 2014, and then by Tax Authorities in subsequent years. There were 109, 114, 128, 134 and 136 affected firms in 2012, 2013, 2014, 2015 and 2016, respectively. This means that there are some new treated firms every year.[11]

We obtain accounting and financial data of French firms, and Dutch and Luxembourg firms as controls from Compustat Global over the period 2008-2017.[12] We have unbalanced panel data because for some variables there are a number of observations with missing values.

Table A1 in Appendix includes definitions of all variables. We use two measures of investment level: *Capex* and *R&D*, computed as capital expenditures, and research and development expenses scaled by total assets at the end of the previous year, respectively. Observations with missing values in both

[10] In addition, Summers and Summers (1989) conjecture that the FTT that ties shareholders to firms will induce them to actively monitor managers.

[11] On the other hand, there were 1, 0, 5, and 8 treated firms that were excluded from the list in 2013, 2014, 2015 and 2016, respectively, as their capitalization fell below the threshold. Our difference-in-difference analyses exclude observations of these firms after their switch of treatment status.

[12] We obtain qualitatively the same results if we shorten the sample period to 2009-2016.

Capex and *R&D* are eliminated. Summary statistics in Table 1 shows that capital expenditures and R&D expenses account for, on average, 4.8% and 11.1% of total assets, respectively.

Control variables include *Size, Tobin's q, Cash flow, ROA* and *Leverage*. *Size* is measured as the logarithm of total assets. *Tobin's q* is equal to the market value of equity (price times shares outstanding) plus total assets minus the book value of equity all over total assets. *Cash flow* is the ratio of earnings before extraordinary items and depreciation over total assets. We compute *ROA* by dividing operating income before depreciation over total assets. *Leverage* is the sum of debt in current liabilities and long-term debt divided by total assets. We winsorize each variable at the first and ninety-ninth percentile by setting all observations outside this range to the first and ninety-ninth percentile values, respectively.

3.2 Empirical strategy

We employ a difference-in-differences design to identify the causal impact of the FTT on corporate investments. The treatment group consists of French firms that are subject to the FTT. One concern is that firms whose capitalization is slightly above 1 billion EUR may buy back a small number of shares or manipulate their stock prices at year ends to avoid the FTT.[13] Repurchasing shares (or resisting additional issuance), deliberately keeping their market capitalization below the threshold to avoid the FTT, may do more harm than good because it prevents firms from growing optimally. Becchetti et al. (2014) also observe no price manipulations with stocks moving across the threshold around the introduction date to evade the tax, and Colliard and Hoffmann (2017) find evidence that rejects the possibility of the FTT avoidance using American Depositary Receipts. Nevertheless, we still graphically inspect the distribution of firms around the threshold to further validate our argument. If firms restrain their market capitalization systematically, we would observe an abnormally high number of firms whose capitalization is just below the threshold and an abnormally small number of firms whose capitalization is just above the threshold. Figure A2 in Appendix suggests that this is not the case. All in all, self-selection into (or out of) treatment is unlikely of concern.

Similar to Coelho (2016) and Colliard and Hoffmann (2017), we use two different control groups. The first group includes Dutch and Luxembourg listed firms with capitalization above 1 billion EUR at the end of 2011. This control group is comprised of 52 Dutch firms and 19 Luxembourg firms with available data. Using a sample of firms that are matched on market capitalization, Tobin's q, cash flow, ROA and leverage yields comparable estimates on the effect of the FTT on investments. The first reason for choosing Dutch and Luxembourg firms is that their stocks and treated firms' stocks are mainly traded in the same platform of Euronext with a similar group of participants. This fact mitigates the concern that the characteristics of financial markets may explain the differences in market efficiency and

[13] For the first year of implementation, it is almost impossible for firms to manipulate their treatment status because the announcement of the policy by French government was made in February 2012 while the list of taxed stocks was made using firms' market capitalization on January 1st 2012.

investor behaviors, which in turn may affect corporate investment behavior. Besides, because these three countries are members of Eurozone and have geographical proximity, we expect investment behaviors of control firms to be similar to those of treated firms before the FTT introduction. Nonetheless, there are still differences in political and macroeconomic conditions that might confound the impact of the FTT.

Therefore, we supplement our analysis with the second strategy, in which we compare French treatment firms with French non-treatment firms. We choose French control firms that have capitalization near the threshold of 1 billion EUR at the end of 2011. Specifically, we obtain 195 control firms whose capitalization is above 0.2 billion EUR at the end of 2011 with available data. The effects of the FTT on investments are similar if other cutoffs such as 0.1 or 0.3 billion EUR are used instead. Results also hold in another robustness test in which we limit our sample to those whose capitalization is slightly below and above 1 billion EUR at the end of 2011 to mitigate the concern that firm size (and other related characteristics) might be the factors behind the difference in the investment trend between the two groups after the FTT introduction.

Table 2 compares control groups and the treated group along some dimensions before the FTT was introduced in 2012. Compared with the non-French control group, the treated group is slightly bigger but has lower *Tobin's q, Cash low, ROA* and *Leverage*. Compared with the French control group, the treated group has similar *Tobin's q* and *Leverage*, but has different *Size, Cash flow* and *ROA*. In order to deal with these ex ante differences, our empirical model includes control variables and their interactions with time. In robustness tests, we employ two other strategies, namely propensity score matching and subsampling that mimics a regression discontinuity design.

We estimate the following model using ordinary least squares (OLS):

$$Investment_{i,t+1} = \alpha_0 + \beta_1 Tax_{i,t} + \gamma' X + \theta'(X \times \tau_t) + \tau_t + \delta_i + \epsilon_{i,t+1} \tag{1}$$

In equation (1), *Investment*, as already defined, is level of capital expenditures or R&D expenses, scaled by lagged total assets.[14] $Tax_{i,t}$ is a dummy variable, equal to 1 for treated firms in the years they are treated, and 0 otherwise. We include firm and year-fixed effects. Because the treated group and control groups are different in some characteristics that are known to affect investments, we control for these characteristics by including *Size, Tobin's q, Cash flow, ROA, Leverage* and their interactions with time.[15] The inclusion of the interactions allows for the effect of these characteristics on investments to be flexibly different year by year, hence controlling better for sources (other than the FTT) that cause

[14] In a robustness check, we employ a more comprehensive measure of investment, i.e. change in total assets. We still find evidence suggesting the positive effect of the FTT on corporate investment.

[15] In a robustness test, we use propensity score matching. Panel A in Table A2 shows that control firms in the matched sample are similar to treated firms in these characteristics in the year before the treatment. Therefore, in regressions using the matched sample, we do not include their interactions with time. Nevertheless, regression results in Panel B of Table A2 are qualitatively the same as those in the main specification.

changes in investments.[16]

Employing difference-in-differences method, we rely on the parallel trend assumption that the trends in investment of the two groups would have been similar in the absence of the French FTT introduction. Though this assumption cannot be directly tested, we attempt to provide some assessment on its validity. Analogous to Jiang et al. (2016), we estimate the following regression:

$$Investment_{i,t+1} = \alpha_0 + \beta_1 D_{i,t}^{-6} + \beta_2 D_{i,t}^{-5} + ... + \beta_{12} D_{i,t}^{+5} + \delta_i + \tau_t + \epsilon_{i,t+1} \quad (2)$$

In equation (2), the dummy variable $D_{i,t}^{+n}$ equals one for treated firms in n^{th} year after the treatment, $D_{i,t}^{-n}$ equals one for treated firms in the n^{th} year before the treatment, and δ_i and τ_t are firm and year fixed effects, respectively. The estimated coefficients of the dummy variables are plotted, together with their corresponding 95% confidence intervals. In Figure 1, no plot exhibits a significant difference in the investment trend between control group and treatment group before the treatment, meaning that capital expenditures and R&D expenses in treated group and control group followed similar trend before firms in treated group were affected by the FTT. After being affected by the FTT, there were some positive differences in capital expenditures and R&D investment between the groups, suggesting the increases in these investments in the treated group relative to the control group.

4 Main empirical results

4.1 Effects on corporate investments

Table 3 reports regression results using non-French control group. The coefficient of variable Tax is positive in all specifications. In columns (1) and (2), the dependent variable is $Capex$ with the latter including control variables. The coefficients of Tax in these two first specifications are positive, statistically significant at 1% and 5% level, respectively. Specifically, we find that treated firms increased their capital expenditures on average by approximately 88 basis points of total assets after being affected by the FTT relative to control firms. This corresponds with about 18% of average capital expenditures. In column (3) and (4), the dependent variable is $R\&D$ with the latter including control variables. The coefficient of $R\&D$ on Tax is positive but not statistically significant in both columns.

Table 4 reports regression results using French control group in the same manner as the Table 3. In the first specification, the coefficient of $Capex$ on Tax is positive and statistically significant at 5%. In the second specification in which control variables are included, the coefficient is still positive and statistically significant at 10% level. The point estimate of the effect of the FTT is an increase in capital

[16] In other words, Edmans et al. (2017b) and Brogaard et al. (2018), who also include similar interactions in difference-in-difference regressions, explain these interactions as the control for time trends in investment sensitivity to these characteristics.

expenditures by 71 basis points of total assets, corresponding with 15% of average capital expenditures. The economic magnitude is comparable with that obtained using non-French controls. Column (3) and (4) shows that the coefficient of $R\&D$ on Tax is positive and statistically significant at 5% level. We estimate that the treated firms on average increased their R&D investment by about 196 basis points of total assets after being affected by the FTT compared with the control firms, corresponding with 17% of average R&D expenses.

In general, we find evidence suggesting that firms that were subject to the FTT increased capital expenditures and R&D expenses compared with those that were not after this tax was imposed on purchases of their stocks. These results are inconsistent with the prediction that the FTT would cause a decline in investment due to higher cost of capital. The silence of the overall negative effect on investments might be partly because of a rather low tax rate (Matheson, 2011; Lendvai et al., 2012). Furthermore, it can be dominated by the positive effect from alleviated short-termism.

We note that the positive aggregate effect does not mean that the negative effect due to higher cost of capital is not present. It may be strong and visible in a subgroup of treated firms that suffer from a larger increase in cost of capital. While the increase in the explicit transaction cost (tax payment) that investors have to pay is the same for every affected stock given the same investor horizon, the increase in the implicit transaction cost (bid-ask spread) is larger for stocks whose liquidity suffers more. Colliard and Hoffmann (2017) find that the French FTT had negative and stronger effect on liquidity of firms whose stocks were ex ante less liquid. Therefore, the increase in required rate of return, and hence cost of capital, should be higher for firms with less liquid stocks. Following Colliard and Hoffmann (2017), we investigate a subsample consisting of affected firms whose stocks were not in Euronext's Supplementary Liquidity Provider (SLP) program, and hence less liquid than those that were in the program.

Table 5 summarizes regression results. The first two specifications use non-French control firms with the dependent variable being $Capex$ and $R\&D$, respectively. Specifications in columns (3) and (4) use French control firms with the dependent variable being $Capex$ and $R\&D$, respectively. The coefficient of Tax is positive in all specifications and statistically significant in 3 out of 4 specifications. The evidence that capital expenditures and R&D expenses increased even among non-SLP firms, whose stock liquidity suffered more and thus cost of capital was likely to increase more, is a stronger rejection of the hypothesis that the FTT causes investment to decrease due to higher cost of capital. Rather, the increases in investments seem to support the explanations of alleviated underinvestment thanks to reduced short-termism.

4.2 Robustness

4.2.1 Other control groups

We still find a positive impact of the FTT on corporate investments when we use a sample of non-French matched firms as controls. Instead of choosing non-French firms with capitalization above 1 billion EUR at the end of 2011, we match each treated firm with a control firm that has the closest propensity score of being treated. Propensity scores are predicted using a set of covariates, namely logarithm of market capitalization, Tobin's q, cash flow, ROA and leverage, in the year before the treatment. We obtain 74 matches of 58 unique firms because we allow for replacement, i.e. one control firm can be matched with more than one treated firm. Panel A of Table A2 in Appendix shows that treated firms and matched firms are similar in covariates that are used for matching. From Panel B, we can see that the coefficient of $Capex$ on Tax is positive, statistically significant at 5% level and of similar magnitude with the one in column 2 of Table 3. Coefficients of Tax in remaining columns are also positive, though not statistically significant.

Results are qualitatively the same when we use other cutoffs to choose French control group. Columns (1) and (2) of Table A3 in Appendix summarize regression results using the cutoffs of 0.1 billion EUR, columns (3) and (4) for 0.3 billion EUR. Again, we find evidence suggesting positive effect of the FTT on capital expenditures and R&D expenses. Columns (5) and (6) present estimates when we limit our sample of treated and control firms to those whose market capitalization is around the threshold of 1 billion EUR, borrowing the idea of a regression discontinuity design. Using the range from 0.3 to 3.0 billion EUR, we find that the local average treatment effect of the FTT is an increase in R&D investment by approximately 171 basis points of total assets.[17]

4.2.2 Other measures of investment

For robustness check, we use the sum of capital expenditures and R&D expenses scaled by lagged total assets as an alternative measure. To avoid losing a significant amount of observations, we set missing values of R&D equal to zeros before adding to capital expenditures. Table A4 in Appendix summarizes regression results. It shows that coefficient of Tax is positive in all columns and statistically significant in 5 out of 6 specifications, consistent with our previous results.

One may concern that firm may increase their investment in capital expenditures and R&D but reduce investment in other items and the net effect might be negative. We check if the positive effect of the FTT on corporate investment holds when we use a more comprehensive measure of investment that

[17] We obtain qualitatively the same results when we use more narrow ranges such as 0.4-3.0 billion EUR or 0.5-2.0 billion EUR. Of course, there is a trade-off between precision and unbiasedness of the estimates when the sample is narrowed down.

reflect acquisition activities as well. Specifically, we use the change in total assets, computed as the difference between total assets in year *t+1* and year *t* over the total assets in year *t*. Regression results in Table A5 in Appendix show that coefficient of Tax is positive in all columns and statistically significant in 4 out of 6 specifications, confirming our previous results.

5 Mechanism

5.1 Does the FTT induce long-term ownership?

The increases in investments seem to be in line with the prediction under short-termism theory. This mechanism relies on the assumption that the FTT can curb short-term traders, inducing long-term ownership. Therefore, we first test this assumed premise to provide support for alleviated short-termism channel.

We do so by using Factset's fund ownership data. Because funds may report monthly or quarterly and on different dates, we only keep the last report in a given calendar quarter. We make use of the classification of funds by Factset based on their portfolio turnover. Funds are classified into five groups: Very Low, Low, Medium, High, and Very High (turnover). Very Low funds have portfolios with less than 25% annual turnover or 4-year holding period or more. Low and Medium funds have holding periods of 2-4 years and 1-2 years, respectively while High and Very High funds have holding periods of less than one year. For each firm, the ownership ratio owned by each type of funds is computed and long-term ownership is defined as the total ownership by Very Low, Low and Medium (turnover) funds. Panel A of Table 6 summarizes statistics on ownership by funds (in %) with different portfolio turnovers computed using the sample of all treated firms, non-French and French control firms. We then examine the change in long-term ownership of treated firms after they were affected by the FTT compared with the corresponding change in control firms. Regressions include firm control variables, quarter and firm fixed effects.

Panel B of Table 6 summarizes the regressions with dependent variable being the total ownership by funds with very low, low and medium turnovers.[18] The first three columns use non-French control firms: (1) compares all treated firms to control firms, (2) compares treated SLP firms to control SLP firms, and (3) compares treated non-SLP firms to control non-SLP firms. The coefficient of Tax in column (1) is positive and statistically significant at 10% level, suggesting an overall increase in long-term ownership in treated firms after their stocks were taxed compared with control firms. This effect seems stronger among SLP firms both in terms of economic and statistical magnitudes. Meanwhile, the coefficient of Tax is statistically insignificant, though still positive, among non-SLP firms. These results

[18] We still find a significant and positive effect of the FTT on long-term ownership when excluding medium-turnover funds from long-term ownership measure.

are consistent with implications from Amihud and Mendelson (1986). The intuition is that because the holdings of SLP stocks (which are more liquid) by short-term investors before the FTT introduction are much higher than those of non-SLP stocks (which are less liquid), and as the FTT curbs short-term trading, it causes a more substantial and visible shift in holdings of SLP stocks from short-term investors to long-term investors.[19] Our results are also consistent with portfolio-level evidence in Colliard and Hoffmann (2017).[20]

Regression results using French control firms are shown in two last columns: (4) compares all treated firms to all control firms, and (5) compares treated non-SLP firms to control non-SLP firms. Because no French control firms are in SLP program, we are unable to make a similar comparison between treated SLP firms and control SLP firms as in non-French control case. The coefficient of Tax is also positive but insignificant for non-SLP firms.

5.2 Effects on investment sensitivity

We have documented the increases in investments and long-term ownership in treated firms after the FTT compared with control firms. This evidence, however, does not necessarily mean that the increased long-term ownership helps alleviate short-termism and induce investments. To provide more concrete evidence on alleviated short-termism channel, we test another prediction regarding investment sensitivity under short-termism theory. According to neoclassical q theory, firms should invest more as their investment opportunities improve, up to the point at which their marginal q equals one. A myopic manager or a manager under short-termist pressure would forgo positive NPV projects, leading to lower investment levels and lower sensitivity to changes in investment opportunities (Asker et al., 2015). As the FTT can potentially alleviate short-termism from these sources, we predict that affected firms would increase not only their investment level but also investment sensitivity to growth opportunities.

We test these predictions by employing the following model:

$$\begin{aligned} Investment_{i,t+1} = \alpha_0 + \beta_1 Tax_{i,t} + \beta_2 Tobin'sq_{i,t} + \beta_3 Tax_{i,t} \times Tobin'sq_{i,t} \\ + \beta_4 Tobin'sq_{i,t} \times Treated_i + \beta_5 Tobin'sq_{i,t} \times \tau_t + \gamma' X + \theta'(X \times \tau_t) + \tau_t + \delta_i + \epsilon_{i,t+1} \end{aligned} \quad (3)$$

In equation (3), $Investment$ and Tax are as previously defined. The coefficient of interest is that of the interaction between the difference-in-differences term Tax and *Tobin's q*, i.e. β_3. A negative coefficient implies a decrease in investment sensitivity to growth opportunities in treated firms after the FTT compared with control firms. Conversely, a positive coefficient implies an improvement in investment sensitivity.

[19] Our t-tests indeed confirm that average holdings in SLP firms during period 2008-2011 by short-term funds (with very high turnover and high turnover) were larger than those in non-SLP firms.

[20] Colliard and Hoffmann (2017) examine the change at portfolio level over a few months around the FTT introduction. We examine it at firm level over much longer period from 2008 to 2017.

Table 7 reports regression results. Panel A analyzes the sensitivity of investment in capital expenditures. In specification (1), in which all treated firms and non-French control firms are used, the estimate of β_3 is negative and statistically significant at 10% level. This suggests that investment in treated firms was overall less sensitive to growth opportunities after their stocks were taxed in relation to control firms. This aggregate effect, however, masks an important heterogeneity between SLP and non-SLP firms. When we compare only treated SLP firms to control SLP firms in column (2), the coefficient β_3 is not statistically different from zero. It is only negative and statistically significant for non-SLP firms in column (3).

Panel B shows the results for the sensitivity of investment in R&D. The estimate of β_3 in column (2) is equal to 0.0164 and statistically significant at 5% level for SLP firms. The estimates for non-SLP firms are positive but statistically insignificant in both column (3) using non-French control and column (5) using French control. In general, the evidence suggests that the FTT affected investment sensitivity positively among SLP firms that had a significant increase in long-term ownership, which is in line with the alleviated short-termism mechanism. As we do not find a significant increase in long-term ownership in non-SLP firms in section 5.1, this mechanism may be weak among these firms. This can explain why we do not find a similar positive effect on investment sensitivity among non-SLP firms. In fact, the effect is negative among non-SLP firms. This is probably because non-SLP firms suffered from a substantial reduction in stock liquidity and price efficiency (Colliard and Hoffmann, 2017) which hinders useful information about investment opportunities from financial market to corporate decision makers (e.g. Dow and Gorton, 1997; Chen et al., 2007a).

5.3 Effect on acquisition activities

Though the evidence of increased investments is consistent with short-termism mechanism, it can be explained by other theories such as managerial empire building. It could be that lower liquidity and higher transaction costs due to the FTT harmed blockholder governance (Edmans, 2009; Admati and Pfleiderer, 2009), giving room for managerial empire-building and overinvestment. To investigate the possibility of empire building story, we look at acquisition activities because managers who have empire-building preference tend to not only overinvest but also be attracted to certain types of investments such as acquisitions (Amihud and Lev, 1981; Stein, 2003). Acquisitions are also one of the biggest corporate investments, examining the effect of the FTT on acquisition activities is thus in and of itself interesting.

If the increased transaction costs due to the FTT reduce disciplinary impact of blockholders on managers taking value-destroying actions as in Admati and Pfleiderer (2009) model, we expect managers more likely to make acquisitions after the FTT and these acquisitions are undesirable from shareholders' perspective. We may also observe a higher likelihood of making acquisitions under alleviated short-termism

channel. As acquisitions are a form of investment that is normally risky with deferred and hard-to-measure results, alleviated short-termism could encourage mangers to make strategic acquisitions even though they may lead to reductions in short-term performance.[21] However, these acquisitions should be value-enhancing, or at least not value-destroying. The same or better performance of acquisition deals depends on to what extent long-term shareholders help to increase bargaining power in negotiations and prevent bad deals from being carried out (Gaspar et al., 2005).

5.3.1 Probability of making acquisitions

We first investigate how the FTT affects the likelihood that firms make acquisitions. We use SDC Mergers and Acquisitions database to extract deals announced between 2008 to 2017. Following Gaspar et al. (2005) and Huang et al. (2014), we keep only deals with known outcome, i.e. either completed or withdrawn, and exclude all transactions labeled as spinoffs, self-tender offers, repurchases, or privatizations. To examine the likelihood of making acquisitions, we use the linear probability model.[22] The binary dependent variable *AcqDummy* is equal to 1 if a firm completed at least one acquisition that year and 0 otherwise. After matching with accounting data from Compustat Global, our whole sample of treated and control firms consists of 3,349 observations, of which 1,163 (34.7%) firm-year observations have at least one acquisition (Table 8). We control for firm *Size, Tobin's q, Cash flow, Leverage, ROA, Cash holding, Non-cash working capital, P/E ratio*, their interactions with time, industry and year-fixed effects.[23]

Table 9 reports regression results for the likelihood of making acquisitions. Panel A and Panel B summarizes results of regressions that exclude and include control variables, respectively. As before, we first use non-French control to examine the effect in all firms, SLP firms and non-SLP firms. The coefficient of Tax in column (1) of Panel B is 0.1259 and statistically significant at 5%, implying that treated firms were roughly 12.59% more likely to make acquisitions after being affected by the FTT compared with control firms. As we can see in columns (2) and (3), this effect is relatively large and significant among SLP firms while it is relatively small and insignificant for non-SLP firms. This evidence seems to be more in line with the argument that among firms that undergo a significant increase in long-term ownership after the FTT, underinvestment problem due to short-termism is alleviated and managers are more likely to make long-term investments like acquisitions. To see if these acquisitions are indeed value-enhancing, we next analyze their performance.

[21] Firms may make acquisitions to gain market power, improve efficiency, obtain complementary resources or boost innovation (Haleblian et al., 2009).

[22] We use the linear probability model simply for the ease of computation and interpretation. Employing a probit model yields qualitatively the same results.

[23] We use industry fixed effects instead of firm fixed effects because there are few variations in the dependent variable within firm. With firm fixed effects being excluded and industry fixed effects being added, the indicator variable Treated is restored in the model as in traditional Dif-in-Dif model. The indicator Post, however, disappears because year fixed effects are included.

5.3.2 Acquisition performance

To evaluate the quality of acquisition investments, we use cumulative abnormal returns (CARs). Abnormal returns are computed as the residuals from a market model, with the estimation window being (-210, -11) and the market return being Stoxx Europe 600 index.[24] Using the estimated parameters, we then calculate the cumulative abnormal returns over the five-day (-2,+2) event window centered on the announcement date. Table 8 of summary statistics shows that there are 965 completed deals with estimated CARs and other deal information, and the average CAR is 0.4%. Similar to Roosenboom et al. (2014), we include controls that are acquirer characteristics (size, Tobin's q, cash flow, leverage, ROA) and deal characteristics (deal value, and binary variables for target firm public status, target subsidiary status, tender offer, cash payment, equity payment).

Table 10 reports the regression results. Results of regressions without firm control variables are summarized in Panel A. As before, the three first columns use non-French control: (1) for all firms, (2) for SLP firms and (3) for non-SLP firms. Results in column (4) and (5), which use French control firms, are for all firms and non-SLP firms, respectively. The coefficient of Tax is positive in all columns, but only statistically significant at 5% in column (2) for SLP firms. These results suggest the positive impact of long-term shareholders on acquisition performance rather than the negative effect under empire building explanation. Regressions include firm control characteristics yield qualitatively the same results that are summarized in Panel B. The estimate indicates that 5-day CAR of treated SLP firms increased by 1.4% after the FTT compared with control SLP firms.

We repeat our analyses using a binary dependent variable, equal to 1 if CAR is positive and 0 otherwise.[25] Regression results are reported in Table A6. Results are qualitatively similar with and without firm controls. The coefficient of Tax for all firms is positive but statistically insignificant. The coefficient for SLP firms is much larger and statistically significant at 1% level, implying that treated SLP firms were more likely to make value-added acquisitions after the FTT compared with control SLP firms. Meanwhile, we do not observe a similar effect in non-SLP firms.

Combined with the evidence from section 5.3.1, we find that affected firms were more likely to make acquisition investments after the FTT without detriment to the deals' quality, especially in SLP firms that experienced a significant increase in long-term ownership. These results lend further support for effect of alleviated short-termism and seem inconsistent with managerial empire building.

[24] Stoxx Europe 600 index consists of 600 components representing large, mid and small capitalization companies among 17 European countries.

[25] In addition, to address the concern about the sample selection bias regarding M&A decisions, we use Heckman (1979) correction procedure to account for this selection bias. The first stage is running a probit regression of the acquisition probability like the ones in section 5.3.1. We then add the inverse Mills ratio as an additional independent variable in the second stage. Though these procedure leaves us with a smaller sample, we still find positive effect of the FTT on acquisition performance among SLP firms.

5.4 Earnings management

Although we have ruled out the empire building mechanism, there could be other alternative explanations. Therefore, we investigate earnings management behavior which goes hand in hand with underinvestment under short-termism theory but seems irrelevant in other theories of investment. Specifically, the emphasis on short-term earnings by short-term investors is likely to induce mangers to manage earnings. Myopic managers also have incentives to manage earnings to benefit from higher monetary bonuses or job security. Therefore, a shift from short-term investors to long-term investors because of the FTT is likely to have an impact on earnings management. Firstly, longer shareholder horizons reduce the emphasis on short-term earnings and pressure on managers, and hence decrease motives for them to manage earnings. Secondly, long-term investors can improve governance, disincentivizing managers from distorting reported earnings. Therefore, we expect earnings management to decrease, especially in SLP firms.

5.4.1 Earnings management proxies

Our first proxy for earnings management is discretionary accruals estimated from a modified version of Jones (1991) model.[26] We gather the pool of French, Dutch and Luxembourg accounting data from Compustat Global over the period 2008-2017 and estimate the following model using OLS for each year and each two-digit SIC industry:

$$\frac{TACC_{i,t}}{AT_{i,t-1}} = \beta_1 \frac{1}{AT_{i,t-1}} + \beta_2 \frac{\triangle Sale_{i,t}}{AT_{i,t-1}} + \beta_3 \frac{PPE_{i,t}}{AT_{i,t-1}} + \epsilon_{i,t} \tag{4}$$

In equation (4), $TACC$ is the computed by subtracting cash flow from operations from income before extraordinary items, AT is total assets, $\triangle Sale$ is the change in net sales from year *t-1* to year *t*, PPE is gross property, plant and equipment.

For each year-industry, we require at least 15 observations when running regressions. We use the absolute value of estimated residuals, i.e. discretionary accruals, as a proxy for earnings management because it is not necessarily the case that mangers always manage earnings upward. They may manage up in one year and down in others to smooth earnings, meeting the targets and expectations every year. Then we merge discretionary accruals data with other accounting data, obtaining 2,924 observations, and the mean of absolute value of discretionary accruals is 0.073 with a standard deviation of 0.111.

In addition to abnormal accruals, small profits and small earnings increases could indicate earnings management because firms with small (unmanaged) losses and small (unmanaged) earnings decreases

[26] Though it is desirable to examine real earnings management through overproduction or cutting costs as in Roychowdhury (2006), data in Compustat Global do not contain Advertising expenses item, hence hinder us from constructing real earnings management proxy. If we proceed the analysis without this item, we find negative, though not significant, effect of the FTT on real earnings management among SLP firms.

tend to manage earnings to report small profits and small earnings increases (Dechow et al., 2010).[27] Managers have incentives to manage earnings to meat or beat these benchmarks because investors with high monitoring and information processing costs, e.g. small and/or short-term investors, rely on low-cost earnings benchmarks to make decisions (Beatty et al., 2002).[28] Following previous studies (e.g. Frankel et al., 2002; Leuz et al., 2003), we construct three dummy variables as follows. *Small Profits* is equal to 1 if earnings before extraordinary items scaled by lagged total assets are positive and below 0.5%, and 0 otherwise. *Small Increases* is equal to 1 if the change in earnings before extraordinary items scaled by lagged total assets is positive and below 0.1%, and 0 otherwise.[29] *Small Profits or Increases* is equal to 1 if either *Small Profits* is equal to 1 or *Small Increases* is equal to 1, and 0 otherwise. In our sample of all treated and control firms, there are 5.9% of firms with small profits, 4.5% of firms with small increases in earnings, and 9.5% of firms with either small profits or small increases in earnings.

5.4.2 Effects on earnings management

We use the following models to investigate the effect of the FTT on earnings management:

$$DiscretionaryAccruals_{i,t+1} = \alpha_0 + \beta_1 Tax_{i,t} + \beta_2 Treated_{i,t} + \gamma' X + \theta'(X \times \tau_t) + \tau_t + \lambda_j + \epsilon_{i,t+1} \quad (5)$$

$$SmallDummies_{i,t+1} = \alpha_0 + \beta_1 Tax_{i,t} + \beta_2 Treated_{i,t} + \gamma' X + \theta'(X \times \tau_t) + \tau_t + \lambda_j + \epsilon_{i,t+1} \quad (6)$$

In equation (5), the dependent variable *Discretionary Accruals* is a continuous measure of earnings management. In equation (6), the dependent variable is one of the dummies, i.e. *Small Profits*, *Small Increases*, *Small Profits or Increases*, and hence regressions are done using linear probability model. Following earnings management literature, we control for *ROA, Size, Tobin's q*, year and industry fixed effects in both models.

Table 11 summarizes the regression results. As before, the first three columns use non-French control: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. Columns (4) and (5) report results for all firms and non-SLP firms using French control. In the first column, we can see that the coefficient of Tax is negative and statistically significant at 5% level. We estimate that the absolute level of discretional accruals on average decreased by 0.0191, equivalent to 17.21% of the standard deviation. As expected, this effect is largely driven by SLP firms with an estimated decrease of 0.0283, equivalent to 25.50% of the standard deviation. The coefficient of Tax non-SLP firms (in column (3) using non-French control and

[27] Burgstahler and Dichev (1997) document a statistically small number of firms with small losses and small earnings decreases and unusually high frequencies of small profits and small increases in earnings.

[28] DeAngelo et al. (1996) document that firms experience negative abnormal returns in years they report an earnings decline after reporting earnings increases for several years.

[29] Results are robust to alternative thresholds, e.g. 1% for small profits and 0.2% for small increases in profits. The thresholds are chosen based on Freedman-Diaconis rule as in prior studies, i.e. interval width $= 2 \times IQR/n^{1/3}$ where IQR is the interquartile range of the variable and n is the sample size.

(5) using French control) is also negative but statistically insignificant. The fact that we find a decrease in earnings management, specially among firms in which we expect to observe the stronger impact of long-term ownership provides strong support for the existence of the short-termism mechanism and that this mechanism prevails in a predictable group of firms.

Turning to likelihood of beating targets, we expect treated firms to be less likely to manage earnings to avoid small losses or small decreases in earnings thanks to less short-termist pressure and/or better governance. Table 12 summarizes regression results with the first three columns using non-French control and the three last ones using French control.[30] Coefficient of Tax is negative in all specifications as expected. In columns (1) and (4), the coefficient of *Small Profits* on Tax is negative and statistically significant at 10% and 5% levels, respectively. In columns (2) and (5), coefficient of *Small Increases* on Tax is negative but not statistically significant. In columns (3) and (6), the coefficient of *Small Profits or Increases* on Tax is negative and statistically significant at 1% and 5% levels, respectively. We estimate that treated firms were 7.26% less likely to have small profits or small increases in earnings after being affected by the FTT compared with control firms. These results suggest that treated firms were less likely to manage earnings to avoid small losses or small decreases in earnings, which is in line with the alleviated short-termism channel.

6 Additional analyses

In this part, we look at how the taxed firms finance their increased investment. Changes in financing policies are in and of themselves interesting because the FTT might increase cost of equity and direct firms toward debt financing or other alternatives. Coelho (2016) argue that the FTT makes equity become relatively more expensive to debt, incentivizing firms to leverage if the cost of debt remains unchanged. In the case of the French FTT, bank savings which are not subject to the tax can be lent to firms at a nontaxed rate (Kiefer, 1990). Corporate bonds are also exempted from the FTT, hence firms may issue debt instead of equity for new projects. However, Lendvai et al. (2012) note that a lower firm value due to the FTT may hinder firms from borrowing by tightening financial constraints and/or raising the risk premium that lenders require to compensate for the drop in the collateral value. An alternative is to build up internal fund by restricting dividends, which is probably prioritized as suggested by Myers and Majluf (1984).

Table 13 reports regression results with panel A summarizing analyses using non-French control and panel B French control. We investigate changes in three variables: *Debt Issuance*, measured as the percentage change in long-term debt, *Equity Issuance*, computed as the sale of common and preferred

[30] We do not split the sample into SLP firms and non-SLP firms in this analysis because doing so would result in too few variations in the dependent variables, hence regression results would have little meaning.

stocks over total assets, and *Dividend Payout*, the ratio of cash dividend over total assets.[31] Using either of the two control groups yields positive estimate of *Debt Issuance* on Tax but negative estimate of *Equity Issuance* on Tax. Although none of those estimates are statistically significant, their consistent signs might hint at a shift from issuing equity to issuing debt. These results suggest that equity might have become more expensive, but the increase was probably not significant enough to alter financial structure or hamper investments.

Regarding internal fund, the coefficient of *Dividend Payout* on Tax is negative and significant at 10% in the specification using non-French control but it is not statistically different from zero in the specification using French control. With caution, we interpret the result as FTT-affected firms might have reduced their dividend payout and financed (part of) their investments with retained earnings. It seems that long-term shareholders are willing to delay the cash receipt and put it into investment opportunities.

7 Conclusions and Implications

We use French introduction of a financial transaction tax on stock purchases in 2012 to evaluate its impact on corporate investment behavior. We employ a difference-in-differences approach using several control groups. We find no evidence on the FTT's most concerning drawback which is the decrease in investment due to higher cost of capital. Rather, our evidence suggest that the negative effect of higher cost of capital is dominated by an alternative channel of alleviated corporate short-termism. Specifically, by inducing long-term ownership, the FTT orientates firms towards long-term value created through more and better investments.

It is, however, noteworthy that as previous studies find a negative impact of the FTT on stock liquidity and price efficiency, our results suggest that FTT can cause investments in some firms to be less sensitive because some information in stock prices about investment opportunities is restrained. Therefore, the policy debate on the FTT introduction and design should take into account the costs and benefits regarding corporate investments.

Our evidence on the effect of the FTT on corporate investments indicates the real and strong impact of this tax on the economy. As we find an increase in R&D investment in the treated firms after they were affected by the tax, examining innovation outcomes such as patents and citations can provide interesting evidence on how beneficial the FTT is for corporate long-term value. Relatedly, the evidence that treated firms were more likely to make acquisitions after the FTT can be also related to innovation reason as recent studies suggest that synergies obtained from combining technological resources are

[31] The item with information on debt issuance consists of mostly missing values, hence we are unable to use the direct measure of debt issuance. The same issue happens with share repurchase, so we are unable to provide a complete picture of changes in financing and payout policies.

important motives of acquisitions (Bena and Li, 2014).

The real impact of the FTT on corporate investments also suggests that apart from direct effect on investors on the financial market, there could be the spillover to other markets. Schwabish (2005) predict substantial job losses not only in financial industry but also in supporting industries. General Equilibrium Model in Lendvai et al. (2012) also predicts a reduction in investment and hence employment. However, our empirical finding of increased investment may suggest an increase in labor demand by affected firms.

References

Admati, A. R. and Pfleiderer, P. (2009). The "wall street walk" and shareholder activism: Exit as a form of voice. *The Review of Financial Studies*, 22(7):2645–2685.

Agarwal, V., Vashishtha, R., and Venkatachalam, M. (2017). Mutual fund transparency and corporate myopia. *The Review of Financial Studies*, 31(5):1966–2003.

AMAFI (2018). French financial transaction tax - fftt guidlines.

Amihud, Y. and Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *The Bell Journal of Economics*, 12:605–617.

Amihud, Y. and Mendelson, H. (1986). Asset pricing and the bid-ask spread. *Journal of Financial Economics*, 17(2):223–249.

Asker, J., Farre-Mensa, J., and Ljungqvist, A. (2015). Corporate investment and stock market listing: A puzzle? *The Review of Financial Studies*, 28(2):342–390.

Beatty, A. L., Ke, B., and Petroni, K. R. (2002). Earnings management to avoid earnings declines across publicly and privately held banks. *The accounting review*, 77(3):547–570.

Becchetti, L., Ferrari, M., and Trenta, U. (2014). The impact of the french tobin tax. *Journal of Financial Stability*, 15:127–148.

Bena, J. and Li, K. (2014). Corporate innovations and mergers and acquisitions. *The Journal of Finance*, 69(5):1923–1960.

Brogaard, J., Ringgenberg, M., and Sovich, D. (2018). The economic impact of index investing. *Review of Financial Studies*, Forthcoming.

Burgstahler, D. and Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of accounting and economics*, 24(1):99–126.

Bushee, B. J. (1998). The influence of institutional investors on myopic r&d investment behavior. *Accounting Review*, 73:305–333.

Chen, Q., Goldstein, I., and Jiang, W. (2007a). Price informativeness and investment sensitivity to stock price. *The Review of Financial Studies*, 20(3):619–650.

Chen, X., Harford, J., and Li, K. (2007b). Monitoring: Which institutions matter? *Journal of Financial Economics*, 86(2):279–305.

Coelho, M. (2016). Dodging robin hood: Responses to france and italy's financial transaction taxes. *Working Paper*, University of California Berkeley.

Colliard, J.-E. and Hoffmann, P. (2017). Financial transaction taxes, market composition, and liquidity. *The Journal of Finance*, 72(6):2685–2716.

Constantinides, G. M. (1986). Capital market equilibrium with transaction costs. *Journal of Political Economy*, 94(4):842–862.

DeAngelo, H., DeAngelo, L., and Skinner, D. J. (1996). Reversal of fortune dividend signaling and the disappearance of sustained earnings growth. *Journal of financial Economics*, 40(3):341–371.

Dechow, P., Ge, W., and Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of accounting and economics*, 50(2-3):344–401.

Deng, Y., Liu, X., and Wei, S.-J. (2018). One fundamental and two taxes: When does a tobin tax reduce financial price volatility? *Journal of Financial Economics*, 130(3):663–692.

Derrien, F., Kecskés, A., and Thesmar, D. (2013). Investor horizons and corporate policies. *Journal of Financial and Quantitative Analysis*, 48(6):1755–1780.

Dow, J. and Gorton, G. (1997). Stock market efficiency and economic efficiency: is there a connection? *The Journal of Finance*, 52(3):1087–1129.

Edmans, A. (2009). Blockholder trading, market efficiency, and managerial myopia. *The Journal of Finance*, 64(6):2481–2513.

Edmans, A., Fang, V. W., and Lewellen, K. A. (2017a). Equity vesting and investment. *The Review of Financial Studies*, 30(7):2229–2271.

Edmans, A., Jayaraman, S., and Schneemeier, J. (2017b). The source of information in prices and investment-price sensitivity. *Journal of Financial Economics*, 126(1):74–96.

Fraichot, J. P. (2017). Study of the effect of a financial transaction tax on the corporate cost of capital. *Applied Economics*, 49(60):5951–5961.

Frankel, R. M., Johnson, M. F., and Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The accounting review*, 77(s-1):71–105.

Froot, K. A., Perold, A. F., and Stein, J. C. (1992). Shareholder trading practices and corporate investment horizons. *Journal of Applied Corporate Finance*, 5(2):42–58.

Gaspar, J.-M., Massa, M., and Matos, P. (2005). Shareholder investment horizons and the market for corporate control. *Journal of Financial Economics*, 76(1):135–165.

Graham, J. R., Harvey, C. R., and Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40(1-3):3–73.

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., and Davison, R. B. (2009). Taking stock of what we know about mergers and acquisitions: A review and research agenda. *Journal of Management*, 35(3):469–502.

Harford, J., Kecskes, A., and Mansi, S. (2018). Do long-term investors improve corporate decision making? *Journal of Corporate Finance*, 50:424–452.

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, 47(1):153–161.

Hemmelgarn, T. and Nicodeme, G. (2012). *Can tax policy help to prevent financial crisis?*, volume 5. Oxford University Press, New York.

Hemmelgarn, T., Nicodème, G., Tasnadi, B., and Vermote, P. (2016). Financial transaction taxes in the european union. *National Tax Journal*, 69(1):217.

Huang, Q., Jiang, F., Lie, E., and Yang, K. (2014). The role of investment banker directors in m&a. *Journal of Financial Economics*, 112(2):269–286.

Jensen, M. C. and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4):305–360.

Jiang, L., Levine, R., and Lin, C. (2016). Competition and bank opacity. *The Review of Financial Studies*, 29(7):1911–1942.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29:193–228.

Keynes, J. M. (1936). *The general theory of employment, interest, and money*. Macmillan St. Martin's Press, London.

Kiefer, D. W. (1990). The securities transactions tax: An overview of the issues. Congressional Research Service, Library of Congress.

Kupiec, P. H. (1996). Noise traders, excess volatility, and a securities transactions tax. *Journal of Financial Services Research*, 10(2):115–129.

Lendvai, J., Raciborski, R., and Vogel, L. (2012). Securities transaction taxes: Macroeconomic implications in a general-equilibrium model. ecfin. *European Economy - Economic Papers*, pages 1–49.

Leuz, C., Nanda, D., and Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics*, 69(3):505–527.

Matheson, M. T. (2011). *Taxing financial transactions: Issues and evidence*. Number 11-54. International Monetary Fund.

Myers, S. C. and Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2):187–221.

Narayanan, M. (1985). Managerial incentives for short-term results. *The Journal of Finance*, 40(5):1469–1484.

Roosenboom, P., Schlingemann, F. P., and Vasconcelos, M. (2014). Does stock liquidity affect incentives to monitor? evidence from corporate takeovers. *The Review of Financial Studies*, 27(8):2392–2433.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of accounting and economics*, 42(3):335–370.

Schwabish, J. A. (2005). Estimating employment spillover effects in new york city with an application to the stock transfer tax. *Public Finance Review*, 33(6):663–689.

Schwert, G. W. and Seguin, P. J. (1993). Securities transaction taxes: an overview of costs, benefits and unresolved questions. *Financial Analysts Journal*, 49(5):27–35.

Song, F. M. and Zhang, J. (2005). Securities transaction tax and market volatility. *The Economic Journal*, 115(506):1103–1120.

Stein, J. C. (1989). Efficient capital markets, inefficient firms: A model of myopic corporate behavior. *The Quarterly Journal of Economics*, 104(4):655–669.

Stein, J. C. (2003). Agency, information and corporate investment. In *Handbook of the Economics of Finance*, volume 1, pages 111–165. Elsevier.

Stiglitz, J. E. (1989). Using tax policy to curb speculative short-term trading. *Journal of Financial Services Research*, 3(2-3):101–115.

Summers, L. H. and Summers, V. P. (1989). When financial markets work too well: a cautious case for a securities transactions tax. *Journal of Financial Services Research*, 3(2-3):261–286.

Umlauf, S. R. (1993). Transaction taxes and the behavior of the swedish stock market. *Journal of Financial Economics*, 33(2):227–240.

Figure 1: The evolution of the difference in corporate investment trend

Panel A. Treated firms vs. non-French control firms

Panel B. Treated firms vs. French control firms

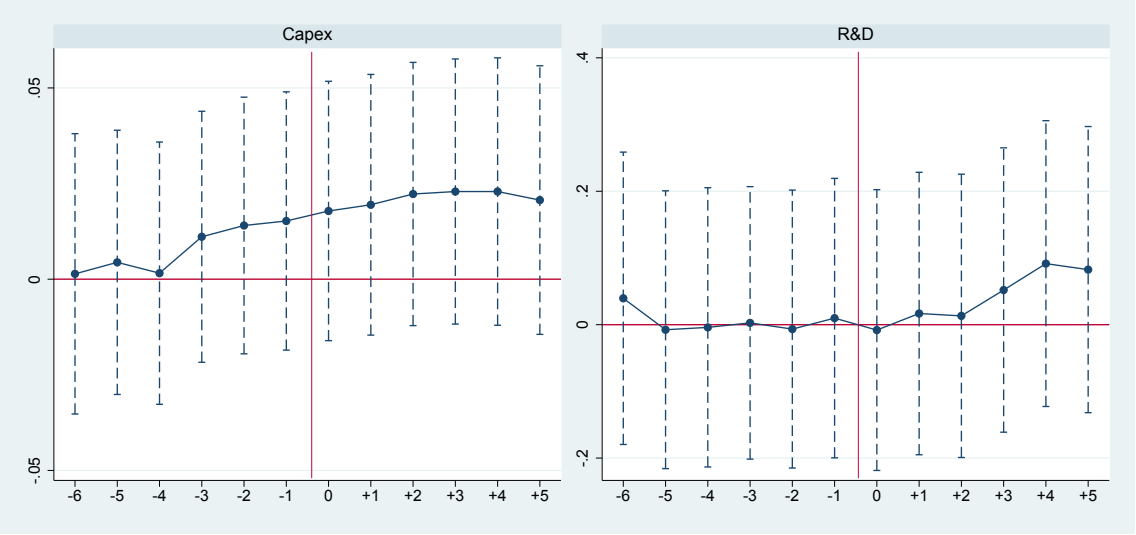

Table 1: Summary statistics

VARIABLES	N	Mean	S.d.	Q1	Median	Q3
Capex	2,619	0.048	0.052	0.018	0.035	0.058
R&D	1,297	0.111	0.204	0.008	0.030	0.105
Tobin's q	2,156	1.864	1.989	1.043	1.270	1.731
Cash flow	2,551	0.027	0.168	0.026	0.062	0.095
Size	2,643	7.141	2.681	5.689	7.526	9.011
ROA	2,642	0.044	0.204	0.053	0.092	0.132
Leverage	2,638	0.262	0.196	0.114	0.239	0.369

This table presents summary statistics. The sample consists of all treated firms and control firms of both control groups, non-French firms with capitalization above 1 billion EUR and French firms with capitalization above 0.2 billion EUR at the end of 2011, over the period 2008-2017. Size, Tobin's q and Cash flow, ROA and Leverage are computed at t while capital expenditure and R&D expense are computed at t+1.

Table 2: Comparison between treatment firms and control firms

Panel A. Treated firms vs. non-French control firms

	Non-French control firms			Treated firms				
VARIABLES	N	Mean	s.d.	N	Mean	s.d.	Mean difference	t-statistic
Capex	254	0.069	0.066	450	0.044	0.039	0.025	6.33
R&D	108	0.038	0.062	260	0.042	0.086	-0.004	-0.48
Tobin's q	172	2.454	3.101	428	1.365	0.963	1.089	6.53
Cash flow	250	0.095	0.108	448	0.070	0.055	0.025	4.07
Size	254	8.113	1.998	452	8.697	1.539	-0.584	-4.33
ROA	254	0.135	0.085	452	0.106	0.071	0.029	4.75
Leverage	254	0.300	0.187	452	0.251	0.149	0.049	3.79

Panel B Treated firms vs. French control firms

	French control firms			Treated firms				
VARIABLES	N	Mean	s.d.	N	Mean	s.d.	Mean difference	t-statistic
Capex	391	0.048	0.058	450	0.044	0.039	0.004	1.10
R&D	116	0.206	0.281	260	0.042	0.086	0.164	8.58
Tobin's q	278	1.446	1.210	428	1.365	0.963	0.081	0.98
Cash flow	389	-0.007	0.205	448	0.070	0.055	-0.077	-7.64
Size	398	5.463	2.164	452	8.697	1.539	-3.23	-25.32
ROA	398	0.012	0.238	452	0.106	0.071	-0.094	-8.02
Leverage	398	0.255	0.236	452	0.251	0.149	0.004	0.27

This table compares characteristics of treated firms and two control groups over the period 2008-2011, i.e. before the introduction of the FTT. Panel A compares treated firms to non-French control firms; Panel B compares treated firms to French control firms with capitalization above 0.2 billion EUR.

Table 3: Impact of the FTT on corporate investment: non-French control

VARIABLES	(1) Capex	(2) Capex	(3) R&D	(4) R&D
Tax	0.0128***	0.0088**	0.0013	0.0025
	(0.0041)	(0.0040)	(0.0042)	(0.0021)
Size		-0.0067		-0.0137***
		(0.0086)		(0.0044)
Tobin's q		0.0076**		0.0094**
		(0.0037)		(0.0047)
Cash flow		0.1691*		0.0293
		(0.0976)		(0.0203)
Leverage		-0.0112		0.0083
		(0.0268)		(0.0124)
ROA		0.0346		-0.0675
		(0.0862)		(0.0484)
Constant	0.0510***	0.0824	0.0398***	0.1465***
	(0.0026)	(0.0759)	(0.0014)	(0.0399)
Observations	1,596	1,400	848	778
Adjusted R-squared	0.6345	0.7008	0.9564	0.9671
Control x Year	no	yes	no	yes
Year FE	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment. The regressions compare French treated firms to non-French control firms. Specifications (1) and (3) exclude control variables; remaining specifications include control variables. In columns (1) and (2), the dependent variable is capital expenditures scaled by lagged total assets. In columns (3) and (4), the dependent variable is R&D expenses scaled by lagged total assets. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 4: Impact of the FTT on corporate investment: French control

VARIABLES	(1) Capex	(2) Capex	(3) R&D	(4) R&D
Tax	0.0083**	0.0071*	0.0361**	0.0196**
	(0.0037)	(0.0036)	(0.0149)	(0.0086)
Size		-0.0146***		-0.0406***
		(0.0049)		(0.0132)
Tobin's q		0.0073		0.0267*
		(0.0050)		(0.0155)
Cash flow		0.0477		-0.0422
		(0.0541)		(0.0503)
Leverage		-0.0384**		0.0056
		(0.0187)		(0.0258)
ROA		-0.0527		-0.0558
		(0.0510)		(0.0769)
Constant	0.0486***	0.1508***	0.1395***	0.3351***
	(0.0023)	(0.0383)	(0.0051)	(0.1011)
Observations	2,040	1,666	1,045	824
Adjusted R-squared	0.6231	0.7254	0.8135	0.9383
Control x Year	no	yes	no	yes
Year FE	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment. The regressions compare French treated firms to French control firms whose capitalizations are above 0.2 billion EUR at the end of 2011. Specifications (1) and (3) exclude control variables; (2) and (4) include control variables. In columns (1) and (2), the dependent variable is capital expenditures scaled by lagged total assets. In columns (3) and (4), the dependent variable is R&D expenses scaled by lagged total assets. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 5: Impact of the FTT on corporate investment: non-SLP firms

	(1)	(2)	(3)	(4)
	Non-French control		French control	
VARIABLES	Capex	R&D	Capex	R&D
Tax	0.0090*	0.0008	0.0080**	0.0195**
	(0.0052)	(0.0025)	(0.0040)	(0.0092)
Constant	0.0413	0.1928***	0.1359***	0.3229***
	(0.0866)	(0.0457)	(0.0387)	(0.0898)
Observations	802	386	1,249	541
Adjusted R-squared	0.6224	0.9707	0.6836	0.9405
Control	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment among firms whose stocks did not belong to Euronext's SLP program. Specifications in columns (1) and (2) use non-French control firms with the dependent variable being Capex and R&D, respectively. Columns (3) and (4) use French control firms with the dependent variable being Capex and R&D, respectively. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 6: Effect of the FTT on ownership structure

Panel A. Summary statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) median	(6) max
Very low turnover	10,459	1.75	2.40	0.00	1.21	50.47
Low turnover	10,459	1.38	2.16	0.00	0.82	75.71
Medium turnover	10,459	0.63	1.05	0.00	0.36	43.60
High turnover	10,459	0.19	0.38	0.00	0.08	8.51
Very high turnover	10,459	0.13	0.29	0.00	0.03	11.50

Panel B. Regression results

	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.5071*	0.7296**	0.4276	0.2870	0.1925
	(0.2760)	(0.2863)	(0.4083)	(0.2587)	(0.2760)
Constant	-1.1817	-3.6260	1.8188	-5.2057*	-4.2108
	(2.9679)	(4.7340)	(3.5481)	(2.8479)	(3.1721)
Observations	6,148	2,422	3,726	7,193	5,475
Adjusted R-squared	0.5237	0.7782	0.4513	0.4834	0.4264
Control	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes
Quarter FE	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes

This table presents analysis on the impact of the FTT on ownership by long-term investors. Panel A summarizes statistics on ownership by funds (in %) with different portfolio turnovers in the whole sample of treated firms, non-French and French control firms. In Factset ownership database, funds are classified into five groups, Very Low, Low, Medium, High, Very High (turnover). Very Low funds have portfolios with less than 25% annual turnover or 4-year holding period or more. Low and Medium funds have holding periods of 2-4 years and 1-2 years, respectively while High and Very High funds have holding periods of less than one year. For each firm, long-term ownership is defined as the total ownership by Very Low and Low and Medium (turnover) funds. Panel B summarizes the regressions with dependent variable being the total ownership by funds with very low, low and medium turnovers. The first three columns use non-French control: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Control variables include size, Tobin's q, cashflow, ROA and leverage. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 7: Effects of the FTT on Investment sensitivity

Panel A. Capex					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.0137***	0.0168	0.0172**	0.0139**	0.0146**
	(0.0050)	(0.0180)	(0.0071)	(0.0056)	(0.0067)
Tobin's q	0.0086**	0.0157	0.0076	0.0048	0.0053
	(0.0043)	(0.0159)	(0.0050)	(0.0054)	(0.0062)
Tax × Tobin's q	-0.0029*	-0.0024	-0.0055**	-0.0056*	-0.0058*
	(0.0017)	(0.0101)	(0.0027)	(0.0031)	(0.0034)
Treated × Tobin's q	-0.0018	-0.0193	0.0054	0.0059	0.0113**
	(0.0048)	(0.0119)	(0.0052)	(0.0062)	(0.0049)
Constant	0.0790	0.2350**	0.0395	0.1496***	0.1345***
	(0.0756)	(0.0923)	(0.0862)	(0.0370)	(0.0376)
Observations	1,400	598	802	1,666	1,249
Adjusted R-squared	0.7025	0.8260	0.6238	0.7267	0.6860
Control	yes	yes	yes	yes	yes
Control × Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes

Panel B. R&D					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.0036	-0.0186**	0.0001	0.0077	0.0082
	(0.0024)	(0.0074)	(0.0040)	(0.0134)	(0.0192)
Tobin's q	0.0097*	0.0288***	0.0038	0.0309*	0.0407***
	(0.0050)	(0.0084)	(0.0083)	(0.0167)	(0.0131)
Tax × Tobin's q	-0.0007	0.0164**	0.0005	0.0084	0.0072
	(0.0004)	(0.0062)	(0.0020)	(0.0090)	(0.0122)
Treated × Tobin's q	-0.0001	-0.0165***	0.0011	-0.0069	-0.0056
	(0.0021)	(0.0059)	(0.0033)	(0.0088)	(0.0096)
Constant	0.1454***	0.0605	0.1962***	0.3303***	0.3258***
	(0.0409)	(0.0430)	(0.0467)	(0.0997)	(0.0900)
Observations	778	392	386	824	541
Adjusted R-squared	0.9670	0.9715	0.9705	0.9385	0.9403
Control	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes

This table presents investment sensitivity analyses. Panel A analyzes the sensitivity of investment in capital expenditures and Panel B the sensitivity of investment in R&D. The first three columns use non-French control: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 8: Summary statistics of acquisition activities

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) median	(6) max
AcqDummy	3,349	0.347	0.476	0	0	1
5-day CAR	965	0.004	0.039	-0.112	0.002	0.127
Value (mil. EUR)	965	356.202	890.702	0.480	95.000	7,010.735
Tender offer	965	0.108	0.310	0	0	1
Public	965	0.244	0.429	0	0	1
Subsidiary	965	0.448	0.498	0	0	1
Cash	965	0.092	0.289	0	0	1
Equity	965	0.020	0.139	0	0	1

This table summarizes statistics of acquisition deals completed by treated firms, French control firms and non-French control firms. AcqDummy is an indicator, equal to 1 if firm makes at least one acquisition in a given year, 0 otherwise. CAR is the cumulative abnormal returns over the 5-day (-2, +2) event window centered on the announcement date, where abnormal returns are computed using the market model. Other variables are binary variables for whether the deal is a tender offer, target firm is public, target firm is a subsidiary, the deal is financed by cash, and the deal is financed by equity.

Table 9: Impact of the FTT on likelihood of making acquisitions

Panel A. Without control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.1413***	0.1736***	0.0682	0.0975**	0.0740
	(0.0401)	(0.0630)	(0.0506)	(0.0383)	(0.0459)
Treated	0.2020***	0.1151	0.1853***	0.3597***	0.2780***
	(0.0454)	(0.0699)	(0.0520)	(0.0349)	(0.0374)
Constant	0.2922***	0.5834***	0.1783***	0.1285***	0.1184***
	(0.0439)	(0.0685)	(0.0494)	(0.0265)	(0.0273)
Observations	2,046	670	1,376	2,579	2,117
Adjusted R-squared	0.1713	0.1706	0.1600	0.2308	0.1629
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes
Panel B. With control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.1259**	0.1310**	0.0613	0.0241	0.0102
	(0.0528)	(0.0646)	(0.0773)	(0.0610)	(0.0654)
Treated	0.1250**	0.0844	0.0708	0.2023***	0.2421***
	(0.0592)	(0.0749)	(0.0987)	(0.0590)	(0.0633)
Constant	-0.8921***	-0.7532	-0.5832	-0.2789	-0.1313
	(0.2946)	(0.5868)	(0.4947)	(0.1715)	(0.1971)
Observations	1,346	578	768	1,663	1,260
Adjusted R-squared	0.1773	0.1670	0.1452	0.2216	0.1435
Control	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes

This table reports OLS results for Linear Probability Models examining the impact of the FTT on the probability of making acquisitions. The dependent variable is a dummy, equal to 1 if the firm makes at least one acquisition in a given year. Specifications exclude and include control variables in Panel A and B, respectively. The first three columns use non-French control: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 10: Impact of the FTT on the performance of acquisition investments

Panel A. Without firm control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.0077	0.0195**	0.0041	0.0025	0.0033
	(0.0076)	(0.0095)	(0.0098)	(0.0106)	(0.0118)
Treated	-0.0089	-0.0084	-0.0014	-0.0077	-0.0122
	(0.0055)	(0.0079)	(0.0096)	(0.0076)	(0.0098)
Constant	0.0012	0.0023	-0.0137	-0.0043	-0.0048
	(0.0051)	(0.0067)	(0.0112)	(0.0079)	(0.0095)
Observations	775	488	287	703	303
Adjusted R-squared	0.0188	0.0419	0.0912	0.0291	0.0407
Deal Control	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes
Panel B. With firm control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.0102	0.0140*	0.0051	0.0048	0.0054
	(0.0075)	(0.0083)	(0.0139)	(0.0135)	(0.0182)
Treated	-0.0078	-0.0042	-0.0028	-0.0011	-0.0056
	(0.0052)	(0.0068)	(0.0144)	(0.0089)	(0.0101)
Constant	0.0941**	0.1931***	0.0896	0.0373	0.0065
	(0.0393)	(0.0518)	(0.0702)	(0.0372)	(0.0617)
Observations	768	488	280	696	296
Adjusted R-squared	0.0270	0.0698	0.1085	0.0370	0.0519
Deal Control	yes	yes	yes	yes	yes
Firm Control	yes	yes	yes	yes	yes
Firm Control x Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes

This table reports regression results for models evaluating the impact of FTT on the performance of acquisition activities. The dependent variable is five-day cumulative abnormal return (CAR). Regressions in Panel A includes only deal control variables (deal value, and binary variables for target firm public status, target subsidiary status, tender offer, cash payment, equity payment). Regressions in Panel B include deal control variables and firm control variables (size, Tobin's q, cash flow, leverage, ROA). The estimates of control variables are not reported for brevity. The first three columns use non-French control firms: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control firm: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 11: Impact of the FTT on earnings management: Discretionary accruals

	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	-0.0191**	-0.0283**	-0.0034	-0.0075	-0.0083
	(0.0085)	(0.0118)	(0.0117)	(0.0151)	(0.0171)
Treated	-0.0016	0.0107	-0.0303*	0.0060	0.0119
	(0.0086)	(0.0072)	(0.0173)	(0.0124)	(0.0146)
Constant	0.0986***	0.0287	0.2107***	0.1065***	0.1124***
	(0.0354)	(0.0527)	(0.0742)	(0.0329)	(0.0365)
Observations	763	366	397	1,017	761
Adjusted R-squared	0.0865	0.0650	0.0943	0.0668	0.0563
Control	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes

This table presents the regression results for models examining the impact of the FTT on the level of discretionary accruals. The dependent variable is the absolute value of discretionary accruals estimated from a modified version of Jones (1991) model. The first three columns use non-French control: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 12: Impact of the FTT on earnings management: Likelihood of beating targets

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-French control			French control		
VARIABLES	Small Profits	Small Increases	Small Profits or Increases	Small Profits	Small Increases	Small Profits or Increases
Tax	-0.0404*	-0.0153	-0.0659***	-0.0460**	-0.0224	-0.0726**
	(0.0208)	(0.0161)	(0.0246)	(0.0224)	(0.0269)	(0.0292)
Treated	0.0268	0.0471***	0.0644***	0.0085	-0.0099	-0.0093
	(0.0201)	(0.0139)	(0.0218)	(0.0293)	(0.0203)	(0.0285)
Constant	0.0034	0.0351	0.0139	0.0452	-0.0705	-0.0205
	(0.1146)	(0.1032)	(0.1321)	(0.0780)	(0.0687)	(0.0943)
Observations	1,797	1,797	1,797	2,128	2,128	2,128
Adjusted R-squared	0.3791	0.0780	0.2744	0.2464	0.0963	0.2317
Control	yes	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents the regression results for models examining the impact of the FTT on likelihood of beating targets. Dependent variables are dummy variables *Small Profits*, *Small Increases* and *Small Profits or Increases*. *Small Profits* is equal to 1 if earnings before extraordinary items scaled by lagged total assets are positive and below 0.5%, and 0 otherwise. *Small Increases* is equal to 1 if the change in earnings before extraordinary items scaled by lagged total assets is positive and below 0.1%, and 0 otherwise. *Small Profits or Increases* is equal to 1 if either *Small Profits* is equal to 1 or *Small Increases* is equal to 1, and 0 otherwise. The first three columns use non-French control and the last three columns use French control. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table 13: Financing the investments

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-French control			French control		
VARIABLES	Debt issuance	Equity issuance	Dividend payout	Debt issuance	Equity issuance	Dividend payout
Tax	0.0015	-0.0167	-0.0031*	0.0149	-0.0042	0.0026
	(0.0078)	(0.0175)	(0.0018)	(0.0100)	(0.0350)	(0.0016)
Constant	0.3628***	0.4660	0.0495*	0.4355***	1.1917***	0.0171
	(0.1045)	(0.3917)	(0.0279)	(0.1349)	(0.3813)	(0.0259)
Observations	1,712	873	1,188	2,017	1,060	1,100
Adjusted R-squared	0.1248	0.6029	0.8338	0.1756	0.6193	0.8847
Control	yes	yes	yes	yes	yes	yes
Control x Year	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on financing and payout policies. *Debt Issuance* is equal to the percentage change in long-term debt, *Equity Issuance* is computed as the sale of common and preferred stocks over total assets, and *Dividend Payout* is the ratio of cash dividend over total assets. The first three columns use non-French control and the last three columns use French control. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

A Appendix

Figure A1: Capitalization distribution of French firms

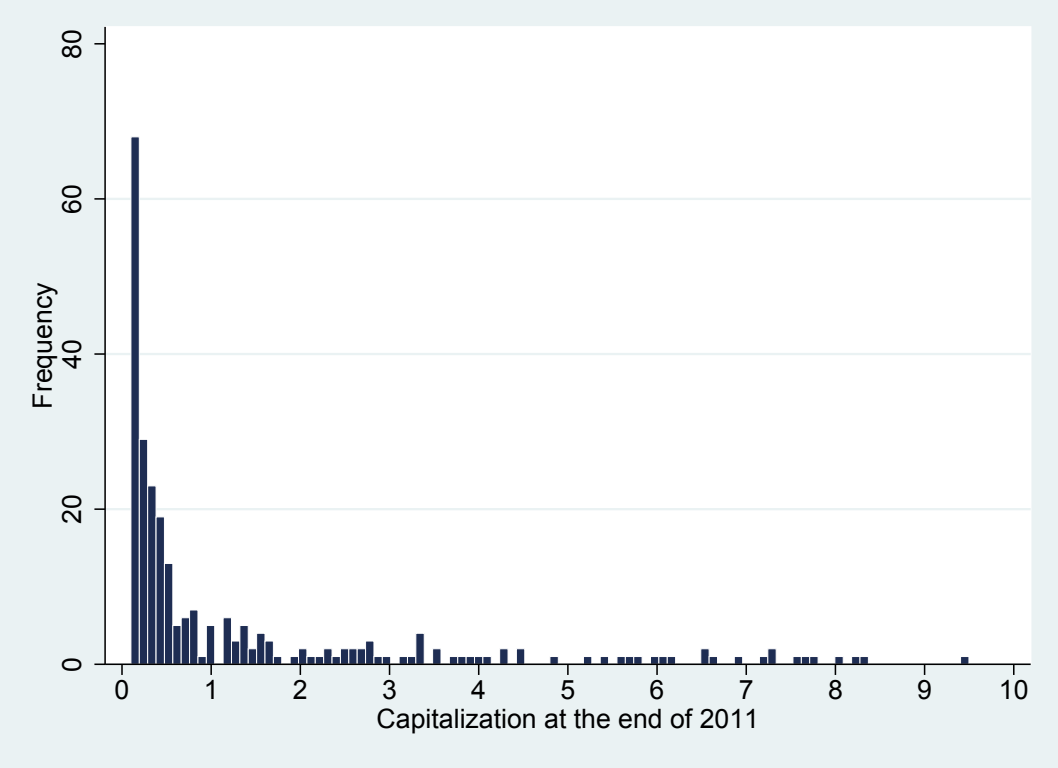

Figure A2: Capital distribution of French firms with capitalization around 1 billion EUR

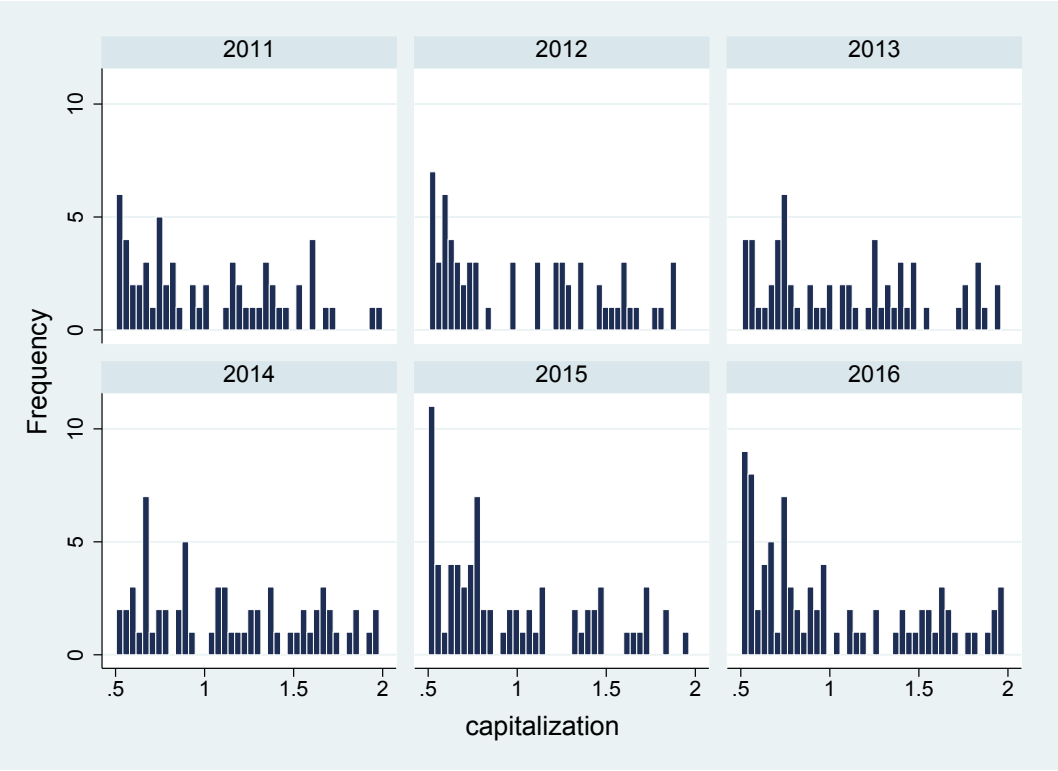

Table A1: Variable definitions

Name	Definition	Source
Tax	Indicator equal to 1 if a firm is treated in that year and 0 otherwise.	The French Ministry of Economy and Finance, and Tax Authorities
Treated	Indicator equal to 1 if a firm is subject to FTT and 0 otherwise.	The French Ministry of Economy and Finance, and Tax Authorities
Capex	$CAPX_{t+1}/AT_t$	Compustat Global
R&D	XRD_{t+1}/AT_t	Compustat Global
Size	$Ln(AT_t)$	Compustat Global
Tobin's q	$(CSHOI * PRCCD + AT - CEQ)/AT$. If CSHOI is not available, CSHOC is used instead.	Compustat Global
Cash flow	$(IB + DP)/AT$	Compustat Global
ROA	$OIBDP/AT$	Compustat Global
Leverage	$(DLC + DLTT)/AT$	Compustat Global
P/E ratio	$PRCCD/EPSEXCON$	Compustat Global
Cash holding	CHE/AT	Compustat Global
Non-cash working capital	$(WCAP–CHE)/AT$	Compustat Global
Debt Issuance	$(DLTT_{t+1}–DLTT_t)/AT_t$	Compustat Global
Equity Issuance	$SSTK_{t+1}/AT_t$	Compustat Global
Dividend Payout	DV_{t+1}/AT_t	Compustat Global
Discretionary Accruals	Absolute value of discretionary accruals estimated by a cross sectional Jones (1991) model.	Compustat Gobal
Small Profits	Indicator equal to 1 if earnings before extraordinary items scaled by lagged total assets are positive and below 0.5%, 0 otherwise.	Compustat Gobal
Small Increases	Indicator equal to 1 if the change in earnings before extraordinary items scaled by lagged total assets is positive and below 0.1%, 0 otherwise.	Compustat Gobal
Small Profits or Increases	Indicator equal to 1 if *Small Profits* equal to 1 or *Small Increases* is equal to 1, 0 otherwise.	Compustat Gobal
Long-term ownership	Funds are classified into five groups, Very Low, Low, Medium, High, Very High (turnover). For each firm, the ownership ratio owned by each type of funds is computed and longtermownership is equal to the total ownership by Very Low and Low and Medium (turnover) funds.	Factset Ownership
AcqDummy	Indicator equal to 1 if firm makes at least one acquisition in a given year, 0 otherwise.	SDC Platinum
CAR	Cumulative abnormal return over the 5-day (-2, +2) event window centered on the announcement date, where abnormal returns are computed using the market model, with the estimation window being (-210, -11) and the market return being Stoxx Europe 600 index.	Compustat Gobal and SDC Platinum
Deal value	Value of the deal divided by lagged market value of equity.	Compustat and SDC Platinum
Tender offer	Indicator equal to 1 if the deal is a tender offer, 0 otherwise.	SDC Platinum
Public	Indicator equal to 1 if the target firm is a public firm, 0 otherwise.	SDC Platinum
Subsidiary	Indicator equal to 1 if the target firm is a subsidiary, 0 otherwise.	SDC Platinum
Cash	Indicator equal to 1 if the deal is financed by cash, 0 otherwise.	SDC Platinum
Equity	Indicator equal to 1 if the deal is financed by equity, 0 otherwise.	SDC Platinum

Table A2: Impact of the FTT on Corporate Investment: Matched firms

Panel A. Treated firms vs. matched firms

	Matched firms			Treated firms				
VARIABLES	N	Mean	s.d.	N	Mean	s.d.	Mean difference	t-statistic
Size	74	8.790	1.671	143	9.045	1.621	-0.255	-1.09
Tobin's q	74	1.913	2.974	143	1.396	1.154	0.517	1.83
Cash flow	74	0.075	0.073	143	0.063	0.066	0.012	1.22
Leverage	74	0.257	0.155	143	0.254	0.155	0.003	0.15
ROA	74	0.113	0.071	143	0.097	0.075	0.016	1.54

Panel B. Regression results

	(1)	(2)
VARIABLES	Capex	R&D
Tax	0.0098**	0.0005
	(0.0045)	(0.0021)
Size	-0.0071	-0.0149***
	(0.0102)	(0.0041)
Tobin's q	0.0046	-0.0003
	(0.0028)	(0.0010)
Cash flow	0.0942***	0.0210
	(0.0302)	(0.0161)
Leverage	-0.0505**	0.0007
	(0.0224)	(0.0085)
ROA	0.0906*	-0.0006
	(0.0528)	(0.0275)
Constant	0.0974	0.1607***
	(0.0898)	(0.0371)
Observations	1,348	755
Adjusted R-squared	0.6982	0.9614
Year FE	yes	yes
Firm FE	yes	yes

This table presents the analysis of the impact of the FTT on investment with control firms being selected from matching. We match treated firms with non-French control firms on logarithm of market capitalization, Tobin's q, cash flow to assets, leverage and ROA in the year before treatment using propensity score matching. Each treated firm is matched with one nearest-neighbor match with replacement. Panel A compares characteristics of treated firms and matched firms in the year before treatment. Panel B summarizes the regression results using the matched sample. In parentheses are robust standard errors clustered by firm. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table A3: Impact of the FTT on corporate investment: French control with alternative cutoffs

	(1)	(2)	(3)	(4)	(5)	(6)
	>0.1 billion EUR		>0.3 billion EUR		0.3-3.0 billion EUR	
VARIABLES	Capex	R&D	Capex	R&D	Capex	R&D
Tax	0.0048	0.0196***	0.0078*	0.0228**	0.0063	0.0171**
	(0.0035)	(0.0075)	(0.0042)	(0.0102)	(0.0056)	(0.0082)
Size	-0.0141***	-0.0444***	-0.0162***	-0.0409***	-0.0074	-0.0343***
	(0.0043)	(0.0114)	(0.0054)	(0.0149)	(0.0047)	(0.0106)
Tobin's q	0.0089*	0.0224	0.0061	0.0321*	0.0069	0.0455**
	(0.0045)	(0.0159)	(0.0057)	(0.0180)	(0.0092)	(0.0187)
Cash flow	0.0309	-0.0383	0.1171*	-0.0036	0.1356*	0.0330
	(0.0389)	(0.0459)	(0.0644)	(0.0676)	(0.0751)	(0.1878)
Leverage	-0.0388***	0.0049	-0.0385*	-0.0003	-0.0831**	0.0082
	(0.0145)	(0.0246)	(0.0213)	(0.0308)	(0.0340)	(0.0314)
ROA	-0.0753*	-0.0735	-0.0999*	-0.1252	-0.1364**	-0.0817
	(0.0397)	(0.0670)	(0.0576)	(0.0862)	(0.0648)	(0.1670)
Constant	0.1398***	0.3527***	0.1676***	0.3387***	0.1158***	0.2839***
	(0.0321)	(0.0845)	(0.0434)	(0.1158)	(0.0406)	(0.0876)
Observations	2,091	992	1,476	761	750	311
Adjusted R-squared	0.6847	0.9228	0.7239	0.9404	0.5973	0.9853
Control x Year	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment using various samples with different cutoffs. All regressions compare French treated firms with French control firms. Columns (1) and (2) use a sample of firms with capitalization above 0.1 billion EUR at the end of 2011; columns (3) and (4) use those above 0.3 billion EUR; and columns (5) and (6) use those above 0.3 and below 3.0 billion EUR. In parentheses are robust standard errors clustered by firm. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table A4: The Impact of the FTT on Corporate Investment: $Capex + R\&D$

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Non-French control		French control		Matched control	
Tax	0.0141**	0.0073	0.0184***	0.0093*	0.0103*	0.0085*
	(0.0055)	(0.0048)	(0.0064)	(0.0052)	(0.0053)	(0.0050)
Size		-0.0155**		-0.0333***		-0.0139
		(0.0077)		(0.0095)		(0.0104)
Tobin's q		0.0089**		0.0193*		0.0042
		(0.0044)		(0.0112)		(0.0029)
Cash flow		0.2267*		0.0483		0.1070***
		(0.1242)		(0.0582)		(0.0358)
Leverage		-0.0063		-0.0091		-0.0550**
		(0.0274)		(0.0264)		(0.0220)
ROA		-0.0190		-0.0692		0.0931*
		(0.1084)		(0.0621)		(0.0549)
Constant	0.0744***	0.1748**	0.1110***	0.2970***	0.0658***	0.1734*
	(0.0039)	(0.0689)	(0.0028)	(0.0710)	(0.0023)	(0.0926)
Observations	1,596	1,400	2,040	1,666	1,431	1,348
Adjusted R-squared	0.7398	0.7841	0.8101	0.8766	0.7923	0.7811
Control x Year	no	yes	no	yes	no	no
Year FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment using the sum of capital expenditures and R&D expenses scaled by lagged total assets as an alternative measure of investment. Missing values for R&D are set to zero. Specifications (1) and (2) use non-French control group without and with control variables, respectively; (3) and (4) French control group; (4) and (5) matched control group. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table A5: The Impact of FTT on Corporate Investment: *Asset Change*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Non-French Control		French Control		Matched Control	
Tax	0.0480*	0.0107	0.0410	0.0754**	0.0465**	0.0333*
	(0.0245)	(0.0231)	(0.0257)	(0.0314)	(0.0194)	(0.0197)
Size		-0.1555***		-0.3084***		-0.1194***
		(0.0476)		(0.0560)		(0.0346)
Tobin's q		0.0404**		0.0506*		0.0386**
		(0.0177)		(0.0260)		(0.0167)
Cash flow		0.6225*		0.2395		0.5737**
		(0.3657)		(0.2678)		(0.2369)
Leverage		-0.1902*		-0.2328*		-0.2142**
		(0.1085)		(0.1200)		(0.0928)
ROA		0.0245		-0.5815*		0.1015
		(0.3094)		(0.3172)		(0.2796)
Constant	0.0639***	1.3328***	0.0880***	2.3872***	0.0187**	1.0346***
	(0.0171)	(0.4184)	(0.0122)	(0.4247)	(0.0085)	(0.3116)
Observations	2,107	1,717	2,585	2,021	1,775	1,640
Adjusted R-squared	0.1744	0.3395	0.1566	0.3314	0.1663	0.2595
Control x Year	no	yes	no	yes	no	no
Year FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the impact of the FTT on corporate investment using Asset Change as an alternative measure of investment. Asset Change in year t is the difference between total assets in year t+1 and year t scaled by total assets in year t. Specifications (1) and (2) use non-French control group without and with control variables, respectively; (3) and (4) French control group; (4) and (5) matched control group. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

Table A6: The Impact of FTT on Likelihood of Positive CAR

Panel A. Without firm control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
Tax	0.1166	0.3496***	-0.0327	0.1036	0.0554
	(0.0799)	(0.1082)	(0.1156)	(0.1002)	(0.1138)
Treated	-0.1052	-0.1466*	0.1395	-0.0723	-0.0828
	(0.0640)	(0.0765)	(0.1449)	(0.0857)	(0.1111)
Constant	0.4855***	0.5392***	0.2197	0.3910***	0.4054***
	(0.0747)	(0.0760)	(0.1536)	(0.0920)	(0.1118)
Observations	775	488	287	703	303
R-squared	0.0800	0.1076	0.2211	0.0819	0.1773
Deal Control	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes
Panel B. With firm control variables					
	(1)	(2)	(3)	(4)	(5)
	Non-French control			French control	
VARIABLES	All firms	SLP firms	Non-SLP firms	All firms	Non-SLP firms
tax	0.1198	0.3895***	-0.1017	0.0327	-0.0668
	(0.0869)	(0.1236)	(0.1574)	(0.1289)	(0.1633)
treated	-0.0841	-0.1337	0.2524	-0.0493	0.0091
	(0.0610)	(0.0843)	(0.1623)	(0.1020)	(0.1296)
Constant	1.5275***	2.0815***	1.4921*	0.7639*	0.3890
	(0.3515)	(0.5223)	(0.7863)	(0.3899)	(0.6873)
Observations	768	488	280	696	296
R-squared	0.1474	0.1786	0.4107	0.1541	0.3497
Deal Control	yes	yes	yes	yes	yes
Firm Control	yes	yes	yes	yes	yes
Firm Control x Year	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes

This table reports regression results for models evaluating the impact of FTT on the performance of acquisition activities. The dependent variable is binary, equal to 1 if CAR(-2,+2) is positive and 0 otherwise. Regressions in Panel A includes only deal control variables (deal value, and binary variables for target firm public status, target subsidiary status, tender offer, cash payment, equity payment). Regressions in Panel B include deal control variables and firm control variables (size, Tobin's q, cash flow, leverage, ROA). The estimates of control variables are not reported for brevity. The first three columns use non-French control firms: (1) compares all treated firms to all control firms, (2) treated SLP firms to control SLP firms, (3) treated non-SLP firms to control non-SLP firms. The last two columns use French control firm: (4) compares all treated firms to all control firms, (5) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.