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

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ABSTRACT

Research Question/Issue: This paper studies how corporate investments are affected by financial transaction taxes levied on stock trading and explores alternative corporate governance mechanisms behind the effect.

Research Findings/Insights: Exploiting the 2012 French introduction of a financial transaction tax in a difference-in-differences design, I find an overall positive effect of the tax on corporate investments, namely, capital expenditure and R&D. I also find an improvement in investment sensitivity and an increase in likelihood and quality of acquisitions, particularly among firms for which the tax causes a significant shift from short-term to long-term ownership.

Theoretical/Academic Implications: The evidence suggests that a financial transaction tax could have a positive effect on corporate investments by inducing long-term ownership and alleviating short-termism. The paper therefore addresses one major concern that the tax would hamper investments by increasing costs of capital or harming other governance mechanisms such as exit threats.

Practitioner/Policy Implications: This study provides evidence on economic benefits of financial transaction taxes which are relevant to the debate on the tax introduction and design in many countries.

> *[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) on securities trades[1]—also known as Robin Hood taxes—have attracted significant attention, particularly within the European Union (EU) and G20 countries. During the Covid-19 crisis, several US senators called for Congress to impose a FTT but faced oppositions from the majority of Americans.[2] After failing to obtain a unanimous agreement on a proposal for an EU-wide FTT, France and Italy introduced their own national FTTs in 2012 and 2013, respectively. These differential policy changes provide an ideal setting to study effects of FTTs on shareholders and corporate policies.[3] In this paper, I examine the impact of FTTs on corporate investment, taking into account the role of heterogeneity in ownership structure—an aspect largely overlooked in the debate.

It is not obvious how FTTs affect corporate investment. On the one hand, FTTs may reduce corporate investment by increasing costs of capital, as investors demand higher returns to compensate for both the tax burden and reduced market liquidity (Umlauf 1993; Lendvai et al. 2012; Fraichot 2017). Moreover, the quality of investment may decline if FTTs weaken corporate governance. By increasing the cost of shareholder entry and exit, FTTs reduce the incentive to acquire significant stakes for

intervention and diminish the disciplinary effect of exit threats (Maug 1998; Admati and Pfleiderer 2009; Edmans et al. 2013). With less effective governance, whether through voice or exit, self-interested managers may pursue value-destroying investments that deviate from firms' most productive opportunities.

On the other hand, the FTT may help increase investments by alleviating short-termism. Literature has shown that the overemphasis on short-term earnings and stock prices causes underinvestment (e.g Stein 1989; Graham et al. 2005; Asker et al. 2015; Edmans, Fang, et al. 2017). As FTTs penalize short-term trading and induce long-term ownership, this short-termism and the resulting underinvestment problem can be mitigated (Stiglitz, 1989; Summers and Summers 1989; Colliard and Hoffmann 2017).[4] In addition, short-termism theory suggests that a myopic manager or a manager under short-termist pressure would forgo positive NPV projects, resulting not only in lower investment levels but also in weaker sensitivity to changes in investment opportunities (Asker et al. 2015). Therefore, FTTs may enhance both the overall level of investment and its responsiveness to growth opportunities.

I 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 generalized difference-in-differences (DiDs) approach, I find that compared with unaffected firms, firms with stocks subject to this tax increase their investments (in capital expenditure and R&D) by 0.8–1.0 percentage points of total assets after being affected by the FTT. I find a similar positive effect of the Italian FTT on corporate investments but no similar effect in other comparable Eurozone economies without FTTs. Investment increases among financially unconstrained firms but not among constrained ones, suggesting that the benefits of reduced short-termism are concentrated in the former but limited in the latter.

To examine whether FTTs indeed affect investment via reduced short-termism, I perform a series of tests. First of all, this mechanism relies on the assumption that the FTT can curb short-term traders, inducing long-term ownership. Therefore, I first test this assumed premise by analyzing fund ownership. Consistent with investor portfolio-level evidence in Colliard and Hoffmann (2017), I find an increase in long-term ownership in treated firms after the FTT imposition compared with control firms.

Secondly, investment theory predicts that firms invest more as opportunities improve, but short-termism may lead managers to forgo positive NPV projects, resulting in lower investment levels and reduced sensitivity to changes in investment opportunities (Asker et al. 2015). If the FTT influences corporate investment by mitigating short-termism, we should observe not only higher investment levels, as shown above, but also greater sensitivity to growth opportunities. Conversely, if the FTT hampers capital provision and allocation in financial markets, investment sensitivity may stagnate or even decline. I find that treated firms, particularly those with a significant increase in long-term ownership, improve their investment sensitivity. This lends further support to the alleviated short-termism channel.

Based on my previous findings, a natural question to ask is whether the increased investments are value-enhancing or value-destroying. If the FTT increases investments through the beneficial role of long-term investors, we should observe increases in shareholder value. However, the increased investments may reflect managerial empire-building if the FTT undermines corporate governance by reducing stock liquidity (Maug 1998; Admati and Pfleiderer 2009; Edmans et al. 2013). I investigate this possibility by looking at acquisition activities since managers who have empire-building preferences tend to overinvest and be attracted to acquisitions (Amihud and Lev 1981; Stein 2003). Acquisitions are also one of the biggest corporate investments, examining effects of the FTT on acquisition activities is thus in itself interesting. I find that treated firms are more likely to make acquisitions without detriment to the deals' quality. In particular, treated firms with a significant increase in long-term ownership even make better deals. These results are in line with the alleviated short-termism explanation rather than the empire building one.[5]

This paper contributes to the corporate governance literature on short-termism (Hackbarth et al. 2022; Terry 2023; Dow et al. 2024). Prior studies have documented evidence on the prevalence of short-termism in the United States (Graham et al. 2005; Asker et al. 2015; Edmans, Fang, et al. 2017) with short-term investors being associated with pressure to cut research and development expenditures to boost earnings (Bushee 1998) and worse merger performance (Gaspar et al. 2005; Chen, Harford, et al. 2007). I examine the issue from a "corrective measure" angle in EU countries. My findings, which suggest that the FTT can help mitigate short-termism and related investment distortions, contribute to the broader understanding of how different ownership structures—such as family firms (Kappes and Schmid 2013), industrial foundations (Thomsen et al. 2018), and sovereign wealth funds (Chen et al. 2022)—affect corporate behaviors.

I also add to the literature on the costs and benefits of FTTs. Existing empirical work mainly focuses on the negative effects of FTTs on financial market quality (Becchetti et al. 2014; Colliard and Hoffmann 2017) and costs of capital (Umlauf 1993; Fraichot 2017). Recent theoretical works show that FTTs can be beneficial under certain conditions (Dieler et al. 2023; Dávila 2023). Indeed, built on previous evidence that FTTs cause a shift from short-term to long-term investors (Colliard and Hoffmann 2017) and reduce price volatility caused by noise traders (Deng et al. 2018), I document evidence suggesting that FTTs can mitigate short-termism and create a more conducive environment for corporate investment. However, it is noteworthy that FTTs may not benefit firms facing financial constraints or economic crises. The findings are informative to the discussion in many countries on the FTT design and introduction.

2 | Institutional Setting, Literature Review, and Hypothesis Development

2.1 | French Policy

Being a proponent of imposing the FTT at the EU level, France introduced a national FTT of 20 basis points on stock purchases on August 1, 2012 as a pilot program.[6] The purchases are liable for the tax if they result in an actual transfer of share ownership,

which means intraday 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, intragroup 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.[7] 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 canceled orders. I believe that the effect of these two taxes does not contaminate my analysis because they do not affect firms directly and their actual impact seems trivial.[8]

2.2 | Literature Review and Hypothesis Development

Since the FTT can alter both incentives and composition of shareholders, its impact on corporate investment can be nuanced. On the one hand, the FTT may harm investments due to increased shareholder transaction costs. First, critics argue that FTTs raise transaction costs and hence costs of capital, thereby discouraging corporate investment (Schwert and Seguin 1993; Lendvai et al. 2012). Investors demand higher returns to compensate for the increased transaction costs including the explicit tax payment and implicit lower liquidity (Amihud and Mendelson 1986). Empirical evidence from Sweden and France suggests that the introduction of transaction taxes led to higher costs of capital for firms (Umlauf 1993; Fraichot 2017). As a result, marginal investment projects may be rejected due to increased required returns that render their net present value (NPV) negative.

Second, the quality of investment may decline if the increased transaction costs weaken corporate governance. Theory suggests that by raising the cost of shareholder entry and the purchase of additional shares, FTTs reduce the potential gains from intervention and thus discourage shareholders from intervening in the first place (Maug 1998). Moreover, by increasing the cost of selling shares, FTTs diminish the disciplinary effect of exit threats (Admati and Pfleiderer 2009; Edmans et al. 2013). With less effective governance, whether through voice or exit, self-interested managers may pursue value-destroying investments that deviate from the firm's most productive opportunities.

H1a: The FTT decreases corporate investment by increasing shareholder transaction costs.

On the other hand, FTTs can increase corporate investment by increasing the shareholder investment horizon and hence reducing short-termism. Asset pricing theories posit that a FTT can extend shareholder investment horizon because (i) it penalizes short-term investors with frequent trading more than long-term investors, making short-term investors sell some of their holdings in affected assets to long-term investors (Amihud and Mendelson 1986) and (ii) investors reduce their trading frequency as a response to higher transaction costs (Constantinides 1986). In the French market, blue-chip companies are very attractive to Anglo–American funds and short-term impatient investors (Goyer 2003, 2011). Consistent with this fact and aforementioned theories, Colliard and Hoffmann (2017) find evidence that the French FTT shifts the investor horizon, especially among large liquid stocks. The resulting lengthened shareholder horizon can help alleviate short-termism that comes from both financial market and management as follows.

Regarding the financial market, because short-term investors prefer short-term price appreciation, they pressure managers to pursue myopic goals and forgo long-run investments. Stein (1989) explicitly shows that when managers act on behalf of not only long-term shareholders but also short-term investors; they put some weight on current stock prices, which creates the incentive to increase current earnings at the expense of long-term investments. According to a survey by Graham et al. (2005), managers of public firms put great emphasis on meeting or beating short-term earnings benchmarks and they are willing to forgo positive NPV projects to boost current earnings. Several empirical studies find that the short-term focus of institutional investors pressures firms to cut investments (e.g. Bushee 1998; Kappes and Schmid 2013; Agarwal et al. 2017). Stiglitz (1989) and Summers and Summers (1989) contend 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 make more investments.

Under the agency framework, 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. 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. In early 2000s, large French firms adopted managerial performance incentives without enhancing financial transparency, which might enable managers to undertake strategies to increase short-term stock prices (Goyer 2003). Summers and Summers (1989) argue that the FTT that ties shareholders to firms may induce them to actively monitor managers since shareholders with longer horizons have naturally lower monitoring cost functions and higher monitoring benefits (Chen, Harford, et al. 2007). Therefore, the FTT can potentially lead to more active governance, inducing mangers to exert effort and make productive investments.

H1b: The FTT increases corporate investment by decreasing short-termism.

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 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 are 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, and hence, the treatment varies both across firms (i.e., treated vs. untreated firms) and over time (i.e., treated firms become treated in different years).[9] The latter variation is akin to a staggered implementation and helps mitigate the confounding effect of any particular year.

I obtain accounting and financial data of French firms and Dutch and Luxembourg firms as controls from Compustat Global over the period 2008–2017.[10] I have unbalanced panel data because for some variables, there are a number of observations with missing values.

Table A1 includes definitions of all variables. I first construct two measures of investment: *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.[11] Observations with missing values in both *Capex* and *R&D* are eliminated. I also calculate an aggregate measure, *Capex+R&D*, by dividing the sum of capital expenditures and R&D expenses by lagged total assets. To avoid losing a significant amount of observations, I set missing R&D to zero, following Lev and Radhakrishnan (2005) and Peters and Taylor (2017) among others, before adding to capital expenditures. Summary statistics in Table 1 shows that capital expenditures and R&D expenses account for, on average, 4.7% and 3.9% of total assets, respectively. The aggregate measure, *Capex+R&D*, has the mean of 6.8%.

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. I 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. I winsorize each variable at the 1st and 99th percentiles by setting all observations outside this range to the 1st and 99th percentile values, respectively. Panel A of Table 1 shows that firms in the sample are big with the median total assets of around 6.4 billion EUR and *Tobin's q* of 1.922. They are profitable firms with the average ROA of 11.4% and cash flows of 7.5%. Their debt on average accounts for 25.7% of total assets.

3.2 | Empirical Strategy

I employ a DiDs 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.[12] 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 optimal growth. Becchetti et al. (2014) observe no price manipulations with stocks moving across the threshold around the introduction date to evade the tax.[13] Nevertheless, I graphically inspect the distribution of firms around the threshold to further validate my 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 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), I use Dutch and Luxembourg listed firms with capitalization above 1 billion EUR at the end of 2011 as control firms. This control group is comprised of 52 Dutch firms and 19 Luxembourg firms with available data. 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 investor behaviors, which in turn may affect corporate investment behavior. Euronext's Supplemental Liquidity Provider also generates an important cross-sectional variation in investor horizons for the tests of mechanism through which the FTT affects corporate investments. Furthermore, because these three countries are members of Eurozone and have geographical proximity, I expect certain similarities in investment behaviors between the two groups before the FTT introduction.[14] Results are robust to alternative control groups such as matched firms or French firms below the threshold as discussed in Section 4.2.

Panel B Table 1 compare control groups and the treatment group along several dimensions before the FTT was introduced in 2012. Compared with the control group, the treatment group is slightly bigger in *Size* but has lower *Tobin's q, Cash low, ROA*, and *Leverage*. In order to deal with these ex ante differences, my empirical model includes control variables and their interactions with time.

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

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

In Equation (1), *Investment*, as already defined, is the level of capital expenditures or R&D expenses or the sum of the two, scaled by lagged total assets. $Tax_{i,t}$ is a dummy variable, equal to 1 for treated firms in the years they are treated, and 0 otherwise. Firm and year-fixed effects are included. Because the treated group and control groups are different in some characteristics that are known to affect investments, I control for these characteristics by adding *Size, Tobin's q, Cash flow, ROA, Leverage*, and their interactions

TABLE 1 | Summary statistics.

Panel A. Full sample						
	N	**Mean**	**S.D**	**Q1**	**Median**	**Q3**
Capex+R&D	1596	0.068	0.065	0.032	0.051	0.081
Capex	1596	0.047	0.042	0.021	0.037	0.059
R&D	839	0.039	0.068	0.005	0.018	0.041
Size	1396	8.844	1.520	7.748	8.765	10.051
Tobin's *q*	1396	1.922	2.696	1.065	1.274	1.643
Cash flow	1396	0.075	0.059	0.044	0.073	0.105
ROA	1396	0.114	0.062	0.076	0.110	0.143
Leverage	1396	0.257	0.145	0.152	0.247	0.352

Panel B. Treated firms vs. control firms						
	Control firms		**Treated firms**			
	N	**Mean**	***N***	**Mean**	**Difference**	***T*-statistic**
Capex+R&D	254	0.085	450	0.068	0.017	2.792
Capex	254	0.069	450	0.044	0.025	5.529
R&D	108	0.038	260	0.042	−0.004	−0.544
Size	254	8.113	452	8.697	−0.584	−4.033
Tobin's *q*	172	2.454	428	1.365	1.089	4.521
Cash flow	250	0.095	448	0.070	0.025	3.438
ROA	254	0.135	452	0.106	0.029	4.516
Leverage	254	0.300	452	0.251	0.049	3.556

Note: This table presents summary statistics. Panel A uses the full sample consisting of treated firms and control firms. Panel B compares characteristics of treated firms and control firms over the period 2008–2011, that is, before the introduction of the FTT. *Size*, *Tobin's q*, *Cash flow*, *ROA*, and *Leverage* are computed at *t*, while *Capex*, *R&D*, and *Capex+R&D* are computed at *t+1*. *Capex* and *R&D* are computed as capital expenditures and research and development expenses scaled by total assets at the end of the previous year, respectively. *Capex+R&D* is the sum of capital expenditures and R&D expenses over lagged total assets with missing values of R&D being replaced with zeros. *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. *ROA* equals operating income before depreciation divided by total assets. *Leverage* is the sum of debt in current liabilities and long-term debt divided by total assets.

with time. 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 changes in investments.[15] For inference, I use robust standard errors clustered by firms.

4 | Main Empirical Results

4.1 | Effects on Corporate Investments

Table 2 reports regression results. Panel A reports the aggregate effect on investment. The coefficient of variable *Tax* is positive in all specifications. In columns (1) and (2), the dependent variable is *Capex+R&D* with the latter including control variables. The estimates on *Tax* in these first two specifications are positive, statistically significant at 1% and 5% level, respectively. The estimate in column (2) suggests that treated firms increase their investments on average by approximately 93 basis points of total assets after being affected by the FTT relative to control firms.[16]

The coefficient of *Capex* on *Tax* in columns (3) and (4) is positive and statistically significant regardless of whether control variables are included or not. In columns (5) and (6), 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 either column.

While the evidence indicates that the FTT has an average positive effect on corporate investments, we may observe a negative effect on investments due to increased costs of capital among firms that have difficulties in raising funds. To investigate this issue, I split the sample based on firms' *ex ante* financial constraints. I use the KZ index constructed by Lamont et al. (2001) based on Kaplan and Zingales (1997) as the measure of financial constraints. A firm is classified as financially constrained if its KZ index value is below the median in the sample.

Panel B of Table 2 shows results for constrained and unconstrained firms. The estimates on *Tax* for constrained firms in columns (1)–(3) are not statistically significant. It can be

TABLE 2 | Impact of the FTT on corporate investment.

Panel A. Aggregate effect

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex+R&D**	**Capex**	**Capex**	**R&D**	**R&D**
Tax	0.0130***	0.0093**	0.0128***	0.0088**	0.0013	0.0025
	(0.0044)	(0.0040)	(0.0039)	(0.0037)	(0.0039)	(0.0019)
Size		−0.0113		−0.0067		−0.0137***
		(0.0092)		(0.0080)		(0.0041)
Tobin's *q*		0.0096**		0.0076**		0.0094**
		(0.0043)		(0.0034)		(0.0044)
Cash flow		0.1937**		0.1691*		0.0293
		(0.0857)		(0.0906)		(0.0187)
ROA		−0.0005		0.0346		−0.0675
		(0.0860)		(0.0801)		(0.0446)
Leverage		−0.0141		−0.0112		0.0083
		(0.0258)		(0.0249)		(0.0115)
Constant	0.0640***	0.1228	0.0434***	0.0681	0.0389***	0.1495***
	(0.0013)	(0.0880)	(0.0012)	(0.0758)	(0.0014)	(0.0378)
Observations	1596	1396	1596	1396	839	771
Adjusted *R*-squared	0.8127	0.8058	0.6345	0.6961	0.9567	0.9673
Controls x Year	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Financially constrained vs. unconstrained firms

	Constrained			Unconstrained		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Tax	0.0072	0.0082	−0.0020	0.0110**	0.0056*	0.0074**
	(0.0052)	(0.0051)	(0.0018)	(0.0043)	(0.0029)	(0.0031)
Constant	0.2972***	0.2748***	0.0806**	0.1991***	0.0420	0.1923***
	(0.0738)	(0.0698)	(0.0376)	(0.0742)	(0.0524)	(0.0394)
Observations	578	578	312	594	594	357
Adjusted *R*-squared	0.7715	0.7405	0.9452	0.8818	0.6940	0.9568
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents regression results for the models examining the impact of the FTT on corporate investment. Panel A reports the aggregate effect. Specifications (1), (3), and (5) exclude control variables; remaining specifications include control variables. In Columns (1) and (2), the dependent variable is *Capex +R&D*, Columns (3) and (4) *Capex*, and Columns (5) and (6) *R&D*. Panel B summarizes results when the sample is split based on the ex ante financial constraint measured by KZ index as in Lamont et al. (2001). Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

that the FTT does not affect investments of financially constrained firms or that the negative effect of increased costs of capital is canceled out by the positive effect of alleviated short-termism. Results in columns (4)–(6) indicate that the FTT has a positive effect on capital expenditures and R&D spending in unconstrained firms. The evidence suggests that firms that have available funds or easy access to financing may still underinvest *ex ante* due to short-termism, and as the FTT can mitigate this short-termism problem, we observe increases in investment *ex post*.

In general, I find evidence suggesting that firms subject to the FTT increase capital expenditures and R&D expenses compared with unaffected firms after the tax imposition on purchases of their stocks. These results support the hypothesis that the FTT increases corporate investment by alleviating short-termism.

4.2 | Robustness

4.2.1 | Other Control Groups

In the first set of robustness tests, I use French firms not affected by the FTT with market capitalization above 0.2 billion EUR as an alternative control group. Table A2 reports regression results using this French control group. The estimate on *Tax* is positive and significant in all columns of Panel A. Column (2) indicates an increase in investments by 113 basis points of total assets, comparable with that obtained using non-French controls. Panel B summarizes the heterogeneous effect. Similar to the results using non-French control, I find no significant effect of the FTT on investment among firms with the *ex ante* financial constraint. The positive effect on investments is mainly driven by unconstrained firms as all estimates on *Tax* for these firms are large and statistically significant.

Second, I use cutoffs other than 0.2 billion EUR to choose the French control group. Columns (2) and (3) of Table A3 in summarize regression results using the cutoffs of 0.1 billion EUR and 0.3 billion EUR. Again, I find evidence of a positive effect of the FTT on investments. Column (4) presents the result when I limit the 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, I obtain the estimate of *Capex+R&D* on *Tax* equal to 94 basis points. The effect is significant at 10% level and also of similar magnitude to those derived from main specifications.[17]

Next, I use propensity score matching to form the control group. Instead of choosing non-French firms with capitalization above 1 billion EUR at the end of 2011, I 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. I obtain 74 matches of 58 unique firms because I allow for replacement, that is, one control firm can be matched with more than one treated firm. Panel A of Table A3 in Appendix shows that treated firms and matched firms are similar in covariates that are used for matching. Therefore, in regressions using the matched sample, I do not include their interactions with time. From Panel B, we can see that the coefficient of *Capex+R&D* on *Tax* is positive, statistically significant at 5% level and of similar magnitude with the one obtained using non-French control firms.

4.2.2 | Placebo Tests

One may argue that the above findings can be explained by the possibility that a few years after the financial crisis, big firms were able to recover better and invested more than small firms. Though the analysis employing matched firms should already resolve at least in part this concern, I further conduct two placebo tests. Specifically, the first test uses the sample of treated firms and a pseudo FTT. This pseudo FTT is imposed on firms with market capitalization above an arbitrary threshold of 5 billion EUR since 2012. The second test uses the sample of non-French firms (Dutch and Luxembourg firms with capitalization above 0.2 billion EUR at the end of 2011) and a pseudo FTT mimicking the French FTT.

Panel A in Table A4 summarizes the results. Columns (1)–(3) report results of the first test and Columns (4)–(6) the second test. The estimates on *Pseudo-Tax* in all columns are statistically insignificant. In other words, I do not observe a similar difference in investment behavior between pseudo treatment (relatively big) and control (relatively small) groups.

Another concern is that the French Florange Act (2014) which gives double voting rights to long-term shareholders can explain my findings. Imperatore and Pope (2024) find that Italian family firms that adopt the tenured-based voting right invest more than family firms without it. It might be the case that it is the Florange Act rather than the FTT that triggered changes in behaviors of investors and increases in corporate investments. I believe that this is very unlikely for several reasons. Firstly, any French listed firm can be affected by this law; hence, it fails to explain the changes in firms subject to the FTT compared with the French control group. Secondly, the facts that (i) many firms had already adopted this policy before 2014 and (ii) firms can opt out explain partly the minor change after the law came into force. For example, among CAC 40 firms, 22 members had double-voting rights before the law, with just four additional firms after the law became effective.[18] I further conduct a placebo test using the data sample from 2012–2017 (after FTT) instead of the original sample from 2008 to 2017. In this placebo test, the variable of interest is *Florange Act*, equal to 1 for the treated firms in years from 2014 onward. If the Florage Act explains the increases in investments, the estimates on *Florange Act* should be positive and significant.

Panel B in Table A4 summarizes the results. Columns (1)–(3) report results using the non-French control group and Columns (4)–(6) the French control group. The estimates on *Florange Act* in all columns are statistically insignificant. In other words, I do not observe a similar difference in investment behavior between treatment and control groups around the 2014 when the Florange Act was passed.

Finally, the FTT should affect investment behavior only after its introduction, not before. To test this, I examine the dynamics

of the FTT's effect on investment. Table A5 reports no significant differences in investment trends between the treatment and control groups prior to the FTT implementation. The difference becomes positive and statistically significant only after the treatment group is exposed to the FTT. This finding supports the parallel trends assumption underlying the DiDs framework that in the absence of the French FTT, the investment trends of the two groups would have evolved similarly.

4.2.3 | The Italian FTT

In the previous subsection, I show that there are no parallel changes in corporate investment in the countries without a FTT. On the other hand, if the increase in investment in French treated firms is indeed due to the FTT, I expect to see a similar effect in other countries when they introduced their FTTs, though the magnitude of the effect may differ due to some variations in tax designs. The Italian FTT introduction in March 2013 provides a suitable setting for this test. Specifically, transactions of shares issued by Italian resident companies with a capitalization equal to or higher than 500 million EUR are to be taxed at a rate of 0.12% in 2013 (0.1% in subsequent years) if executed on regulated markets and on multilateral trading facilities and 0.22% in 2013 (0.2% in subsequent years) if executed over the counter.

Panel A of Table A6 reports regression results using different samples of Italian firms with capitalizations around the threshold of 500 million EUR. Columns (1) and (2) use all treated firms and firms with a capitalization above 100 million EUR at the end of 2012 as controls. Columns (3) and (4) use treated firms with a capitalization below 2,000 million EUR and firms with a capitalization above 100 million EUR at the end of 2012 as controls. Similarly, Columns (5) and (6) use the range from 50 to 1,500 million EUR, and Columns (7) and (8) use 50–1,000 million EUR. All the estimates of *Capex* or *R&D* on *Tax* are positive. The estimates of *Capex* on *Tax* are statistically insignificant. The estimates of *R&D* on *Tax* in Columns (4), (6), and (8) are statistically significant at 10% level or lower, depending on the range used. These results suggest that the Italian FTT has a similar positive effect on corporate investment, particularly R&D, to the French FTT, though the magnitude of the effect of the former seems smaller than that of the latter.

5 | Mechanism

5.1 | Does the FTT Induce Long-Term Ownership?

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

I do so by using Factset's fund ownership data from 2009 to 2017.[19] Because funds may report monthly or quarterly and on different dates, I only keep the last report in a given calendar quarter. I 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. Panel A of Table 3 summarizes statistics on ownership by funds (in %) with different portfolio turnovers. Long-term ownership in a given firm is defined as the total ownership by very low, low and medium (turnover) funds. I also measure long-term capital, defined as the total capital held by long-term investors in a given firm divided by its country's stock market capitalization.[20] I then examine the change in long-term ownership and capital of treated firms after the FTT imposition compared with the corresponding change in control firms. Regressions include firm control variables, quarter, and firm fixed effects.

Panel B of Table 3 summarizes regression results with long-term ownership being used as the dependent variable in Columns (1)–(3). The coefficient of *Tax* in column (1) is positive and statistically significant at 5% level, suggesting an overall increase in long-term ownership in treated firms after the FTT imposition compared with control firms. The estimate indicates that long-term ownership increases by approximately 13%.[21]

As the theory (Amihud and Mendelson 1986) and evidence (Goyer 2011, 2) suggest that short-term investors are heavily concentrated in more liquid stocks, we may see a stronger effect among firms with *ex ante* higher liquidity. To check if this is the case, I make use of a natural partitioning that a group of stocks are included in Euronext's supplementary liquidity provider (SLP) program and hence more liquid than those that are not in the program. Columns (2) compares treated SLP firms to control SLP firms, and Column (3) compares treated non-SLP firms to control non-SLP firms. This effect, indeed, 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.

In Columns (4)–(6), the dependent variable is long-term capital. The results show that the FTT increases long-term capital. And again, while the estimate is both statistically and economically significant for SLP firms, the effect for non-SLP firms is insignificant. These results are consistent with implications from Amihud and Mendelson (1986) and portfolio-level evidence in Colliard and Hoffmann (2017). The intuition is that because the holdings of SLP stocks by short-term investors before the FTT introduction are much higher than those of non-SLP stocks, 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.[22]

Therefore, if the FTT indeed affects investment via the lessened short-termism channel, it is more likely to find supporting evidence among SLP firms that experience a significant increase in long-term ownership. I make use of the heterogeneity and discuss results for SLP versus non-SLP firms in the subsequent analysis in this section.

TABLE 3 | Effects of the FTT on investor horizon.

Panel A. Summary statistics

	N	Mean	S.D	Min	Median	Max
Very low turnover	5504	2.043	2.440	0.000	1.653	50.474
Low turnover	5504	1.523	1.721	0.000	1.007	32.816
Medium turnover	5504	0.693	0.802	0.000	0.488	7.988
High turnover	5504	0.176	0.236	0.000	0.101	2.688
Very high turnover	5504	0.179	0.307	0.000	0.100	11.495

Panel B: Regression results

	Long-term ownership			Long-term capital		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**All firms**	**SLP firms**	**Non-SLP firms**	**All firms**	**SLP firms**	**Non-SLP firms**
Tax	0.5583**	0.8945***	0.4364	0.0179***	0.0516***	0.0067
	(0.2609)	(0.2612)	(0.3740)	(0.0064)	(0.0097)	(0.0062)
Constant	1.0194	0.4450	2.2871	−0.1922*	−0.6001***	−0.1611
	(2.5635)	(4.5656)	(2.9841)	(0.1086)	(0.1603)	(0.1234)
Observations	5504	2152	3352	5504	2152	3352
Adj *R*-squared	0.5233	0.7872	0.4545	0.7993	0.8264	0.7745
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents analysis on the impact of the FTT on investor horizon. Panel A summarizes statistics on ownership by funds (in %) with different portfolio turnovers in the full sample of treated firms and control firms. In Factset database, funds are classified into five groups. 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 and 1–2 years, respectively, while high and very high funds have holding periods of less than 1 year. Panel B summarizes the regressions. The dependent variable in Columns (1)–(3) is long-term ownership, defined as total ownership in a firm by funds with very low, low, and medium turnovers, In Columns (4)–(6) the dependent variable is total long-term capital in a firm divided by total its country's stock market capitalization. Columns (1) and (4) compare all treated firms to all control firms, Columns (2) and (5) treated SLP firms to control SLP firms, and Columns (3) and (6) treated non-SLP firms to control non-SLP firms. Robust standard errors clustered by firm are in parentheses. Control variables include size, Tobin's *q*, cashflow, ROA, and leverage. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

5.2 | Effects on Investment Sensitivity

I 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, I test another prediction regarding investment sensitivity under short-termism theory. According to the 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, I predict that affected firms would increase not only their investment level but also investment sensitivity to changes in investment opportunities. However, if the FTT hampers capital provision and allocation in financial markets, investment sensitivity may stagnate or even decline. I find that treated firms, particularly those with a significant increase in long-term ownership, improve their investment sensitivity.

I test this by employing the following model:

$$\begin{aligned} Investment_{i,t+1} &= \alpha_0 + \beta_1 Tax_{i,t} + \beta_2 Tax_{i,t} \times InvOp_{j,t} + \beta_3 InvOp_{j,t} \\ &\quad + \beta_4 InvOp_{j,t} \times Treated_i + \beta_5 InvOp_{j,t} \times \tau_t + \gamma' X \\ &\quad + \theta'(X \times \tau_t) + \tau_t + \delta_i + \epsilon_{i,t+1} \end{aligned} \tag{2}$$

In Equation (2), *Investment* and *Tax* are as previously defined. Following Badertscher et al. (2013) and Asker et al. (2015), I use *InvOp*, which is the size-weighted average q of all firms in each four-digit SIC industry, as a proxy for the investment opportunities available to each firm in the industry. For robustness, I also use the industry average sales growth as an alternative measure of investment opportunities. The coefficient of interest is that of the interaction between the DiDs term *Tax* and *InvOp*, that is, β_2. A negative coefficient implies

a decrease in investment sensitivity to changes in growth opportunities in treated firms after the FTT compared with control firms. Conversely, a positive coefficient implies an improvement in investment sensitivity.

Table 4 reports regression results. For the sake of brevity, I report only estimates for β_1 and β_2. Panel A uses the industry q, and panel B uses industry sales growth. For SLP firms, the coefficient of *Capex+R&D* on the interaction term, β_2, in column (1) is positive and significant. When the two types of investments are investigated separately in Columns (2) and (3), the coefficient of interest is positive and significant at 5% level for *R&D* and marginally significant for *Capex*. These results suggest that investments of treated SLP firms become more sensitive to changes in investment opportunities after the FTT imposition compared with control SLP firms. Meanwhile, I find little evidence of a similar positive effect on investment sensitivity among non-SLP firms as shown in Columns (4)–(6).

In general, the evidence suggests that the FTT affects investment sensitivity positively among SLP firms—those that experience a significant increase in long-term ownership—is in line with the alleviated short-termism mechanism. As I do not find a significant increase in long-term ownership in non-SLP firms, this mechanism may be weak among these firms. This can explain why I find little evidence of a similar positive effect on investment sensitivity among non-SLP firms.[23]

5.3 | Effect on Acquisition Activities

Based on my previous findings, a natural question to ask is whether the increased investments are value-enhancing or value-destroying. If the FTT increases investments through the beneficial role of long-term investors, we should observe increases in shareholder value. However, the increased investments may reflect managerial empire-building if the FTT undermines corporate governance by reducing stock liquidity (Maug 1998; Admati and Pfleiderer 2009; Edmans et al. 2013). I investigate this possibility by looking at acquisition activities since managers who have empire-building preferences tend to overinvest and be attracted to acquisitions (Amihud and Lev 1981; Stein 2003). Acquisitions are also one of the biggest corporate investments, examining effects of the FTT on acquisition activities is thus in itself interesting.

Under the empire-building explanation, managers are 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.[24] 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 prevent bad deals from being carried out (Gaspar et al. 2005).

5.3.1 | Probability of Making Acquisitions

I first investigate how the FTT affects the likelihood that firms make acquisitions. I use SDC Mergers and Acquisitions database to extract deals announced between 2008 to 2017. Following Gaspar et al. (2005) and Huang et al. (2014), I keep only deals with known outcome, that is, either completed or withdrawn, and exclude all transactions labeled as spinoffs, self-tender offers, repurchases, or privatizations. To examine the likelihood of making acquisitions, I use the linear probability model.[25] 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, there are 2046 firm-year observations with about 46% having at least one acquisition (Panel A, Table 5). I include the same set of control variables as before, their interactions with time, and industry and year-fixed effects.[26]

Panel B of Table 5 reports regression results for the likelihood of making acquisitions. Columns (1) and (2) summarize results of regressions for SLP firms that exclude and include control variables, respectively. The estimates on *Tax* in both columns are positive, significant, and of similar magnitude. The coefficient of interest in Column (2) is equal to 0.1601 and statistically significant at 5%, implying that the likelihood of making acquisitions by treated SLP firms increases by 16.01 percentage points after the FTT imposition compared with control firms. Regarding non-SLP firms, results in Columns (3) and (4) show that the estimates on *Tax* are much smaller and statistically insignificant. The evidence points towards 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, I next analyze market reactions upon their announcements.

5.3.2 | Acquisition Performance

To evaluate the quality of acquisition investments, I 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.[27] Using the estimated parameters, I then calculate the cumulative abnormal returns over the 5-day $(-2, +2)$ event window centered on the announcement date. Panel A of Table 5 shows that there are 775 deals completed with estimated CARs and other deal information available, and the average CAR is 0.3%. Similar to Roosenboom et al. (2014), I include controls that are acquired 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, and equity payment).

Panel C of Table 5 reports regression results. Results for SLP firms are summarized in Columns (1) and (2). The coefficient of *Tax* is positive and statistically in both columns. These results suggest the positive impact of long-term shareholders on acquisition performance rather than the negative effect under

TABLE 4 | Effects of the FTT on investment sensitivity.

Panel A. Tobin's *q*

	SLP firms			Non-SLP firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Tax	−0.0280**	−0.0140	−0.0126**	−0.0024	0.0020	−0.0072
	(0.0123)	(0.0154)	(0.0061)	(0.0082)	(0.0081)	(0.0051)
Tax*Tobin's *q*	0.0298***	0.0185	0.0114**	0.0097*	0.0069	0.0048
	(0.0078)	(0.0113)	(0.0056)	(0.0055)	(0.0049)	(0.0036)
Constant	0.2253**	0.1815**	0.0775*	0.0988	0.0423	0.1965***
	(0.0860)	(0.0801)	(0.0434)	(0.0938)	(0.0838)	(0.0466)
Observations	598	598	390	798	798	381
Adjusted *R*-squared	0.8836	0.8291	0.9707	0.7627	0.6070	0.9702
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Sales growth

	SLP firms			Non-SLP firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Tax	0.0092	0.0099*	0.0001	0.0080*	0.0084*	−0.0002
	(0.0057)	(0.0053)	(0.0026)	(0.0044)	(0.0043)	(0.0018)
Tax*Sales growth	0.0565**	0.0304	0.0313**	−0.0066	−0.0030	−0.0097
	(0.0228)	(0.0214)	(0.0127)	(0.0267)	(0.0256)	(0.0126)
Constant	0.2871***	0.2095***	0.1140**	0.0990	0.0485	0.1925***
	(0.0879)	(0.0743)	(0.0510)	(0.0912)	(0.0818)	(0.0442)
Observations	598	598	390	798	798	381
Adjusted *R*-squared	0.8835	0.8356	0.9712	0.7868	0.6499	0.9711
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents analyses of the impact of the FTT on investment sensitivity to changes in investment opportunities using model 2. Panel A uses the industry Tobin's *q* as a proxy for investment opportunities available to firms in the industry. Panel B uses the average industry sales growth as a proxy for investment opportunities. The estimates on controls and other interaction terms in model 2 are not reported for brevity. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

empire building explanation. The estimate in Column (2) indicates that 5-day CAR of treated SLP firms increased by 1.4% after the FTT compared with control SLP firms. Results in Columns (3) and (4) show that the estimates on *Tax* are positive but not significant for non-SLP firms. Combined with the evidence from Section 5.3.1, I find that affected firms, especially SLP firms, are more likely to make acquisition investments after the FTT imposition without detriment to the deals' quality. These results seem consistent with the effect of alleviated short-termism and inconsistent with managerial empire building.

All in all, the fact that I find positive effect on investment sensitivity and acquisition activities, especially among firms in which I expect to observe the stronger impact of long-term ownership, lends support for the existence of the short-termism

TABLE 5 | Effects of the FTT on acquisition activities.

Panel A. Summary statistics

	N	Mean	S.D	Min	Median	Max
AcqDummy	2046	0.461	0.499	0	0	1
CAR(−2, +2)	775	0.003	0.038	−0.110	0.002	0.120
Deal value	775	0.048	0.097	0.000	0.012	0.580
Tender offer	775	0.115	0.319	0	0	1
Public	775	0.258	0.438	0	0	1
Subsidiary	775	0.445	0.497	0	0	1
Cash	775	0.095	0.294	0	0	1
Equity	775	0.013	0.113	0	0	1

Panel B. Likelihood of making acquisition

	SLP firms		Non-SLP firms	
	(1)	(2)	(3)	(4)
Variables	**AcqDummy**	**AcqDummy**	**AcqDummy**	**AcqDummy**
Tax	0.1736***	0.1601**	0.0682	0.0375
	(0.0630)	(0.0624)	(0.0506)	(0.0619)
Treated	0.1151	0.0669	0.1853***	0.0899
	(0.0699)	(0.0698)	(0.0520)	(0.0718)
Constant	0.5371***	−0.3088	0.2271***	−0.1759
	(0.0456)	(0.3101)	(0.0347)	(0.1754)
Observations	670	667	1376	1040
Adjusted R-squared	0.1706	0.1777	0.1600	0.1529
Controls	No	Yes	No	Yes
Controls x Year	No	Yes	No	Yes
Year FE, Industry FE	Yes	Yes	Yes	Yes

Panel C. Acquisition performance

	SLP firms		Non-SLP firms	
	(1)	(2)	(3)	(4)
Variables	CAR(−2, +2)	CAR(−2, +2)	CAR(−2, +2)	CAR(−2, +2)
Tax	0.0195**	0.0140*	0.0041	0.0051
	(0.0095)	(0.0083)	(0.0098)	(0.0139)
Treated	−0.0084	−0.0042	−0.0014	−0.0028
	(0.0079)	(0.0068)	(0.0096)	(0.0144)
Constant	0.0023	0.1931***	−0.0137	0.0896
	(0.0067)	(0.0518)	(0.0112)	(0.0702)
Observations	488	488	287	280
Adjusted R-squared	0.0419	0.0698	0.0912	0.1085
Deal controls	Yes	Yes	Yes	Yes
Firm controls	No	Yes	No	Yes
Firm controls x Year	No	Yes	No	Yes
Year FE, Industry FE	Yes	Yes	Yes	Yes

Note: This table presents analyses of effects of FTT on acquisition activities. *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. Firm control variables include size, Tobin's *q*, cash flow, leverage, and ROA. Deal control variables include relative deal value, and binary variables for target firm public status, target subsidiary status, tender offer, cash payment, equity payment. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

mechanism and that this mechanism prevails in the expected group of firms.

In additional analysis, I look for further evidence that the FTT relieves short-termism by examining dividend payout and earnings management—behaviors linked to short-termism. First, when the market takes announced dividends as a signal of observed earnings, managers are tempting to pay excessive dividends to increase the stock price, even if that means cutting back on investment (Miller and Rock 1985). Indeed, public firms exhibit higher payout ratios than private firms, reflecting short-termist pressure to prioritize payouts over positive NPV investments (Asker et al. 2015). Table A7 shows that treated firms reduce dividend payout, consistent with keeping funds to finance expanded investments. Second, the use of simple earnings matrices by financial markets, especially short-term investors, in evaluating managers' performance puts pressure on managers to manipulate earnings and meet targets. Table A8 shows that treated firms reduce earnings management and are less likely to beat earnings targets by tiny margins, consistent with less earnings pressure from short-term investors.

6 | Conclusions

I use the French introduction of a FTT on stock purchases in 2012 to evaluate its impact on corporate investment behavior. Employing a DiDs approach, I find little evidence on the FTT's most concerning drawback, namely a decrease in investment due to the higher cost of capital. Rather, the evidence suggests the FTT induces long-termism and boosts corporate investments.

It is important to note the heterogeneous effects of the FTT on different types of firms. In particular, financially constrained firms or firms with relatively low stock liquidity are not benefited. Therefore, FTTs could prove counterproductive in economic downturns and impede governance mechanisms that rely on shareholder exit and blockholder activism. The policy debate on the FTT introduction and design should take into account the costs and benefits on firm investment and shareholder value as well as the differences among firms.

The evidence on the effects of the FTT on corporate investment suggests that this tax has real and meaningful implications for the broader economy. While this paper focuses specifically on investment behavior, future research could explore other corporate policies and outcomes to further illuminate the trade-offs associated with FTTs. For example, although I document an increase in R&D spending among treated firms following the imposition of the tax, examining innovation outputs, such as patents or citations, could offer valuable insights into whether the FTT enhances long-term corporate value. Similarly, the finding that treated firms are more likely to engage in acquisitions post-FTT may also be linked to innovation-driven motives, which would be a promising direction for further investigation.

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Conflicts of Interest

The author declares no conflicts of interest.

Data Availability Statement

The data supporting the findings of this study were obtained from commercial providers as specified in the manuscript. Due to licensing and contractual restrictions, these data cannot be shared.

Endnotes

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

[2] See https://www.uschamber.com/series/above-the-fold/63-of-americans-oppose-financial-transaction-tax

[3] See Stein (2003) and Bernstein (2022) for surveys on effects of capital markets on corporate investment and other firm behaviors.

[4] Many financial industry professionals share this view. Warrent Buffet, for example, believes that "quarterly earnings guidance often leads to an unhealthy focus on short-term profits" and "contributes to a shift away from long-term investments". He publicly supports the FTT and other measures that encourage long-term focus among investors. See https://www.wsj.com/articles/short-termism-is-harming-the-economy-1528336801. Anecdotal evidence from France indeed suggests that firms cut investments to protect short-term goals and that the FTT induces long-term ownership and improves investments. For example, Jean-Marc Boursier, CFO of Suarez Environment, said: "we would cut our investments and protect our balance sheet, but we would leave our dividend policy unchanged." See https://www.reuters.com/article/suezenvironnement-results-dividend-idUSL6N0LP2V520140220. In another example, Safran, a French multinational high-technology group, has been subject to the FTT since late 2012. Figure A1 indicates that there was a significant increase in Safran's long-term ownership after the FTT introduction. Its investments in fixed assets and R&D have followed suit. The role of long-term shareholders in Safran's investment strategies was also heightened in an acquisition deal in 2017. Specifically, Safran proposed to buy Zodiac Aerospace, a listed aerospace company. TCI Fund Management, a long-term shareholder of Safran since 2012, claimed that the merger was significantly overpriced. TCI also questioned synergies, deal structure and its fairness to shareholders. Safran adjusted the share ratio and reduced the headline price which resulted in an aggregate price reduction of approximately 26%. See https://droitetcroissance.fr/wp-content/uploads/2019/03/Shareholder-activivism_Kevin-Romanteau_DC-vF_edited2.pdf.

[5] In addition, I look for further evidence that the FTT relieves short-termism by examining dividend payout and earnings management—behaviors linked to short-termism. First, when the market takes announced dividends as a signal of observed earnings, managers are tempting to pay excessive dividends to increase the stock price, even if that means cutting back on investment (Miller and Rock 1985). Table A7 shows that treated firms reduce dividend payout, consistent with keeping funds to finance expanded investments. Second, the use of simple earnings matrices by financial markets, especially short-term investors, in evaluating managers' performance puts pressure on managers to manipulate earnings and meet targets. Table A8 shows that treated firms reduce earnings management and are less

likely to beat earnings targets by tiny margins, consistent with less earnings pressure from short-term investors.

[6] On February 2, 2012, media first covered the details of the legislative bill which was approved later on February 29. 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/.

[7] 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.

[8] 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. The tax on naked sovereign CDS obviously does not apply to firms; hence, it has no direct impact on them. Had it affected corporate decisions due to changes in investors' behaviors, I 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.

[9] On the other hand, there are 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. My DiD analyses exclude observations of these firms after their switch of treatment status.

[10] I still find evidence on the effect of the FTT on corporate investments if I (i) shorten the sample period to 2009–2016 or 2010–2015 or (ii) exclude Luxembourg firms.

[11] A portion of R&D spending may serve maintenance purposes rather than the creation of new capital. However, I treat R&D expenditure entirely as investment for both conceptual and practical reasons. Conceptually, managerial short-termism can lead to reductions in R&D spending, whether for maintenance or future innovation, in an effort to boost current earnings. For instance, cutting supplies or facility-related costs can improve short-term profitability, while workforce reductions can yield even greater cost savings. In this sense, the "maintenance" component of R&D is also subject to pressures from short-termist behavior, and its reduction may similarly indicate a shift away from long-term value creation.

[12] 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. Therefore, the strategy that compares only these treated firms with non-French firms should address well this manipulation concern. Results are qualitatively the same when this strategy is employed.

[13] Relatedly, Coelho (2016) and Colliard and Hoffmann (2017) argue and provide evidence that significant tax *evasion* by investors seems implausible. For example, they find that American Depositary Receipts are not used to circumvent the FTT and trading in taxed French shares dropped even more substantially in foreign exchanges (such as London and Frankfurt) than in Paris, relative to Dutch control stocks.

[14] In the context of the European debt crisis, other Eurozone countries like Germany or Spain may not offer better controls. Spain was unable to bail out its financial sector and had to apply for a rescue package in 2012. In terms of fiscal sustainability, Germany did not appear to face short-term, medium-term or long-term fiscal sustainability challenges while France, The Netherlands and Luxembourg all faced some risks in medium to long run (EC 2012). From late 2011, French CDS spreads increased, and the divergence from the Dutch counterpart was smaller than that from the German one (Heinz and Sun 2014). Furthermore, industry composition of the French treated firms is more comparable to that of the chosen control firms than to that of German firms. For example, two industries "Consumer Durables" and "Chemicals and Allied Products" respectively make up 4.3% and 3.5% of the treated firm sample. In the Dutch and Luxembourg control firm sample, they accounts for 3.6% and 6.2%. For German firms with capitalization above 1 billion EUR at the end of 2011, the numbers are much higher, being 9.3% and 10.4%. Nevertheless, I still find a positive effect on investments using German control firms.

[15] I thank Todd Gormley for the idea of including interactions. Edmans, Jayaraman, et al. (2017) and Brogaard et al. (2019) also include similar interactions in DiD regressions. They explain that these interactions control for time trends in investment sensitivity to firm characteristics. Examining European firms, Kalemli-Ozcan et al. (2018) show that their investment behavior differs before and after 2008 crisis, that is, investment sensitivities to debt, cash flow, size, among other characteristics, change during the bust period. Alternatively, Bertrand and Mullainathan (2003) interpret that the interactions between plant size and year fixed effects in their models allow for the time shocks to differentially affect plants of different size.

[16] To put the estimate in context, Cremers et al. (2020) find that the inclusion to the Russell 2000 leads to an increase of 1.9 percentage points in (short-term) transient ownership and firms with a relatively large increase cut R&D by *130 basis points* of total assets.

[17] I obtain qualitatively the same results when I 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.

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

[19] The data hence do not include ownership by individual and other types of institutional investors. Therefore, while the tests are informative about the economic channel and behaviors of representative investors, that is funds, statistics and estimates should be interpreted within this context and in relative rather than absolute sense.

[20] I thank the reviewer for the idea of examining long-term capital.

[21] This significant economic effect is consistent with large portfolio changes documented in Colliard and Hoffmann (2017). They estimate that one quarter after the FTT introduction, short-term investors with "very high turnover" sold 8.5% of their holdings of affected stocks, and "high turnover" sold 4.7%.

[22] The 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.

[23] Furthermore, as non-SLP firms suffer from a substantial reduction in stock liquidity and price efficiency (Colliard and Hoffmann 2017), useful information about investment opportunities from financial market to corporate decision makers can be hindered (e.g. Dow and Gorton 1997; Chen, Goldstein, et al. 2007), offsetting the positive effect.

[24] Firms may make acquisitions to gain market power, improve efficiency, obtain complementary resources or boost innovation (Haleblian et al. 2009; Bena and Li 2014; Guo et al. 2019).

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

[26] I 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 the traditional Dif-in-Dif model. The indicator Post, however, disappears because

year fixed effects are included. Results are qualitatively the same when (1) firm fixed effects are used and/or (2) more controls, such as for firm *Cash holding, Non-cash working capital, P/E ratio*, are included.

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

[28] See https://www.reuters.com/article/suezenvironnement-results-dividend-idUSL6N0LP2V520140220.

[29] According to Safran 2012 Registration Document, The Children's Investment Fund Management (UK) LLP, by letter of October 5, 2012, reported that it had exceeded the statutory threshold of 2%.

[30] See https://droitetcroissance.fr/wp-content/uploads/2019/03/Shareholder-activivism_Kevin-Romanteau_DC-vF_edited2.pdf.

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Appendix A

A.1 | Anecdotal Evidence

A.1.1 | *Suez Environnement*

Suez Environnement, a French waste and water group, has followed a stable dividend policy. Instead of adopting the residual dividend policy in which companies pay out dividends from funds left after making desirable investments, Suez would do all it could to keep its dividend unchanged, including cutting investments and other costs. Its capital expenditures have followed a downward trend, from 5.5% of total assets in 2009 to 4.5% in 2012. Its spending on R&D, which was already modest at 0.3% in 2009, was further cut and became immaterial in 2012. Meanwhile, it kept payout stable at 0.65 euros per shares, with 2012 payouts even exceeding earnings. The CFO of the firm Jean-Marc Boursier said:"If we unfortunately got hit a third time by economic crisis like in 2008–2009 and in 2012–2013, we would do exactly the same thing: we would cut our investments and protect our balance sheet, but we would leave our dividend policy unchanged."[28]

A.1.2 | *Safran*

Safran, a French multinational high-technology group, has been subject to the FTT since late 2012. Figure A1 indicates that there was a significant increase in long-term ownership after the FTT introduction. Investments, both in terms of capital expenditures and R&D spending, have followed suit. In 2017, Safran proposed to buy Zodiac Aerospace, a listed aerospace company. TCI Fund Management, a long-term shareholder of Safran since 2012,[29] claimed that the merger was significantly overpriced. TCI also questioned synergies, deal structure, and its fairness to shareholders. Safran adjusted the share ratio and reduced the headline price which resulted in an aggregate price reduction of approximately 26%.[30]

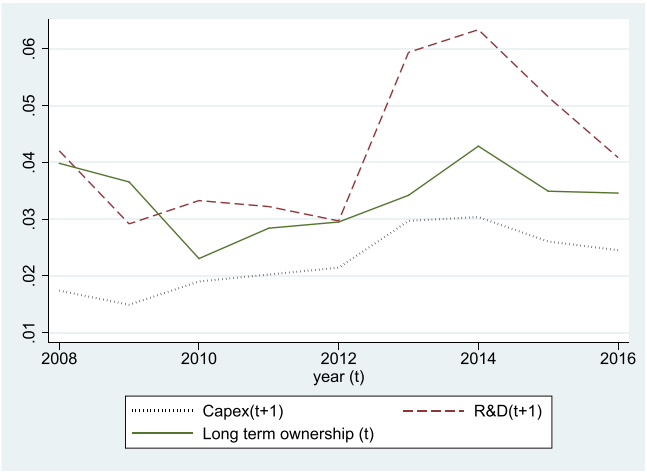

FIGURE A1 | The case of Safran SA. [Colour figure can be viewed at wileyonlinelibrary.com]

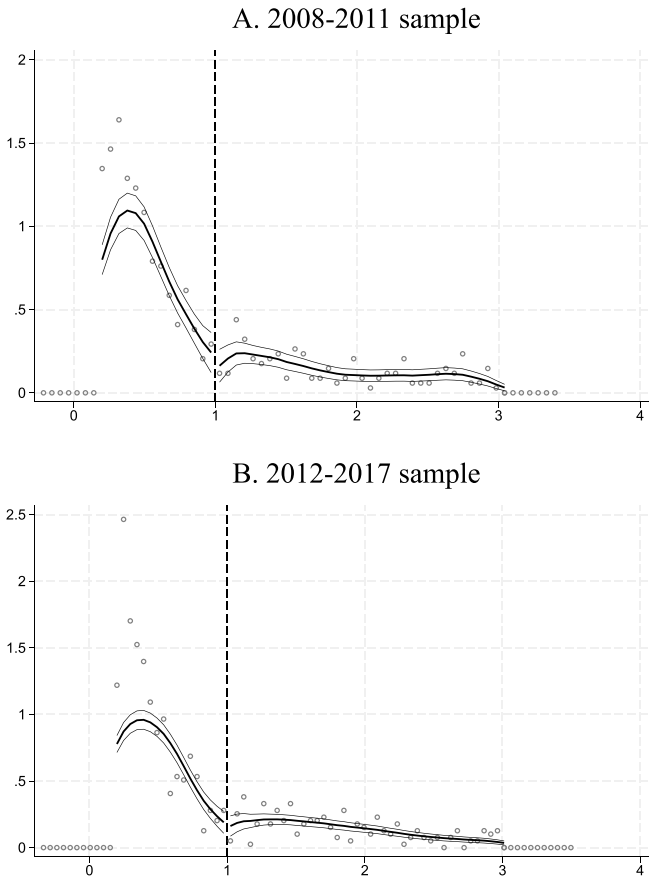

FIGURE A2 | Distribution density around the 1B EUR threshold. (A) 2008–2011 sample. (B) 2012–2017 sample.

The figure shows the histogram, estimated density, and 95% confidence intervals of market capitalization around the 1B EUR threshold. McCrary (2008) test statistics for 2008–2011 and 2012–2017 samples are –0.91 and –0.23, respectively, which are not statistically significantly different from zero at any conventional level. [Colour figure can be viewed at wileyonlinelibrary.com]

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
Financial Constraint	KZ index constructed by Lamont et al. (2001) based on Kaplan and Zingales (1997).	Compustat Global
Long-term ownership	Funds are classified into five groups, very low, low, medium, high, and very high (turnover). For each firm, the ownership ratio owned by each type of funds is computed and long-term ownership is equal to the total ownership by very low and low and medium (turnover) funds.	Factset Ownership
Long-term capital	Total capital held by long-term investors in a firm divided by its country's stock market capitalization.	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: *French control >0.2 bil. EUR*.

Panel A. Aggregate effect						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Variables	**Capex+R&D**	**Capex+R&D**	**Capex**	**Capex**	**R&D**	**R&D**
Tax	0.0187***	0.0113**	0.0083**	0.0071**	0.0361***	0.0196**
	(0.0063)	(0.0050)	(0.0034)	(0.0033)	(0.0135)	(0.0077)
Size		−0.0341***		−0.0146***		−0.0406***
		(0.0091)		(0.0044)		(0.0118)
Tobin's q		0.0193*		0.0073		0.0267*
		(0.0102)		(0.0045)		(0.0138)
Cash flow		0.0504		0.0477		−0.0422
		(0.0532)		(0.0491)		(0.0450)
ROA		−0.0575		−0.0527		−0.0558
		(0.0536)		(0.0463)		(0.0689)
Leverage		−0.0119		−0.0384**		0.0056
		(0.0241)		(0.0170)		(0.0231)
Constant	0.1034***	0.3209***	0.0435***	0.1585***	0.1172***	0.3844***
	(0.0015)	(0.0710)	(0.0008)	(0.0334)	(0.0039)	(0.0999)
Observations	2015	1632	2015	1632	1025	800
Adjusted R-squared	0.8030	0.8838	0.6158	0.7218	0.8136	0.9375
Controls x Year	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Financially constrained vs. unconstrained firms						
	Constrained			**Unconstrained**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Tax	−0.0016	0.0002	−0.0030	0.0205***	0.0124**	0.0203**
	(0.0037)	(0.0037)	(0.0025)	(0.0068)	(0.0057)	(0.0077)
Constant	0.2073***	0.1736***	0.1285**	0.2502***	0.0090	0.3212***
	(0.0503)	(0.0490)	(0.0484)	(0.0875)	(0.0529)	(0.0693)
Observations	740	740	344	650	650	329
Adjusted R-squared	0.7886	0.7386	0.9513	0.9717	0.6295	0.9847
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: 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), (3), and (5) exclude control variables; remaining specifications include control variables. In Columns (1) and (2), the dependent variable is *Capex+R&D*, Columns (3) and (4) *Capex*, and Columns (5) and (6) *R&D*. Panel B summarizes results when the sample is split based on the ex ante financial constraint measured by KZ index as in Lamont et al. (2001). Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A3 | Effects of the FTT on corporate investment: *Alternative control groups*.

Panel A. Treated firms vs. matched firms

	Matched firms		Treated firms			
	N	**Mean**	***N***	**Mean**	**Difference**	**T-statistic**
Size	74	8.790	143	9.045	−0.255	−1.075
Tobin's *q*	74	1.913	143	1.396	0.517	1.439
Cash flow	74	0.075	143	0.063	0.012	1.180
ROA	74	0.113	143	0.097	0.016	1.573
Leverage	74	0.257	143	0.254	0.003	0.152

Panel B. Regression results

	(1)	**(2)**	**(3)**	**(4)**
Variables	**Matched**	**> 0.1 bil.**	**> 0.3 bil.**	**0.3–3.0 bil.**
Tax	0.0091**	0.0106**	0.0134**	0.00940*
	(0.0045)	(0.00476)	(0.00563)	(0.00482)
Size	−0.0118	−0.0339***	−0.0357***	−0.0316***
	(0.0110)	(0.00789)	(0.00987)	(0.00817)
Tobin's *q*	0.0044	0.0184*	0.0184*	0.0304
	(0.0027)	(0.00992)	(0.0110)	(0.0186)
Cash flow	0.1002***	−0.00361	0.150**	0.144**
	(0.0294)	(0.0439)	(0.0650)	(0.0688)
ROA	0.0950*	−0.0598	−0.124**	−0.167**
	(0.0506)	(0.0549)	(0.0593)	(0.0728)
Leverage	−0.0564***	−0.0134	−0.00836	−0.0903***
	(0.0206)	(0.0190)	(0.0272)	(0.0312)
Constant	0.1513	0.311***	0.337***	0.301***
	(0.0970)	(0.0587)	(0.0778)	(0.0590)
Observations	1347	2057	1442	750
Adjusted *R*-squared	0.7986	0.866	0.882	0.950
Controls x Year	No	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes

Note: This table presents the analysis of the impact of the FTT on investment using alternative control groups. Panel A compares characteristics of treated firms and matched firms in the year before treatment. Panel B summarizes regression results with Column (1) using the matched sample. Columns (2), (3), and (4) use French control groups with alternative cutoffs: Column (2) firms with capitalization above 0.1 billion EUR at the end of 2011, Column (3) above 0.3 billion EUR, and Column (4) between 0.3 and 3.0 billion EUR. In parentheses are robust standard errors clustered by firm. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A4 | Impact of the FTT on corporate investment: *Placebo tests*.

Panel A. Pseudo tax

	French sample			Non-French sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Pseudo-Tax	0.0016	0.0016	−0.0001	−0.0118	−0.0105	0.0007
	(0.0026)	(0.0024)	(0.0019)	(0.0085)	(0.0081)	(0.0041)
Constant	0.1513***	0.0762	0.1564***	0.2113**	0.1542**	0.1805***
	(0.0540)	(0.0505)	(0.0397)	(0.0872)	(0.0747)	(0.0600)
Observations	965	965	569	631	631	285
Adjusted *R*-squared	0.8334	0.7499	0.9567	0.7169	0.6548	0.9649
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Florange act

	French sample			Non-French sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Capex+R&D**	**Capex**	**R&D**	**Capex+R&D**	**Capex**	**R&D**
Florange Law	0.0064	0.0058	0.0013	−0.0034	−0.0047	0.0126
	(0.0057)	(0.0057)	(0.0016)	(0.0075)	(0.0054)	(0.0152)
Constant	0.0847	0.0384	0.1527***	0.4225***	0.1974***	0.5565***
	(0.0633)	(0.0520)	(0.0525)	(0.1291)	(0.0511)	(0.1644)
Observations	796	796	441	940	940	492
Adjusted *R*-squared	0.8258	0.6881	0.9796	0.8558	0.7198	0.9134
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes		Yes	Yes

Note: This table presents placebo tests. In panel A, Columns (1)–(3) summarize regression results using the sample of treated firms and a pseduo FTT imposed on firms with market capitalization above 5 billion EUR; Columns (4)–(6) summarize regression results using the sample of non-French firms and a pseudo FTT mimicking the French FTT. Panel B uses the original data sample but starts from 2012 (after the FTT introduction); Florange act is equal to 1 if a firm belongs to the treatment group in 2014 and onward. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A5 | Dynamic effects of the FTT on corporate investment.

	(1)
Variables	**Capex+R&D**
six_years_before	0.0214
	(0.0243)
five_years_before	0.0036
	(0.0082)
four_years_before	0.0064
	(0.0104)
three_years_before	0.0110
	(0.0108)
two_years_before	0.0137
	(0.0132)
one_year_before	0.0139
	(0.0150)
treatment_year	0.0232
	(0.0165)
one_year_after	0.0274*
	(0.0153)
two_years_after	0.0252
	(0.0165)
three_years_after	0.0385**
	(0.0166)
four_years_after	0.0457***
	(0.0175)
five_years_after	0.0436**
	(0.0181)
Constant	0.0905***
	(0.0054)
Observations	2594
Adjusted R-squared	0.7731
Year FE	Yes
Firm FE	Yes

Note: This table presents the dynamic effect of the FTT on investment. I estimate the following model:

$$Investment_{i,t+1} = \alpha_0 + \beta_1 D_{i,t}^{-6} + \beta_2 D_{i,t}^{-5} + \ldots + \beta_{12} D_{i,t}^{+5} + \delta_i + \tau_t + \epsilon_{i,t+1} \quad (A1)$$

In Equation (A1), 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. To accommodate the full set of interactions between the treatment and year indicators and reduce noise in the estimates, I use the combined sample of treated firms, French and non-French control firms. In parentheses are robust standard errors clustered by firm. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A6 | The impact of the FTT on long-term ownership and corporate investment: *The Italian FTT*.

Panel A. Corporate investment								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	> 100 mil. EUR		**100–2000 mil. EUR**		**50–1500 mil. EUR**		**50–1000 mil. EUR**	
Variables	**Capex**	**R&D**	**Capex**	**R&D**	**Capex**	**R&D**	**Capex**	**R&D**
Tax	0.0042	0.0024	0.0014	0.0043*	0.0011	0.0058**	0.0000	0.0069***
	(0.0046)	(0.0028)	(0.0049)	(0.0023)	(0.0051)	(0.0026)	(0.0052)	(0.0024)
Constant	0.1207***	0.1846***	0.0083	0.0350	0.0434	0.0861***	0.0402	0.0747***
	(0.0435)	(0.0461)	(0.0368)	(0.0355)	(0.0413)	(0.0251)	(0.0418)	(0.0260)
Observations	935	375	594	239	823	328	769	310
Adj R-squared	0.6825	0.8580	0.5813	0.9421	0.5634	0.9543	0.5582	0.9565
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Long-term ownership				
	(1)	**(2)**	**(3)**	**(4)**
Variables	**> 100 mil. EUR**	**100–2000 mil. EUR**	**50–1500 mil. EUR**	**50–1000 mil. EUR**
Tax	0.4399*	0.3865	0.5157*	0.7389**
	(0.2375)	(0.2883)	(0.2820)	(0.2883)
Constant	−0.2555	−2.2061	−1.1452	−1.7851
	(1.4768)	(2.0844)	(1.7691)	(1.4946)
Observations	5318	3283	4094	3662
Adj R-squared	0.6192	0.6357	0.6542	0.6639
Controls	Yes	Yes	Yes	Yes
Controls x Year	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes

Note: This table reports regression results for models evaluating the impact of the Italian FTT levied on the purchases of stocks with capitalization above 500 million EUR. Panel A summarizes results for corporate investment using different samples of firms with capitalization around the threshold of 500 million EUR. Panel B for long-term ownership. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A7 | Impact of the FTT on dividend policies.

Variables	(1) Dividend	(2) Dividend growth
Tax	−0.0029*	−0.0885**
	(0.0016)	(0.0438)
Observations	1181	1733
Adjusted R-squared	0.7925	0.2635
Controls	Yes	Yes
Controls x Year	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes

Note: This table presents regression results for models examining the impact of the FTT on dividend policies. In Column (1), *Dividend* is the amount of dividend payout scaled by total assets. In Column (2), *Dividend Growth* is a dummy equal to 1 if dividend growth $(div_{t+1} - div_t)/div_t$ is higher than median and 0 otherwise. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

TABLE A8 | Impact of the FTT on earnings pressure.

Variables	(1) Small Profits or increases	(2) Discretionary accrual
Tax	−0.0659***	−0.0191**
	(0.0246)	(0.0085)
Treated	0.0644***	−0.0016
	(0.0218)	(0.0086)
Constant	−0.0825	0.1251***
	(0.0693)	(0.0264)
Observations	1797	763
Adjusted R-squared	0.2744	0.0865
Control	Yes	Yes
Control x Year	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes

Note: This table presents regression results for models examining the impact of the FTT on earnings pressure. Dependent variables are *Small Profits or Increases* or *Discretionary Accruals*. *Small Profits or Increases* is equal to 1 if a firm has either small profits or a small increase in profits, and 0 otherwise. *Discretionary Accruals* is the absolute value of discretionary accruals estimated from a modified version of Jones (1991) model. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.