1

Are Closely Held Firms Tax Shelters?

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Executive Summary

In 2004 Norwegian authorities announced a reform introducing dividend taxation for personal (but not corporate) owners to take effect starting in 2006. This change provided incentives to maximize dividends in 2004 and 2005, and to retain earnings in the following years. Using Norwegian registry data that cover the universe of nonpublicly traded firms, we find that dividend payments responded very strongly to the anticipated reform, but also that much of the response was compensated by reinjecting shareholder equity in the same firms. On the other hand, following the reform, firms began to retain earnings. While all categories of assets grow, the increase in durable assets categories that include equipment, machinery, company cars, planes, and boats is particularly striking. We find that personally owned firms and those that pursued aggressive dividend maximization policy in anticipation of the reform exhibit lower profits and economic activity in the aftermath, but retain earnings and accumulated assets at comparable or faster rates than others. The differential effect on assets is concentrated in financial (a potential substitute for private saving) and durable (a potential substitute for private consumption) asset categories. We interpret these results as indicating both the existence of real tax responses and supportive of the notion that in the presence of dividend taxation, closely held firms partially serve as tax shelters.

I. Introduction

In this chapter, we focus on closely held Norwegian firms for which the interaction between individual and firm incentives cannot be ignored. In the absence of an arms-length relationship between shareholders and management—a natural situation to consider when a firm has few owners—there is a possibility that some aspects of the behavior of a firm are motivated by owners' personal incentives rather than maximization of the value of the firm. In particular, in the presence of taxation,

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some of the firm's costs may in fact reflect private consumption, and some of its investment activity may in fact be equivalent to private saving. In other words, a firm may act as a tax shelter on top of or even instead of its core economic activity. We provide evidence suggesting that this is so by relying on data from Norway that span a 2006 reform that introduced taxation of dividends to personal shareholders (dividends to corporations as shareholders remained tax free) and modified incentives for personal versus corporate ownership of firms.

The reform we study was announced in March of 2004. Prior to the reform, dividends were effectively not taxable (beyond regular corporate tax liability). As of January 1, 2006, dividends to personal shareholders that exceeded a risk-free rate-of-return allowance started being subject to a 28% tax, matching the treatment of personal capital gains. Simultaneously, it was announced that immediately (as of March 2004) capital gains to corporate shareholders were no longer subject to taxation. As the result, in the aftermath of the reform, personal shareholders would prefer to hold shares through a holding firm—due to preference for capital gains at the announcement, and due to preference for both dividends and capital gains when fully implemented. In this chapter, we document the responses to this introduction of a dividend tax both (1) in anticipation of the reform, and (2) over a longer term after the reform had been fully implemented. Additionally, we also show some evidence of changes in ownership form, the topic on which we focus in more details in a companion paper (Alstadsæter, Kopczuk, and Telle 2013).

More specifically, we find that firms responded to the reform before its full implementation by increasing their dividend payments and by setting up holding companies that allowed for converting ownership from personal to corporate. Norwegian firms are subject to accounting rules that govern retaining equity/asset ratio above 10% and that cap dividend payouts at the level of accumulated retained earnings. We find that for almost half of the personally owned firms with ability to pay dividends, at least one of these two constraints ends up binding in 2005. In other words, many firms aggressively maximize their dividend payouts. However, we also find that these large outflows of accumulated funds do not necessarily correspond to reducing the size of a firm: dividends paid out are then used to recapitalize the same firms by injecting additional shareholder equity. As the result, in anticipation of the reform, the average (though not necessarily marginal) source of funds shifts from retained earnings toward external equity financing but the overall equity of the firms is not substantially affected.

This close to complete compensation for dividend payments is surprising given that the dividend tax implies reduced return to shareholder equity in the future. Such a response is consistent with either (1) lack of attention to tax considerations (though this is hard to believe given that firms do respond to anticipated policy), (2) importance of liquidity constraints, or (3) firms being used for private saving ("pension accounts") or financing of private consumption so that no taxable return is expected. We corroborate the third possibility by investigating the behavior of firms after the reform. We show that consistently with the new tax incentives, postreform all firms start retaining much higher share of earnings and building up much higher equity position. In particular, the propensity to retain earnings increases significantly and the correlation of dividends and profits declines. The cumulative growth in retained earnings is more pronounced for firms with personal ownership and for those that maximized dividends in either 2004 or 2005—the two groups that we use as proxies for being affected by reform-induced incentives. A potential complication in interpreting these differences as being due to the reform is that the postreform period overlaps with a profit boom. However, indicators of real economic activity—profits, revenue, and costs—all increase more for firms that are less affected by the change in incentives, indicating that the introduction of dividend tax may have had a negative effect on real economic activity. At the same time, despite weaker economic outcomes, long-term financial and fixed assets increase more for personally than corporately owned firms, as well as for dividend maximizing than nonmaximizing firms—indicating that the retained earnings are saved but invested in ways not leading to economic profits.

Particularly striking is the difference across personally and corporately owned firms for the subgroup of durables that includes company cars, boats, planes, and other durable goods that may be of mixed corporate/personal use. We conclude that the new incentive structure induced firms to retain earnings but that this effect at least partially corresponds to a shift toward activities that do not translate into increasing profitability, and instead are likely to reflect personal saving and/or consumption within a firm.

II. Literature Review

The canonical approach to analyzing the impact of corporate taxation in public finance focuses on a firm that is pursuing its activity in order to

maximize its value, while dealing with arms-length shareholders. Accordingly, corporate and capital income tax policy may influence firm investment behavior by influencing the marginal cost of capital. A large literature has focused on distinguishing between two different possibilities (e.g., Auerbach 2002 and Auerbach and Hasset 2002). When marginal projects are financed out of new share issues ("old view"), dividend taxation distorts the marginal cost of capital; on the other hand, when marginal projects are financed out of retained earnings ("new view"), dividend taxation has no effect on the cost of (trapped) capital. Both views may apply at the same time to different firms: indeed, "old view" describes relatively cash-poor and illiquid firms, perhaps those that are relatively young, while "new view" applies to firms with significant retained earnings—"old" firms (e.g., Becker, Jacob, and Jacob 2013).

This is a useful dichotomy for thinking about large publicly traded firms, although even in this context it has been recognized that the arms-length assumption does not apply to all parties; in particular, management may have objectives that are in conflict with maximization of the value of the firm. More generally, the assumption of an arms-length relationship between shareholders and management is not attractive for thinking about closely held firms with a small number of shareholders. In the extreme, an entrepreneur is unlikely to be interested in simply maximizing the value of the firm, but rather in maximizing the overall level of personal utility, with business activity being just one input.

It has been documented in the literature that some aspects of the structure of firms do respond to personal tax considerations. Gordon and Slemrod (2000) have documented that the US Tax Reform Act of 1986 led to massive conversion of corporate firms to a different organization form of S-corporation that, in particular, implies taxation of firm profits as personal tax. Romanov (2006) showed that a tax reform in Israel, which changed the relationship between individual and income tax rates, encouraged small businesses to incorporate. Jacob and Alstadsæter (2013) find that owner-managers in closely held firms in Sweden rely on wages as the sticky payout channel, while dividend payments are more responsive to changes in taxes.

The economic literature on dividend taxes and their effect on payout policy and corporate behavior proves ambiguous. In particular, little is known about long-term real effects on firms by dividend taxes. Major reasons for this is lack of tax variation and compelling data. The majority of evidence is based on samples of large, publicly traded firms. A recent wave of evidence (e.g., Chetty and Saez 2005; Brown, Liang, and Weisben-

ner 2007) focuses on responses to the 2003 dividend tax cut in the United States and finds evidence consistent with the importance of agency issues. Chetty and Saez (2010) argue for a clientele effect on investments following a dividend tax reform. A dividend tax cut induces firms to distribute more dividends, reducing lock-in of capital and "wasteful" use of resources in cash rich firms in the presence of agency problems. Cash constrained firms that rely on new equity to finance projects can raise new capital, resulting in more investments. Even if total investment level is more or less the same, a dividend tax change can increase productivity through a reallocation of investments across firms. Becker et al. (2013) document this effect for listed firms using cross country firm data. Yagan (2013) finds no effects of the 2003 US dividend tax cut on overall investments of firms affected by the tax cut (C-corporations) compared with firms unaffected by the tax cut (S-corporations). The sample consists of large, privately traded corporations with similar trends prior to the reform. Another issue in this literature is the role of share repurchases. A substitution of repurchases for dividends, which leaves net equity unaffected, has a similar flavor to the strategy of reinjecting dividends as external equity that we document in this chapter that corresponds to issuing new shares in lieu of retaining profits.

Firms are as a group very heterogeneous. The behavior of large, publicly traded firms with dispersed ownership and separation of ownership and management is potentially different from that of small- and medium-sized firms that often are owner-managed. These firms constitute a considerable share of the economy. Michaely and Roberts (2012) document that the payout policies of publicly traded firms differ from privately traded firms. In the present chapter, we concentrate on closely held firms and provide new information on their behavior.[1]

Little research has been done on how taxes affect ownership constellations in firms, beyond what is done on effects on owner clienteles in listed corporations (Korkeamäki, Liljeblom, and Pasternack 2010). One reason for this is lack of data. To our knowledge, nothing has been done on how tax incentives affect ownership constellation and individual owners' ownership shares in smaller and medium-sized firms.

III. Background on the Norwegian Tax System

A. Changes in the Tax Regime

The Norwegian dual income tax system levies a progressive tax rate on labor income and a constant tax rate on capital income. A basic tax

rate of 28% applies to corporate, capital, and labor income. Individuals' labor income is subject to an additional flat social security contribution of 7.8%, and two additional and highly progressive surtaxes. The top marginal tax rate on labor income was 55.3% before 2005 and 47.8% from 2006 and onward. In addition, geographically differentiated Social Security contributions of maximum 14.1% apply to all wage payments on the employer level.

Prior to 2006, capital gains from the realization of shares were taxable at 28%, though the part of capital gains stemming from withheld profits in the firm was tax free. Dividends were tax exempt before 2006.[2]

A shareholder income tax was first proposed by an advisory committee on February 6, 2003. A revised version was presented by the government on March 26, 2004, and sanctioned by the Parliament on June 11, 2004, to be introduced on January 1, 2006. The shareholder income tax levies a tax of 28% on all personal shareholders' income from shares, both dividends and capital gains. An imputed risk-free return to the share, the so-called Rate of Return Allowance (RRA), is tax exempt. The RRA is imputed as the average interest rate on government bonds times the purchasing price of the share. Any unused RRA is carried forward and added to the imputed RRA in the following year. The share-specific RRA cannot be transferred between different types of shares, and only the owner at the end of the year benefits from the imputed RRA for that year. Sørensen (2005) and Alstadsæter and Fjaerli (2009) provide more information on the shareholder income tax.

Under the shareholder income tax, no tax is levied on firms' income from shares, dividends, or capital gains.[3] In fact, the tax on realized capital gains from shares for corporate owners was unexpectedly removed already on March 26, 2004, that is, long before the introduction of the shareholder income tax. The tax rates and changes in such are displayed in table 1 below.

The top marginal tax rate on income from self-employment equals the top marginal tax rate on labor income. Prior to 2006, when dividends were tax exempt, the high income self-employed had incentives to incorporate in order to save taxes, as emphasized by Thoresen and Alstadsæter (2010). The introduction of a dividend tax in 2006 in combination with a reduction in the top marginal tax rate on labor income, partly removed these tax incentives for incorporation for self-employed individuals. Most of our analysis is performed on the sample of firms that existed throughout the period mitigating concerns about any incorporation/self-employment adjustments playing a role.

Table 1
Top Marginal Tax Rates by Type of Income and Recipient

			Dividends, by Type of Recipient		Capital Gains, by Type of Recipient	
Year	Wage[a]	Corporate Income	Individuals[b]	Corporations[c]	Individuals[d]	Corporations[c]
1999	49.3	28	0	0	28	28
2000	55.3	28	0	0	28	28
2001	55.3	28	11	0	28	28
2002	55.3	28	0	0	28	28
2003	55.3	28	0	0	28	28
2004	55.3	28	0	0	28	0
2005	51.3	28	0	0	28	0
2006	47.8	28	28	0	28	0
2007	47.8	28	28	0	28	0
2008	47.8	28	28	0	28	0
2009	47.8	28	28	0.8	28	0.8
2010	47.8	28	28	0.8	28	0.8
2011	47.8	28	28	0.8	28	0.8
2012	47.8	28	28	0.8	28	0

Notes:
[a] In addition, Social Security contributions of 14.1% apply to wage payments on the corporate level.
[b] An 11% tax on dividends to personal shareholders (with NOK 10,000 as tax-free deduction in taxable dividends per shareholder) was unexpectedly introduced September 5, 2001, and removed December 31, 2002. On March 26, 2004, the shareholder income tax was announced to be introduced from January 1, 2006. Under the shareholder income tax, the normal return to shares are tax exempt, and the remainder is taxed at 28%. Until 2006, dividends to shareholders active in the daily operation of the firm were taxed according to the so-called SPLIT model; an imputed return to capital was taxed as dividend income, while the remainder was taxed as wage income at shareholder level.
[c] Unexpected removal of capital gains tax for corporations as shareholders on March 26, 2004. Announced introduction of 28% tax on 3% of all capital gains and dividends received by corporations, from October 7, 2008, effectively a 0.8% tax. As of 2012, this tax was again removed on capital gains received by corporations.
[d] Until 2006, the capital gains attributed to retained earnings were tax exempt under the so-called RISK model, and the remaining capital gains were taxed at 28%. On March 26, 2004, the shareholder income tax was announced to be introduced from January 1, 2006. Under the shareholder income tax, the normal return to shares are tax exempt, while the remainder is taxed at 28%.

B. Incentives for Changes in Behavior

Prior to 2004, corporate capital gains and dividends were treated in the same way as personal ones; as of March 2004, corporate capital gains were privileged relative to individual ones, and in 2006 both capital gains and dividends on the corporate level were treated favorably relative to

individual ones. As the result, the changes introduced incentives to hold ownership stake in a firm through another entity rather than directly. A transition rule in effect between December 10, 2004, and December 31, 2005, enabled personal shareholders to transfer their shares to a holding firm ("E-firm") without triggering the capital gains taxes that would otherwise apply, given certain restrictions. As documented by Alstadsæter et al. (2013), approximately 16,000 holding firms were established under this rule, mainly during the last few months of 2005. Approximately 9% of existing nonlisted firms at the end of 2004 had at least some of the owners electing to transfer their stake to a holding company during 2005.

In present value terms, and given constant accrual-based tax system and rates of return after 2006, there is no tax saving in deferring dividend taxes through the setup of a holding company. But there are still tax benefits of doing this. First, the deferral enables tax-free growth of assets within the holding company. Second, it allows for pooling of losses and gains from various enterprises within a single holding company level. The shareholder income tax does not allow RRA to be transferred across different types of shares, and at realization, unused RRAs are lost at shareholder level. At company level, there is no dividend tax and thus no unused RRA to be lost at realization. This will then increase the total RRA of the owner of the holding company, as the personal shareholder's RRA is based on his share of the external equity in the holding company, which is unaffected by this transaction. Third, holding shares through a holding company allows the personal shareholder to determine ultimate payout in firms with multiple owners. Fourth, the investor may make a policy bet on the dividend tax to be removed in the future, and fifth, a personally fully owned holding company facilitates the investor's ability to shift parts of his private consumption to the firm.

In preparation for the announced dividend tax for personal shareholders in 2006, there were huge incentives to shift dividends across time and maximize dividend payments before the introduction of the tax. However, emptying the companies of cash and internal equity then increases leverage and leaves the firm more vulnerable for difficulties in raising new loans, and in the worst case, this increases the risk of bankruptcy. One way to avoid that is to reinvest (tax-free) distributed dividend as external equity so that liquidity of the company is unaffected. Inserted equity can then be distributed tax free to shareholders in the future, as long as there is no capital gain involved. This could also be done in one operation without even distributing dividends, if the general assembly decides to convert internal equity to external equity.

Estimates from Statistics Norway based on national accounts suggest that 73% of dividends received by households and nonprofit organizations in 2005 were reinvested in the corporate sector, either as debt or equity (Alstadsæter and Fjaerli 2009), and we will show microevidence of these effects as well.

In the presence of the new dividend tax, firms have a stronger incentive to retain rather than distribute earnings in order to defer tax liability, although naturally, it depends on the potential economic use of funds. The incentive to use company rather than personal funds for categories that can be funded in either way (i.e., for which private and corporate spending are substitutes) strengthens unambiguously, however. The incentives for personal consumption within the firm were strong also before the 2006 reform, in particular through the value added tax of 25% which the firm can deduce before the profit tax is levied, as well as through the tax deductible depreciation of durable assets in the firm, in addition to any deductible financing costs. But the additional dividend tax strengthens these incentives by raising the costs of distributing corporate profits for private consumption as dividends by 28%.

To summarize, tax changes announced during the years 2004 to 2006 created the following changes in incentives:

1. After the reform, it is better to have corporate rather than personal owners. This implies a shift toward more indirect ownership by individuals.

2. In anticipation of the reform, firms should pay out as many dividends as possible before 2006 and reduce dividend distributions to personal shareholders from 2006 and onward.

3. Firms have incentives to reinvest extraordinarily high dividends in 2005 as inserted equity.

4. After the reform, the incentive to retain earnings is stronger and, in particular, the incentive to substitute corporate spending for private spending becomes very strong.

In this chapter we document responses to these incentives.

IV. Data

A. Data Sources

We use detailed administrative data from two data sources maintained by Statistics Norway. Every firm and resident in Norway is provided one

unique personal identifier which is present in all data sources, enabling us to follow every firm and individual over time and across data sets.

1. *The shareholder register*. It contains records of every shareholder of every Norwegian firm from 2004 to 2011. Ownership information is as of December 31 each year. There is also information of each shareholder who has received dividends during the year, even if the shareholder does not hold shares at year end. Because we observe this information for a number of subsequent years, we can also trace changes in the ownership structure such as transfers of an existing firm.

2. *The accounting register*. It contains accounts and balance sheet information from the financial statements of every nonfinancial firm for every year 1999–2011.[4]

B. Sample Definition

The sample(s) we use in our analysis include firms that meet a set of conditions. In principle, the shareholder register contains all firms,[5] while the accounting register contains every nonfinancial firm. Our first condition is that we restrict attention to the subset of firms available in both data sources. Further, we limit attention to firms that exist in both 2004 and 2005 and, for most of the analysis, focus on a balanced set of firms that existed throughout the period. We eliminate firms that were publicly traded or had at least 1% foreign owners in 2005.[6]

C. Definition of Variables

Information on distributed dividends from each firm to each of its shareholders during a calendar year is available from the *shareholder register*. Distributed dividends are the actual dividends paid during the year. From the *accounting register* we also have access to the sum of *proposed* (ordinary) dividends of the firm as decided by the general assembly when closing the books for the previous year.[7] The proposed dividends may differ from actual dividends because shareholders may choose to pay additional dividends after the assembly.[8] While the correlation between distributed dividends and proposed dividends is very high, it is possible that distributed dividends turn out lower (if the firm for some reason ends up not paying) or higher (if special dividends are decided by a special general assembly) than the proposed dividends. Information on distributed dividends is available for the years

2004–2011. In addition, information on every firm's industry, foundation date, and whether it is publicly traded, are also collected from the accounting register.

Using the shareholder register we can identify how dividend receipts are distributed to the following groups of shareholders: personal owners, corporate owners, foreigners, and others.[9]

We will use information about whether owners are persons or other firms in what follows. In order to identify owners of the firm at the entry into the given year, we use information from the *shareholder register* at the end of the previous year. Thus, the first year of ownership information is 2005. For firms founded within the year, data on owners at beginning of the year (and at foundation) are not available, so for these firms we set the owners at the beginning of the year equal to the owners at the end of the foundation year. We define as *corporately owned* those firms that are solely owned by corporations, while we classify firms as *personally owned* if they have *any* personal owner (even if they have *some* corporate ones). Because ownership of a firm may and does change over the years, we will usually define ownership based on information as of 2005.

To the sample of firms in the shareholder register, with information about paid dividends in the year, and about owners at entry into the year, we merge in accounting information for the same calendar year. We use several variables from the *accounting register*. Earned equity corresponds to accumulated retained profits that have not yet been paid out to the shareholders, and in this measure we include proposed dividends that are not yet distributed. We will also define total equity as the sum of earned equity and external equity.

We will be particularly interested in firms that maximize dividends. To define dividend maximizers, we operationalize the two main legal restrictions on dividends. First, only accumulated earned equity from the balance sheet of the previous year can be distributed in the given year. Our operationalization of earned equity is a proxy, since there are additional factors (which we do not have data to incorporate) that should be deducted from our measure of earned equity to find the exact legal limit on dividends. Our measure may thus overestimate legal dividends somewhat. Second, remaining equity after dividend payments needs to be at least 10% of total assets, again as stated in the balance sheet of the previous year. In defining dividend maximizers we use *proposed* rather than *distributed* dividends for two reasons. First, we do not observe actually distributed dividends before 2004 and using proposed dividends allows for illustrating the patterns before 2004. Second, we do not have

sufficient information to fully implement rules applying to special dividends and thus can be much more precise using proposed dividends.

We divide the sample of personally owned firms into three groups. Some firms have no earned equity (because they have paid it out in the past or have accumulated losses) or their equity level is below 10% of assets. Such firms have no ability to legally pay any dividends. The remaining firms can pay dividends. Some of them hit one of the two constraints that we just mentioned—we will refer to them as "dividend maximizers"—and others ("dividend nonmaximizers") do not. We define as maximizers firms that after proposing the positive dividend have the equity/asset ratio of between 0.09 and 0.11 or that propose a dividend exceeding 95% of its earned equity.

Our variables are measured in thousand Norwegian Kroners (NOK); the exchange rate between 2000 and 2011 fluctuated in the range of approximately 5 to 9 NOK per US dollar. When we focus on balance sheet variables measured in NOK, we usually work with levels—this is because many of our variables can be negative or zero. To deal with wide distribution, we winsorize all variables at 1% and 99%, for each year separately.

Table 2 provides summary statistics for the 44,905 different firms in our balanced sample that existed all years in the period 1999–2011. The most important thing to observe is that these are small firms, with the median number of both employees and owners being only two. Operating income and profits are not impressive, with medians of NOK 2.5 million and NOK 0.18 million. It is also noteworthy that, despite the imposed sample restrictions, these firms are highly heterogeneous, typically with means substantially higher than medians. However, for the number of owners, the median and the mean are both low, and even the 95th percentile is only 7. This underlines that our sample mainly consists of small firms with few owners for which interaction of individual and firm incentives cannot be ignored. A clear majority of the firms belong to the two European Classification of Economic Activities (NACE**)** industry categories "wholesale and retail repairs," and "real estate, renting, and business activities."

V. Responses in Anticipation of the Reform

A. Dividend and Ownership Patterns

Figure 1 shows the pattern of actual distributed dividends starting in 2004. The overall level of dividends in 2004 and 2005 vastly exceeded

Table 2
Summary Statistics

		Percentile				
	Median	Fraction with Value Equal to or below Zero	5th	95th	Mean	*N*
Employees	2	0.36	0	28	8.8	44,716
Operating income	2,536	0.09	0	49,091	20,632	44,905
Profits	183	0.23	−304	4,865	2,452	44,905
Number of owners	2		1	7	3.5	44,898
Industry groups (European Union's NACE standard)						
Agriculture, hunting, forestry, fishing, mining, and quarrying					0.03	44,880
Manufacturing, electricity, gas, and water supply					0.10	44,880
Construction					0.10	44,880
Wholesale and retail trade, repairs					0.24	44,880
Hotels and restaurants, transport, storage, and communication					0.08	44,880
Financial intermediation					0.00	44,880
Real estate, renting, and business activities					0.40	44,880
Other					0.06	44,880

Note: All variables are measured in 2004. Monetary variables are in thousands of NOK. The sample comprises the 44,905 firms that existed in all years (1999–2011).

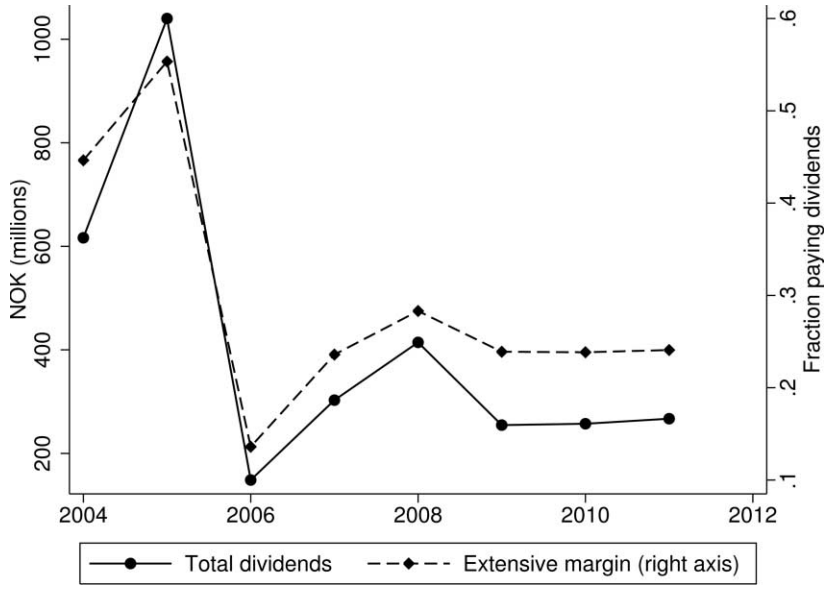


Fig. 1. Trends in dividend payments

Note: Dividend payments for firms existing in all years 1999–2011; total amount of dividends (left axis) and fraction of firms paying dividends (right axis).

that in the following years. Over 40% of firms in 2004 and 50% of firms in 2005 paid dividends, the number drops below 20% in 2006 and stays below 30% in the following years.

In figure 2, we show evidence of a response to the ownership incentives, where we have classified firms into three groups: solely privately owned, solely corporately owned and mixed ownership. In the balanced sample of firms that existed throughout the period we study, structure of ownership is very stable except for a onetime sharp shift in 2006. Between 2005 and 2006, the number of firms with purely corporate ownership has nearly doubled, while the number of firms with purely private ownership has decreased by approximately the same amount, with an increase in mixed ownership making up the difference. This corresponds to transfer of ownership to holding companies that are studied by Alstadsæter et al. (2013). Such transfers may be implemented by each owner separately so that ultimate ownership is mixed, but figure 2 suggests that in most cases all personal ownership has been transformed into corporate ones.

As mentioned before, we will use two groups in the rest of our anal-

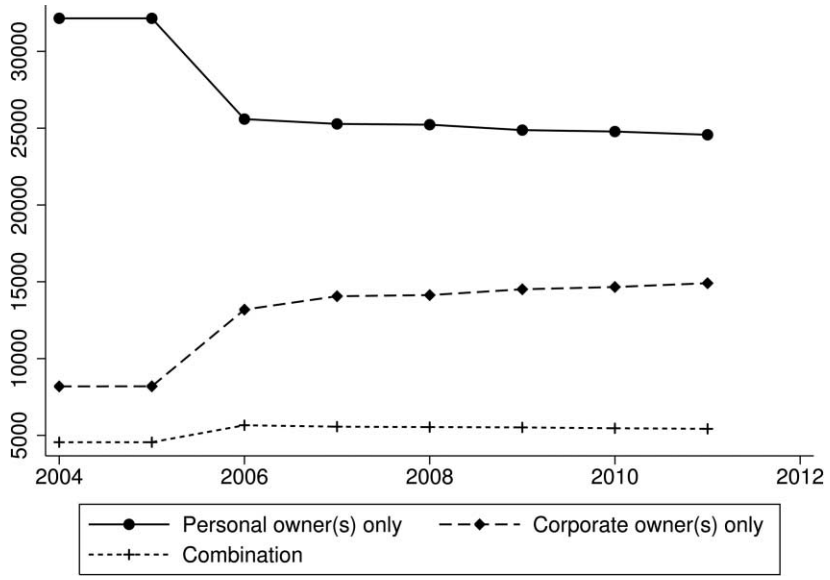


Fig. 2. Restructuring

Note: Ownership structure in each year for firms existing in all years 1999–2011.

ysis. *Corporately owned firms* are those solely owned by corporations, while we classify firms as *personally owned* if they have any personal owners (even if they have some corporate owners). In order to keep the composition of the two groups constant, we will typically rely on ownership structure in 2005 to classify firms. The pattern of dividend payments is driven by firms that were owned by individuals rather than corporations, as shown in figure 3. Impressively, over 60% of privately owned firms chose to pay dividends in 2005. Interestingly, the same pattern is visible for firms that have transformed their ownership to corporate ones in the aftermath of the reform, as shown in figure 4.[10] While setting up a holding company allows for deferring dividend tax, the return will still be subject to taxation at a later date when profits retained in a holding company are going to be distributed either as dividends or capital gains. Thus, paying dividends in anticipation of the reform is a tax saving strategy even for firms that convert to corporate ownership.

In figure 5 we show that propensity to pay *any* dividends varies with the number of owners of a firm, but the time series pattern is the same regardless of the number of owners.

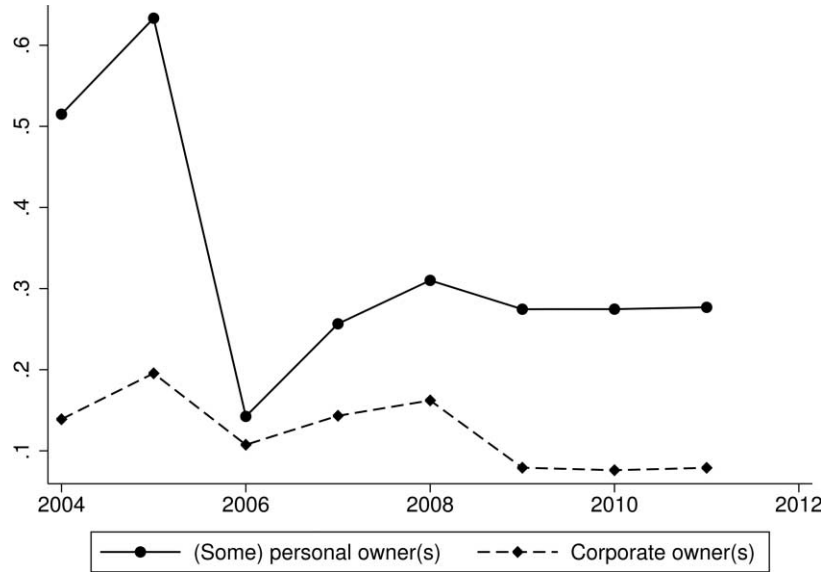


Fig. 3. Firms paying dividends by initial ownership status

Note: Fraction of firms that paid dividends in each year, by ownership status in 2005. The sample comprises firms that existed in all years (1999–2011).

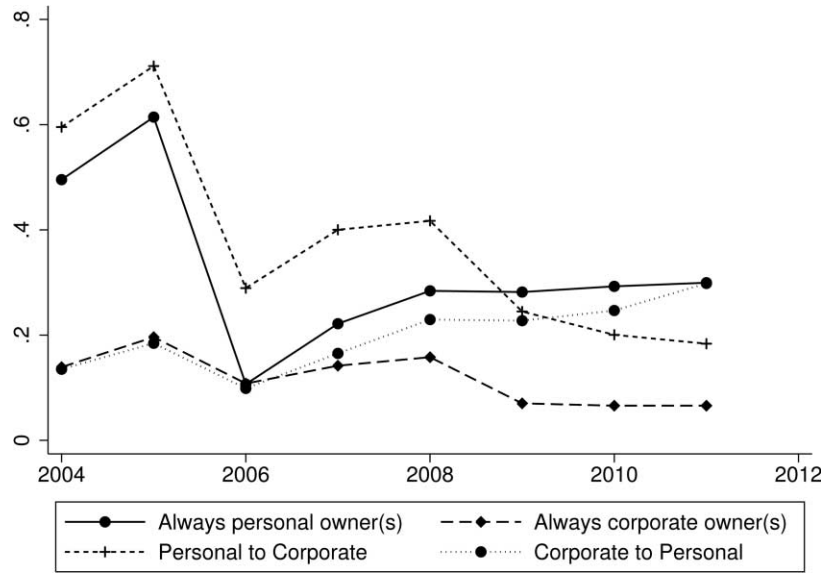


Fig. 4. Firms paying dividends by change in ownership status

Note: Fraction of firms that paid dividends in each year, by change in ownership structure 2005–2011. The sample comprises firms that existed in all years (1999–2011).

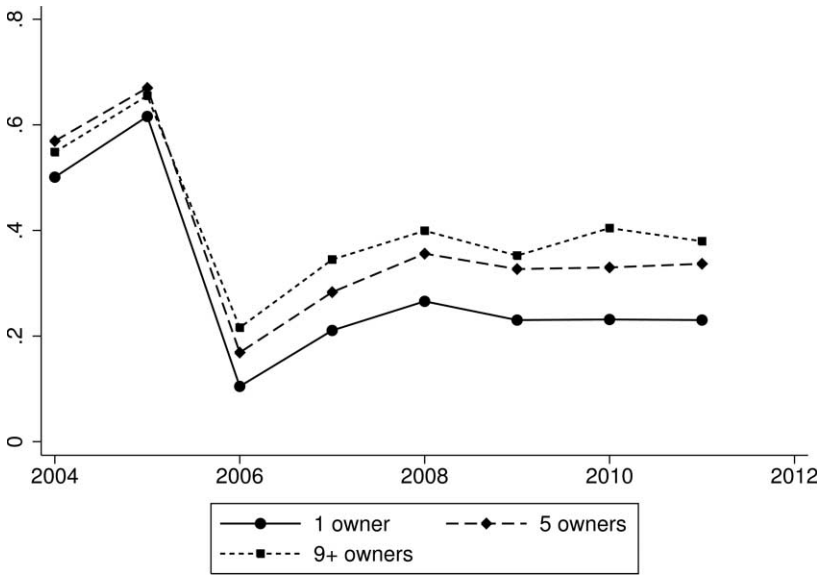


Fig. 5. Propensity to pay dividends by number of owners in 2005

Note: Fraction of personally owned firms in 2005 that paid dividends in a given year, by number of owners in 2005. The sample comprises firms that existed in all years (1999–2011).

B. Dividend Maximization and External Equity Substitution

As mentioned before, in order to assess the importance of incentives introduced by the reform and the strength of response, we construct a proxy for a firm being constrained in paying dividends. We divide the sample of privately owned firms into three groups. Some firms have no earned equity or their equity level is below 10% of assets. Such firms have no ability to legally pay any dividends. In our balanced sample, there are a bit more than 20% of such firms every year and the share is fairly smooth; see figure 6. The remaining firms can pay dividends, and as previously described under the heading *Definition of Variables*, we have divided them into "dividend maximizers" and "dividend nonmaximizers." Figure 6 illustrates the relative share of each type in our balanced panel over time. In years before or after the reform, the number of firms that maximize their dividends is small. In 2005, however, nearly half of the firms that have the ability to pay dividends (almost 40% of the whole sample) decide to maximize their payouts. Given that just over 60% of these firms pay any dividends, the

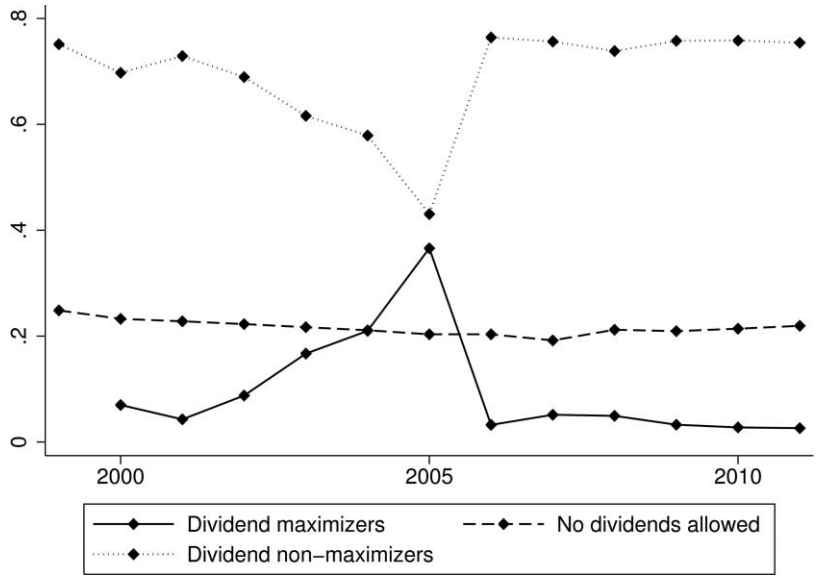


Fig. 6. Ability to pay dividends and dividend maximization

Note: Fraction of firms that maximize dividends in each year. Dividend maximization defined by equity to asset ratio close to 0.1 or dividends greater than 95% of earned equity (see text for details). The sample comprises firms that existed in all years (1999–2011) and were personally owned in 2005.

median firm that pays dividends in 2005 does so to the maximum extent possible.

Propensity to maximize dividends also appears somewhat elevated in 2003 and 2004. The decision to propose dividends for 2003 for sure precedes the announcement of the reform, while the decision for 2004 may have preceded it for some firms but not for most of them.[11] The prereform trend in dividends may also be affected by the presence of a (different) dividend tax in late 2000 and 2001 (see note 2) and the possibility of introducing a new tax (as ultimately happened) being on the political agenda. After 2005, the incidence of maximization of dividends drops precipitously.

Given firms' attempts to maximize dividends, one might expect that firms' liquidity and overall assets will decline. We investigate it by looking at changes in the level of external (shareholder equity) and total equity. The dividend tax depletes earned equity. As figure 7 shows though, 2004 and 2005 also feature unusually high increases in external equity. Put differently, owners of firms in 2004 and 2005 approximately

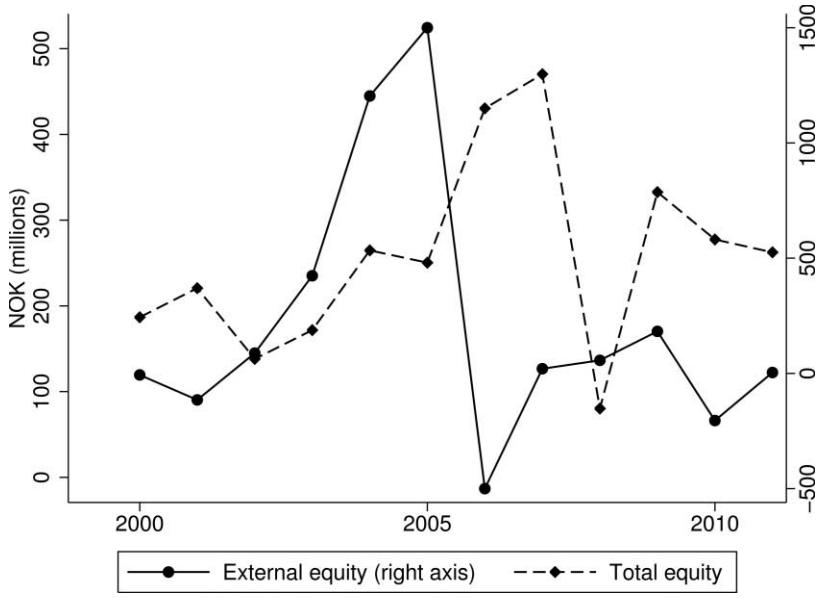


Fig. 7. Changes in external and total equity over time
Note: The sample comprises firms that existed in all years (1999–2011).

tripled their direct investments in their firms. As the result, there is no discernible effect on the change in the total equity of these firms. Figure 8 shows the extensive margin. Increasing external equity is a relatively rare event—in a typical year, only about 5% of firms do so. In 2005, however, this number nearly doubles. Furthermore, as figure 9 illustrates, the incidence of matching external equity changes and dividend payments one-for-one, while rare in general, spikes in 2005.

VI. Behavior in the Aftermath of the Reform

In the previous section, we documented that firms responded in anticipation of the reform by distributing dividends prior to the reform. At the same time, they also took measures to limit the impact on their liquidity by reinjecting external equity. There is a possibility then that nothing about the activity of the firm changes as the result of the reform, at least on impact. This is puzzling though. In the new regime, the return to outside funds is affected, a scenario stressed by the "old" view of the dividend taxation. Firms that paid dividends and reinjected external equity appear to have an ability to manipulate their outside fund-

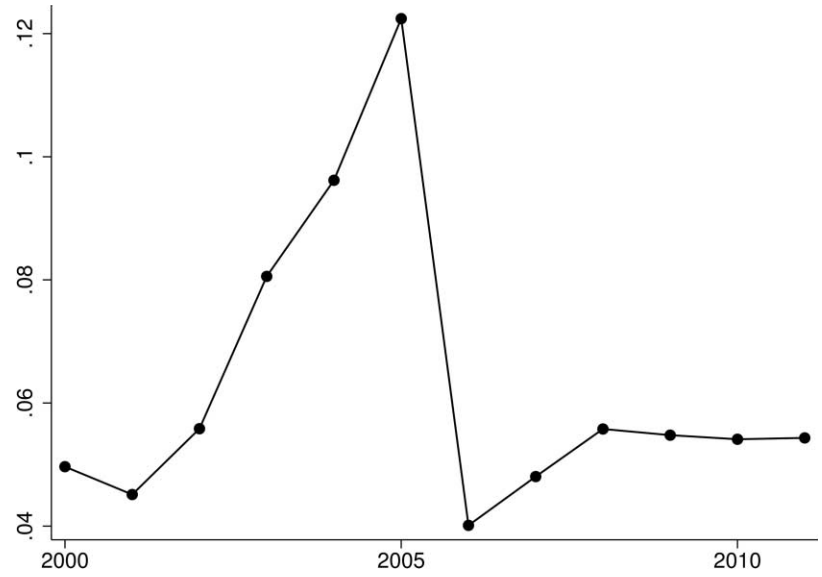


Fig. 8. Fraction of firms increasing external equity

Note: Fraction of firms increasing external equity by more than NOK 50,000 relative to the previous year. The sample comprises firms that existed in all years (1999–2011).

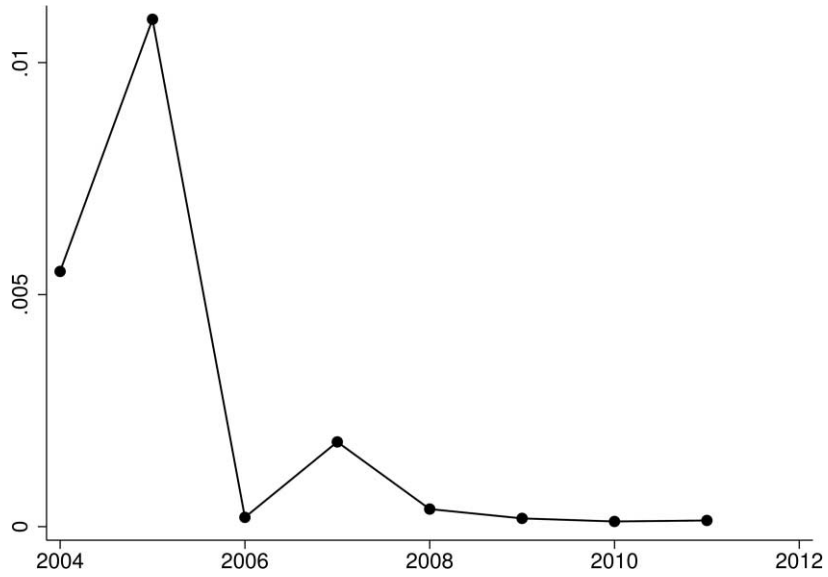


Fig. 9. Firms with change in external equity similar to dividend payment

Note: Fraction of firms with a change in external equity of similar magnitude as the dividend payment (i.e., change in external equity between 0.95 and 1.05 of dividend). The sample comprises firms that existed in all years (1999–2011).

ing, so that the "old" view may in fact be applicable and one would then expect scaling down the size of the firm in response to adverse incentives. There are a few alternative possibilities though. First, assuming that injection of external equity is equivalent to issuing new equity is not necessarily appropriate if firms face adjustment costs or liquidity constraints—in that case, the whole point of combined dividend/external equity scenario is to keep things constant and the marginal source of funds for additional projects (rather than maintaining current ones) may well be retained earnings if any (so that the "new" view applies). Second, owners may be focusing on the salient benefit of avoiding the dividend tax on already accumulated earnings, and ignoring the importance of the dividend tax in reducing the return to additional investments. Third, such a strategy is completely rational if firms do not expect that reinvestment will lead to taxable dividends in the future. This would be so if the additional investments are in fact a substitute for the same type of behavior outside of the firm—a tax shelter-like activity.

In what follows, we will analyze behavior of firms in the aftermath of the reform. We will first show that after the reform, firms are significantly more likely to retain earnings. Then, we will compare outcomes for different types of firms that were differently affected by the reform, in order to learn about the association between incentives and firm behavior.

In table 3 we show the sensitivity of changes in retained earnings and dividends to after-tax profits, for firms with personal owners. This is done by regressing the outcome variable on year dummies and their interactions with profits, on a balanced panel with standard errors clustered on firm level. We do not claim that the results represent a causal relationship, but they allow for investigating how the correlations between profits and dividends or equity changed over time. The baseline is 2003; in that year, an additional 1NOK of profits is associated with 0.41NOK increase in retained earnings and 0.39NOK increase in ordinary dividends. This relationship is stable between 2002 and 2005. In particular, the lack of a significant change in this association in 2005 suggests that factors other than current profits (and not strongly associated with them), such as availability of accumulated (rather than current) earnings were primary determinants of dividend distribution decisions. This relationship changes dramatically in the immediate aftermath of the reform when the association of profits and retained earnings raises to nearly one,[12] while association of profits and dividends falls to close to zero. In the years that

Table 3
Sensitivity of a Change in Retained Earnings and Dividends to Profits

	Δ Earned Equity		Dividends	
Profits	0.41	8.92	0.39	33.77
Profits#year				
2000	0.21	3.68	−0.15	−11.86
2001	0.43	7.36	−0.24	−21.11
2002	0.00	0.03	−0.09	−7.03
2003	.	.	.	
2004	0.03	0.43	−0.09	−6.73
2005	−0.08	−1.21	0.02	1.51
2006	0.57	11.09	−0.36	−31.18
2007	0.60	11.07	−0.30	−25.58
2008	0.25	4.26	−0.26	−20.85
2009	0.17	2.88	−0.32	−27.29
2010	0.16	2.85	−0.31	−26.47
2011	0.20	3.31	−0.29	−24.51
N	440,496	440,496		
R^2	0.30	0.26		

Note: Point estimate (followed by *t*-statistic) from ordinary least squares (OLS) regressions run on the balanced panel of firms that existed in all years (1999–2011) and were personally owned in 2005. Year dummies (2003 omitted) included in both models but estimates not reported. After-tax profits and proposed dividends. Standard errors clustered on firm level.

follow, retained earnings remain much more sensitive to profits than prior to the reform and association of dividends and profits remains very weak.

These results indicate that following the reform we should expect to see increases in retained earnings. This is indeed the case, as figure 10 illustrates. This, and the following figures, normalize all series to 1 for 2004 in order to facilitate the comparison across groups. Average earned equity (retained earnings) starts to increase immediately and rapidly after the reform. These effects are very large and in sharp contrast to the behavior of the firms prior to the reform. By 2009, the undistributed earnings accumulated by the firms double. The figure shows both the effect on personally owned and corporate owned firms (using the status as of 2005). While distributed profits of both types of firms are going to be eventually subject to capital income taxation when distributed to ultimate personal shareholders, firms with corporate ownership structure have additional degrees of freedom, because payouts to corporate parents does not trigger immediate tax liability. Hence, one may expect

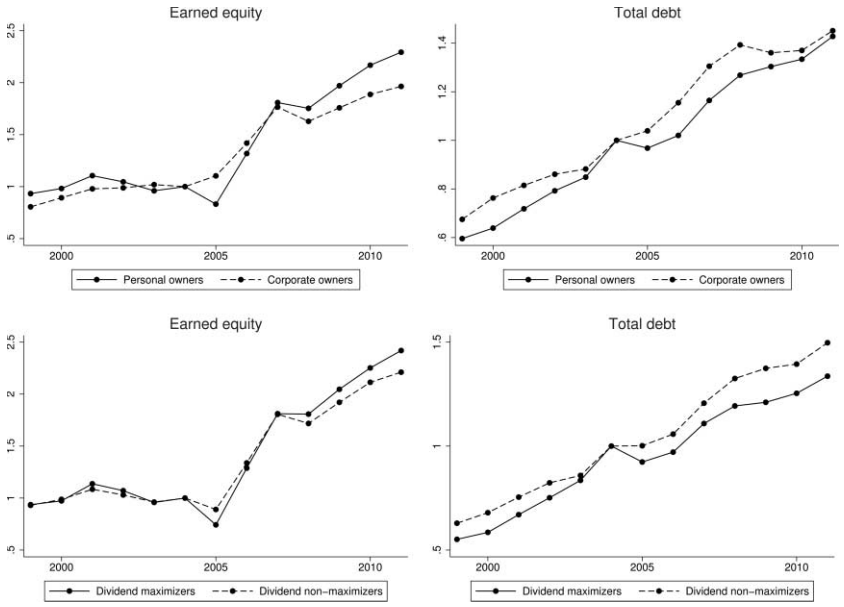


Fig. 10. Accumulated retained earnings and debt by ownership status

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

that the effect of tax incentives will be muted for corporate firms. It does indeed appear so in the case of retained earnings. While retention increases for both types of firms, the effect after a few years is much stronger for privately owned firms.

Our alternative strategy for identifying firms that are differentially affected by the reform relies on their behavior in 2004–2005. We classify personally owned firms as dividend maximizers if they maximized (distributed) dividends in either 2004 or 2005 and as nonmaximizers otherwise. This is of course an endogenous choice. However, this selected group of firms that maximize dividends may be expected to be more responsive to tax consideration. In figure 10, we show that dividend maximizers are indeed accumulating more retained earnings after a few years and we find no evidence of a difference in the retention pattern of the two groups prior to the reform. The pattern of debt does not exhibit sharp changes after the reform and trends are parallel for the two groups (in either strategy), with the exception of 2004, suggesting that some of the increased dividend payouts may have been financed by (short-term) loans.

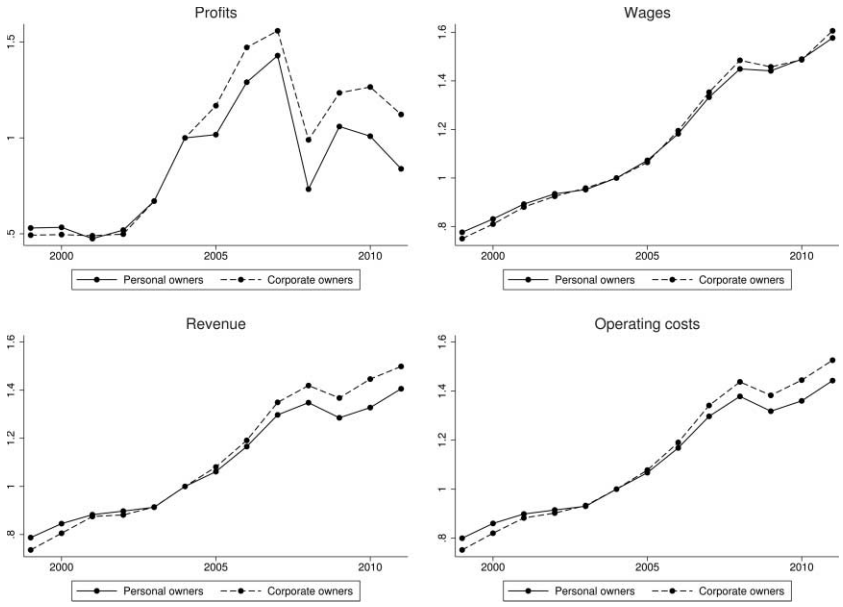


Fig. 11. Real economic outcomes by ownership status in 2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

In figures 11 and 12, we illustrate evolution of variables that proxy for real economic activity. Overall profits undergo large changes during the 2000s, with an expansion beginning in 2003 or so, peak in 2007 and a drop during the crisis that followed. Using both of our strategies for splitting the data, firms that are expected to be more responsive to the tax incentives affected by the reform have *lower* profits beginning with 2005 and very similar patterns prior to that. These lower profits are associated with both lower operating income and lower operating costs (and not much difference in wages), which suggest a lower level of economic activity. This is revealing in the light of just documented effects on retained earnings: since the same firms are actually retaining more of their earnings, one might have expected that they expand their economic activity and yet the opposite occurs. Hence, these results suggest that retaining earnings stimulated by tax incentives does not correspond to profitable economic activity but may in fact reflect other considerations.

In figures 13 and 14 we focus on the asset side of the balance sheet. Consistently with the effect on earned equity, the overall assets for pri-

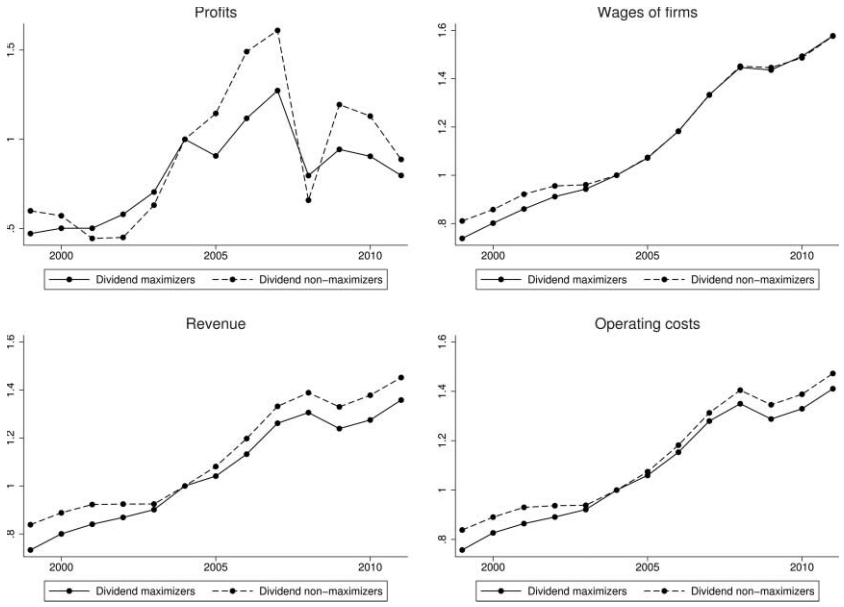


Fig. 12. Real economic outcomes by dividend maximization status in 2004–2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

vately owned firms and their dividend-maximizing subset, increase relatively more. Overall assets can be grouped into four components: long-term financial assets, durable ("real") assets, intangible assets, and current assets (inventories, cash and short-term investments). The difference between tax-sensitive and insensitive groups is present for financial assets and durable assets, but much less obvious for current assets (and, if anything, going in the opposite direction). The latter is consistent with the notion that current assets are more tightly linked to current real economic activity (e.g., one might expect that inventories and cash holdings are correlated with firms' core business activity), further supporting the previous finding that firms affected by the tax reform have actually experienced a relative decline in their economic activity.

Individuals are subject to the shareholder income tax, with a top marginal tax of 28% on dividends and capital gains. Firms pay no taxes on income from shares and the effect on financial assets indicates that firms are increasingly used as a vehicle for financial saving and investment. As is seen in figure 13, firms that were personally held in 2005 dras-

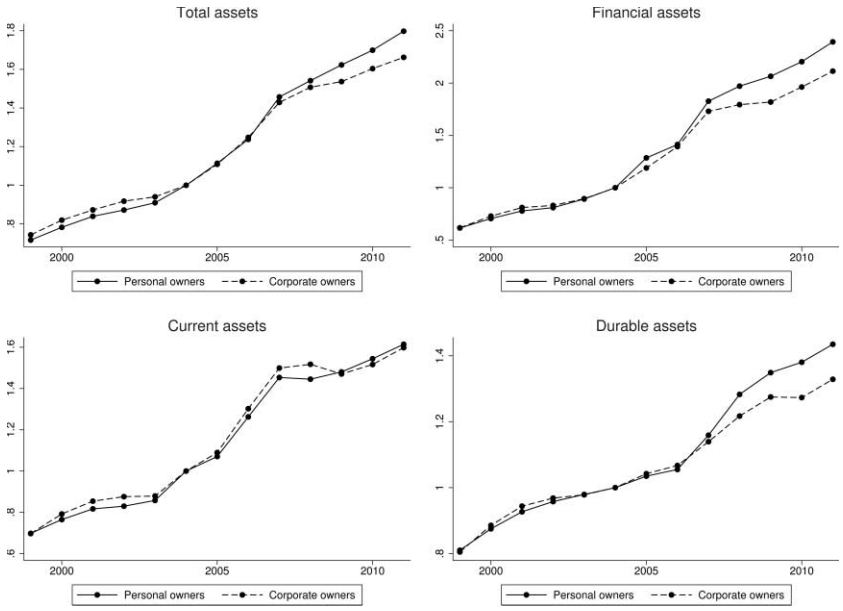


Fig. 13. Assets by ownership status in 2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

tically increased their financial assets in the aftermath of the reform, compared with firms that were owned by corporate shareholders. Also, firms that maximized dividends in 2005 also increase their stock of financial assets relatively more after 2006; see figure 14.

The effect on durable assets is also very pronounced. We show particular subcategories of fixed assets in figure 15. Ownership of machinery and ships and planes has dramatically increased, with the effect more pronounced among firms that are more sensitive to tax incentives.[13] Our data do not allow for direct investigation of the nature of this response but two possibilities are using retained earnings to substitute from leasing to ownership and investing in assets that can be used for personal consumption rather than business activity. Tax authorities are aware of such attempts to conceal purchases of private durable goods (horses, planes, luxury boats, houses, etc.) as business expenses and attempt to limit this type of tax evasion. For example, in June 2013, they issued a press release stating[14] that over the prior two years they had detected NOK 90 million in tax evasion among firm own-

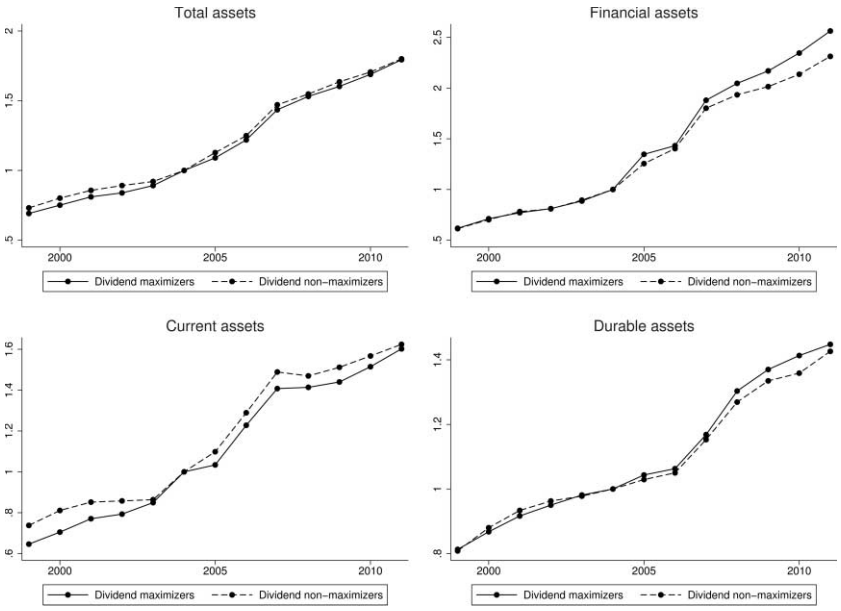


Fig. 14. Assets by dividend maximization status in 2004–2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

ers who use luxury boats at the cost of their firm. They also explicitly stated that the 2006 introduction of dividend tax was a possible reason for this.

Both the ships/planes category (which may include private boats and yachts as well as private jets), and the machinery/equipment category (which has also been identified by tax authorities as being used to conceal private durable goods), show patterns indicating their increased use by tax-sensitive firms. Furthermore, in figure 16, we show a category of "other durables" that includes assets that are likely to be used for personal consumption—notably company cars (also smaller categories such as office equipments). This category of assets also underwent a striking evolution in the aftermath of the reform, responding sharply right after its introduction and, again, showing stronger effect for the tax sensitive groups despite their lower level of economic activity. Overall, these results suggests that retained earnings are invested in both financial and real assets, but heterogeneity across different types of firms indicates that such investments are not associated with real economic activity.

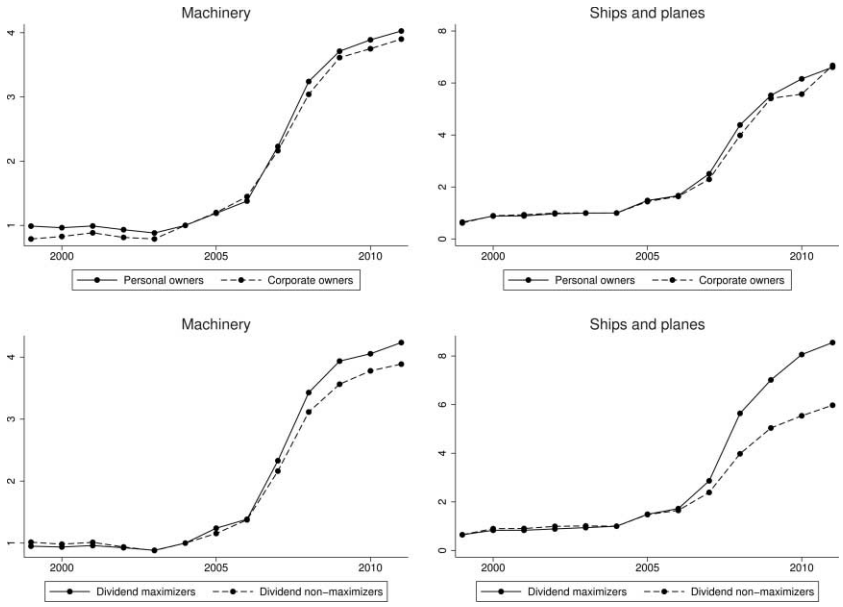


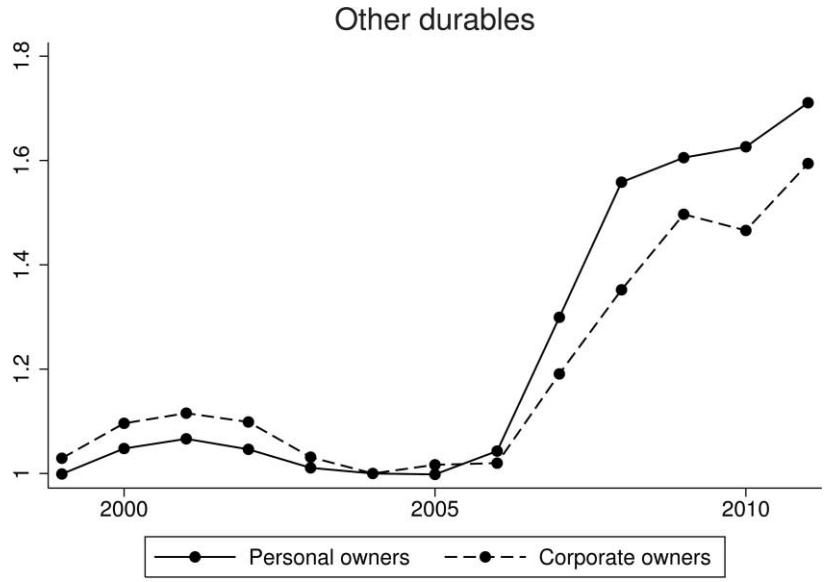
Fig. 15. Equipment and machinery by ownership and dividend maximization status in 2004–2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

VII. Conclusions

In this chapter, we documented the effect of a 2006 Norwegian dividend tax reform on the behavior of closely held firms. As expected, an anticipated dividend tax stimulated dividend payments prior to the reform and the response was aggressive: nearly half of the firms that could pay dividends did so to the maximum extent possible. This anticipation response has all the hallmarks of a purely tax-motivated response because it is accompanied by reinjection of equity into firms so that their net balance sheets are largely not affected.

In the aftermath of the reform, firms begin to retain earnings at a much faster pace than before. In particular, the strength of association of profits and changes in retained earnings increases, while the association of profits and dividends falls almost to zero. We focus on two groups that are likely to be particularly affected by tax incentives: personally owned firms and the self-selected subset of them that chose to maximize their dividend payouts prior to the reform. We find that



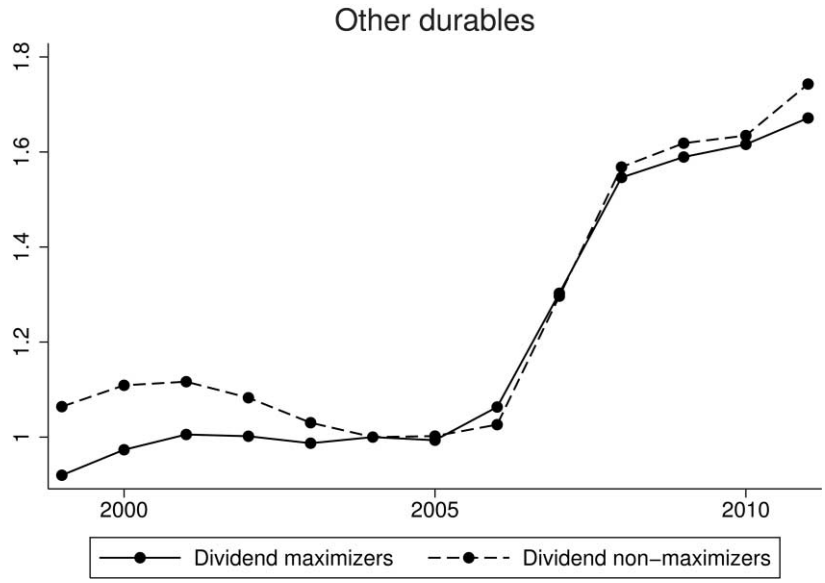


Fig. 16. Other durables (including company cars) by ownership and dividend maximization status in 2004–2005

Note: Means of variables normalized to 1 in 2004. The sample comprises firms that existed in all years (1999–2011).

both of these groups exhibit lower level of economic activity relative to their complements (respectively, corporately owned firms and privately owned ones that did not maximize dividends in 2004–2005): their revenue and costs are lower, and so are their profits. At the same time though, there is no evidence that these firms get relatively smaller. To the contrary: the more tax-affected firms accumulate more of retained earnings and end up with higher total assets. Hence, more distorting dividend tax incentives appear to be simultaneously associated with larger firms and less real economic activity. The asset increase is visible in both the financial and real asset category, in particular in the categories including machines, equipment, boats, planes, and company cars. The puzzle here is why firms that appear to invest more in real and financial assets are not seeing a corresponding effect on profits, revenue, and operating costs. The possible explanation for these effects is that an increase in retention does not serve the main economic purpose of the firm but is instead invested within a firm in a way that benefits shareholders without associated profitability. The leading examples of such activity are using a firm as a substitute for private saving and using a firm's real assets for personal use. Hence, our results appear consistent with the dividend tax stimulating the closely held corporate tax sector to become more passive in terms of real economic activity and more active as a tax shelter.

Endnotes

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1. Publicly traded firms may also have other motives beyond taxes for their dividend policy. Under the signaling theory, (publicly traded) firms are reluctant to cut dividend payments, as this is perceived as a negating signal of profitability to the market (Lintner 1956; Allen and Michaely 2003).

2. There are two noteworthy modifications to this tax exemption. First, under the pre-2006 tax regime, owners who worked in their closely held firms had tax incentives to withdraw income from their firm in the form of tax-free dividends instead of labor income. To avoid such income shifting, a so-called "split model" applied to owners with 2/3 or more of shares in the firm they (or their immediate family) worked. For these owners, a specific and imputed return to real capital could be distributed as tax-free dividends to the owners. Any remaining share of corporate profits was taxed as wage income, independent of how it was distributed to the owner. Due to the imputation rule, owner-managers in firms with low capital and/or few employees had incentives to reduce total ownership in the firm (just) below 2/3, inducing firms to have more dispersed ownership. After the removal of this split model on January 1, 2006, this incentive disappeared. See Lindhe, Södersten, and Öberg (2004) and Thoresen and Alstadsæter (2010) for

details. Second, in 2001 there was a temporary dividend tax of 11% (with a small, fixed, tax-free amount of NOK 10,000 per shareholder). It was announced on September 5, 2000, valid for all dividends that were decided to be distributed from that day and onward. This was removed from January 1, 2002, due to a change in government. The intention was to evaluate and find a more permanent way to tax dividends and restrict income shifting in the future. See table 1.

3. From 2009 a small tax on dividends and capital gains was introduced for corporate shareholders as well; 3% of dividends and gains were subject to taxation, rendering an effective tax rate on income from shares of 0.8%. From 2012 and onward, this tax was removed for capital gains realized by firms.

4. As in the United States, however, the book and tax statements are not the same, since tax accounts/balance sheet submissions may be required to provide more detailed information than the financial statements, or since the rules for how to set up the tax accounts/balance sheet may be somewhat different from the rules related to the financial statements.

5. However, around 5–10 percent of firms do not report to the shareholder register each year, according to the Norwegian Tax Administration.

6. By excluding firms that did not exist in both of the years 2004 and 2005, we also remove a special category of firms ("E-firms") that were set up as holding companies in 2005 (see Alstadsæter et al. 2013 for details).

7. While proposed dividends are defined as corresponding to the previous accounting year, in this chapter we align the timing of proposed and distributed dividends so that they correspond to the payout in the same calendar year.

8. This is similar to the distinction between ordinary and special dividends in the United States (though it is not the same as extraordinary dividends, since the additional dividends over the original proposed dividend need not be large).

9. The latter group also includes a small number of owners with missing or incorrect personal/corporate identification numbers.

10. Figure 2 indicates that the bulk of such changes took place between 2005 and 2006.

11. Proposed dividends for accounting year $t - 1$ are decided at a general assembly that typically takes place in May/June in year t, and are payable in year t. The reform was announced March 26, 2004.

12. The sum of the baseline coefficient on profits and the year-specific effect.

13. The magnitude of response of these variables reflect the fact that much of the response takes place on the extensive margin with many firms beginning to report nonzero values in later years.

14. Norwegian Tax Assessment Region Øst Press Release Number 11/2013, dated 6/27/2013; See also http://www.ba.no/jobbmagasinet/article6732282.ece accessed on 10/24/2013.

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