

Dividend Taxes and Corporate Behavior

Evidence from the 2003 Dividend Tax Cut

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MOTIVATION

- Taxation of dividends creates classic tradeoff in tax policy analysis
 - Capital and especially taxable dividend income accrues disproportionately to the wealthy
 - But taxation of dividends may have high efficiency costs
 - Incentive to save, invest reduced
 - Agency problems when firms retain earnings
- Key to understand behavioral responses to dividend taxation to determine optimal tax policy
- Magnitudes remain controversial because of lack of clean tax experiment and convincing research design
- This paper uses the 2003 tax reform to estimate response of dividend payments to dividend taxes

TAX REFORM AND RESEARCH QUESTIONS

2003 TAX REFORM:

Jobs and Growth Tax Relief Reconciliation Act 2003 (2nd Bush administration tax reform) cut federal taxes on dividend income for individuals from normal income tax rates (up to 35%) to 15%.

TIMING:

- Proposed in early January, 2003
- Signed at the end of May 2003 but applied retroactively from Jan 1, 2003.
- Scheduled to expire in 2009, may be extended further.

RESEARCH QUESTIONS:

1. Did the reform induce firms to increase payouts?
2. Which firms paid more dividends?
3. What do we learn about theories of dividend taxation?

MICROSOFT EXAMPLE

- Mature company with steady earnings and the highest cash holdings in the U.S. never paid a dividend before 2003
- Initiated annual dividend of \$0.8b in March 2003 and increased dividend to \$1.7b in December 2003.
- In July 2004, announced additional \$32b special dividend.
- Bill Gates gets \$3.2bn in dividend income from the single special dividend, saving \$640m in individual taxes (saving is \$320m if giving everything to charity, better than giving appreciated stock).
- Big benefit for the richest individual but might have big consequences on Microsoft's corporate behavior.
- Press speculation that Microsoft change was tax driven.
- Goal of paper: Test if Microsoft was an anomaly or tax reform had widespread effect on dividend payments.

OUTLINE

- I) Background on payout policies and previous work
- II) Research Design and Data
- III) Effects on dividend payments
- IV) Heterogeneity analysis: Which firms respond?
 - a. Self-serving executives
 - b. Strong principals
 - c. Capital allocation efficiency
- V) Substitution with share repurchases

PAYOUT POLICIES

- 1) Dividend payments:
 - Regular dividends: periodic and recurrent events
 - Tend to be very smooth
 - Few firms cut or stop regular dividends (sign of distress)
 - Special dividends: one time dividends

 - 2) Share repurchases:
 - Much more irregular than regular dividend payments
 - Not viewed as a commitment
 - Hardly existed before the early 1980s but have become as important as dividends in the 1990s.
- Repurchases and dividends are equivalent in a perfect information setting with no taxes
 - Traditionally, dividends have been tax disadvantaged relative to share repurchases but 2003 tax cut almost eliminated this disadvantage

EXISTING EMPIRICAL WORK ON DIVIDENDS AND TAXES

- 1) Classic debate in PF based on time series evidence:
 - Old View: Dividend taxes reduce savings, investment, and dividends in long-run (Poterba-Summers 1985, Poterba 2004)
 - New View: Investment financed with retained earnings, so dividends are just residual and hence not affected by taxation (Auerbach and Hassett 2003)

- 2) Tax reform “natural experiment” studies:
 - Bolster and Janjigian (1991) analyze TRA86 and find no effect on dividend payments
 - Perez-Gonzalez (2003) analyzes TRA86 and finds increase in dividend payments for firms with large individual shareholders

- 3) Recent studies of dividend payments around 2003 reform
 - Blouin, Raedy, Shackelford (2004) find no effect on regular dividend payments
 - Julio and Ikenberry (2004) find that surge in dividend payments began in 2000/2001, before the reform took place

RESEARCH DESIGN

- Pre-Post Analysis: comparing dividend payments before and after reform
- Also conduct some robustness checks with control groups (non-taxable institutions, Canadian firms) to verify causality of tax cut
- Two important econometric challenges:
 1. Dividends are extremely concentrated
 - Top 20 payers account for 50% of dividends paid by public firms
 - Mean amounts suffer from small sample problem (driven by a handful of firms)
 2. Very high rate of sample attrition and entry
 - Number of publicly traded firms fluctuates (1998: 6K, 2004: 3.8K)
 - Turnover is correlated with dividend payer status:
 - In recent years, many non-paying dot-com firms left sample, driving up average dividend payment rate

MAIN RESULTS

- Clear, robust evidence of increases following the tax cut along the following margins exactly at the time of the reform:
 - Extensive margin: Number of initiations, fraction of payers
 - Intensive margin: Number of regular dividend increases
 - Special Dividend payments
- Quarterly dividends rose by \$5 billion from a base of \$25 billion, implying an elasticity of 0.5 w.r.t. dividend tax rate
- Response concentrated in firms with:
 - Large executive ownership and low stock-options ownership, implying agents are self-serving
 - Large ownership by independent directors and large institutional ownership, implying that strong principals matter
- Response confined to low growth firms, suggesting capital allocation efficiency improvement.
- Total payout rose; dividends not simply substituting for repurchases

DATA

- ❑ CRSP: price and dividend quarterly data on all firms traded on NYSE, NASDAQ, AMEX available up to 2004-Q2.
 - Following literature, we exclude financials and utilities
 - Analysis excludes all closely held corporations (C status)
- ❑ COMPUSTAT: detailed quarterly balance sheet information about publicly traded firms in the US (comparable to CRSP)
- ❑ Execucomp and Thomson Financial databases: information on executive and institutional ownership
- ❑ Dlugosz, Fahlenbrach, Gompers, and Metrick data on large shareholders
- ❑ Ownership data supplemented by hand-collected data from proxy statements to increase sample size and precision

Figure 1

Regular and Special Dividend Amounts by Quarter

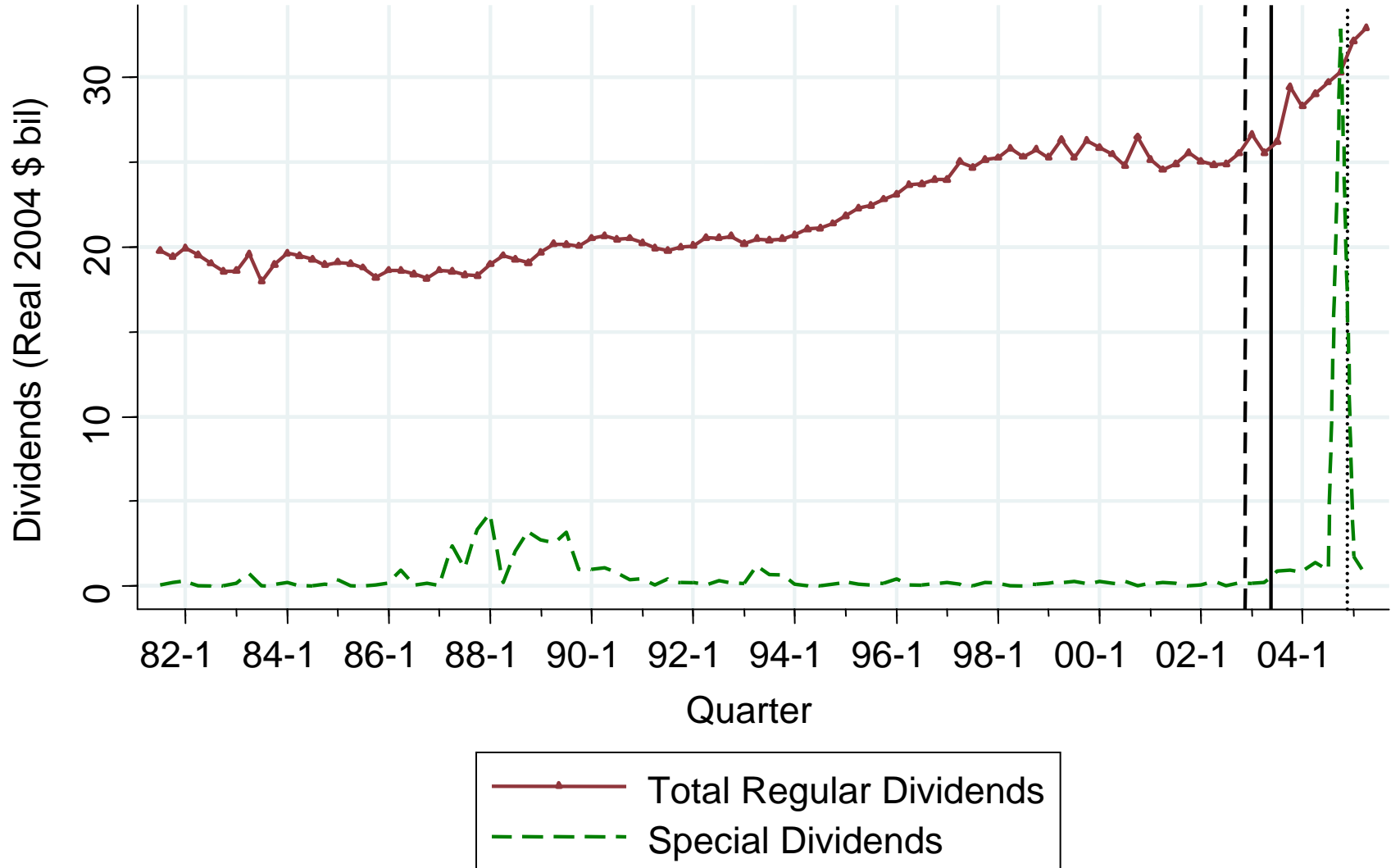


Figure 2

Dividend Initiation and Termination

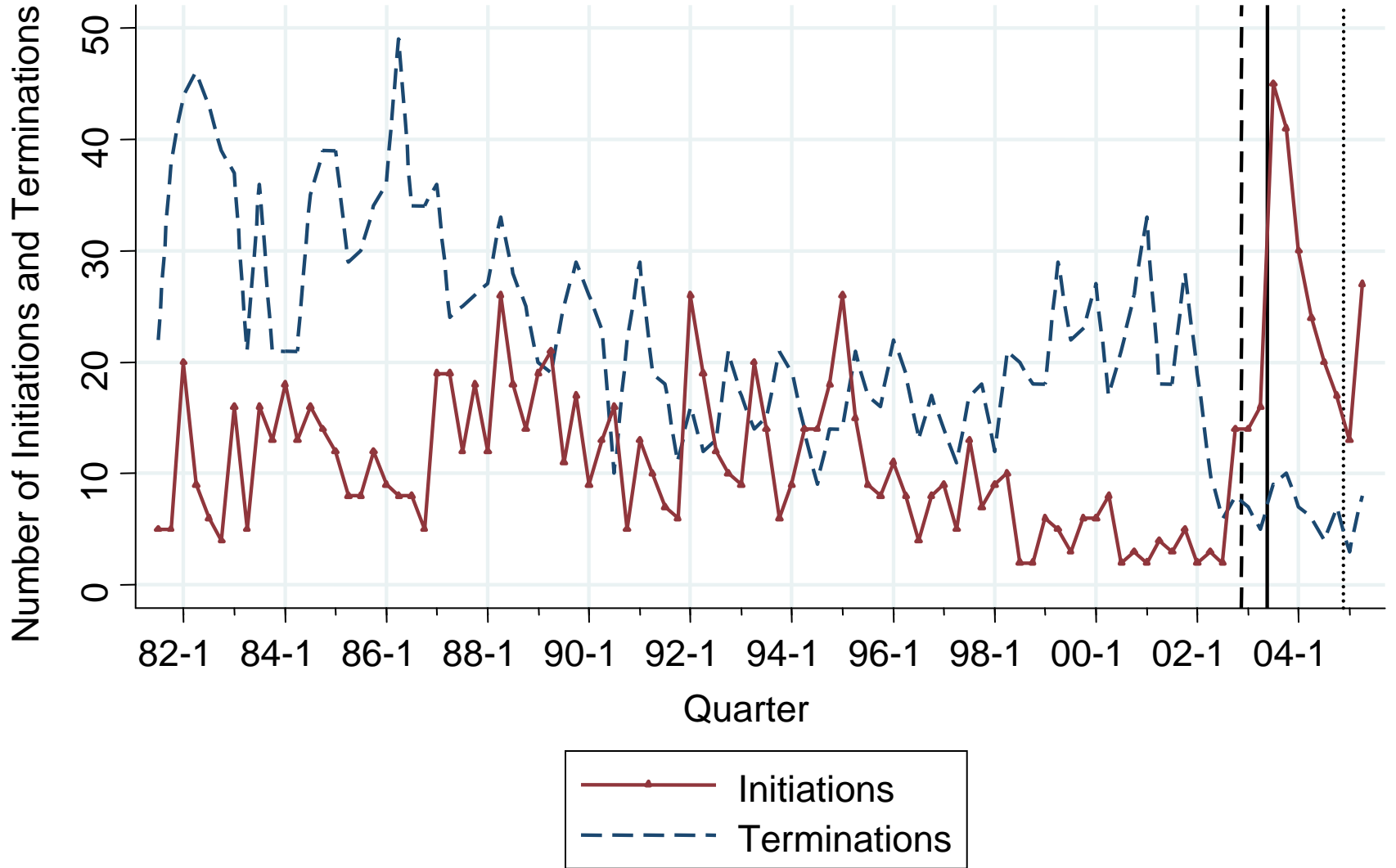
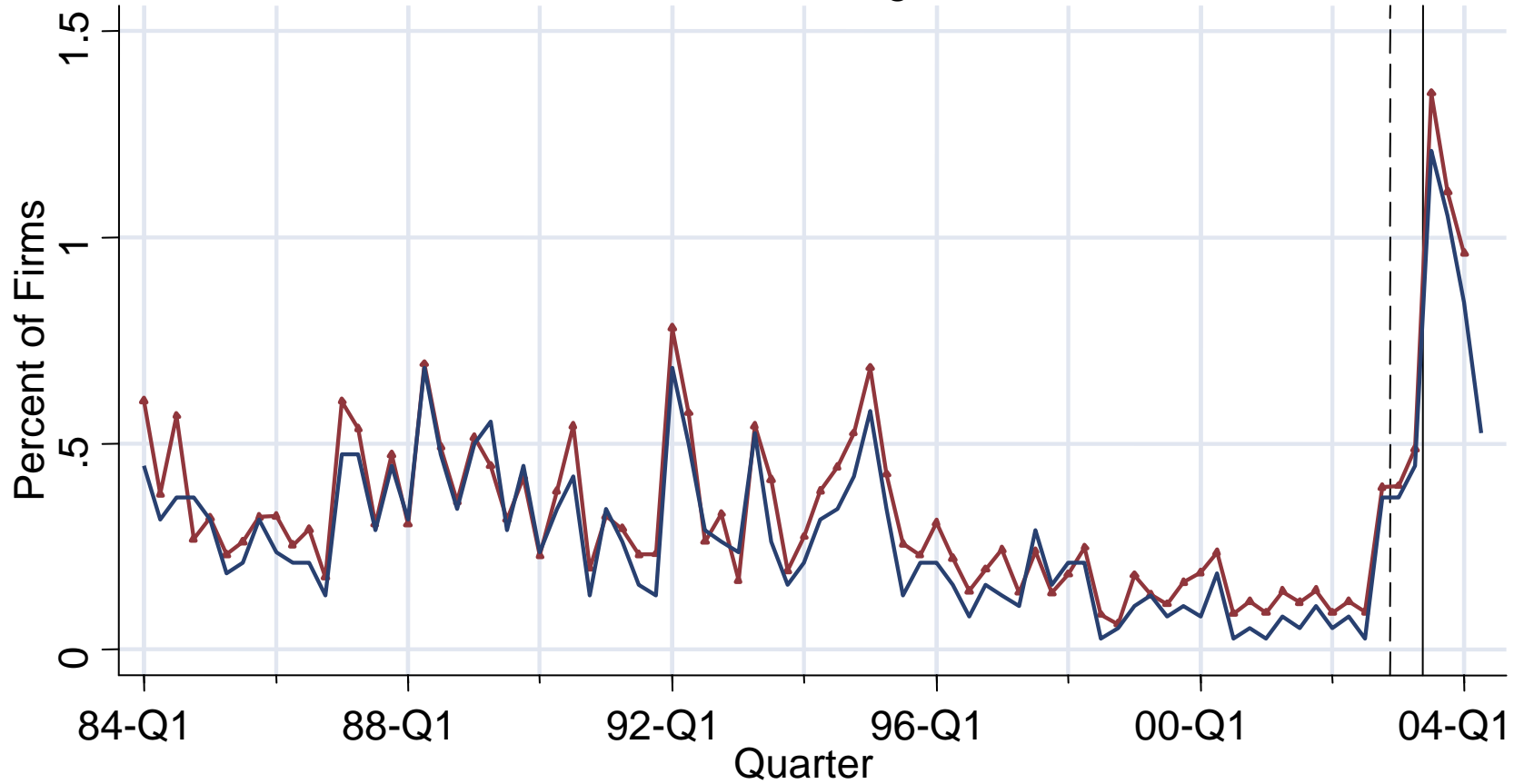


Figure 3

Dividend Initiations Controlling for Observables



—●— Percent payers: regression residuals, full sample
— Percent payers: means, top sample

Figure 4

Regular Dividend Initiations Per Month 2001-2004

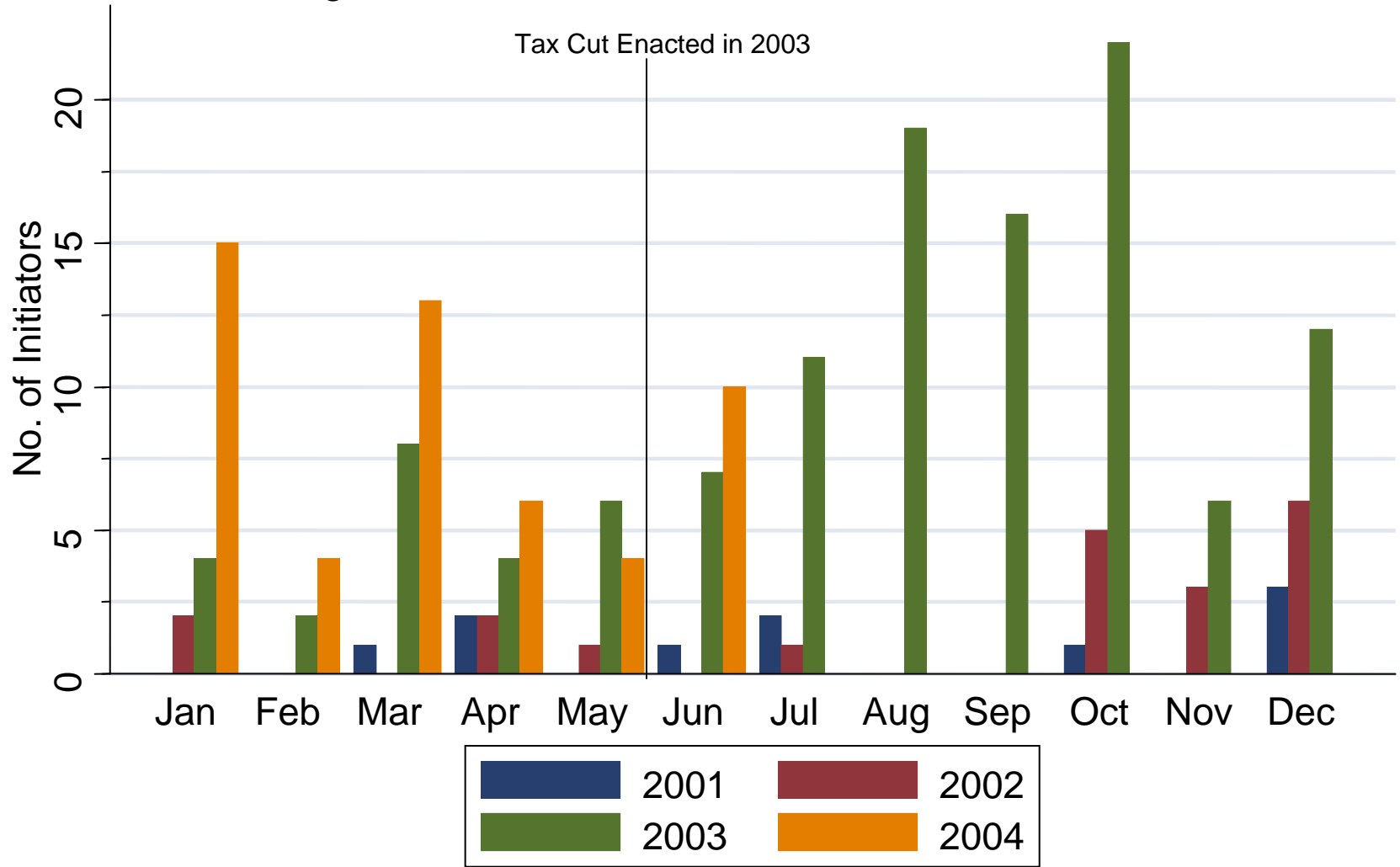


Table 1
Post-2003 Initiators Among Top 100 Largest Companies

Company	Industry	Mktcap Rank 2004-Q1	Annual Dividend Yield	Annual Dividends (\$ mil)
1. Microsoft	Software	2	0.99%	2610
2. Viacom	Entertainment	26	0.58%	392
3. Qualcomm	Wireless Equipment	34	0.55%	160
4. Clear Channel Com.	Radio, Television	66	0.93%	248
5. Guidant	Medical Equipment	80	0.76%	100
6. Analog Devices	Semiconductors	88	0.34%	59.2
7. Best Buy	Electronics Retail	100	0.69%	130

NOTE - CRSP companies (NYSE, AMEX, NASDAQ) excluding foreign, financials and utilities. Annual dividend yield and annual dividends based on payments in year of initiation.

Figure 6a

Percent Dividend Payers: Constant-Size vs. Core Sample

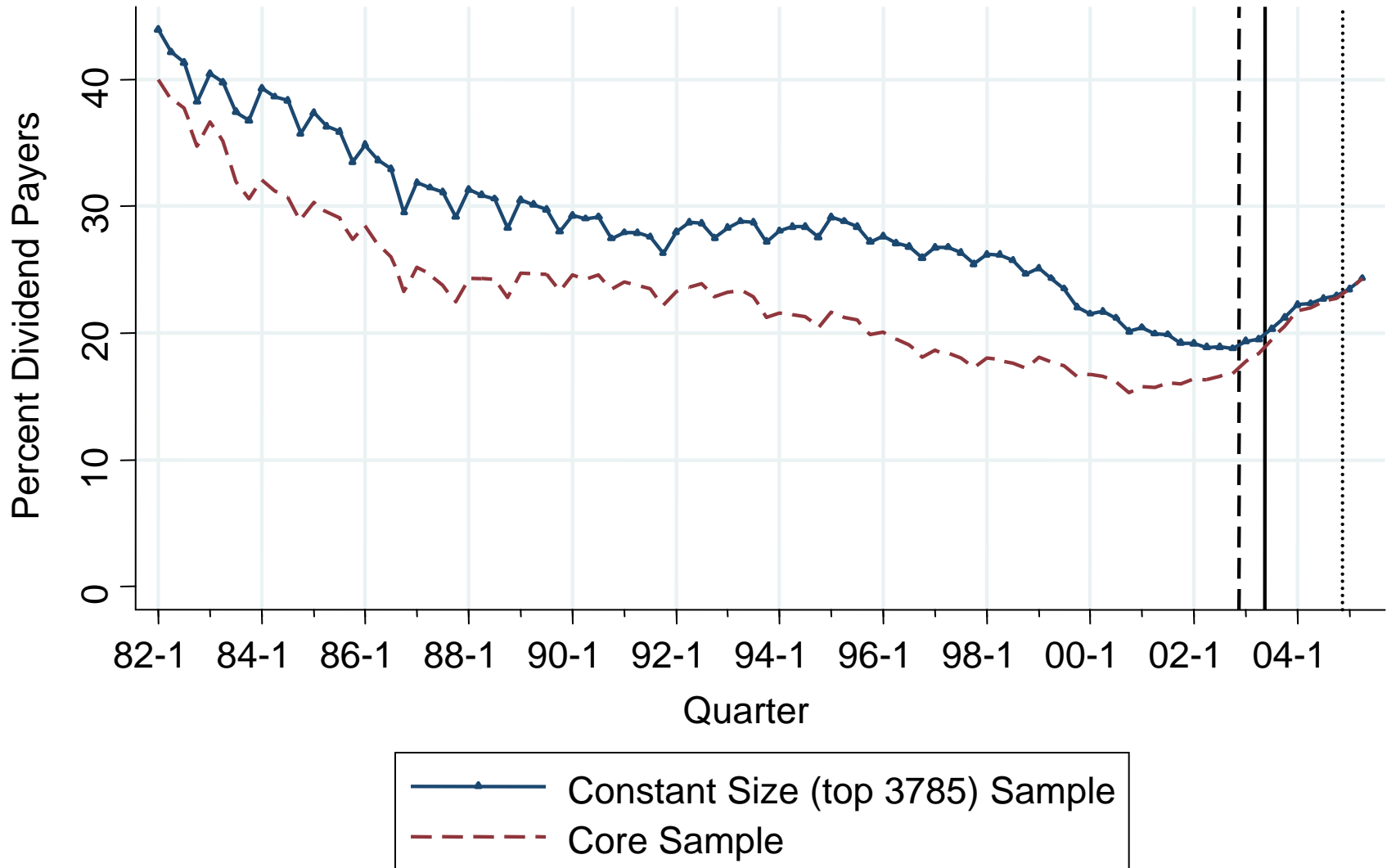


Figure 6b

Number of Firms and Number of Payers Paying Dividends (core sample)

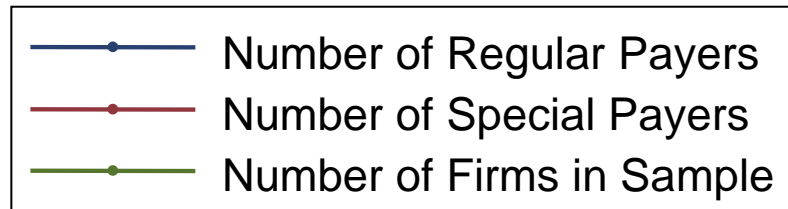
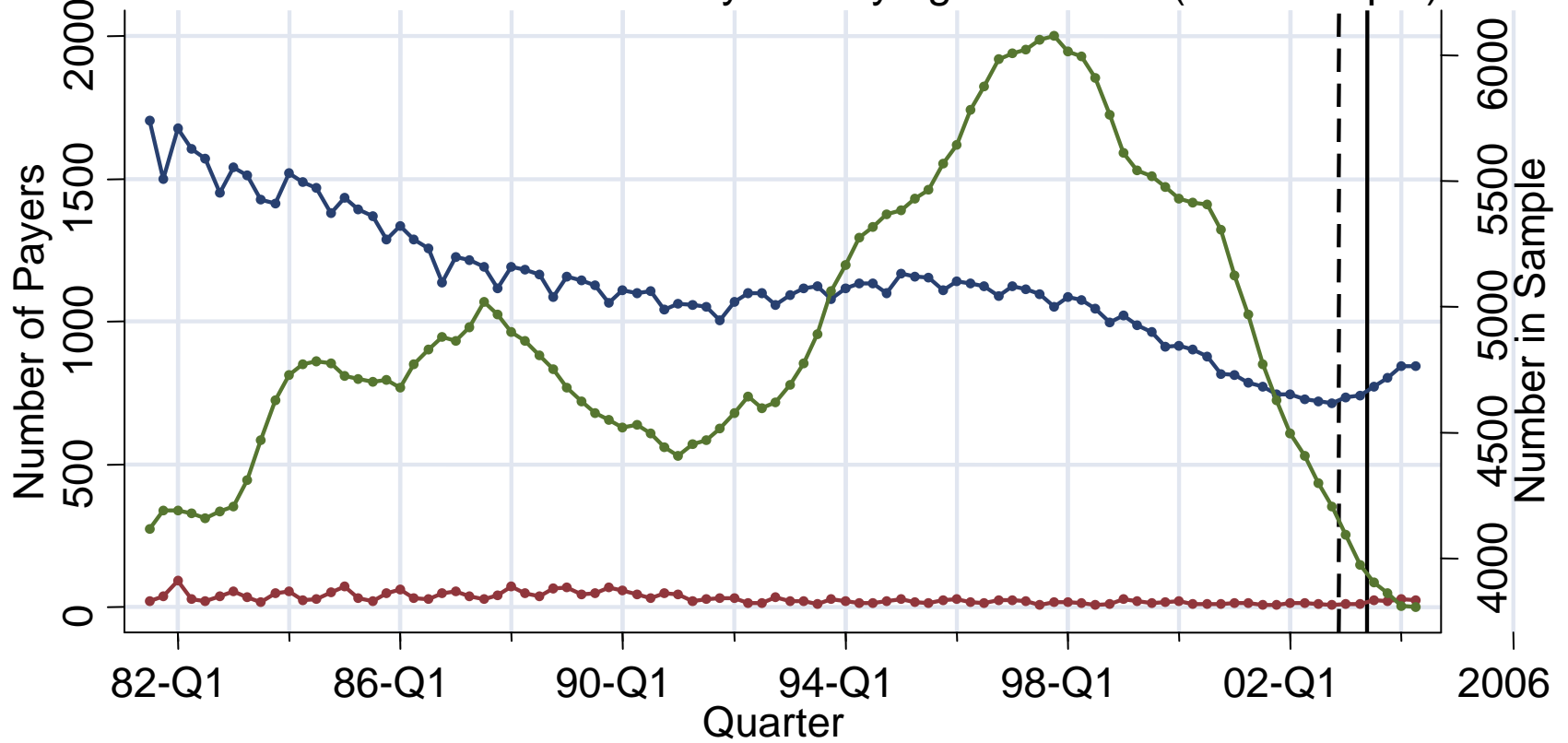


Figure 9a

Intensive Margin: Dividend Increases and Decreases in Top 3807 Firms

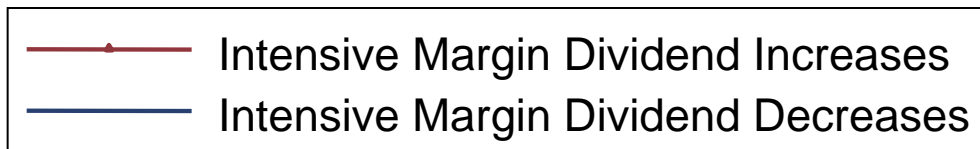
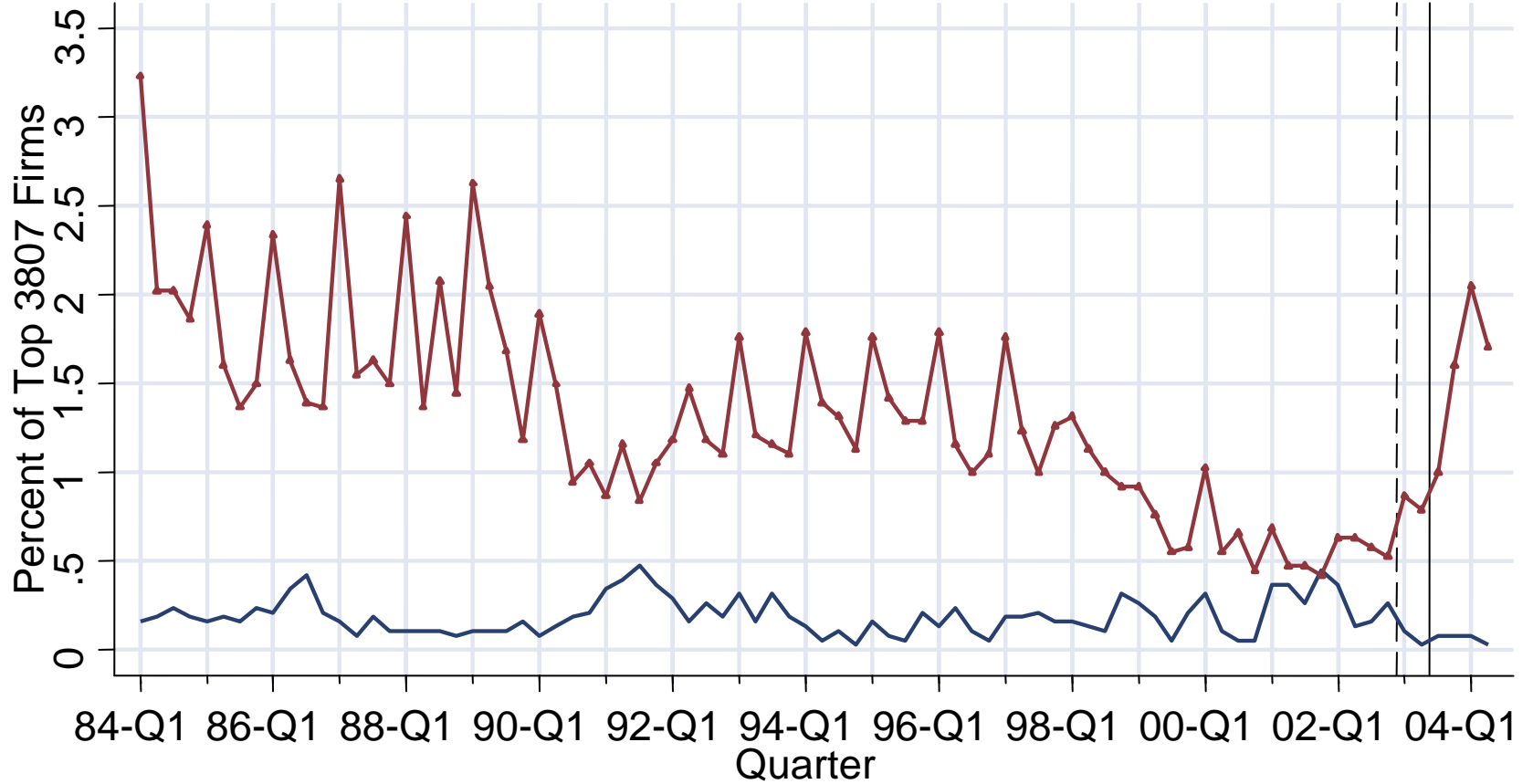
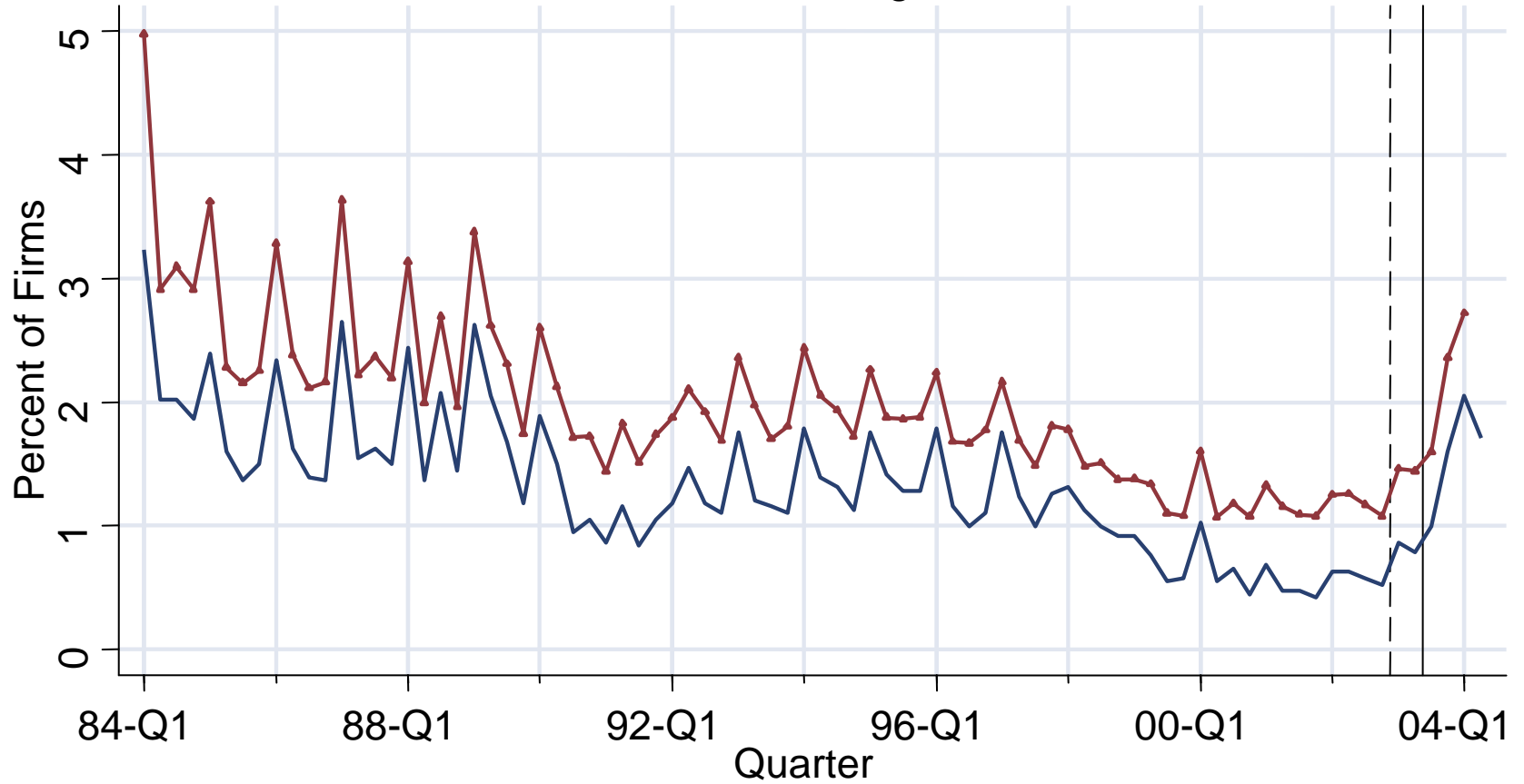


Figure 9b

Dividend Increases Controlling for Observables



—●— Percent payers: regression residuals, full sample
— Percent payers: means, top sample

Figure 11
Special Dividend Payers

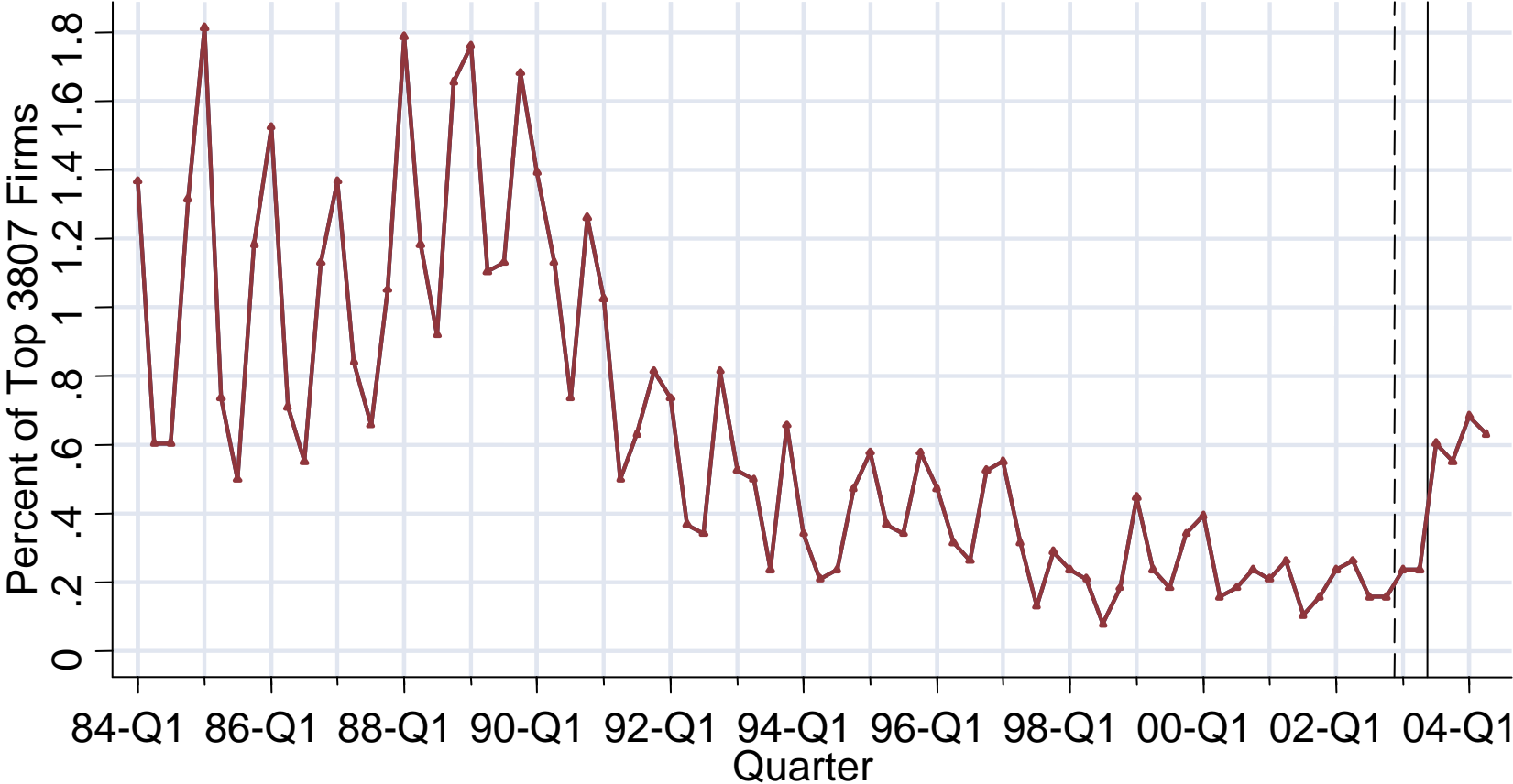


Figure 12a

Change in Dividend Amounts on Intensive and Extensive Margins

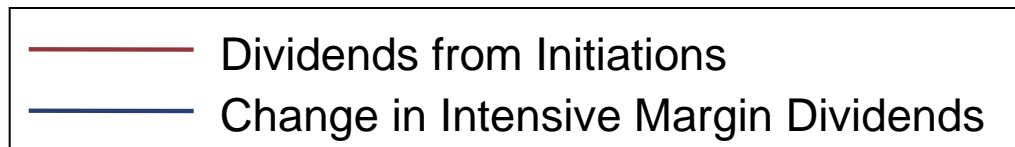
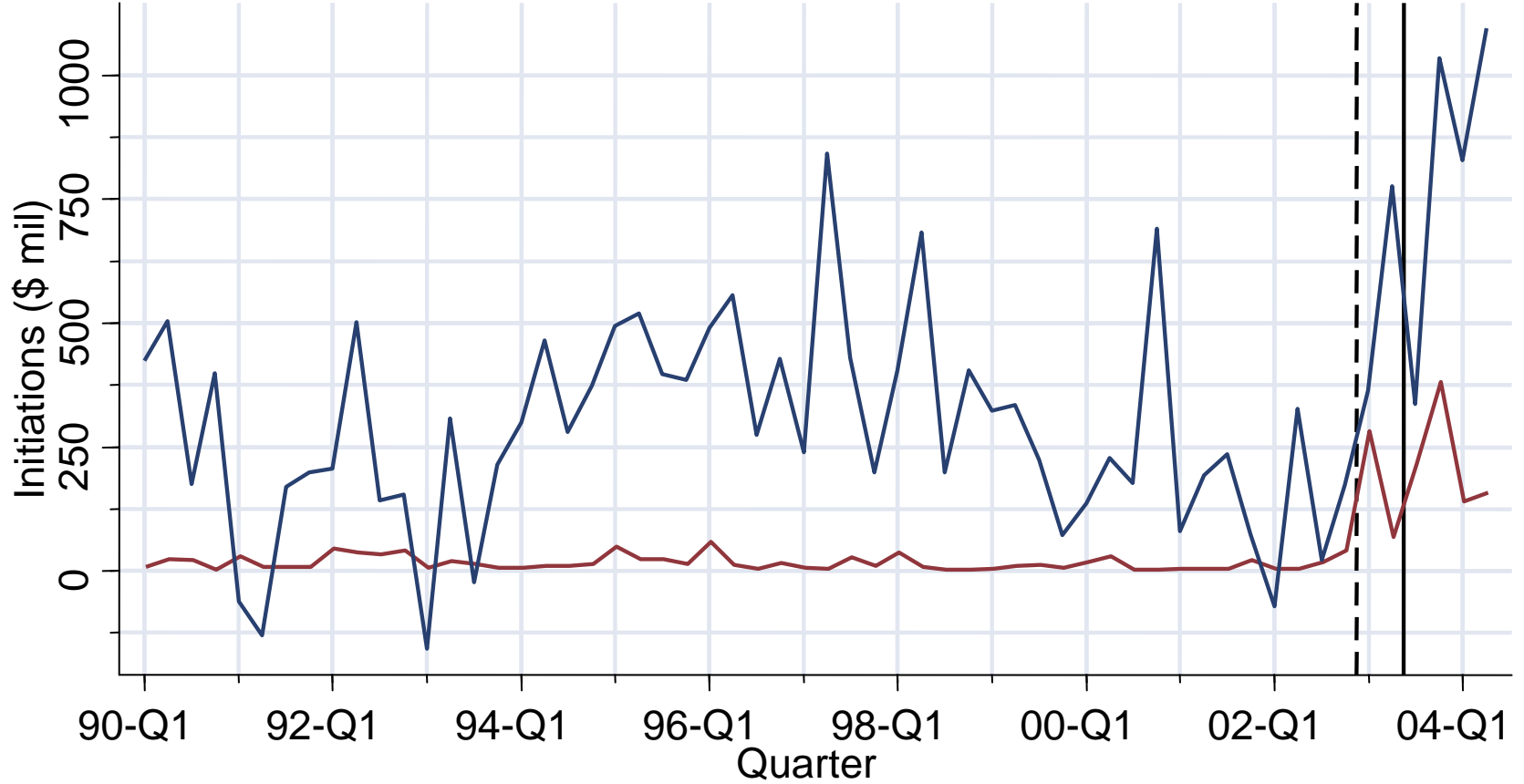
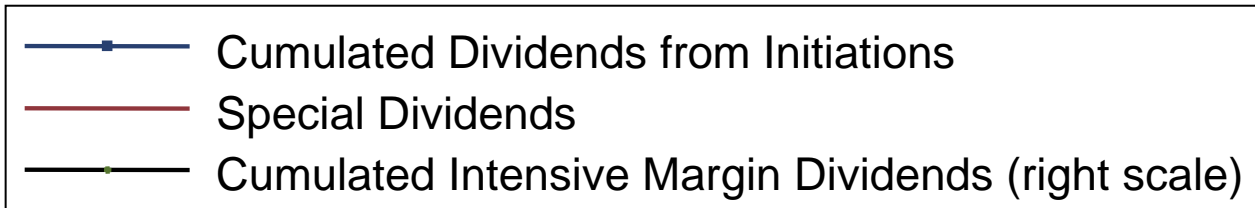
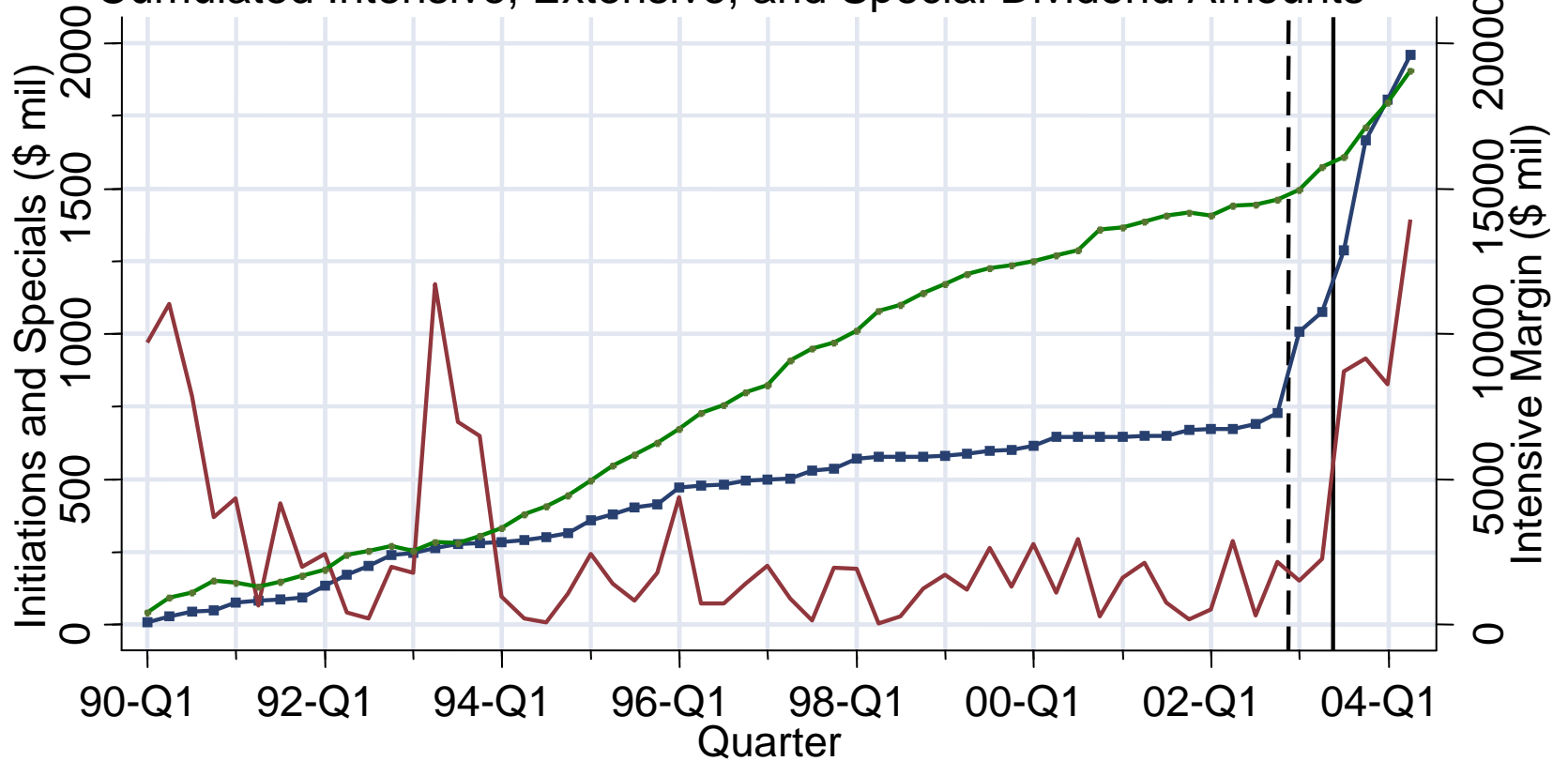


Figure 12b

Cumulated Intensive, Extensive, and Special Dividend Amounts



Summary of Results

	Pre-reform (01Q3-02Q4)	Post-reform (03Q1-04Q2)	Δ Dividend Amount (\$ Mn) per quarter
Initiations per qtr	4.3 (0.85)	29.0 (2.2)	192.2 (48.5)
Increases (20%+) per qtr	19.0 (1.8)	49.8 (2.9)	612.8 (167.8)
Special Payers per qtr	6.8 (1.1)	17.8 (1.7)	617.4 (203.5)

Total effect on regular dividends after 6 quarters: $6 \times (0.2 + 0.6) = \$4.8$ bn

→ Implied **elasticity** of dividends w.r.t. to tax rate of **-0.5** by 2004-Q2

ROBUSTNESS CHECKS: IS THE TAX CUT CAUSAL?

- One leading alternative story: Recent corporate scandals have generated distrust among shareholders
- This may have increased signaling value of dividends, boosting dividend payments, as in Baker and Wurgler's "catering theory"
- Beyond timing, three methods to tease apart tax effect from other unobservable trends:
 - 1) Press releases: More than 25% of initiators explicitly cite tax cut in first announcement
 - 2) Effect of taxable vs. non-taxable institutional shareholders (we will return to this in heterogeneity analysis)
 - 3) Canadian corporations as a control group (data from Compustat Canada)

WHICH FIRMS RESPONDED TO THE TAX CUT?

- Methodology: focus on initiations here (results for increases similar)
- Classify corporations into categories (quintiles) based on mean attributes between 1998 and 2004, except for earnings growth.
- Compare annual initiation rate among non-payers in each category pre (98-Q1 to 02-Q4) and post-reform (03-Q1 to 04-Q2)
- Run a regression with all observables interacted with reform dummy to test robustness of tabulations.
- Results reported here are robust to controls.

Figure 14a

Effect of Tax Cut on Initiations: Breakdown by Executive Ownership

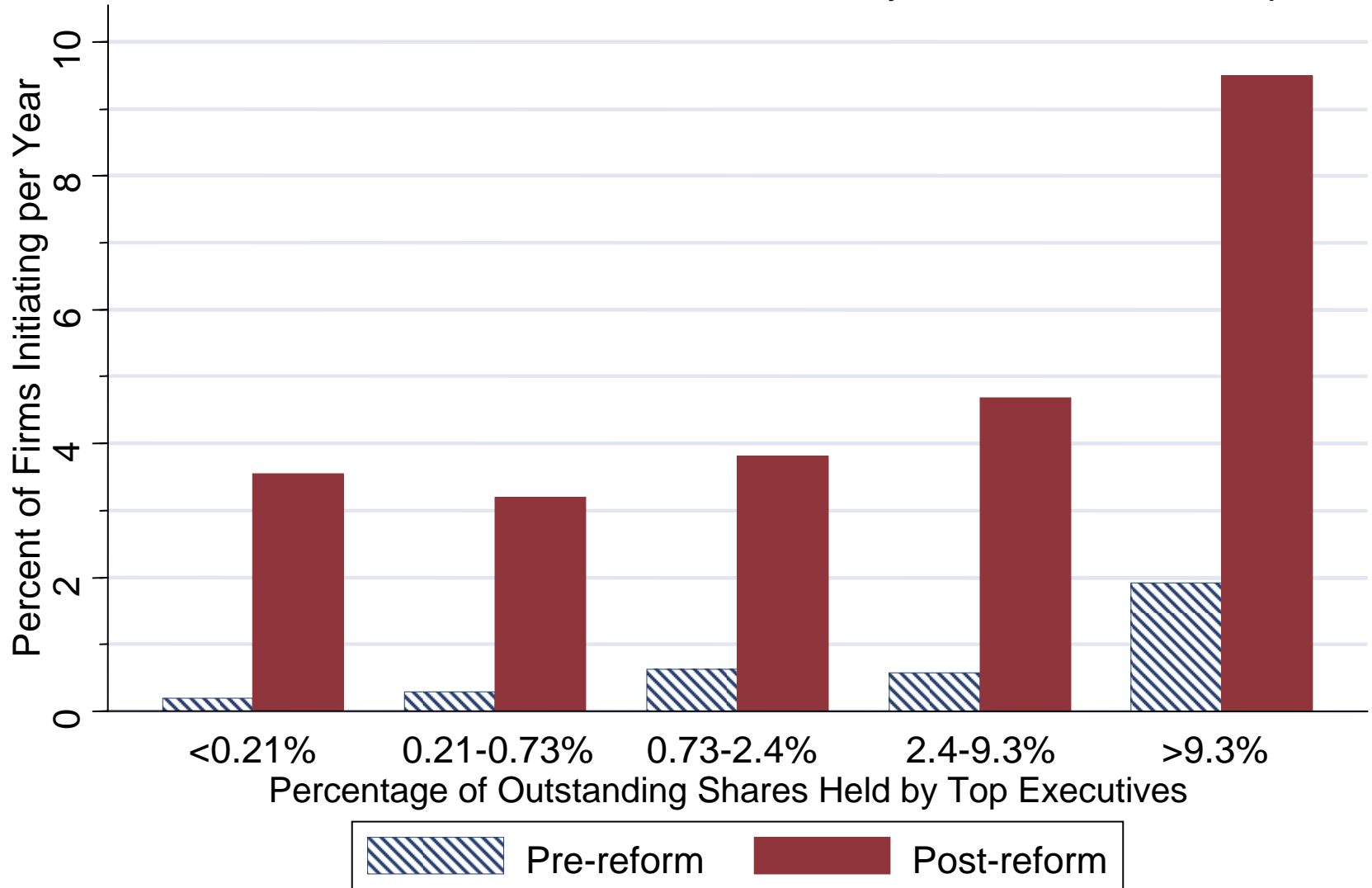


Figure 14b

Effect of Tax Cut on Initiations: Breakdown by Executive Option Holdings

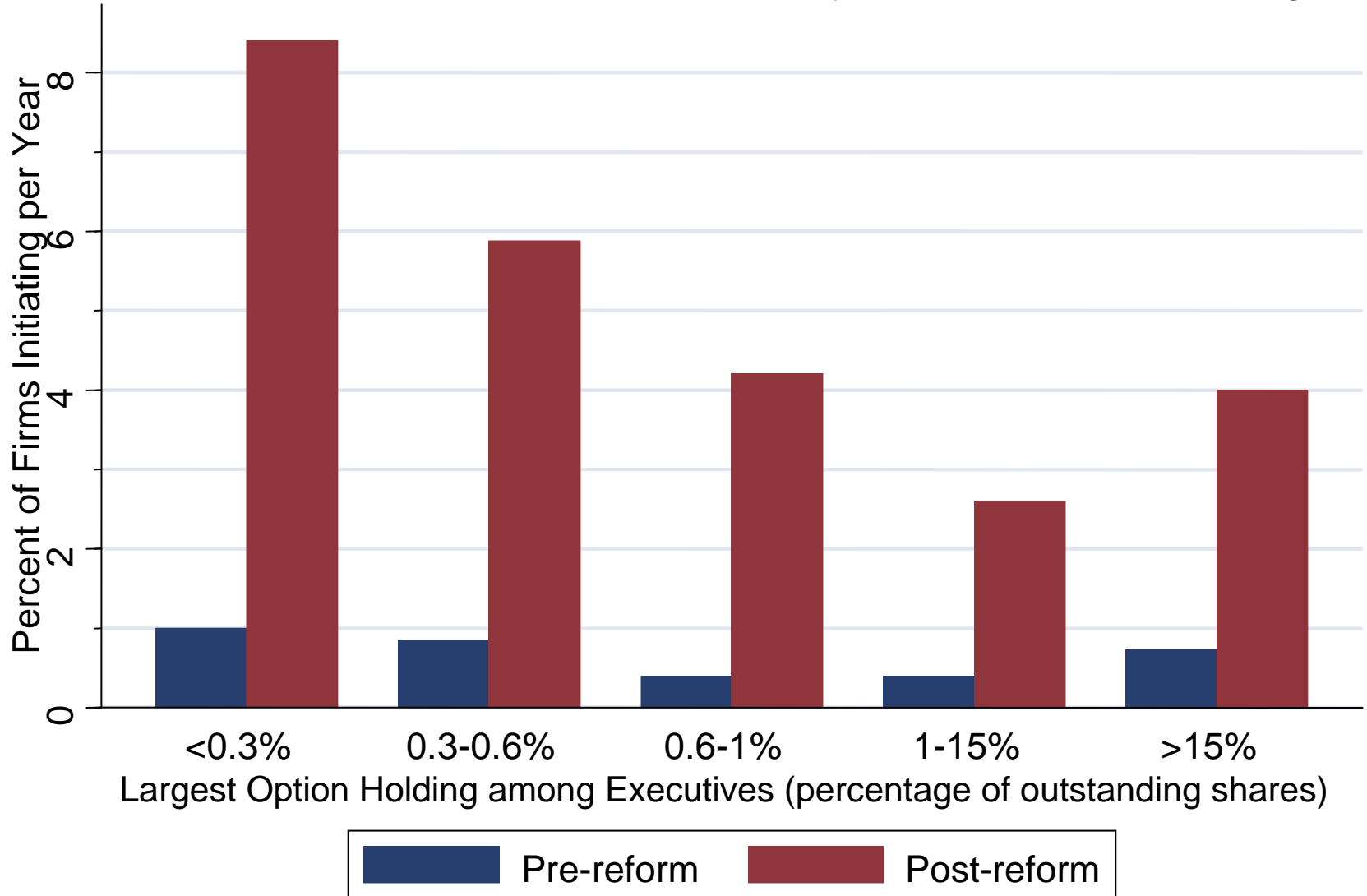


Table 4a

Interaction of Executive Incentives

Post-Reform Annual Initiation Rate by Share and Option Holding Groups

		Percentage of Shares Held by Top Executives		
		< 0.3%	0.3-2.8%	> 2.8%
Largest Option Holding among Executives	< 0.4%	2.75	4.53	14.00
	0.4-1.0%	1.43	4.35	10.47
	> 1.0%	0.67	1.90	7.03

Figure 15a

Effect of Tax Cut on Initiations: Breakdown by Institutional Ownership

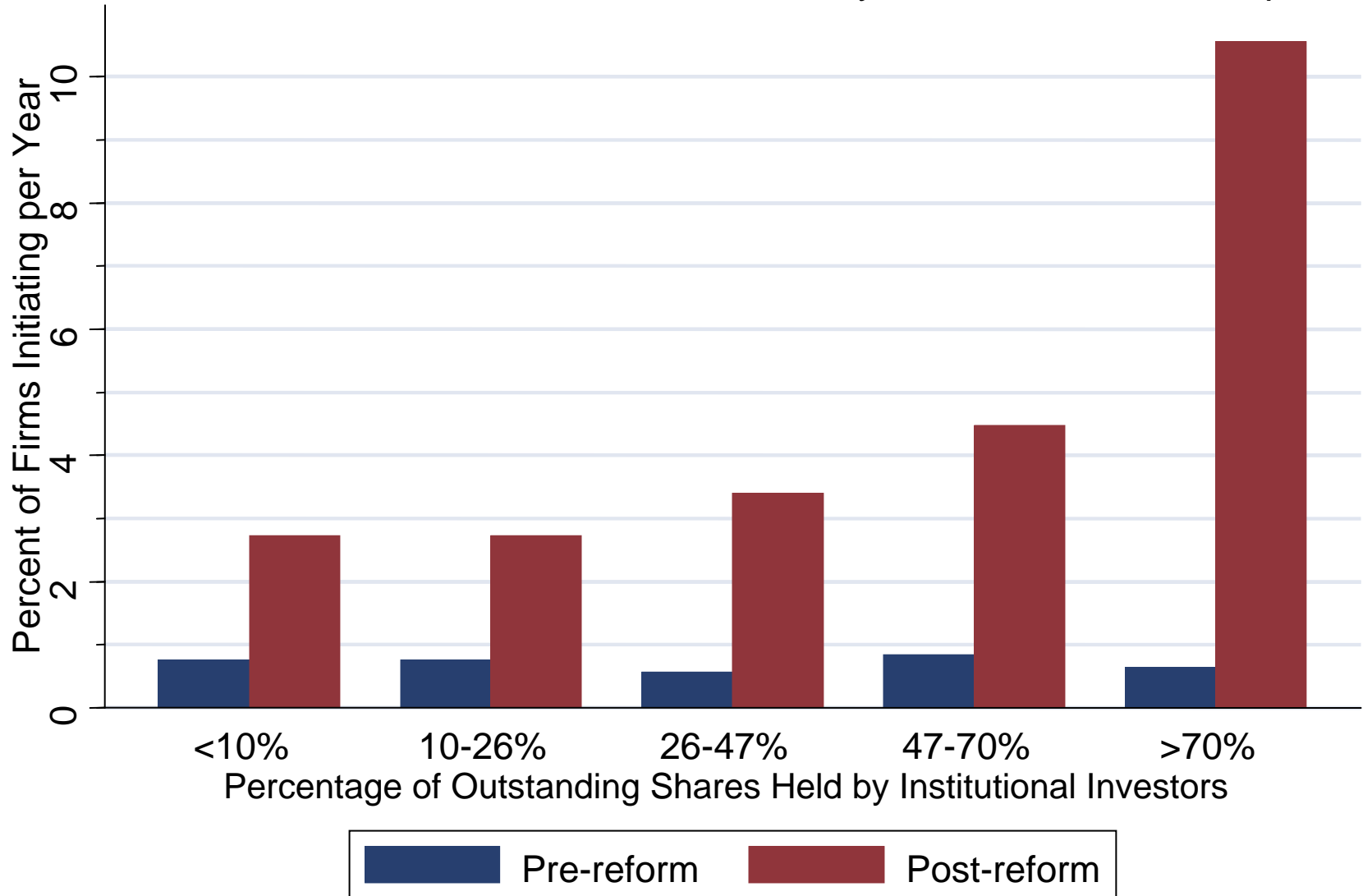


Figure 15b

Effect of Tax Cut on Initiations: Breakdown by Large Ownership Groups

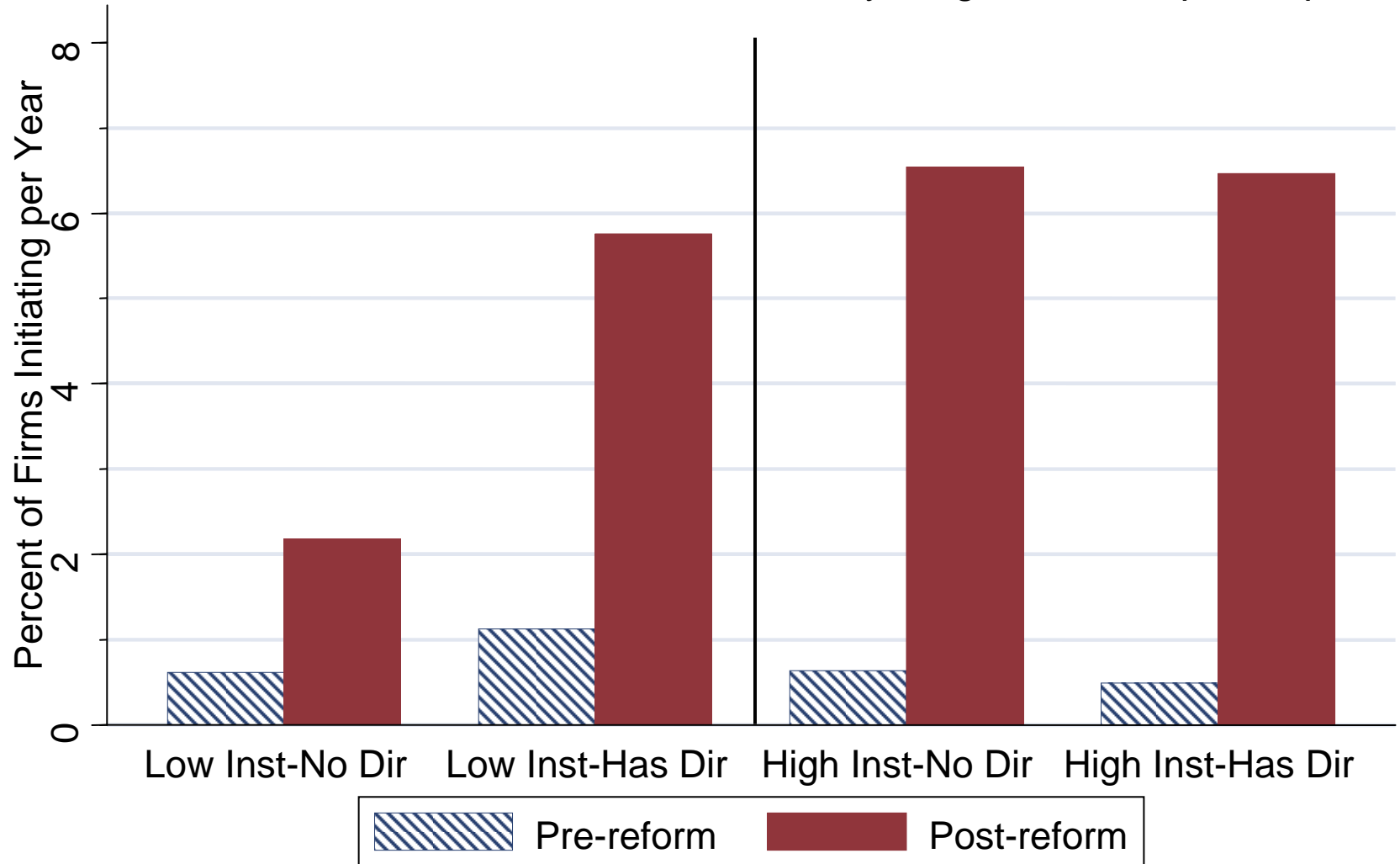


Table 4b

Interaction between Agents and Principals

Post-Reform Annual Initiation Rate by Exec Shares/Options and Inst. Holding

		<u>Percentage of Shares Held by Institutional Investors</u>		
		< 35%	35-63%	> 63%
Largest shareholding Among top execs	<0.5	1.21	1.24	6.66
	0.5-3.3	1.35	0.30	9.34
	>3.3	7.12	6.19	10.94

TAXABLE STATUS OF INSTITUTIONS

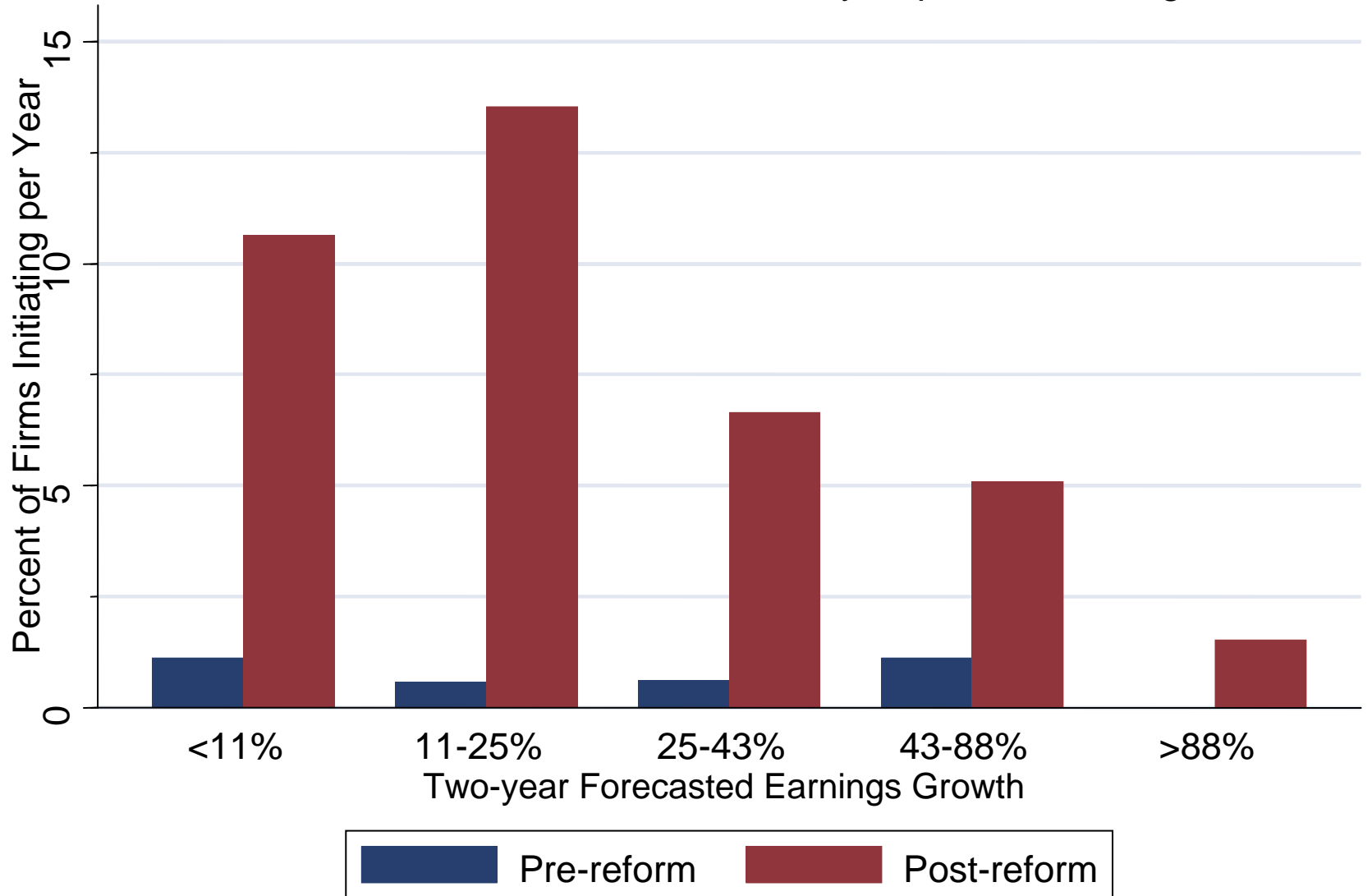
- Some institutional investors were unaffected by tax reform (e.g. pension funds)
- Do firms with taxable institutional holders respond more to tax cut than those with non-taxable institutions?
 - Break down response by tax status of largest instit. shareholder
 - Find a surge in initiations only among taxable institutions
 - Confirms causality of tax cut
 - Shows that large principals are themselves self-serving

Table 5
Initiation Rates by Tax Status
of Largest Institutional Holder

	Non-taxable	Taxable	Difference
Pre-reform	0.27 (0.15)	0.21 (0.04)	-0.07 (0.16)
Post-reform	0.25 (0.33)	1.28 (0.07)	1.02 (0.57)
Difference	-0.02 (0.37)	1.07 (0.08)	1.09 (0.37)

Figure 16

Effect of Tax Cut on Initiations: Breakdown by Expected Earnings Growth



TWO LESSONS FROM HETEROGENEITY ANALYSIS

- Principal-agent issues play a central role in response to taxes

Self-Serving agents (top execs) much more likely to initiate dividends if it is in their own interest (high share ownership, few options)

Strong principals (independent directors with large stakes, large taxable institutional investors) can induce a tax response especially if agents don't have incentives to do so.

Calls for tighter connection between agency theory in corporate finance and tax theory in public finance.

- Suggestive evidence of improved capital allocation with lower taxes

Dividend response confined to firms with moderate growth prospects

If internal capital markets inefficient (e.g. Jensen 1986), tax cut could have helped reallocate capital from low growth to high growth firms via external capital markets.

ARE DIVIDENDS SUBSTITUTING FOR SHARE REPURCHASES?

- Ideal strategy to answer this: Examine
Total Payout = Dividends+Repurchases
- Unfortunately, repurchases are very noisy so no change in total payout can be detected in full sample
- Noise plagues all other moments of total payout distribution as well:
Percentile amounts, # payers, etc.

Figure 17

Aggregate Dividends and Share Repurchases

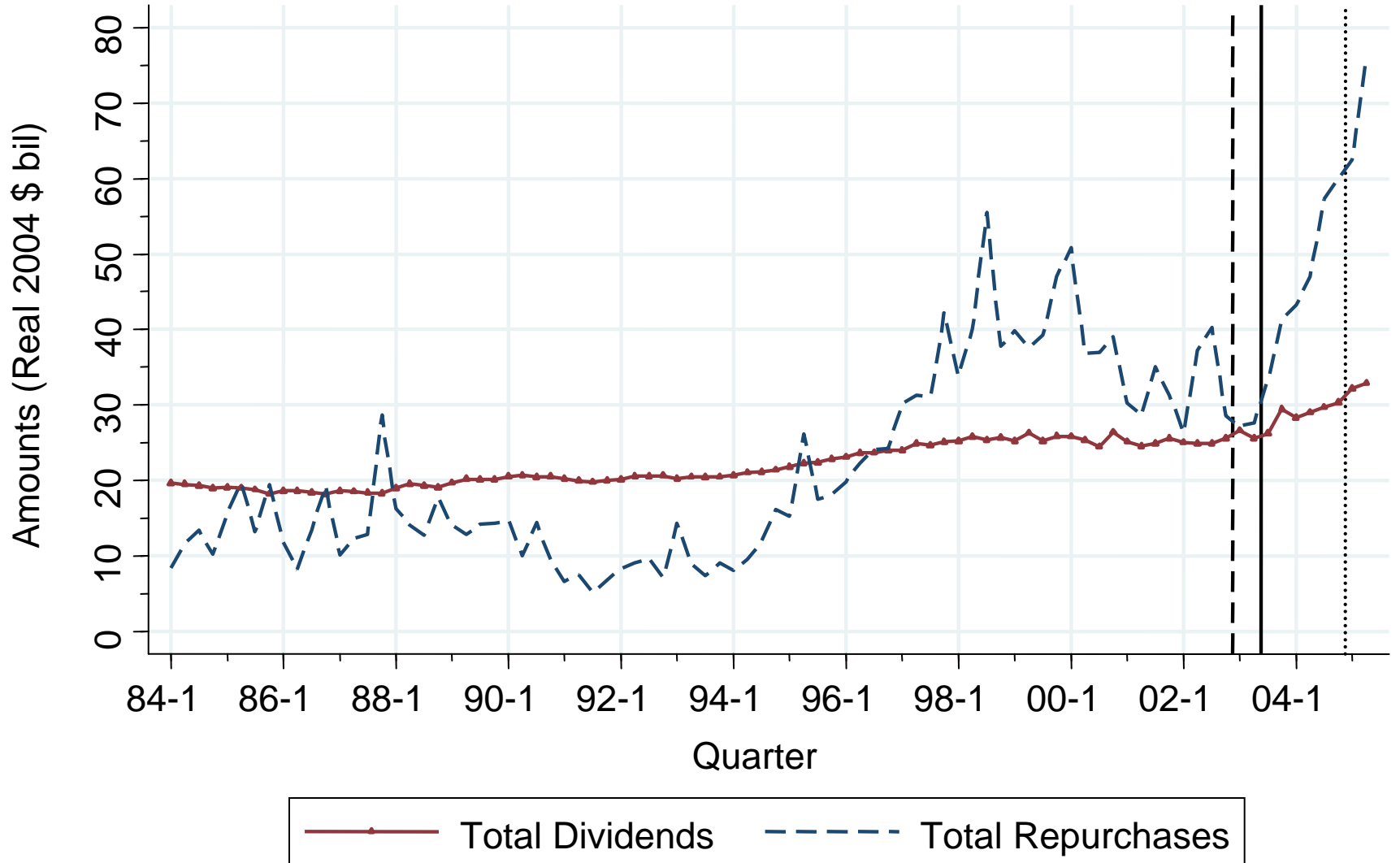
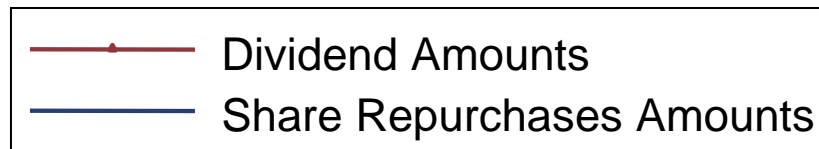
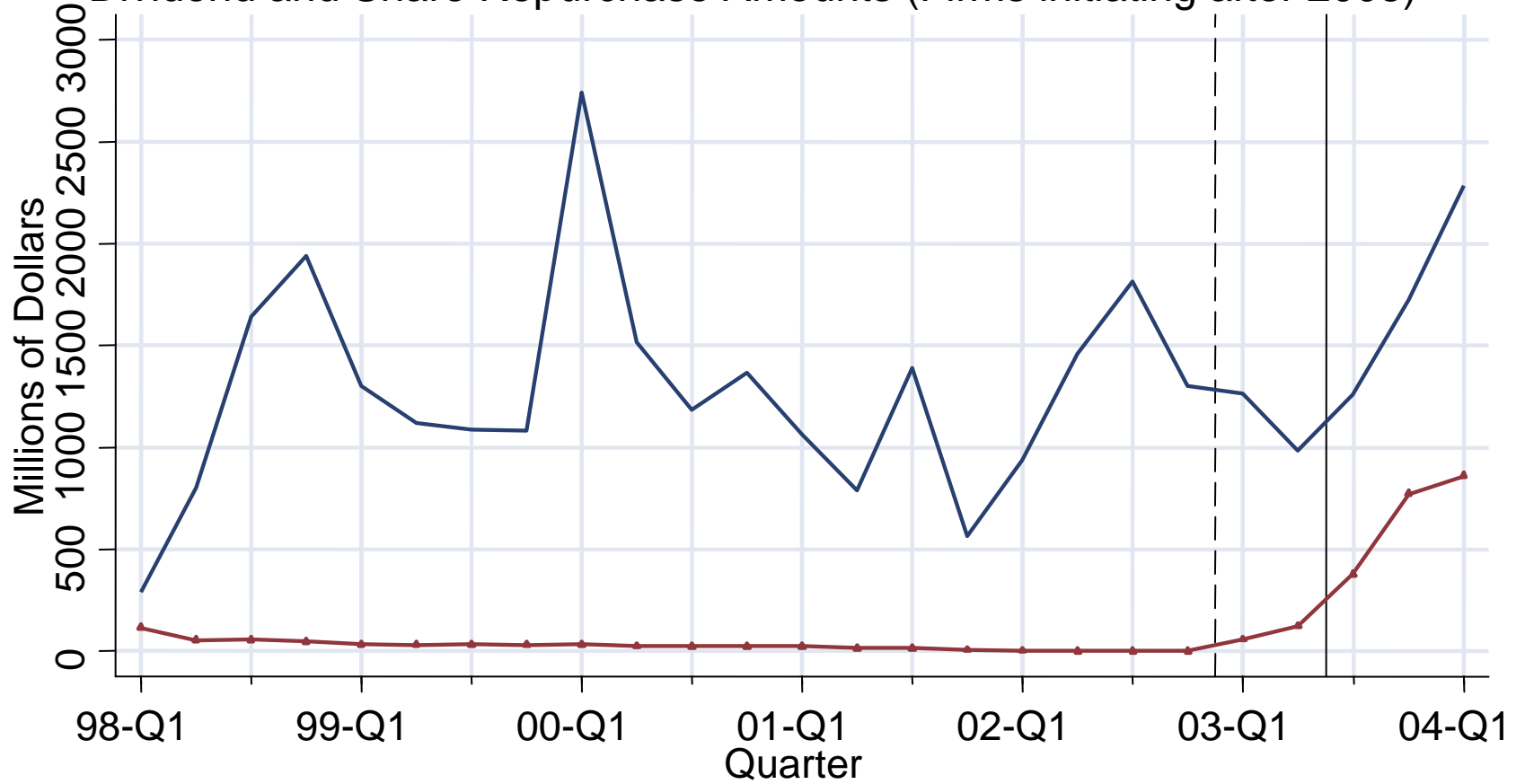


Figure 18b

Dividend and Share Repurchase Amounts (Firms initiating after 2003)



CONCLUSIONS

1. 40% tax cut on dividends in 2003 increased dividend payments by roughly 20%: estimated elasticity of -0.5
 - Particularly striking evidence at the extensive margin: End of the secular decline in fraction paying that started in late 1970s
 - Large increase in regular payments suggests that effects will be long term (even if tax cut is reversed)
2. Principal-agent relationship determines size of tax response.
 - Good agent incentives or powerful principals are necessary to induce larger payouts
3. Evidence consistent with improved capital allocation efficiency
 - High taxes coupled with agency problems may have led to an inefficiently high level of retained earnings pre-reform

QUESTIONS FOR FUTURE RESEARCH

1. What would an “agency theory of dividend taxation” look like?

Implications for optimal tax policy and behavioral responses on other margins

2. How do taxes affect other margins, e.g. asset prices?

Did the stock market value dividend initiations post-reform as much as pre-reform?

Could help distinguish signalling and agency explanations of dividends (Bernheim and Wantz, 1995)