

## Initial Public Offering Price Support and Ownership Structures

Sturla Lyngnes Fjesme  
Associate Professor of Finance  
Oslo and Akershus University College  
[sturla.fjesme@hioa.no](mailto:sturla.fjesme@hioa.no)

*Forthcoming in the Scandinavian Journal of Business Research*

### **Sammendrag**

Aksjer solgt gjennom Initial Public Offerings (IPOs) er ofte underpriset og derfor svært populære investeringsobjekter. Fjesme (2016) dokumenterer at den allokerte investeringsbanken ofte krever at investorer i populære IPOs kjøper flere aksjer også etter at børsnoteringen har funnet sted. Denne økte etterspørselen etter aksjer støtter prisene og tiltrekker mer interesse mot selskapene. Wilhelm (1999) forklarer at ikke-profesjonelle investorer kan misforstå denne prisstøtten som positiv informasjon og derfor investere i selskapene. Å finne data til å studere implikasjonene av prisstøtte på eierskapsstrukturer har vist seg å være svært vanskelig. I denne artikkelen studerer jeg nye data på IPOs fra Oslo Børs. Jeg viser at prisstøtte gir økt investering fra individuelle og norske investorer og redusert investering fra internasjonale institusjonelle investorer. Jeg konkluderer med at prisstøtte reduserer eierskap i norske selskaper fra internasjonale profesjonelle investorer.

Nøkkelord: Nyetableringer på børs; IPO allokeringer; Prisstøtte; Eierskapsstruktur; Individuelle investorer

### **Abstract**

Shares sold through Initial Public Offerings (IPOs) are often underpriced and therefore very popular investment objects. Fjesme (2016) documents that the allocating investment bank requires certain larger investors in popular IPOs to also purchase more shares after the stock exchange listing. This additional buying supports prices and attracts more attention to the companies in the short term. Wilhelm (1999) explains how non-professional investors are likely to misunderstand this price support as positive information and thereby increase their investment. Obtaining data to investigate the implications of price support on investor holdings has proven difficult in the past. In this paper, I investigate actual IPO allocations combined with trading after the listing on the Oslo Stock Exchange (OSE). I document that increased price support generates a large influx of domestic and retail ownership as opposed to foreign institutional ownership. I conclude that price support reduces international institutional ownership on the OSE.

Keywords: Initial Public Offerings; IPO allocations; Price support; Ownership structure; Retail investors

## **Introduction**

It is well documented that investment banks force investors in oversubscribed IPOs that they underwrite to purchase additional shares in the secondary market as a form of price support after the listing; see Griffin, Harris, and Topaloglu (2007) and Fjesme (2016). Investors agree to engage in price support to secure continued access to oversubscribed IPO allocations. Investment banks use investor-based price support to increase the share price in the immediate period after the listing to avoid having to stabilize the price themselves. Wilhelm (1999) argues that professional investors are likely to be aware of the price support, but that more naive investors are likely to misunderstand the increased trading as positive information. More price support could therefore potentially lead to an inflow of less professional investors.

In the past, obtaining data on actual IPO allocations has proven difficult. Linking IPO allocations with post-listing trading has been even more difficult. I investigate actual IPO allocations with post-listing trading for a sample of 182 IPOs on the OSE in the period 1993 to 2007. Companies listing on the OSE have to register shareholdings with the share depository (the OSE VPS) as part of the listing process. Secondary trading is then continually updated in the data. The smallest investor groups, as measured by the average portfolio value on the OSE, are domestic and retail investors. In this paper, I examine if increased price support is related to an increase in domestic ownership—and separately, retail ownership—after new listings.

I find that increasing price support by one standard deviation is associated with an increase in domestic ownership and, separately, retail ownership in the six months after the listing, by 9.24% and 2.73% respectively.

Fjesme (2016) shows that price support is actively used on the OSE. He shows that increased price support is related to a reduced holding period return for secondary investors. In addition, non-allocated secondary investors buy more shares when there is more price support. These non-allocated investors will also stay away from the IPO secondary market in the future when they realize that there has been price support. The investors who engage in price support are allocated more future oversubscribed IPO shares as a reward. Fjesme (2016), however, does not investigate how price support changes company ownership structure. Other studies have found that ownership structure is important for companies. Lau, Ng, and Zhang (2010) find that increased domestic ownership (as opposed to international ownership) is related to an increased cost of capital. Evans and Fahlenbrach (2012) and James and Karceski (2005) find that retail owners (as opposed to institutional owners) are less likely to monitor companies (and therefore less likely to provide benefits from reduced agency conflicts).

My main contribution is that I document that price support has a real impact on the ownership structure in the intermediate term (six months) after new listings. When there is more price support, there will also be more domestic and more retail investors holding shares in the companies. It is therefore possible that price support can increase problems associated with increased domestic and retail ownership (such as an increased cost of capital and reduced monitoring).

The remainder of this paper is organized as follows: Section 2 is hypothesis development; section 3 describes the data; section 4 gives the empirical results, while section 5 concludes.

## **Hypothesis development**

Hao (2007), and Chen and Wilhelm (2008), show theoretically that investment banks tie IPO allocations to investor after-listing purchases as a form of price support. In this way investment banks that manage the IPOs influence the share prices on the secondary market after the listings.

Investment banks use investor price support because stabilizing prices after new listings is an important part of the job that can potentially be very expensive (at least without overallotment options)<sup>1</sup>. Ellis (2006), Griffin et al. (2007), and Fjesme (2016) provide empirical evidence of IPO price support<sup>2</sup>.

One effect of price support is that prices are likely to rise above what they otherwise would have been immediately after the listing (before they eventually fall to their apparent equilibrium levels). Wilhelm (1999) argues that more naive investors are likely to misunderstand the price support as informed trading and thereby buy shares that are likely to fall in value later. One potential effect of price support is then an increase in the ownership by more naive investors in the period after new listings.

The average total portfolio values of international institutional, domestic, and retail IPO investors on the OSE are US\$360 million, US\$15.9 million, US\$3.5 million, respectively; see Fjesme (2016). On the basis of the average portfolio value, it is expected that both retail and domestic investors (as opposed to international institutional investors) are more likely to be part of the naive group of investors as described by Wilhelm (1999)<sup>3</sup>. If domestic investors (and separately, retail investors) are likely to misunderstand price support as informed trading, we should see that these investor types will increase their investment on the secondary market in IPOs with more price support. Griffin et al. (2007), and Chen and Wilhelm (2008), explain that investment banks are likely to use a smaller number of large investors for the price support to economize on monitoring costs. The biggest investors on the OSE are international institutional investors.

Based on Wilhelm (1999), Ellis (2006), Hao (2007), Griffin et al. (2007), Chen and Wilhelm (2008), and Fjesme (2016), I expect that domestic investors (and separately, retail investors) will increase their total holdings on the secondary market following IPOs with more price support. I formalize these predictions as Hypothesis H1 and H2.

*Hypothesis H1:* There is a positive relation between price support and total investment by domestic investors after new listings.

*Hypothesis H2:* There is a positive relation between price support and total investment by retail investors after new listings.

## **Data**

### **IPO sample**

There were 266 new listings on the OSE in the period January 1993 to September 2007. All companies listing on the OSE must register shareholdings on the OSE VPS database as part of the listing process. This database is continually updated with secondary trading. From the OSE

---

<sup>1</sup> Over allotment options are not commonly used in Norwegian IPOs during the sample period. Only two (out of the 182) companies provide information about over allotment options granted.

<sup>2</sup> See Fjesme (2016) for a more detailed review on why IPO participants engage in price support on the OSE.

<sup>3</sup> Barber and Lyon (2008) documents that retail investors are more likely to buy shares that get much attention in the media or from an increased trading volume. The argument is that non-professional investors have less time for analysis and will therefore buy shares that they already know about. Based on average portfolio values domestic and retail investors are more likely than international institutions to be non-professional

VPS database I observe IPO allocations in 188 of the 266 listings. The remainder 78 companies distribute shares in the IPO before they list in the database. The timing of when companies list in the VPS database appears random. The VPS data ends in September 2007. In total, six of the 188 companies with IPO data list on the OSE late in 2007, so I am not able to observe six months of post-listing trading. The final sample is 182 companies with complete data. This is the same data as used in Fjesme (2016). Table 1 lists the IPOs per year for the sample period.

### **Definition of variables**

Table 2 provides summary statistics of all variables used in the paper. I define *Domestic ownership* as the percentage of the outstanding shares held by domestic (Norwegian) investors at the end of the listing month. *Retail ownership* is the percent of the outstanding shares held by retail (non-institutional) investors at the end of the listing month. *Change domestic* is the percentage change in the *Domestic ownership* from the end of the listing month to the end of the sixth month after the listing. *Change retail* is the percentage change in the *Retail ownership* from the end of the listing month to the end of the sixth month after the listing. *Price support* is the fraction of the IPO issued shares purchased by foreign institutional investors in the first month after the listing. This is the same definition of *Price support* as Fjesme (2016). *News* is the number of news articles in the one month period before the listing that mention the company name. *MV* is the market value of equity of the company in millions of USD on the listing day. *BV/MV* is the book value of equity divided by the market value of equity. *VC* is a dummy variable that takes the value of one (otherwise zero) for companies with venture capital backing. *First day return* is the return from the IPO offer price to the first day closing price. *Top tier manager* takes the value of one (otherwise zero) for IPO managers ranked among the 8 highest (out of 32 possible); see Megginson and Weiss (1991). *Tech* takes the value of one (otherwise zero) for companies in the information technology sector. *Offer size* is the fraction of shares issued in the IPO to total outstanding shares. *Hot dummy* takes the value of one (otherwise zero) for companies listed in 2005 (the year with the most IPOs). *Post hot dummy* takes the value of one (otherwise zero) for companies listed in 2006 or 2007. *Time gap* is the time difference in months between the IPO allocation and the listing.

### **Summary statistics**

From Table 2 we see that the average *Domestic ownership* across the 182 IPOs is 76.3%. This means that on average domestic (Norwegian) and international (non-Norwegian) investors hold 76.3% and 23.7% out of outstanding shares at the end of the listing month, respectively. The average *Retail ownership* is 20.2%. This means that on average retail (non-institutional) and institutional investors hold 20.2% and 79.8% out of outstanding shares at the end of the listing month, respectively. The average *Change domestic* and *Change retail* are -0.96% and +5.2%, respectively. This means that on average there is a small reduction of -0.96% in the level of domestic shareholdings in the six month period after the listing. There is also a small increase in the level of retail shareholdings of 5.2% in the same time period. The average level of *Price support* is 6%. This means that allocated institutional investors buy on average 6% of the IPO issued shares immediately after the listing (in addition to the shares purchased in the issue). This does not include any purchases that stem from over allotment options as these (if any) would be done directly by the underwriter. *Price support* has a high standard deviation of 28% that indicates a high level of price support in some IPOs. The average IPO is mentioned in 5.08 separate news articles in the one month before the listing (*News*).

## Empirical results

### Domestic investment

Hypothesis H1 predicts a positive relation between price support and total investment by domestic investors in the period after new listings. In Table 3 I regress *Change domestic* on *Price support* and controls in a standard Tobit model<sup>4</sup>. *Change domestic* is the percentage change in domestic ownership from the end of the listing month to the end of the sixth month after the listing<sup>5</sup>. *Price support* is the fraction of the IPO issued shares purchased by international institutional investors in the first month after the listing. From column 1 of Table 3 we see that the slope coefficient of *Change domestic* on *Price support* is 33.0 and statistically significant at the 1% level. The interpretation is that increasing *Price support* by one standard deviation will increase *Change domestic* by 9.24% ( $33.0 * 0.28$ ). The results are also economically significant. The average *Domestic ownership* at the end of the listing month is 76.27%. Increasing *Domestic ownership* by 9.24% will lead to a level increase in the domestic ownership of 7% in the six-month period after the listing ( $(76.27% * 1.0924) - 76.27%$ ). Consistent with Hypothesis 1 I find that when there is more *Price support* there is also more domestic investment.

I use the combined set of control variables as used by Fjesme (2016), Boehmer, Boehmer, and Fishe (2006), and Liu and Ritter (2011) when they investigate IPO price support, IPO long term returns, and IPO short term returns, respectively. Arguably, secondary investment is related to expected returns. I control for the market value of the company shares (*MV*), the book to market ratio (*BV/MV*), a dummy variable indicating if the company has venture capital backing (*VC*), the company *First day return*, if the underwriter has many IPOs (*Top tier manager*), if the company is in the technology sector (*Tech*), the fraction of the company shares sold in the offering (*Offer size*), a dummy variable indicating if the company is in 2005 (*Hot dummy*), a dummy variable if the company is in 2006 or 2007 (*Post hot dummy*), a variable indicating the time difference between the IPO allocation and the listing (*Time gap*), and year fixed effects. *Change domestic* is positively related to *BV/MV* and negatively related to *Offer size*.

Barber and Odean (2008) show that retail investors are more likely to buy shares with more media attention, shares with high one day returns, and shares with high trading volume. It is therefore necessary to control that the increased buying comes from *Price support* and not from the general attention some companies get in the listing process from the media. In column 2 of Table 3 I include *News* as a control variable in the regression. *News* is the number of news articles in Norway in the one month period before the listing that mention the company name<sup>6</sup>. There is a negative relation between *Change domestic* and *News* when controlling for *Price support*. This indicates that foreign investors, rather than domestic investors, care more about news articles. However, one should be careful in placing too much weight on these numbers as *News* is only weakly economically and statistically related to *Change domestic*. In column 3 of Table 3 I interact *Price support* with *News* to investigate if *News* will increase the effect of *Price support* when both are used. The interaction *Price support \* News* is negative and significant at the 5% level in a one sided t-test. The effect of *Price support* on *Change domestic* is reduced when the company gets more attention in the media before the listing. I conclude that the increase in *Change domestic* is driven by *Price support* and not by general attention.

---

<sup>4</sup> I use a Tobit model as *Change domestic* and *Change retail* are censored at -100% as investors can at most sell all their shares. I find the same results when using alternative models such as standard OLS.

<sup>5</sup> I find the same results when specifying *Change domestic* and *Change retail* as the level change rather than the percentage change over time (not reported).

<sup>6</sup> I use news articles in the one month period before the listing to avoid a simultaneity bias where articles are written about the current trading.

## Retail investment

Hypothesis H2 predicts a positive relation between *Price support* and total investment by retail investors in the period after new listings. In Table 4 I regress *Change retail* on *Price support* and controls in a standard Tobit model. *Change retail* is the percentage change in the retail investor ownership from the end of the listing month to the end of the sixth month after the listing. From column 1 of Table 4 we see that the slope coefficient of *Change retail* on *Price support* is 9.76 and statistically significant at the 1% level. The interpretation is that increasing *Price support* by one standard deviation will increase *Change retail* by 2.73% ( $9.76 * 0.28$ ). The average retail ownership at the end of the listing month is 20.2%. Increasing retail ownership by 2.73% will lead to a level increase in the retail ownership of 0.55% ( $(20.2% * 1.0273) - 20.2%$ ). More price support will increase the total investment by retail investors. I control for the same variables as before (*MV*, *BV/MV*, *VC*, *First day return*, *Top tier manager*, *Tech*, *Offer size*, *Hot dummy*, *Post hot dummy*, and *Time gap*). *Change retail* is positively related to *BV/MV* and negatively related to *Offer size* and *VC*. This finding is consistent with hypothesis H2. There is a positive relation between *Price support* and total investment by retail investors in the period after the listing.

Given that Barber and Odean (2008) show that retail investors are more likely to be attention traders, I want to control that the results are driven by *Price support* and not by general attention. In column 2 of Table 4 I include *News* as a separate control variable. *Change retail* is not statistically related to *News*. In column 3 of Table 4 I interact *Price support* with *News*. The interaction term *Price support \* News* is negative, but only statistically significant at the 10% level in a one-sided t-test. I do not find that there is an increase in retail investment from the general attention that the company receives through the media.

## Conclusion

In this paper, I investigate if domestic (Norwegian) and retail (non-institutional) investors buy more shares in newly listed companies when there is more *Price support*. I investigate if the price support documented in Fjesme (2016) has a real influence on the ownership structure. I find that increasing price support by one standard deviation will increase domestic and retail ownership in the six months after the listing by 9.24% and 2.73%, respectively.

The practical implications of these findings are that in companies with more *Price support* there will also be more domestic and retail investor ownership after the listing. Issuers have allocated shares in the IPO presumably to the investors that they want to hold the shares in the long term; see Jenkinson and Jones (2004). *Price support* is likely to distort this initial allocation. It is also well documented in the literature that company ownership matters. Lau, Ng, and Zhang (2010) show that increased ownership by foreign investors is likely to reduce cost of capital. Reducing foreign investment can therefore potentially increase cost of capital for the involved companies. James and Karceski (2005) show that institutional investors are more likely than retail investors to monitor companies. *Price support* that increases retail holdings therefore has the potential to reduce benefits associated with increased monitoring (such as reduced agency problems). Currently *Price support* is legal in Norway as long as secondary purchases are made above the IPO offering price. I show that price support significantly alters the ownership structure in companies. Regulators could potentially change trading rules such that investors are made aware of those trades that are supportive trades and those that are not. In this way, non-professional investors will not be misled into buying shares they otherwise would not have purchased. Theoretical implications of these findings are that future models on ownership structures should also incorporate the stabilization process after the listing.

## References

- Barber, B., Odean, T. 2008: All that Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors. *Review of Financial Studies* 21, 785–818.
- Boehmer, B., Boehmer, E., Fishe, R. P. H. 2006: Do Institutions Receive Favorable Allocations in IPOs with Better Long-Run Returns? *Journal of Financial and Quantitative Analysis* 4, 809–828.
- Chen, Z., Wilhelm, W. 2008: A Theory of the Transition to Secondary Market Trading of IPOs. *Journal of Financial Economics* 90, 219-236.
- Ellis, K. 2006: Who trades IPOs? A Close Look at the First Days of Trading. *Journal of Financial Economics* 79, 339-363.
- Evans, R.B., Fahlenbrach, R. 2012: Institutional Investors and Mutual Fund Governance: Evidence from Retail–Institutional Fund Twins. *Review of Financial Studies* 25, 3530-3571.
- Fjesme, S.L. 2016: Initial Public Offering Allocations, Price Support, and Secondary Investors. *Journal of Financial and Quantitative Analysis* 51, 1663–1688.
- Griffin, J., Harris, J., Topaloglu, S. 2007: Why are IPO Investors net Buyers Through Lead Underwriters? *Journal of Financial Economics* 85, 518-551.
- Hao, Q. 2007: Laddering in Initial Public Offerings. *Journal of Financial Economics* 85, 102-122.
- James, C., Karceski J. 2006: Investor Monitoring and Differences in Mutual Fund Performance. *Journal of Banking and Finance* 30, 2787–2808.
- Jenkinson, T., Jones, H. 2004: Bids and Allocations in European IPO Bookbuilding. *Journal of Finance* 59, 2309-2338.
- Lau, S.T., Ng, L., Zhang, B. 2010: The World Price of Home Bias. *Journal of Financial Economics* 97, 191-217.
- Liu, X., Ritter, J. 2011: Local Underwriter Oligopolies and IPO Underpricing. *Journal of Financial Economics* 102 , 579–601.
- Meggison, W., Weiss, K. 1991: Venture Capitalist Certification in Initial Public Offerings. *Journal of Finance* 46, 879-903.
- Wilhelm, W. 1999: Secondary Market Stabilization of IPOs. *Journal of Applied Corporate Finance* 12, 77-86.

## Table 1

### IPOs per year

Table 1 lists the number of IPOs per year on the Oslo Stock Exchange (OSE) in the period January 1993 to September 2007, for which I observe IPO allocations and a minimum of six months of post listing trading.

---

Year	IPOs
1993	5
1994	15
1995	12
1996	13
1997	26
1998	15
1999	3
2000	13
2001	6
2002	2
2003	
2004	13
2005	33
2006	20
2007	6
Total	182

---



## Table 2

### Descriptive statistics

Table 2 defines all the variables used in the paper. *Domestic ownership* is the % of the outstanding shares held by domestic (Norwegian) investors at the end of the listing month. *Retail ownership* is the % of the outstanding shares held by retail (non-institutional) investors at the end of the listing month. *Change domestic* is the percentage change in domestic ownership from the end of the listing month to the end of the sixth month after the listing. *Change retail* is the percentage change in the retail investor ownership from the end of the listing month to the end of the sixth month after the listing. *Price support* is the fraction of the IPO issued shares purchased by international institutional investors in the first month after the listing; see Fjesme (2016). *News* is the number of news articles published in the Norwegian press in the one-month period before the listing date that mention the company name. *MV* is the market value of equity in the company in million USD at the listing day. *BV/MV* is the book value of equity divided by the market value of equity. *VC* is a dummy variable that takes the value of one (otherwise zero) for companies with venture capital backing. *First day return* is the return from the IPO offer price to the first day closing price. *Top tier manager* takes the value of one (otherwise zero) for IPO managers ranked among the 8 highest (out of 32 possible); See Megginson and Weiss (1991). *Tech* takes the value of one (otherwise zero) for companies in the information technology sector. *Offer size* is the fraction of shares issued in the IPO to total outstanding shares. *Hot dummy* takes the value of one (otherwise zero) for companies listed in 2005 (the year with the most IPOs). *Post hot dummy* takes the value of one (otherwise zero) for companies listed in 2006 or 2007. *Time gap* is the time difference in months between the IPO allocation and the listing.

Variable	Obs	Mean	Std. Dev.	5%	25%	50%	75%	95%
Domestic ownership	182	76.27	24.64	18.23	61.96	84.98	95.76	99.78
Retail ownership	182	20.22	19.22	0.90	4.61	13.66	30.71	65.01
Change domestic	182	-0.96	23.85	-26.62	-6.69	-0.03	2.93	19.28
Change retail	182	5.20	46.75	-50.62	-14.13	0.90	13.33	86.21
Price support	182	0.06	0.28	0.00	0.00	0.01	0.06	0.18
News	182	5.08	7.81	0.00	0.00	3.00	6.00	18.85
MV	182	0.30	0.85	0.02	0.05	0.10	0.25	1.09
BV/MV	182	0.58	0.73	0.05	0.23	0.42	0.69	1.69
VC	182	0.15	0.36	0.00	0.00	0.00	0.00	1.00
First day return	182	0.10	0.26	-0.18	-0.01	0.04	0.16	0.50
Top tier manager	182	0.54	0.50	0.00	0.00	1.00	1.00	1.00
Tech	182	0.18	0.38	0.00	0.00	0.00	0.00	1.00
Offer size	182	0.35	0.27	0.03	0.14	0.29	0.46	1.00
Hot dummy	182	0.18	0.39	0.00	0.00	0.00	0.00	1.00
Post hot dummy	182	0.14	0.35	0.00	0.00	0.00	0.00	1.00
Time gap	182	0.69	1.09	0.00	0.00	0.00	1.00	3.00

**Table 3****The Change in Domestic Ownership After the Listing**

Table 3 reports intercept coefficients and p-values in parentheses for standard Tobit regressions of *Change domestic* on *Price support* and controls. In column 3 *Price support* is interacted with *News*. All variables are defined in Table 2. Statistical significance at the 10%, 5%, and 1% level are indicated by \*, \*\*, and \*\*\*, respectively.

	Change domestic					
	1		2		3	
Price support	33.00***	(0.000)	32.83***	(0.000)	33.56***	(0.000)
Price support * News					-2.26**	(0.025)
News			-0.20*	(0.059)	0.10	(0.657)
MV	0.41	(0.663)	0.87	(0.411)	0.71	(0.527)
BV/MV	2.80***	(0.002)	2.91***	(0.002)	2.93***	(0.001)
VC	-6.91	(0.226)	-6.97	(0.220)	-7.72	(0.215)
First day return	-3.12	(0.600)	-3.42	(0.563)	-3.48	(0.552)
Top tier manager	1.00	(0.795)	1.30	(0.737)	1.33	(0.739)
Tech	-2.12	(0.454)	-2.46	(0.380)	-2.37	(0.437)
Offer size	-11.32**	(0.016)	-11.81**	(0.017)	-11.53**	(0.015)
Hot dummy	2.59	(0.616)	3.40	(0.535)	3.38	(0.507)
Post hot dummy	-7.53	(0.125)	-7.12	(0.164)	-7.85*	(0.090)
Time gap	-0.29	(0.778)	-0.43	(0.660)	-0.26	(0.782)
Constant	2.09	(0.215)	1.75	(0.313)	2.15	(0.168)
N	182		182		182	
Year fixed effects	Yes		Yes		Yes	
Adj.R2	2.7%		2.7%		2.8%	

**Table 4****The Change in Retail Ownership After the Listing**

Table 4 reports intercept coefficients and p-values in parentheses for standard Tobit regressions of *Change retail* on *Price support* and controls. In column 3 *Price support* is interacted with *News*. All variables are defined in Table 2. Statistical significance at the 10%, 5%, and 1% level are indicated by \*, \*\*, and \*\*\*, respectively.

	Change retail					
	1		2		3	
Price support	9.76***	(0.001)	9.50***	(0.000)	10.75***	(0.000)
Price support * News					-3.93	(0.182)
News			-0.31	(0.540)	0.23	(0.778)
MV	-1.11	(0.738)	-0.43	(0.883)	-0.69	(0.796)
BV/MV	7.29**	(0.016)	7.45**	(0.022)	7.49**	(0.017)
VC	-9.97*	(0.059)	-10.05*	(0.055)	-11.36*	(0.061)
First day return	3.02	(0.782)	2.57	(0.802)	2.47	(0.812)
Top tier manager	-1.92	(0.852)	-1.47	(0.883)	-1.42	(0.883)
Tech	-4.42	(0.250)	-4.93	(0.162)	-4.77	(0.196)
Offer size	-17.00*	(0.072)	-17.73*	(0.066)	-17.24*	(0.070)
Hot dummy	0.37	(0.972)	1.59	(0.899)	1.57	(0.893)
Post hot dummy	-0.52	(0.960)	0.09	(0.994)	-1.18	(0.918)
Time gap	3.59	(0.245)	3.38	(0.248)	3.68	(0.205)
Constant	1.51	(0.703)	2.02	(0.568)	1.32	(0.689)
N	182		182		182	
Year fixed effects	Yes		Yes		Yes	
Adj.R2	0.8%		0.8%		0.9%	