

# **Stock Option Grants and Firm Value When Directors Cannot Behave Opportunistically**

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# What do we do in this study

This study examines the impact of option grants issued to executive and non executive directors in Australia

Main focus:

Why issue option grants to non-executive directors (NEDs) against **Corporate Governance Principles and Recommendations 8.2**

How market react to managers decision to issue option grants to NEDs, whether this reaction differs from issuance of options to EDs.

# Institutional Background

## According to ASX Listing Rules

- Issuing securities to directors (including option grants) must be approved in advance by shareholders at the annual general meeting (listing rules 10.11, 10.14).
- Entity must not increase the total amount of directors fees without the approval of the holders of ordinary shares (listing rule 10.17). This rule does not apply to a salary of executive director.

# Corporate Governance Principles and Recommendations

## **Recommendation 8.2:**

- Companies should clearly distinguish the structure of non-executive directors' remuneration from that of executive directors and senior executives

## Box 8.2: Guidelines for non-executive director remuneration

### Companies may find it useful to consider the following when considering non-executive director remuneration:

- Non-executive directors should normally be remunerated **by way of fees, in the form of cash**, non-cash benefits, superannuation contributions or salary sacrifice into equity; they should not normally participate in schemes designed for the remuneration of executives.
- **Non-executive directors should not receive options or bonus payments.**
- Non-executive directors should not be provided with retirement benefits other than superannuation.

# Motivation

It provides a rich setting in Australia to examine the impact of the announcement of stock option to directors in Australia.

To the best of our knowledge, no Australian study has investigated the price reactions around the announcement of option grants to directors (EDs and NEDs) and issuance choice of options to ED versus NED.

# Agency Theory

Agency theory predicts that well designed compensation schemes should align the interests of managers and shareholders and encourage managers to make decisions consistent with increasing shareholders wealth (Jensen and Murphy, 1990).

# Introduction

Evidence on the impact of US stock option proposals on share price is mixed

- Brickley, Bhagat and Lease (1985, JAE);
- Defusco et al (1990)
- **Martin and Thomas (2005).**

Martin and Thomas suggest that the stock markets' and shareholders' perceptions of stock option plans are changing.

While early plans in the 1980s and early 1990s were enthusiastically endorsed by both of them, their excitement has dimmed in recent years.



# US Evidence

- **Brickley, Bhagat and Lease (1985)**
- Financial press rarely reports disclosure of changes in managerial compensation plans.
- Considerable uncertainty exists as to the timing of announcement of plan.
- Market reaction to the announcements of “clean” sample of long range managerial compensation plans around
  - Board meeting dates,
  - Proxy statement dates,
  - SEC stamp dates and
  - Shareholders meeting dates

# Event Dates - US

Empirical studies have investigated share price reaction around compensation plans in US.

## Events

Negotiations occurs	Months before
Board meeting materials sent to members	1–2 weeks before BM
Board Members approve plans	Board Meeting (BM)
Proxy sent to SEC	Proxy filing date
SEC stamp date	3-4 days after filing date
Shareholders meeting	1-2 months after proxy is sent

# Event Dates - US

Empirical studies have investigated share price reaction around compensation plans in US.

## Events

Negotiations occurs

Months before

Board meeting materials sent to members

1–2 weeks before BM

Members approve plans

Board Meeting (BM)

33.5

Proxy sent to SEC

35

60.5

Proxy filing date

SEC stamp date

3-4 days after filing date

23

27

Shareholders meeting

1-2 months after proxy is sent

# US Evidence

## **Brickley, Bhagat and Lease (1985)**

### **Median number of trading days from**

- (a) board meeting date through SEC stamp date was 35;
- (b) board date through proxy date was 33.5;
- (c) board meeting date through shareholders meeting date was 60.5;
- (d) proxy date through shareholders meeting date was 27; and
- (e) SEC stamp date through shareholders meeting date was 23 in their sample.

# US Evidence

- **Brickley, Bhagat and Lease (1985)**
  - NO price reaction around each of these dates.
  - Significant positive price reaction of 2.40% for the period from board meeting date to the day after the SEC stamp date.
  - They argue that this supports the notion that the long range plans increase the shareholders wealth.
  - Positive but insignificant price reaction (1.0%) for the period from two days after the SEC stamp date to shareholders meeting date.

# US Evidence

Defusco et al (1990) – positive price reaction to stock option plans to Executives

## Shareholders wealth

0.68%	SEC Stamp date to next trading day (N=107)
4.00%	Board meeting date to day after SEC Stamp date (N=53)

## Bondholders' wealth

-0.78%	SEC Stamp date to next trading day (N=36)
Insignificant	Board meeting date to day after SEC Stamp date .

They suggest that stock option plans may induce a wealth transfer from bondholders to shareholders.

# US Evidence

Morgan and Poulsen (2001) – compensation plans  
S&P 500 firms 1992 through 1995

- **Executive**
- **Non-employee director**
- **Employee**

# US Evidence

	Mailing date (-day1 to day 1)	Meeting date (-day1 to day 1)
Executive	0.52**	0.30
Non-employee directors	0.15	0.59
Employees	0.02	1.31**

They suggests that stock-based compensation plans are helpful in improving managerial efforts to increase shareholder wealth.



# US Evidence

Martin and Thomas (2005) - Stock option plans announced in 1998

Proxy filing date  
(-day1 to day 1)

Executive -0.25 (insignificant) N=193

All Employees 0.50 (insignificant) N=216

Non-Employee director not provided in tables  
(insignificant) N=49

# US Evidence

They conclude that the stock markets' and shareholders' perceptions of stock option plans are changing.

While early plans in the 1980s and early 1990s were enthusiastically endorsed by both of them, their excitement has dimmed in recent years.

# Evidence from Japan

## Kato et al (2005)

- Stock option plans during the period 1997-2001 in Japan - positive price reaction of 2%.
- They find that abnormal returns are positively associated with the amount of options granted to board members, but are negatively related to the amount of options granted to non-board employees.
- They argue that this result suggests that market participants perceive that the larger incentive effects to stock option plans come from the granting of these options to top management.

# Motivation

92% of stock options granted to Japanese managers are typically out-of-the-money by about 5% on the grant date.

Hall and Murphy (2002) note that 94 percent of the stock options awarded to the S&P companies in US in 1998 were at-the-money.

# Research design

## Sample selection process:

- Excluded the events that are announced simultaneously with share placements, share buy back, share split, consolidation, public share offers, right issues, and convertible note issues.
- Partitioned the sample into clean options and options with increase in non-directors fees

# Research design

- **Generation of abnormal returns:**
  - Market Model (MM)
- **event windows:**
  - Notice of AGM – three days
  - AGM – three days
  - Day before Notice to day after AGM (mean 23.7 days; median 24 days)

## Table 1: Summary of Sample Selection and Exclusions Executive/Non-Executive Option Grants 1998 to 2006

	Reason for sample exclusion	
Initial sample before exclusions		1239
Less exclusions		
Announced simultaneously with equity offerings/debt offerings	398	
Announced simultaneously issue of options (warrants)	10	
Announced simultaneously issue of convertible notes/stocks	23	
Announced simultaneously with buyback or stock split or share consolidation	67	
Announced simultaneously with dividend re-investment plan or share purchase plan or disposal of marketable shares	29	
Announced simultaneously with merger or acquisition, joint venture, alliance or expansion announcement	27	
Share price/accounting data not available for the estimation period	40	
Resolution not passed	3	
Delisted/Trading Halt	9	
Total exclusions		606
Final sample of option grants		633

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## Distribution of Sample year wise classification

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Panel A: Classification based on years

Year	All Categories	ED only	NED only	ED and NED
1998	24	16	3	5
1999	33	22	2	9
2000	36	19	2	15
2001	50	32	4	14
2002	42	26	6	10
2003	53	33	9	11
2004	96	44	18	34
2005	131	68	21	42
2006	168	69	35	64
Total	633	329	100	204

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## Distribution of Sample industry wise classification

### Panel B: Classification based on industry sectors

<i>Industry Sector</i>	All Categories	ED only	NED only	ED and NED
Energy	77	31	7	39
Materials	198	96	32	70
Consumer Discretionary	69	46	6	17
Financial	60	34	15	11
Industrials	55	31	10	14
Consumer Staples	31	29	-	2
Health Care	87	41	17	29
Information Technology	44	14	10	20
Telecommunication Services	8	4	3	1
Utilities	4	3	-	1
Total	633	329	100	204

**Table 2 Financial Characteristics**

	DED	DNED	DEDNED	KW test	MW test DNED vs DEDNED
Market value (millions of dollars)					
Mean	1353.99	69.06	130.37		
Median	109.94	21.52	24.15	85.80***	1.11
Book-to-market ratio	0.69	0.69	0.62		
Mean	0.69	0.61	0.59	10.73***	0.80
Median					
Total assets (millions of dollars)					
Mean	6766.49	50.06	201.81		
Median	73.09	13.67	13.70	95.11***	0.15

	DED	DNED	DEDNED	KW test	MW test DNED vs DEDNED
Debt ratio (DEBTR)					
Mean (percent)	15.18	7.44	7.66		
Median (percent)	8.72	0.02	0.24	46.93***	0.40
Long term debt ratio					
Mean (percent)	11.00	3.87	5.00		
Median (percent)	3.20	0.00	0.00	52.91***	1.23
NPAT/TA					
Mean (percent)	-8.69	-19.37	-22.84		
Median (percent)	1.11	-8.15	-7.17	38.14***	0.16
EBITDA/TA					
Mean (percent)	-3.31	-15.31	-18.18		
Median (percent)	6.73	-7.77	-8.46	35.59***	0.30
CASH/TA					
Mean (percent)	22.14	32.66	31.96		
Median (percent)	10.77	25.61	24.03	37.83***	0.73

	DED	DNED	DEDNED	KW test	MW test DNED vs DEDNED
RUNUP Mean (percent) Median (percent)	22.97 10.43	30.85 0.28	66.95 12.92	3.07	1.60
IDYRISK Mean (percent) Median (percent)	3.31 2.88	5.19 4.55	4.99 4.58	106.22***	0.59
PREPBAN1YR Mean (percent) Median (percent)	3.53 2.07	6.48 4.85	5.72 4.13	84.35***	1.60

	DED	DNED	DEDNED	KW test	MW test DNED vs DEDNED
TOP 20 Mean (percent) Median (percent)	59.18 59.21	61.44 60.30	57.30 57.13	4.18	2.01**
BH Mean (percent) Median (percent)	34.67 32.80	36.72 34.33	32.37 32.51	3.16	1.71*
TOP 1 Mean (percent) Median (percent)	17.95 14.23	19.90 16.32	16.82 13.01	4.32	1.90*

	DED	DNED	DEDNED	KW test	MW test DNED vs DEDNED
EPTOSPN2					
Mean	1.22	1.52	1.37		
Median	1.04	1.25	1.23	35.27***	0.12
VESTP (years)					
Mean	1.06	0.50	0.42		
Median	0.73	0.00	0.00	35.89***	0.26
LEPGD (years)					
Mean	4.68	3.73	4.15		
Median	5.00	3.29	4.44	25.37***	1.40
Sample size	329	100	204		

**Table 4: Decision to Issue of Options to Non-Executive directors - LRA**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.0232 (0.03)	-0.1113 (-0.16)	0.2277 (0.53)	0.5014 (0.78)	0.5161 (0.760)	0.0276 (0.06)
LMV	-0.4428 (-3.44) <sup>***</sup>	-0.4041 (-3.23) <sup>***</sup>	-0.2974 (-4.44) <sup>***</sup>			-0.2418 (-3.83) <sup>***</sup>
IDYRISK	0.2440 (3.75) <sup>***</sup>	0.2302 (3.76) <sup>***</sup>	0.2300 (4.06) <sup>***</sup>	0.2527 (4.02) <sup>***</sup>	0.2449 (3.82) <sup>***</sup>	0.2411 (3.95) <sup>***</sup>
LDEBTR	-0.9501 (-1.10)	-0.8543 (-1.03)	-1.3790 (-1.70) <sup>*</sup>	-1.9946 (-2.49) <sup>**</sup>		-1.6787 (-2.10) <sup>**</sup>
LNPREPBAN1YR	-0.1695 (-0.68)	-0.1613 (-0.65)		0.4298 (3.23) <sup>***</sup>	0.5235 (3.73) <sup>***</sup>	
RUNUP	0.3615 (2.23) <sup>**</sup>	0.3990 (2.58) <sup>***</sup>	0.4242 (2.91) <sup>***</sup>	0.3166 (2.19) <sup>**</sup>	0.1883 (1.88) <sup>*</sup>	
CASH/TA	-0.3141 (-0.73)					
NPAT/TA	0.3164 (1.04)					
LBM	-0.3784 (-2.30) <sup>**</sup>	-0.2532 (-1.82) <sup>*</sup>			-0.2657 (-1.99) <sup>**</sup>	
$\chi^2$	106.98	109.72	107.70	95.29	123.17	101.24
<i>p</i> -value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R <sup>2</sup>	0.1614	0.1591	0.1534	0.1427	0.1412	0.1438
% correctly classified	68.9	69.2	69.2	67.8	69.0	68.1

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13
Constant	0.3783 (0.58)	-0.4865 (-4.16) <sup>***</sup>	-0.1542 (-1.83) <sup>*</sup>	-0.1995 (-2.31) <sup>**</sup>	2.9310 (8.06) <sup>***</sup>	1.7711 (8.02) <sup>***</sup>	-1.8197 (-8.62) <sup>***</sup>
LMV						-0.4614 (-8.82) <sup>***</sup>	
IDYRISK	0.2549 (3.93) <sup>***</sup>						0.4310 (8.78) <sup>***</sup>
LDEBTR	-2.1225 (-2.66) <sup>***</sup>						
LNPREPBAN1YR	0.3856 (2.94) <sup>***</sup>				0.8652 (8.44) <sup>***</sup>		
RUNUP			0.2160 (3.06) <sup>***</sup>				
CASH/TA		1.1765 (3.48) <sup>***</sup>					
NPAT/TA		-0.6480 (-2.66) <sup>***</sup>		-0.7437 (-3.56) <sup>***</sup>			
LBM							
$\chi^2$	89.55	31.01	9.36	14.07	87.32	99.02	102.72
<i>p</i> -value	0.0000	0.0000	0.0022	0.0002	0.0000	0.0000	0.0000
Pseudo R <sup>2</sup>	0.1372	0.0354	0.0106	0.0160	0.1001	0.1130	0.1172
% correctly classified	67.8	59.1	56.2	58.1	65.6	65.9	67.5



# Who choose to issue option to NEDs

Firms with higher information asymmetry;

Smaller size

Higher risk

Lower liquidity

Lower leverage

Lower profitability

AND

HIGHER GROWTH OPPORTUNITY

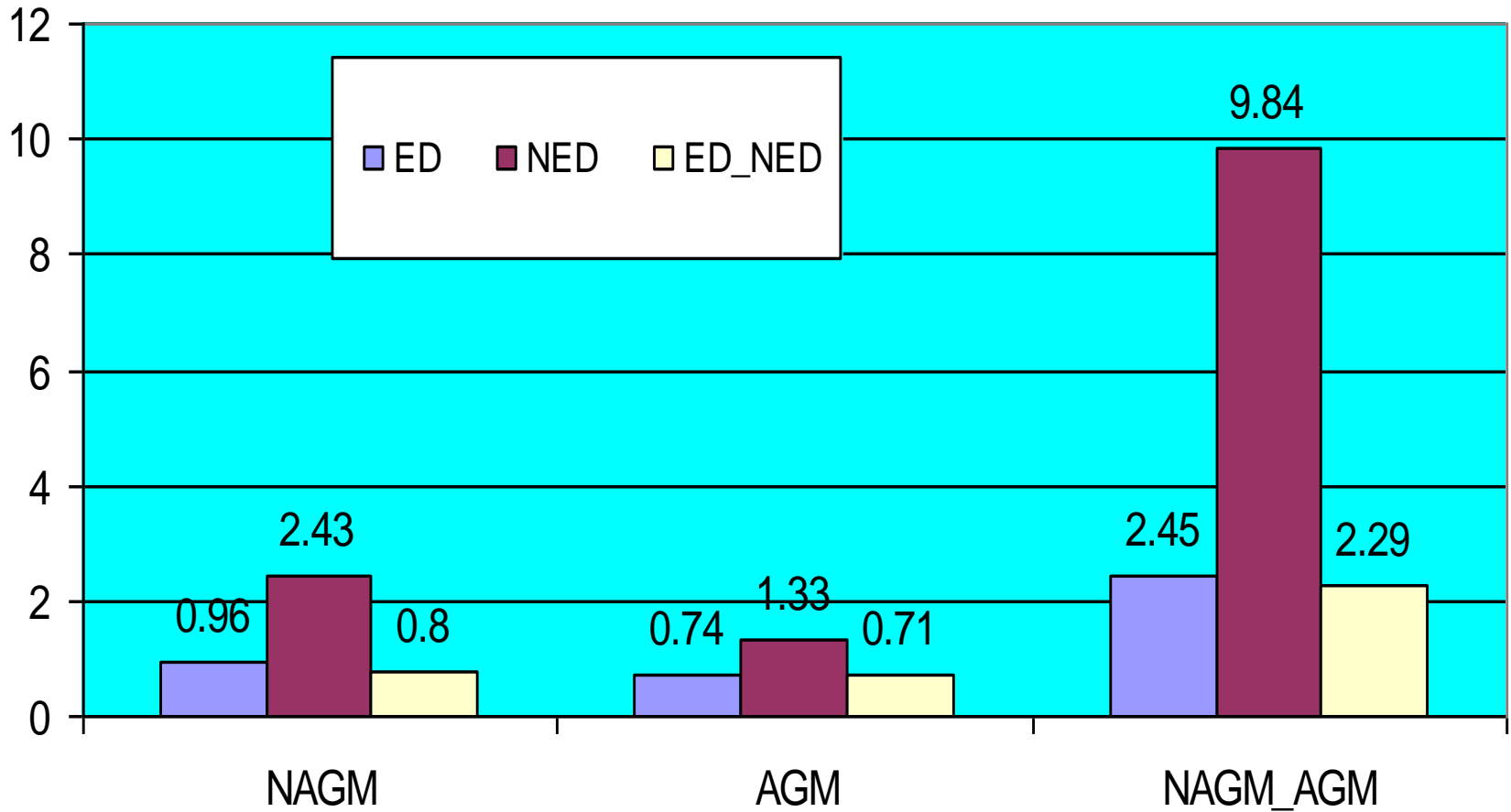
HIGH CASH RATIO

## Determinants of EPTOSPN2

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	-0.0392 (-0.96)	0.5012 (12.49)***	0.6670 (10.28)***	0.3405 (4.00)***	0.1907 (6.27)***
LMV		-0.0781 (-10.61)***		-0.0615 (-5.76)***	
IDYRISK	0.05293 (4.99)***			0.0223 (2.05)**	
LNPREPBAN1YR			0.1388 (8.72)***		
VESTP					-0.0681 (-4.70)***
DNED					0.1086 (1.89)*
DEDNED					0.0758 (2.04)**
R <sup>2</sup>	0.0959	0.1398	0.1049	0.1506	0.0538
F-statistic	24.90	112.68	76.12	59.07	16.30
P-value	0.0000	0.0000	0.0000	0.0000	0.0000

# Market Reaction to Announcement of Option Grants

## ED vs NED vs ED&NED



**Table 3: Market Reaction to Option Grants Announcements**  
**ED vs NED vs ED&NED**

Panel A – ED only versus NED only versus both ED and NED Option Grants						
		All	ED Only	NED Only	Both ED and NED	ANOVA-test
Three days window around Notice of AGM	MEAN (%)	1.14	0.96	2.43	0.80	1.46
	MEDIAN (%)	0.27	0.30	0.75	0.21	
	SRT	(7.05) <sup>***</sup>	(4.07) <sup>***</sup>	(3.60) <sup>***</sup>	(4.74) <sup>***</sup>	
Three days window around AGM	MEAN (%)	0.82	0.74	1.33	0.71	0.25
	MEDIAN (%)	0.64	0.60	0.82	0.58	
	SRT	(5.26) <sup>***</sup>	(2.74) <sup>***</sup>	(2.53) <sup>**</sup>	(4.03) <sup>***</sup>	
Day before the Notice to day after the AGM	MEAN (%)	3.56	2.45	9.84	2.29	5.67 <sup>***</sup>
	MEDIAN (%)	2.58	1.56	5.38	3.00	
	SRT	(16.74) <sup>***</sup>	(7.34) <sup>***</sup>	(16.78) <sup>***</sup>	(8.41) <sup>***</sup>	
Sample Size		633	329	100	204	

**Table 3: Market Reaction to Option Grants Announcements**  
**ED vs NED vs ED&NED**

<b>Panel B – Executive directors only:</b>				
<b>No changes in NED fees versus increase in NED fees</b>				
		No information on changes in NEDs fees	Increase in NEDs fees	t-test
Three days window around Notice of AGM	MEAN (%)	1.22	0.09	1.68*
	MEDIAN (%)	0.51	-0.04	
	SRT	(4.56)***	(0.14)	
Three days window around AGM	MEAN (%)	1.08	-0.40	1.89*
	MEDIAN (%)	0.76	-0.14	
	SRT	(4.41)***	(-2.34)**	
Day before the Notice to day after the AGM	MEAN (%)	4.02	-2.81	3.79***
	MEDIAN (%)	2.97	-2.23	
	SRT	(14.44)***	(-11.07)***	
Sample Size		253	76	

**Table 3: Market Reaction to Option Grants Announcements**  
**ED vs NED vs ED&NED**

Panel C – Non-Executive directors only: No changes in NED fees versus increase in NED fees				
		No changes in NED fees	Increase in NED fees	<i>t</i> -test
Three days window NAGM	MEAN (%)	2.32	2.86	-0.30
	MEDIAN (%)	0.41	2.10	
	SRT	(2.70)**	(2.66)**	
Three days window AGM	MEAN (%)	1.73	-0.29	0.96
	MEDIAN (%)	1.01	0.07	
	SRT	(2.81)***	(-0.01)	
Day before the Notice to day after the AGM	MEAN (%)	11.44	3.42	1.09
	MEDIAN (%)	6.00	-5.06	
	SRT	(18.38)***	(0.75)	
Sample Size		80	20	

**Table 3: Market Reaction to Option Grants Announcements**  
**ED vs NED vs ED&NED**

Panel D –Options to ED and NED: No changes in NED fees versus increase in NED fees				
		No changes in NED fees	Increase in NED fees	
Three days NAGM	MEAN (%)	1.13	-0.66	1.26
	MEDIAN (%)	0.20	-0.66	
	SRT	(5.76) <sup>***</sup>	(-1.06)	
Three days AGM	MEAN (%)	0.98	-0.45	1.32
	MEDIAN (%)	0.62	0.22	
	SRT	(4.73) <sup>***</sup>	(-0.56)	
Day before the Notice to day after the AGM	MEAN (%)	3.10	-1.23	1.89*
	MEDIAN (%)	3.06	-0.25	
	SRT	(6.71) <sup>***</sup>	(-2.21) <sup>**</sup>	
Sample Size		166	38	

**Table 3: Market Reaction to Option Grants Announcements**  
**ED vs NED vs ED&NED**

		Opt EDs & Inc NEDs fees	Opt EDs	Opt both NEDs and EDs	OptNEDs and EDs Inc NED fees	Option to NEDs	Opt NEDs & Inc NEDs fees
Three day NSGM	MEAN (%)	0.09	1.22	1.13	-0.66	2.32	2.86
	MEDIAN (%)	-0.04	0.51	0.20	-0.66	0.41	2.10
	SRT	(0.14)	(4.56)***	(5.76)***	(-1.06)	(2.70)**	(2.66)**
Three days AGM	MEAN (%)	-0.40	1.08	0.98	-0.45	1.73	-0.29
	MEDIAN (%)	-0.14	0.76	0.62	0.22	1.01	0.07
	SRT	(-2.34)**	(4.41)***	(4.73)***	(-0.56)	(2.81)***	(-0.01)
Day before the Notice to day after the AGM	MEAN (%)	-2.81	4.02	3.10	-1.23	11.44	3.42
	MEDIAN (%)	-2.23	2.97	3.06	-0.25	6.00	-5.06
	SRT	(-11.07)***	(14.44)***	(6.71)***	(-2.21)**	(18.38)***	(0.75)
Sample Size		76	253	166	38	80	20



# Summary and Conclusions

## Issuance of options to NEDs

Firms with smaller size, lower leverage, higher risk, lower liquidity

tend to grant options to non-executive directors with a tendency not to incorporate performance hurdles in the plans but rather to have higher ratio of exercise price to price prior to the announcement.

# Summary and Conclusions

Price reaction is stronger for the option grants issued to non-executive directors only rather than to executive directors only or to both executive and non-executive directors provide support for monitoring.

Future Work:

Valuing options

Collecting directors ownership.