

Board gender-balancing and insider trading performance

B. Espen Eckbo and Bernt Arne Ødegaard

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Abstract

Using modern holdings-based performance measures, we test whether the dramatic female-director network expansion caused by Norway's board gender-balancing law has improved the information content and performance of trades by male versus female primary insiders. The potential for a network effect arises because industry peers share firm characteristics. We also examine gender-based insider purchase activity following the exogenous price-shocks during the financial crisis to draw inferences about potential differences in risk aversion. We identify a positive network-spurred information effect but no gender-based difference in either holdings-based performance or crisis-induced purchase activity.

Primary Insider trades

Trades by executives or directors in own company stock.

Source of trading profit

Trades reflect knowledge/understanding/experience of

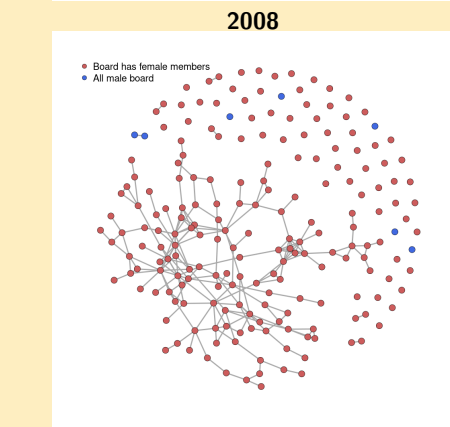
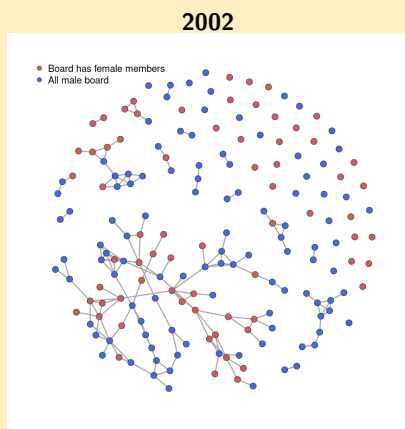
- Own company
- Industry in which company operates

Sources of gender differences?

- **Network** of insiders (e.g. board memberships) determine information (Inci, Narayanan and Seyhun, 2017)
 - When females few, trades reflect less inside information
- Norway: Shock to gender network: Board reform – 40% minimum female representation on boards of OSE listed companies. (Eckbo, Nygaard and Thorburn, 2021)

Evolving connectedness of board networks

Board network maps



Blue: All male boards;
Red: Boards with at least one female director

This investigation

Norway: All reported inside trades 1997–2016.

Measure gender differences in

- Short term market *reaction* when insiders trade.
- Long term *performance* measuring the actual gains implied in insider's trading.

Short term price movements when insiders trade

- Timing by insiders (insider knowledge)
- Market's evaluation of the fact that an insider traded.

Method: Event study

Market reaction (CAR): Coefficient Γ in

$$r_{it}^e = a_i + b_i r_{mt}^e + \Gamma D_{it}^{event} + \varepsilon_{it}$$

Event windows:	(-1, 1)	(-1, 5)	(-1, 25)	(-1, 50)
A: Female Insiders 1997–2007				
CAR	0.0039 (0.002)	-0.0008 (0.001)	-0.0150 (0.001)	-0.0151 (0.0005)
B: Male Insiders 1997–2007				
CAR	0.0163*** (0.001)	0.0148*** (0.001)	0.0117 (0.0003)	0.0104 (0.0003)
C: Female Insiders 2008–2016				
CAR	0.0154*** (0.002)	0.0212*** (0.001)	0.0172 (0.001)	0.0161 (0.0004)
D: Male Insiders 2008–2016				
CAR	0.0167** (0.002)	0.0083 (0.002)	-0.0141 (0.001)	-0.0429 (0.001)

Market reaction to female trades larger as the female network increases

Gender difference in long term performance

Construct portfolio incorporating information in insider trades

- Ownership weights
- Value weights

→ Monthly series of portfolio weights.

Performance evaluation

- Holdings-based evaluation
 - Do weight changes in (inside) portfolio predict performance?
- Returns-based evaluation
 - "Alpha"

Results of long term performance comparison

Point estimate: Females do (slightly) better.
Statistically: No significant performance differences

Risk aversion and gender - the '08 crisis

Insider reactions to '08 fall in equity values

- 1 → buy stocks to rebalance portfolios.
- 2 → higher potential for inside view to differ from consensus view (increase inside holdings if positive view).

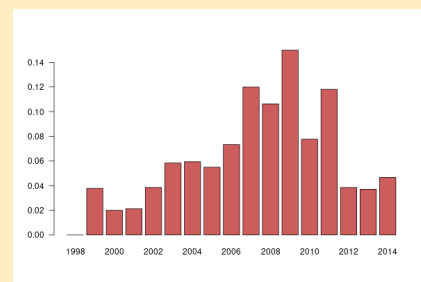
Risk aversion's influence on this decision
More risk averse:

- 1 → Less equity in optimal portfolio
- 2 → Less willing to lower diversification to concentrate holdings in own company stocks.

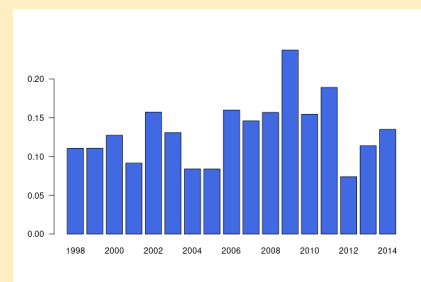
Prediction More risk averse individuals will buy less equity following the fall in stock values.

Propensity to trade by directors

Females



Males



Key takeaways

Gender based performance differences?

- Positive short term market reaction higher for male trades.
- No significant long term differences

Board reform: influx of female directors

- Market reacts *more positively* to inside trades by females after board reform.

Financial crisis and risk aversion

- Female insiders increase equity buying during crisis.
- Not consistent with female executives/directors being more risk averse than their male colleagues.