Dressing the Bride Phenomenon -
Earnings management on the Swedish IPO market

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Abstract

By studying abnormal changes in accruals for *Failed* and *Successful IPOs*, we show that earnings management prior IPOs exists on the Swedish IPO market. Defining *Failed IPOs* as firms announcing they will go public but never proceed with an IPO, we introduce a difference-in-difference approach using *Successful* IPOs as the control group. Studying the differential effect, we add an alternative way of investigating the *Dressing the Bride Phenomenon* to current research. We argue that this approach provides a way of separating abnormal changes in accruals relating to earnings management from abnormal changes relating to IPO firms operating in an abnormal environment. Finally, we argue that our results might be driven by *Failed* and *Successful* firms having different incentives to manage earnings prior an IPO, which is in conflict with the assumptions this paper rests on.

Keywords: Initial public offerings, earnings management, accruals, failed IPOs

JEL classification: G14, G32, M41

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1. Introduction

Among others Wang (1997) points out that shareholders' objective is to extract as much value out the firm's shares as possible during an IPO. When going public Iqbal, Espenlaub and Strong (2009) argue that shares are priced based on the firm's financial statements since there is no market price for unlisted firms. As follows, managers maximizing firm value will have obvious incentives to influence the firm's financial statements and exercise accounting manipulations. This anomaly is called *earnings management*. When earnings management is practised prior initial public offerings in order to receive the highest possible valuation of firms, we call this the *Dressing the Bride Phenomenon.* Our paper investigates the existence of this phenomenon and finds evidence of firms dressing the bride.

We investigate the existence of the *Dressing the Bride Phenomenon* based on a comparison between two groups; *Failed* and *Successful IPOs.* The *Failed* group consists of firms, having announced that they will go public but later on withdrew their announcement and never went public. *Successful* firms, on the other hand, fulfilled their IPO announcements and became listed.

We argue that *Failed* and *Successful* firms have the same incentives to dress the bride prior the IPO. Based on shareholders' incentives though, we assume that *Successful* firms maintain the earnings management after the IPO while *Failed* firms reverse the earnings management after the withdrawal of the IPO announcement since this is no longer a value creating activity. Accordingly, we suggest that only if *Failed IPOs* have a negative change compared to *Successful IPOs*, when going from prior to post the issue / withdrawal, we can argue that firms dress the bride.

We estimate changes in abnormal accruals, i.e. accruals affected by the management, as a proxy for earnings management to increase earnings. For estimation of abnormal accruals, we use the Modified Jones model which according to Dechow, Sloan and Sweeney (1995), is the accrual based model for detecting earnings management providing the highest explanatory power. We add firm and industry-year fixed effects to the model to correct for firm and industry-year specifics which otherwise might affect the result due to omitted variables.

We find that the change in abnormal accruals is negative for the year prior to the IPO, as well as for the IPO year. Using the absolute approach of measuring earnings management, proposed by Dechow, Sloan and Sweeney (1995) this indicates that firms do not dress the bride. We suggest that using an absolute approach, i.e. arguing that a positive change in abnormal accruals implies earnings management, might cause errors due to the Modified Jones model not providing estimations accurate enough for this. We illustrate this by showing that in our dataset the Modified Jones provides a change in abnormal accruals that is clearly negative for a normal year. Thus, we suggest that a relative approach should be used, comparing *Failed* and *Successful* IPOs when going from prior to post the issue / withdrawal. Using the relative approach, we see a pattern indicating that firms dress the bride (Figure 5.3).

We then run a difference-in-difference test based on the abnormal change in accruals. We conclude that there is a significant difference in change in abnormal accruals between the *Failed* and *Successful* IPOs when going from prior the announcement to post the withdrawal. We argue that this difference could only appear if both groups dressed the bride.

As the next step, we show that our results are unlikely to be driven by outliers through a winsorized robustness test. We also show that our results are robust to which period is used as estimation period for normal accruals.

In sum, we find robust evidences of firms dressing the bride. Later, we question our assumptions by pointing out that our results might being driven by *Failed* and *Successful* firms not having the same incentives to dress the bride. We also point out that accounting data can change dramatically in relation to the IPO, due to changes in firm structure. Thus, we discuss that our results might being driven by errors in the use of accounting data.

In previous research, Friedlan (1994) concludes that US firms tend to be a part of earnings management before a successful initial public offer by affecting the firm's accruals to increase earnings in their interim reports. Friedlan suggest that these abnormal changes in accruals should be seen as *discretionary accruals*, i.e. accruals affected by the managers.

Moreover, Aharony, Lee and Wong (2000) find evidence of earnings management before *Successful IPOs* along Chinese firms using annual financial data from the IPO year. Additionally, Chen and Yuan (2004) show that there is a relationship between requirement for a certain level of earnings to satisfy the return on equity demanded by investors prior an IPO and earnings management. Darrough and Rangan (2005) also find evidence of firms practicing earnings management prior IPOs and in addition to discretionary accruals, firms stretch their accounting methods of R&D to manipulate R&D costs to increase earnings.

Separately from authors providing evidence of firms managing earnings prior to *Successful IPOs*, Teoh et al. (1998b), Yoon and Miller (2002b) and Iqbal, Espenlaub and Strong (2009) show evidences of firms dressing the bride even when firms do not proceed with the IPO, i.e. *Failed IPOs.*

Authors of previous research provide results of both *Failed* and *Successful IPOs* dressing the bride. Though, Miloud (2014) claims that the causality between closing in on the IPO and increased earnings management is vague. Miloud further explains that the abnormal change in reported figures might only reflects the normal operating activities, financing and investment decisions related to growing firms. Friedlan (1994) show that firms with the objective to go public are often fast growing firms with volatile financial. This creates a risk of accruals being considered as abnormal for a "regular" company are in fact normal for a fast growing firm.

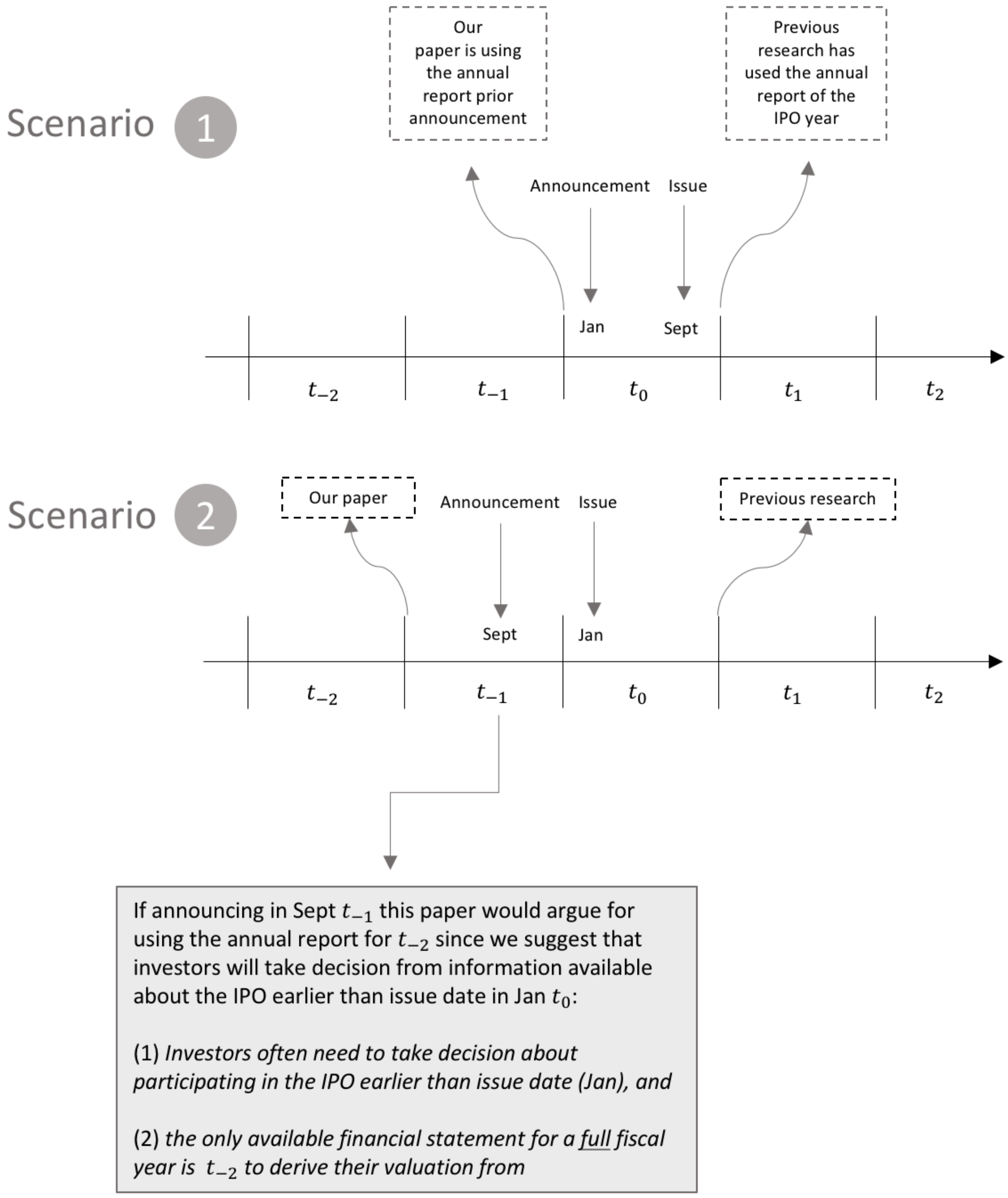
Except from Friedlan (1994) and Darrough and Rangan (2005), both using US interim reports to measure earnings management, previous studies have been estimating earnings management prior an IPO using the annual report of the IPO year, i.e. after the IPO. Teoh et al (1998a) and Miloud (2014) argue that the annual report of the IPO year is used due to incomplete data in the prospectus financial statement and interim reports not being available for years' prior the IPO. This paper identifies this approach as a risk of capturing other factors affecting earnings management post the issue date. Roosenboom et al (2003) finds evidence that earnings management in the first year as a public company is related to (1) support high stock prices after IPO during the lock-up period for managers and (2) pressure to meet earnings forecasts issued at the time of the IPO. Von Eije et al. (2003) find that 17 out of 25 CEOs at Dutch IPOs increase their focus on increasing earnings after the IPO.

As the reader will be aware of, this paper rests on the assumption that *Successful IPOs* will maintain the same level of earnings management post the IPO. The findings made by Roosenboom et al (2003) highlight that the differential effect between *Failed* and *Successful IPOs* might be due to *Successful* increasing earnings management when already listed. Though, we show that our results are unlikely to be driven by earnings management related to the short-termism of the stock market after the IPO. We suggest that this finding adds value to research through confirming that previous findings of firms dressing the bride are unlikely to be driven by earnings management practised after the IPO.

We suggest that this paper will contribute to previous research by providing a way of investigating the *Dressing the Bride Phenomenon* separated from earnings management related to operating activities in IPO firms. We suggest that the contribution emerge from investigating the differential effect between two groups in the same relative period to the IPO. As Miloud (2014) argues, normal activities in rapid growing IPO firms can be captured as abnormal numbers by the Modified Jones model, which our relative approach corrects for.

Moreover, previous research has been using the issue date as the effective date of measuring earnings management prior IPOs. This paper adds *announcement date* as a new way of timing the measurement of earnings management prior the IPO. We introduce announcement dates since we believe that investors valuate firms based on the information available at announcement rather than the issue date. We argue that at issue date investors have already made up their minds regarding the value of the firm.

Figure 1.1 Timing of measuring earnings management



2. Empirical strategy and data

We begin our analysis by first describing the institutional background of the Swedish IPO market and earnings management prior an IPO. We then stepwise develop the model we use in this paper to measure earnings management. Subsequently, we develop our hypothesis and identification strategy. Finally, we proceed with the empirical implementation and define the data in use to test the hypothesis.

2.1 Institutional background

According to Davidson (2015), Sweden is the start-up capital of Europe and many firms seek to raise capital from an IPO. According to Carnegie Investment Bank (2016), Sweden has had an astonishing IPO cycle in recent years and a very solid aftermarket performance have created a strong demand among investors to participate in IPOs. Furthermore, Sweden is acknowledged as the third less corrupt country in the world according to the Corruption Perceptions Index, by Transparency International (2015). Nevertheless, as any IPO market, the Swedish IPO market suffer from asymmetric information, and time to time bad fishes are found in the water. Petersson (2014) points out the leading search company Eniro as a recent example of public firms exercising doubtful accounting methods. Thus, Swedish IPO market have an interesting mix of being perceived as a non-corrupt market, but yet, the lemons problem in equity market and firms taking advantage asymmetric information raises a curious question: do Swedish firm dress the bride prior an IPO?

Dressing the bride is in conflict with accounting standards and it would lose its purpose if it was obvious to market participants that the picture of the company is manipulated. Thus, managers maximizing firm value through earnings management is not visible at a first glance in the financial statements. If such, how can we measure earnings management? During the two last decades, researchers have developed techniques to determine if a firm are participating in earnings management. These techniques themselves are mainly focusing on two divergent ways of earning management:

(i) Managing operational activates in a dishonest way – *Real earnings management*
(ii) Managing accruals in a dishonest way– *Accrual based earnings management*

Among the methods created to detect earnings management, researchers have been focusing on detecting accrual based earnings management rather than real earnings management (*Figure 5.1*). Real earnings management would demand deep insights in firm's operations since it can be accomplished by manipulating operational activities such as heavy price discounts or suddenly cut R&D and advertising to boost earnings in single period. For accrual based earnings management it is possible to detect earnings management using public financial statements.

2.2 Developing a model to measure earnings management

Models for measuring accrual based earnings management all have the same approach of measuring earnings management by investigating *Discretionary* accruals, i.e. accruals caused by managers. Thus, research has found that *Discretionary* accruals (*Total* Accruals – *Non-discretionary* accruals) are the central figure for measuring earnings management which all methods builds their foundation on. Different measuring methods only differ in their way of measuring these *Discretionary* accruals since there are different opinions on how to derive them.

When measuring the level of earnings management, the starting point is always total accruals or more specifically; the change in total accruals.

$$\Delta TACC_{t,i} = \Delta CA_{t,i} - \Delta Cash_{t,i} - \left(\Delta CL_{t,i} - \Delta DCL_{t,i}\right) - DEP_{t,i} \tag{2.1}$$

Where:

$\Delta TACC_{t,i}$ = Change in Total Accruals in year t for firm i

$\Delta CA_{t,i}$ = Change in Current Assets in year t for firm i

$\Delta Cash_{t,i}$ = Change in Cash in year t for firm i

$\Delta CL_{t,i}$ = Change in Current Liabilities in year t for firm i

$\Delta DCL_{t,i}$ = Change in Debt in Current Liabilities in year t for firm i

$DEP_{t,i}$ = Depreciation in year t for firm i

Also, all accrual based models for detecting earnings management argues that *Total* accruals consists of *Non-discretionary* accruals, i.e. normal accruals not affected by the management and *Discretionary* accruals, i.e. abnormal accruals created by the management:

$$TACC_{t,i} = NDACC_{t,i} + DACC_{i,t}$$

(2.2)

Where,

$NDACC_{t,i}$ = *Non-discretionary accruals* in year t for firm i

$DACC_{t,i}$ = *Discretionary* accruals in year t firm i

Healy (1985) provides the first model for detecting earnings management through measuring *Discretionary* accruals. The key assumption states that *Discretionary* accruals vary in the short run but in the long run *Discretionary* accruals will be zero, i.e. earnings should equal a firm's cash flow in the long run. That is, during a firm's lifetime total accruals = *Non-discretionary* accruals. Thus, *Discretionary* accruals equal the residual between total accruals at a given point of time and the average total accruals:

$$NDACC_{t,i} = \frac{\sum_{t=1}^{T} TACC_{t,i}}{T, i}$$

(2.3)

Where,

$NDACC_{t,i}$ = *Non-discretionary accruals* in year t for firm i

$TACC_{t,i}$ = Total accruals in year t for firm i

T_i = Total number of years for firm i

DeAngelo (1986) moves beyond the Healy model by assuming that the *Non-discretionary* accruals for a specific year equals the total accruals from the previous year.

$$NDACC_{t,i} = TACC_{t-1,i}$$

(2.4)

Where,

$NDACC_{t,i}$ = *Non-discretionary accruals* in year t for firm i

$TACC_{t-1,i}$ = Total accruals in year t-1 for firm i

Jones (1991) found a problem with the Healey and DeAngelo models since they did not put accruals in relation to company conditions. Jones (1991) argue that it is natural for accruals to change if the company conditions change. Thus, *Discretionary* accruals still equal the difference between total accruals and *Non-discretionary* accruals (see *Equation 2.2.*), but the way of estimating *Non-discretionary* accruals includes company characteristics. First, Jones (1991) calculates total accruals using *Equation 2.1.* Second, Jones defines *Non-discretionary* accruals as the predicted change in total accruals based on the below given relationship between revenue, PPE and lagged total assets:

$$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}} = \alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{\Delta REV_{t,i}}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}}$$

(2.5)

Where,

$\Delta NDACC_{t,i}$ = Change in *Non-discretionary* accruals in year t for firm i

$\Delta Rev_{t,i}$ = Change in Revenue in year t for firm i

$PPE_{t,i}$ = Gross Property, Plant and Equipment in year t for firm i

$TA_{t-1,i}$ = Total assets in year t-1 for firm i

This model is well acknowledged as the first exhausting model measure earnings management for a specific firm. Property Plant Equipment and change in revenue are both scaled by lagged assets to make earnings management comparable between firms. Change in revenue is included since total accruals include receivables, which creates a natural relationship between revenue and change in total accruals. The PPE variable is reflecting the depreciation, which affects the change in total accruals (*Equation 2.1*). Thus, the normal level of accruals should be adjusted for the PPE level, since higher PPE value likely leads to higher depreciation causing lower accruals, and vice versa. The inversed lagged assets are included in the model as Jones (1991) argues that it is natural that accruals change as the company grows.

Jones (1991) serve as the foundation to measure earnings management but in 1995 Dechow, Sloan & Sweeney found that the Jones Model would provide a more accurate measurement of earnings management if the change in revenues was subtracted by the change in receivables. The authors explain this by using revenues for estimating *Non-discretionary* accruals is only reasonable if receivables, which can be manipulated by the management, are excluded. By proceeding with the modification of the Jones model, Dechow, Sloan & Sweeney (1995) created the Modified Jones model. In their paper the authors show evidence of the Modified Jones model providing the highest explanatory power of earnings management:

$$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}} = \alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{\Delta REV_{t,i} - \Delta REC_{t,i}}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}}$$

(2.6)

Where,

$\Delta NDACC_{t,i}$ = Change in *Non-discretionary* accruals in year t for firm i

$\Delta Rev_{t,i}$ = Change in Revenue in year t for firm i

$\Delta Rec_{t,i}$ = Change in Receivables in year t for firm i

$PPE_{t,i}$ = Gross Property, Plant and Equipment in year t for firm i

$TA_{t-1,i}$ = Total assets in year t-1 for firm i

Recent research about earnings management prior an IPO have almost exclusively been using the Modified Jones model since it has the highest explanatory power when predicting earnings management. Consequently, we proceed with the Modified Jones model to investigate the *Dressing the Bride Phenomenon.*

2.3 Hypothesis development

Our basic premise, based on findings from previous research of earnings management prior *Successful* and *Failed IPOs*, is that firms only do earnings management to dress the bride for the IPO if we can conclude a certain pattern:

(1) Incentives to dress the bride should not differ between failed and successful IPOs prior the announcement of the IPO

We suggest that all companies announcing IPOs aim to go public, and thus the incentives to prepare for the IPO should not differ between the *Failed* and *Successful* IPOs when announcing the IPO.

(2) *If firms did earnings management to dress for the IPO, Failed IPOs would reverse earnings management related to the IPO immediately after the IPO-withdrawal*

We suggest that shareholders of *Failed IPOs* have no incentives to keep managing earnings after the IPO-withdrawal since they create no value from short term earnings manipulations, as the firms' shares are no longer for sale. Based on operating managers acting in the interest of their shareholder, they will reverse the earnings management immediately after the withdrawal of the IPO.

(3) Successful IPOs should maintain earnings management related to the IPO at least until the first annual report after the issue date

Teoh et al. (1998a) argues that *Successful* firms will maintain earnings management for at least several months after the IPO since there otherwise might be a lawsuit against them. In addition, Beck-Friis and Greijer (2010) finds that managers in Sweden receiving shares in the IPO are on average not able to sell their shares within 291 days, which creates incentives for maintaining earnings management for a period after the IPO. Teoh et al. (1998a) further argues that even if no lawsuit occurs the firm will get a bad reputation if investors and stakeholders find out that firm manipulated the accounting data. Since bad reputation and lawsuits are hurtful to firms, there are obvious incentives for shareholders to maintain the earnings management related to the IPO until the firm is no longer considered as recently listed by stakeholders. We assume that firms will be considered as recently listed for at least until the first annual report after the issue. Assuming that managers act in the interest of the shareholder, we thus assume that *Successful* firms will maintain the earnings management related to the IPO until after the first annual report on the exchange.

Based upon this setup, our hypothesis has arisen:

Hypothesis: *If firms practice earnings management to dress the bride, then any such efforts should immediately be reversed after a Failed but not after a Successful IPO*

Only when *Failed IPOs* withdraw earnings management and *Successful IPOs* keep the earnings management it is reasonable to argue that this indicates that firms might exercise earnings management prior an IPO and we can argue for the *Dressing the Bride Phenomenon*.

We will show that our hypothesis holds very well across Swedish firms and that *Failed* firms exhibits different post treatment effects by reason of failure. By using Swedish data, this paper has access to public accounting data for both listed and private firms, where studies in US of the same phenomena would suffer from having data issues due to restricted availability of accounting data for private companies.

2.4 Identification strategy

Our identification strategy exploits the prevalence of the *Dressing the Bride Phenomenon* and in order to empirically test for this phenomenon we proceed with the difference-in-difference framework. Our treatment group consist of *Failed IPOs* and the control group consists of *Successful IPOs* and serve as a counterfactual for what would have happened if the *Failed IPO* would have gone through. This paper wants to distinguishing earnings management prior an IPO from normal operating activities, financing and investing decisions of firms proceeding with an IPO which affects the estimation of discretionary accruals. Thus, the most important factor for testing our hypothesis and the *Dressing the Bride Phenomenon* is the differential effect between *Failed* and *Successful IPOs,* i.e. our relative approach.

To test our hypothesis, we estimate the following difference-in-difference regression, including firm and industry-year fixed effects:

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \ \delta_i + \lambda_{tj} \ + \varepsilon_{it_{I/W}} \tag{2.7}$$

Where:

$POST_{t_{I/W}}$ = Dummy variable for time relative to issue / withdrawal that is equal to 1 when observation is post issue / withdrawal and 0 if observation is prior announcement

$FAILED \times POST_{t_{I/W}}$ = The *Post* dummy multiplied by dummy for *Failed*, i.e. equals 1 for *Failed* announcement post withdrawal and 0 otherwise

δ_i = Firm fixed effects

λ_{tj} = Industry-Year fixed effects

$\varepsilon_{it_{I/W}}$ = Error term

Gamma reflects the change in earnings management for *Successful* and *Failed IPOs* i.e. effect of total the IPO group going from t_{A-1} to $t_{I/W}$, i.e. from the annual report prior to the announcement to the annuals report after the issue / withdrawal. Beta is the DID parameter and thus captures the differential effect for *Failed IPOs*. Along these lines, our *Hypothesis* implies that beta should be negative.

Firm fixed effects are included in the model to take into account contrasting firm-specific characteristics such as larger companies might have more complex balance sheets. Dechow et al. (2007) show that larger and more complex balance sheets facilitate accounting manipulations. Firms might also differ in level of expertise to practice earnings management or the resources needed to hire e.g. an investment bank to prepare for an IPO. Firms proceeding with an IPO on smaller exchanges could be more reluctant to use an investment bank to dress the bride since the costs might exceed the benefits.

The firms fixed effects also captures the fact that firms also differ in the use of accounting standards; IFRS versus Swedish GAAP (which could be further divided into principals of K2, K3 or K4). According to Swedish GAAP, this will affect changes in accruals. Furthermore, Filbeck and Krueger (2005) show that firms operates in different industries which by nature are different with respect to accruals.

The regression also includes industry-year fixed effects to encounter for the different characteristics of accruals between industry-years, assuming the industry being time-invariant. Including industry-year fixed effects is relevant for our study since (1) Petersen and Strongin (1996) finds that industries have different cyclical patterns and (2) Maloud (2014) finds that accruals change corresponding to firms' growth. Thus, we have incentives to believe that accruals will differ between industry-years.

A potential concern in our regression is that there is a risk of announcement and withdrawal dates being set inaccurate since these have been estimated. Being estimated incorrectly could affect the results. (see section 2.6 for an exhaustive definition of announcement and withdrawal dates).

An additional matter of potential concern in our regression is that when firms go public, a holding company is often designed to be the firm which shares are traded and consolidated accounts is created. When this has been the case, there is often an extreme change in capital structure. Neutralizing this would demand pro-forma adjustments with access to internal accounting data and this has not been accessible. To mitigate this problem, this paper uses the announcing company's financial statements even if this company now is part of the consolidated accounts as a subsidiary with internal relationships. Likewise, if Failed IPOs have failed due to an M&A transaction this have a similar issue. This might cause biasness in our results.

The reader should also be aware of that the same fiscal year is used to collect accounting data for a firm that announces an IPO in January as for a firm that announces an IPO in December. We capture more recent accounting data prior to an announcement for some firms while we fail to capture as recent accounting data as possible for other firms which might cause biasness in our results.

2.5 Empirical implementation

To test our hypothesis, we proceed with on main test and three robustness tests following the same step-by-step structure:

Step 1. An estimation window is created for every IPO announcement to estimate the expected normal change in *Non-discretionary* accruals explained by the Modified Jones model.

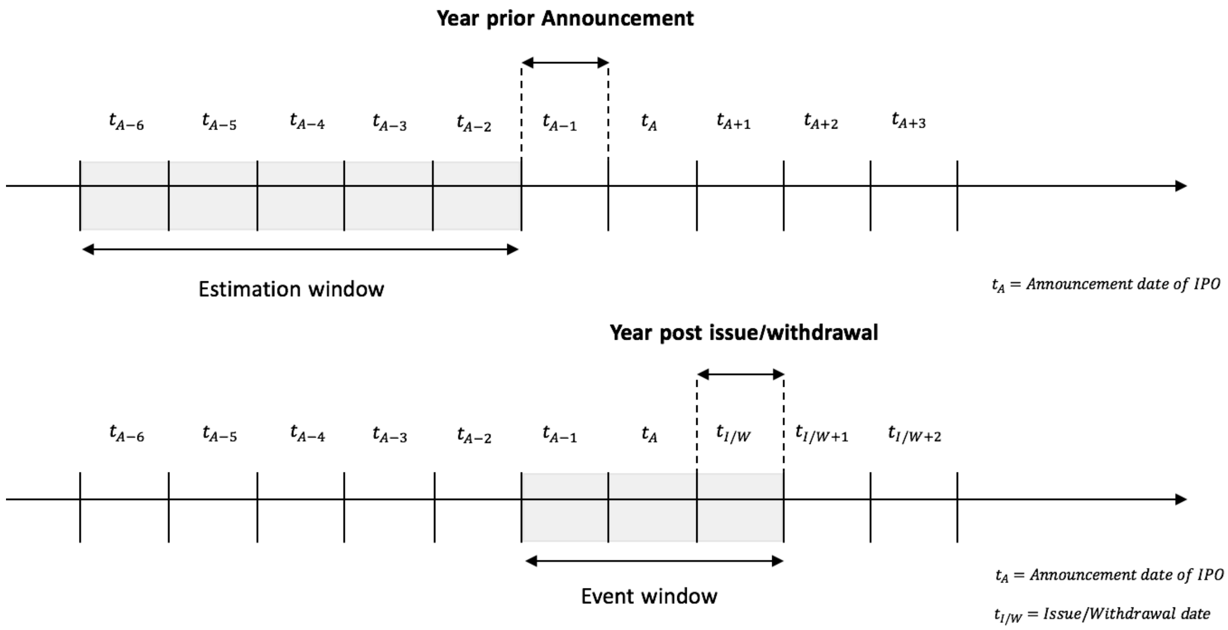
Step 2. After approximating the normal change in total accruals, i.e. change in *Non-discretionary* accruals, we calculate the deviation from normal change in any specific firm-year. The deviation from the normal change in total accruals should be interpreted as the change in total accruals affected by managers. Hence, the discretionary change is the residuals from the best fitting line.

Step 3. An event window is created for both successful IPOs and failed IPOs to capture two observations per firm, (1) the annual report prior to the announcement and (2) the annual report for the issue / withdrawal year to investigate the post-treatment effect of failed IPOs.

By running a difference-in-difference regression using dummy variables to test the null hypothesis that (i) *Failed IPOs* will not withdraw the earnings management related to the IPO immediately after the withdrawal of the IPO and (ii) *Successful IPOs* will not maintain earnings management related to the IPO at least until the first annual report after the issue date, we investigate *Dressing the Bride Phenomenon*.

Step 1 Estimating the expected normal change in Non-discretionary accruals

The first step in the Modified Jones model is to estimate the change in *Non-discretionary* accruals (*Equation 2.6*). In this paper, the change in total accruals is assumed to be on a normal level until one year prior the announcement of the IPO, that is our estimation window (this assumption is later going to be challenged in section 3.4 *Results from robustness test*). The assumption is based firms starting to dress their financial statements no earlier than one year before they announce that they are going to proceed with an IPO. We suggest that firms know that investors use the year prior to the announcement for valuation and thus firms have incentives to start managing earnings during that year. Before that, we assume that firms do not have incentives to manipulate earnings to maximize firm value related to the IPO.



First, we calculate $\Delta TACC_{t,i}$ for each firm and year using *Equation 2.1*. Second, we predict the change in total accruals using the robust Modified Jones Model with standards errors clustered on firm level. In accordance with the Modified Jones model we define the predicted change in total accruals, as the change in *Non-discretionary* accruals:

$$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}} = \alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{(\Delta REV_{ti} - \Delta REC_{t,i})}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}} + \delta_i + \lambda_{tj} + \varepsilon_{it}$$

(2.8)

Where,

$\Delta NDACC_{t,i}$ = Change in *Non-discretionary accruals* in year t for firm i

$\Delta REV_{t,i}$ = Change in Revenues in year t for firm i

$\Delta REC_{t,i}$ = Change in Receivables in year t for firm i

$PPE_{t,i}$ = Gross Property, Plant and Equipment in year t for firms i

$TA_{t-1,i}$ = Total assets in year t-1 for firm i

δ_i = Firm fixed effects

λ_{tj} = Industry-Year fixed effects

ε_{it} = Error term

$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}}$ represents the normal change in total accruals and is scaled by lagged total assets to encounter for the size of each company to be able to do cross-firm analysis and reduce heteroscedasticity. This applies to all other regression variables as well.

<u>*Step 2 Estimating the deviation from change in Non-discretionary accruals*</u>

In the previous step, we approximate the change in *Non-discretionary accruals* and based on *Equitation 2.2* we derive the change in *Discretionary accruals* ($\Delta DACC_{t,i}$), through calculating the residual between the change in *Non-discretionary accruals* and observed change in total accruals for any given firm-year. That is, *Discretionary accruals* is the residuals from the best fitting line in estimated in *Step 1*:

$$\frac{\Delta DACC_{t,i}}{TA_{t-1,i}} = \frac{TACC_{t,i}}{TA_{t-1},i} - (\alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{(\Delta REV_{t,i} - \Delta REC_{t,i})}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}} + \delta_i + \lambda_{tj} + \varepsilon_{it}) \tag{2.9}$$

Where,

$\Delta DACC_{t,i}$ = Change in *Discretionary* accruals in year t for firm i

$\Delta TACC_{t,i}$ = Change in Total Accruals in year t for firm i

$\Delta REV_{t,i}$ = Change in Revenues in year t for firm i

$\Delta REC_{t,i}$ = Change in Receivables in year t for firm i

$PPE_{t,i}$ = Gross Property, Plant and Equipment in year t for firm i

TA_{t-1} = Total assets in year t-1 for firm i

δ_i = Firm fixed effects

λ_{tj} = Industry-Year fixed effects

ε_{it} = Error term

As pointed out in *Step 1* all variables are scaled by lagged total assets and consequently the discretionary accruals ($\Delta DACC_t$) equals a percentage change of lagged total assets. The change in discretionary accruals ($\Delta DACC_t$) should be interpreted as proxy for earnings management and $\Delta DACC_t$ represent the change in earnings management, a positive sign of $\Delta DACC_t$ indicates that earnings being adjusted upwards and vice versa.

Step 3 Running a difference-in-difference regression to test our null hypothesis

From step 2 we concluded that the deviation from the normal in total accruals equals the change in earnings management. The outcome from equation 2.9 is now used to test our null hypothesis by running a difference-in-difference test for *Failed IPOs* and the total IPO announcing group between pre-announcement and post-Issue/withdrawal. The control group of *Successful IPOs* is used as a proxy for what change in earnings management we would expect in absence of failure and the treatment group of *Failed IPOs* is used as the proxy for what change in earnings management we would expect at failure. The actual level of earnings management is not our main concern, we are interested in the differential effect between *Failed* and *Successful IPOs* to test our hypothesis and explore *Dressing the Bride Phenomenon*.

We only use two data points in our difference-in-difference test, the fiscal year prior the announcement (t_{A-1}) and the same fiscal year as the withdrawal/issue year ($t_{I/W}$). The fiscal years t_{A-1} and $t_{I/W}$ due to the fact that we are interested in the pattern of (1) *Incentives to dress the bride should not differ between failed and successful IPOs prior the announcement of the IPO,* (2) *If firms did earnings management to dress for the IPO, Failed IPOs would reverse earnings management related to the IPO immediately after the IPO-withdrawal and* (3) *Successful IPOs should maintain earnings management related to the IPO at least until the first annual report after the issue date.*

The difference-in-difference test is conducted by introducing a dummy variable for *Failed IPOs.* We also introduce the dummy variable *POST*, which in turn represents the time relative to the IPO and equals 0 if the observation is before the announcement and 1 if the announcement is post the issue / withdrawal. Together, the FAILED × POST variable captures the differential effect for *Failed IPOs* when going from prior the announcement to post the withdrawal. Changes in earnings management for a *Successful IPO*, when going from prior the announcement to post the issue, serve as a counterfactual for what would have happened if the *Failed IPO* had gone through. That is, *Successful* firms serve as a control group, for which change in *Discretionary* accruals (when going from prior the announcement to post the issue) is captured by the variable *POST*. Thus, to test our hypothesis, we finally proceed with the following regression specification:

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_{tj} + \varepsilon_{it_{I/W}} \tag{2.10}$$

Where:

$POST_{t_{I/W}}$ = Dummy variable for time relative to the issue / withdrawal

$FAILED \times POST_{t_{I/W}}$ = The Post dummy multiplied by dummy for Failed announcement

δ_i = Firm fixed effect

λ_{tj} = Industry-Year fixed effect

$\varepsilon_{it_{I/W}}$ = Error term

To test the robustness of this test we move on with three additional tests. First, we winsorize our dataset in the 5^{th} and 95^{th} percentiles for *Failed* and *Successful IPOs* separately in order to control for outliers. Second, we change the estimation window for estimating *Non-discretionary accruals.* We change the estimation window to control for our results not being driven by an incorrect assumption that firms start to dress their financial statements no earlier than one year before the IPO announcement. Third, we run above regression substituting industry-year fixed effects for year fixed effects, as we identify a risk of having too few observations to be able to use industry-year fixed effects without risk of errors.

2.6 Data description

The dataset consists of firms having announced that they will proceed with an IPO on any of Sweden's three largest stock exchanges; *Aktietorget, First North* or *Nasdaq Stockholm*. The selection of Swedish exchanges is based on:

- High availability of accounting data for both private and public companies in Sweden
- High transparency in the market (making it possible to find failed announcements)

Since the availability of financial data and the electronic archive of firm and newspaper publications have increased in recent years, we use a dataset of announcements between the years 2007-2016. That is, as recent period as possible.

Collection of IPO announcements

IPO announcements have been manually collected using either one of (1) memorandum published by the firm stating that the firm will go public (2) press release by the firm stating that the firm will go public or (3) any article by financial journals, financial websites and financial newspapers stating that a specific firm will go public within 12 months (see *Figure 5.2*). Announcements made by the firm itself through either press releases, financial reports or memorandum have been assumed to be more reliable than newspaper articles. Thus, newspaper articles have only been used when the firm when memorandum or press release have not been available or found.

The announcement date has been set equal to the date the memorandum, press release or article was published. If the firm has made multiple press releases or memorandum publications the date of the first release has been used. If no memorandum or press release have been available, the article that first announced that a firm will make an IPO has been used as announcement date.

Collection of issue and withdrawal dates

In case of a *Successful IPO* the issue date has been set equal to the date of the first trading day of the share. This information has been received using the official website for each of the exchanges. (see *Figure 5.3*)

For *Failed IPOs*, the withdrawal date has been set equal to (1) the date of an active withdrawal, e.g. a withdrawal announcement or announcing that the firm has been sold in a M&A transaction (2) the date of an inactive withdrawal, i.e. the date when the firm should have gone public but never did. The withdrawal date has been set equal to the inactive withdrawal date only when no active withdrawal has been available or found.

Collecting accounting data

Accounting data was collected using the Retriever database which contains annual reports for private and public Swedish firms. Retriever database is a primary source for authentic annual reports from firms themselves. Available accounting data from annual reports has been collected manually for the fiscal years 2000 – 2016 for both *Failed* and *Successful IPOs*. Annual reports in Sweden needs to be submitted either in Swedish GAAP or IFRS depending on firm size and if the firm is listed on a regulated or unregulated exchange.

Raw data

Our raw data consists of 459 IPO announcements (*Table 6.1*). Of the total number of announcements 60 firms are missing accounting data, and are thus excluded from the dataset. The remaining 399 announcements, split up between 43 Failed and 356 Successful announcements (*Table 6.2*), act as a gross dataset for our tests. For each test, we make changes to the gross dataset to fit into the framework of the test.

We estimate normal change in accruals based on accounting data two years prior to the announcement, i.e. based on normal years. When estimating normal change in total accruals we thus collapse our dataset to only include firms with at least one observation earlier than one year prior to the IPO.

Going forward, we run our difference-in-difference regression comparing two observations for each firm; one prior to the announcement and one post the issue / Withdrawal. We thus reduce our gross dataset to only include firms with observations prior the announcement as well as after the issue / Withdrawal.

In addition, we show that firms fail to proceed with IPOs due to different reasons (*Table 6.3*). The main reason being *M&A transaction*, i.e. firm was sold off the market. Furthermore, we identify a group of firms deciding to not fulfil their IPO announcements in favour of staying private, *Unfulfilled IPO*. At last, we show that a group of companies failed due to not achieving requirements demanded by the exchange they applied for, *Not qualified for listing*. That is, these firms did not choose to withdraw their announcements themselves. Hence, we argue that this group of firms have incentives to keep managing earnings even after the withdrawal to prepare for going public in the future. As we assume *Failed IPOs* lose incentives to manage earnings related to the IPO after the withdrawal, we exclude firms *Not qualified for listing* from our dataset to mitigate the risk of errors when running our difference-in-difference test. As a consequence, we use a final dataset of 20 *Failed* and 247 *Successful* announcements in our difference-difference test (*Table 6.4*).

3. Results

Following the *Empirical implementation* in *section 2.5*, we show results for the three steps in our analysis followed by robustness tests of our results. First, we show that our estimation of *Non-discretionary* accruals is reasonable comparing to Jones (1991). Second, we proceed with considering changes in abnormal accruals indicating that firms dress the bride. Third, we find a significant difference between *Failed* and *Successful* IPOs from which we conclude that with 95% significance firms dress the bride. Finally, we show that our results are robust to changes in estimation of *Non-discretionary* accruals and that our results are unlikely to be driven by outliers.

3.1 Results from estimating the change in Non-discretionary accruals

By estimating the change in *Non-discretionary* accruals using the Modified Jones regression (*Equation 2.6*) we conclude that all coefficients are significant at the 95% level which we show in *Table 5.5*. We further show that the relationships between change in *Non-discretionary* accruals and the explaining variables in our dataset are consistent with the relationships presented by Jones (1991) and Dechow, Sloan and Sweeney (1995).

The R-squared value of 0.558 states that the change in *Non-discretionary accruals* explain about 56% of the change in total accruals which is significantly higher than the 25 % explanatory power presented by Jones (1991) and Dechow, Sloan and Sweeney (1995).

Since our regression firms fixed effects and industry-year fixed effects this explains some of the difference in explanatory power. Excluding fixed effects provides a R-squared of 42%, shown in *Table 6.6*. As 42% is still significantly higher than 25%, we suggest that the Modified Jones regression better predicts the accruals using our data compared to the data used by Dechow, Sloan and Sweeney (1995). Since discretionary accruals are defined as the residuals from the best fitting line, another way of interpreting our higher R-squared is that firms in our dataset do not manage earnings in the same extent as the firms in the dataset used by Dechow, Sloan and Sweeney (1995).

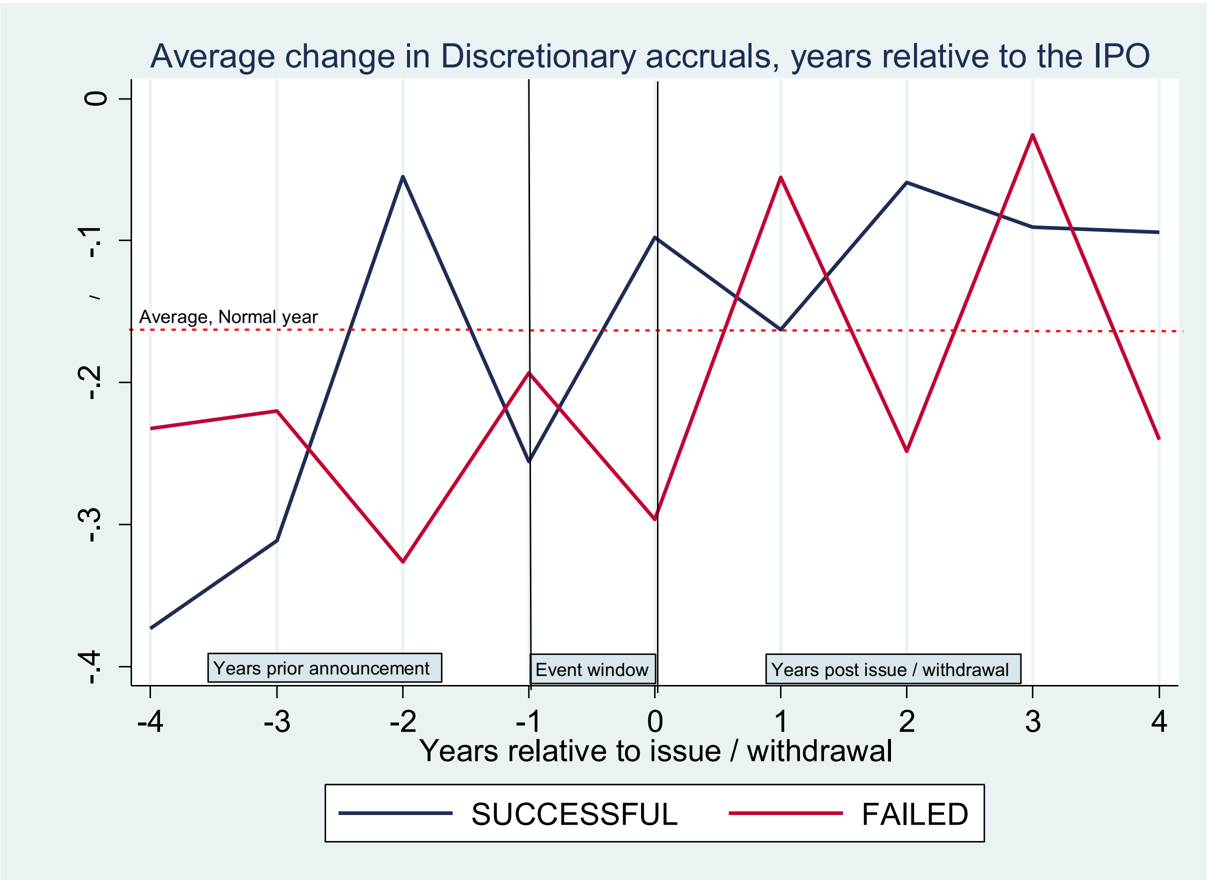
Subsequently, we insert the estimated change in Non-discretionary accruals, shown in Table 5.5 to estimate the change in Discretionary accruals for each firm and year, according to Equation 2.9. We show *Equation 2.9* updated with the input from *Table 5.5,* in *Equation 3.1.*

$$\frac{\Delta DACC_{t,i}}{TA_{t-1,i}} = \frac{TACC_{t,i}}{TA_{t-1,i}} - 306.4\frac{1}{TA_{t-1,i}} + 0.776\frac{\left(\Delta REV_{t,i} - \Delta REC_{t,i}\right)}{TA_{t-1,i}} - 0.0324\frac{PPE_{t,i}}{TA_{t-1,i}} \quad \textbf{(3.1)}$$

3.2 Results from estimating deviation from change in Non-discretionary accruals

We show that there is a differential effect between *Successfu*l and *Failed* firms when going from prior the announcement to post the issue / withdrawal. This indicates that firms might dress the bride.

Figure 3.1: Average change in discretionary accruals, years relative to IPO



Above graph shows the development of average change in Discretionary accruals for our dataset used in our Difference-in-Difference test (Table 6.4). Negative values on the X-axis (left of event window) illustrates number of years prior to announcement. Positive numbers on the x-axis (right of event window) show number of years post the issue / withdrawal. The area on named Event window is the area reaching from the year prior to the announcement to the issue / withdrawal year, i.e. the period used for our difference-in-difference test. The line illustrating Average for a normal year is the average change in discretionary accruals in a normal year, i.e. for observations earlier than 1 year prior to the announcement.

In *Figure 3.1,* we show that a normal year (two year prior announcement and earlier) has a negative change in *Discretionary* accruals. This is in conflict with the intuition behind accrual based models, where earnings have to equal cash flows over a longer period. That is, discretionary accruals should equal 0 in the long run. By displaying a negative change in *Discretionary* accruals in a normal year, we show evidence of the Modified Jones model's lack of predictability. Consistent with our findings, Yoon and Miller (2002b) and Yoon et al. (2006), show evidence of the Modified Jones model being inaccurate in predicting *Discretionary* accruals for Asian firms. Our study mitigates this problem related to errors in absolute measurements through adapting a relative approach, studying the differential effect between *Successful* and *Failed IPO.*

We show that *Successful* have significantly higher change in *Discretionary* accruals than *Failed IPOs* two years prior the announcement. In the year prior the issue / withdrawal, *Failed* IPOs have higher change in discretionary accruals than *Successful IPOs*. Through showing that our two groups follow different patterns prior the IPO we question our assumption of incentives to dress the bride being equal for *Failed* and *Successful* IPOs. As a consequence, we argue that there is a risk of our results being driven by *Successful* and *Failed* firms having different incentives to dress the bride.

In *Table 6.8* we show that our dataset includes outliers, which might affect the interpretation of *Figure 3.1.* Furthermore, the upward sloping curve for Successful firm between the year prior the announcement to the issue year indicates that Successful increase earnings management during the first year on the exchange. According to evidence provided by Roosenboom et al (2003) this occur since managers need to (1) support high stock prices after IPO during the lock-up period and (2) pressure to meet earnings forecasts issued at the time of the IPO. Thus, this highlights the risk of capturing a differential effect between *Failed* and *Successful IPOs* only driven by an increase in earnings management from *Successful IPOs* practicing earnings management after the issue date.

3.3 Results from the difference-in-difference regression to test our null hypothesis

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_{tj} + \varepsilon_{it_{I/W}}$$

Table 3.1 Difference-in-difference test, including Firm and Industry-Year fixed effects

VARIABLES	DACC
POST	-0.0733
	(0.335)
FAILED × POST	-0.468**
	(0.226)
Observations	534
Number of Company	267
R-squared	0.293
Firm Fixed Effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The FAILED × POST variable captures the differential effect for *Failed IPOs* when going from prior the announcement to post the withdrawal. Changes in earnings management for a *Successful IPO*, when going from prior the announcement to post the issue, serve as a counterfactual for what would have happened if the *Failed IPO* had gone through. This effect is captured by the POST variable.

Running the DID regression to test our null hypothesis with firm and industry-year fixed effects we show a negative differential effect between our treatment group, *Failed* IPOs, and our control group, *Successful* IPOs. The differential effect is significant at the 95 % level, and thus we reject the null hypothesis.

We show that the explanatory variables explain about 29% of the change discretionary accruals, which could be considered as low. As we proceed with a difference-in-difference test, though, the crucial part is to analyse causality, rather than prediction.

We argue that the differential effect of -46.8% of total lagged assets, indicate that the results might be driven by the outliers shown in *Table 6.8*. This will further be investigated in a winsorized robustness test in *section 3.4*.

In *Section 3.2* we identified the risk of capturing a differential effect between *Failed* and *Successful IPOs* only driven by an increase in earnings management from *Successful IPOs* practicing earnings management after the issue date. When including Firm and Industry-Year fixed effects, though, we provide evidence of that the risk of our differential effect arising due to *Successful* firms manage earnings post the issue date was likely to be caused by unobserved variables inside firms and industry-years, e.g. differences in accounting standards. We provide these evidences through showing that the *POST* variable, capturing the change in *Discretionary* accruals for *Successful* firms when going from prior the announcement to post the issue, cannot be significantly separated from 0.

To conclude, we find evidence of firms dressing the bride which is consistent with the theory of managers maximizing firm value. Still, our evidence indicates that further analysis must be undertaken since the results might be driven by outliers.

3.4 Results from robustness tests

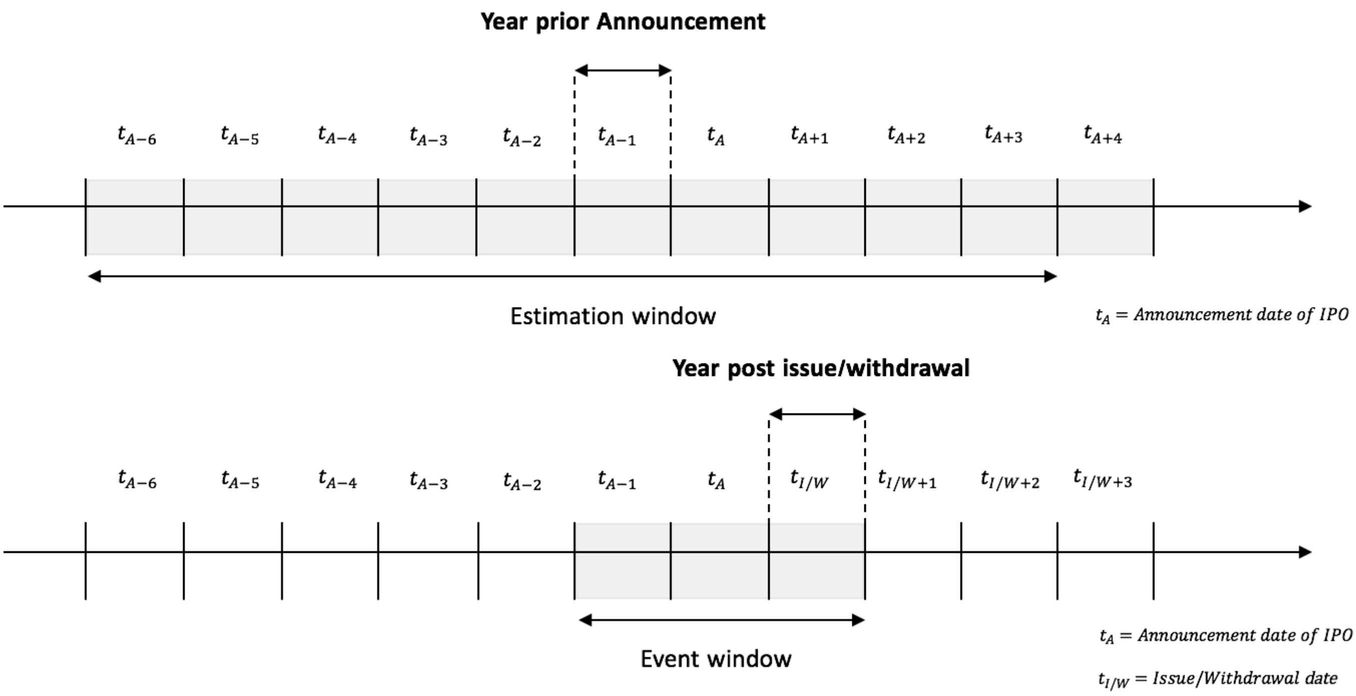
Results from winsorized DID - test, using firm and industry-year fixed effects

As previously indicated we find evidence in *Figure 5.4* of our dataset including outliers. Going one step further, we show evidence of our results not being driven by these outliers. We provide this evidence through concluding that, even when winsorizing the dataset in the 5^{th} and 95^{th} percentiles for *Successful* and *Failed* firms separately, there is a negative differential effect between the groups. We show that the differential effect when winsorizing is significant at the 95 % level, and thus we argue that the null hypothesis should be rejected.

Studying the differential effect in *Table 6.12*, captured by the FAILED × POST variable, we show a coefficient of -0.274 after winsorizing. This is sufficiently lower than -0.468 but still significant, and we suggest that such differential effect might be more realistic even if we claim that the results still might suffer from errors. These errors might arise from our dataset including influential points far from the median.

Results from changing the estimation window of Non-discretionary accruals to 2006-2015

We have previously pointed out that the estimation of change in non-discretionary rests on the assumption that accruals will be on a normal level until 2 years prior the announcement. We identify this assumption as a potential error if not correct. We show that our assumption is not a concern in the analysis. We show in *Table 6.13* that the null hypotheses still is rejected at the 95 % level when changing the estimation window to include all observations for firms going public or failing prior to 2014 and post 2005. Thus, we argue that our difference-in-difference approach is robust to errors in estimation of non-discretionary accruals.



Results from difference-in-Difference test, using firm and year fixed effects

In *Table 6.10* we show that our dataset used in the difference-in-difference test have very few observations per industry year. Thus, there is a risk of using industry-year fixed effects which might lead to incorrect results. We suggest that including industry-year fixed effect in our model did not lead to incorrect results, as we show a significant differential effect between *Failed* and *Successful IPOs* when substituting the industry-year fixed effects for year fixed effects (*Table 6.11*).

4. Conclusions

In this paper, we study if firms manage earnings to maximize firm value before going public. We provide evidence of firms increase earnings through accrual manipulation before making IPO announcements. We show that our findings hold for *Failed* as well as for *Successful* announcements.

By providing evidence of a differential effect between *Failed* and *Successful IPOs* we suggest that firms dress their financial statements prior an IPO. Our findings are consistent with previous research by Friedlan (1994), providing evidence of firms maximizing firm value by managing earning before going public. Our paper goes beyond previous research by providing a way of analysing accruals related to the IPO in isolation of accruals caused by operating activities of IPO firms. We also introduce IPO announcements as a vital part in investigating earnings management related to IPOs.

We show that there is a risk of our results being driven by *Successful* and *Failed* firms having different incentives to dress the bride, which is in conflict with our assumptions. Thus, we see a demand for future research in investigating how incentives to manipulate earnings differ between firms and if earnings management could be a reason for failure.

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5. Figures

Figure 5.1: Accruals earnings management and real earnings management

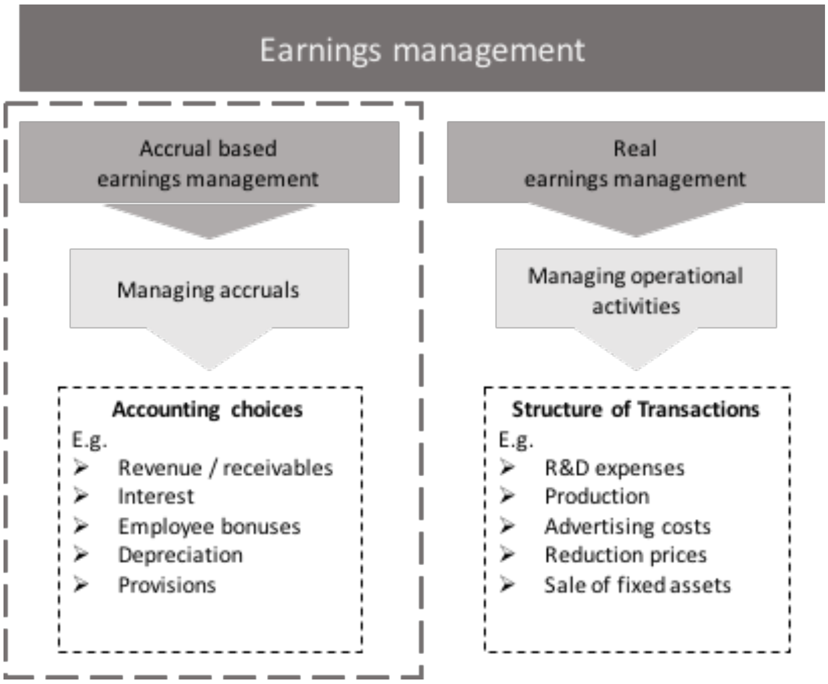


Figure 5.2: IPO announcements per fiscal year

The graph shows number of announcements per fiscal year and the dataset displayed in the graph is the data used for the difference-in-difference analysis. That is, 20 Failed and 247 Successful announcements. Our period includes the financial crisis in 2007-2008, causing the number of announcements being low around that year. According to Carnegie Investment Bank (2015), it has been an IPO boom in Sweden in recent years, explaining the high bars in 2014 and 2015. Since we hand collected the data for this paper in March / April 2017, we have not been able to access annual reports for all companies announcing their IPOs in 2016. Thus, the number of announcements made in 2016 used in this paper is very low.

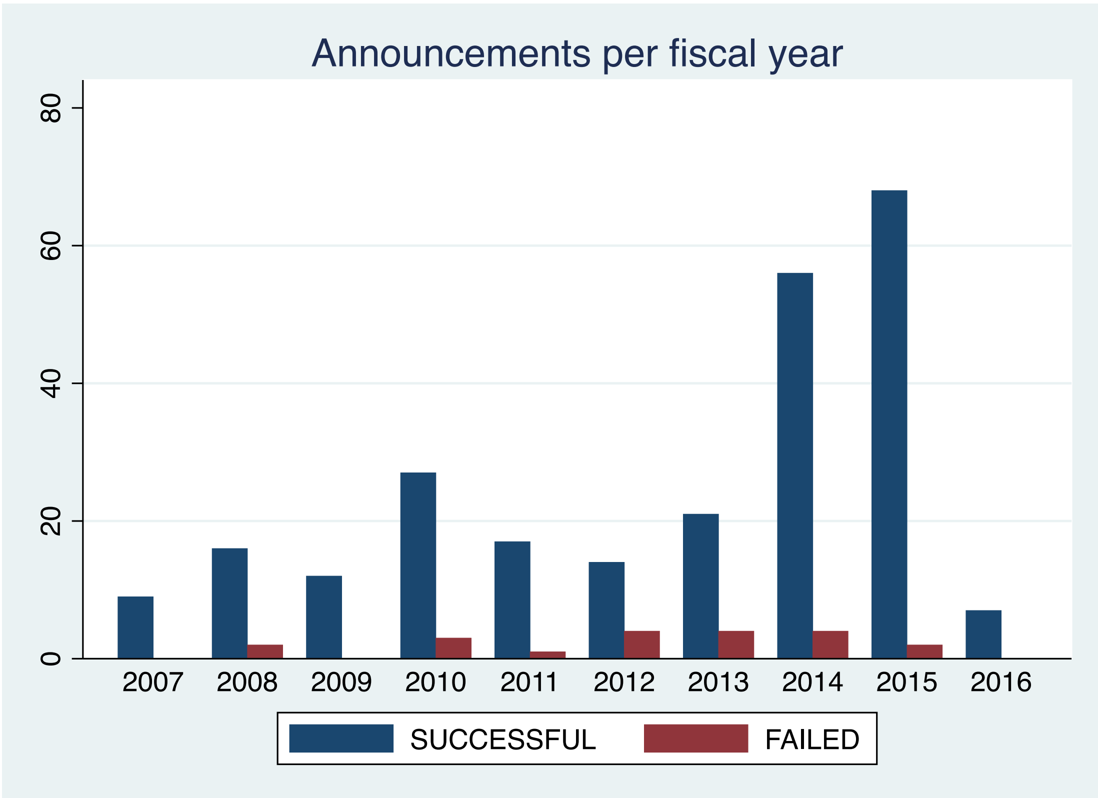


Figure 5.3: IPO issues / withdrawals per fiscal year

The graph shows number of announcements per fiscal year and the dataset displayed in the graph is the data used for the difference-in-difference analysis. That is, 20 withdrawal and 247 IPOs. Comparing this graph to *Figure 5.1* we conclude that the number of issues / withdrawals is high in the same year as the number of announcement is high. This implies that the time between announcing the IPO to completing / failing it is on average significantly shorten than a year. Otherwise, we suggest there would be a difference in when the numbers of announcements versus issues / withdrawals were high.

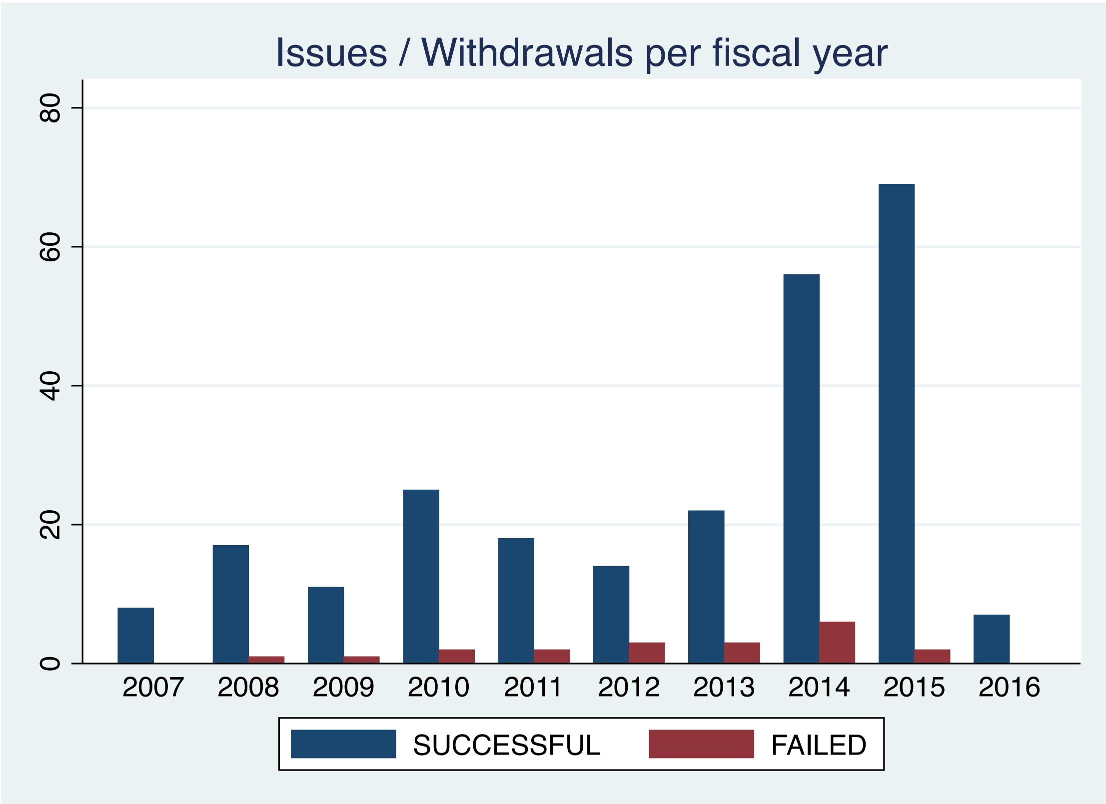
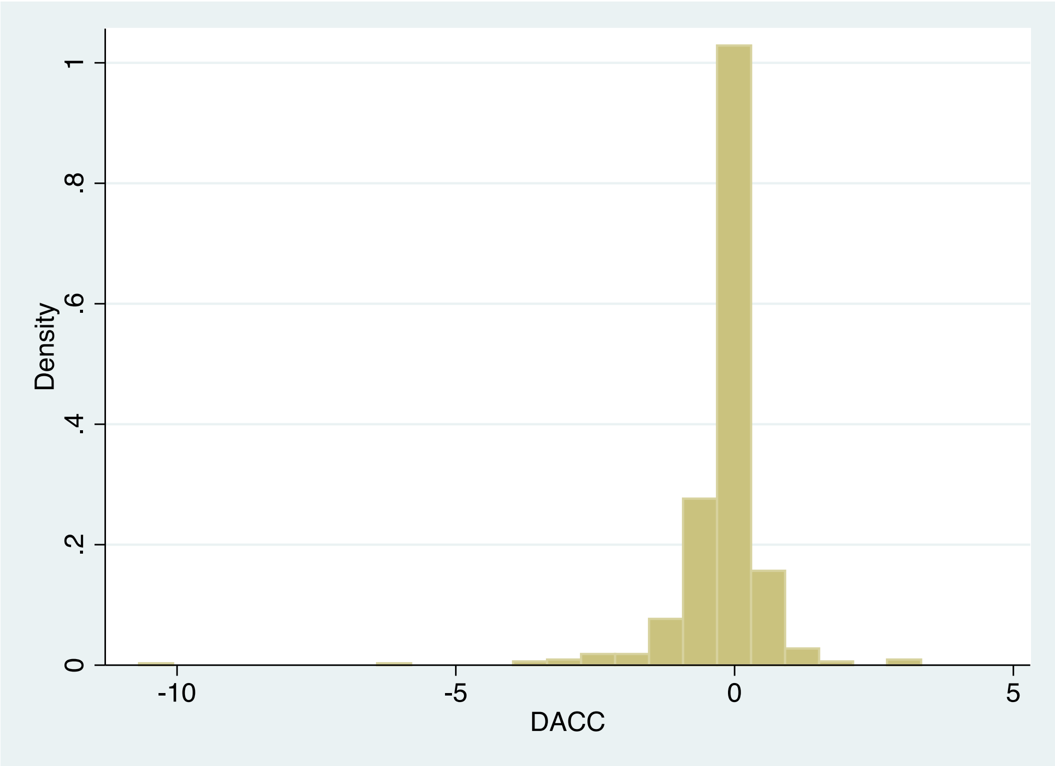


Figure 5.4: Observations of Discretionary accruals used for Difference-in-Difference test

In below histogram, we show that the dataset of *Discretionary* accruals (DACC) used for running the Difference-in-Difference test includes outliers that might affect the result.



6. Tables

Table 6.1: Raw data, number of firms with IPO announcements between 2007-2016

Our raw data consists of 459 announcements between 2007-2016, of which 399 are included in our analysis. We exclude 7 announcements since they were made by firms listed abroad, not in the scope of this paper. We exclude another 53 firms since there was no accounting data available for these firms, e.g. shelf companies not having any financial data prior the announcement of the IPO.

OBSERVATION	Freq.
Foreign company	7
Include	399
No data	53
Total	459

Table 6.2: Gross dataset, split between Failed and Successful announcements

Of the total 399 announcements in our gross dataset, 43 announcements failed and 356 succeeded.

OBSERVATION	Status		
	Failed	Successful	Total
Include	43	356	399
Total	43	356	399

Table 6.3: Failed IPOs, split by reason for failure

We identify three main reasons for failing an IPO. *M&A transaction*, meaning that the firm was sold off the market.. *Not qualified for listing,* meaning that the firm failed due to not reaching the minimum requirements demanded by the exchange they applied for. The requirements can be either financial, e.g. a minimum asset value, or non-financial, e.g. a minimum number of shareholders. *Unfulfilled IPO* means that the firm decided to stay private instead of fulfilling its IPO announcement. We identify two ways of deciding to stay private. Either the firm actively announce that it withdraws the IPO announcement or it can passively withdraw it announcement through never applying for getting listed.

FAIL_CAT	Freq.
M&A transaction	11
Not qualified for listing	5
Unfulfilled IPO	9
Total	25

Table 6.4: Dataset for difference-in-difference test

We proceed our difference-in-difference analysis with the below dataset, only including firms with accounting data the year prior to the announcement as was as for the issue / withdrawal year.

Status	Freq.
Failed	20
Successful	247
Total	267

Table 6.5: Modified Jones prediction change in non-discretionary accruals –normal years

Below table shows the results from running the regression presented in *section 3.1*

$$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}} = \alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{\left(\Delta REV_{ti} - \Delta REC_{t,i}\right)}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}} + \delta_i + \lambda_{t,j} + \varepsilon_{i,t}$$

We run the regression to estimate the normal change in total accruals, i.e. change in non-discretionary accruals. We estimate the normal change in accruals using data for two years prior to the IPO announcement and earlier. We use data until two years prior the announcement since we believe that firms have not started to prepare for going public by that time. Thus, these years can be considered as normal years in sense of not firms not having specific incentives to manage earnings. We use annual reports from 2006 and forward. We do not take into account if the announcement failed or succeeded, since we assume no difference between the groups in a normal year. We run the regression with firm and industry-year fixed effect to correct for omitted variables inside of each firm and industry-year that could otherwise affect our result.

VARIABLES	scaled_TACC
Inverse Lagged Assets	-306.4***
	(102.5)
Scaled Delta Rev – Delta Rec	0.776**
	(0.346)
Scaled PPE	-0.0324***
	(0.0101)
Observations	1,066
Number of Company	270
R-squared	0.561
Firm Fixed effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6.6: Modified Jones regression without fixed effects

We estimate the normal change in accruals using data for two years prior to the IPO announcement and earlier, for each firm having available data. We use data until two years prior the announcement since we believe that firms have not started to prepare for going public by that time. Thus, these years can be considered as normal years in sense of not firms not having specific incentives to manage earnings. We use annual report from 2006 and forward. We do not take into account if the announcement failed or succeeded, since we assume no difference between the groups in a normal year

VARIABLES	scaled_TACC
Inverse Lagged Assets	-236.0***
	(9.034)
Scaled Delta Rev – Delta Rec	0.562***
	(0.0273)
Scaled PPE	-0.0262***
	(0.00159)
Observations	1,106
R-squared	0.421

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.

Table 6.7: Industry-years for dataset used for estimating change in normal accruals

We have used Fama French 12 industries as a base in categorizing firms into industries. Since we have rather low number of observations we have merged industries where suitable. We use the industry categorisation to include industry-year fixed effect in our model. To be able to use industry-year fixed effect in a desirable way each industry year should include multiple observations. We show that our dataset includes only a 5 industry-years with less than 3 observations. Thus, we argue that industry-year fixed effects can be used in an accurate way when estimating change in discretionary accruals (Table 6.5).

	Datayearfiscal									
Industry	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Biotech	9	11	13	11	13	8	8	6		79
Construction	4	4	6	5	6	7	7	7	1	47
Entertainment	2	4	4	5	5	8	8	6	3	45
Finance & Real estate	15	18	22	23	25	26	23	14	4	170
Healthcare	30	39	45	48	43	45	41	25	4	320
IT & Communication	25	24	27	23	19	21	22	14	7	182
Manufacturing	22	29	32	31	33	37	34	26	12	256
Natural resources & Energy	3	7	6	5	5	4	4	4	2	40
Public Utilities	2	5	7	5	5	5	5	5	1	40
Retail	8	10	13	10	17	14	13	8	4	97
Services	9	10	11	11	13	13	11	10	6	94
Total	129	161	186	177	184	188	176	125	44	1,370

Table 6.8: Descriptive statistics of DACC for each year relative to the IPO

In below graph we show descriptive statistics for our dataset displayed in *Table 6.4. The table shows year prior to announcements until year 0. From year zero the table shows number of years after the IPO.*

Relative_time	variable	mean	p50	max	min
-4	SUCCESS_DACC	-.373195	-.0644799	4.951636	-22.43668
	FAILED_DACC	-.2325694	-.0298654	.2174753	-1.914967
-3	SUCCESS_DACC	-.3113995	-.042064	4.638914	-7.868
	FAILED_DACC	-.2200893	-.0269947	1.779501	-5.232044
-2	SUCCESS_DACC	-.0550036	-.0566993	7.015117	-3.139331
	FAILED_DACC	-.3261729	-.0736447	.1857269	-2.152845
-1	SUCCESS_DACC	-.2555749	-.1176699	3.257169	-10.68071
	FAILED_DACC	-.1934824	-.0422215	.2689932	-1.336435
0	SUCCESS_DACC	-.0976321	-.0377192	3.345107	-6.019137
	FAILED_DACC	-.2964807	-.1185473	.4316762	-2.499061
1	SUCCESS_DACC	-.1629929	-.1071327	2.394645	-3.330465
	FAILED_DACC	-.055578	-.0161791	.5861475	-.9101442
2	SUCCESS_DACC	-.0590682	-.0275191	1.269866	-1.738551
	FAILED_DACC	-.2486011	-.1267076	.1111541	-.837705
3	SUCCESS_DACC	-.0905618	-.0706685	2.220982	-1.851377
	FAILED_DACC	-.0253668	-.0174324	.6883457	-.7115304
4	SUCCESS_DACC	-.0939348	-.0723309	1.095311	-1.790504
	FAILED_DACC	-.2401489	-.149785	.1918457	-1.007735
Total	SUCCESS_DACC	-.1728505	-.0704888	7.015117	-22.43668
	FAILED_DACC	-.2151837	-.0642536	1.779501	-5.232044

Table 6.9: Difference-in-Difference test, using firm and industry-year fixed effects

We run a robust regression, clustering standard errors on firm level to investigate the differential effect in change in discretionary accruals between our treatment group *Failed* IPOs and our control group *Successful IPOs.*

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_{tj} + \varepsilon_{it_{I/W}}$$

We run the regression using the dataset specified in Table 6.4 and the estimation of normal accruals specified in Table 6.5. We include Firm and Industry-Year fixed effects to correct for unobservable factors within Firm and Industry-Years that might affect our result (see *section 2.4*). Industry-Year fixed effect are based on Fama French 12 industries, in order to correct for our low number of observations. To run the DID test, we use two observations for each firm; one before the IPO announcement and one after the issue / withdrawal. The observation's time relative to the IPO, i.e. before announcement or after issue / withdrawal, is captured by the dummy variable *POST*. The dummy variable *FAILED*, captures whether the observation is a *Failed* announcement. Thus, the FAILED × POST variable captures the differential effect between our treatment group and our control group when going from prior the announcement to post the issue / withdrawal.

VARIABLES	DACC
POST	-0.0733
	(0.335)
FAILED × POST	-0.468**
	(0.226)
Observations	534
Number of Company	267
R-squared	0.293
Firm Fixed Effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

We show a negative differential effect, significant at the 95 % level between our treatment group and our control group. The change in discretionary accruals, i.e. the explained variable, is expressed in percentages of lagged total asset. This implies that the differential effect of -0.468 equals -46.8 % of lagged total assets. As we run a DID test the coefficient for the POST variable is not of importance in to investigate the differential effect, but we claim that a positive value of this coefficient indicates a risk of our results being driven by earnings management practised by Successful firm after the issue date.

Table 6.10: Industry-years for dataset used for Difference-in-Difference test

We have used Fama French 12 industries as a base in categorizing firms into industries. Since we have rather low number of observations we have merged industries where suitable. We use the industry categorisation to include industry-year fixed effect in Difference-in-Difference test (Table 6.7). To be able to use industry-year fixed effect in a desirable way each industry-year should include multiple observations. As we show in below table, we have multiple years with below 3 observation per industry-year which might create errors when including industry-year fixed effects in our test.

	Datayearfiscal											
Industry	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
2	3	4	1	6	7	3	4	15	23	13	1	80
3				1	1			1	6	5		14
4			3	5	3	3	3	2	2	2	1	24
5				3	2	6	2	4	7	4		28
6	4	9	6	5	10	4	4	12	16	9	3	82
7		4	5	3	2		2	4	6	5	1	32
8		1	1	2	2	1	1		4	5	1	18
9		2	2	5	5	3	4	7	8	4		40
10		3	8	8	11	12	15	27	36	18		138
11	1	2	1	2	1	5	6	11	21	10		60
12	1	1	3	2	1	1	1	2	3	3		18
Total	9	26	30	42	45	38	42	85	132	78	7	534

Table 6.11: Difference-in-Difference test, using firm and year fixed effects

We run a robust regression, clustering standard errors on firm level to investigate the differential effect in change in discretionary accruals between our treatment group *Failed* IPOs and our control group *Successful IPOs.*

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_t + \varepsilon_{it_{I/W}}$$

We run the regression using the dataset specified in Table 6.4 and the estimation of normal accruals specified in Table 6.5. We include Firm and Year fixed effects to correct for unobservable factors within Firm and Years that might affect our result. The regression is run using two observations for each firm; one before the IPO announcement and one after the issue / withdrawal. The observation's time relative to the IPO, i.e. before announcement or after IPO / withdrawal, is captured by the dummy variable *POST*. The dummy variable *FAILED*, captures whether the observation is a *Failed* announcement or not. Thus, the *FAILED* × *POST* variable captures the differential effect between our treatment group and our control group when going from prior the announcement to post the issue / withdrawal. We show a negative differential effect, significant at the 95 % level. The change in discretionary accruals, i.e. the explained variable, is expressed as percentage of lagged total asset. This implies that the differential effect of -0.331 equals -33.1 % of lagged total assets. As we run a DID test the coefficient for the POST variable is not of importance in to investigate the differential effect, but we claim that a positive value of this coefficient indicates a risk of our results being driven by earnings management practised by *Successful* firms after the issue date.

VARIABLES	DACC
POST	0.0205
	(0.226)
FAILED × POST	-0.331**
	(0.146)
Observations	534
Number of Company	267
R-squared	0.077
Firm Fixed Effects	YES
Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6.12: Winsorized DID test, using firm and industry-year fixed effects

We run a robust regression, clustering standard errors on firm level to investigate the differential effect in change in discretionary accruals between our treatment group *Failed* IPOs and our control group *Successful IPOs.*

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_{tj} + \varepsilon_{it_{I/W}}$$

We run the regression using the dataset specified in Table 6.4 and the estimation of normal accruals specified in Table 6.5. We include Firm and Industry-Year fixed effects to correct for unobservable factors within Firm and Industry-Years that might affect our result (see *section 2.4*). Indsutry-Year fixed effect are based on Fama French 12 industries. In order to correct for possible outliers (Figure 5.4), we winsorize our dataset in the 5^{th} and 95^{th} percentiles, for *Failed* and *Successful* firms separately (separately to adjust for differences in number of observation between the groups). To run the DID test we use two observations for each firm; one before the IPO announcement and one after the issue / withdrawal. The observation's time relative to the IPO, i.e. before announcement or after issue / withdrawal, is captured by the dummy variable *POST*. The dummy variable *FAILED*, captures whether the observation is a *Failed* announcement. Thus, the FAILED × POST variable captures the differential effect between our treatment group and our control group when going from prior the announcement to post the issue / withdrawal.

VARIABLES	DACC
POST	-0.135
	(0.189)
FAILED × POST	-0.274**
	(0.136)
Observations	534
Number of Company	267
R-squared	0.304
Firm Fixed Effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

We show a negative differential effect, significant at the 95 % level between our treatment group and our control group. The change in discretionary accruals, i.e. the explained variable, is expressed in termed of share of lagged total asset. This implies that the differential effect of -0.274 equals -27.4 % of lagged total assets. As we run a DID test the coefficient for the POST variable is not of importance in to investigate the differential effect, but we claim that a positive value of this coefficient indicates a risk of our results being driven by earnings management practised by *Successful* firms after the issue date.

Table 6.13: Estimation of Non-discretionary accruals using issue / withdrawal 2006-2015

Below table shows the results from running the regression presented in *section 3.4*

$$\frac{\Delta NDACC_{t,i}}{TA_{t-1,i}} = \alpha_1 \frac{1}{TA_{t-1,i}} + \alpha_2 \frac{(\Delta REV_{ti} - \Delta REC_{t,i})}{TA_{t-1,i}} + \alpha_3 \frac{PPE_{t,i}}{TA_{t-1,i}} + \delta_i + \lambda_{tj} + \varepsilon_{i,t}$$

We run below regression to estimate the normal change in total accruals, i.e. change in non-discretionary accruals. We use an estimation window of all years available for firms going public or withdraw their announcements earlier than 2015. We do so based on the intuition behind the abnormal change in accruals should equal zero in the long run. Only including firms withdrawing their announcements or going public before 2015, we have at least two annual reports after the issue / withdrawal for each firm. Only including these observations, we mitigate the risk of only capturing the increase in accruals prior the IPO and not the reversal. By doing so, this approach provides a new way estimating earnings management for a normal period. We run the regression with firm and industry-year fixed effect to correct for omitted variables in each firm and industry-year that could otherwise affect our result.

VARIABLES	scaled_TACC
Inverse Lagged Assets	-329.8
	(321.6)
Scaled Delta Rev – Delta Rec	0.525**
	(0.235)
Scaled PPE	-0.0447***
	(0.00193)
Observations	1,809
Number of Company	255
R-squared	0.408
Firm Fixed effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6.14: DID test with estimation period 2006-2015, using firm and industry- year fixed effects

We run a robust regression, clustering standard errors on firm level to investigate the differential effect in change in discretionary accruals between our treatment group *Failed* IPOs and our control group *Successful IPOs*.

$$\frac{\Delta DACC_{it}}{TA_{t-1}} = \beta FAILED \times POST_{t_{I/W}} + \gamma POST_{t_{I/W}} + \delta_i + \lambda_t + \varepsilon_{it_{I/W}}$$

We run the regression using the dataset specified in Table 6.4 and the estimation of normal accruals specified in Table 6.11. We include Firm and Indsutry-Year fixed effects to correct for unobservable factors within Firm and Indsutry-Years that might affect our result. The regression is run using two observations for each firm; one before the IPO announcement and one after the issue / withdrawal. The observation's time relative to the IPO, i.e. before announcement or after issue / withdrawal, is captured by the dummy variable *POST*. The dummy variable *FAILED*, captures whether the observation is a *Failed* announcement. Thus, the *FAILED × POST* variable captures the differential between our treatment group and our control group effect when going from prior the announcement to post the IPO / withdrawal. We show a negative differential effect, significant at the 95 % level. The change in discretionary accruals, i.e. the explained variable, is expressed in termed of share of lagged total asset. This implies that the differential effect of -0.401 equals -40.1 % of lagged total assets. As we run a DID test the coefficient for the POST variable is not of importance in to investigate the differential effect, but we claim that a positive value of this coefficient indicates a risk of our results being driven by earnings management practised by *Successful* firms after the issue date.

VARIABLES	DACC
POST	-0.00877
	(0.303)
FAILED × POST	-0.402**
	(0.182)
Observations	534
Number of Company	267
R-squared	0.254
Firm Fixed Effects	YES
Industry-Year Fixed Effects	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1