Event Driven Investing Series

Late to File

The costs of delayed 10-Q and 10-K company filings

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Timely disclosure of financial statements is important to well-functioning capital markets. The U.S Securities & Exchange Commission ("SEC") requires companies to submit quarterly (10-Q) and annual (10-K) financial statements in a timely manner. Companies that cannot file within the statutory period are required to file form 12b-25 ("NT")[1] with the SEC. In this report we examine the relationship between late filings (form 12b-25s) and subsequent market returns, as well as whether late filings (or serial late filings[2]) signal deeper fundamental problems within the company. Our results, within the Russell 3000 universe (February 1994 – June 2015), indicate that abnormal returns[3] of late filers is negative prior to and post NT filing. Late filers are also typically companies with poor fundamental characteristics relative to peers; investors may want to consider avoiding or short-selling these firms. Additional findings include:

- **Late filers generate an abnormal return of -1.34% in the three days surrounding the filing of a form 12b-25,** and -0.53% on the event date (both significant at the 1% level).

- **Late filers continue to underperform after NT filing.** Abnormal returns over the next one week, one month, three months and one year are -0.62%, -1.76%, -4.44% and -7.90% respectively (all returns significant at the 1% level).

- **The late filer effect is more pronounced within the small cap universe, perhaps a reflection of small cap names having larger "information gaps"[4] and lower visibility (compared to large cap stocks).** Abnormal returns in the Russell 2000 (small cap universe) are up to two and a half times worse than those in the Russell 1000 (large cap universe) depending on the return horizon (Table 2).

- **Abnormal returns, surrounding the event date (first two rows in Table 3) of first time filers are worse than those of serial or repeat filers,** as NT filings by first time filers may come as a "surprise" to market participants[5].

- **A portfolio of stocks that have filed form 12b-25s over the last 3-months (rebalanced monthly) generates a monthly abnormal return of -1.48%.** Abnormal return dropped to -1.05% when we extended the look-back window from 3 to 12 months.

- **Return on Asset and Operating Cash Flow to Total Assets ratios of late filers are weaker than those of peers matched on sector and size (Table 6).**

[1] Form 12b-25 is a notification of late filing. NT stands for "Not Timely".
[2] Serial late filings are NT filings made in consecutive quarters.
[3] Abnormal returns are calculated after controlling for market, value, size and momentum risk factors.
[4] Small cap companies may have more difficulty communicating NT filings to investors, unlike their large cap counterparts who enjoy more analyst coverage.
[5] Subsequent NT filings after the initial filing may be anticipated and not as informative as the initial filing.

1. Introduction

Form 12b-25 (which must be filed within one business day of the relevant report due date), documents the filer's inability to file a 10-Q or 10-K in a timely manner, and also details the reasons for the delay. Reasons typically provided by late filers include accounting issues, financing issues (M&A, restructuring), financial distress and SEC investigations. Companies that timely file an NT are automatically granted a 15 day extension for 10-K (annual) filings and a 5 day extension for 10-Q (quarterly) filings. Quarterly or annual filings that are made within the extension period are deemed by the SEC to have been filed "on time" and no further action is taken by the SEC. Issuers that fail to file within the extension period are subject to enforcement actions by the SEC, including possible revocation of the company's stock registration. Other costs that late filers may incur include being delisted from an exchange, penalized by creditors for debt covenant violations tied to timely filings, and market impact costs.

Several academic papers have examined the impact of late filings on equity prices. Griffin (2003) documented significant short-term negative excess returns around NT quarterly and annual filings between 1996 and 2001. He also found the effect to be more pronounced for small cap stocks and firms lightly owned by institutional investors. Dalton, Buchheit, Murray and Oler (2010) documented negative excess returns around both the statutory report date and extension due date for issuers that failed to file their reports before the expiration of an extension window. Cao, Calderon, Chandra and Wang ("CCCW", 2010) reported a larger impact for late quarterly filings than for late annual filings. CCCW also found that filings associated with information system delays, SEC investigations and accounting issues led to the largest negative market reaction. Bartov, DeFond and Konchitchki ("BDK", 2013) documented a continued downward price drift for late filers months after the NT filing. BDK also reported that late filers had poor operating metrics as measured by return on assets (ROA) during the five fiscal quarters centered on an NT filing.

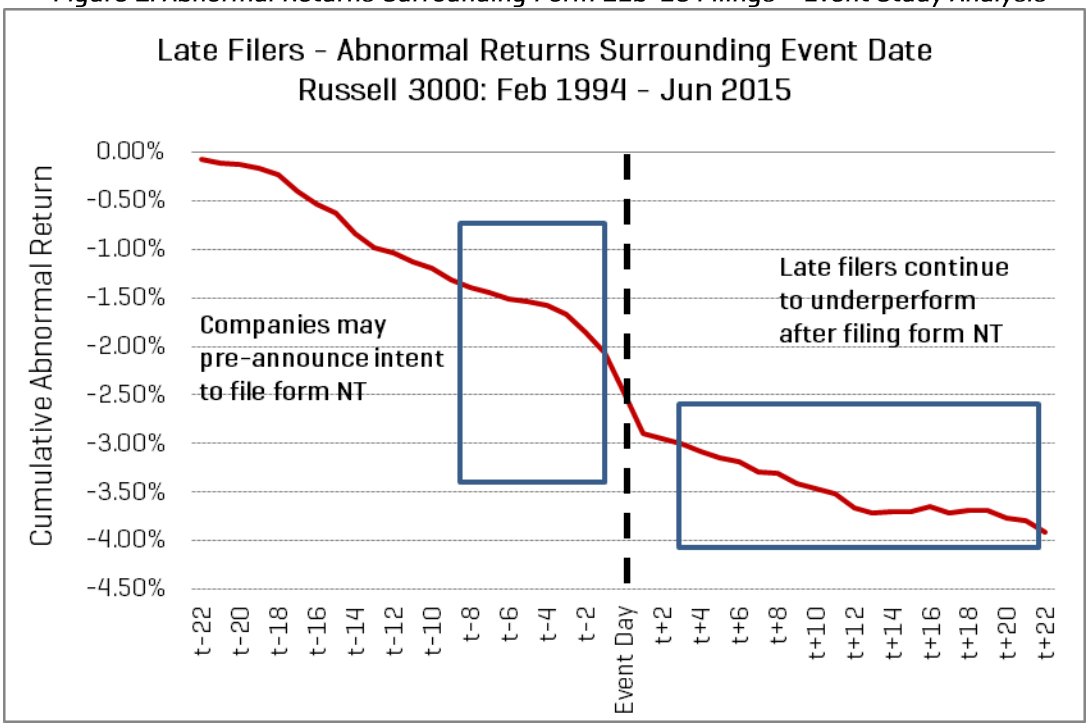
In this report, we examine abnormal or excess returns surrounding NT filings by companies in the U.S, using an event study approach and a portfolio formation framework[6]. We examine abnormal returns for filings by serial or repeat offenders (companies that file an NT in consecutive quarters). We also compare the fundamental characteristics of late filers to their sector peers matched on size. All excess or abnormal returns in this report are calculated after controlling for market, value, size and momentum risk factors, unless otherwise stated. This report is a continuation of our work in the area of event driven investing, a class of strategies that originate from company specific events. Event driven strategies tend to be idiosyncratic and are often complementary to strategies typically employed by investors.

[6] An event study is used to measure the immediate impact of an event on the value of a firm; a portfolio formation approach forms a portfolio of stocks (over a given look-back window) based on an event and rebalances that portfolio at a predefined frequency.

2. Abnormal Returns Surrounding Late Filings Using Event Study

Abnormal returns surrounding NT filings are shown in Figure 1, where the dotted black line indicates the date of the filing. Late filers generate an abnormal return of -250 basis points (bps) one month prior to the filing of an NT, and another -180bps one month after the filing.

Figure 1: Abnormal Returns Surrounding Form 12b-25 Filings – Event Study Analysis



Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

Companies may pre-announce their intent to file form 12b-25 prior to the actual filing with the SEC, and this may account for some of the negative abnormal return before the event date. To account for the fact that investors' may be aware of the intent to file form 12b-25 at a later date, we look at abnormal returns around the event date, rather than just on the event date itself (See Table 1). The abnormal return to late filers is -2.37% in the ten business days centered on the event date (t-5, t+5). The hit rate[7] indicates that 60% of the population of late filers has negative abnormal returns in this return window. Late filers still have a negative abnormal return of -1.37% when we shorten the window around the event date to two days prior and one day after (t-2, t+1). The average abnormal return to late filers on the event date is -0.53%, statistically significant at the 1% level. These results are consistent with existing literature that NT filings have a negative market impact.

Late filers continue to underperform in the short and long term, post NT filing. We adopted a conservative approach for the post filing return measurement; our abnormal return calculation

[7] Hit rate is the number of months with positive abnormal return divided by the total number of months.

starts at the end of the day after the filing or event date. The average return to late filers is -0.62% five days after the event date (t+1, t+6) and -1.76% one month after. Over the longer term, (3-12 months) late filers continue to underperform. Going forward, we will restrict our analysis to a maximum window of three months[8].

Table 1: Late Filers: Abnormal Returns around Event Date – Event Study Analysis

Russell 3000 (February 1994 - June 2015) Late Filers: Back-test Fama-French 4-Factor Adjusted Abnormal Returns			
	Average	T-Stat	Hit Rate
5 Days Before to 5 Days After Event Day (t-5,t+5)	-2.37%	(13.46)	40%***
2 Days Before to 1 Day After Event Day (t-2,t+1)	-1.34%	(13.96)	41%***
Event Day Return (t-1,t0)	-0.53%	(9.46)	44%***
5 Days Forward Return (t+1,t+6)	-0.62%	(5.41)	46%***
1-month Forward Return	-1.76%	(7.19)	43%***
3-months Forward Return	-4.44%	(10.29)	42%***
6-months Forward Return	-6.24%	(9.40)	40%***
1-Year Forward Return	-7.90%	(7.89)	41%***

*** significant at 1% level; ** significant at 5% level; * significant at 10% level

Total number of observations is 4409

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

2.1.Small Cap Vs Large Cap Analysis

Several researchers documented a larger market impact for small cap late filers compared to large cap late filers. For our analysis, we split the Russell 3000 into the large cap universe (Russell 1000) and small cap universe (Russell 2000). Similar to prior academic findings, we find the effect to be more pronounced in the small cap universe (Table 2). Abnormal returns for the small cap universe are more negative than that of the large cap universe for each return window we examined. All abnormal returns and hit rates for the Russell 2000 are significant at the 1% level; only four (two) of the six abnormal returns (hit rates) for the large cap universe are significant at the 1% level and the hit rate for the 5 days forward return is not significant. In addition, the difference in mean returns between the Russell 1000 and Russell 2000 for each return window is significant at either the 1% or 5% levels, except for the 5 day forward return window (not shown in Table 2).

[8] Since companies can file successive quarterly form 12-25s, return windows longer than 3-months would include the effect of multiple form 12-25 filings. Our conclusions are similar to what is shown in Table 1 when we looked only at isolated form 12b-25 filings (filings that were not preceded or followed by another filing for at least 12 calendar months).

Table 2: Large Cap vs Small Cap (Event Study Analysis)

Russell 1000 (February 1994 - June 2015) Late Filers - Back-test Fama French 4-Factor Adjusted Abnormal Returns			
	Average	T-Stat	Hit Rate
5 Days Before to 5 Days After Event Day (t-5,t+5)	-1.10%	(3.48)	43%***
2 Days Before to 1 Day After Event Day (t-2,t+1)	-0.64%	(3.90)	44%***
Event Day Return (t-1,t0)	-0.32%	(3.31)	47%*
5 Days Forward Return (t+1,t+6)	-0.48%	(2.28)	48%
1-month Forward Return	-0.74%	(1.69)	46%**
3-months Forward Return	-1.88%	(2.74)	46%**

Russell 2000 (February 1994 - June 2015) Late Filers - Back-test Fama French 4-Factor Adjusted Abnormal Returns			
	Average	T-Stat	Hit Rate
5 Days Before to 5 Days After Event Day (t-5,t+5)	-2.70%	(13.04)	40%***
2 Days Before to 1 Day After Event Day (t-2,t+1)	-1.53%	(13.51)	40%***
Event Day Return (t-1,t0)	-0.59%	(8.91)	44%***
5 Days Forward Return (t+1,t+6)	-0.65%	(4.80)	45%***
1-month Forward Return	-1.96%	(6.89)	43%***
3-months Forward Return	-4.90%	(9.63)	41%***

*** significant at 1% level; ** significant at 5% level; * significant at 10% level

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

Number of observations for Russell 1000 and Russell 2000 are 747 and 3558 respectively

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

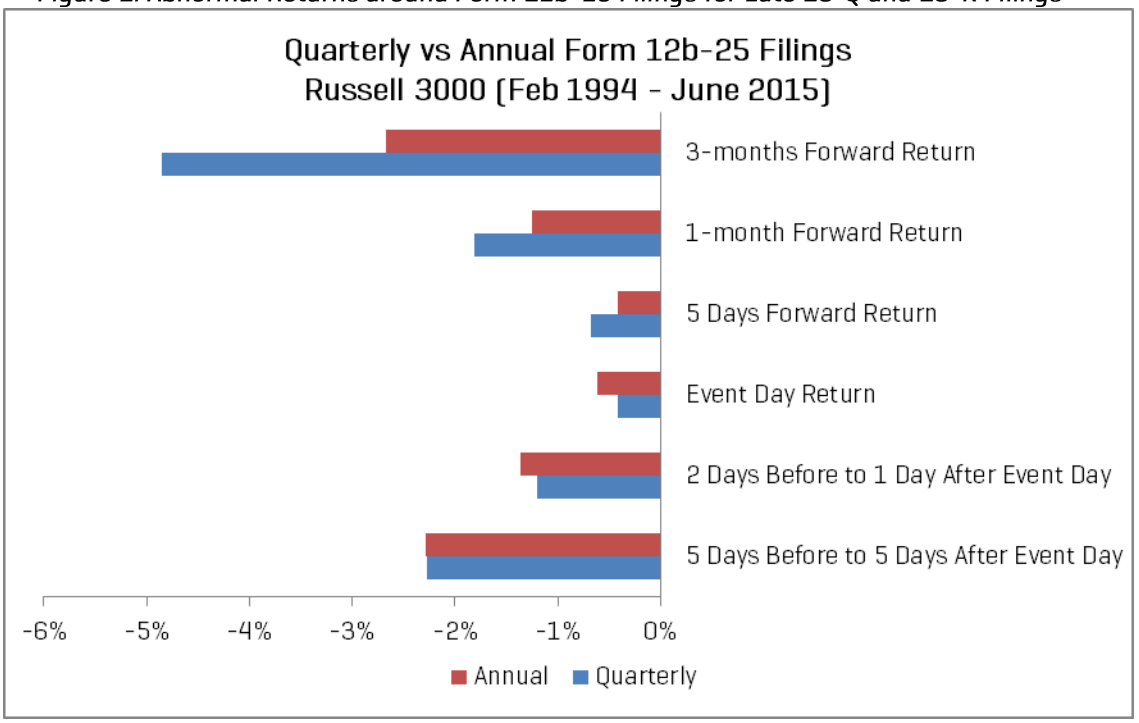
2.2. Are Quarterly Late Filings More Informative than Annual Filings?

Which of the form 12b-25 filings (10-K or 10-Q) should lead to a larger response from investors? On one hand, delayed 10-Qs may signal a bigger fundamental issue (compared to delayed 10-Ks) with the company, as 10-Qs are unaudited and require less disclosure. NT filings associated with 10-Qs may therefore have a larger price impact than those associated with 10-Ks. On the other hand, the delayed release of 10-Ks, which contain more information than 10-Qs, may leave investors with a bigger "knowledge gap" than 10-Qs.

Figure 2 shows the market's reaction to NT filings associated with both late 10-Q and 10-K filings. In both instances, investor reaction is negative over all return windows considered[9]. Market reaction for quarterly filings appear to be larger than annual filings post event-date, although the difference in returns between quarterly and annual filings is not statistically significant at the usual levels, except for the 3-month forward return window (significant at 5% level).

[9] All the abnormal returns are statistically significant at the 1% level, except for 5 day forward return for annual 12b-25 filings, which is significant at the 5% level.

Figure 2: Abnormal Returns around Form 12b-25 Filings for Late 10-Q and 10-K Filings



Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.
Number of observations for quarterly and annual filings is 2750 and 1565 respectively

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

2.3. Market Reaction to Filings by Repeat Offenders

It is not unusual for a company to file successive form 12b-25s as the company works through the issue(s) that led to the delayed 10-Q or 10-K filing. For example, Hertz Global Holdings Inc. filed five consecutive NTs with the SEC between March 2014 and March 2015 due to issues with the implementation of an enterprise resource planning system, and problems with past financial records. Does the market punish this type of behavior more severely?

For this analysis, we categorize companies that file form 12b-25 in consecutive quarters as "repeat offenders", or "RO" and companies that do not fall into this category as "first time", or "FT" offenders. We rerun the analysis in Table 1 for each category and the results are shown in Table 3. Abnormal returns for first time offenders are worse than those of repeat offenders around the event date and the difference is statistically significant at the 1% level (first two rows in Table 3). However, after the initial event, it does not appear investors treat repeat offenders different from first time offenders in the longer term after the filing (last three rows in Table 3), as abnormal returns to both first time and repeat offenders are not significantly different. NT filings for first time offenders may come as a surprise and this may be reflected in the larger price impact for these late filers. Once a company has filed an NT the first time, subsequent filings may not be as surprising as the initial filing, as investors may expect there to be more down the road (about 25% of total NT filings fall under the repeat category).

Table 3: Repeat Offenders ("RO") Vs First Time ("FT") Offenders Analysis

Russell 3000 (February 1994 - June 2015) Repeat Offenders ("RO") vs First Time ("FT") Filers Back-test Fama-French 4-Factor Adjusted Abnormal Returns					
	Type	Average (A)	Type	Average (B)	Difference (A- B)
5 Days Before to 5 Days After Event Day (t-5,t+5)	RO	-1.31%***	FT	-2.70%***	1.39%***
2 Days Before to 1 Day After Event Day (t-2,t+1)	RO	-0.79%***	FT	-1.52%***	0.73%***
Event Day Return (t-1,t0)	RO	-0.37%***	FT	-0.57%***	0.20%
5 Days Forward Return (t+1,t+6)	RO	-0.47%**	FT	-0.68%***	0.21%
1-month Forward Return	RO	-1.26%***	FT	-1.90%***	0.62%
3-months Forward Return	RO	-4.98%***	FT	-4.22%***	-0.76%

*** significant at 1% level; ** significant at 5% level; * significant at 10% level

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

Number of observations for repeat offenders and first time offenders are 1027 and 3268 respectively

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

2.4. Abnormal Returns in Different Regimes

One of the consequences of shorter filing deadlines[10] and stringent reporting required under the Sarbanes-Oxley ("SOX") Act of 2002 was acceleration in the number of NT filings after 2003 (See Figure 3 on page 11). Prior research associated the increase in late filings in 2003 to concerns expressed by issuers and their auditors over their ability to prepare financial reports in a timely manner due to SOX requirements. Since we do not know the reason[11] given by companies for NT filings, we divided our sample period into three regimes to better understand abnormal returns around the period of elevated NT filings. The first regime is the Pre-SOX regime (1994 – 2002); the second is the SOX period (2003-2008)[12] and the final is the post-SOX regime (2009-2015). Results are displayed in Table 4.

The main take-away from Table 4 is that abnormal returns for each return window are smallest in the SOX regime where we saw elevated NT filings. A possible reason for this may be that some of the filings in this period were due to companies trying to adjust to new filing/SOX requirements, which are not related to accounting/distress problems. While abnormal returns in the post-SOX period are not as large as in the pre-SOX regime, they are statistically significant at the 1% level.

[10] The SEC shortened the 10-K filing deadline for both Accelerated Filers and Large Accelerated Filers from 90 days to 75 and 60 days respectively between 2004 and 2007. 10-Q filing deadline was shortened to 40 days for Large Accelerated Filers, but was unchanged for Accelerated Filers at 45 days. Non-Accelerated Filers saw no change in 10-Q (45 days) and 10-K (90 days) filing deadline. See Appendix A for market cap cut-off for different type of filers.

[11] Companies usually provide the reason for 10-Q or 10-K delays in NT filings. Our data source does not include this narrative information. See Section 5 for description of data source.

[12] We used 2008 as a cut-off as it was after this year that filings dropped back to pre-2003 levels

Table 4: Regime Analysis – Event Study Analysis

Russell 3000 (February 1994 - June 2015) SOX Regime Analysis Back-test Fama-French 4-Factor Adjusted Abnormal Returns			
	Pre-SOX (Feb 1994 - Dec 2002)	SOX (Jan 2003 - Dec 2008)	Post-SOX (Jan 2009 - June 2015)
5 Days Before to 5 Days After Event Day (t-5,t+5)	-4.11%***	-1.58%***	-2.59%***
2 Days Before to 1 Day After Event Day (t-2,t+1)	-2.11%***	-1.00%***	-1.39%***
Event Day Return (t-1,t0)	-0.79%***	-0.35%***	-0.71%***
5 Days Forward Return (t+1,t+6)	-1.16%***	-0.32%***	-0.84%***
1-month Forward Return	-4.20%***	-0.90%***	-1.44%***
3-months Forward Return	-9.15%***	-2.36%***	-5.03%***

*** significant at 1% level; ** significant at 5% level; * significant at 10% level

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

Number of observations for pre-sox, sox and post-sox regimes are 970, 2405 and 925 respectively

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

3. Abnormal Returns Using Portfolio Formation Approach

One of the problems with the event study framework is that it is difficult, if not impossible, for investors to capture the suggested returns in practice. For investors to harvest returns under the event study framework, they must buy/sell on the event date, which may not be realistic for most investors. A portfolio formation approach solves this problem by aligning the purchase/sale of securities with a pre-determined rebalancing frequency. For example, a portfolio formation approach might buy all companies that have filed a form 12b-25 over the past 3-months and rebalance the portfolio monthly. We show the returns to a portfolio formation approach using 3, 6 and 12 month look-back windows (all monthly rebalancing) in Table 5. The first column (horizon) is the look-back window applied to construct the portfolio.

All abnormal returns are statistically significant at the 1% level[13]. The sensitivities in columns 3-6 indicate that a late filers' portfolio is tilted towards small cap stocks that have witnessed significant price decline over the last previous 12 months before the NT filing.

[13] Our conclusions do not change when we applied a $5 minimum price and a requirement that the security cannot be in the bottom quintile of a liquidity filter constructed as average trading volume over last 3 months divided by shares outstanding.

Table 5: Portfolio Formation Approach – Russell 3000 (Jan 1995 – June 2015)
Back-test Fama-French 4-Factor Adjusted Abnormal Returns

Horizon (Months)	Average Monthly Excess Return	Sensitivity to Market Risk Premium	Sensitivity to Size Risk Premium	Sensitivity to Value Risk Premium	Sensitivity to PriceMOM Risk Premium+	Average Monthly Count
3	-1.48%***	1.07***	1.06***	-0.09	-0.56***	49
6	-1.27%***	1.12***	1.02***	-0.07	-0.46***	81
12	-1.05%***	1.14***	0.97***	-0.03	-0.47***	133

*** significant at 1% level; ** significant at 5% level; * significant at 10% level

+PriceMOM indicates Price Momentum

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

4. Fundamental Characteristics of Late Filers

Bartov, DeFond and Konchitchki ("BDK") reported that late filers had poor operating metrics as measured by return on assets (ROA) during the five fiscal quarters centered on an NT filing in their 2003 paper. In addition to ROA, we examined the characteristics of late filers for two fundamental ratios: Earnings before Interest, Tax, Depreciation & Amortization to Revenue ("EBITDAMgn") and Operating Cash Flow to Total Assets ("OcfAst")[14]. Our analysis is based on the difference in median ratios between late filers and peers matched on sector and size[15]. Results are displayed in Table 6.

Panel A shows the fundamental characteristics of late filers on the day the firm files a form 12b-25, using financial information from its previous 10-Q/10-K report; Panel B and Panel C show the same fundamental characteristics (excluding market capitalization) using data from the delayed 10-Q/10-K report and 4 quarters after the NT filing respectively. The first column in all three panels is the fundamental ratio of interest; the middle column is the median ratio for late filers; while the last column is the difference in median ratio between late filers and matched peers.

Late filers are approximately half the size of their sector peers[16], when size is measured by market capitalization (Panel A). Similar to BDK, we found late filers to have weaker ROA metrics compared to matched peers across all three panels (last column). Late filers are also more likely to have weaker EBITDAMgn and OCFAst ratios compared to matched peers (median differences are statistically significant at the 1% level), before and one year after NT filing. These results suggest NT filings convey news about deeper problems within the firm. Late filings may be a sign of poor management quality, showing up in weak fundamental ratios.

[14] Companies in the financials sector were excluded for OcfAst analysis.
[15] Size match was based on market capitalization tertiles. Sector match is based on GICS 2-digit code.
[16] Late filers were only matched using sectors for market capitalization characteristic.

Table 6: Fundamental Characteristics of Late Filers vs Peers (Russell 3000)
Feb 1994 – March 2014

Panel A
Fundamental Characteristics on Date of Form 12b-25 Filing

	Late Filers (Median Ratio)	Median Diff in Characteristics: Late Filers vs Peers Matched on Sector and Size
MarketCap ($'Million)	387	-384***
ROA	0.95%	-1.62%***
EBITDAMgn	10.98%	-1.73%***
OCFAst	4.88%	-2.48%***

Panel B
Fundamental Characteristics Using Delayed 10-Q/10-K Report

	Late Filers (Median Ratio)	Median Diff in Characteristics: Late Filers vs Peers Matched on Sector and Size
ROA	0.46%	-2.31%***
EBITDAMgn	10.24%	-2.20%***
OCFAst	4.76%	-2.81%***

Panel C
Fundamental Characteristics 4 Quarters after Event Day

	Late Filers (Median Ratio)	Median Diff in Characteristics: Late Filers vs Peers Matched on Sector and Size
ROA	0.28%	-2.24%***
EBITDAMgn	9.56%	-2.58%***
OCFAst	5.39%	-2.36%***

*** significant at 1% level; ** significant at 5% level; * significant at 10% level (Wilcoxon Test)

Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

Backtested returns do not represent the results of actual trading and were constructed with the benefit of hindsight. Returns do not include payment of any sales charges or fees. Inclusion of fees and expenses would lower performance. Past performance is not a guarantee of future results.

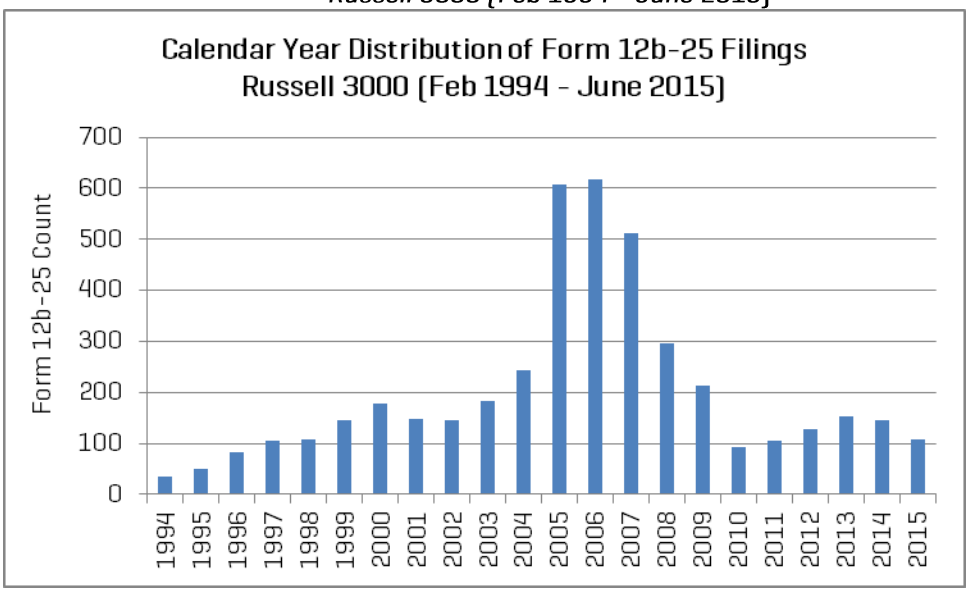
5. Data

The data used for this study is from S&P Capital IQ's key developments (key dev) data base. S&P Capital IQ currently collects over 160+ key dev types, using multiple global, regional and local sources, including press releases, regulatory filings and company websites. Coverage is global where possible and includes both publicly listed and private companies.

The key dev type used for this study is "Delayed SEC filings"; form 12b-25 SEC filings serve as the data source for this particular key dev type. Other types in the database include bankruptcy filings, executive changes and buyback transaction announcements.

We restricted our analysis to the Russell 3000, a broad based investable index. The calendar year distribution of NT filings is shown in Figure 3; we have a total of 4409 filings between February 1994 and June 2015. As discussed in numerous academic studies, there was an increase in filings after 2003 when the SEC shortened filing deadlines and added new report requirements mandated by SOX.

Figure 3: Calendar Year Distribution of Form 12b-25 Filings
Russell 3000 (Feb 1994 – June 2015)



Source: S&P Capital IQ Quantamental Research. Data as of 08/31/2015.

6. Conclusions

An NT filing may signify deeper underlying problems within the filing company. Investors understand the implications of such filings and late filers typically underperform the market over the short and long term. The abnormal returns of late filers are -1.34% over the three days surrounding the form 12b-25 filing and -1.76% over the next 1-month. The effect is more pronounced in the small cap spectrum as abnormal returns of small cap late filers were up to 2.5 times worse than those of large cap late filers. Investors may anticipate additional NT filings following an initial filing, and this may account for the difference in abnormal returns between first

time filers and repeat offenders. A portfolio of stocks that have filed a form 12b-25 over the prior 3-months (rebalanced monthly) generates a monthly abnormal return of -1.48%.

The information in this report should be useful to both long-only and long-short portfolio managers. Long-only managers may want to consider using an NT filing as a trigger to further review stocks in an existing portfolio or to avoid as buy candidates. Portfolio managers that short securities should consider including NT filings as one of their signals in a short strategy.

Appendix A

SEC Filing Deadlines for Form 10-Q and Form 10-K

Type of Filer	Market Cap Range	10-Q Filing Deadline	10-K Filing Deadline
Non-Accelerated Filers	Less than $75M	45 Days	90 Days
Accelerated Filers	$75 - $700M	45 Days	75 Days
Large Accelerated Filers	>=700M	40 Days	60 Days

Source: U.S Securities & Exchange Commission, S&P Capital IQ Quantamental Research. Data as of 08/31/2015

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Our Recent Research

October 2015: Global Country Allocation Strategies
In this report, we investigate the efficacy of fundamental, macroeconomic and sentiment-based strategies for country selection across global equity markets. Using point-in-time fundamental and macroeconomic data, we constructed signals at the country level, grouped into five themes: valuation, quality, sentiment, volatility and macro. We examined their performance between January 1999 and November 2014 for the developed and emerging markets in the S&P Global Broad Market Indices Our major findings include:

- Valuation is a common driver of performance in both developed and emerging markets.
- In addition to valuation, we found macro and sentiment based indicators to be effective country selection signals in developed markets.
- We found currency depreciation to be important when emerging market countries were separated into exporting and importing nations.
- Valuation and profitability are low-turnover strategies while macro and sentiment indicators tend to result in more frequent rotation among countries..

September 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 5
The Q3 issue of Equity Market Pulse spotlights potential opportunities in Asia, attractive growth and valuations in developed Europe and Japan, and risks associated with rising volatility and elevated 2016 global EPS estimate levels.

September 2015: Research Brief: Building Smart Beta Portfolios
Why is smart beta important? We believe that smart beta is continuing to gain momentum among a variety of constituencies, including ETF providers, asset managers and asset owners. Many asset managers are making smart beta part of their investment processes. European and Canadian public pension funds have been increasingly relying on internalized smart beta, with the largest U.S. pension funds and endowments also adopting the approach. The purpose of this brief is to aid asset managers and owners in building their own "internal" smart beta processes with a focus on portfolio construction and optimization, including how to manage liquidity and turnover constraints and avoid unintended factor bets.

September 2015: Research Brief – Airline Industry Factors
This brief examines S&P Capital IQ's industry-specific factors for the global airline industry. The seven airline industry factors contained in S&P Capital IQ's Alpha Factor Library consist of ratios widely used by airline industry analysts. The factors address airline profitability in terms of growth, capacity utilization, and operating efficiency. By applying the factors to regime analysis, we find:

- During periods of low fuel price increases industry growth factors are most effective.
- During periods of high fuel price growth, efficiency factors stand out.
- During periods of high revenue passenger growth our studies show that both growth and fuel efficiency factors performed well.

August 2015: Point-In-Time vs. Lagged Fundamentals – This time i[t']s different?
The common starting point for alpha discovery and risk analysis is the backtesting of historical company financials using a research database. Whether internally constructed or licensed, research databases can be distinguished by two primary formats – Point in Time and Non-Point in Time. This paper focuses on the major practical differences between Point in Time (PIT) and Non-

Point in Time (Non PIT) data for both backtesting and historical research. PIT data is defined by its ability to answer two questions: When was the information known? and What information was known at the time?.

August 2015: Introducing S&P Capital IQ Stock Selection Model for the Japanese Market

Since the launch S&P Capital IQ's four U.S. stock selection models ("US Stock Selection Models Introduction") in January 2011, we released a suite of global stock selection models targeting both developed ("Introducing S&P Capital IQ Global Stock Selection Models for Developed Markets") and emerging markets ("Obtaining an Edge in Emerging Markets"). In this report, we introduce a stock selection model for the Japanese equity market that completes our global model offering.

July 2015: Research Brief – Liquidity Fragility

As liquidity in the bond market becomes increasingly constrained, there has been a growing chorus of concerns raised by Mohamed A. El-Erian, John Paulson, Jamie Dimon, Larry Summers and recently the Federal Reserve. As we learned in the Global Financial Crisis, when liquidity seizes in one market, margin calls are met by raising cash in one of the most liquid markets in the world: the US equity market. How should equity investors be thinking about liquidity in their market?

June 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 4

The Q2 issue of Equity Market Pulse features a spotlight on developed Europe, which has the highest estimated growth rates and most attractive valuations among developed markets.

May 2015: Investing in a World with Increasing Investor Activism

Investor activism has gained mainstream acceptance as activists with larger-than-life personas have waged a string of successful campaigns. Activist hedge funds' assets under management (AUM) have swelled to $120 billion, an increase of $30 billion in 2014 alone. It was among the best performing hedge fund strategies in 2014 as well as over the last three- and five-year periods. In this report, we explore an investment strategy that looks to ride the momentum surrounding the announcement of investor activism. We further explore what, if any, changes to targeted companies activists are able to influence.

April 2015: Drilling for Alpha in the Oil and Gas Industry – Insights from Industry Specific Data & Company Financials

During the recent slide in oil prices, clients frequently asked us which strategies have historically been effective in selecting stocks in declining energy markets. This report answers this question, along with its corollary: which strategies work in rising energy markets? We also explore the value of oil & gas reserve data used by fundamental analysts/investors, but not used in a majority of systematic investment strategies. The analysis in this report should help both fundamental and quantitatively-oriented investors determine how to best use industry-specific and generic[1] investment metrics when selecting securities from a pool of global oil & gas companies.

March 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 3

February 2015: U.S. Stock Selection Model Performance Review – The most effective investment strategies in 2014

January 2015: Global Pension Plans: Are Fully Funded Plans a Relic of the Past?

January 2015: Profitability: Growth-Like Strategy, Value-Like Returns

November 2014: Equity Market Pulse – Quarterly Equity Market Insights Issue 2

October 2014: Lenders Lead, Owners Follow – The Relationship between Credit Indicators and Equity Returns

August 2014: Equity Market Pulse – Quarterly Equity Market Insights Issue 1

July 2014: Factor Insight: Reducing the Downside of a Trend Following Strategy

May 2014: Introducing S&P Capital IQ's Fundamental China A-Share Equity Risk Model

April 2014: Riding the Coattails of Activist Investors Yields Short and Long Term Outperformance

March 2014: Insights from Academic Literature: Corporate Character, Trading Insights, & New Data Sources

February 2014: Obtaining an Edge in Emerging Markets

February 2014: U.S Stock Selection Model Performance Review

January 2014: Buying Outperformance: Do share repurchase announcements lead to higher returns?

October 2013: Informative Insider Trading – The Hidden Profits in Corporate Insider Filings

September 2013: Beggar Thy Neighbor – Research Brief: Exploring Pension Plans

August 2013: Introducing S&P Capital IQ™ Global Stock Selection Models for Developed Markets: The Foundations of Outperformance

July 2013: Inspirational Papers on Innovative Topics: Asset Allocation, Insider Trading & Event Studies

June 2013: Supply Chain Interactions Part 2: Companies – Connected Company Returns Examined as Event Signals

June 2013: Behind the Asset Growth Anomaly – Over-promising but Under-delivering

April 2013: Complicated Firms Made Easy – Using Industry Pure-Plays to Forecast Conglomerate Returns.

March 2013: Risk Models That Work When You Need Them – Short Term Risk Model Enhancements

March 2013: Follow the Smart Money – Riding the Coattails of Activist Investors

February 2013: Stock Selection Model Performance Review: Assessing the Drivers of Performance in 2012

January 2013: Research Brief: Exploiting the January Effect Examining Variations in Trend Following Strategies

December 2012: Do CEO and CFO Departures Matter? – The Signal Content of CEO and CFO Turnover

November 2012: 11 Industries, 70 Alpha Signals –The Value of Industry-Specific Metrics

October 2012: Introducing S&P Capital IQ's Fundamental Canada Equity Risk Models

September 2012: Factor Insight: Earnings Announcement Return – Is A Return Based Surprise Superior to an Earnings Based Surprise?

August 2012: Supply Chain Interactions Part 1: Industries Profiting from Lead-Lag Industry Relationships

July 2012: Releasing S&P Capital IQ's Regional and Updated Global & US Equity Risk Models

June 2012: Riding Industry Momentum – Enhancing the Residual Reversal Factor

May 2012: The Oil & Gas Industry – Drilling for Alpha Using Global Point-in-Time Industry Data

May 2012: Case Study: S&P Capital IQ – The Platform for Investment Decisions

March 2012: Exploring Alpha from the Securities Lending Market – New Alpha Stemming from Improved Data

January 2012: S&P Capital IQ Stock Selection Model Review – Understanding the Drivers of Performance in 2011

January 2012: Intelligent Estimates – A Superior Model of Earnings Surprise

December 2011: Factor Insight – Residual Reversal

November 2011: Research Brief: Return Correlation and Dispersion – All or Nothing
October 2011: The Banking Industry

September 2011: Methods in Dynamic Weighting

September 2011: Research Brief: Return Correlation and Dispersion

July 2011: Research Brief – A Topical Digest of Investment Strategy Insights

June 2011: A Retail Industry Strategy: Does Industry Specific Data tell a different story?

May 2011: Introducing S&P Capital IQ's Global Fundamental Equity Risk Models

May 2011: Topical Papers That Caught Our Interest

April 2011: Can Dividend Policy Changes Yield Alpha?

April 2011: CQA Spring 2011 Conference Notes

March 2011: How Much Alpha is in Preliminary Data?

February 2011: Industry Insights – Biotechnology: FDA Approval Catalyst Strategy

January 2011: US Stock Selection Models Introduction

January 2011: Variations on Minimum Variance

January 2011: Interesting and Influential Papers We Read in 2010

November 2010: Is your Bank Under Stress? Introducing our Dynamic Bank Model

October 2010: Getting the Most from Point-in-Time Data

October 2010: Another Brick in the Wall: The Historic Failure of Price Momentum

July 2010: Introducing S&P Capital IQ's Fundamental US Equity Risk Model