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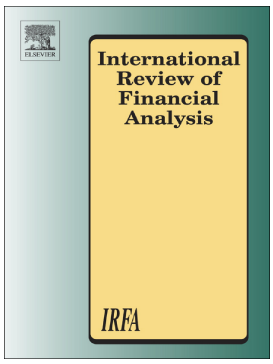

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Policy Uncertainty and Seasoned Equity Offerings Methods*

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ABSTRACT

Based on a sample of U.S. seasoned equity offering (SEO) during the period 2002-2017, we examine how the choice of equity issuance method changes in response to policy uncertainty. We find that firms subject to high policy uncertainty are less likely to use accelerated offerings rather than other types of traditional seasoned equity offerings. Our results are robust to alternative variable specifications, propensity score matching method, IV approach, and the

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inclusion of additional controls. Also, the effect of policy uncertainty on accelerated offering decision is weaker for firms with better information environment, earnings quality, and governance structures. Further, policy uncertainty increases the cost of funds and lowers long-run abnormal returns after SEOs for firms subject to high levels of policy uncertainty.

Keywords: Seasoned equity offerings; Policy uncertainty; Multinomial logistic regression; Propensity score matching, IV approach.

JEL codes: G24; G32; G38

1. Introduction

Policy uncertainty is fundamental to investment and financing decisions as well as firm value. At the macro-level, Baker et al. (2016) and Smales (2020) suggest that uncertainty relating to government decisions, such as fiscal and monetary policies, exacerbated the negative effects on financial markets and the real economy arising from the Global Financial Crisis of 2007 to 2009. At the firm-level, uncertainty associated with possible changes in government policy has implications for investment decision-making. For instance, using a sample of 48 countries, Julio and Yook (2012) find that firms lower their capital expenditure during the national election campaign whilst Nguyen and Phan (2017) document that firms tend to slow down their

investment process in response to high policy uncertainty. In the latter study, increases in policy uncertainty result in decreases in both the probability and value of M&As, while the time to completion increases.

Company decisions and valuation are affected by policy uncertainty if there is information asymmetry between managers and investors, i.e., managers have information which investors do not have (Myers, 1984; Myers and Majluf, 1984). Various empirical studies, including Bortolotti et al. (2008), Chang et al. (2009), and Autore et al. (2011) emphasize the role of information asymmetry and transparency in the way firms make financial decisions. Nagar et al. (2019) and Bird et al. (2017) argue that company managers know more about the impact of policy risk on the intrinsic value of their companies than outsiders. Investors will be reticent to expend time, effort, and funds if the value of enterprises is highly uncertain.

Interest in the effect of political uncertainty and information asymmetry on corporate decisions has extended to capital raising activities. Some studies, for example, Gilchrist, Sim, and Zakrajsek (2014), and Pástor and Veronesi (2013) point out that policy instability raises the cost of external financing through the high-risk premiums which investors and creditors require to compensate for political risk they are subject to when investing in firms. Other studies investigate the link between policy uncertainty and initial public offerings (IPOs). For example, Colak et al. (2017) find that the quantity of IPOs is smaller in the periods around state and national elections, and the offer price is lower in election years.

Evidence on the influence of policy uncertainty on seasoned equity offerings (SEOs) is relatively sparse despite their importance as a source of company finance (DeAngelo et al., 2010). From 2001 to 2014, relative to IPOs, total equity capital raising from SEOs was considerably larger ($396 billion for IPOs compared to $458 billion for SEOs) (Chan et al.,

2021). While IPOs usually only happen once during the lifetime of a firm, there is no limit to the number of SEOs that a firm can conduct as long as there is demand for new shares in the company. When a firm wants to raise equity capital through an SEO, underwriters can suggest three main types of offering -fully marketed, accelerated, and rights offers. Fully marketed and rights issues can be considered as 'slow SEOs' since they take a period of months to complete. The quickest method, accelerated offerings, can take place within one or two days and are popular with U.S. firms (Bortolotti et al., 2008). This latter technique allows issuers to quickly raise significant funds with lower underwriting spreads and fees. However, in order to accept accelerated offerings, underwriters seek higher transparency and lower information asymmetry.

Prior studies also find that rights offerings are a predominant method of SEOs by public firms in several countries. Holderness and Pontiff (2016) find that shareholder participation in rights offerings of U.S. firms is considerably lower than previously asserted, with average wealth transfers of 7% of the offerings from nonparticipating to participating shareholders. They suggest that shareholder nonparticipation may help explain the puzzling paucity of rights offerings in the US. Eckbo and Masulis (1992) and Eckbo (2009) argue that a major cost of nonparticipation in rights offerings arises due to adverse selection arising from hidden information by sellers who have at least the potential to know more than buyers about the true value of the security being sold. Singh (1997) contends that the adverse selection component is inversely related to the proportion of the rights issue taken up by current stockholders and hence, higher take-up levels should be associated with relatively more favorable information. Massa et al. (2016) argue that firms seem to restrict rights trading in order to raise financing when the need to force the hand of the existing shareholders is higher. Thus, firms using rights offerings to raise capital in the U.S.

may face financial distress (Ursel, 2006), lack of shareholder participation and investment bankers' involvement to underwrite rights offerings (Holderness and Pontiff, 2016).

On the other hand, Slovin et al. (2000) argue that, as placements entail the sale of shares to outside investors, there is a decline in ownership concentration, which enhances the potential for external monitoring and corporate control. They conclude that the option to conduct private placements enhances the ability of firms to signal their quality. Wu (2004) argues that standalone private placements generally involve lower numbers of investors, and as such they accrue the lowest costs of information production. Firms with high information asymmetry would then be expected to reduce information production costs by issuing their equity in a standalone private placement. In a similar vein, Barclay et al. (2007) suggest that management can solidify control over the firm by issuing private placements to passive investors. Hertzel and Smith (1993) argue that managers with favorable information, who, under the Myers and Majluf (1984) assumptions, would not issue equity to the public, may resort to making private placements rather than foregoing profitable investment opportunities. Even if underinvestment is not a problem, they show that undervalued firms will choose private placements over public issues if doing so enables existing shareholders to retain a larger fraction of the firm. Hertzel and Smith (1993) conclude that their findings are consistent with the role of private placements as a solution to the Myers and Majluf underinvestment problem and with the use of private placements to signal undervaluation. Wruck (1989) argues that active investors purchase private placements to the extent that such investors are motivated by monitoring and control objectives.

We argue that policy uncertainty increases the information asymmetry between informed managers, underwriters and existing shareholders. Hence, underwriters might demand higher investigation costs and the transaction costs associated with rights issues, private placements and

of the preparation of a more elaborate prospectus will be higher. Therefore, firms operating under policy uncertainty are more likely to use rights offerings and private placements.

To date, only a small number of papers study the impact of policy uncertainty on SEOs. Chan et al. (2021) focus on the relationship between SEO discounts and political instability and find that issuance discounts are larger for firms with higher sensitivity to government's changes in policy. Moreover, they find evidence that fewer SEOs take place in periods of high policy uncertainty. Contrary to Chan et al. (2021), our paper investigates the impact of policy uncertainty on the method of SEO. We examine how the choice between issuance methods (i.e., firm commitment offerings, accelerated offerings, private placements, or rights offerings) changes in response to policy uncertainty. We specifically address the effect of information asymmetry, including the information environment, earnings quality and governance arrangements, on the choice of method of SEO. Further, we examine the effect of policy uncertainty on the cost of capital (both equity and debt) and the long run performance of SEOs. For example, Eckbo and Masulis (1992) argue that managers and shareholders possess asymmetric information with regard to firm value, which influences expectations about the willingness of existing shareholders to participate in equity offerings, thereby determining the method of flotation. Thus, our study is motivated by preceding literature, which indicates the presence of a close link between asymmetric information and policy uncertainty. For instance, Nagar et al. (2019) state that political uncertainty can increase investors' perception of risk. Since investors recognise that managers know more about the impact of policy risk on the intrinsic value of the company, they adjust their investment and trading activities such as information gathering, securities trading, and provision of loans in response to changes in such uncertainty. Similarly, Ozsoylev and Werner (2011) and Bird et al. (2017) argue that political

uncertainty reduces information transparency at the firm-level whilst Pasquariello and Zafeiridou (2014) indicate that political uncertainty distorts the firm's information environment.

Given the influence of policy uncertainty on managers and investors decisions and the increasing importance of SEOs for fund raising in recent years, we seek to address a gap in the literature on the relationship between policy uncertainty and SEOs. The preceding discussion indicates that information asymmetry directly affects SEO choices and that such asymmetries are also related to policy uncertainty in a number of studies. Our study addresses this literature gap by examining how policy uncertainty affects the choice of SEO method, a relationship which we view through a lens of information asymmetries arising due to policy uncertainty. Our theoretical framework explicitly argues that key information asymmetries drive the relationship between policy uncertainty and the choice of SEO method. Specifically, we address three sources of asymmetry in our study: the corporate information environment, earnings quality, and governance structures.

Understanding the mechanism through which policy uncertainty affects the choice of SEOs issuance method is important for long-run economic growth at the national level and has implications for the behaviour of underwriters, managers, creditors, and investors. In this study, we use the index of Baker et al. (2016) to estimate policy uncertainty. This index is constructed as a weighted average combination of three elements, incorporating news events, tax code changes, and monetary and fiscal policy forecast dispersions. The measurement interval is monthly which reflects the fluctuation of policy uncertainty more frequently. In the present study, we investigate whether the policy uncertainty index affects the likelihood of choosing a specific method of SEO issuance.

Using a large sample of SEOs for the period from 2002 to 2017, we make three contributions to the literature on policy uncertainty and SEOs. First, to the best of our knowledge, our study is among the first to examine the impact ofpolicy uncertainty on the choice of SEO method. Controlling for an appropriate set of firm characteristics, we document novel and robust evidence that a firm subject to high levels of policy uncertainty is less likely to undertake accelerated offerings. We also find that outside investors face higher level of information asymmetry when policy uncertainty increases, which in turn affects the use of accelerated offerings. Our findings are robust to a number of different specifications of our models. For instance, when including several proxies for corporate information, earnings quality, and governance environment in our models, our results remain robust. Second, the paper contributes to the existing literature on the cost of equity financing by reporting strong evidence of a positive relationship between policy uncertainty and the cost of funds raised by SEO firms. Consistent with the high cost of equity funding, we also find that higher policy uncertainty leads to lower firm value. Lastly, our study examines the extent to which the policy uncertainty affects the long-run underperformance of stock returns following SEO offerings. We find that firms subject toa high degree of policy uncertainty experience strongly negative post-SEOs abnormal returns.

The remainder of the paper is organised as follows. Section 2 discusses the literature on policy uncertainty and the determinants of SEO issuance before providing our hypotheses. The data and methodology are described in Section 3. Section 4 presents the empirical results and discussion. The conclusion, including some implications of our findings, is provided in Section 5.

2. Hypothesis development

The selection of the seasoned equity issue method will depend upon a number of differing criteria and dimensions. The signalling framework is a popular and insightful approach to gauge the relative importance of various alternative factors driving these issue type decisions. That is, in selecting their issue type, corporate managers will select that issue method (see Myers and Majluf (1984), Heinkel and Schwartz (1987), Eckbo and Masulis (1992). The impact of policy uncertainty on the method of SEO issuance can be predicted based on variables known to affect information asymmetry and transparency. As mentioned earlier, Nagar et al. (2019) demonstrate the link between asymmetric information and policy uncertainty when firm managers know more about the impact of policy risk on the intrinsic value of the company compared to outside investors. Similarly, Dai and Ngo (2019) state that firm managers are in an advantageous position compared to outside investors in recognising and evaluating the influence of political uncertainty on the revenues and expenses of enterprises. The result is an increase in information asymmetry between inside- and outside-parties as political uncertainty increases.

In terms of information transparency, Bird et al. (2017) state that political uncertainty reduces information transparency at the firm-level. They explain that higher political uncertainty leads to lower predictability of economic policies in the future, and hence, increases in business risk for firms. Ozsoylev and Werner (2011) show that policy uncertainty results in a poor information environment. They state that the ambiguity in information reduces information transmission in the market, leading to decreases in market depth and trading volume. Furthermore, Pasquariello and Zafeiridou (2014) indicate political uncertainty distorts firm information, and hence, investors receive low-quality information upon which to base their stock valuation decisions.

Previous studies (see for example, Daley et al., 1995) argue that lower levels of accounting transparency are likely to increase information asymmetry which, in turn, results in both increased complexity and risk related to the corporate financing decisions. Nagar et al. (2019) also demonstrate that policy uncertainty reduces the quality of the company's information environment. They point out that although managers tend to take more actions in order to decrease the information asymmetry generated from political uncertainty, for example, higher voluntary disclosures, their reactions are insufficient, and a positive relationship between policy uncertainty and asymmetric information is identified.

In recent years, the accelerated offering method has become increasingly popular amongst US firms seeking to raise new capital (Gao and Ritter, 2010). With this offering method, issuing firms can quickly raise capital at lower transaction costs, while investment banks save on time and marketing effort (Bortolotti et al., 2008), leading to a lower issuance fee. Due to the shorter completion time, this offering method places pressure on underwriter banks since they must quickly conduct due diligence investigations on SEO firms and evaluate the market demand before deciding on an offer price. This implies that information quality (i.e., higher business information transparency and lower information asymmetry) is an important determinant of offering method selection. Bortolotti et al. (2008) show that large and highly valuable enterprises prefer accelerated offerings over other forms of SEO issuance due to lower levels of information asymmetry.

Information asymmetry may also be present in the form of low earnings quality. Bhattacharya et al. (2013) argue that poor earnings quality is significantly and incrementally associated with higher information asymmetry. Weaker governance at firm level may increase agency conflicts and informational asymmetries between shareholders and managers due to

problems of moral hazard (Armstrong et al., 2010). This suggests that when governance (defined as the extent of monitoring intensity) is weaker in firms, the information environment in firms may be of poorer quality.

Although a growing literature examines empirical links between policy uncertainty and various firm- or market-specific activities, few rigorous empirical works explore how policy uncertainty affects methods of equity offering. Based on the close relationship identified in previous studies between policy uncertainty and information asymmetry, combined with the role of information in selecting the method of SEO offerings discussed above, we predict that policy uncertainty affects the choice of offering method selected by listed companies. Since firms undertaking accelerated offerings require more transparent and less asymmetric information, investors in firms subject to a low level of policy uncertainty can be confident of the fairness of the terms in the accelerated offering. On the other hand, investors will be less inclined to provide funds in such circumstances in a highly uncertain environment.

Our approach is consistent with that of Baker (2009) and Baker and Wurgler (2013) in that we see market timing as a key part of our framework. In this vein, we argue that managers see little value in accelerating offers in periods of high policy uncertainty because the prevailing investors' required rate of return is higher than the intrinsic cost of capital (which is better known to managers). High policy uncertainty gives rise to a higher cost of capital in periods of high uncertainty. In other words, in our view, investors are asking for a higher return to compensate for information asymmetry. This makes accelerated offerings unattractive to managers in periods of high policy uncertainty.

Notwithstanding our previous discussion, there are circumstances identified in the literature which might give rise to managers choosing accelerated offerings. For example, Autore et al.

(2011) raise the possibility that managers seeking to avoid pre-issue scrutiny will accelerate offers if they have unfavourable inside information that is not known by investors. Within our framework, where policy uncertainty incorporates the possibility of such inside information, managers would accelerate their offer if the intrinsic cost of capital (k*) exceeds the investors' required rate of return (k). This alternative hypothesis is valid when the impact of such inside information is sufficient to raise k^* above $\underline{k}$. Similarly, examining overnight SEOs, Gustafson (2018) identifies that managers accelerate their offers to avoid pre-selling pressure. Once again if $k^* > \underline{k}$ then managers will accelerate the offer. What then is the impact of policy uncertainty in this framework? Our view is that investors will raise k in response to policy uncertainty and this will make accelerated offers less attractive.

We, therefore, expect that firms subject to a high level of policy uncertainty are less likely to use accelerated offerings when raising seasoned equity capital. Thus, our first hypothesis as follows:

H1: *Firms subject to high policy uncertainty are less likely to use accelerated offerings*.

McDonald and Siegel (1986) were among the first authors to study the impact of policy instability on the cost of funds for investment. They find that even moderate levels of uncertainty can lead to a doubling of the required rate of return for investment projects. Some recent studies, for example, Bowen et al. (2008) and Chan and Chan (2014), show that a high extent of policy uncertainty increases the level of information asymmetry among investors and hence increases the required rate of return for new shares. Since it is difficult for outside investors to estimate the degree of the impact of policy instability on the stock prices of companies operating in highly uncertain information environments (Nagar et al., 2019; Dai and Ngo, 2019), investors will require greater compensation for buying new issues.

Pástor and Veronesi (2013) suggest that high political uncertainty increases the cost of capital for firms through the creation of an additional component of the equity risk premium, which they named political risk compensation. When policy uncertainty increases, the political risk compensation, and consequently the market risk premium, will be higher because investors require compensation for the additional risks to which they are exposed, leading in turn to a higher required rate of return. Consistent with Pástor and Veronesi (2013), Brogaard and Detzel (2015) find that policy instability creates a risk premium in stock prices, since when economic policy risks increase by 1%, market volatility increases by 18%. Moreover, Li et al. (2018) study the influence of policy uncertainty on equity costs for a sample of Chinese companies and find that the cost of equity increases when firms face higher political uncertainty. Similarly, Francis et al. (2004) identify a positive link between information quality and the cost of equity. Based on three market-based attributes of earnings, including value relevance, timeliness, and conservatism, and four accounting-based elements, including accrual quality, smoothness, persistence, and predictability, Francis et al. (2004) find that firms with less favourable values for these attributes will have to bear a higher cost of equity. In short, the cost of equity should increase with policy instability.

Policy uncertainty is also shown to affect the cost of debt in some recent studies. For example, Cremers and Yan (2016) show that high policy uncertainty can affect decisions to invest or divest, leading to volatility of cash flow related to investment and a higher risk of default. Thus, investors require higher discounts on corporate bonds. In a similar vein, Faccio (2006) and Cooper et al. (2010) suggest that policy uncertainty lessens the capacity for the detection of accounting fraud and, consequently, firm performance. In such circumstances, creditors will require higher interest rates or larger discounts on the bond price. Also, on the

issue of the cost of debt, Cao et al. (2013) state that under the influence of political instability, creditors tend to be more unsure about the cash flows of firms, and thus be less willing to provide funds and require a higher rate of return when they do so. Moreover, they find that firms subject to high political uncertainty need more time to offset the deviation between their leverage and the optimal level, whilst under-leveraged firms are less likely to raise their debt-to-asset ratio due to political uncertainty. Interestingly, Cao et al. (2013) demonstrate that political uncertainty can make the credit spreads wider. Based on the preceding arguments, we expect SEO firms that are subject to high level of policy uncertainty will have to bear higher costs of capital (for both debt and equity). Hence, our second hypothesis is as follows:

H2: *The cost of capital will be higher for firms subject to high levels of policy uncertainty*.

Several studies find that SEO announcements bring on poor post-SEO stock-price performance (see, for example, Jung et al., 1996; Eckbo et al., 2000; Hauser et al., 2003). To some extent, these results can be explained with reference to traditional corporate finance theory. According to agency theory (Jensen, 1986), negative excess return may be associated with managerial motives for the issuance and potentially negative net present value investments. Alternatively, the adverse selection model (Myers and Majluf, 1984) suggests that, due to the issue of information asymmetry between managers and investors, the announcement of an SEO is likely to signal that the firm's stock is overvalued leading to a correction in the market. Consistent with this view, Loughran and Ritter (1997) argue that, since managers know more about the true value of a firm than outsiders, companies will conduct SEOs when their stock is overvalued. Alternatively, the market timing theory proposed by Baker and Wurgler (2002) also provides some implications for post-SEO under-performance in so much as timing the market may lead managers to choose SEOs at times when the cost of equity financing is favourable.

Henderson, Jegadeesh, and Weisbach (2006) show that long-run post-SEO under-performance is the result of ex-ante overvaluation of the firms and ex-post adjustment to over-optimistic expectations. Besides, the level of systematic risk of firms declines following SEOs since leverage decrease (i.e., equity capital increase) (Eckbo et al., 2000). This leads to a lower default risks, and as a consequence, a lower required return on stocks of SEOs firms.

Other explanations for low post-SEO performance are provided in the earnings management literature. Rangan (1998) shows that earnings manipulation before SEOs is linked to lower post-SEO stock performance whilst Dechow and Shakespear (2009) argue that managers have strong incentives to misrepresent their financial results with the aim of enhancing their ability to raise capital in new issues. Similarly, Teoh et al. (1998) indicate that the long-run underperformance of stock returns following SEO offerings is caused by earnings manipulation before SEO offerings. Since investors fail to recognize such earnings management before SEOs, a later gradual correction to stock prices occurs after the SEO (Zhou and Elder, 2004).

Based on our expectation that policy uncertainty will increase information asymmetry and reduce information transparency, SEOs subject to high policy uncertainty are expected to experience negative abnormal returns. The SEO may be conducted without proper consideration of political risks, or it may signal poor investor protection and potential for expropriation by managers. Following these arguments, our third hypothesis as follows:

H3: *Long-run abnormal returns after SEOs are lower for firms subject to high levels of policy uncertainty.*

3. Data and variable description

3.1 Data and sample

We employ a comprehensive data sample of SEOs over the years of 2002- 2017 from U.S. publicly listed firms.[1] We employ the database from Thomson One Banker (SDC module) to recognize companies raising seasoned equity via accelerated offerings, rights offerings, private placement, and firm commitment offerings. To begin with, we have raw data of 21,278 SEOs. Next, we drop 9,017 deals due to the absence of offering techniques details in the SDC database. We also exclude events with shelf offering details, duplicate issuance, preference shares, units, trust units, American depositary shares, warrants, as well as convertible bonds. We then remove equity offerings that do not have total assets and market value information at the balance sheet date immediately prior to the announcement. The final sample consists of 2,636 distinct events. [2] Panel A-Table 1 presents details of exclusions used in deriving the final sample.

[Insert Table 1 here]

Panel B-Table 1 shows a summary of the sample's composition. Specifically, it shows the year-by-year- (industry-) wise distribution for each type of SEO offering. The number of seasoned equity offerings per year steadily increases from 2002 to 2017. During the period of global financial crisis (GFC), the quantity of accelerated offerings declines to just seven offerings in 2008. However, the number of accelerated offerings increases from 2009 onwards.

[1] Bortolotti et al. (2008) document that the global number of accelerated offerings has increased dramatically since 2000. In their sample of 31,242 SEOs from almost 100 countries conducted over 1991–2004, around 16% involve accelerated offerings. Gao and Ritter (2010) provide a comprehensive study of accelerated offerings in the U.S. SEO market. Accelerated offers account for 25% of the total proceeds raised in their sample SEOs. In addition, rights offerings have been rare in the U.S. since the early 1980s (Eckbo and Masulis, 1992), and in the 1960s and 1970s comprised less than five percent of the seasoned equity issued by firms listed on the NYSE or Amex (Smith, 1977). So, our sample compares favorably with other studies.

[2] In line with previous studies (see for example, Bortolotti et al. (2008), SDC's offering technique is mostly confusing because it gives multiple designations to the same offering. For instance, many issues are classified as "block trade/negotiated sale" "accelerated bookbuilt/firm commitment", "bought deal/open offer" or similar combinations. Therefore, in line with Gao and Ritter (2010), we rely on the length of time from filing to the offering, supplemented by Factiva's to classify our SEO offering techniques. Accelerated offerings are almost always completed within three calendar days from filing with the SEC and firm commitment offerings take a longer time, ranging from three to more than 150 calendar days.

Seasoned equity offerings are predominantly from firms operating in the manufacturing industry, while firms from the retail industry are the next most strongly represented.

Accelerated offerings are principally from firms operating in the retail industry with 208 observations, while firm commitments offerings are mostly with 573 observations. Rights offering and private placements are generally from firms in the transport industry and manufacturing industry, respectively.

For stock data, we collect the information: related to daily returns, market returns, and daily bid-ask price for a period from one year prior to the announcement date through to the one-year period after announcement date, market capitalization at one month prior to announcement datefrom the CRSP database. We take annual accounting figures from Compustat and identify Big 4 audit firm status at the balance sheet date immediately prior to the SEO announcement using data from Audit Analytics. We employ the Thomson Reuters Institutional (13F) Holdings database to obtain institutional ownership information for each firm issuer in the last quarter immediately before the SEO announcement. We then calculate the level of institutional ownership as a ratio of institutional investor shares held to total shares outstanding (Karpavicius and Suchard, 2018). If any firm is not held by any institution, this study considers institutional ownership to be 0; whereas we set institutional ownership at 1. Finally, we also collect data on financial analyst coverage and subsidiaries from Institutional Brokers' Estimate System (I/B/E/S) and Osiris, respectively.

3.2 Policy Uncertainty (PU)

We employ the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016) as a measure for political uncertainty. *PU* is calculated based on (i) the searches of newspaper articles containing terms regarding economic policy uncertainty, (ii) data from the

Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on consumer price index, purchase of goods and services by state and local governments, and purchases of goods and services by the federal government. The index is collected from www.policyuncertainty.com.

3.3 Firm characteristics

Table 2 provides descriptive statistics of firm-level financial features stratified by different types of SEOs (e.g., accelerated offerings, firm commitment offerings, private placement, and rights offerings). The table also reports non-parametric test statistics for the differences in median (mean) values between the four sub-groups.

We cover a comprehensive set of control variables. *INSIZE* is the log transformation on the inflation-adjusted total assets to control for the inflation effect and extreme values immediately before the announcement date.[3] *BM* is the book-to-market ratio calculated by taking the book value of assets over the market value of assets. *LIQUID* is the average value of proportionate bid-ask spread through out one year period before the announcement. *IDYRISK* is the standard error for the one-year period prior to the announcement date (daily returns from day *t-260* to day *t-2*). *AGE* is the number of years from entering Compustat database. *IO* is the proportion of shares in hands of institutional investors. *OPTA* is offer proceeds relative to total assets. *ANALYST* is the highest number of analysts making annual earnings forecasts in any month over the last one year. *BIG4* is a dummy variable that takes a value of 1 if firms are audited by Big 4

[3] Given that the size of the firm does not fully capture the differences in sizes of firms over the sample period due to inflation. To address this concern, firm size is measured with the inflation-adjusted natural log of total assets as of the end of the fiscal year following the SEO announcement.

and zero otherwise. Finally, *ACCRUAL* is the total accrual at the balance sheet date immediately before the announcement.

Several notable features are worth noting from the comparison using the four sub-groups. In Table 2, firms with higher profitability, larger size, higher leverage, lower risk, higher liquidity, greater analyst following, the appointment of Big 4 auditors, higher dollar audit fees, and higher institutional ownership tend to choose accelerated offerings. Firms of lower market capitalization, lower leverage, higher risk, lower liquidity, audited by non-Big 4 auditors, and lower institutional ownership are more likely to raise external capital by private placements and rights offerings. These differences suggest that those firms subject to greater governance oversight and monitoring appear more likely to choose accelerated offerings. This is possible because these firms have lower agency problems and lower levels of information asymmetry. Firms subject to high policy uncertainty are less likely to use accelerated offerings relative to firms using other equity issuance methods.

[Insert Table 2 here]

4. Empirical results

4.1 Policy uncertainty and SEO decisions

To examine the first hypothesis that policy uncertainty determines the choice between different SEO issuance methods, including accelerated offerings, firm commitments, private placements, and rights offerings, we run three multinomial logistic regression models. The dependent variable, $SEOMETH_{i,t}$ takes a value of zero for firm commitment offerings, 1 for accelerated offerings, 2 for private placements, and 3 for rights offerings. We cover some firm-level variables ($CONTROLS_{i,t-1}$) that could have impacts on the choice of issuance method. Since

we consider fouroptions for SEO issuance methods, we employ three corresponding models as follows:

$$Log\left(\frac{\Pr(Y=1)}{\Pr(Y=0)}\right) = \beta_{10} + \beta_{11}PU_{i,t-1} + \gamma CONTROLS_{i,t-1} \qquad (1.1)$$

$$Log\left(\frac{\Pr(Y=2)}{\Pr(Y=0)}\right) = \beta_{20} + \beta_{21}PU_{i,t-1} + \gamma CONTROLS_{i,t-1} \qquad (1.2)$$

$$Log\left(\frac{\Pr(Y=3)}{\Pr(Y=0)}\right) = \beta_{30} + \beta_{31}PU_{i,t-1} + \gamma CONTROLS_{i,t-1} \qquad (1.3)$$

We use the natural log of the PU index (Baker et al., 2016) (*lnPU*) as the proxy for policy uncertainty. The index captures (i) searches of newspaper articles containing terms regarding policy uncertainty, (ii) data from the Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on the consumer price index, purchases of goods and services by state and local governments, and purchases of goods and services by the federal government. The index can be found at www.policyuncertainty.com.

The regression results are presented in Table 3. The outcomes for the relationship between policy uncertainty and SEO decisions are largely consistent to different specifications of the model (Models 1 through 4). Providing strong support for our first hypothesis, the coefficient for *lnPU* is negative significantly negative at the 5% level for accelerated offerings (*ACC*) and positive and significant at the 1% level for rights offerings (*RO*) in all of our models, suggesting that firms subject to high levels of policy uncertainty are less likely to adopt accelerated offerings but more likely to undertake rights offerings. Our regression results show private placements (*PP*) are not related to *lnPU* in any of our specifications.

[Insert Table 3 here]

The outcomes for the other firm-level determinants are in line with the previous studies. For example, firms with higher levels of debt (*LEV*), and firms audited by Big 4 auditors (*BIG4*) are more likely to adopt accelerated offerings but less likely to employ rights offerings than the firm commitment offering method (*FC*), which may reflect lower information asymmetry. Otherwise, firms with lower institutional ownership, lower leverage, and those not audited by Big 4 are more likely to use rights offerings than firm commitment offerings as their information environment is less transparent.

As an additional robustness test, we investigate the effect of policy uncertainty on SEO methods. Accordingly, we use a dummy variable for the SEO method in the main models with accelerated offerings taking a value of one, and all other methods taking a value of zero. We report our additional results in Table 4.

[Insert Table 4 here]

The results show that coefficient estimate on *lnPU* is negative and statistically significant for accelerated offerings. This indicates that firms with policy uncertainty (*lnPU*) are more likely to choose non-accelerated offerings over accelerated offerings. This finding suggests that firms with policy uncertainty are willing to undertake (or capable of undertaking) non-accelerated offerings because they signal higher information asymmetry.

Another robustness check is presented in Table 5, which uses U.S. presidential elections standing for policy uncertainty. The results remain consistent with our hypothesis but with somewhat reduced significance.

[Insert Table 5 here]

4.2. Robustness tests

To alleviate the possibility that the results can be bias due to unobservable and time-invariant heterogeneity across firms, we re-examine regressions (1.1), (1.2), and (1.3) controlling for firm-fixed effects. Table 6 presents the multinomial logistic regression results for the impact of policy uncertainty on the choice of different SEO issuance methods. As shown, after controlling for firm-fixed effects, a negative association is found between policy uncertainty and the likelihood of accelerated offerings while a positive link is found between policy uncertainty and right offerings selection, suggesting that our findings are not driven by time-invariant unobservable firm characteristics.

[Insert Table 6 here]

The SEO method may suffer from self-selection bias. It is reasonable to assume that SEO issuers using any given method may choose the method of issue or choose not to issue at all based on the probability of success. If self-selection bias is an issue, then causality is more difficult to determine. In order to address the potential selection bias problem, we apply propensity score matching to control the endogeneity and ex-ante observable characteristics (Dehejia and Wahba, 2002).

Table 7 presents the results on whether firms subject to high policy uncertainty would prefer non-accelerated offering decisions using propensity score matched sample. We calculate two-digit SIC industry median value of PU by year and classify firms with high (low) PU as those higher (or lower) than median PU. Firms subject to high policy uncertainty are the treatment group, whilst firms with low policy uncertainty are the control firms. We measure the probability of being assigned to the treatment or control group using a logit regression with all explanatory variables and fixed effects as specified in our baseline regression. We then use the propensity scores from this logit estimation and perform the matching using the nearest neighbour matching.

We run this procedure with replacement, allowing each treated firm to be matched with multiple controls. After controlling for firm and issue characteristics, and dealing with the selection bias issue, our findings still support our baseline result that firms subject to higher policy uncertainty are less likely to use accelerated offerings.

[Insert Table 7 here]

In Table 8, we use 2SLS as an additional modelling approach to address the potential issue of endogeneity in our results. Panel A presents the first stage in which we model policy uncertainty. We use the monthly Partisan Conflict Index (*PCI*) grown by Azzimonti (2014) as our instrument variable. The *PCI* captures the extent of political disagreement at the federal level among U.S. politicians through summarizing the frequency of newspaper articles outlining the controversy in a given month. Higher PCI indicates greater conflict among political politicians, parties, Congress, and the President. As shown, *lnPCI* significantly positive related to *lnPU*.

[Insert Table 7 here]

Panel B presents the results of the second stage in which we estimate the relation between predicted policy uncertainty and SEO decisions. In all columns, the results for the relation between the estimated value of policy uncertainty and the method of SEO issuance are consistent with our previous findings. In Panel B Column (1), the coefficient on *EXlnPU* is significant for the *ACC* and *RO* models, which strongly support the first hypothesis. The results show that firms subject to a high level of policy uncertainty are less likely to undertake accelerated offerings and relatively more likely to make rights offerings than other types of SEO. The results are also robust to adjustments to the panel of control variables. Overall, the results in Table 8 confirm that firms subject to lower levels of policy uncertainty undertake accelerated offerings, which is in linewith the view that they signal higher issuance quality.

4.3. The role of corporate information environment, earnings quality, and governance structures

Since informational asymmetries are central to our arguments for the effects of policy uncertainty upon the accelerated offering decision, we provide further cross-sectional analyses on the relationship between political uncertainty and the choice of SEO methods based on firms with differing levels of information environment, earnings quality, and corporate governance. Given a relationship between the corporate information environment and SEOs (see Dasilas and Leventis, 2013), the effect of policy uncertainty may be more (less) pronounced for companies with higher (lower) information asymmetry. Extant evidence suggests that firms that are covered by more financial analysts report higher quality information, hence, reducing information asymmetry (e.g., Hope, 2003). Similarly, firms with high institution ownership should provide a more transparent information environment since institutional owners have stronger incentives and a higher capacity to monitor and discipline opportunistic management (Burns, Kedia, and Lipson, 2010).

In line with previous studies (Brown and Hillegeist, (2007); Kim et al., (2016)), we use the institutional ownership (*IO*), analyst's coverage (*ANALYST*), and analysts' forecast dispersions (*DISP*), and errors of analysts' earnings per share forecasts (*ERROR*) as proxies of corporate information environment and examine whether the effect of political uncertainty and the choice of SEO method differ between firms with high and low information asymmetries. We measure analyst following as the average number of analysts making annual earnings forecasts over a 12-month period for a particular firm. Following Kovacs (2010), analyst forecast dispersion is defined as the standard deviation of all earnings forecasts for the next fiscal year, while forecast error is the forecast error of actual quarterly earnings per share (EPS). We sort all firms in our

sample into two groups for each fiscal year: a high information environment group (that is, with low information asymmetry) and a low information environment group (high information asymmetry) based on the median values of analyst following, analyst forecast dispersion, forecast error, and intuitional ownership for each year. In the case of analysts following, we define the high information environment group as having more analysts following than the median analysts following for each year of our sample (*highANALYST*) whereas the low information environment group is defined as having a lower than or equal to median analysts following (*lowANALYST*). Similarly, we classify firms into the high information environment category for firms with lower than median analyst forecast dispersion for each year (*lowDISP*) and the low information environment category contains firms with higher than or equal to the median analyst forecast dispersion (*highDISP*). We also measure firms into the high information environment category for firms with lower than median forecast error for each year (*lowERROR*) and the low information environment category contains firms with higher than or equal to the median forecast error (*highERROR*). A similar high/low informational environment classification is used for the *IO* variable, where *highIO* (*lowIO*) information environment.

Finally, we run the regression (accelerated offering decision) for each group and present the results in Panel A of Table 9. We find a statistically significantly negative relation between policy uncertainty and accelerated offering decisions for firms with both high and low information asymmetry using each information asymmetry measure. Further, we find that the estimated coefficient for the higher information asymmetry group is statistically significantly more negative than that for the lower information asymmetry group, irrespective of the information asymmetry measures used. Overall, our findings in this section indicates that policy

uncertainty does have a greater impact on accelerated offering decision when the high information asymmetry is high.

[Insert Table 9 here]

In this section, we also examine the impact of policy uncertainty on the accelerated offering decision among firms with differing levels of earnings quality using the Hutton (2009) opacity measure of earnings management and the Rajgopal and Venkatachalam (2011) DD measure, based on an approach proposed by Dechow and Dichev (2002) and Francis et al. (2005). *OPAQUE* is calculated as the moving total of absolute values of discretionary accruals from year *t-1* to year *t-3*, where discretionary accruals are measured based on the modified Jones model (Dechow, Sloan, and Sweeney, 1995). *RajgopalDD* is estimated as the standard deviation of residuals, calculated over a four-year period using equation 1(a) in Rajgopal and Venkatachalam (2011). We sort all firms in our sample into two groups based on the median value of earnings quality for each year using both earnings quality measures. As before, we we run the regression (accelerated offering decision) for each group and present the results in Panels B of Table 9.

We find a statistically significantly negative relation between policy uncertainty and accelerated offering decision for firms with both high and low earnings quality using each earnings quality measure. Further, we find that the estimated coefficient for the lower earnings quality group is statistically significantly more negative than that for the higher earnings quality group. The results obtained indicate that the impact of policy uncertainty on the accelerated offering decision is, indeed, more pronounced for firms with poor earnings quality. Overall, then, we provide further supportive evidence, suggesting that the earnings quality provides additional insights into the effect of policy uncertainty upon accelerated offering decision.

The current literature shows that strong corporate governance mechanisms can mitigate agency problems or reduce information asymmetries through utilizing independent boards of directors and by providing share-based compensation packages to managers (Shleifer and Vishny, 1997). In contrast, weak corporate governance leads to serious agency conflicts and informational asymmetries between shareholders and managers (Armstrong, 2010). Moreover, strong corporate governance mechanisms can reduce earnings management following SEO decisions (Gompers et al., 2003), and detect information asymmetry effectively (Chemmanur and Paeglis, 2005). In addition, Chemmanur et al. (2010) find that the performance of SEOs issuers is positively correlated with managerial quality. Therefore, we argue that the negative relationship between policy uncertainty and accelerated offering decision will be more pronounced for firms with poor inside and outside governance mechanisms.

We use the proportion of independent directors (*BI*) following Ryan and Wiggins (2004), dedicated institutional ownership (*DIO*) following Bushee (1998), and Hartzell and Starks (2003), as our measures for the strength of internal and external governance mechanisms. The *BI* variable represents the proportion of independent directors on the board in year *t-1*, while the *DIO* is the percentage of dedicated institutional ownership in year *t-1*. We measure the yearly proportions of outstanding shares owned by dedicated institutional investors, calculating the average value across the four quarters of the financial year *t-1* based on the data from the Thomson Reuters Institutional Holdings (13F). Our classification of dedicated institutions is based on Bushee (1998).

We classify firms into those firms having better governance mechanisms (with proxy above the median) and those firms having poor governance (with proxy less than or equal to the median) using board independence (*BI*) and dedicated institutional ownership (*DIO)* measures as

the governance proxy variables and analyze the impacts of these classifications on the policy uncertainty/accelerated offering decision. We report the results in Panels C of Table 9. Accordingly, we find a significantly negative relation between policy uncertainty and the accelerated offering decision for both high and low *BI* subgroups as well as high and low *DIO* groups. However, the negative relation between policy uncertainty and the accelerated offering decision is stronger, in terms of the magnitude of the coefficient, for firms with a weaker *BI* group than in the stronger *BI* group as well as for the lower *DIO* group in comparison with the higher *DIO* group. However, we find that the estimated coefficient for the poor governance mechanism group is statistically significantly more negative than that for the better governance mechanism group. Overall, we find that the influence of policy uncertainty on accelerated offering decision is more pronounced for firms with low dedicated ownership (firms with *lowDIO* rather than *highDIO*), and poor board independence (firms with *lowBI* rather than *highBI*).

4.4. Policy uncertainty and financing costs

We next provide insight on the relation between policy uncertainty and the cost of external funds. Prior studies employ both the implied approach and the realized approach for measuring the cost of equity (Monkhouse, 1993; Khurana and Raman, 2004; Dhaliwal et al., 2006; Hail and Leuz, 2006; Gray et al., 2009; Chen et al., 2011; Hasan et al., 2015). However, some authors, for instance, Pastor et al. (2008) suggest that the implied approach is superior to the realized approach. In addition, estimates based on ex-post realized stock returns suffer from measurement errors (Fama and French, 1997). As a result, we employ the implied approach to estimate the cost of equity. Following Hasan et al. (2015), we use price/earnings to growth ratio (PEG), modified PEG ratio (MPEG), and Ohlson and Juettner-Nauroth (2005) models, labelled as

COE_PEG, COE_MPEG and COE_OJN, respectively. Following Kim et al. (2011), we employ interest rate spread as a proxy for cost of debt (COD), which is the difference between interest rate on debt and average annual prime rate.

Since, ceteris paribus, the net present value (NPV) of an investment project is negatively related to the expected cost of equity, there should be a negative relationship between SEO activities and the expected cost of equity. From this perspective, Li et al. (2009) argue that the negative relationship between investments and the expected cost of equity is an important factor in decisions to raise seasoned equity. Furthermore, Altinkilic and Hansen (2003) note that SEO underpricing reflects the cost of raising equity capital for issuers and Butler et al. (2005) find that the cost of raising equity capital (total investment banking fees) is significantly lower for firms with more liquid stocks.

Employing different measurements for the cost of equity (Equations 2. 1 to 2.4) and the cost of debt (Equation 2.5), we test the relation between policy uncertainty and financing costs as follows:

$$COE\_PEG_{i,t} = \alpha + \beta PU_{i,t-1} + \gamma CONTROLS_{i,t-1} + \varepsilon_{i,t} \quad (2.1)$$

$$COE\_MPEG_{i,t} = \alpha + \beta PU_{i,t-1} + \gamma CONTROLS_{i,t-1} + \varepsilon_{i,t} \quad (2.2)$$

$$COE\_OJN_{i,t} = \alpha + \beta PU_{i,t-1} + \gamma CONTROLS_{i,t-1} + \varepsilon_{i,t} \quad (2.3)$$

$$COE\_Avg_{i,t} = \alpha + \beta PU_{i,t-1} + \gamma CONTROLS_{i,t-1} + \varepsilon_{i,t} \quad (2.4)$$

$$COD_{i,t} = \alpha + \beta PU_{i,t-1} + \gamma CONTROLS_{i,t-1} + \varepsilon_{i,t} \quad (2.5)$$

where, *COEi,t (CODi,t)* is the cost of equity (debt) capital for firm *i* in year *t*. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016).

The results shown in Table 10 support the expectation from our second hypothesis that high policy uncertainty raises the cost of funds. In terms of the cost of equity, policy uncertainty is

positively correlated with the cost of issuing equity in all models. For the cost of debt, in Column (5), the coefficient estimate for *lnPU* is significant and positive at the 1% level, implying that firms subject to high policy uncertainty pay more for their external capital, which is consistent to studies of Faccio (2006), Cooper et al. (2010), and Cremers and Yan (2016). In short, we find strong evidence for a positive relation between policy uncertainty and the cost of debt and equity funds acquired by SEO firms.

[Insert Table 10 here]

4.5. Long-term abnormal returns

In this section, we investigate long-term abnormal stock returns following SEOs using a calendar-time methodology (see, for example, Loughran and Ritter, 2000; Peyer and Vermaelen, 2008; Hertzel and Zhi, 2010) and monthly cumulative average abnormal returns (CARs) using Ibbotson's (1975) returns across time and security (IRATS) method, as suggested by Peyer and Vermaelen (2008). The purpose of this analysis is to assess the capital market response to the choice of SEO method by firms subject to policy uncertainty.

We compute monthly returns in calendar-time for portfolios of SEO firms. Such companies are added to portfolios at the beginning of the month after the SEO announcement month and retained for a maximum of the next 36 months or until the stock stops trading. Each stock receives equal weight since the portfolio is rebalanced at the beginning of each month. Over time, new SEO firms come into the portfolios, and old firms leave, leading to the varying in the number of stocks in our portfolios.

We then employ the three-factor model (Fama and French, 1993), the four-factor model incorporating momentum (Carhart, 1997), the five-factor model incorporating momentum and liquidity (Pastor and Stambaugh, 2003), and the seven-factor model incorporating momentum,

liquidity, profitability and investment (Fama and French, 2015), to calculate the average monthly abnormal performance of SEO firms belonging to high (*HPU*) and low policy uncertainty (*LPU*) groups.

We perform a single time-series regression with the excess return of the equally-weighted portfolio return as the dependent variable and the return on the three factors, four factors, five factors, and seven factors, respectively, as the independent variables. We employ both methods of ordinary (*OLS*) and weighted least squares (*WLS*) regressions to calculate the monthly abnormal portfolio performance. The weighting of each month is determined using the square root of the number of firms.

[Insert Table 11 here]

In Panel A of Table 11, for the full sample, the average monthly abnormal long-term performance α_t is insignificant for the 36-month period subsequent to the announcement of a seasoned equity offering, under either *OLS* or *WLS* regressions and for all methods of estimating excess performance. However, SEOs by firms subject to high policy uncertainty appear to result in disappointing long-term outcomes for investors. We find consistent evidence of negative post-announcement abnormal returns for firms subject to high policy uncertainty across all models. For firms subject to low policy uncertainty, long-term abnormal performance is positive but less consistent with strong significance only exhibited for the *OLS* four-factor model.

As a robustness check, we use the *IRATS* technique in all factor models. In Panel B, we document significantly positive long-term abnormal returns for various post-announcement windows (12 months, 24 months, and 36 months) for portfolios of firms belonging to low uncertainty groups. Reported figures are the sums of the intercepts from cross-sectional regressions throughout the relevant event-time periods. We estimate *t*-statistics as the sum of the

intercepts divided by the square root of the sum of the squares of the monthly standard errors, over the relevant event-time period. The results from Panels A and B in Table 11 are consistent with our third hypothesis that SEO firms subject to high degrees of policy uncertainty exhibit lower long-run performance. We document significant negative long-term abnormal returns for highly uncertain firms and positive long-term abnormal returns for firms subject to lower levels of policy uncertainty but with lower levels of significance.

In addition, we investigate the long-term stock price reaction using the reference portfolio approaches of Lyon, Barber and Tsai (LBT, 1999) and Daniel, Grinblatt, Titman and Wermers (DGTW, 1997). We provide bootstrap test statistics to test the significance level of buy and hold abnormal returns (BHARs). In Table 12, we find significantly negative BHARs for both periods using both LBT (1999) and DGTW (1997) methods (Panel A). Further, we examine the long-term reaction for groups of high policy uncertainty and low policy uncertainty (Panels B and C). We find significantly negative BHARs for the one-year and two-year periods for firms with high policy uncertainty in the post announcement period at least at the 1% significance level, whereas significantly negative BHARs for one-year and two-year post announcement periods for SEO firms with low policy uncertainty period at least at the 10 % significance level. Overall, the results reported using BHARs based on the reference portfolio approaches are consistent with our prediction that long term returns are stronger for firms with high policy uncertainty in the post-SEO announcement period than in the firms with low policy uncertainty in the post-SEO announcement period.

[Insert Table 12 here]

We further examine the determinants of the post- SEO announcement two-year period buy-and-hold abnormal returns using the LBT (1999) reference portfolio method and present the results in Table 13.

[Insert Table 13 here]

As can be seen in Table 13, the estimated coefficient of *lnPU* is significant and positive for 24-month period, indicating that the market gradually incorporates the information conveyed by policy uncertainty during the 24-month period after the SEO announcement. In addition, we find that the post-announcement abnormal returns are positively related to the debt ratio (*LEV*) and negatively related to size, age, and institutional ownership in the post SEO period. Overall, we find that the information conveyed by policy uncertainty is reflected in long term price reactions for the post-SEO period, supporting our prediction.

5. Conclusion

Despite evidence on the link between policy uncertainty and SEOs (DeAngelo, DeAngelo, and Stulz, 2010), the impact of policy uncertainty on the choice of SEOs methods does not appear to be thoroughly examined in the SEO literature. Our study provides new insights into the impact of policy uncertainty on issuance choice of SEOs, cost of capital, and the long-run performance of SEO firms.

We find evidence that firms subject to high policy uncertainty are less likely to use accelerated offerings rather than the traditional firm commitment offer process. Using U.S. presidential elections as a proxy for policy uncertainty, ourresults remain consistent with the baseline regression. Theresults still remain unchanged controlling for firm-fixed effects and are robust to propensity score matching method, IV approach, and the inclusion of additional

controls. Also, the influence of policy uncertainty on the choice of accelerated offerings is weaker for firms with better information environment, earnings quality, and governance structures. Furthermore, policy uncertainty increases the cost of capital and reduces long-run abnormal returns after SEOs for firms subject to high levels of policy uncertainty.

Findings in this study offer several interesting implications for future research. Investigators can explore if policy uncertainty can explain the growing acceptance of non-accelerated offerings in international markets, particularly in countries with less information transparency.

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Table 1: Summary of sample selection and data filtering

Panel A: Sample Derivation

Reason for Sample Exclusion	No. of offerings
Initial Sample before exclusion	21,278
Exclusions	
- Without offering techniques details	9,017
- Without shelf offering details	2,419
- Duplicate offering	2,175
- American Depositary Share (ADS)	02
- Warrants	182
- Convertible bonds	685
- Preference shares	52
- Trust units	520
- Units	680
- Without Firm codes/announcement details	220
- Without Total assets and Market value	870
- Without Return Series Data for one yea	642
- Without Offering Proceeds Data in SDC	534
- Without Policy Uncertainty Data	644
Total Exclusions	17,998
Final Sample	2,636

Panel B: Summary of sample selection and distribution

This table provides year-wise classification and industry representations of SEO offerings of the final sample including accelerated offerings, firm commitment, private placement and rights offerings made during the period 2002-2017.

Year-wise classification					
Year	**Accelerated offering**	**Firm commitment**	**Private placement**	**Rights offering**	**Total**
2002	12	97	0	2	111
2003	21	129	0	2	152
2004	33	152	0	4	189
2005	35	119	0	2	155
2006	20	90	0	0	110
2007	26	125	1	1	152
2008	7	117	3	0	127
2009	9	117	6	6	137
2010	10	257	22	14	303
2011	10	155	15	3	184
2012	30	132	7	5	174
2013	41	141	11	3	197
2014	23	93	5	6	128
2015	69	87	7	6	169
2016	80	80	6	6	172
2017	98	65	9	5	177
Total	524	1,957	92	63	2,636

Industry-wise classification					
Year	**Accelerated offering**	**Firm commitment**	**Private placement**	**Rights offering**	**Total**
Agriculture	23	153	7	2	186
Transport	28	308	14	30	380
construct	64	236	18	2	321
Finance	5	49	14	2	71
Manufacturing	154	544	19	16	734
Mining	2	73	0	2	77
Retail	208	573	10	7	798
Services	9	3	3	1	16
Transport	21	2	2	1	26
Wholesale	9	15	3	0	27
Total	524	1,957	92	63	2,636

Table 2: Seasoned equity offerings and sample firm characteristics

This table provides summary statistics of firm-level financial features according to different types of SEOs, including accelerated offerings (ACC), firm commitment offerings (FC), private placement (PP), and rights offerings (RO). *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016) based on (i) the searches of newspaper articles containing terms regarding economic policy uncertainty, (ii) data from the Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on consumer price index, purchase of goods and services by state and local governments, and purchases of goods and services by the federal government (see www.policyuncertainty.com). Firm-level financial variables include: *SIZE*, the value of total assets at the balance sheet date immediately before the announcement date; *LEV*, equals to total debtsoverassets; *BM*, the book-to-market ratio which is the ratio of the book value of assets overmarket value of assets; *LIQUID* is the logarithm proportionate bid-ask spread for one year period before the SEO announcement; *IDYRISK*, the standard error for the oneyear period prior tothe announcement date (return from day t-260 to day t-2); *AGE* is the number of years from entering Compusat database. *IO* is the proportion of shares in hands of institutional investors. *OPTA* is offer proceeds relative to total assets. *ANALYST* is the highest number of analysts making annual earnings forecasts in any month over the last one year. *BIG4* is a dummy variable that takes a value of 1 if firms are audited by Big 4 and zero otherwise. *ACCRUAL* is the total accrual at the balance sheet date immediately before the announcement. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Characteristics		**ACC**	**FC**	**PP**	**RO**	**KW test**
PU	Mean	96.77	126.14	107.23	103.78	
	Median	101.13	123.45	111.89	102.34	78.98***
SIZE ($m)	Mean	7,460.25	12,697.38	847.62	1338.76	
	Median	1,860.35	751.15	144.28	287.16	189.87***
LEV (%)	Mean	40.79	25.78	12.87	27.46	
	Median	32.43	18.72	5.58	18.15	99.87***
BM	Mean	0.62	0.57	0.66	0.78	
	Median	0.61	0.54	0.57	0.81	25.89***
LIQUID	Mean	0.60	1.22	3.33	4.40	
	Median	0.29	0.44	2.27	2.64	189.09***
IDYRISK	Mean	0.02	0.03	0.04	0.05	
	Median	0.01	0.02	0.03	0.04	213.98***
AGE	Mean	14.00	10.12	8.47	7.01	
	Median	9.12	7.61	5.73	4.91	9.87***
IO (%)	Mean	38.94	27.38	14.55	12.01	
	Median	29.15	21.64	2.52	5.57	18.65***
OP ($m)	Mean	216.79	229.28	16.68	75.96	
	Median	128.76	98.20	10.23	14.41	202.67***
OPTA (%)	Mean	21.09	32.79	14.43	11.57	
	Median	8.68	14.94	9.97	9.97	58.43***
ANALYST	Mean	7.59	5.66	3.52	4.95	
	Median	5.28	4.35	1.76	3.52	46.89***
BIG4	Mean	0.83	0.68	0.34	0.52	
	Median	0.88	0.87	0.00	0.88	94.32***
ACCRUAL	Mean	0.07	0.08	0.16	0.26	
	Median	0.04	0.04	0.08	0.06	24.08***

Table 3: The effect of policy uncertainty on the SEO issuance choice decision

This table presents the multinomial logistic regression outcomes of the relationship between policy uncertainty and SEO issuance decisions. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016) based on (i) the searches of newspaper articles containing terms regarding economic policy uncertainty, (ii) data from the Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on consumer price index, purchase of goods and services by state and local governments, and purchases of goods and services by the federal government. The index can be found at www.policyuncertainty.com.The dependent variable, $SEOMETHi_{,t}$ takes the value of zero for firm commitment offerings (base), one for accelerated offerings, two for private placements, and three for rights offerings. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at 1%, including inflation adjusted size (*INSIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*), the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of themaximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Variables	**(1)**			**(2)**			**(3)**			**(4)**		
	ACC	**PP**	**RO**	**ACC**	**PP**	**RO**	**ACC**	**PP**	**RO**	**ACC**	**PP**	**RO**
lnPU	**-0.483**	**0.664**	**0.794**	**-0.471**	**0.668**	**0.342**	**-0.417**	**0.727**	**0.701**	**-0.437**	**0.584**	**0.723**
	(-2.41)**	**(1.07)**	**(2.76)*****	**(-2.23)****	**(1.18)**	**(1.39)**	**(-2.06)***	**(1.22)**	**(2.34)****	**(-2.06)****	**(1.11)**	**(2.55)****
INSIZE	0.036	-2.189	-2.053	0.320	-1.376	-2.355						
	(0.23)	(-4.42)***	(-4.09)***	(2.62)**	(-4.63)***	(-2.92)**						
BIG4	1.303	-0.168	-1.861	1.261	-0.881	-1.994	1.367	-1.422	-1.125	1.407	-1.368	-1.154
	(2.49)**	(-0.28)	(-2.89)***	(2.35)**	(-1.64)	(-4.73)**	(2.61)**	(-2.52)**	(-2.71)**	(2.65)**	(-2.40)**	(-3.52)***
LEV	0.764	-1.862	-1.664	0.713	-0.955	-1.109	0.754	-2.449	-1.057	0.656	-1.664	-1.909
	(2.19)**	(-0.98)	(-3.19)***	(2.18)**	(-0.73)	(-5.04)***	(2.29)**	(-1.21)	(-2.16)**	(2.10)**	(-1.62)	(-2.53)**
IO	0.074	-0.356	-1.139	0.031	0.041	-0.177	0.114	-0.127	-0.137	0.018	-0.770	-0.266
	(0.25)	(-0.45)	(-5.44)***	(0.10)	(0.06)	(-1.91)*	(0.40)	(-0.19)	(-1.87)*	(0.06)	(-1.40)	(-2.64)**
lnBM	0.081	0.774	3.111	-0.184	1.171	1.563	0.176	0.856	0.001	-0.112	-0.100	-0.108
	(0.27)	(1.36)	(4.00)***	(-0.78)	(4.43)***	(1.75)*	(0.73)	(2.28)**	(0.01)	(-0.45)	(-0.20)	(-0.09)
lnAGE	0.035	0.181	-0.789	0.010	0.255	-0.381	0.069	0.145	-0.986	0.077	-0.054	-0.467
	(0.35)	(0.79)	(-6.18)***	(0.40)	(1.24)	(-2.80)***	(0.65)	(0.87)	(-2.76)***	(0.75)	(-0.34)	(-2.52)**
LIQUID	-0.021	0.741	0.089				-0.358	0.798	0.056			
	(-2.03)**	(1.26)	(0.62)				(-2.84)***	(2.96)***	(3.40)***			
OPTA	0.005	-1.847	-1.637							-0.332	-1.134	-1.111
	(0.02)	(-2.59)**	(-5.03)***							(-1.00)	(-2.27)**	(-2.77)***
IDYRISK	-3.490	1.495	2.713									
	(-3.33)***	(1.67)*	(2.95)***									
DSHELF	1.434	-0.089	-0.220	1.491	0.782	-0.019	1.333	0.881	-0.016	1.477	0.563	-0.039
	(3.84)***	(-0.10)	(-3.12)***	(4.20)***	(1.13)	(-1.06)	(3.63)***	(1.32)	(-1.09)	(4.11)***	(0.85)	(-1.72)*
lnACCRUAL	-0.003	0.388	1.398	-0.124	0.273	-1.490	0.025	-0.262	0.740	0.084	-0.607	-0.107
	(-0.03)	(1.39)	(2.41)**	(-1.13)	(1.11)	(-2.01)**	(0.28)	(-1.65)	(2.12)**	(1.10)	(-3.47)***	(-0.37)
lnANALYST	0.115	-0.355	-0.842	0.172	-0.495	-0.482	0.168	-0.748	-0.607	0.181	-0.317	-0.890
	(0.97)	(-0.67)	(-4.59)***	(0.98)	(-0.72)	(-0.65)	(0.89)	(-1.16)	(-0.79)	(0.84)	(-0.81)	(-1.27)
Constant	-6.487	12.320	5.902	-8.877	6.776	2.253	-7.167	2.046	3.170	-7.432	4.811	4.030
	(-4.32)***	(3.87)***	(7.34)***	(-6.19)***	(2.09)**	(3.30)***	(-5.57)***	(0.63)	(5.87)***	(-5.77)***	(1.57)	(4.97)***
Fixed effects		YI			YI			YI			YI	
Pseudo R^2		0.341			0.290			0.271			0.292	

Obs	2,636	2,636	2,636	2,636

Table 4: Robustness check with alternative dependent variable

This table presents the logistic regression outcomes of the relationship between policy uncertainty and SEO issuance decisions. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016). The dependent variable, $SEO\_DUM_{i,t}$ takes the value of one for accelerated offerings, and all other methods taking a value of zero. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at 1%, including firm size (*SIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*), the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of the maximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Variables	**SEO_DUM**
lnPU	**-0.335**
	(-4.18)* **
SIZE	0.184
	(4.35)***
BIG4	0.588
	(3.50)***
LEV	0.4[illegible]8
	(2.[illegible]2)**
IO	0.15[illegible]
	(2.41)**
lnBM	0.099
	(1.07)
lnAGE	0.058
	(0.80)
LIQUID	-0.092
	(-2.92)***
OPTA	0.030
	(0.21)
IDYRISK	-1.327
	(-2.15)**
DSHELF	0.896
	(4.16)***
lnACCRUAL	0.109
	(0.35)
lnANALYST	0.724
	(2.67)***
Constant	-4.398
	(-6.42)***
Fixed effects	YI
Pseudo R^2	0.202
Obs	2,636

Table 5: Robustness check with alternative independent variable

This table presents the multinomial logistic regression outcomes of the relationship between policy uncertainty, proxied by national elections *(ELECTION)*, and SEO issuance decisions. The *ELECTION* variable is a dummy that equals 1 if the USA holds presidential election in year *t*, and 0 otherwise. The dependent variable, The dependent variable, $SEOMETHi_{,t}$ takes the value of zero for firm commitment offerings (base), one for accelerated offerings, two for private placements, and three for rights offerings. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at 1%, including firm size (*SIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*),the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of themaximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. The symbols ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively

Variables	**ACC**	**PP**	**RO**
ELECTION	**-0.078**	0.082	**0.024**
	(-2.37)**	(0.77)	**(1.81)***
SIZE	0.036	-0.589	-0.355
	(0.22)	(-3.21)***	(-2.70)***
BIG4	0.890	-0.172	-0.628
	(2.46)**	(-0.20)	(-1.90)*
LEV	0.757	-0.352	-0.998
	(2.17)**	(-0.51)	(-2.10)**
IO	0.073	-0.258	-0.752
	(0.25)	(-0.32)	(-3.59)***
lnBM	0.081	0.562	2.053
	(0.26)	(0.98)	(2.64)***
lnAGE	0.035	0.132	-0.521
	(0.33)	(0.57)	(-4.08)***
LIQUID	-0.020	0.088	0.058
	(-2.01)**	(0.91)	(0.40)
OPTA	0.005	-1.341	-1.081
	(0.01)	(-1.88)*	(-3.32)***
IDYRISK	-3.456	1.085	1.791
	(-3.30)***	(1.20)	(1.94)*
DSHELF	1.419	-0.064	-0.145
	(3.80)***	(-0.07)	(-2.05)**
lnACCRUAL	-0.003	0.282	0.923
	(-0.02)	(-1.00)	(1.58)
lnANALYST	0.114	-0.258	-0.555
	(0.96)	(-0.48)	(-3.03)***
Constant	-6.424	8.947	3.896
	(-4.28)***	(2.80)***	(4.84)***
Fixed effects		YI	
Pseudo R^2		0.337	
Obs		2,636	

Table 6: Firm-fixed effects

This table presents the multinomial logistic regression results of the relation between policy uncertainty, proxied by *PU*, and SEO issuance decisions, controlling for firm and year fixed. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016) based on (i) the searches of newspaper articles containing terms regarding economic policy uncertainty, (ii) data from the Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on consumer price index, purchase of goods and services by state and local governments, and purchases of goods and services by the federal government. The index can be found at www.policyuncertainty.com.The dependent variable, $SEOMETHi_{,t}$ takes the value of zero for firm commitment offerings (base), one for accelerated offerings, two for private placements, and three for rights offerings. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at 1%, including firm size (*SIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*), the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of themaximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively

Variables	**ACC**	**PP**	**RO**
lnPU	**-0.398**	0.548	**0.655**
	(-1.98)**	(0.8[illegible])	**(2.27)****
SIZE	0.029	-1.306	-1.694
	(0.19)	(-3.6[illegible])***	(-3.38)***
BIG4	1.075	-0.138	-1.536
	(2.05)**	(-0.23)	(-2.38)**
LEV	0.631	-1.536	-1.374
	(1.81)*	(-0.81)	(-2.63)***
IO	0.061	-0.294	-0.940
	(0.21)	(-0.37)	(-4.49)***
lnBM	0.267	0.638	2.567
	(0.22)	(1.12)	(3.30)***
lnAGE	0.028	0.149	-0.651
	(0.28)	(0.65)	(-5.10)***
LIQUID	-0.017	0.611	0.073
	(-1.68)*	(1.04)	(0.51)
OPTA	0.004	-1.524	-1.351
	(0.01)	(-2.14)**	(-4.15)***
IDYRISK	-2.879	1.233	2.238
	(-2.75)***	(1.37)	(2.43)**
DSHELF	1.183	-0.073	-0.182
	(3.17)***	(-0.08)	(-2.57)**
lnACCRUAL	-0.003	0.321	1.153
	(-0.02)	(1.14)	(1.98)**
lnANALYST	0.095	-0.293	-0.694
	(0.80)	(-0.55)	(-3.79)***
Constant	-5.353	10.167	4.870
	(-3.57)***	(3.19)***	(6.06)***
Fixed effects		FY	
Pseudo R^2		0.399	
Obs		2,636	

Table 7: Propensity score matching

This table presents the results on whether firms subject to high policy uncertainty would have lower accelerated offering decision using propensity score matching. We use the yearly two-digit SIC industry median value of the PU by year and classify firms with high (low) PU as those higher (or lower) than median PU. Firms subject to high policy uncertainty are the treatment group, whilst firms with low policy uncertainty are the control firms. Panel A compares the mean differences in the covariates of treatment firms with those of control firms. We then estimate the probability of being assigned to the treatment or control group using a logit regression with all explanatory variables and fixed effects as specified in our baseline regression. We use the propensity scores from this logit estimation and perform the matching using the nearest neighbour matching. We run this procedure with replacement, allowing each treated firm to be matched with multiple controls. Panel B reports the logit regression results. The dependent variable is a dummy variable taking a value of one for accelerated offerings, and zero for non-accelerated offerings. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at the 1% level, including firm size (*SIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*), the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of the maximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. The symbols *** and ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Panel A: Mean differences			
Variables	**Treatment**	**Control**	***t-test***
SIZE	6.03	6.05	0.87
BIG4	0.83	0.84	1.37
LEV	18.05	18.09	0.82
IO	0.24	0.23	1.01
lnBM	3.73	3.74	0.59
lnAGE	12.34	11.89	1.13
LIQUID	0.49	0.38	0.99
OPTA	18.07	17.32	1.25
IDYRISK	0.03	0.02	1.46
ACCRUAL	0.06	0.07	1.58
ANALYST	8.12	7.53	0.93
Panel B: Propensity score matching			
lnPU		**-0.410**	
		(-5.77)* **	
Constant		-3.769	
		(-4.89)***	
Firm-level controls		Yes	
Fixed effects		YI	
Pseudo R^2		0.198	
Obs		810	

Table 8: Endogeneity

Panel A presents the first stage, predicting the policy uncertainty using measure of policy uncertainty, *lnPU*, as dependent variable. We use the monthly Partisan Conflict Index (*PCI*) developed by Azzimonti (2014) as our instrument variable in the first stage regression. Panel B presents the multinomial logistic regression outcomes of the relation between policy uncertainty, proxied by *EXPlnPU*, and SEO issuance methods. The dependent variable, $SEOMETH_{i,t}$, takes the value of zero for firm commitment offerings (base), one for accelerated offerings, two for private placements, and three for rights offerings. All control variables ($CONTROLS_{i,t-1}$) are measured over or at the end of the previous year, and winsorized at 1%. The construction of the related variables is detailed in the Appendix. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Panel A: Determinants of policy uncertainty (*lnPU*)	
Variables	
lnPCI	**0.081**
	(9.21)* **
SIZE	0.142
	(34.24)***
BIG4	-0.031
	(-6.02)***
LEV	-0.303
	(-4.60)***
IO	-0.592
	(-4.06)***
lnBM	-0.479
	(-6.88)***
lnAGE	0.380
	(3.84)***
LIQUID	0.168
	(2.89)***
OPTA	0.102
	(1.94)*
IDYRISK	0.165
	(3.86)***
DSHELF	-0.691
	(-3.55)***
lnACCRUAL	-0.471
	(-6.54)***
lnANALYST	-0.184
	(-5.92)***
Constant	5.675
	(4.09)***
Fixed effects	YI
$AdjR^2$	0.245
Obs	2,636

Panel B: Predicted Policy Uncertainty and SEOs

Variables	(1)			(2)			(3)			(4)		
	ACC	**PP**	**RO**	**ACC**	**PP**	**RO**	**ACC**	**PP**	**RO**	**ACC**	**PP**	**RO**
EXPlnPU	**-0.488**	0.675	**0.822**	**-0.477**	0.671	0.347	**-0.410**	0.715	**0.736**	**-0.425**	0.569	**0.710**
	(-2.43)**	(1.08)	**(2.85)*****	**(-2.26)****	(-1.18)	(-1.41)	**(-2.02)****	(1.20)	**(2.46)****	**(-2.00)****	(1.08)	**(2.51)****
SIZE	0.037	-2.223	-2.127	0.324	-1.382	-2.390						
	(0.23)	(-4.49)***	(-4.24)***	(2.66)***	(-4.65)***	(-2.96)***						
BIG4	1.318	-0.171	-1.928	1.277	-0.884	-2.023	1.343	-1.397	-1.181	1.371	-1.333	-1.134
	(2.52)**	(-0.29)	(-2.99)***	(2.38)**	(-1.65)	(-4.80)***	(2.57)**	(-2.48)**	(-2.85)***	(2.58)**	(-2.33)**	(-3.46)***
LEV	0.773	-1.891	-1.724	0.722	-0.958	-1.126	0.742	-2.407	-1.110	0.639	-1.622	-1.875
	(2.22)**	(-1.00)	(-3.30)***	(2.21)**	(-0.73)	(-3.09)***	(2.25)**	(-1.19)	(-2.27)**	(2.04)**	(-1.58)	(-2.49)**
IO	0.075	-0.362	-1.180	0.032	0.042	-0.179	0.112	-0.124	-0.143	-0.017	-0.750	-0.262
	(0.26)	(-0.46)	(-5.64)***	(0.10)	(-0.06)	(-1.94)*	(0.39)	(-0.19)	(-1.96)**	(-0.06)	(-1.36)	(-2.60)**
lnBM	0.083	0.785	3.222	-0.187	1.577	1.586	0.175	0.842	-0.001	-0.109	-0.097	-0.106
	(0.28)	(1.38)	(4.15)***	(-0.79)	(4.45)***	(1.77)*	(0.71)	(2.24)**	-0.0100	(-0.44)	(-0.20)	(-0.09)
lnAGE	0.036	0.184	-0.817	0.041	0.257	-0.387	0.003	0.143	-1.035	0.075	-0.052	-0.458
	(0.35)	(-0.80)	(-6.40)***	(0.40)	(1.25)	(-2.92)***	(0.64)	(0.86)	(-2.89)***	(0.73)	(-0.33)	(-2.48)**
LIQUID	-0.021	0.752	0.092				-0.353	0.785	0.059			
	(-2.06)**	(1.28)	(0.65)				(-2.79)***	(2.91)***	(3.57)***			
OPTA	0.005	-1.875	-1.695							-0.323	-1.104	-1.092
	(0.02)	(-2.63)***	(-5.21)***							(-0.98)	(-2.21)**	(-2.72)***
IDYRISK	-3.532	1.517	2.810									
	(-3.37)***	(1.69)*	(3.06)***									
DSHELF	1.451	-0.089	-0.228	1.543	0.285	-0.018	1.312	0.865	-0.018	1.439	0.549	-0.039
	(3.88)***	(-0.10)	(-3.23)***	(4.34)***	(-1.13)	(-1.04)	(3.57)***	(1.30)	(-1.14)	(4.00)***	(0.83)	(-1.69)*
lnACCRUAL	-0.003	0.395	1.448	-0.120	0.275	0.212	0.024	-0.257	0.776	0.082	-0.591	-0.105
	(-0.03)	(1.41)	(2.49)**	(-1.17)	(0.11)	(0.17)	(0.28)	(-1.62)	(2.22)**	(1.07)	(-3.38)***	(-0.36)
lnANALYST	0.117	-0.361	-0.871	0.178	-0.499	-0.475	0.165	-0.735	-0.637	0.176	-0.309	-0.875
	(-0.99)	(-0.67)	(-4.75)***	(1.02)	(-0.72)	(-0.64)	(-0.88)	(-1.14)	(-0.83)	(0.82)	(-0.79)	(-1.25)
Constant	-6.565	12.510	6.113	-9.182	6.805	2.2186	-7.051	2.011	-3.328	-7.241	4.686	-3.961
	(-4.37)***	(3.93)***	(7.60)***	(-6.40)***	(2.09)**	(3.25)***	(-5.48)***	(-0.62)	(-6.16)***	(-5.62)***	(1.53)	(-4.88)***
Fixed effects		YI			YI			YI			YI	
Pseudo R^2		0.339			0.288			0.273			0.275	
Obs		2,636			2,636			2,636			2,636	

Table 9: The role of corporate information and governance environment

This table reports the impacts of corporate information and governance environments on the relationship between policy uncertainty and equity issuance decision. We employ 2 proxies for corporate information environment, including the institutional ownership (Panel A1) and analyst's coverage, forecast dispersions, and errors of analysts' earnings per share forecasts (Panels A2-A4). The *ANALYST* variable refers to the highest number of analysts making annual earnings forecasts in any month over the last year, while the *IO* is the proportion of shares owned by institutional investors. For each fiscal year in the observed period, we classify firms into two different groups (high and low information environment) based on the median value of each measure. We have also used the dispersion and errors of analysts' earnings per share forecasts to measure information asymmetry. We divide the sample into sub-groups based on these information asymmetry proxies and re-estimate our primary regression analysis using these sub-sample groupings. We interact our hierarchical complexity variable with the dummies denoted to high and low information asymmetry and regress these interaction terms on accelerated offering decision. For corporate earnings quality, we employ the Hutton (2009) opacity measure of earnings management (*OPAQUE,* Panel B1) and the Rajgopal and Venkatachalam (2011) DD measure (*RajgopalDD,* Panel B2), based on a technique suggested by Dechow and Dichev (2002) and Francis et al. (2005). Similarly, for each fiscal year in the observed period, we classify firms into two different groups (high and low earnings quality) based on the median value of each earnings quality measure. For corporate governance environment, we employ board independence (Panel C1) and dedicated ownership (Panel C2) as proxies for firm-level governance structure. For each fiscal year in the sample period, we sort firms into two groups (high and low corporate governance) based on the median value of each governance measure. The *BI* variable refers to the proportion of independent directors on the board, while the *DIO* is the proportion of dedicated institutional ownership in year *t-1*. We measure the yearly proportion of shares in hands of dedicated institutional investors, taking the average value over the four quarters of year *t-1* based on Thomson Reuters Institutional Holdings (13F) database. Our classification of dedicated institutions is based on Bushee (1998). We interact our policy uncertainty variable with the high and low governance structure dummies and regress these two interaction variables on accelerated offering decision. All control variables are measured over or at the end of the previous year, and winsorized at the 1% level. The construction of the related variables is detailed in the Appendix. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	Panel A: Corporate information environment				
	A1: Institutional Ownership			***A2: Analyst Coverage***	
	lowIO	*highIO*		*lowANALYST*	*highANALYST*
lnPU	**-0.384**	**-0.191**	*lnPU*	**-0.221**	**-0.138**
	(-6.15)* **	**(-3.02)*** **		**(-4.18)*** **	**(-2.66)*** **
Firm-level controls	Yes	Yes	*Firm-level controls*	Yes	Yes
Fixed effects	YI	YI	*Fixed effects*	YI	YI
Pseudo R^2	0.191	0.190	*Pseudo* R^2	0.193	0.189
Obs	2,636	2,636	*Obs*	2,636	2,636
	A3: Analysts forecast dispersion			***A4: Errors of analysts' earnings per share forecasts***	
	highDISP	*lowDISP*		*highERROR*	*lowERROR*
lnPU	**-0.237**	**-0.146**	*lnPU*	**-0.213**	**-0.166**
	(-4.22)* **	**(-2.72)*** **		**(-2.92)*** **	**(-1.71)***
Firm-level controls	Yes	Yes	*Firm-level controls*	Yes	Yes
Fixed effects	YI	YI	*Fixed effects*	YI	YI
Pseudo R^2	0.193	0.190	*Pseudo* R^2	0.190	0.189
Obs	2,636	2,636	*Obs*	2,636	2,636
	Panel B: Corporate earnings quality				
	B1: *Opacity*			**B2: *RajgopalDD***	
	highOPAQUE	*lowOPAQUE*		*highRajgopalDD*	*lowRajgopalDD*
lnPU	**-0.237**	**-0.129**	*lnPU*	**-0.261**	**-0.148**
	(-5.26)* **	**(-2.46)** **		**(-4.91)*** **	**(-2.83)*** **
Firm-level controls	Yes	Yes	*Firm-level controls*	Yes	Yes
Fixed effects	YI	YI	*Fixed effects*	YI	YI
Pseudo R^2	0.193	0.190	*Pseudo* R^2	0.192	0.190
Obs	1,810	1,810	*Obs*	1,849	1,849
	Panel C: Corporate governance environment				

	C1: *Board independence*			C2: *Dedicated ownership*	
	lowBI	*highBI*		*lowDIO*	*highDIO*
lnPU	**-0.263**	**-0.180**	*lnPU*	**-0.280**	**-0.119**
	(-5.51)* **	**(3.46)*** **		**(-6.22)*** **	**(-2.31)** **
Firm-level controls	Yes	Yes	*Firm-level controls*	Yes	Yes
Fixed effects	YI	YI	*Fixed effects*	YI	YI
Pseudo R^2	0.192	0.189	*Pseudo* R^2	0.193	0.191
Obs	2,636	2,636	*Obs*	2,636	2,636

Table 10: Policy uncertainty and cost of capital

This table provides the regression results of the relationship between policy uncertainty and cost of capital, employing different measures of cost of equity capital financing (Models 1 through 4) and cost of debt capital financing (Model 5). The empirical equations are given as:

$$COE_{i,t} = \alpha + \beta PU_{i,t} + CONTROLS_{i,t-1} + \varepsilon_{i,t} \ (*)$$
$$COD_{i,t} = \alpha + \beta PU_{i,t} + CONTROLS_{i,t-1} + \varepsilon_{i,t} \ (**)$$

where, $COE_{i,t}$($COD_{i,t}$) is cost of equity (debt) capital of firm *i* in year *t*. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016). Control variables are measured over or at the end of the previous year, and winsorized at the 1% level, including firm size (*SIZE*), audit quality (*BIG4*), liquidity (*LIQUID*), risk (*IDYRISK*), relative issue size (*OPTA*), shelf offering (*DSHELF*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*),the proportion of shares held by institutional investors (*IO*), logarithm of total accrual at the balance sheet date immediately prior to the announcement (*lnACCRUAL*), and logarithm of the maximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). The construction of the related variables is detailed in the Appendix. *** and ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Variables	***COE_PEG*** ***(1)***	***COE_MPEG*** ***(2)***	***COE_OJN*** ***(3)***	***COE_Avg*** ***(4)***	***COD*** ***(5)***
lnPU	**0.484**	**0.544**	**0.574**	**0.667**	**0.173**
	(2.58)**	**(3.13)*****	**(3.67)*****	**(4.49)*****	**(2.92)*****
SIZE	-0.039	-0.047	-0.052	-0.059	-0.029
	(-0.24)	(-0.29)	(-0.63)	(-0.88)	(-1.52)
BIG4	-0.544	-0.583	-0.510	-0.528	-0.262
	(-2.68)***	(-3.25)***	(-3.85)***	(-4.58)***	(-3.07)***
LEV	0.307	0.309	0.246	0.252	0.138
	(2.35)**	(2.86)***	(1.67)*	(1.82)*	(2.46)**
IO	-0.106	-0.097	-0.152	-0.121	-0.069
	(-0.26)	(-0.24)	(-0.74)	(-0.43)	(-0.96)
lnBM	-0.006	-0.006	-0.004	-0.004	-0.008
	(-2.48)**	(-2.08)**	(-1.73)*	(-1.68)*	(-4.25)***
lnAGE	0.038	-0.046	-0.052	-0.048	-0.066
	(-0.36)	(-0.44)	(-0.52)	(-0.57)	(-1.10)
LIQUID	-0.022	-0.027	-0.020	-0.028	-0.009
	(-2.19)**	(-2.65)***	(-1.69)*	(-2.44)**	(-1.51)
OPTA	0.006	0.007	0.003	0.007	0.009
	(0.12)	(0.19)	(0.06)	(0.24)	(0.57)
IDYRISK	1.179	1.116	1.045	1.478	2.888
	(3.58)***	(4.34)***	(3.51)***	(5.07)***	(3.13)***
DSHELF	0.168	0.152	0.122	0.130	0.234
	(0.86)	(0.75)	(0.72)	(0.77)	(0.73)
lnACCRUAL	-0.004	-0.004	-0.002	-0.003	-0.004
	(-0.02)	(-0.03)	(-0.08)	(-0.01)	(-0.19)
lnANALYST	-0.125	-0.151	-0.112	-0.121	-0.207
	(-1.04)	(-1.27)	(-0.96)	(-0.65)	(-1.35)
Constant	-6.987	-8.125	-7.886	-7.549	-6.283
	(-4.65)***	(-5.63)***	(-5.10)***	(-3.82)***	(-7.81)***
Fixed effects	YI	YI	YI	YI	YI
Adj R^2	0.146	0.162	0.152	0.178	0.130
Obs	2,636	2,636	2,636	2,636	2,636

Table 11: Long-run abnormal returns

Panel A reports the monthly average abnormal returns (a_t) for the equally weighted calendar time portfolio method, using the three-factor, four-factor, five-factor and seven-factor models. In this method, event firms that announced SEO offerings in the last 36 calendar months form the basis of the calendar month portfolio. A single time-series regression is run with the excess return of the calendar portfolio as the dependent variable and the return on three/four/five/ seven factors as the independent variables (the excess market return, a high-minus-low book to market, a small-minus-big capitalization factor, a momentum factor, and a liquidity factor). We use *OLS* and *WLS* regression to report the monthly average abnormal returns. Panel B reports *CAR* using the *IRATS* method combined with three/four/five/ seven factors. The numbers reported are the sums of the intercepts a_t from cross-sectional regressions over the relevant event-time periods. We estimate *t*-statistics as the sum of the intercepts divided by the square root of the sum of the squares of the monthly standard errors, over the relevant event-time period. HPU and LPU refer to high and low policy uncertainty groups, respectively. The symbols *** and ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Panel A: Calendar Time Methodology

			Three-Factor Model – Fama & French (1993)			Four-Factor Model - Fama & French (1993), Carhart (1997)			Five-Factor Model - Fama & French (1993), Carhart (1997), Pástor & Stambaugh (2003)			Seven-Factor Model Fama & French (2015), Carhart (1997), Pástor & Stambaugh (2003)		
			All Firms	HPU	LPU	All Firms	HPU	LPU	All Firms	HPU	LPU	All Firms	HPU	LPU
36 months	*EW-OLS*	*Alpha*	-0.05	-0.64	0.31	-0.09	-0.74	0.58	-0.01	-0.53	0.27	0.11	0.58	0.08
		t-test	(-0.39)	(-3.11)***	(1.91)*	(-0.28)	(-3.31)***	(2.61)***	(-0.07)	(-2.07)**	(1.51)	(0.38)	(2.30)**	(0.09)
	EW-WLS	*Alpha*	-0.06	-0.47	0.18	-0.08	-0.31	-0.27	-0.01	-0.42	0.29	0.07	0.41	0.09
		t-test	(-0.44)	(-2.68)***	(1.77)*	(-0.33)	(-2.46)**	(1.56)	(-0.13)	(-1.86)*	(1.57)	(0.53)	(2.16)**	(0.29)

Panel B: IRATS

		Three-Factor Model –Fama & French (1993)			Four-Factor Model - Fama & French (1993), Carhart (1997)			Five-Factor Model - Fama & French (1993), Carhart (1997), Pástor & Stambaugh (2003)			Seven-Factor Model - Fama & French (2015), Carhart (1997), Pástor & Stambaugh (2003)		
		All Firms	HPU	LPU	All Firms	HPU	LPU	All Firms	HPU	LPU	All Firms	HPU	LPU
[+1, +12]	*Sum of alpha*	-0.36	-1.54	3.18	-0.21	-1.13	4.88	-0.31	-1.28	5.38	-0.06	-0.91	4.78
	t-test	(-0.74)	(-1.38)	(2.18)**	(-0.31)	(-1.28)	(2.67)***	(-0.35)	(-1.08)	(2.31)**	(-0.11)	(-0.76)	(2.13)**
[+1, +24]	*Sum of alpha*	-0.28	-1.28	6.54	0.87	-0.48	7.67	0.89	-0.67	7.76	3.23	1.28	8.79
	t-test	(-0.31)	(-0.99)	(2.45)**	(0.71)	(-0.36)	(2.34)**	(0.67)	(-0.47)	(2.38)**	(2.28)**	(1.31)	(3.03)***
[+1, +36]	*Sum of alpha*	-2.88	-4.32	6.30	-1.51	-4.01	9.98	-1.76	-3.46	9.67	3.28	1.87	11.78
	t-test	(-2.21)**	(-1.67)*	(2.56)**	(-0.91)	(-2.33)**	(2.34)**	(-0.91)	(-1.71)*	(2.31)**	(1.78)*	(1.67)*	(2.76)***

Table 12: Long Term Buy and Hold Abnormal Returns – Reference Portfolio Approach

This table reports mean and median buy-and-hold abnormal returns for one year and two-year periods using matching reference portfolio approaches of Lyon, Barber and Tsai (1999) and Daniel, Grinblatt, Titman and Wermers (1997). We provide bootstrap test statistics to test the significance level of buy and hold abnormal returns. HPU and LPU refer to high and low policy uncertainty groups, respectively. The symbols *** and ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	LBT (1999) Method		DGTW (1997) Method	
	1 year	**2 years**	**1 year**	**2 years**
Panel A: All SEO Firms				
Mean	-0.053	-0.056	-0.055	-0.041
Median	-0.023	-0.043	-0.028	-0.036
Bootstrap test	(3.64)***	(2.19)**	(3.86)***	(1.65)*
Panel B: LPU				
Mean	-0.034	-0.060	-0.037	-0.060
Median	-0.019	-0.073	-0.014	-0.071
Bootstrap test	(1.56)	(1.87)*	(1.63)	(1.86)*
Panel C: HPU				
Mean	-0.022	-0.035	-0.027	-0.032
Median	-0.009	-0.012	-0.011	-0.012
Bootstrap test	(3.69)***	(3.10)***	(3.21)***	(3.04)***

Table 13: The determinants of the post- SEO announcement two-year BHARs

This table provides regression results on the factors that determine the SEO announcement two-year period buy-and-hold abnormal returns using the Lyon, Barber and Tsai (1999) reference portfolio method. *PU* is the monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016). Control variables are measured over or at the end of the previous year, and winsorized at the 1% level, including firm size (*SIZE*), liquidity (*LIQUID*), logarithm of firm age (*lnAGE*), logarithm of book-to-market ratio (*lnBM*), leverage (*LEV*), the proportion of shares held by institutional investors (*IO*), and logarithm of the maximum number of analysts making annual earnings forecasts in any month over the last 12-month period (*lnANALYST*). *SEO_DUM* takes the value of one for accelerated offerings, and all other methods taking a value of zero. The model is estimated using OLS estimators with White heteroscedasticity-consistent standard errors. *t*-statistics are given in parentheses. The construction of the related variables is detailed in the Appendix. *** and ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Variables	**BHARs**
lnPU	**-0.072**
	(-2.78)* **
SIZE	-0.717
	(-3.18)***
SEO_DUM	-0.021
	(-1.65)
LEV	0.462
	(4.23)***
IO	-0.531
	(-2.03)**
lnBM	-0.425
	(-0.89)
lnAGE	-0.048
	(-2.52)**
LIQUID	-0.127
	(-0.37)
lnANALYST	-0.047
	(-1.74)*
Constant	1.539
	(7.15)***
Fixed effects	YI
R^2	0.176
Obs	1,881

Appendix: Variable definitions

	Acronym	Description	Data so
iables			
oice	*SEOMETH*	A multinomial variable which takes the value of zero for firm commitment (base), one for accelerated offerings, two for private placement, and three for rights offerings.	SDC/Fa
o-year	*BHARs*	The SEO announcement two-year period buy- and-hold abnormal returns using Lyon, Barber and Tsai (1999) reference portfolio method	CRSP
iables			
y	*PU*	The monthly economic policy uncertainty index compiled by Baker, Bloom, and Davis (2016) based on (i) the searches of newspaper articles containing terms regarding economic policy uncertainty, (ii) data from the Congressional Budget Office on the present value of future scheduled tax code expirations, and (iii) data from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecaster about economic forecaster disagreement on consumer price index, purchase of goods and services by state and local governments, and purchases of goods and services by the federal government. The index is collected from www.policyuncertainty.com.	policyu
	PCI	The Partisan Conflict Index captures the degree of political disagreement among U.S. politicians at the federal level by measuring the frequency of newspaper articles reporting disagreement in a given month. Higher index values indicate greater conflict among political parties, Congress, and the President.	Azzimo
	RajgopalDD	Standard deviation of firm residuals, calculated over a four-year period using equation 1(a) in Rajgopal and Venkatachalam (2011).	CRSP
g quality	*OPAQUE*	The moving sum of the absolute value of discretionary accruals over the three-year period from t-1 to t-3, where discretionary accruals are calculated based on the modified Jones model (Dechow, Sloan, and Sweeney, (1995)).	Compu
	BIG4	A dummy variable which equals one if the firm employs a Big 4 auditor, and zero otherwise.	Audit A
size	*INSIZE*	Logarithm of Inflation adjusted total assets.	Compu
atio	*lnBM*	Logarithm of book-to-market ratio.	Compu
	LIQUID	Logarithm of average proportionate bid-ask spread for the one-year period prior to the announcement of SEO offerings.	CRSP
	IDYRISK	The standard error for the 1-year period before the announcement date (return from day -260 to day -2).	Compu
e	*OPTOTA*	Offer proceeds relative to total assets.	SDC
	DSHELF	A dummy variable, which takes the value of one if the offerings are shelf offerings and zero otherwise.	SDC
	lnAGE	Logarithm of age where age of the firm is measured in years since the firm entered the Compustat database.	Compu
	LEV	The ratio of total debt to total assets.	Compu
	COE_PEG	Cost of capital based on the model developed by Gebhardt, Lee, and Swaminathan (2001)	Compu
	COE_MPEG	Based on the model developed by Claus and Thomas (2001)	Compu
	COE_OJN	Based on the model developed by Ohlson and Juettner-Nauroth (2005)	Compu
	COE_Avg	Mean estimate of the COE_PEG, COE_MPEG, and COE_OJN estimates	Compu
	COD	Interest rate spread which is the difference between interest rate on debt and average annual prime rate	Compu
sts	*lnANALYST*	The logarithm of the maximum number of analysts making annual earnings forecasts in any month over the last 12-month period.	I/B/E/S
ctors	*BI*	The percentage of independent directors on the board	Riskme
	lnACCRUAL	The total accrual at the balance sheet date immediately prior to the announcement.	I/B/E/S
ional	*DIO*	The percentage of dedicated institutional ownership	13 F
ership	*IO*	The proportion of shares held by institutional investors.	13 F

HIGHLIGHTS

- A sample of U.S. seasoned equity offering (SEO) during the period 2002-2017;
- Firms subject to high policy uncertainty are less likely to use accelerated offerings;
- The results are robust to a set of tests involving governance, information environments and endogeneity.
- Long-run abnormal returns after SEOs are lower for firms subject to high levels of policy uncertainty.

All authors contribute equally to this paper.