

A global analysis of Private Investments in Public Equity

Dimitris Andriosopoulos¹ and Styliani Panetsidou²

Abstract

Raising equity capital via Private Investments in Public Equity (PIPsEs) has been rising in popularity, matching Seasoned Equity Offerings (SEOs). We use over 10,000 PIPsEs in a global setting during 1995-2015 to assess how and through which channels institutional frameworks affect the issuers' performance. We document a significant decline in the market reaction, especially during 2004-2015 and find that firms issuing equity via PIPsEs have significantly worse fundamentals. We also show that country governance matters as issuing firms operating in countries with better regulatory environments outperform others. Finally, we find that regulatory enforcement is a plausible underlying channel for the positive effect of the institutional frameworks on PIPsEs performance.

Keywords: Private Investment in Public Equity (PIPE); stock performance; cross-country; institutional frameworks, regulatory quality; enforcement; regulations; MiFID.

JEL classification: G15, G18, G38

¹ Corresponding author. Strathclyde Business School, University of Strathclyde, 199 Cathedral Street, Glasgow, G4 0QU, UK (email: d.andriosopoulos@strath.ac.uk).

² Coventry University, Faculty of Business and Law, Gosford Street, Coventry CV1 5DL (email: ad1683@coventry.ac.uk).

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1. Introduction

The time efficient manner and low issuance costs of Private Investments in Public Equity (PIPEs) have led to their emergence as an alternative way of raising capital.¹ The capital raised via PIPEs is substantial. From 2001 to 2015 US small firms, i.e. not exceeding \$1bn in market capitalization, raised approximately \$243bn via PIPEs, which is similar to the \$240bn raised via Seasoned Equity Offerings (SEOs) (Lim et al., 2019). PIPEs have gained popularity in the US since the early 1990s and surpassed SEOs in dollar volume and number of deals during 1996-2006 (Chen et al., 2010). Meanwhile, the rest of the world has been catching up. In our global sample, firms raised \$396 billion via PIPEs between 1995 and 2015, a third of which was raised by US firms. The aim of this paper is twofold. First, to evaluate the market performance of PIPE issuing firms and provide stylized facts from more than 10,000 PIPE issues in 37 countries. Second, to assess the effect of institutional frameworks on the issuers' performance.

Better quality institutional frameworks are associated with better information flow, transparency and trust on the available information, lower investment uncertainty, fair valuations in private contracts, and increased investors' confidence in the markets (e.g., Dittmar et al., 2003; Hail and Leuz, 2006). Therefore, better regulatory quality and investor protection should lead investors to have a more positive outlook on a capital increase through PIPEs. In addition, better legal enforcement can increase investor confidence and play a positive role in potential cases of disputes between PIPE issuers and investors. We argue that the differences in institutional frameworks play a key role in explaining the differences in the market reaction to PIPE issues across countries.

¹ A PIPE transaction can be executed quickly as the issuer can close the deal and receive the funds without going through an SEC review in the case of US issues, or without publishing a prospectus upon satisfying certain criteria relative to the country of issue in non-US markets. Issuing firms can also negotiate directly with the purchaser, reducing the direct offering costs (Chen et al., 2010; Dresner and Kim, 2010).

While the US remains the most active market (18,849 deals) the frequency of PIPEs is increasing in the rest of the world. Figure 1 shows the number and value of PIPE issues over time across regions. During 1995-2015 the Americas-excluding-US have 8,925 deals, followed by Asia-Pacific (5,879) and Europe (2,890).² To put this into context, for every PIPE there are about 2 SEOs and 1.2 Initial Public Offerings (IPOs) in the US, 5 SEOs and 0.9 IPOs in the Americas-excluding-US, and 10 SEOs and 4 IPOs in Europe and Asia-Pacific. During the decade to 2015 the average annual deal value is \$46bn in the US, \$29bn in Asia and \$35bn in Europe. This illustrates the increasing popularity of PIPEs for raising capital.

“Insert Figure 1 here”

The market valuation of PIPEs varies significantly across countries and time. We find that in the US PIPEs trigger a positive market reaction, consistent with existing US-based evidence (e.g., Brophy et al., 2009; Dai, 2007; Lim et al., 2019). In contrast, in Europe and Asia-Pacific, PIPEs have a negative market reaction. One thing all countries have in common is that PIPE issuers have a negative stock performance over the year following the issue, which ranges from -21% on traditional PIPEs in Europe to -44% on structured PIPEs in the US. Additionally, the market reaction to PIPEs has a downward shift over time. For instance, the average market reaction to PIPE issues in the US drops from 1.60% during 1995-2005 to -0.61% during 2006-2015. PIPE issuers also exhibit a poor long-run performance across all countries. We assess several potential reasons for the negative shift in the market reaction to PIPEs, including the impact of the 2007-08 financial crisis, issue characteristics and firms’ fundamentals. We find that since 2004, firms raising capital through PIPEs around the world are smaller and have significantly worse fundamentals in terms of profitability and operating performance. This explains, partially at least, the negative shift in the market reaction to PIPEs.

²These numbers correspond to the total PIPE issues reported in PlacementTracker from 1995 to 2015. Therefore, they differ from our final sample after applying our sample selection criteria, which we discuss in Section 3.1.

We also find that institutional frameworks matter for the market valuation of PIPEs. For instance, a one unit increase in *regulatory quality*, *rule of law* and *control for corruption* is associated with an increase of 10%, 18% and 13%, respectively, in the market reaction to PIPEs. This effect holds after controlling for other firm- and issue-specific factors. Our results suggest that better (poor) shareholder protection and more (less) robust legal environments positively (negatively) affect the market valuation of PIPEs. Our findings are consistent with the literature, suggesting a positive relationship between legal environment quality and economic outcomes in terms of corporate valuations, economic growth, and market development (La Porta et al., 1997; 1998; 2002), and firm profitability and equity returns (Hooper et al., 2009; Lombardo and Pagano, 2000).

We investigate three plausible channels through which institutional frameworks can influence the market valuation of PIPEs across countries. The first channel we assess is the enforcement of regulations. The introduction or simple existence of laws may not have the anticipated outcome unless they are enforced (Bhattacharya and Daouk, 2002; Cumming and Johan, 2019; Cumming et al., 2011). Moreover, the regulatory environment and its enforcement vary significantly across countries and time (Pagano and Volpin, 2001). Following Cumming et al. (2011) we use the implementation of the Markets in Financial Instruments Directive (MiFID) on November 1, 2007 as an exogenous increase in regulatory enforcement. The implementation of MiFID enhanced market surveillance and organizational agreements, leading to improved enforcement of rules and regulations across the European Union (Cumming and Johan, 2008; 2019; Cumming et al., 2011). More importantly MiFID enforced the rules concerning market abuse across all European firms, leading to greater market transparency and investor protection (Cumming et al., 2011). Therefore, MiFID provides a good set-up to test the enforcement channel.

The second channel we assess is the certification channel. Strategic investors can provide a certification effect due to their likely long-term and strategic relationship with firms in which they invest (Billett et al., 2015). Therefore, we examine the level of strategic holdings to test the certification channel. The third channel we assess is investor monitoring. Better monitoring leads managers to make decisions that maximize shareholder value and discourages managerial misbehavior ranging from fraud and earnings management to investment and financing activities (Harford et al., 2018). For the monitoring channel, we use the level of foreign holdings since, foreign investors provide effective monitoring to firms (Ferreira and Matos, 2008; Gillan and Starks, 2003).

We find no support for the certification or monitoring channels in our cross-country set-up. But we find clear support for the enforcement channel. Our results show there is an improvement in the issuers' performance following the adoption of MiFID. In particular, European PIPE issuers in countries with poorer institutional frameworks (i.e. regulatory quality and control for corruption) have a better market reaction compared to their non-European counterparts following the adoption of MiFID. This supports the enforcement channel and suggests that regulatory reforms aid in the improvement of the market conditions they were aiming for. This finding is consistent with the argument that better regulations and enforcement lead to a lower likelihood of managers extracting rents (Barclay et al., 2007), and an increase of investors' trust and more efficient investment behavior from firms (Mclean et al., 2012). Moreover, institutional frameworks remain important factors influencing PIPEs' performance.

Our contribution to the literature is fourfold. First, this is the first study to our knowledge that provides comprehensive evidence on PIPEs around the world. Therefore, we extend our understanding on the behavior and implications of this equity funding choice. Second, an international setting allows us to access a large degree of variation in the quality of institutional frameworks of PIPE issuers. We provide evidence that country-specific institutional

frameworks have a first order effect on the market valuation of PIPEs. Third, we contribute to the political economy of financial markets regarding PIPEs, by showing that it is both the regulatory environment and enforcement that influence positively the performance of firms raising capital through PIPEs. Moreover, we show that small and weaker firms continue to access the capital markets via PIPEs driven by a reduction in market frictions through the relaxation of regulations around PIPEs. Therefore, allowing smaller firms to have better access to the capital markets which indicates an improvement in the capital raising environment of small firms. Fourth, by using a global empirical setting, we confirm previous US-based evidence and the persistence of stock anomalies by assessing whether the long-term underperformance following PIPE issues persists. Our analysis alleviates any concerns of potential disappearance of market anomalies over time, or that previous evidence in the literature can be sensitive to time periods (Fu and Huang, 2016) and the methods used. After all, one way to mitigate these concerns is to use a different dataset (Fama, 1998) and a large country coverage (Djankov et al., 2007).

2. Literature and regulatory environment

2.1 Regulatory framework of Private Investments in Public Equity

PIPEs fall in two broad categories: traditional and structured. In traditional PIPEs, investors acquire common stock or fixed convertibles. Structured PIPEs have more complex contract terms, usually based on floating convertibles. The rules that apply to PIPEs vary across the world. In the US, although security offerings are required to be registered with the Securities and Exchange Commission (SEC), PIPEs are not required to undergo the same regulatory review process and can be exempt from a registration statement. With no SEC review required, the transaction is executed quickly, even within seven days. This makes PIPEs a quick way to raise equity capital. However, investors are restricted from reselling or short-selling their shares until the registration statement receives approval (circa 120 days). Due to

this restriction and to be compensated for their due diligence costs, investors are offered a discount (John et al., 2016).

The US has clearer guidelines for PIPEs compared to other countries. Outside the US, PIPEs have not been historically a popular option for financing. This could be due to regulations hindering PIPE issues. For instance, caveats could include the prevalence of statutory pre-emptive rights which protect shareholders against share price dilution or challenge the rights of shareholders in Europe.³ Another consideration for large PIPE deals is the mandatory offer requirement that is triggered at 30% in the majority of European and Asian countries, while no such regulation is in place for the US. In Europe, companies and investors interested in PIPEs have to conform to the main rules applying to all listed companies in Europe. Other exchange-specific rules of the corresponding market can also affect the PIPE issue. For instance, companies traded on regulated markets, such as the Euronext or the London Stock Exchange, should follow the Prospectus (2003/71/EC) and Transparency (2013/50/EU) directives. The same rules apply to all EU countries, subject to each EU member's jurisdiction. However, more recently, there has been a movement towards the facilitation of PIPE issuances in Europe, by lifting regulatory impediments, such as allowing the exemption of the application of pre-emptive rights subject to criteria set by the respective country.⁴ In addition, similarly to the US, an offer may be exempt from the obligation to publish a prospectus if the offer is addressed exclusively to qualified investors (Article 3(2) of Directive 2003/71/EC).

³ For instance, in the UK, caveats for PIPE issues include shareholder approval of new issues and pre-emptive rights, and mandatory takeover rules. In Germany PIPE-related rules include shareholder approval for new issues and pre-emptive rights, and personal liability of management board members. In the Netherlands PIPE transactions are easier to facilitate compared to other European jurisdictions with mandatory takeover regulation not applying to issues via PIPEs. Some regulations that could still hinder PIPEs include the shareholders' approval on new issues and pre-emptive rights. In France, regulations hindering PIPEs include shareholders' approval on new shares and preferential rights, reporting obligations, mandatory takeover offer, and prospectus approval. We tabulate a set of such regulatory limitations in more detail in the Internet appendix, Table I.

⁴ These often include a shareholder vote granting exemptions if the shares are offered to a small number of professional or institutional investors, depending on the respective jurisdiction.

In Asian markets, similarly to the US and Europe, the issuer should adhere to the exchange listing rules. For example, in Hong Kong a company can obtain a mandate from shareholders that allows the company to raise up to 20% of its share capital within the year. Hence, if a company has such mandate, a PIPE issue can be completed quickly, even within days (So and Chow, 2015). Similarly, Australian listed firms can issue up to 15% of their share capital in a year without a shareholders' vote (ASX Listing Rule 7.1). New Zealand and Singapore differ in their regulatory treatment on private equity placements since there are no resale restrictions (Anderson and Gupta, 2009), while in China newly acquired private equity stock cannot be resold for 12 months (Dong et al., 2020). Overall, PIPEs offer the same motivation for issuers, irrespective of the region, i.e. to raise capital quickly and at a low cost.

Apart from regulatory differences in PIPEs' treatment across countries, there are also differences in the contract types used. The differences are more pronounced between the US and non-US regions. For example, in the US common stock issues account for 48% of the total issues, while the second most popular type is fixed price convertibles, followed by at the market offerings (ATMs), floating convertibles and structured equity lines. However, in non-US regions there is less variation. The vast majority of PIPE issues are common stock. Specifically, common stock issues comprise 90% of the total issues in Canada, 70% of the total issues in Australia, 80% of the total issues in Hong Kong and Japan, and 77% of the total issues in the UK.⁵

2.2 Issuers' behavior, legal environment, and cross-sectional variation in performance

PIPE issuers are publicly listed firms. Hence, they typically have access to public offerings such as SEOs. However, firms may choose to issue equity via PIPEs for time-efficiency or to avoid the higher cost of large public issues. Other reasons for issuing a PIPE, are that these

⁵ These statistics are based on our final dataset. They are untabulated for brevity.

issuers have high information asymmetries and weak operating performance, which are often not well received in SEOs, or they want to signal their undervaluation through the participating investors' due diligence (Brown and Floros, 2012; Chen et al., 2010; Hertzel and Smith, 1993).

PIPEs typically have a positive market reaction followed by a long-term underperformance (Brophy et al., 2009; Chen et al., 2010; Dai, 2007). But, this varies across investors (Dai, 2007), contract types (Brophy et al., 2009) and whether it is an initial or a successive issue (Floros and Sapp, 2012). John et al. (2016) find that PIPEs that do not include investor protection (i.e. common stock) outperform those that include investor protection provisions (i.e. reset or floating features). The interaction of PIPE investor types and contractual terms also matters. Brophy et al. (2009) show that firms issuing structured PIPEs to hedge funds perform worse compared to those issued by other investor types or to traditional PIPEs. Billett et al. (2015) also report that contract terms impact PIPEs' wealth effects conditional on investors' identity.

Accessing external capital markets has frictions which vary, conditional on institutional frameworks (Almeida et al., 2011; Kusnadi and Wei, 2011). In addition, the regulatory environment is associated with firms' financing choices and performance (Himmelberg et al., 2004; Klapper and Love, 2004; La Porta et al., 2002; Lombardo and Pagano, 2000). Better investor protection is also associated with better access to external finance (La Porta et al., 2000; 2002), greater investment efficiency (Mclean et al., 2012), greater likelihood of firms making investment that benefit their shareholders (Shleifer and Wolfenzon, 2002; Wurgler, 2000), more accurate financial reporting (Leuz et al., 2003), lower likelihood of private rent extraction (Barclay et al., 2007) and stock prices that reflect more closely their fundamentals (Mclean et al., 2009; Morck et al., 2000).

Moreover, efficient legal systems can lead to better financial development (La Porta et al., 1999; La Porta et al., 1997) as they offer better protection to outside investors which enables firms to raise external financing at a lower cost (La Porta et al., 2002). Investors who enjoy

only security benefits, are more reluctant to invest in weak legal protection countries as they expect a large rent extraction in such companies (Giannetti and Simonov, 2006). A strong legal environment is further associated with fair valuation in private equity contracts (Cumming and Johan, 2013), contractual agreements (Jandik and Kali, 2009) and contracting evaluation process. This is because the information presented in financial reports is more reliable for due diligence in high law enforcement environments. In contrast, in weak regulatory environments, investors are more likely to depend on personal contacts to obtain information (Cumming et al., 2006; Cumming and Walz, 2009). But well-functioning legal institutions may reduce the risk-premium demanded by investors (Harvey, 1995; Hail and Leuz, 2006). Effectively, weak environments may be deemed riskier by investors and induce them to require higher risk premiums, suggesting a negative relationship between regulatory quality and equity returns. For instance, Low et al. (2011) argue that investors associate low governance quality with higher risk.

Overall a strong legal environment means stronger investor rights on firm decisions while a weaker legal environment can increase the likelihood of managers expropriating shareholders which hinders equity issuance (La Porta et al., 1998). The literature highlights, both theoretically and empirically, that differences in investor protection across countries can influence investors' confidence in markets and market development (La Porta et al., 1997; 1998; Shleifer and Vishny, 1997; Shleifer and Wolfenzon, 2002). Engelen and Van Essen (2010) find lower information asymmetries in countries with a better legal environment, leading to more efficient stock valuations. Manconi et al. (2019) show that market efficiency matters for stock valuations. Building on this literature there should be a positive relationship between PIPE performance and better institutional quality. However, if poor governance quality leads to increased risk valuation, thereby driving investors to demand higher returns as compensation for the increased risk (Albuquerque and Wang, 2008; Low et al., 2011), a negative

relationship between PIPE returns and governance quality should persist. Therefore, the relationship between institutional quality and the market performance following PIPEs is an empirical question which we address.

3. Data and summary statistics

3.1 Data selection

We identify all PIPE transactions that occurred worldwide during 1995-2015. Data for PIPE issuance dates and deal characteristics are from PlacementTracker of Sagient Research. Daily stock prices for US firms are from the Center for Research in Security Prices (CRSP) and for non-US firms from Refinitiv (formerly known as Thomson Reuters)⁶ in local currency to avoid the potential effect of currency changes. To ensure the quality of the data employed from Refinitiv, we follow a two-step cleaning process as in Manconi et al. (2019). First, we remove all non-trading days. Second, we remove stale prices due to a firm's delisting by replacing all zero returns with missing values, starting from the most recent observation up to the first non-zero observation.

Financial data are from Refinitiv Worldscope and are reported in US dollars for comparability purposes. We start with 39,108 issues, which is the universe of PIPE issues during the examined period. Following relevant studies (Brown and Floros, 2012; Dai, 2007), we exclude financial firms, Depository Receipts (DRs), secondary issues, “Confidentially Marketed Public Offerings” (CMPOs)/overnight offerings⁷, shelf-sale issues and firms that trade in Over the Counter (OTC)⁸ and pink sheets. Moreover, we follow Brophy et al. (2009)

⁶ Refinitiv is reported to have poorer quality stock data compared to CRSP (e.g., Manconi et al., 2019). Therefore, we collect US stock data from CRSP.

⁷ According to PlacementTracker, CMPOs have a hybrid structure between registered direct and public follow-on issues. CMPOs start by confidentially addressing private investors, but are then publicly announced which turns them into public offerings. Shelf-sales require an effective registration statement before the sale of the stock, which makes them public offerings. CMPOs and shelf-sale issues raise less than 3% of the total proceeds in our sample.

⁸ A large number of firms are trading in OTC markets (26%). This is in line with Brown and Floros (2012) and Floros and Sapp (2012) who find 21% of their PIPE sample trade in OTC markets and exclude these firms from

and exclude issues categorized as Rule 144-A. These securities are issued by larger and more mature firms and are not considered PIPEs due to different regulations. We further exclude Registration S. securities as in Chen et al. (2010), since a registration statement is required before the issuance, which differentiates them from PIPEs. These restrictions lead to a final dataset of 10,408 PIPE issuances from 4,456 unique firms in 37 countries⁹.

“Insert Table 1 here”

PIPE deals are classified as traditional and structured as follows. Traditional PIPEs include common stock issues, common stock-rights offerings, fixed convertibles, and non-convertible debt/preferred stocks. Structured PIPEs include common stock reset issues, floating convertibles, convertible reset issues, convertible-company instalment issues, ATMs¹⁰, and structured equity lines.

3.2 Descriptive statistics

Table 2 presents a breakdown of PIPE issues in our sample. The US is leading in PIPE issues (2,747 deals) with almost a third of all PIPE issues globally, followed by Asia-Pacific (3,403 issues) and Europe (1,808 issues). PIPE funding is not a one-time event. On average there are three issues per firm in the US and two issues outside the US during our sample period, with the total PIPE proceeds amounting to \$402.4bn.

“Insert Table 2 here”

The median PIPE proceeds over market capitalization are approximately the same across the sample. However, there is a variation in the average proceeds among countries. Firms in

their tests due to data availability issues. We also exclude OTC firms from our final sample due to data unavailability. The excluded firms' proceeds amount to less than 5% of the total PIPE proceeds during 1995-2015.⁹ Cyprus and Finland do not have enough stock data to estimate their announcement returns and therefore are not included in the empirical analysis.

¹⁰ ATM offerings refer to equity sold at par to retail investors with no additional terms (see Brophy et al., 2009) for a detailed description of PIPE security types) which could raise concerns over potential bias in the analysis of the valuation of PIPEs, although, ATMs are only a small fraction of our sample (less than 3% of the total issues). We repeat our analysis excluding ATM offerings and the results are qualitatively similar.

the Americas-excluding-US raise on average 22% of their market capitalization through PIPEs, with Brazil having the largest proceeds (53%). Similarly, Asian firms raise on average 22% of firms' market capitalization via PIPEs. European firms raise on average 26% of their market capitalization with Greece (66%), Luxembourg (51%) and Norway (33%) having the largest PIPE proceeds, although they have a small number of PIPE issues. Overall, European firms issue a larger fraction of their equity capital through PIPEs. The PIPE proceeds over market capitalization are on similar levels to those of SEOs. To put PIPE proceeds into perspective we compare them to SEO proceeds over the same period (untabulated for brevity). We identify all SEOs from Refinitiv Thomson One between 1995 and 2015 for the 37 countries in our sample and exclude financial firms. We find that the mean proceeds over market capitalization for SEOs are 23% in the Americas-excluding-US, 22% in Asia-Pacific, 20% in Europe and 17% in the US. These figures are similar to the 28.5% mean SEO proceeds over total assets in Europe during 1999-2012 reported in Fauver et al. (2017).

Table 3 presents a breakdown of the sample according to region, industry, and contract type. The majority of PIPE issuing firms are based in the US and the Asia-Pacific region. Almost half the firms are in the mining and construction industries, followed by firms in the business equipment and the oil, gas and coal extraction industries, although, the industry distribution varies amongst regions. The majority of the firms in the Americas-excluding-US and Asia-Pacific regions, operate in the mining/construction industry, while in the US the majority of the firms operate in healthcare and business equipment.

“Insert Table 3 here”

The majority of PIPE issues are traditional PIPEs. Common stock issues are the most popular with 63.5% of the total traditional PIPEs, similarly to Chen et al. (2010) and Berkman et al. (2017). Structured PIPEs amount to just 6.6% of the total issues and have declined in popularity over the years. This can be either due to the bad reputation these issues have received

with regard to potential price manipulation through short sales (Hillion and Vermaelen, 2004) or to a turn towards issuer-friendly contracts with better investor protection terms and fewer repricing rights, resulting from SEC investigations to limit price manipulation around PIPEs in 2002 (Bengtsson et al., 2014). The ownership structure of PIPE issuers also differs. Appendix A shows that strategic investors hold on average 32% of PIPE shares, with values ranging from 7.69% in Japan to 72.5% in Russia. Finland and Italy have the highest level of government held securities of PIPE issuers, with many countries having little to no government held securities. Pension funds have low holdings across all countries. Regarding foreign holdings, the highest levels are in Russia, followed by the Cayman Islands and Malaysia. The highest levels of shares held by insiders are in Singapore, Spain, Cayman Islands, Greece, and the Philippines.

Table 4 Panel A reports the descriptive statistics of PIPE issuing firms by region (all variables are defined in Appendix B). Firms in the Americas-excluding-US have the lowest market value. Since most of the issuers in this region are from Canada, the values are consistent with Carpentier et al. (2011) who show that many small firms with low financing needs are listed in Canada due to the light listing requirements. US PIPE issuers have, on average, higher market-to-book ratios compared to issuers from the rest of the world. Cash burn rates are high (negative values) especially in the US and the Americas-excluding-US, while cash levels are similar across countries. This shows that PIPE issuers need cash, consistent with (Floros and Sapp, 2012). Operating performance (ROA) is negative across all regions, in line with US evidence (Dai, 2007) confirming the poor financial position of these firms. But, this is contrary to Dahiya et al. (2017) who find that Asian PIPE issuers have high operating performance. This difference could be due to the earlier sample period (2000-2009) that Dahiya et al. (2017) use

or because they focus on PIPEs with high proceeds¹¹. The median illiquidity levels are similar across all regions (0.02%) with the most illiquid stocks to be observed in the Asia-Pacific region.

Overall, PIPE issuing firms are small, have high leverage, negative operating performance, and high financing needs. PIPE issuers are reported to be of a distressed nature (Chaplinsky and Haushalter, 2010). Hence, in Table 4 Panel B, we measure the default probability of PIPE issuers using two methods. Column (1) shows the percentage of firms that have a z-score lower than 1.8 (unsafe zone), one year prior to the issue. Column (2) shows the percentage of firms that have negative operating income during the two years before the issue. In both measures PIPE issuers have a very high distress risk, in line with the literature which suggests that PIPEs can act a last resort method of raising capital (Brophy et al., 2009; Floros and Sapp, 2012).

“Insert Table 4 here”

4. Empirical findings

4.1 PIPE issuers’ stock performance

To assess the performance of PIPE issues around the world we use a standard event study methodology to estimate a market model (Brown and Warner, 1985). We use as a market benchmark the CRSP value-weighted market indices for US firms and the Datastream individual country indices for non-US firms, following global stock performance studies (Bris, 2005; Manconi et al., 2019). We measure the announcement returns using the window (-4, +5) days around the PIPE announcement. Alternatively, to disentangle the information effect from the direct effect of the offer price discount, we adjust the CARs by the issuance discount following Wruck (1989). This procedure excludes the discount valuation impact and shows the

¹¹ The authors focus on PIPEs with proceeds higher than \$1m. This is relevant to their study since they compare PIPEs with SEOs; but, it does not fit the purpose of our paper, in which we aim to document the behavior of all PIPE issues, which tend to be small in some regions.

abnormal returns that are due to the market's assessment of the firm value. Also, we estimate the Buy and Hold Abnormal Returns (BHARs) to ensure our results are not biased when assessing longer windows due to ignoring compounding (Barber and Lyon, 1997). To measure the short-, medium- and long-term BHARs and be comparable with the relevant literature (Brophy et al., 2009; Chen et al., 2010; Dai, 2011b), we use the following time windows (+6, +100), (+6, +250) and (+6, +500) relative to the PIPE announcement.

"Insert Table 5 here"

Table 5 Panel A shows the announcements CARs, adjusted CARs and BHARs by region categorized into traditional and structured PIPEs. Table 5 Panel B reports the BHARs on the short-, medium-, and long-term returns. Contrary to earlier US-based studies that show a positive announcement market reaction around PIPEs, we document negative average announcement returns outside the US and specifically in the European and Asian regions, as shown in both specifications. In addition, US PIPEs exhibit lower announcement returns compared to earlier studies that find approximately 3.5% to 6% excess returns (Brophy et al., 2009; Chen et al., 2010; Dai, 2011a) using examination periods spanning the years 1995 to 2011. Moreover, Lim et al. (2019) find higher announcement returns (approximately 4%) when focusing on common stock issues. We address this change in market reaction in the next subsection. The results are qualitatively similar when the announcement CARs are adjusted by the issuance discount.

In the post-announcement windows, we find a significant long-term underperformance across all regions, with the least underperformance for traditional PIPEs evident in US and European firms. Structured PIPEs perform worse than traditional PIPEs across almost all regions and time windows. However, the differences between the structured and traditional categories are only significant for US and European firms on most windows assessed. The insignificant difference between traditional and structured PIPEs can be driven by the small

number of structured PIPEs. US structured PIPEs also appear to have the worst long-term performance (+6, +500) losing approximately 70%. This is consistent with the permanent dilution caused by convertible investors that may push the stock below the fair value in order to benefit upon conversion (Hillion and Vermaelen, 2004). The negative long-term returns following PIPEs are consistent with US evidence on PIPEs (Brophy et al., 2009) and are similar to findings on IPOs (Aggarwal and Rivoli, 1990; Ritter, 1991; Loughran and Ritter, 1995) and SEOs (Hillion and Vermaelen, 2004; Spiess and Affleck-Graves, 1995).

For robustness, we divide the sample into “initial issues” that includes only the first issue of each company and “follow-up issues” that includes all issues from a given company except the first one. We do so to alleviate concerns that our results are driven by outliers, as Floros and Sapp (2012) report that PIPEs’ performance deteriorates across successive issues. Also, we assess the returns excluding all issues that occurred in less than 255 trading days from the previous issue, to avoid confounding effects occurring from multiple events in close periods (Bris, 2005; Campbell et al., 1997). The results (Appendix C) are qualitatively similar. When we include only the initial issues, the returns are marginally better, but still negative, across almost all windows and regions, suggesting that our earlier findings are not driven by outliers. Follow-up issues show larger negative returns; a possible interpretation is that investors have already observed the firm’s negative long-run performance following the initial PIPE issue.

4.2 Testing the reasons for the reduction in the announcement returns

In this section, we examine the reasons for the lower (or more negative) announcement returns compared to earlier evidence. We explore three possible explanations. First, as most of the prior studies focus specifically on common stock and fixed convertible PIPEs (Berkman et al., 2017; Chen et al., 2010; Dai, 2011a) we assess whether the inclusion of all PIPE contracts can explain the lower or negative PIPE announcement returns. In Table 6 we assess the announcement returns by the security type issued. We find that traditional PIPEs, and

especially common stock issues, perform considerably better than the other security types across all regions with the exception of European firms that have low negative returns. However, even for those security types that perform better, the announcement returns are lower in the last years of our sample, as also illustrated in Figure 2 Panel A, and this is consistent globally. Therefore, the negative (lower) announcement returns are not driven by the inclusion of all PIPE types.

“Insert Table 6 here”

Second, we examine whether the lower returns can be attributed to the timing of the issues. In Figure 2 Panel B, we plot the announcement returns for the full sample by year. The PIPE announcement reaction deteriorates after 2003 across all security types. Bengtsson et al. (2014) also show an underperformance during 2003-2006 and investigate whether a series of SEC’s actions in 2003 to limit the potential of stock price manipulation¹² around PIPEs was the reason for the underperformance, but find no evidence to support this. In addition, as illustrated in Figure 2, the negative shift in the market reaction around PIPEs extends to non-US markets. Table 7 Panel A presents the issuers’ fundamentals before and after the negative shift in PIPEs’ announcement returns. The results show that issuers in more recent years are smaller in size and have significantly worse fundamentals i.e. have less cash and higher cash burn rates, are financially distressed as measured by the Altman (1968) z-score¹³, and invest less in R&D. This finding, that smaller and weaker firms raise equity capital via PIPEs, along with the relaxation of regulations regarding PIPEs issues in some countries as discussed in Section 2.1, indicate an improvement in the capital raising environment for smaller firms.

¹² The SEC investigations that started in late 2002 and resulted in subpoenas and legal case filings in 2003, aimed to limit price manipulation around PIPEs, stemming mainly from aggressive investor rights agreed in structured PIPEs. The allegations pertained mainly to insider trading and the sale or short-selling of unregistered securities. This is because selling short shares acquired through a PIPE before the issuer files a resale registration, corresponds to illegal selling of unregistered securities (Bengtsson et al., 2014).

¹³ Results are qualitatively similar if we use as a distress proxy a negative operating income binary variable (equals 1 if the firm has negative operating income during the two years prior to the PIPE issue, and 0 otherwise).

“Insert Figure 2 here”

To alleviate potential concerns regarding the association between financially weak firms and poor performance, we assess announcement and long-term returns using a subsample of “weak” and “non-weak” firms. The weak firms’ subsample comprises firms that have cash burn rates lower than the sample median.¹⁴ If both the *weak* and *non-weak* firms have poor returns it would indicate that PIPEs are generally perceived by the market as a bad signal. But if only weak firms perform poorly then the poor market valuation can be attributed to the PIPE issuers’ weak fundamentals. The results presented in Table 7 Panel B show that the subsample with the weaker fundamentals performs significantly worse than the *non-weak* subsample; i.e. the mean announcement returns dropped by more than 100% during the last 10 years compared to the first 11 years of our sample, with the difference being statistically significant at the 1% level. We obtain similar results when comparing the long-term performance. These findings confirm that PIPE issuers’ performance can be explained by their weaker financial position.

“Insert Table 7 here”

Third, in Table 7 Panel C we assess the impact of the 2007-08 financial crisis on PIPEs’ performance as a potential determinant for the low/negative returns. The 2007-08 financial crisis lowered stock market returns and increased volatility (Fu and Huang, 2016) and adversely affected people’s trust towards firms and capital markets as a whole (Lins et al., 2017). We split the sample into three periods: before, during, and after the financial crisis. During the recession there is a large drop in the returns, but there is no sign of improvement during the years following the financial crisis as the returns keep decreasing. If the negative shift was attributed to the financial crisis, we would expect the announcement returns to recover

¹⁴ We use two alternative classifications for weak firms. First, we classify as weak the firms with a z-score below 1.8. Second, we classify as weak the firms with size, market-to-book ratio and cash burn rate lower than the sample median, z-score below 1.8 and leverage higher than the sample median. Our results hold.

to levels similar to those prior to the recession. Therefore, the negative shift in PIPEs' market reaction can only be partially explained by the financial crisis and is mostly driven by the weaker fundamentals of firms issuing PIPEs more recently.

4.3 Calendar time portfolios

To mitigate concerns regarding the event study approach, i.e. adjustment speed of returns following a corporate event and cross-sectional dependencies in stock returns (Fama, 1998; Mitchell and Stafford, 2000), we estimate PIPEs' performance using calendar portfolios. For each calendar month we form equally-weighted portfolios with all PIPE issuing firms over 12, 24, 36, and 48-month horizons following the issue. Alternatively, we form value-weighted portfolios based on market capitalization and the results are similar. The portfolios are constructed based on one month ahead of the date of announcement. Alternatively, we include the month of the announcement and the results are similar (unpublished for brevity). We then estimate alphas using the 4-factor model (Carhart, 1997) and the 5-factor model (Fama and French, 2015) using the Fama-French global factors from Kenneth French's website. The annualized abnormal returns are presented in Table 8. The results show that a portfolio including PIPE-issuing firms over a two-year horizon loses on average 20-25% per annum. This finding is in line with prior US-based evidence (e.g. Brophy et al., 2009) and similar to our previous results of a significantly negative long-term performance following PIPE issues.

"Insert Table 8 here"

4.4 PIPE announcement reaction and institutional frameworks

La Porta et al. (1998) show that laws vary across countries, based on few legal families and traditions (Watson, 1974), and argue that while there are no countries with laws exactly alike, there are certain similarities that allow for the classification of four legal families. However, this classification is time invariant and firms of the same legal origin can still vary subject to the advances in the judicial system over time (Chiou et al., 2010). Berkowitz et al.

(2003) report that an important determinant of the effectiveness of legal institutions is the way the respective countries received their law, rather than their legal family, which effectively leads to differences in the legal system between countries of the same legal origin.

Therefore, we use in our analysis three time-varying variables as proxies for the institutional framework: *regulatory quality*, *rule of law* and *control for corruption*. Eckbo and Masulis (1995) suggest that capital structure effects are unlikely to be closely related to the equity issue in the long-run as they may be offset by subsequent corporate actions. Hence, we focus on the market reaction to the PIPE announcement. We use the following model:

$$CAR_{i,t} = \alpha + \beta * \text{institutional frameworks}_{j,t} + \eta * \text{issue controls} + \zeta * \text{firm controls}_{i,t-1} + \gamma + \theta \quad (1)$$

Our dependent variable is the mean stock performance of the 10 working days surrounding the PIPE announcements ($CAR_{-4,+5}$). The independent variable of interest is the institutional frameworks. It includes three alternative time varying variables *regulatory quality*, *rule of law* and *control for corruption*. *Regulatory quality* is a measure of the investment profile; it assesses the factors affecting the risk to investment, i.e. contract viability, profits repatriation and payment delays. *Rule of law* measures the impartiality of the legal system and compliance with the law. A low score shows that a country suffers from high criminality and ignorance of the law while a high score points to a good judicial system. *Control for corruption* measures the corruption in the political system; a low score shows low efficiency in the government and business, and people assuming positions through patronage rather than skills. There is a strong positive correlation (Internet appendix, Table II) in the pair *regulatory quality* and *control for corruption* (22%) and the pair *rule of law* and *control for corruption* (40%), explained by the fact that countries with low corruption rates typically have a good judicial system.¹⁵

¹⁵ For robustness we include the institutional framework variables in different specifications in our tests. If regulatory quality and rule of law are included in the same specification the results are qualitatively similar.

Moreover, we control for the following issue-specific characteristics that may affect the market valuation of PIPEs: PIPE proceeds (Kalay and Shimrat, 1987); pre-announcement market performance (CAR_{-25, -5}); discount¹⁶ offered to investors (Chen et al., 2010; Demsetz and Lehn, 1985; Hertzel and Smith, 1993; Lim et al., 2019; Myers and Majluf, 1984; Shleifer and Vishny, 1986); and security-type to control for the different types of PIPE issues and capture potential differences in the rights of different contract holders (John et al., 2016). We also include a set of firm-specific characteristics that are typically reported to affect stock returns. We use firm size (Fama and French, 1993); leverage (Eckbo and Masulis, 1995); multiple issuers (Floros and Sapp, 2012) with a binary variable that equals 1 if a firm has issued at least two PIPEs during the examination period and 0 otherwise; financial distress (Chaplinsky and Haushalter, 2010; Floros and Sapp, 2012) with a binary variable that equals 1 if a firm has a z-score lower than 1.8 and 0 otherwise; R&D (Brown and Floros, 2012) and stock illiquidity using the Amihud (2002) model (Chen et al., 2010; Dahiya et al., 2017). Finally, γ and θ are industry and year fixed effects, respectively.

The results, reported in Table 9 columns (1-6), show that *regulatory quality*, *rule of law* and *control for corruption* are positive and statistically significant, consistent with our expectations.¹⁷ This finding suggests that PIPE issuers in countries with better governance quality where there is greater transparency, better legal rules, greater judicial efficiency and higher investor protection, have a higher market reaction. These results hold after the inclusion of issue- and firm-specific control variables. The results are also economically significant; a one unit increase in *regulatory quality* is associated with a 10% increase in market valuation. Similarly, a one unit increase in *rule of law* and *control for corruption* is associated with an

¹⁶ In untabulated results we find that PIPEs have an average discount relative to their announcement date of 5.5%, although the average discount varies significantly across countries.

¹⁷ The results are qualitatively similar when we exclude a) the United States, b) Canada, and c) Australia respectively, to mitigate concerns that our results are influenced by countries with a large number of observations.

18% and 13% increase in market valuation, respectively. Overall, our findings show that firms in countries with better regulatory quality and thus transparency and investor protection have better stock market performance, when they raise equity capital via PIPEs. Another potential reason for the positive market reaction when small and oftentimes loss generating issuing firms issue PIPEs in good regulatory environments, is that firms choosing PIPEs have high growth opportunities but are at an early stage of their growth (Ellis and Twite, 2008). Moreover, investors may be positively surprised when a poor performing firm gains access to a capital increase (Chen et al., 2010). Therefore, investors perceive positively the fact that a firm increased its capital through a PIPE in an environment associated with better investment growth potential and superior investor rights. Our findings are consistent with the literature which suggests that there is a positive relationship between the quality of institutional frameworks and firm profitability and equity returns (Demirguc-Kunt and Maksimovic, 1998; El Ghoul et al., 2017; Gompers et al., 2003; Hooper et al., 2009; La Porta et al., 1998; Lombardo and Pagano, 2000).

Leverage is negatively related to firms' announcement returns, suggesting that riskier firms are not well received by the market. In line with our expectations and Brown and Floros (2012), *R&D* is positive and significant. In addition, we find that a smaller *discount* with which private investors purchase PIPE securities is associated with a better market reaction on the issue. This suggests that when securities are purchased at a low discount or at a premium, new investors have positive expectations regarding the growth of the issuing companies, while existing shareholders also perceive the issue positively since they do not get significantly diluted. Since the institutional framework variables remain positive and significant, the discount offered to investors does not negate the effect of country governance on PIPE performance.

"Insert Table 9 here"

To ensure our results are robust we take four steps. First, we include a binary variable that takes the value of 1 if the PIPE issue is the first PIPE issue of that company and 0 otherwise. The results in Table 9, columns (7-9), show that our results on institutional frameworks are similar to our previous findings. Meanwhile, the *first issue* is positive and significant in line with our earlier findings (Appendix C) that on average the first PIPE issue for each firm has a better (or less negative) performance. These results also suggest that the markets learn over time, as the positive reaction around the PIPE announcement declines on the follow-up issues. Second, to ensure our results are not driven by the clustering of multiple and consecutive PIPE issues, we repeat our estimations, including in the sample one issue per firm per trading year. The results (unreported for brevity) hold. Third, to mitigate concerns of omitted variable bias or general market trends, we perform a placebo event study following Andres et al. (2019). We use as the event day a random date, set to be 50 trading days prior to the PIPE announcement, and repeat the regressions of the *announcement returns* on the *institutional frameworks* using as the dependent variable the placebo announcement CARs. The results (Internet appendix, Table III) show that the *institutional frameworks* are not significant. This confirms that our results are not spurious and that institutional frameworks play a key role in the market valuation of PIPEs. Fourth, we repeat our baseline regression using as *institutional frameworks* the firms' legal origin, following La Porta et al. (1998). The results (Internet appendix, Table V) are in line with our main findings.

4.5 Plausible channels through which institutional frameworks affect PIPEs' valuation

In this section we test three underlying channels that can explain the positive relationship between institutional frameworks and the market reaction to PIPEs: *regulatory enforcement*, *investor certification*, and *investor monitoring*.

Bhattacharya and Daouk (2002) suggest that having no law in place can be better than having a law that is not enforced. The regulatory environment and its enforcement varies

significantly across countries and time (Pagano and Volpin, 2001) which can affect market efficiency and liquidity (Comerton-Forde and Rydge, 2006; Cumming and Johan, 2008), stock price synchronicity (Gul et al., 2010), the cost of equity (Bhattacharya and Daouk, 2002), and economic growth (Demirguc-Kunt and Maksimovic, 1998; Rajan and Zingales, 1998). Moreover, the enforcement of rules and regulations is as important as disclosure and more important than private liability rules in explaining financial market outcomes across countries (Jackson and Roe, 2009). Therefore, if a change in regulatory enforcement affects the market reaction to PIPEs it would support the enforcement channel.

We test the enforcement channel using a difference-in-difference-in-differences set-up. Following Cumming et al. (2011) we use the adoption of MiFID on November 1, 2007 as an exogenous change in enforcement. Although MiFID was preceded by the Market Abuse Directive (MAD), it is the enhanced surveillance and organizational agreements that were implemented with MiFID that enforced the rules across the European Economic Area (EEA) (Cumming and Johan, 2008; 2019; Cumming et al., 2011). *Post-MiFID* is a binary variable that equals 1 if the issue is after November 1, 2007 (MiFID implementation) and 0 otherwise. *EU region* is a binary variable that equals 1 if the PIPE issuer at the time of the issue was a member of the EEA and 0 otherwise. Our variable of interest is the effect of the MiFID adoption on the market valuation of PIPEs conditional on institutional frameworks, i.e. the interaction term *Post-MiFID x EU region x institutional frameworks*. To ensure comparability of the treated (EU region) and control (non-EU region) issuers, we also match our treated and control samples based on the following firm and issue characteristics¹⁸: *size, leverage, distress, R&D, proceeds, pre-announcement, discount, stock illiquidity* and *multi-issuer*.

¹⁸ In alternative specifications, we include ownership concentration in the covariate matching and our results hold.

Table 10, columns (1-3) show the results for the unmatched samples, while columns (4-6) present the results for the matched samples. Columns (1) and (4) show that MiFID has a positive effect on the market valuation of PIPEs issued in the EU region. The triple interaction, our variable of interest, is negative and statistically significant. This suggests that PIPE issuers in countries with lower regulatory quality have a better market reaction with better enforcement, compared to their non-European counterparts. Markets with low regulatory quality have greater information asymmetries. Therefore, better regulatory enforcement leads to larger improvements in transparency and information flow and in turn higher wealth effects when raising capital through PIPEs. We obtain similar results when we interact the *EU region** *Post-MiFID* with *control for corruption* (Table 10, columns 3 and 6). This shows that better regulatory enforcement can reduce the likelihood of expropriation (Barclay et al., 2007) which in turn increases the market reaction to PIPEs in countries with lower regulatory quality and lower control for corruption. Moreover, this is consistent with Jackson and Roe (2009) who argue that enforcement is important for financial market outcomes across countries.

“Insert Table 10 here”

We also perform a number of alternative specifications (untabulated for brevity) to ensure the robustness of our results regarding the enforcement channel: i) We exclude the UK from the EU region. Cumming et al. (2011) suggest that the UK already had in place similar rules to those implemented with MiFID. ii) We exclude the US from the non-EU region due to having the larger number of observations in the sample (e.g., Manconi et al., 2019; Alvarez et al., 2018). iii) We match EU with non-EU issuers excluding the UK from the EU region. iv) We match EU with non-EU issuers excluding the US from the non-EU region. v) To ensure our results are not biased due to the global financial crisis, similar to Dissanaike et al. (2020) and Falato and Liang (2016) we re-estimate our regressions excluding the year 2007, or 2007-2008,

or 2007-2009. Overall, across these alternative specifications we get consistent results supporting the enforcement channel.

To examine the certification channel we assess the relationship between the level of strategic holdings¹⁹ and the market reaction to PIPEs. Billett et al. (2015) find that strategic investors are more likely to have a long-term relationship with PIPE issuers, while Brophy et al. (2009) show that PIPEs with hedge fund investors underperform those with no hedge funds. Therefore, strategic investors (i.e. investors with long-term investment horizons such as pension funds) can have a certification effect. Table 11 shows that the holdings of strategic investors have no effect on the market reaction. When we interact the three variables of interest with the certification variable (columns 5-7), to assess the marginal effect, the results on the interaction are also not statistically significant. Meanwhile, the effect of institutional frameworks on the market valuation of PIPEs holds. Therefore, we do not find evidence to support the certification channel.

“Insert Table 11 here”

Next, we test the monitoring channel. Ferreira and Matos (2008) and Gillan and Starks (2003) argue that foreign investors can provide effective monitoring. Therefore, we use the percentage of shares held by foreign investors²⁰ as a proxy for monitoring. The results in Table 12 (columns 1-4) show that *monitoring* does not explain PIPE announcement returns.²¹ This

¹⁹ Ideally, we would use the type and shares held by each investor participating in every PIPE for a more accurate measure of the certification channel. However, we do not have this information. Alternatively, we use the ownership concentration of PIPE issuers, since insider participation in PIPEs is perceived positively by the market, exerting a certification effect (Floros et al., 2020). The results (unpublished) remain the same. In unreported results, we also test whether PIPEs' performance differs between high and low ownership concentration firms. We do not find significant differences.

²⁰ A robust proxy for the monitoring channel is the block ownership obtained by PIPE investors. However, this data is not available for our global sample. Instead, as an alternative proxy for monitoring we follow Hertz and Smith (1993) and Wruck (1989) who suggest that larger increases in ownership concentration are linked to increased monitoring, and use the change in ownership concentration (change in the percentage of closely held shares) following the PIPE issue. The results (unpublished) are similar.

²¹ The correlation (see Internet Appendix, Table II) between enforcement and monitoring is 14.10%, and between enforcement and certification is 7.62%. The correlation between monitoring (foreign investor holdings) and

finding supports Dai (2011a) who does not find evidence that investors with large stakes are more likely to increase their monitoring via staged funding in PIPEs. Also, we find that a better regulatory environment is positively related to PIPE returns, even after controlling for firms' monitoring. When interacting monitoring with institutional frameworks (columns 5-7) we still find no effect on the market valuation. Therefore, we do not find evidence to support monitoring as the underlying channel for the positive relationship between regulatory environment and PIPEs' performance.

“Insert Table 12 here”

Finally, we test the validity of our results considering changes in the corporate governance environment of issuers. A corporate governance reform can lead to an improvement in investor protection, which is linked to higher wealth effects on investments (John et al., 2008) and a reduction in information asymmetries (Kim and Lu, 2013). Therefore, we examine whether our results on PIPEs' performance and institutional frameworks hold following major country-specific corporate governance reforms. Following Kim and Lu (2013) for identifying major corporate governance reforms, we form a subsample of firms that issue a PIPE in a country where a corporate governance reform took place within our examination period. We find (the results are unreported for brevity) that our variables capturing institutional frameworks remain positive and significant while we do not find any evidence that corporate governance reforms affect the market valuation of PIPEs. This finding confirms our baseline results showcasing that when controlling for changes in the corporate governance environment, the issuers' institutional framework remains an important factor influencing PIPEs' performance. Overall, out of the three plausible channels we test, it is the enforcement channel that explains the impact of institutional frameworks on the market reaction to PIPEs.

certification (strategic investor holdings) is 43.28% which is not too high as to raise concerns they capture the same channel nor too low which would be counterintuitive.

5. Conclusion

This paper documents the market reaction to PIPEs in a global setting during 1995-2015. We find a decline in PIPEs' performance, with decreased announcement returns across all regions. We find that smaller and financially distressed firms raising equity through PIPEs during the last decade shows an improvement in the capital raising environment for small firms.

Moreover, we provide evidence that PIPEs' market reaction is driven by differences in institutional characteristics, as the market reaction around PIPEs is positively associated with better regulatory quality and lower governmental corruption rates. Our findings are consistent with the law and finance literature, suggesting that more effective and less corrupt government systems enhance the efficiency of investment and increase equity returns. We test three channels that may explain our results: enforcement, certification, and monitoring. We do not find support for the certification or monitoring channels, but we find that regulatory enforcement is a plausible channel behind the relationship between institutional frameworks and the market valuation of PIPEs. Finally, we acknowledge two limitations in this paper. First, is the assumption that all firms raising capital through PIPEs comply with the rules, although, there can be cases where firms are penalized for breaking these rules retrospectively. Second, is the lack of data on investor types participating in a PIPE and the respective contractual terms on an international level, which can provide further insights when analyzing PIPEs across countries.

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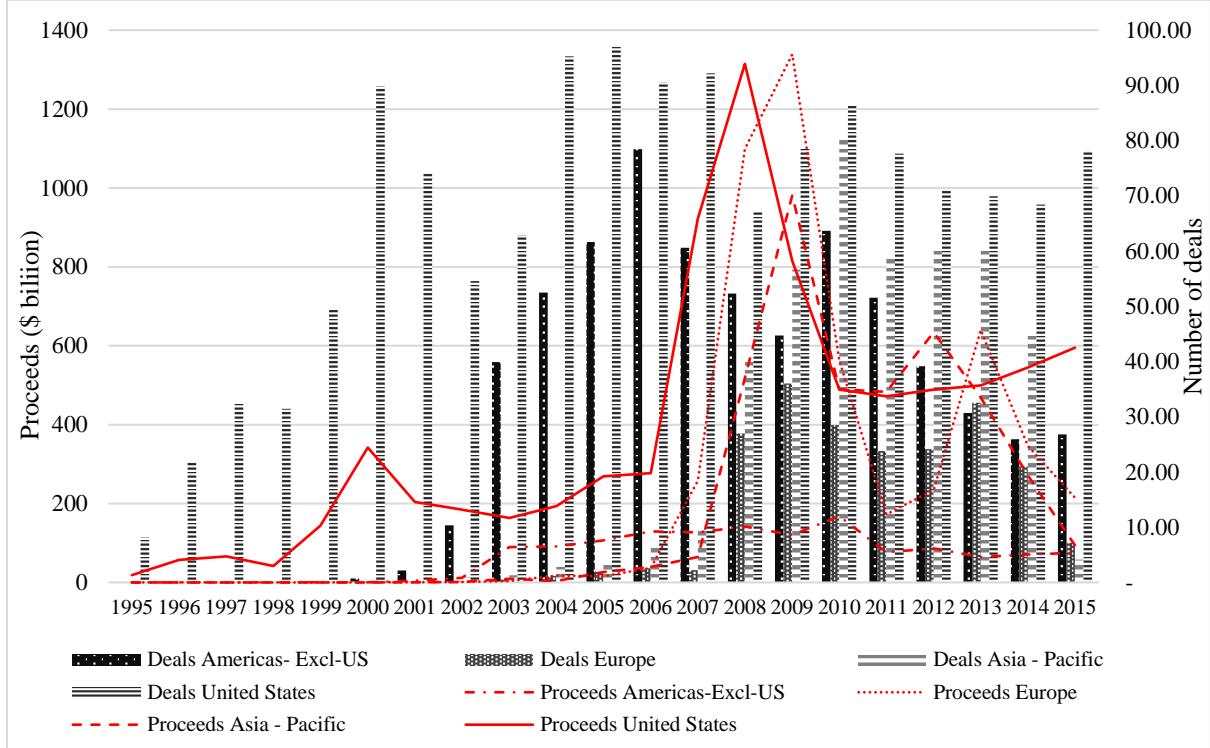
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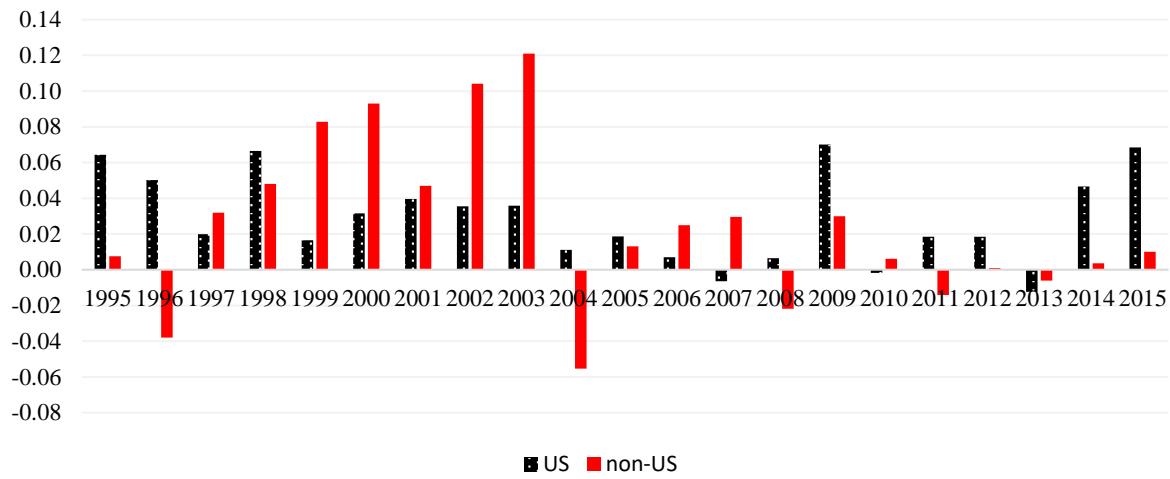
Figure 1: PIPE issues and proceeds (\$ billion) by region and year



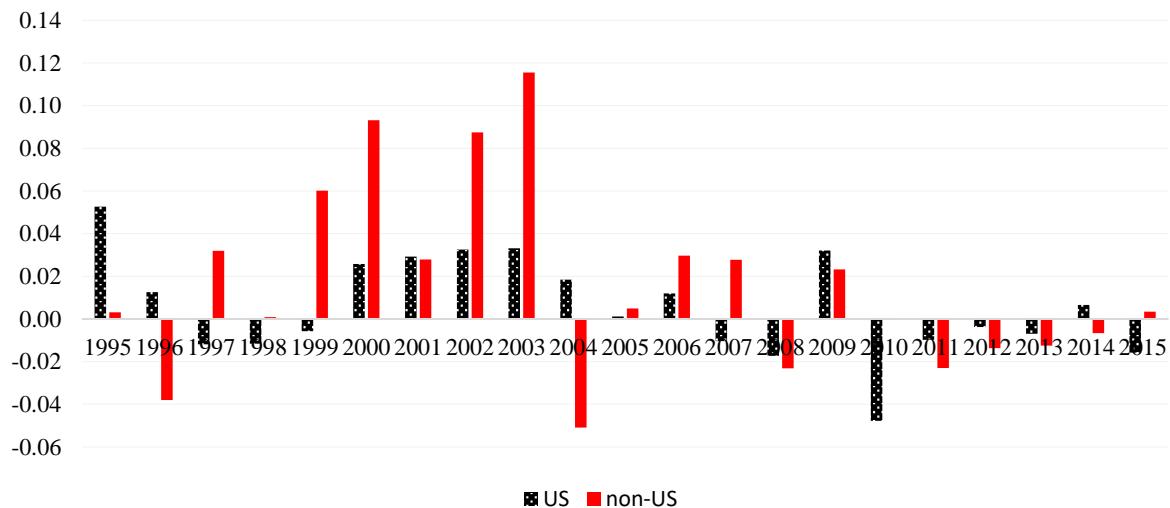
This figure illustrates the number of PIPE deals and their respective proceeds in \$ billion from 1995 to 2015 by region and year that are included in the final dataset. Data on PIPE activity and proceeds are from Sagient Research - PlacementTracker.

Figure 2: Announcement Cumulative Abnormal Returns by year

Panel A: Announcement returns of common stock and fixed price convertible PIPEs



Panel B: Announcement returns of all PIPEs



This figure illustrates the cumulative average abnormal returns on a 10 days' window (-4, +5) around the announcement of the PIPE by issue type. Panel A includes only common stock and fixed price convertible issues while Panel B includes all PIPE types. Deals are categorized into US and non-US according to the issuers' nation. Stock price data are retrieved from CRSP (US firms) and Refinitiv Datastream (non-US firms). Abnormal returns are winsorized at the 1% and 99% levels.

Table 1: Sample selection

All issues 1995-2015	39,108	100%
Legal structure: Rule 144-A	-1,635	-4%
Legal structure: Registration S.	-678	-2%
Legal structure: Secondary private	-223	-1%
Financial Firms	-3,222	-8%
Over the Counter (OTC)	-10,184	-25%
Security type: Common stock - shelf-sale (registered direct)	-1,371	-3%
Security type: Common stock - CMPO/overnight offering	-661	-2%
Depository receipts	-69	-0%
No financial data	-10,657	27%
Total	10,408	26%

The table presents a breakdown of the sample selection process. The data on PIPE issues are from Sagient Research PlacementTracker. Stock price data are retrieved from CRSP (US firms) and Refinitiv Datastream (non-US firms).

Table 2: PIPE deals characteristics

Nation	Number of PIPEs	Number of firms	Number of PIPEs per firm (mean)	Total Proceeds mil. USD	Proceeds / market capitalization (mean)	Proceeds / market capitalization (median)
United States	2,747	1,045	3	128,000	0.19	0.11
Global non-US	7,661	3,411	2	274,400	0.23	0.13
Total	10,408	4,456	2	402,400	0.22	0.13
Region: Americas-Excl.-US						
Argentina	1	1	1	24	0.10	0.10
Bermuda	35	8	4	2,420	0.27	0.12
Brazil	1	1	1	450	0.53	0.53
Canada	2,411	1,013	2	33,500	0.22	0.13
Cayman Islands	1	1	1	26	0.09	0.09
Mexico	1	1	1	70	0.09	0.09
Total	2,450	1,025	2	36,490	0.22	0.13
Region: Asia-Pacific						
Australia	2,495	1,032	2	55,800	0.23	0.13
China	47	29	2	2,040	0.18	0.12
Hong Kong	794	403	2	40,100	0.20	0.12
India	4	4	1	402	0.14	0.13
Israel	11	8	1	169	0.17	0.16
Japan	15	3	5	2,130	0.06	0.04
Malaysia	8	5	2	56	0.12	0.13
New Zealand	6	6	1	249	0.24	0.15
Philippines	4	4	1	628	0.14	0.11
Singapore	10	10	1	1,950	0.11	0.11
Taiwan	7	5	1	776	0.28	0.23
Un. Arab Emir.	2	2	1	641	0.38	0.38
Total	3,403	1,511	2	104,941	0.22	0.13
Region: Europe						
Austria	1	1	1	45	0.07	0.07
Belgium	14	9	2	6,010	0.30	0.10
Cyprus	1	1	1	79	.	.
Finland	1	1	1	1,900	0.17	0.17
France	14	11	1	1,010	0.13	0.09
Germany	15	11	1	4,250	0.14	0.10
Greece	4	3	1	436	0.66	0.70
Ireland	43	15	3	1,440	0.23	0.09
Italy	10	2	5	109	0.11	0.08
Luxembourg	1	1	1	340	0.51	0.51
Monaco	5	4	1	212	0.07	0.01
Netherlands	8	6	1	4,420	0.22	0.19
Norway	11	10	1	1,490	0.33	0.13
Russia	2	2	1	205	0.10	0.10
Spain	3	3	1	189	0.18	0.18
Sweden	20	13	2	505	0.20	0.10
Switzerland	5	3	2	118	0.18	0.21
Un. Kingdom	1,650	779	2	104,000	0.27	0.15
Total	1,808	875	2	126,758	0.26	0.15

The table reports the summary statistics of all PIPE deals from 1995 to 2015 with available data on Datastream (non-US firms) and CRSP (US firms). The issues are categorized by the firms' region of operation. For each country, the total number of PIPE issues and number of firms are presented as well as the average number of PIPE deals per firm. The total proceeds in million USD (\$) are presented along with the average and median proceeds over the firms' market capitalization for each country.

Table 3: PIPE issuers' distribution

Panel A: Region classification	No. of firms	%
Americas-excluding-US	1,025	23.00
Asia-Pacific	1,511	33.91
Europe	875	19.64
United States	1,045	23.45
Panel B: FF 12 industry classification	No. of firms	%
Consumer Non-Durables	150	3.49
Consumer Durables	79	1.84
Manufacturing	214	4.98
Oil, Gas, and Coal Extraction and Products	485	11.28
Chemicals and Allied Products	68	1.58
Business Equipment	528	12.28
Telephone and Television Transmission	77	1.79
Utilities	99	2.30
Wholesale, Retail, and Some Services	237	5.51
Healthcare, Medical Equipment and Drugs	419	9.73
Other, Mines, Construction, Transportation	2,100	45.21
Panel C: PIPE type classification	No. of firms	%
Traditional	4,162	93.40
Structured	294	6.60

The table presents the distribution characteristics of PIPE issuers in our sample from 1995 to 2015. Panel A shows the distribution of PIPE issuers by firms' region of operation. Panel B shows the issuers' industry distribution based on the Fama-French 12 industries classification system. Panel C presents the classification of PIPE deals into traditional and structured according to the contract type.

Table 4: Descriptive statistics

Panel A: PIPE firms' characteristics										
Region	Market value	M/B	Leverage	Cash burn	Cash	R&D	ROA (%)	Stock illiquidity (%)	Discount (%)	Pre-announcement (%)
Americas-excluding-US	181,160 (22,735)	2.68 (1.42)	0.25 (0.00)	-7.98 (0.75)	0.27 (0.18)	0.11 (0.00)	-72.09 (-16.27)	0.04 (0.02)	-0.79 (-3.51)	0.47*** (-0.65)
N	2,178	2,009	2,264	1,949	2,222	2,280	2,272	2,085	2,075	2,066
Asia-Pacific	282,788 (33,213)	2.58 (1.40)	0.22 (0.01)	-2.58 (-0.31)	0.29 (0.20)	0.03 (0.00)	-47.86 (-11.34)	0.43 (0.02)	-7.33 (-10.78)	2.50*** (0.44)
N	3,227	3,242	3,327	3,245	3,317	3,340	3,314	2,585	3,064	3,207
Europe	561,594 (44,914)	2.67 (1.55)	0.19 (0.05)	-3.72 (-0.30)	0.23 (0.13)	0.07 (0.00)	-43.98 (-9.75)	0.06 (0.02)	-9.87 (-8.75)	-1.01*** (-0.88)
N	1,551	1,564	1,628	1,580	1,606	1,629	1,630	1,499	1,478	1,539
United States	694,465 (91,179)	3.93 (2.49)	0.25 (0.14)	-8.17 (-0.58)	0.36 (0.25)	0.23 (0.07)	-58.78 (-32.54)	0.11 (0.02)	-2.75 (-1.66)	0.11*** (-0.33)
N	2,323	2,245	2,403	2,237	2,393	2,406	2,406	1,369	956	2,355
Total: All regions	408,600 (41,841)	2.95 (1.61)	0.23 (0.02)	-5.33 (-0.45)	0.29 (0.19)	0.10 (0.00)	-55.65 (-15.12)	0.19 (0.02)	-5.46 (-7.89)	0.84*** (-0.25)
N	9,279	9,060	9,622	9,011	9,538	9,635	9,622	7,538	7,573	9,167

Panel B: PIPE firms' default probability

Region	% of firms in "unsafe" zone	% of firms with negative operating income
Americas-excluding-US	85.66	68.95
Asia-Pacific	84.42	69.98
Europe	82.87	54.99
United States	81.45	55.45

Panel A reports the mean (medians are reported in parentheses) values of PIPE issuers' characteristics from 1995 to 2015 by firms' region. Panel B shows the percentage of PIPE firms with a z-score (Altman, 1968) lower than 1.8 one year before the PIPE issue and the percentage of firms that have negative operating income during the two years prior to the issue, proxying for financial distress. All variables are defined in Appendix B. Financial data are retrieved from Refinitiv Worldscope and are from the fiscal year prior to the PIPE issue. All variables are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5: PIPEs performance

	America-excluding-US			Asia Pacific			Europe			United States		
	Traditional %	Structured %	Diff. in means/ medians %	Traditional %	Structured %	Diff. in means/ medians %	Traditional %	Structured %	Diff. in means/ medians %	Traditional %	Structured %	Diff. in means/ medians %
Panel A: Announcement cumulative abnormal returns and buy and hold abnormal returns												
CAR _(-4,+5)	1.88*** (-0.25)	-1.80*** (-0.20)	3.68 (-0.04)	-0.94*** (-1.77)	-2.13*** (-1.76)	1.19 (-0.00)	-2.20*** (-1.73)	-2.06*** (-1.77)	-0.14 (0.03)	2.28*** (-0.16)	-4.28*** (-4.00)	6.56*** (4.16)***
N	1,987	60		3,152	45		1,465	61		1,700	637	
Adj. CAR _(-4,+5)	2.49*** (0.00)	-4.44*** (-2.37)	6.93** (2.37)	1.00*** (-0.87)	-5.42*** (-0.73)	6.42** (-0.14)	-0.79*** (-0.75)	-0.54*** (-1.84)	-0.25 (1.09)	2.61*** (1.89)	-2.17*** (-1.03)	4.78*** (2.92)***
N	1,802	25		2,976	20		1,351	35		665	249	
BHAR _(-4,+5)	0.40*** (-1.61)	-2.50*** (-1.03)	2.90 (-0.58)	-1.09*** (-2.52)	-4.36*** (-2.58)	3.27** (0.06)	-2.24*** (-2.14)	-2.03*** (-2.33)	-0.21 (0.19)	1.74*** (-0.50)	-3.62*** (-4.26)	5.36*** (3.76)***
N	2,100	64		3,279	48		1,524	65		1,893	690	
Panel B: Short, medium, and long-term buy and hold abnormal returns												
(+6,+100)	-19.08*** (-25.66)	-11.16*** (-18.41)	-7.93 (-7.25)	-13.13*** (-18.57)	-27.29*** (-27.42)	14.16*** (8.84)**	-9.34*** (-12.47)	-14.28*** (-21.23)	4.94 (8.77)**	-11.88*** (-16.50)	-22.52*** (-25.74)	10.64*** (9.24)***
N	2,064	61		3,264	47		1,525	63		1,874	645	
(+6,+250)	-38.93*** (-52.15)	-33.58*** (-43.77)	-5.36 (-8.38)	-27.55*** (-40.47)	-41.37*** (-43.47)	13.81** (3.00)	-20.91*** (-27.54)	-36.03*** (-45.84)	15.13*** (18.30)***	-25.27*** (-34.39)	-43.67*** (-50.19)	18.40*** (15.80)***
N	1,968	55		3,220	45		1,486	60		1,782	575	
(+6,+500)	-60.01*** (-74.50)	-55.66*** (-61.58)	-4.35 (-12.92)**	-47.40*** (-64.41)	-38.39*** (-68.22)	-9.01 (3.81)	-38.50*** (-52.38)	-55.86*** (-70.03)	17.45** (18.65)***	-41.95*** (-52.92)	-72.81*** (-78.44)	30.86*** (25.53)***
N	1,842	54		3,030	40		1,375	54		1,627	480	

The table summarizes the mean (medians are reported in parentheses) abnormal returns of PIPE issuing firms between 1995 and 2015 by issuers' region. N corresponds to the number of observations. The mean (median) ARs are computed over four time-windows, measured in trading days around the announcement of the PIPE issue. Panel A presents the average cumulative abnormal returns, the adjusted cumulated abnormal returns and the average buy and hold abnormal returns for the announcement window (-4,+5). Panel B presents the average buy and hold abnormal returns for the short (+6,+100), medium (+6,+250) and long-term (+6,+500) windows. Stock prices are from CRSP (US firms) and Refinitiv Datastream (non-US firms). All variables are winsorized at the 1% and 99%. *, **, *** denote statistical significance at the 10%, 5% and 1% level.

Table 6: Market reaction by security type

	<i>Announcement returns</i>				
	Americas-excluding-US	Asia-Pacific	Europe	United States	N
Traditional PIPEs					
Common Stock	2.03*** (-0.25)	0.38*** (-0.78)	-2.24*** (-1.73)	3.54*** (1.04)	6,430
Common Stock - Rights Offering	1.17*** (-0.34)	-6.15*** (-6.74)	-3.37*** (-3.50)	-2.35*** (-2.80)	852
Convertible - Fixed	-0.65*** (-0.20)	0.26*** (-0.31)	-0.88*** (-0.48)	0.90*** (-0.65)	864
Non-Convertible Debt/Pref. Stock	2.57*** (-0.20)	8.37*** (8.45)	6.99*** (0.52)	-4.10*** (-2.52)	150
Structured PIPEs					
ATM (At the Market) Offering	-4.65*** (-2.13)	-13.76*** (-13.76)	-2.12*** (-1.18)	-4.92*** (-4.14)	252
Common Stock Reset				-3.87*** (-4.26)	17
Convertible - Company Instalment	0.03 (-4.43)	-4.81*** (-4.81)	-5.97*** (-3.81)	-11.55*** (-12.91)	66
Convertible - Floating	1.95*** (2.67)	2.97*** (-3.48)	-3.81*** (-3.20)	-3.76*** (-5.93)	191
Convertible - Reset	-3.31*** (0.08)	2.88*** (3.36)	-3.91*** (-0.88)	-2.18*** (-4.32)	76
Structured Equity Line	-0.02 (0.28)	-6.39*** (-1.87)	-1.95*** (-2.20)	-1.83*** (-1.96)	198

The table summarizes the mean (median values are shown in parentheses) abnormal returns of PIPE issuing firms between 1995 and 2015 by issuers' region and issue type. The mean (median) *announcement returns* are computed over a 10-day window (-4,+5) around the PIPE announcement. N shows the total number of observations for each category. Stock prices are from CRSP (US firms) and Refinitiv Datastream (non-US firms). The abnormal returns are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 7: Market reaction and issuers' characteristics before and after the performance shift

Panel A: Issuers' characteristics before and after the performance shift

	2004 - 2015	1995 - 2003	Diff.	[p-value]
<i>Size</i>	394,965	551,740	-156,775**	[0.05]
<i>Leverage</i>	0.23	0.21	0.02	[0.47]
<i>Cash</i>	0.29	0.33	-0.04***	[0.00]
<i>Cash burn</i>	-5.58	-2.22	-3.36**	[0.04]
<i>Distress</i>	0.84	0.78	0.06***	[0.00]
<i>R&D</i>	0.10	0.19	-0.09***	[0.00]
<i>EBITDA</i>	-0.45	-0.38	-0.07**	[0.01]
<i>Pre-announcement (%)</i>	0.70	1.98	-1.28	[0.12]
<i>Announcement (%)</i>	-0.45	2.11	-2.56***	[0.00]
<i>ROA</i>	-0.56	-0.53	-0.03	[0.52]

Panel B: Performance by firms' financial position

	Weak firms	Non-weak	Diff.	[p-value]
CAR (-4,+5)	-0.68%	0.31%	-0.99**	[0.02]
BHAR (+6, +100)	-19.48%	-7.89%	-11.59***	[0.00]
BHAR (+6, +250)	-38.95%	-18.01%	-20.94***	[0.00]
BHAR (+6, +500)	-62.24%	-33.63%	-28.61***	[0.00]

Panel C: Announcement returns by region and period

Period	Americas-excluding-US	Asia-Pacific	Europe	United States
1995-2006	3.44% *** [0.00]	-2.66% *** [0.00]	3.18% *** [0.00]	1.62% *** [0.00]
2007-2009	2.61% *** [0.00]	0.11% [0.18]	-0.51% *** [0.00]	0.35% ** [0.05]
2010-2015	1.16% *** [0.00]	-1.26% *** [0.00]	-3.35% *** [0.00]	-1.21% *** [0.00]

Panel A presents the mean values of issuers' characteristics before and after the negative shift in the announcement (-4,+5) returns of PIPEs. Panel B shows PIPEs' announcement and long-term returns as measured by the windows (-4,+5), (+6,+100), (+6,+250) and (+6,+500), by firms' fundamentals. Weak firms are considered to be those that have a cash burn rate lower than the median of all firms. Panel C shows the announcement cumulative average abnormal returns as measured by the (-4, +5) window by time period: before, during and after the financial crisis. All variables are defined in Appendix B. All continuous variables are winsorized at the 1% and 99% levels. Accounting data are from the fiscal year end prior to the PIPE issue. p-values on differences in means are shown in brackets. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 8: Calendar time portfolios

	12-months	24-months	36-months	48-months
Panel A: Equally weighted portfolios				
		Four-factor model		
Alpha	-21.99***	-24.78***	-27.16***	-25.25***
[p-value]	[0.00]	[0.00]	[0.00]	[0.00]
N	264	277	283	283
Adj. R ²	0.06	0.06	0.07	0.06
		Five-factor model		
Alpha	-20.71***	-23.05***	-26.41***	-24.15***
[p-value]	[0.00]	[0.00]	[0.00]	[0.00]
N	264	277	283	283
Adj. R ²	0.08	0.07	0.09	0.08
Panel B: Value weighted portfolios				
		Four-factor model		
Alpha	-19.16***	-22.62***	-25.31***	-23.72***
[p-value]	[0.00]	[0.00]	[0.00]	[0.00]
N	264	277	283	283
Adj. R ²	0.06	0.06	0.07	0.06
		Five-factor model		
Alpha	-17.54**	-20.44***	-24.21***	-22.19***
[p-value]	[0.01]	[0.00]	[0.00]	[0.00]
N	264	277	283	283
Adj. R ²	0.08	0.07	0.09	0.08

The table summarizes the annualized calendar time alphas over 12, 24, 36 and 48 months following the PIPE announcement. Alphas are estimated using the Fama-French global factors. Panel A reports the results estimated using equally weighted portfolios and Panel B reports the results estimated using value weighted portfolios. The data sample consists of PIPE issues over the period 1995-2015. Stock price data are obtained from CRSP (US firms) and Refinitiv Datastream (non-US firms). Portfolio returns are winsorized at the 1% and 99% levels. p-values are shown in brackets. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 9: Market reaction and country governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Announcement returns</i>									
<i>Regulatory quality</i>	0.09*** [0.00]			0.10*** [0.00]			0.10*** [0.00]		
<i>Rule of law</i>		0.10** [0.02]			0.18*** [0.00]			0.18*** [0.00]	
<i>Control for corruption</i>			0.11*** [0.00]			0.13*** [0.00]			0.13*** [0.00]
<i>Size</i>				-0.00 [0.79]	-0.00 [0.75]	-0.00 [0.76]	-0.00 [0.80]	-0.00 [0.75]	-0.00 [0.77]
<i>Leverage</i>				-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]
<i>Multi issuer</i>				-0.01 [0.46]	-0.01 [0.46]	-0.01 [0.45]			
<i>Distress</i>				0.00 [0.77]	0.00 [0.81]	0.00 [0.78]	0.00 [0.78]	0.00 [0.82]	0.00 [0.80]
<i>R&D</i>				0.02** [0.02]	0.02** [0.01]	0.02** [0.01]	0.02** [0.02]	0.02** [0.01]	0.02** [0.01]
<i>Proceeds</i>				0.00 [0.20]	0.00 [0.40]	0.00 [0.18]	0.00 [0.45]	0.00 [0.70]	0.00 [0.41]
<i>Pre-announcement</i>				-0.01 [0.56]	-0.01 [0.53]	-0.01 [0.53]	-0.01 [0.50]	-0.01 [0.47]	-0.01 [0.47]
<i>Discount</i>				0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]
<i>Stock illiquidity</i>				-0.14 [0.77]	-0.29 [0.53]	-0.09 [0.85]	-0.11 [0.81]	-0.26 [0.57]	-0.06 [0.89]
<i>First issue</i>							0.02*** [0.01]	0.02** [0.01]	0.02*** [0.01]
<i>Constant</i>	-0.03 [0.36]	-0.07 [0.18]	-0.04 [0.26]	0.02 [0.72]	-0.03 [0.64]	0.03 [0.56]	0.01 [0.86]	-0.04 [0.58]	0.02 [0.69]
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Security FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.01	0.01	0.01	0.03	0.03	0.03	0.04	0.04	0.04
Observations	8,829	8,829	8,829	4,915	4,915	4,915	4,915	4,915	4,915

The table reports the estimates of the regressions of country governance measures on the market reaction of PIPE issues CAR(-4,+5). All variables are defined in Appendix B. Stock price data are from CRSP (US firms) and Refinitiv Datastream (non-US firms). Accounting data are obtained from Refinitiv Worldscope. All accounting measures are from the fiscal year end prior to the PIPE issue. Standard errors are robust and clustered at the firm level. p-values are shown in brackets. All continuous variables are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 10: Enforcement channel. The adoption of MiFID and the impact of institutional frameworks in the market reaction to PIPEs

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Announcement returns</i>						
	<i>Unmatched issues</i>				<i>Matched issues</i>	
<i>EU region</i>	-0.07** [0.05]	-0.07* [0.05]	-0.05 [0.12]	-0.05 [0.18]	-0.05 [0.18]	-0.03 [0.49]
<i>Post-MiFID</i>	-0.07*** [0.01]	-0.07*** [0.01]	-0.07*** [0.01]	-0.02 [0.64]	-0.03 [0.51]	-0.03 [0.50]
<i>EU region * Post-MiFID</i>	0.19*** [0.01]	-0.00 [0.99]	0.20*** [0.01]	0.29*** [0.01]	0.03 [0.85]	0.24** [0.02]
<i>Regulatory quality</i>	0.09* [0.10]			0.20* [0.06]		
<i>EU region * Post-MiFID * Regulatory quality</i>	-0.16** [0.02]			-0.30*** [0.01]		
<i>Rule of law</i>		0.11 [0.11]			0.11 [0.45]	
<i>EU region * Post- MiFID *</i>		0.04			-0.02	
<i>Rule of law</i>		[0.74]			[0.90]	
<i>Control for corruption</i>			0.12*** [0.01]			0.22** [0.01]
<i>EU region * Post- MiFID *</i>			-0.24** [0.01]			-0.34** [0.02]
<i>Control for corruption</i>						
<i>Size</i>	-0.00 [0.77]	-0.00 [0.81]	-0.00 [0.77]			
<i>Leverage</i>	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]			
<i>Multi issuer</i>	-0.01 [0.37]	-0.01 [0.39]	-0.01 [0.38]			
<i>Distress</i>	0.00 [0.97]	0.00 [0.95]	0.00 [1.00]			
<i>R&D</i>	0.02** [0.01]	0.02** [0.01]	0.02** [0.01]			
<i>Proceeds</i>	0.00** [0.04]	0.00* [0.08]	0.00* [0.08]			
<i>Pre-announcement</i>	-0.01 [0.42]	-0.01 [0.40]	-0.01 [0.42]			
<i>Discount</i>	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]			
<i>Stock illiquidity</i>	-0.26 [0.57]	-0.46 [0.31]	-0.29 [0.51]			
<i>Constant</i>	0.05 [0.45]	0.05 [0.51]	0.05 [0.34]	-0.17* [0.09]	-0.05 [0.58]	-0.08 [0.13]
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Security FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.04	0.04	0.04	0.03	0.03	0.03
Observations	4,915	4,915	4,915	1,964	1,964	1,964

The table reports the impact of regulatory changes following the adoption of MiFID on PIPEs' market reaction CAR(-4,+5). Unmatched issues include all PIPE issues in our dataset. For the Matched issues subsample we include only EU PIPE issuers with non-EU issuers that are matched based on all firm- and issue-specific covariates, i.e. *size*, *leverage*, *multi-issuer*, *distress*, *R&D*, *proceeds*, *pre-announcement*, *discount*, and *stock illiquidity*. All variables are defined in Appendix B. Stock price data are from CRSP (US firms) and Refinitiv Datastream (non-US firms). Accounting data are obtained from Refinitiv Worldscope. All accounting measures are from the fiscal year end prior to the PIPE issue. Standard errors are robust and clustered at the firm level. All continuous variables are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 11: PIPEs' market reaction and the certification channel

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Announcement returns</i>							
<i>Certification</i>	0.00 [0.64]	0.00 [0.42]	0.00 [0.42]	0.00 [0.36]	0.00 [0.52]	0.00 [0.45]	0.00 [0.78]
<i>Regulatory quality</i>		0.12*** [0.00]			0.14** [0.02]		
<i>Rule of law</i>			0.19*** [0.00]			0.25** [0.03]	
<i>Control for corruption</i>				0.14*** [0.00]			0.15* [0.06]
<i>Certification * Regulatory quality</i>					-0.00 [0.60]		
<i>Certification * Rule of law</i>						-0.00 [0.49]	
<i>Certification * Control for corruption</i>							-0.00 [0.87]
<i>Size</i>	-0.00 [0.98]	0.00 [0.98]	-0.00 [0.98]	-0.00 [0.96]	0.00 [0.99]	-0.00 [0.98]	-0.00 [0.96]
<i>Leverage</i>	-0.00 [0.20]	-0.00 [0.18]	-0.00 [0.19]	-0.00 [0.18]	-0.00 [0.18]	-0.00 [0.20]	-0.00 [0.18]
<i>Multi issuer</i>	-0.00 [0.75]	-0.00 [0.67]	-0.00 [0.68]	-0.00 [0.69]	-0.00 [0.67]	-0.00 [0.68]	-0.00 [0.69]
<i>Distress</i>	0.01 [0.17]	0.01 [0.19]	0.01 [0.20]	0.01 [0.19]	0.01 [0.20]	0.01 [0.21]	0.01 [0.19]
<i>R&D</i>	0.02* [0.05]	0.02* [0.07]	0.02* [0.06]	0.02* [0.06]	0.02* [0.07]	0.02* [0.06]	0.02* [0.06]
<i>Proceeds</i>	0.00 [0.44]	0.00 [0.16]	0.00 [0.47]	0.00 [0.20]	0.00 [0.16]	0.00 [0.46]	0.00 [0.20]
<i>Pre-announcement</i>	-0.01 [0.73]	-0.01 [0.68]	-0.01 [0.66]	-0.01 [0.65]	-0.01 [0.68]	-0.01 [0.66]	-0.01 [0.65]
<i>Discount</i>	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]
<i>Stock illiquidity</i>	0.05 [0.92]	0.08 [0.88]	-0.07 [0.89]	0.13 [0.80]	0.08 [0.87]	-0.08 [0.88]	0.13 [0.80]
<i>Constant</i>	0.05 [0.60]	-0.06 [0.58]	-0.08 [0.44]	-0.03 [0.76]	-0.08 [0.48]	-0.14 [0.33]	-0.04 [0.73]
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Security FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.03	0.04	0.04	0.04	0.04	0.04	0.04
Observations	3,946	3,933	3,933	3,933	3,933	3,933	3,933

The table reports the estimates of the regressions of PIPEs' market reaction CAR(-4,+5) and certification. Certification is proxied by strategic holdings. All variables are defined in Appendix B. Stock price data are from CRSP (US firms) and Refinitiv Datastream (non-US firms). Accounting data are obtained from Refinitiv Worldscope. All accounting measures are from the fiscal year end prior to the PIPE issue. Standard errors are robust and clustered at the firm level. p-values are shown in brackets. All continuous variables are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 12: PIPEs' market reaction and the monitoring channel

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Announcement returns						
<i>Monitoring</i>	-0.00 [0.10]	-0.00 [0.17]	-0.00 [0.16]	-0.00 [0.21]	0.00 [0.90]	-0.00 [0.91]	0.00 [0.90]
<i>Regulatory quality</i>		0.08** [0.03]			0.09** [0.03]		
<i>Rule of law</i>			0.16** [0.01]			0.16** [0.03]	
<i>Control for corruption</i>				0.12*** [0.01]			0.13** [0.01]
<i>Monitoring *</i>					-0.00		
<i>Regulatory quality</i>					[0.75]		
<i>Monitoring * Rule of law</i>						-0.00 [0.99]	
<i>Monitoring * Control for corruption</i>							-0.00 [0.76]
<i>Size</i>	-0.00 [0.58]	-0.00 [0.62]	-0.00 [0.60]	-0.00 [0.59]	-0.00 [0.62]	-0.00 [0.60]	-0.00 [0.60]
<i>Leverage</i>	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]	-0.00*** [0.00]
<i>Multi issuer</i>	-0.01 [0.36]	-0.01 [0.34]	-0.01 [0.33]	-0.01 [0.34]	-0.01 [0.34]	-0.01 [0.33]	-0.01 [0.34]
<i>Distress</i>	0.01 [0.48]	0.01 [0.52]	0.01 [0.56]	0.01 [0.53]	0.01 [0.52]	0.01 [0.56]	0.01 [0.54]
<i>R&D</i>	0.00 [0.64]	0.00 [0.71]	0.00 [0.64]	0.00 [0.68]	0.00 [0.71]	0.00 [0.64]	0.00 [0.68]
<i>Proceeds</i>	0.00 [0.45]	0.00 [0.27]	0.00 [0.49]	0.00 [0.27]	0.00 [0.28]	0.00 [0.50]	0.00 [0.28]
<i>Pre-announcement</i>	-0.01 [0.65]	-0.01 [0.66]	-0.01 [0.63]	-0.01 [0.63]	-0.01 [0.66]	-0.01 [0.63]	-0.01 [0.63]
<i>Discount</i>	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]	0.07*** [0.00]
<i>Stock illiquidity</i>	-0.09 [0.84]	-0.09 [0.85]	-0.22 [0.65]	-0.04 [0.93]	-0.09 [0.86]	-0.22 [0.65]	-0.04 [0.94]
<i>Constant</i>	0.15** [0.03]	0.07 [0.35]	0.01 [0.89]	0.06 [0.32]	0.06 [0.41]	0.01 [0.90]	0.06 [0.39]
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Security FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Observations	4,379	4,365	4,365	4,365	4,365	4,365	4,365

The table reports the estimates of the regressions on PIPEs' market reaction and monitoring. Monitoring is proxied by foreign holdings. All variables are defined in Appendix B. Stock price data are from CRSP (US firms) and Refinitiv Datastream (non-US firms). Accounting data are obtained from Refinitiv Worldscope. All accounting measures are from the fiscal year end prior to the PIPE issue. Standard errors are robust and clustered at the firm level. p-values are shown in brackets. All continuous variables are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Appendix A: Summary statistics on institutional framework, by country

Nation	Strategic Holdings	Government holdings	Pension fund holdings	Foreign holdings	Closely held shares
Argentina	0.00	0.00	0.00	0.00	41.15
Australia	29.13	0.03	0.02	5.78	35.43
Austria	15.00	0.00	0.00	15.00	14.96
Belgium	31.11	2.00	0.00	12.10	25.76
Bermuda	29.96	0.00	0.00	23.20	32.36
Brazil	16.00	0.00	0.00	16.00	1.31
Canada	25.78	0.06	0.10	7.06	26.14
Cayman Islands	60.00	0.00	0.00	60.00	67.05
China	50.59	0.00	0.00	17.50	57.70
Cyprus	.	.	.	.	.
Finland	53.00	53.00	0.00	0.00	
France	43.88	5.78	0.00	3.22	35.30
Germany	38.23	1.17	0.00	12.62	45.72
Greece	45.00	0.00	0.00	0.00	62.90
Hong Kong	47.99	0.09	0.00	21.07	49.14
India	64.50	0.00	0.00	3.33	55.94
Ireland	41.00	1.20	0.00	28.54	28.17
Israel	38.57	0.00	0.00	9.00	26.18
Italy	37.88	24.90	0.00	3.80	32.60
Japan	7.69	0.00	0.00	0.00	16.57
Luxembourg	.	.	.	.	59.96
Malaysia	52.50	14.33	0.00	57.00	63.90
Mexico	.	.	.	.	.
Monaco	57.33	0.00	0.00	19.50	48.90
Netherlands	24.50	0.00	0.00	5.25	23.42
New Zealand	41.25	0.00	0.00	2.40	47.07
Norway	24.29	0.00	1.75	15.25	22.18
Philippines	54.67	0.00	0.00	0.00	60.30
Russia	72.50	0.00	0.00	72.50	59.83
Singapore	48.38	2.63	0.00	19.25	74.99
Spain	60.33	0.00	0.00	7.00	79.90
Sweden	33.70	4.55	0.00	6.64	35.79
Switzerland	25.00	0.00	0.00	21.20	23.16
Taiwan	28.25	0.00	0.00	3.20	31.30
United Arab Emir	16.00	0.00	0.00	5.00	12.37
United Kingdom	35.14	0.06	0.08	12.42	37.81
United States	30.44	0.09	0.13	3.06	28.60
Total	31.77	0.13	0.08	8.05	34.04

The table presents the summary statistics of the institutional framework of PIPE issuers by country. *Strategic holdings* is measured as the percentage of strategic share holdings of 5% or more. *Government holdings* are measured as the percentage of shareholdings of 5% or more held by a government or a government institution. *Pension fund holdings* are measured as the percentage of shareholdings of 5% or more held by pension funds or endowment funds. *Foreign holdings* is measured as the percentage of shareholdings of 5% or more held in a country outside that of the issuer. *Closely held shares* are measured as the percentage of shareholdings of 5% or more held by management, corporations, benefit/pension schemes and individuals. Data on shareholdings are from Refinitiv (Worldscope) and are from the fiscal year end prior to the PIPE issue.

Appendix B: Variable definitions

Variable Name	Definition	Source
<i>Adjusted cumulative abnormal returns</i>	The adjusted cumulative abnormal returns are adjusted for the issuance discount effect as in Wruck (1989) as follows: $R_{adjusted} = \frac{R}{1-a} - \frac{a*d}{1-a}$ where, R is the raw return, a is the shares issued over the total shares outstanding after the announcement and d is the purchase discount calculated as the difference between the purchase price and the announcement price over the announcement price.	CRSP (US firms), Refinitiv Datastream (non-US firms)
<i>Announcement returns</i>	Announcement is the cumulative abnormal returns over trading day -4 to +5 around the PIPE announcement.	CRSP (US firms), Refinitiv Datastream (non-US firms)
<i>Buy and hold abnormal returns</i>	Buy and Hold Abnormal Returns are estimated following Barber and Lyon (1997) using the following model: $BHAR_{i,j,t} = \prod_{t=1}^N (1 + R_{i,j,t}) - \prod_{t=1}^N (1 + R_{m,j,t})$ where $BHAR_{i,j,t}$ denotes the daily Buy and Hold Abnormal Returns of security i , in country j , on day t , $R_{i,j,t}$ is the logarithmic return of security i , in country j , on day t and $R_{m,j,t}$ is the daily return of market m , in country j , on day t . We use as a market benchmark the CRSP value weighted market indices for US firms and the Datastream individual country indices for non-US firms.	CRSP (US firms), Refinitiv Datastream (non-US firms)
<i>Cash</i>	Cash is defined as the cash and cash equivalents (item WC02001) over total assets (item WC02999).	Refinitiv Worldscope
<i>Cash burn</i>	Following Chaplinsky and Haushalter (2010), the cash burn ratio is defined as the ratio of operating income before depreciation (item WC18155) over cash and cash equivalents. This ratio is set to zero if the firm's operating income is positive in the fiscal year end prior to the PIPE issue.	Refinitiv Worldscope
<i>Certification</i>	Certification is proxied by strategic holdings (item NOSHST). It is measured as the percentage of strategic share holdings of 5% or more, in the fiscal year end prior to the PIPE issue.	Refinitiv Worldscope
<i>Control for corruption</i>	Control for corruption measures the corruption in the political system. The score ranges from 0 to 1 with 1 showing the lowest levels of corruption and 0 showing the highest e.g.: low efficiency in government and business, people assume positions through patronage rather than skills.	International Country Risk Guide (ICRG) available at: info.worldbank.org/governance/wgi/pdf/PRS.xlsx
<i>Cumulative abnormal returns</i>	Cumulative abnormal returns are estimated following a standard event study methodology (Brown and Warner, 1985) as follows: $AR_{i,j,t} = R_{i,j,t} - \hat{\alpha}_{i,j,t} - (\hat{\beta}_{i,j,t} * R_{m,j,t})$ where $AR_{i,j,t}$ is the abnormal return of security i , in country j , on day t . $R_{i,j,t}$ is the logarithmic return of security i , in country j , on day t . The $\hat{\alpha}$ and $\hat{\beta}$ coefficients are estimated based on 250 trading days before day -25 relative to the announcement date and $R_{m,j,t}$ is the return of the market m , in country j , on day t . We use as a market benchmark the CRSP value weighted market indices for US firms and the Datastream individual country indices for non-US firms.	CRSP (US firms), Refinitiv (Datastream) (non-US firms)
<i>Discount</i>	Discount is employed from Sagient Research and is calculated as [(Purchase Price Per Share) / (Closing Market Price) - 1]*100. It is a continuous variable that indicates a discount if it is negative and a premium if it is positive.	Sagient Research PlacementTracker

<i>Distress</i>	Distress is an indicator variable that takes the value of 1 if a firm has a z-score (Altman, 1968) lower than 1.8 one year prior to the PIPE announcement and 0 otherwise.	Refinitiv Worldscope and own estimations
<i>EBITDA</i>	EBITDA is defined as the ratio of Earnings Before Interest, Taxes & Depreciation (item WC18198) over total assets.	Refinitiv Worldscope
<i>EU region</i>	EU region is an indicator variable that takes the value of 1 if the PIPE issuer, at the time of the issue, is based in the EU and 0 otherwise.	Own estimations
<i>First issue</i>	First issue is an indicator variable that takes the value of 1 if the issue corresponds to the first PIPE issue of a company in our dataset and 0 otherwise.	Sagient Research PlacementTracker and own estimations
<i>Leverage</i>	Leverage is the ratio of total debt (item WC03255) to total assets.	Refinitiv Worldscope
<i>Market-to-Book</i>	Market-to-Book ratio is the market to book value of equity (item MTBV).	Refinitiv Datastream
<i>Market value</i>	Market Value is the market price at the end of the year multiplied by the common shares outstanding.	Refinitiv Worldscope
<i>Monitoring</i>	Monitoring is proxied by foreign holdings (item NOSHFR). It is calculated as the percentage of strategic share holdings of 5% or more held in a country outside that of the issuer, in the fiscal year end prior to the PIPE issue.	Refinitiv Datastream
<i>Multi-issuer</i>	Multi-issuer is an indicator variable that takes the value of 1 if a firm has issued at least 2 PIPEs during the period 1995-2015 and 0 otherwise.	Sagient Research PlacementTracker and own estimations
<i>Post-MiFID</i>	Post-MiFID is an indicator variable that takes the value of 1 if the issue was after the MiFID implementation (Nov 1, 2007) and 0 otherwise.	Own estimations
<i>Pre-announcement</i>	Pre-announcement is the cumulative abnormal returns over trading day -25 to -5 prior to the PIPE announcement.	CRSP (US firms), Refinitiv Datastream (non-US firms)
<i>Proceeds</i>	Proceeds are defined as the gross proceeds scaled by the market capitalization.	Sagient Research PlacementTracker
<i>R&D</i>	R&D is defined as the ratio of research and development (item WC01201) over total assets.	Refinitiv Worldscope
<i>Regulatory quality</i>	Regulatory quality is a measure of the investment profile; it assesses the factors affecting the risk to investment and it is derived by three components: contract viability, profits repatriation and payment delays. The score ranges from 0 to 1 with 0 showing very high risk and 1 showing very low risk.	International Country Risk Guide (ICRG) available at: info.worldbank.org/governance/wgi/pdf/PRS.xlsx
<i>ROA</i>	Return On Assets is the ratio of net income (item WC01751) over total assets.	Refinitiv Worldscope
<i>Rule of law</i>	Rule of law is measured by two components, the law and the order. Law measures the impartiality of the legal system and order measures the compliance to the law. The score ranges from 0 to 1 with 0 being the lowest, meaning that the country suffers from high criminality and ignorance of the law, and 1 being a good judicial system.	International Country Risk Guide (ICRG) available at: info.worldbank.org

		g/governance/wgi /pdf/PRS.xlsx
<i>Security FE</i>	Security fixed effects are indicator variables corresponding to the security type issued.	Sagient Research PlacementTracker
<i>Size</i>	Size is defined as the natural logarithm of market capitalization (item WC08001).	Refinitiv Worldscope
<i>Stock illiquidity</i>	Stock illiquidity is measured using the Amihud illiquidity ratio (Amihud, 2002) calculated as the average absolute value of the daily stock return over the daily dollar volume over the period -275 to -26 days prior to the PIPE announcement.	Refinitiv Datastream

This table presents the definitions of the variables used in the paper. All continuous variables are winsorized at the 1% and 99% levels.

Appendix C: Cumulative abnormal returns – sub samples

Panel A: Cumulative Abnormal Returns								
	<i>Traditional PIPEs</i>				<i>Structured PIPEs</i>			
	(-4, +5)	(+6, +100)	(+6, +250)	(+6, +500)	(-4, +5)	(+6, +100)	(+6, +250)	(+6, +500)
<i>Panel A1: All issues</i>								
Americas-excluding-US	1.889***	-14.479***	-38.899***	-80.029***	-1.80***	-5.22***	-24.60***	-63.12***
Asia-Pacific	-0.939***	-12.489***	-32.519***	-64.859***	-2.13***	-29.16***	-48.33***	-69.61***
Europe	-2.209***	-10.639***	-28.199***	-55.169***	-2.59***	-16.79***	-42.40***	-81.53***
United States	2.289***	-12.599***	-32.569***	-57.909***	-4.28***	-25.25***	-55.74***	-92.47***
<i>Panel A2: Initial issues</i>								
Americas-excluding-US	2.67***	-12.98***	-37.10***	-83.89***	-0.86***	11.91***	-17.03***	-53.37***
Asia-Pacific	0.03***	-10.75***	-25.78***	-48.17***	2.17***	-27.43***	-32.36***	-59.66***
Europe	-0.54***	-9.31***	-20.65***	-36.58***	-2.71***	-22.91***	-36.40***	-53.04***
United States	1.29***	-12.08***	-33.92***	-55.64***	-2.68***	-27.63***	-63.13***	-102.22***
<i>Panel A3: Follow-up issues</i>								
Americas-excluding-US	1.37***	-15.42***	-40.03***	-77.55***	-2.11	-10.94***	-27.12***	-66.37***
Asia-Pacific	-1.66***	-13.79***	-37.57***	-77.39***	-4.51***	-30.11***	-57.14***	-75.10***
Europe	-3.73***	-11.83***	-35.10***	-72.22***	-1.74***	-14.99***	-47.83***	-98.90***
United States	2.83***	-12.87***	-31.81***	-59.15***	-4.87***	-24.39***	-53.05***	-88.92***
<i>Panel A4: One issue per year</i>								
Americas-excluding-US	1.79***	-14.44***	-38.74***	-79.77***	-0.99*	-6.01***	-26.34***	-64.89***
Asia-Pacific	-1.04***	-11.71***	-30.61***	-59.94***	-2.57***	-27.74***	-47.39***	-62.45***
Europe	-1.87***	-11.05***	-27.08***	-51.19***	-1.42***	-16.00***	-43.51***	-74.34***
United States	1.78***	-11.84***	-31.42***	-54.55***	-3.34***	-26.68***	-57.77***	-92.20***

Panel B: Buy and Hold Abnormal Returns								
	<i>Traditional PIPEs</i>				<i>Structured PIPEs</i>			
	(-4, +5)	(+6, +100)	(+6, +250)	(+6, +500)	(-4, +5)	(+6, +100)	(+6, +250)	(+6, +500)
<i>Panel B1: All issues</i>								
Americas-excluding-US	0.40***	-19.08***	-38.93***	-60.01***	-2.50***	-11.16***	-33.58***	-55.66***
Asia-Pacific	-1.08***	-13.13***	-27.55***	-47.39***	-4.36***	-27.29***	-41.37***	-38.39***
Europe	-2.24***	-9.34***	-20.91***	-38.50***	-2.03***	-14.28***	-36.03***	-55.96***
United States	1.74***	-11.88***	-25.27***	-41.95***	-3.62***	-22.52***	-43.67	-72.81
<i>Panel B2: Initial issues</i>								
Americas-excluding-US	1.16***	-16.61***	-37.83***	-58.84***	-1.31***	2.69***	-26.75***	-46.78***
Asia-Pacific	-0.23***	-10.41***	-20.95***	-38.29***	-5.35***	-25.33***	-32.54***	-31.13***
Europe	-0.87***	-7.84***	-14.92***	-31.80***	-3.46***	-17.56***	-30.95***	-41.06***
United States	0.77***	-11.31***	-26.36***	-35.44***	-3.29***	-23.69***	-44.11***	-75.11***
<i>Panel B3: Follow-up issues</i>								
Americas-excluding-US	-0.11*	-20.79***	-39.72***	-60.87***	-2.89***	-16.08***	-36.38***	-59.08***
Asia-Pacific	-1.77***	-15.32***	-32.87***	-54.95***	-3.71***	-28.62***	-47.25***	-43.75***
Europe	-3.56***	-10.81***	-26.75***	-45.10***	-1.24***	-12.52***	-38.77***	-64.05***
United States	2.37***	-12.27***	-24.53	-46.28***	-3.76***	-22.01***	-43.47***	-71.85***
<i>Panel B4: One issue per year</i>								
Americas-excluding-US	0.45***	-18.94***	-39.75***	-61.14***	-1.59***	-14.84***	-39.07***	-59.76***
Asia-Pacific	-1.14***	-12.79***	-26.66***	-45.45***	-5.86***	-24.18***	-37.73***	-29.68***
Europe	-1.99***	-9.84***	-20.51***	-36.32***	-1.71***	-11.88***	-36.16***	-50.59***
United States	1.52***	-11.82***	-25.30***	-38.33***	-2.90***	-22.87***	-42.05***	-71.20***

The table summarizes the mean abnormal returns of PIPE issuing firms between 1995 and 2015 by issuers' region. The mean abnormal returns are computed over four time windows, measured in trading days around the announcement of the PIPE issue. Stock price data are obtained from CRSP (US firms) and Datastream (non-US firms). Panel A presents the Average Cumulative Abnormal Returns. Panel B presents the Average Buy and Hold Abnormal Returns. Panels A1 & B1 include all issues. Panels A2 & B2 include only the first PIPE issue of each firm. Panels A3 & B3 exclude the first PIPE issue of each firm and include all the following issues. Panels A4 & B4 exclude all issues that occur in less than 255 trading days from the previous issue. The abnormal returns are winsorized at the 1% and 99% levels. *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.