Private Company Finance and Financial Reporting

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Abstract

This article provides a comprehensive assessment of private firms’ financing sources and their impact on financial reporting practices. We consider debt financing (bank financing, leasing, and government guarantees), equity financing (family ownership, government ownership, employee ownership, and private-equity financing), and trade credit (supplier credit and factoring). Our primary conclusions are that there is significant heterogeneity in the way in which private companies are financed that is influenced by their specific business contexts, and that this heterogeneity in financing is associated with differential demand for and supply of financial reporting.

Key words: Private firms; financing; financial reporting quality; demand and supply factors

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1. Private Firms and Accounting Information in Private Firms

This article focuses on what explains variations in financial reporting practices among private firms, and in particular on the role of financing (broadly defined). We consider a broad range of financing sources, including debt financing (bank financing, leasing, and government guarantees), equity financing (family ownership, government ownership, employee ownership, and private-equity financing), and trade credit (supplier credit and factoring). Our main conclusions are that there is significant heterogeneity in the way in which private companies are financed due to their specific business contexts, and that this heterogeneity in financing is associated with differential demand for and supply of financial reporting. Preparers’ reporting incentives are consistent with this differential demand for financial reporting by the various capital providers. While in many instances, variations in financial reporting practices are explained using standard agency-theoretic considerations, the picture is more nuanced in certain specific financing contexts such as family, government, and employee ownership.

Before proceeding, it is important to recognize the importance of private firms in the economy and discuss whether financial reporting matters for these firms. Without considering these questions one could argue that it is not important to examine variations in financial reporting practices. Thus, we provide discussions on these questions as well as a brief comparison between private and public firms in this section.

1.1 The Importance of Private Firms

Whereas we have numerous studies on publicly-listed companies, the empirical evidence on private firms is rather limited. We believe this is primarily due to data limitations, and a strong case can
be made for the importance of furthering our knowledge of privately-held companies.

First, private firms (i.e., firms that are not traded on public stock exchanges) are the predominant organization in most countries. To illustrate the relative contribution of private firms to international economic activity, Berzins, Bøhren, and Rydland (2008) show that, in the aggregate, nonlisted firms have about four times more employees, three times higher revenues, and twice the amount of assets than listed firms, and that these statistics are representative for most countries in the world. Furthermore, more than 99% of limited liability companies are not listed on a stock exchange in most countries (e.g., Nagar, Petroni, and Wolfenzon 2011; Berzins, Bøhren, and Rydland 2008; Pacter 2004). To further highlight the significance of private firms, according to the U.S. Census Bureau, there are 29 million privately held companies in the United States, 7.6 million of which have paid employees, representing one-half of the nation’s GDP.¹ Similar statistics are found in many countries around the world.

In spite of their economic importance and likely differences from public companies, comparatively little is known about financial reporting by private firms. We believe the primary reason for this is limited data on private companies outside of Europe. In Europe, the filing of financial statements with the relevant regulator is independent of the listing status whereas in for instance the U.S. private firms do not have to file with any easily-available public registry. This provides not only an opportunity in that researchers can focus more on Europe where data are widely available, but also a limitation in that it is unclear whether inferences drawn from European settings generalize elsewhere.

Highlighting the interests in private companies and recognizing the potential differences from public corporations, accounting standard setters have recently increased their focus on the need to better understand the financial reporting requirements for small private companies. For example, the International Accounting Standards Board has developed a separate set of financial reporting requirements for small and medium enterprises (SMEs). In Canada, private firms can choose to use

either International Financial Reporting Standards or Private Enterprise GAAP beginning in 2011. In the United States, the Private Company Council recently issued a guidance on the private-company accounting project, *Private Company Decision-Making Framework*, which suggests that not all private firms need to prepare financial statements under the same set of U.S. GAAP as public firms do and that exceptions and alternatives should be allowed.

### 1.2 Financial Reporting Quality (FRQ) of Private versus Public Firms

Several recent studies consider whether private or public companies provide higher FRQ. Private firms differ from publicly traded firms in several respects. They tend to have more concentrated ownership although some large private firms can have relatively dispersed ownership. With greater ownership concentration, large shareholders can take advantage of their controlling positions to derive private benefits from personal consumption; this is a typical problem of expropriation of minority shareholders and creditors (e.g., Morck, Shleifer, and Vishny 1988).

There are competing hypotheses on the FRQ of public versus private firms (e.g., Hope, Thomas, and Vyas 2013). The “demand” hypothesis predicts that public firms have incentives to provide financial information to meet the information demands of investors and creditors. These incentives arise because public firms have greater ownership dispersion, greater owner-manager separation, and less managerial ownership, resulting in higher agency costs. Public firms also face additional regulations that limit private communication. For private firms, capital providers and other stakeholders are likely to have greater insider access to relevant information and thus, they *may* rely less on financial-reporting information.

The lower demand for (costly) accrual-based financial-reporting information of private firms is often attributed to a lack of agency problems typically observed in public firms. For example, private firms often have a single manager-owner and some capital providers (e.g., private equity providers)
who often take a direct role in helping manage the company (Chen, Hope, Li, and Wang 2011). Private companies are also, on average, more reliant on bank financing than public firms. Because banks often have direct access to inside information and continuous contacts with management, they may rely less on the formal communication of accrual-based financial statements (Berger and Udell 1998). Further, private companies may also have personal ties with lenders, who often are local financial institutions (Vera and Onji 2010; Cole and Wolken 1995). As stated in the PCC’s Basis for Conclusion to the Private Company Decision-Making Framework, “Many preparers of private company financial statements said that the preparation efforts and audit or review costs of complying with some accounting guidance that does not affect reported cash amounts or liquidity often are not justified considering the limited benefits of reporting that information offers to users” (PCC 2013, paragraph BC13). Instead, researchers state that private firms’ financial reports could reflect other objectives such as tax reporting, dividend policy, or insurance requirements (Ball and Shivakumar 2005; Burgstahler, Hail, and Leuz 2006).

The “opportunistic behavior” hypothesis predicts that the FRQ of public firms is affected by managers’ manipulative actions. Managers of public firms are subject to capital-market pressures to meet earnings expectations and they often have equity-based compensation packages, resulting in a greater incentive to manipulate reported earnings. Evidence in favor of the opportunistic behavior hypothesis is more limited and confined to some studies that use either data from specialized industries (e.g., Beatty and Harris 1998; Beatty, Ke, and Petroni 2002) or small samples (Penno and Simon 1986).

Although the evidence to date is not conclusive, we believe it is fair to say that the more recent literature concludes that private firms on average have lower earnings quality than public firms (e.g., Ball and Shivakumar 2005; Burgstahler et al. 2006; Hope, Thomas, and Vyas 2013). Yet, we caution readers about this conclusion as it is difficult to compare such different sets of firms. First, private and public firms tend to be significantly different in terms of size and ownership concentration, so if the
researcher attempts to match on these dimensions the comparison is between a small subset of either set of firms (either the largest private firms or the smallest public firms, or a combination of both). Second, most prior research assumes that the FRQ measures developed for public firms are also relevant for private firms. We consider this latter issue an interesting avenue for future research.

1.3 Does Accounting Matter in Private Firms?

If we believe the overall conclusion from above that private firms are likely to have (on average) lower quality accounting than public firms, a natural question that arises is whether accounting matters at all in private firms.

In our view, the fact that most prior research concludes that private firms display lower quality financial reporting than public firms do, does not imply that accounting is “less important” for private firms than for public firms. In fact, we view it as a promising area for future research to examine in greater depth whether accounting is more or less useful in private firms. A secondary but rather important question is whether private firms’ stakeholders have a similar notion of “high quality” financial reporting as those of public firms. For example, it is possible that stakeholders only consider “cash-flow predictability” to be an important attribute of FRQ for private firms, whereas the literature on public firms highlights a much more multi-faceted view of FRQ that includes multiple aspects such as restatements and meet-or-beat behavior. In this article, we take no stance on these questions. However, we would like to raise some arguments to highlight the potential for accounting to be especially important in private firms and provide some research findings on the benefits of high FRQ for private firms.

Private firms typically disclose less non-accounting information, as such, there are fewer competing sources of information (e.g., Hope, Thomas, and Vyas 2016), increasing the potential importance of financial accounting information to external providers of capital in monitoring
managerial activities. In particular, there is much less coverage for private firms than public firms by sell-side financial analysts, and prior research shows that analysts do not merely disseminate information but also produce new information to the market. In addition, there is on average less media attention (and media scrutiny) for private firms. Similar to analysts, journalists both interpret existing information and produce new information for interested parties. Finally, given that private firms are not listed on stock exchanges, they do not furnish the additional filings and updates that exchanges and securities regulators require and often make publicly available. In conclusion, it is likely (at least certainly possible) that accounting information comprises a larger percentage of the overall information set about private firms than about public firms.

In addition, managerial activities of public firms are partially constrained by market-based mechanisms. For instance, public firms are more susceptible to takeovers that help control for agency conflicts (Lennox 2005). In the absence of market-based measures of firm-value as well as other sources of information such as financial analysts, high-quality reporting may be particularly relevant for evaluation of managerial performance to support personnel and compensation decisions. For example, Indjejikian and Matejka (2009) emphasize the importance of accounting information in compensation contracts for private firms. Similarly, McNichols and Stubben (2008) highlight the role that accounting information plays in internal decision making. Finally, private firms are less likely to have separate management accounting systems from financial accounting systems (e.g., Drury and Tayles 1995), potentially enhancing the significance of accounting in firms' internal decision making. Consistent with this notion, McNichols and Stubben (2008) emphasize how low-quality financial information implies distorted information to decision makers that in turn leads to inefficient investment decisions.

While the above arguments raise the possibility of accounting being important in private firms, we further provide direct evidence on the role of accounting in private firms. Given that the role of auditing is discussed in a separate article at this conference, we will merely mention that prior research
provides evidence of the usefulness of auditing in a private firm context (e.g., Allee and Yohn 2009; Hope, Thomas, and Vyas 2011; Minnis 2011; Clatworthy and Peel 2013; Kausar, Shroff, and White 2016; and others).

In a recent study, Hope, Thomas, and Vyas (2016) use a large sample of U.S. private firms and show that accrual quality in private firms is associated with the ability of accruals to predict future cash flows. Chen, Hope, Li, and Wang (2011) examine the role of FRQ in private firms from emerging markets, a setting in which extant research suggests that FRQ is less conducive to the mitigation of investment inefficiencies (i.e., countries with low investor protection, bank-oriented financial systems, and stronger conformity between tax and financial reporting rules). In spite of such “tension,” using firm-level data from the World Bank, the authors conclude that FRQ positively affects investment efficiency. It is also often asserted that greater emphasis on taxes reduces the informational role of earnings and that the focus on tax minimization is more pronounced for private firms. However, there is very little empirical evidence on this issue to date. An exception is the trade-off analysis offered by Chen, Hope, Li, and Wang (2011). Specifically, Chen et al. (2011) find that the relation between FRQ and investment efficiency is decreasing in the incentives to minimize earnings for tax purposes, a connection that prior literature has merely asserted but not tested.

Furthermore, a more significant benefit of providing higher-quality FRQ is perhaps the access to debt financing with favorable terms. While Section 2 extensively reviews the literature on the impact of debt financing on private firms, representative examples of such studies include Van Canegham and Van Campenhout (2012) and Vander Bauwhede, de Meyere, and Van Cauwenberge (2015), in which authors report that higher accounting quality reduces borrowing costs. Consistent with these findings, Chen et al. (2011) also show that the effect of FRQ on investment efficiency increases in bank financing.

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2 In an earlier version of that paper, the authors also showed a positive association between FRQ and investment efficiency for the same sample of firms.
In conclusion, the evidence presented above suggests that (1) private firms are important to the economy and that (2) accounting information is indeed economically important for private firms. In our next and primary chapter, we focus on what explains the variations in the FRQ among private firms. Specifically, we focus on the heterogeneity in financing sources within private firms — we predict that different capital providers (e.g., families, governments, private-equity firms, banks, and suppliers) face differential agency conflicts and information asymmetry, and thus, they have differential financial reporting needs. The examination of financing heterogeneity within private firms is a natural extension of the literature that has examined the more basic public-private contrast. The evidence discussed in the next chapter is largely consistent with the notion that the reporting incentives of preparers respond to the differential demand for financial reporting by various capital providers.3

2. Impact of Financing Sources on FRQ in Privately-Held Firms

Privately-held firms obtain their financing from a variety of sources. Traditional sources of funding include, *inter alia*, debt financing (including bank financing, leasing, and government guarantees), equity financing (including family ownership, government ownership, private-equity financing, and employee ownership), and trade credit (including supplier credit and factoring). We also consider other non-traditional and new online sources of funding such as crowdfunding. Despite the array of potential sources, external financing constraints remain particularly acute for private firms as they are typically smaller and less established compared to public firms (Gross and Verani 2013), and because they by definition do not have access to public equity.

While the impact of ownership structure has been investigated in a variety of contexts for public firms, an examination within private firms is relatively new. Private firms differ from public firms in a

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3 A general caveat is that many of the studies we discuss are published in lower-tier journals and thus not subject to as stringent review process as articles published in top journals.
number of important ways. Private firms tend to be more closely held, have less formal governance
mechanisms, and have greater managerial ownership. Moreover, major capital providers often have
insider access to corporate information (e.g., banks) and could take a more active role in management
(e.g., venture capitalists). Thus, factors that affect accounting in public firms may not affect accounting
in private firms in the same way.

We examine the impact of the various financing sources on firms’ financial reporting choices.
We first begin with a discussion of debt financing (particularly bank lending, leasing, and government
credit guarantees), followed by a discussion of equity financing (beginning with a discussion of two
dominant concentrated ownership types — family and government ownership, followed by private
equity and venture capital financing), trade credit (including supplier credit and factoring), and finally
end with a new online alternative source of financing — crowdfunding. For each source of funding, we
first begin with a brief background and discuss the economic incentives and conflicts created by the
funding structure, followed by a discussion of the impact of these economic incentives on firms’
financial reporting choices.4

2.1. Debt Financing

2.1.1. Background

Given their lack of access to public capital markets, the capital structure of privately-held firms
naturally comprises a combination of private equity and/or private debt. Further, considering the fact
the availability of private equity tends to be concentrated in certain industries, geographies, or firm life-
cycle stages, it is easy to conjecture that private firms are, on average, more leveraged than publicly
listed firms (this idea is supported by descriptive statistics for U.K.-based firms reported in Agkuc,

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4 Other stakeholders (that do not provide financing, at least not directly) may also affect firms’ financial reporting choices,
such as lobby groups, media, competitors, tax authorities, and domestic and foreign regulators (e.g., Hope, Ma, and Thomas
2013; Akamah, Hope, and Thomas 2016). We do not discuss these non-finance determinants of variations in FRQ in this
article.
Choi, and Kim 2015, and for U.S.-based private-equity firms in Badertscher, Givoly, Katz, and Lee 2015). This implies that, relative to public firms, debt financing is likely to be more important in private firms (Berger and Udell 1998; Brav 2009), and that demand from creditors is likely to be a key influencer of private borrowers’ FRQ.

The impact of debt financing on firms’ financial reporting choices arises from two distinct mechanisms. The first mechanism is generally applicable during the credit-granting decision stage and pertains to the role of financial reporting in reducing informational frictions faced by external providers of capital. This channel predicts that lenders demand high quality accounting reports from borrowers to reduce their information risk in forecasting future cash flows.5 The second mechanism pertains to subsequent ongoing monitoring by lenders — lenders demand high-quality financial reporting to increase debt-contracting efficiency. An extensive literature in financial economics has studied lenders’ reliance on covenants to mitigate the agency conflicts between stockholders, managers, and bondholders (e.g., Jensen and Meckling 1976; Myers 1977; Smith and Warner 1979; Aghion and Bolton 1992; Haugen and Senbet 1988). Borrowers are commonly required by banks to comply on an ongoing basis with “maintenance” covenants that are based on financial ratios derived using GAAP-compliant accounting numbers. Violation of covenants results in transfer of control to the creditors. However, the efficacy of these financial ratio-based covenants to appropriately allocate state-contingent control rights (and accordingly, the efficiency of these debt contracts) rests on the quality of the underlying accounting numbers — low-quality accounting metrics will not be sufficiently reflective of the underlying state (Aghion and Bolton 1992).

These two mechanisms apply generally to both public and private firms, and suggest that firms obtaining debt financing will signal credible financial information to lower their cost of capital, as well

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5 Paper such as Francis, LaFond, Olsson, and Schipper (2005) and Bharath, Sunder, and Sunder (2008) have studied the relation between FRQ and price- and non-price debt contractual terms for public firms.
as produce high-quality financial statements subsequently for ongoing monitoring of covenant compliance by banks.\footnote{Note that loan covenants are common even among small private firms (Niskanen and Niskanen 2004).} Note, however, that this statement is not tautological — as Berger and Udell (1998) suggest, non-accounting information is also frequently used by lenders for credit appraisal and may well be more important for small privately-held firms.\footnote{Relationships between management and bankers are often also very important, perhaps especially in less-developed countries. For example, Hope, Yue, and Zhong (2016) find that after political connections (a form of relationship) are cut off for Chinese firms (due to Rule 18), firms respond by increasing their FRQ to better access financing. In other words, they find evidence of a substitute relation between such relationships and FRQ.} In addition, firms may engage in earnings management to avoid breaching covenants.

\subsection*{2.1.2. Usefulness of borrowers’ financial reporting to banks}

Survey evidence suggests that bankers frequently require provision of financial reporting information by privately-held borrowers. For example, Collis and Jarvis (2000) survey managers of small companies based in the U.K. and report that 69\% of the firms in their sample provide their statutory accounting reports to banks and other capital providers. Collis and Jarvis (2002) confirm the role of bank financing in borrowers’ financial reporting and report that statutory accounting reports are useful for maintaining relationships with banks. Collis (2008) provides a survey of small private companies and reports that a majority of respondents (64\%) consider published accounts to be useful to creditors.\footnote{In an archival study that spans 13 European countries, Peek, Cuijpers, and Buijink (2010) suggest that compared to public firms, creditors of private firms rely more on relationship lending, and less on financial-reporting information to mitigate shareholder-creditor conflicts of interest.} While the studies cited above suggest that bankers demand high-quality financial statements to improve the \textit{ex-ante} efficiency of their credit-granting decision, Goncharov and Zimmerman (2007) show that Russian private firms may have incentives to manage earnings subsequently in response to banks’ monitoring activities.

Findings on the usefulness of financial reporting to bankers are evidently varied and contextual — for example, the CAN Interpreta (2011) pan-European survey suggests that information other than
accounting reports — such as commercial reports and banking information — were more useful among the respondents. Howorth and Moro (2012) also report anecdotal evidence from Italy that suggests that bank managers do not consider statutory financial reporting information to be very useful as such information can be influenced by tax strategy and other extraneous considerations.\(^{10}\) Cassar, Ittner, and Cavalluzo (2015) study lending decisions to small U.S. borrowers and find while that use of accrual accounting does not impact the loan approval or denial decision, conditional on approval, accrual accounting usage is associated with a lower interest rate on loans. Minnis and Sutherland (2015) employ a database of small commercial bank loans and document an interesting U-shaped relation between borrower risk and demand for financial statements by banks — arguing that financial statements-based monitoring is not incrementally beneficial for reputed low-risk borrowers, and that it is not credible for high-risk borrowers with little to lose by way of reputation. The authors further uncover a substitutability between demand for tax returns and financial statements.

The literature discussed above has extensively examined the usefulness of financial reporting for bank lenders, but there is little systematic evidence on what constitutes useful or high quality financial reporting from the bankers’ perspective. We believe that this is an interesting question for future research; this question might be addressed through carefully conducted field studies or interviews.\(^{11}\)

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\(^{10}\) Bigus, Georgiou, and Schorn (2015) study the earnings quality of German private firms, and find that unincorporated firms have a lower incentive to use financial reporting as a means of maintaining their relationship with lenders compared to their incorporated counterparts (this result is attributed to the fact that lenders of unincorporated firms have an additional layer of security via recourse to owners’ assets).

\(^{11}\) Another interesting avenue for future research pertains to credit unions (a segment of the banking sector). The importance of credit unions in small business lending has increased sharply in the U.S. during the past decade, and has tended to partially offset the declines in business loans at traditional commercial banks (Wilcox 2011). Credit unions typically operate within pre-defined geographical and/or sectoral mandates, and accordingly have the potential for utilizing their specific local knowledge and business insights to lend to private firms that are small and informationally opaque (Whittam, Talbot, and Mac an Bhaird 2015). We consider it an interesting area for future research to examine the differential weight placed by credit unions on traditional financial statement information vs. sector-specific or local geographical information.
2.1.2. FRQ and bank-loan contracting outcomes

A large portion of the literature derives inferences concerning demand and supply of financial reporting information by private firms by examining the realized loan outcomes of these firms. For example, Blackwell, Noland, and Winters (1998) examine a sample of 212 revolving credit agreements pertaining to small U.S. private firms, and report that firms that have audited financials pay lower interest rates. Employing a sample of small U.S. private firms with data from the National Survey of Small Business Finances, Allee and Yohn (2009) find that firms that prepare accrual-based accounting statements receive debt financing at interest rates that were on average lower by 70 basis points lower than other firms in the sample. Minnis (2011) reports similar findings that audited U.S. private firms enjoy a cost of debt that is lower by 69 basis points pointing toward a certification role for audits. Similarly, Hope, Thomas, and Vyas (2011) use a sample of private firms from 68 countries to document that private firms with audited financials face lower financing costs and constraints. Gassen and Fuelbier (2015) examine a dataset comprising European private firms during 1998 to 2007 and show that firms with higher levels of debt have greater income smoothing, and this relation is stronger in countries with higher bankruptcy and contract-enforcement costs (see also Hope 2015). Their findings are consistent with creditors demanding more income smoothing for contracting-efficiency reasons. Chi, Dhaliwal, Li, and Lin. (2013) study the voluntary filing of financial statements by Taiwanese private companies, and find that voluntary filers enjoy a lower cost of debt.\(^\text{12}\)

The literature cited above comprehensively links FRQ to loan interest rates; however, we believe that future work could move beyond this simple relation on multiple dimensions. For example,

\(^{12}\) A number of studies infer FRQ using audit-related measures. Van Canegham and Van Campenhout (2012) analyze Belgian private company data and find that information quality and quantity (measured using auditing measures) are positively related to financial leverage. Vander Bauwede, de Meyere, and Van Cauwenberge (2015) examine a sample of Belgian private firms from 1997 to 2010 and report that accruals quality reduces borrowing costs. Karjalainen (2011) examines Finnish private firms during 1999-2006 that firms with higher quality audits (such as those conducted by a Big 4 auditor or reputed audit personnel) and higher accruals quality receive a lower cost of debt. Koren, Kosi, and Valentinicic (2014) report somewhat contradictory findings using a sample of Slovenian small private firms — firms with voluntary audits are associated with a higher cost of debt suggesting an unresolved endogeneity in voluntary audit choice. A recent
what is the *relative* importance of various loan terms such as interest rates, covenants, collateral, maturity, and personal guarantees for bank lending to private firms, and how does the collective set of loan terms vary with FRQ?

2.1.3. State-owned banks

This section focuses on lending by an important subset of banks — state- or government-owned banks. The share of state-owned banks in total banking assets increased during most of the twentieth century, reaching a share of 67% in 1970, but subsequently declining sharply to 41% in 1995, and further down to 22% in 2009 (La Porta, Lopez de Silanes, Shleifer, and Vishny 2002; World Bank 2013). Despite this decline, state-owned banks remain dominant in important developing countries such as China, India, and Egypt. The financial crisis reinvigorated interest in state-owned banks — observers argue that state-owned banks do not suffer from the painful procyclicality observed in private bank-lending activity — the cushion of a stable deposit bank and government backstops allow them to maintain lending to important economic and social sectors during economic downturns (e.g., Rudolph 2009, 2010; Micco and Panizza 2006; Bertay, Demirgüç-Kunt, and Huizinga 2012). As small private firms appear to have been more adversely impacted by the retrenchment of bank lending during the crisis (OECD 2009), the role of state-owned banks is especially pertinent.

The potential alleviation of the consequences of a general failure of the private bank sector is what Sapeinza (2004) describes as the “social view” of government-bank ownership, where state-owned banks contribute to general socio-economic welfare and development. Sapienza (2004) also describes two countervailing negative views. The “political view” of state-owned banks considers such

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study by Kausar, Shroff, and White (2016) exploits a natural experiment involving U.K. private firms and shows that voluntary choice of an audit by private firms conveys incremental information about the firm’s type to external capital providers. Lisowsky and Minnis (2013) also examine the choice of voluntary audit among U.S. private firms and report a positive association between debt levels and the presence of audited U.S. GAAP financial statements. Lennox and Pittman (2011) report similarly supportive evidence that after auditing became voluntary for a certain population of small U.K. private firms in 2004, those that continued to be audited voluntary received higher credit ratings, which has implications for the cost of debt financing. Dedman and Kausar (2012) also report a similarly positive relation between retention of voluntary audit and credit ratings for the sample of small U.K. private firms for which auditing became voluntary in 2004.
entities to be inefficient compared to private-sector banks, suggesting that they are used by politicians to inefficiently tunnel resources to their friends and families or pet projects supporters. The “agency view” suggests that even if these entities are created with a “social view,” bureaucratic agency costs prevent efficient monitoring of bank managers and could lead to corruption in the banking sector. Further, state-owned banks, riding on government support, could crowd out the private sector and render the overall banking industry inefficient in the long run.\(^\text{13}\)

What sort of financial reporting incentives do state-owned banks engender for prospective and existing borrowers? This could be an interesting avenue for future research. On one hand, do state-owned banks’ informational needs pertain to whether or not a social objective is fulfilled, rather than cash-flow predictability? In that case, traditional metrics of FRQ are likely to be meaningless (and instead be replaced by an emphasis on CSR reports). On the other hand, if state-owned banks are professionally managed and conduct regular monitoring of the borrowers, then they might instead have a positive effect on FRQ.

2.1.4. Government loan guarantees

As discussed earlier, private firms are generally less established compared to their public counterparts, and accordingly experience greater constraints while accessing bank lending (Zecchini and Ventura 2009; Green 2003; Roper 2011). Empirical evidence suggests that government credit guarantees improve the likelihood of accessing bank credit for small businesses — evidence includes Riding, Madill, and Haines Jr. (2007) in Canada, KPMG (1999) in the United Kingdom, Zecchini and Ventura (2009) in Italy, Boocock and Shariff (2005) in Malaysia, Usegi, Sakai, and Yamashiro (2010) in Japan, and Lelarge, Thraer, and Sesmar (2008) in France. As a natural extension, researchers have also tried to study whether this alleviation of financing constraints via loan guarantees impacts the

\(^{13}\) Which of these three views dominates surely depends upon specific institutional context. However, Berger and Udell (2006) summarize a large empirical literature that, at least in stable economic times, is suggestive of an on-average negative effects of state-ownership in terms of non-performing loans of the banks and overall effects on credit availability and economic performance.
performance and default probability of recipient firms and has reported mixed evidence. For example, Arraiz, Melendez, and Stucchi (2011) report that a higher growth in employment and output upon participation in a Colombian loan-guarantee program, but finds no improvement in investments or productivity. Similarly, Oh, Li, Heshmati, and Choi (2009) report growth in sales, employment, and wage levels among firms participating in Korean credit-guarantee programs, but find no evidence of an impact on productivity, R&D, or investment intensity. For participants in a French program, Lelarge et al. (2008) report improvements in employment and investment growth, but note that the participant firms subsequently exhibit higher default probability. Similar deterioration in default rates is also documented by Usegi et al. (2010) for a sample of Japanese firms and by Cowan, Drexler, and Yanez (2008) for a sample of Chilean firms, suggesting that as a negative by-product of lowering banks’ risk exposures, there may be a decrease in bank-monitoring incentives — that banks have lower incentives to monitor loans guaranteed by government schemes rather than borrowers’ personal guarantees.

To the best of our knowledge, research evidence does not exist on the role of financial reporting in the context of government credit guarantees. We appeal to agency theory and propose the following testable hypotheses: (a) firms that make a better case for their contribution to governmental social and economic policy objectives, such as by reporting figures on local job creation and social-responsibility initiatives, can achieve greater success in accessing credit through governmental guarantee schemes, (b) transparency through a variety of channels (such as a clear website with biographies of the owners and business objectives) can improve the likelihood of funding, and (c) improved financial reporting transparency can mitigate minority investors’ concerns about dilution in bank monitoring due to government guarantees.

2.1.5. Leasing

While bank lending is the predominant source of financing for private firms, small private firms that are informationally opaque face significant constraints to bank-financing access (ECB 2012; OECD
A Euro-area survey (ECB 2012) suggests that leasing is the third-most important source of financing for SMEs in Europe behind traditional bank loans and other forms of revolving bank credit. Leasing can be seen as a type of asset-based financing — the lessor lends an asset to the lessee for a contractually determined duration in exchange for contractually pre-determined payments (IAS 17). Variations in contractual structures notwithstanding, leasing involves separation of legal ownership and economic use of the asset. The lessor retains legal ownership of the leased asset, and accordingly the asset serves as a collateral for this type of financing.\textsuperscript{14}

Leasing is an attractive financing alternative for young and small informationally opaque firms with high growth needs (Ayadi 2009; Oxford Economics 2011; Sharpe and Nguyen 1995; Eisfeldt and Rampini 2008) — for such firms, severe information asymmetry deters unsecured lending, and posting different types of firm assets as collateral might turn out to be prohibitively expensive due to growth needs. Gallardo (1997) suggests that as opposed to a cash lender who is concerned about both the principal and the interest, a lessor is primarily concerned about the ability of the borrower to make periodic lease payments.\textsuperscript{15}

For young firms, the risk of adverse selection is acute. However, leased assets are also vital to business operations, making any default very costly for the lessees. It can also be argued that the lessor owns the asset and accordingly understands the underlying industry and asset markets better than a traditional bank (Schmit and Stuyck 2002). The leased asset serves as a de-facto collateral, further lowering the credit risk faced by the lessor. Studies confirm that leasing represents a lower credit risk compared to other forms of financing (e.g., Schmit 2005; De Laurentis and Mattei 2009). On the demand side, leasing can be attractive to lessees due a variety of different price, accounting, regulatory, and timing reasons (Oxford Economics 2011).

\textsuperscript{14} In addition to greater security, Sharpe and Nguyen (1995) and Eisfeldt and Rampini (2008) argue that lessors receive a higher priority in bankruptcy due to legal ownership of the asset.

\textsuperscript{15} The spectrum of risks and rewards of ownership that are transferred to the lessee increases from leases that are classified for accounting purposes as “operating leases” to those that are classified as “financing” or “capital leases.”
A relatively large body research examines the structuring of leases as either operating or capital leases to enable achievement of off- vs. on-balance sheet accounting treatment for publicly-listed companies in the U.S.\textsuperscript{16} Lasfer and Levis (1998) is an example of a U.K.-based study that examines the determinants of leasing for both public and private firms, and documents the importance of taxes, capital investment intensity, firm size, and leverage in determining the leasing decision. However, the study is careful in suggesting that these determinants vary by firm size (which could be argued as a proxy for the external financing opportunity set), and that small firms with high-growth potential are particularly likely to use leasing as a source of financing. Bathala and Mukherjee (1995) survey a group of small U.S. firms (potentially some are privately-held) and show that manufacturing firms (in their sample) exhibit high growth and are highly leveraged are likely to use lease financing. Their surveyed firms also suggest off-balance sheet accounting treatment as an advantage of leasing. Beatty, Liao, and Weber (2010) examine the lease-vs.-buy decision for a sample of U.S. listed firms and report that low-accounting quality firms exhibit greater use of leasing, and that this relation is diminished when traditional bank lenders have greater incentives and ability to monitor the borrowers’ investments. An extension of Beatty et al. (2010) in the private-firm setting could provide interesting future research. Also, while the literature has tended to concentrate on the leasing decision, we are \textit{not} aware of work in accounting that examines the role of financial reporting in impacting the cost and other terms of lease financing. Future research can also shed light on what specific aspects of lessee FRQ matter to lessors vs. traditional bank lenders.

2.2. Equity Financing

2.2.1. Family ownership: Background

The importance of family firms to the global economy is well documented — family businesses generate 70 to 90% of global GDP (Family Firm Institute 2008). Che and Langli (2016) report that 80% of U.S. businesses are family firms, contributing over half of the U.S. GDP. The importance of family firms is similarly high in other parts of the world, accounting for 44% of large firms in Western Europe, and over two-thirds of firms in East Asia (Cheng 2014; Prencipe, Bar-Yosef, and Dekker 2014; Claessens, Fan, and Lang 2000). Family firms permeate all important sectors of the economy, including the heavily-regulated utilities and financial industries (Chen, Chen, and Cheng 2008). While there is no singular definition of family firms, they are commonly defined as firms in which the founders and their family members or descendants occupy top positions in the firms’ management, serve on their board of directors, or are controlling shareholders or blockholders (Cheng 2014).

Family firms are characterized by three important features (Cheng 2014). First, family owners have concentrated equity ownership in their firm, but unlike other blockholders who may be professional equity investors, family owners are typically poorly diversified and as a result have a lot of “skin in the game” — their personal wealth is directly impacted by their corporate decisions. Second, family owners typically have investment horizons that are longer than other active blockholders, primarily due to the fact that family businesses are passed on from one generation to the other (e.g., the Ford family has been actively involved in management for multiple generations). Third, founding families are actively involved in managing their companies and typically occupy senior management positions such as the CEO position, and often appoint family members on the company’s board of directors (Anderson and Reeb 2003, 2004). As discussed below, this active involvement in firm
management substantially mitigates the typical owner-manager agency conflict and ensures that founding families’ business interests and preferences are well-protected.

These unique characteristics of family firms influence the prevalence and extent of agency conflicts between various stakeholders in the firm. First, family firms’ concentrated and undiversified equity-portfolio holdings imply that the typical free-rider problem that firms with diversified holdings face is substantially mitigated for family firms (Shleifer and Vishny 1986). Family owners have strong incentives to monitor the firm’s management, thereby mitigating the common shareholder-manager conflict of interest (Jensen and Meckling 1976; Hope, Langli, and Thomas 2012). Second, the negative side of concentrated ownership is the potential for controlling shareholders to extract “private benefits of control” (e.g., pursuit of value-destroying pet projects and direct wealth expropriation) at the expense of minority shareholders (Shleifer and Vishny 1986; Demsetz 1983). This potential is exacerbated in instances where family owners enjoy control rights that are disproportionate to their cash-flow rights. Accordingly, whereas the family-ownership structure mitigates shareholder-manager conflicts, it has the potential to exacerbate majority-minority shareholder conflicts. Third, due to the inter-generational nature of family businesses, family owners are less concerned about short-term career concerns and have a significantly longer-term investment horizon compared to other firms. This long-term orientation of family firms spills over into long-term business relationships with other stakeholders as well (such as trade partners and bankers).

**Empirical evidence on economic consequences of family ownership**

The agency conflicts discussed above are particularly acute for large firms with professionally hired (external or non-family) management, and widely dispersed minority shareholders. In other words, the ability of family ownership to mitigate or exacerbate agency conflicts is most likely to be prevalent in publicly-listed firms. Accordingly, it is not surprising that research evidence on family firms has tended to focus on founding families’ influence on listed firms. However, this research focus
also be driven by data-availability considerations. We direct readers to Hope (2013), Cheng (2014), and Prencipe et al. (2014) for comprehensive reviews.

The relation between family ownership and firm performance is of first-order importance. Consistent with family ownership mitigating agency conflicts and enabling a long-term investment horizon, some studies conducted using publicly-listed firms report a positive relation between family ownership and firm performance (Anderson and Reeb 2003; Lee 2006 and Maury 2006), while some others report a negative relation (Stewart and Hitt 2012). Similarly, the limited evidence on private family firms also sheds a nuanced picture. Sciascia and Mazzola (2008) and Westhead and Howorth (2006) do not find a significant relation between family ownership and firm performance among Italian- and U.K-based private companies. Che and Langli (2016) report a U-shaped relation between family ownership and performance for a sample of Norwegian privately-held family firms. Che and Langli (2016) also find that firm performance is positively related to the ownership of the second-largest owner, percentage of family members on the company’s board, and the power of the family. Arosa, Iturralde, and Maseda (2010) analyze Spanish private firms and document that the relation varies with the family generation (first or subsequent) that is managing the business.

The collective research evidence on listed family firm suggests that such ownership has beneficial corporate governance effects and is associated with higher FRQ. For example, Wang (2006) finds that among S&P 500 constituents, family firms exhibit higher earnings quality than non-family firms. Tong (2007) and Jiraporn and Dadlt (2009) report supportive evidence using samples of S&P 500 and S&P 1500 firms respectively. Ali, Chen, and Radhakrishnan (2007) also use a sample of S&P 500 companies and report higher earnings quality in family firms than non-family firms. However, they find that family firms disclose less information than non-family firms (see also Chen, Chen, and Cheng 2008). Using a sample of Italian listed firms, Prencipe, Bar-Yossef, Mazzola, and Pozza (2011) find less income smoothing behavior among family-controlled firms. Cascino, Pugliese, Mussolino, and
Sansone (2010) also analyze Italian listed firms and report that family ownership is associated with higher earnings quality.

Research evidence concerning financial reporting by privately-held family firms is more limited, and often focuses on auditing. For example, Hope, Langli, and Thomas (2012) utilize detailed data on private-firm financials and family relationships from Norway to study the relation between auditor effort and agency conflicts, and document that the agency conflicts vary systematically with family involvement. Carey, Simnett, and Tanewski (2000) examine privately-held family firms in Australia, and show that the prevalence of external auditing (a measure of financial reporting credibility) in family firms is positively associated with the extent of agency conflicts within the firm and with the level of debt. Niskanen, Karjalainen, and Niskanen (2010) study small Finnish privately-held firms and report that family ownership is negatively correlated with usage of Big 4 auditors (a proxy for audit quality). Stockmans, Lybaert, and Voordekers (2010) study Flemish private SMEs and report that while family owners (especially first-generation owners and founders) prioritize nonpecuniary goals, they are prone to upward earnings management to mask negative performance (and to avoid a decrease in their “socioemotional wealth” which is akin to reputational capital).

2.2.2. *Government ownership: Background*

The aftermath of the financial crisis has witnessed a spirited debate on regulation and the extent to which governments should be involved in businesses. As Hope (2013) details, state ownership is not new nor is it confined to Europe or Asia — governments all around the world have looked at promoting economic growth at varying points in time by supporting businesses through a variety of financing means. While the involvement of governments in businesses gained traction globally during the 1900-

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17 Specifically, Hope et al. (2012) analyze auditors’ increase of effort and firms’ choice of auditors in situations with higher level of agency conflicts. For a large sample of private firms, they use unique data to measure direct and ultimate ownership for each shareholder as well as extended family relationships. They find that audit fees vary as hypothesized with firm-level characteristics related to ownership structures and family relationships. Second, they show that firms in higher agency-cost settings respond by hiring a Big-4 auditor.
1970 period, the past few decades leading up to the crisis in 2008 witnessed large-scale privatizations and general retrenchment of the government from businesses in developed countries (The Economist 2012). However, the narrative has become more nuanced recently, with many looking toward the phenomenal growth of China and other East-Asian countries as shining example for the success of “state capitalism” (The Economist 2012; Hope 2013). These means of government financial support include (a) direct ownership of a firm’s equity and (b) indirect support by way of credit guarantees, subsidies, and tax credits.

Perhaps the most visible form of government involvement is ownership of equity. Some of the world’s most influential business entities are state-owned (defined as firms in which the government has a significant equity stake). Notable examples in the energy sector include Gazprom from Russia, Statoil from Norway, and China National Petroleum Corporation from China in the energy sector. State ownership is widespread across non-energy industries as well — ranging from railways (e.g., Amtrak and Indian Railways) to mobile communication (e.g., China Mobile and BSNL India) to ports (e.g., Dubai Ports Authority). These government-owned behemoths are influential in the global economy and by virtue of their size and importance they tend to be publicly listed.\(^\text{18}\)

_Empirical evidence on state-owned enterprises (SOEs)_

Extant literature has demonstrated both theoretically and empirically that ownership structure plays an important role in shaping corporate governance and firm performance (e.g., Shleifer and Vishny 1997). Much of the research evidence on the effects of government ownership has tended to focus on publicly-listed firms. This is not surprising given data limitations. These data limitations appear to be especially acute for in the context of government-owned firms, as empirical evidence on

\(^{18}\) Another form of government support that is more pertinent to smaller privately-held companies pertains to government programs that are meant to ease firms’ access to financing. Examples include small-business financing programs that guarantee a certain percentage of bank loans as long as some qualifying criteria are met (such programs are operational, with varying degrees of success, in developed countries such as Canada, the U.K., and the U.S., as well as in developing countries such as Ghana, Croatia, Tanzania, and India). We discuss such findings in the section on debt financing.
unlisted government-owned firms is virtually non-existent. Accordingly, the evidence presented below largely pertains to listed state-owned firms, followed by conjectures on how government ownership is likely to differentially impact privately-held firms.¹⁹

Much of the empirical research on state-owned enterprises has tended to focus on China, primarily because it has one of the highest percentage of SOEs in the world (Hope 2013). The state, directly or indirectly, is the controlling shareholder in almost a third of Chinese listed companies (Tian 2001). The evidence from China on the linkages between state ownership and firm performance has been mixed (Wang and Judge 2011).²⁰

Several papers document differences in financial reporting incentives between Chinese SOEs and non-SOEs, especially around IPOs. These studies provide interesting evidence on the reporting incentives of private firms just before they switch their listing status. For example, Chen, Wang, and Wei (2015) study 437 Chinese IPO firms and report a lower level of earnings management around IPOs by SOEs compared to non-SOEs, and that better access to bank financing (i.e., lower financing constraints) for SOEs is the underlying factor that reduces the need for managing earnings. Aharony, Lee, and Wong (2000) examine earnings management around 83 IPOs by Chinese SOEs between 1992

¹⁹ Hope (2013) discusses two countervailing forces that arise due to government ownership. First, according to the property-rights theory, unlike family ownership, state ownership does not incentivize the firm managers to pursue profit maximizing strategies as the state owns the controlling stake in the firm (Hart and Moore 1996). It is also not clear whether profit maximization or specific social objectives constitute the objective function of state-owned firms; accordingly, it remains unclear whether state-owned firms would penalize shirking by managers in the same way as private firms. However, arguments could be made that striving to achieve certain social objectives, without necessarily emphasizing on cost minimization or profit maximization has the potential of having benefits for delivering higher quality service to certain sections of the society (e.g., Hart, Shleifer, and Vishny 1997). However, as Schmidt (1996) argues, there is a trade-off involved — there could be too much state interference for political reasons that could be masked under the social-policy umbrella (see also Boardman and Vining 1989; Megginson et al. 1994; Shleifer 1998).

²⁰ On the negative side, Bai, Liu, Lu, Song, and Zhang (2004), Xu and Wang (1999), and Qi, Wu, and Zhang (2000) document a negative relation between firm performance and government ownership, whereas Tomasic and Andrews (2007) report survey evidence in which participants outline a lack of minority shareholder protection. However, governments are also more likely to be long-term oriented and provide financing across the business cycle; accordingly, some studies such as Chen and Gong (2000) report a positive correlation, whereas others such as Tian and Estrin (2008), Tian (2001) and Hess, Gunasekarage, and Howe (2010) find a more nuanced U-shaped relation between government ownership and market value. With regards to differences in managerial incentives between SOEs and non-SOEs in China, s Kato and Long (2006) find that pay-performance sensitivity is lower for SOEs compared to other firms. Firth, Fung, and Rui (2007) document that SOEs are likely to have CEOs who are former bureaucrats and exhibit lower management quality. Conyon and He (2011) find that SOEs have a lower level of CEO compensation and incentives and are less likely to fire CEOs for poor performance.
and 1995, and document that earnings management behavior as observed through pre-IPO accruals and post-IPO ROA decline is statistically significant in unprotected or more competitive industries that are less likely to be favored by the state in the IPO-selection process (protected industries such as energy and raw materials are favored by the state and thus they need not manage earnings to be selected for an IPO). Wang and Yung (2011) report that SOEs benefit from government protection and are accordingly less inclined to manage earnings (see also Ding, Zhang, and Zhang 2007). Chen, Chen, Lobo, and Wang (2011) examine Chinese listed firms and document that the effects of audit quality on earnings management and cost of equity capital are more pronounced for non-SOEs than for SOEs.\footnote{Similarly, Wang, Wong, and Xia (2008) finds that Chinese SOEs controlled by local governments are more likely to hire small local auditors, consistent with the local geographic incentives of these SOEs.}

The evidence on unlisted SOEs is rather sparse. Capalbo, Mollica, and Palumbo (2014) examine a sample of 5,349 private Italian SOEs and report that while these firms engage in earnings management, the extent of earnings management is lower than non-SOEs. We believe that while most of the studies reviewed above largely pertain to Chinese companies just prior to or post public listing, the implications apply broadly to privately-held companies as well. We conjecture that potential governance issues as well as benefits that stem from state ownership are likely to be amplified away from the public gaze. For example, on one hand, corrupt politicians can more easily tunnel corporate resources without the threat of market discipline.\footnote{See Hope, Li, Liu, and Wu (2016) for an in-depth examination of how news related to tunneling problems is censored in China.} On the other hand, governments can more easily orient SOEs toward achievement of long-term specific social objectives without being answerable to the equity market on a frequent basis. Which way the pendulum swings on average remains an empirical question.

2.2.4 Employee Ownership

Another widespread form of concentrated ownership is employee ownership — survey data from National Center for Employee Ownership (NCEO) suggests that 36% of employees working for
U.S. companies (or about 28 million Americans) have equity ownership interest in their firms through stock holdings or stock-option holdings. Employees can obtain equity ownership in their companies through a variety of approaches, including the most common form of employee stock-ownership plans (ESOPs), stock and profit-sharing bonus plans, and other broadly-granted stock-option and equity awards. The NCEO estimates total assets held by ESOP and ESOP-like plans in the U.S. to be approximately $1.3 trillion. NCEO data suggest that an overwhelming 92% of ESOP and ESOP-like plans pertain to privately-held companies. Managerial excesses during the financial crisis have rekindled regulatory and academic interest in non-traditional forms of governance and monitoring. Insofar as employee ownership aligns long-term interests of the employees with their firms, employee ownership seems to be an ideal candidate for research and policy interest along these lines.

Significant research attention has been devoted to the effect of employee ownership on firm performance (Bova, Dou, and Hope 2014). In contrast, limited research has been conducted on the impact of rank-and-file employee and financial-reporting outcomes. For example, Bova, Dou, and Hope (2014) test the “incentive alignment” vs. “rent extraction” hypotheses for U.S. public firms. They find that voluntary disclosure is positively related to employees’ equity ownership, and that this effect increases with employees’ negotiation power within the firm. Jiraporn (2007) also studies U.S. listed companies and reports a negative association between the extent of employee ownership and earnings management, suggesting that ownership incentivizes employees to monitor better. In other words, in

Proponents of employee ownership argue that better incentive alignment drives higher corporate performance (Jones and Kato 1995, Kruse, Blasi, and Park 2009). Blasi, Kruse, and Weltman (2013) report results from a dataset pertaining to privately-held companies that adopted ESOP plans between 1988 and 1994, and document greater sales and employment growth, higher sales/productivity, and higher survival rates for ESOP firms. Quarrey and Rosen (1987) also document higher sales and employment growth among privately-held ESOP firms in the U.S., whereas GAO (1987) reports higher productivity growth among ESOP firms, and that the benefits were more pronounced for ESOP firms that had worker participation plans (see also Winther and Mares (1997). Numerous studies using samples of U.S. publicly-listed companies have reported an on-average positive association between employee ownership and various measures of firm performance (Chang and Mayers 1992, Park and Song 1995, and Beatty, 1995, among others) --- see Rosen (2011) for a comprehensive review. Empirical evidence also suggests that employee ownership is negatively related to firm risk (Bova, Kolev, Thomas, and Zhang 2014), and reduces frictions during labor disputes and contract renegotiations (Cramton, Mehran, and Tracy 2008).
addition to the direct effect of employee ownership on performance improvement, there appears to be an added indirect benefit by way of enhanced voluntary disclosures and lower earnings management.

Overall, despite the economic importance of employee ownership for privately-held firms, evidence on the association between employee ownership and financial reporting, especially using non-U.S. samples is rather sparse, and this is surprising given the importance of employee ownership in many jurisdictions. We believe that this is an area ripe for empirical investigation. For example, given the prevalence of other firms of concentrated ownership within private firms (e.g., family and government ownership), does employee ownership make a significant difference to any financial-reporting outcomes for private firms? Further, does the effect of employee ownership vary with the legal and institutional environment (e.g., more vs. less employee-friendly environments)?

2.2.4. Private-equity (PE) and venture-capital (VC) financing

Privately-held firms, by definition, raise their equity financing from private sources. In this section, we analyze the agency issues and resultant incentives inherent in early-stage private-equity financing (PE) to companies with high-growth potential – generally referred to as VC funding. VCs typically invest in startups, but funding can be provided to companies at various stages of development. Annual funding provided to VC-backed companies globally has sharply increased over the last few years, increasing from $45.2 billion in 2012 to $130.9 billion in 2015 (KPMG Venture Pulse Report, Q2 2016).

PE-investments in general, and VC-investments in particular, are characterized by a high degree of information asymmetry that is inherent in young and high-growth potential firms. As Cochrane (2001) points out, VC-investments are often not purely financial, as VC-firms provide valuable advisory and support services to investees. In other words, VC-firms are active financial intermediaries that serve not only a monitoring function, but also actively support and mentor firm management by providing advisory services (Kaplan and Strömberg 2001; Bander, Antweiler, and Amit 2002; Bottazzi,
Rin and Hellman 2004), as opposed to bank-debt investors who are mostly concerned about downside risk and actively monitor firm compliance with specific covenants and provisions that protect them from such downside risk. The economics and entrepreneurial-finance literature has documented that this active monitoring and support provided by PE-investors results in substantial changes to firms’ corporate-governance systems and affects the professional management and performance of the portfolio firms (Sahlman 1990; Lerner 1995; Sapienza, Manigart, and Vermier1996; Hellman and Puri 2002; Cowling 2003; Kaplan and Strömberg 2004). Consistent with this argument, Gompers and Lerner (1999) report that PE-investments lead to a positive certifying effect on portfolio companies over and above the mere alleviation of financing constraints.

Evidence on PE-investments and FRQ

A limited but conclusive set of papers appeal to this positive governance role of PE-firms and examine the relation between investments by PE-investors and the financial reporting practices of portfolio firms. Beuselinck, Deloof, and Manigart (2004) examine a hand-collected dataset comprising of Belgian private firms that received PE funding and report that these firms manage their earnings upwards to attract PE-investor interest before the investment. An interesting cross-sectional finding in this study is that private (non-governmental) PE investors serve a more rigorous governance function compared to PE-investments by the government. Katz (2006) reports supportive evidence using a sample of U.S. firms that have publicly-listed debt but unlisted equity — such quasi-private firms that are sponsored by PE-firms exhibit higher FRQ compared to non-PE backed firms.

Davilla and Foster (2005) examine evidence from the field pertaining to 78 U.S. startup firms, including a high percentage of VC-backed firms, and report a positive association between VC funding and the prevalence of professional management and financial planning and evaluation systems. The article further reports positive effects of management-control systems adoption on valuation by VC-firms, suggesting indirectly the value of management and financial reporting systems to VC-investors.
Using a sample of 67 portfolio investments of 11 VC firms, Kaplan and Strömberg (2004) also report that VC-investors are frequently involved in actions such as implementation of information and accounting control systems. Hand (2005) reports complementary evidence concerning the relevance of financial statement information to VC-investors by documenting the value relevance of financial statements to VC-investors in 204 U.S. biotechnology firms. Further, Hand (2005) reports that the relevance of financial statement information increases as the portfolio firms mature. Employing a sample of 502 VC-backed firms that conducted an IPO in the U.S. from 1996 to 2000, Armstrong, Davila, and Foster (2006) report similar findings concerning relevance of financial statement information to the valuation of VC-backed firms, and that costs such as R&D expense that have an investment aspect are positively associated with valuation of VC-backed firms. While this evidence does not directly study the quality of reported financial numbers, it indirectly suggests that VC-investors value financial statement information and are accordingly likely to demand high-quality reports.

Using a sample of 270 unquoted Belgian PE-backed firms during 1985-1999, Beuselinck and Manigart (2007) report a counterintuitive finding that portfolio firms with higher PE-investor stakes exhibit lower FRQ. The authors attribute this finding to the fact that PE investors with greater stakes can monitor the firm more rigorously through private communication, without necessarily requiring public financial statements. In other words, this study suggests that FRQ and PE equity percentage stakes are substitute corporate-governance mechanisms.

A related stream of literature has examined a specific setting where incentives to manage earnings are likely to be salient — the time of the VC-investors’ exit via IPOs of portfolio firms. Suggesting that VCs play a positive corporate-governance role, Morsfield and Tan (2006) and Hochberg (2008) find that U.S. VC-backed firms record lower abnormal accruals during the fiscal year in which the IPO takes place, compared to non VC-backed firms. Liu (2014) also used a sample of U.S. IPOs and finds a similar restraining effect on real-earnings management for VC-backed firms, but notes
that this governance effect was diluted during the internet bubble. Wongsunwai (2013) shows that earnings management for U.S. IPO firms (both real and accruals-based) during the IPO year is lower for firms that that are backed by higher-quality VCs. Gotkan and Muslu (2015) report findings that are similar in tenor for IPOs of U.S. firms backed by listed PE firms — IPOs of firms backed by listed PE-firms report lower discretionary accruals and more conservative earnings, consistent with a positive spillover effect for listed PE-firms’ investees. Lee and Masulis (2011) report similar findings — IPO firms backed by more reputable VCs exhibit lower earnings management, and that this effect is amplified for IPOs that are underwritten by more reputed investment banks.

We believe that the literature on financial reporting by VC-backed funds, while burgeoning, still needs to further our understanding of what exactly do VC-investors mean by high quality financial reporting (assuming that they care about financial reporting to begin with). Another interesting avenue for research would be to examine the efficiency of VC investment decisions — is the relative weighting of financial and non-financial information by VC-investors reflected in ex-post investment performance?

**Government-backed venture capital**

Government-backed equity investment programs (also referred to as “hybrid funds” when the government is a co-investor) generally arise due to supply-side problems in the market for venture capital.\(^{24}\) The rationale for government intervention has been argued to be particularly strong for young firms with a high degree of information asymmetry and with projects that generate positive social benefits (Evans and Jovanovic 1989). However, observers such as Berger and Udell (2006) note that state-owned financing institutions generally suffer from weaker monitoring incentives compared to

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\(^{24}\) The public-policy argument in favor of venture capital suggests that investments in SMEs exhibit a greater likelihood of spurring innovation in the economy compared to similar-sized investments by large corporates (e.g., Kortum and Lerner 2000). If growth in the SME sector and concomitant economic benefits are a public-policy objective, then it seems natural that government intervention in the venture/growth capital markets has been suggested as a way to increase supply of capital to SMEs.
private financiers, and accordingly give rise to inefficient investments. Inefficiencies can creep up due to the myriad policy objectives that government-backed funds might have — such as a regional focus (e.g., Reid and Nightingale 2011; Mason and Pierrakis 2009) or schemes that are designed for the creation of employment during economic downturns rather than pursuit of growth. It is perhaps because of these inefficiencies, or perhaps due to an unobserved selection problem, that businesses that are backed by government-backed capital tend to underperform those backed by private capital (e.g., Brander, Eagan, and Hellman 2010 in the Canadian context, and Murray 1998 in Europe).25

The impact on firm performance and achievement of objectives notwithstanding, government-backed venture capital appears to be an important feature of these markets throughout the world. What role, if any, does financial reporting play in this form of financing? It is not clear as there are no extant empirical studies with the exception of Beuselinck, Deloof, and Manigart (2004). They examine Belgian private firms that received PE funding and show that firms backed by government-backed PE firms exhibit lower earnings conservatism, consistent with more slack monitoring by government-backed PE firms. The effect of financial reporting in attracting government interest is an area ripe for investigation — it is likely that investees that modify their business pitch to make a case for achievement of social-policy objectives would be more likely to succeed in attracting government funding. Further, while Beuselinck, Deloof, and Manigart (2004) report lower conservatism, future studies can study whether other elements of investees’ financial reporting and performance improve due to the potentially long-term horizon of governments (e.g., is there a lower need for real-earnings management?).

2.3. Trade Credit

2.3.1. Supplier credit: Background

Research attention on private-firm financing has primarily been focused on debt and equity financing, which is unsurprising given data-availability reasons. One source of financing that is often overlooked in research studies despite its extensive prevalence and magnitude is supplier credit (also referred to as trade credit). Simply put, supplier credit is short-term purchase financing provided by a firm’s suppliers — the supplier delivers goods and simultaneously grants credit to the customer. The importance of supplier credit in terms of magnitude, however, has been well documented — for large listed companies of G-7 countries, Rajan and Zingales (1995) report that 11.5 to 17% of total assets are financed by supplier credit. Giannetti (2003) reports slightly higher ratios for privately held European firms. Casciano, Clatworthy, Osma, Gassen, Imam, and Jeanjean (2013) report consistent evidence by citing a 2006 survey of European businesses that revealed that a majority of surveyed firms sell over three quarters of their goods and services on credit. Beck, Demirgüç-Kunt, and Maksimovic (2008) provide survey evidence pertaining to 48 countries that supplier credit was used to finance approximately 20% of all externally-financed investments. As Wilson and Summers (2002) suggest, supplier credit can be especially important for small and fast-growing private firms that have limited access to other sources of external financing (see also Berger and Udell 1998; Cuñat 2007). Extension of trade credit to start-ups enables the buyer firm to establish a credit history of repayment, which facilitates access to bank finance in a later stage (Cook 1999; Garcia-Appendini 2007).

While supplier credit is akin to short-term debt, Cuñat and Garcia-Appendini (2012) argue that there are three major differences. First, unlike bank loans, supplier credit is effectively short-term lending of goods and services (i.e., it is “in kind” rather than cash). Second, trade credit is characterized
by bilateral or industry conventions and is typically not accompanied by formal contracts. Finally, the suppliers are not financial institutions and accordingly financing is not their primary business activity.\textsuperscript{26}

\textit{Supplier credit and FRQ}

Although theoretical studies have modeled supplier credit as a mechanism to reduce information asymmetry between suppliers and customers (e.g., Smith 1987), the theoretical relation between supplier credit and FRQ has not yet been explicitly modeled (e.g., whether they are substitutes or complements.) A few survey-based and empirical studies, however, have addressed this question. Collis, Jarvis, and Page (2013) interview management at small to mid-sized private firms in Finland, the United States, the United Kingdom, and South Africa. They find that suppliers rarely use financial statements when offering credit to customers, but instead they often rely on the payment-default reports, the age of the customer, their prior relationship with the customer, and their knowledge learned in their prior dealings with the customer. In contrast, Garcia-Teruel, Martinez-Solano, and Sanchez-Ballesta (2014) examine a dataset of Spanish SMEs and find that firms with higher accruals quality have greater access to trade credit, suggesting that suppliers have informational needs that are similar to other capital providers. Similarly, Hope, Thomas, and Vyas (2016) study private firms in the U.S. and report evidence consistent with suppliers’ demanding high quality financial statements from their privately-held customers. They appeal to the argument in MacLeod (2007) that firms use accounting quality to

\textsuperscript{26} Various theoretical reasons have been put forward to explain the existence of supplier credit. The financing motive suggests that supplier credit enables suppliers and customers to circumvent credit-market imperfections (Ferris 1981, Schwartz 1974), the tax motive explains supplier credit as a function of the difference in the distribution of marginal tax rates between buyers and sellers (Brick and Fung 1984), whereas the pricing motive suggests that supplier credit is essentially a selling expense that is used to increase the product demand (Nadiri 1969), and to circumvent regulatory prohibitions on price discrimination (Meltzer 1960; Schwartz and Whitcomb 1980; Brenan, Maksimovic, and Zechner 1988). Information asymmetry in the product markets is offered as one reason why trade credit exists. For example, Lee and Stowe (1993) and Long, Malitz, and Ravid (1993) suggest that trade credit acts as a warranty on product quality. Smith (1987) and Biais and Gollier (1997) suggest that supplier credit emerges as an alternative to bank lending as suppliers have an informational advantage over banks. A number of other empirical studies examine firm characteristics, product characteristics, and bank-firm relationships as determinants of supplier credit and its terms to support the above theoretical arguments (e.g., Mian and Smith 1992; Petersen and Rajan 1997; Cheng and Pike 2003; Pike, Cheng, Cravens, and Lamminmaki 2005; Giannetti, Burkart, and Ellingsen 2008; Kim 2016; Huyghebaert 2006; Deloof and Jegers 1999; Deloof and Jegers 1996; Danielson and Scott 2004; Cunat 2007).
maintain long-term relationships with their suppliers and to continue receiving a “reputational premium” (through preferred price and/or other trading terms).

We would like to highlight a few studies that are conducted using publicly-listed company data, but the findings may apply to privately-held companies as well. Costello (2013) examines long-term supply contracts gleaned from SEC filings of publicly-listed firms and finds that specific investments, information asymmetry, and FRQ affect the customer-supplier contract design. Specifically, information asymmetry, proxied by the distance between the supplier and the customer, is associated with a shorter contract duration and greater covenant usage, and low FRQ is associated with the lower covenant usage. Radhakrishnan, Wang, and Zhang (2014) also rely on SEC filings to infer major customer-supplier relationships, and find that suppliers’ profitability is positively associated with customers’ capital-market information quality, as measured by customers’ provision of earnings forecasts, reported earnings quality, and coverage by analysts and credit-rating agencies. Dou, Hope, and Thomas (2013) conduct their empirical analyses on a sample of publicly-listed companies from 39 countries and show that firms in industries with greater relationship-specific investments resort to greater income smoothing, presumably to maintain and enjoy the benefits of their trade relationships.27

In terms of future research, supplier credit provides fertile ground for testing theories pertaining to the effects of information asymmetry on capital providers. First, after controlling for information asymmetry, can we infer the degree of information asymmetry based on reliance on supplier credit compared to other financing sources such as bank loans? Second, with the exception of Costello (2013), the literature has largely ignored the terms of supplier credit. We admit significant data constraints exist in obtaining supply contracts pertaining to private firms; accordingly, this question is amenable to survey-based or field studies.

27 A natural conjecture is that suppliers are more likely to rely on financial statements of their customers the more readily available such information is. For example, in the Nordic countries all firms’ financial are easily available and customers’ “payment remarks” can also be accessed easily (Che, Hope, and Langli 2016).
2.3.2 Factoring

Alleviation of information asymmetry between lenders and borrowers, especially for small and opaque borrowers without an established financial track record, often leads to demand for asset-based financing. A specialized form of asset-based funding is factoring — whereby accounts receivables of a firm are sold by a client firm to a bank or a specialized factoring firm, with the title to the receivables often passing on to the lender. The size of the global factoring market totaled $2,594 billion in 2015 (Factors Chain International). Auboin, Smythe, and Teh (2016) note that the rapid growth in factoring is attributable in part to the general retrenchment of banks from SME lending during the financial crisis. However, Bakker, Klapper, and Udell (2004) suggest that the importance of factoring as a percentage of GDP varies widely across countries (e.g., factoring is much more widespread in Italy than in the U.S. and Germany). Berger and Udell (2004) argue that factoring solves the severe information asymmetry that is inherent in high-risk borrowers — lending underwriting is based not on the overall creditworthiness of the firm, but on the quality of the accounts receivables (see also Klapper 2006). Accordingly, the key credit-risk exposure that factors are concerned about is that of the obligor. Berger and Udell (2004) also suggest that factoring may be useful for firm in countries with weak creditor rights, and in instances where the receivables pertain to obligors from strong information environments.

Empirical evidence on the use of factoring is limited. Soufani (2002) employs interview-based survey data from the U.K. to examine the determinants of the use of factoring and finds that factoring can be particularly useful for SMEs. The study notes that while the factors frequently require financial statements from borrowers, the credit-granting decision is not influenced by the strength of the financial statements. The author notes that weak financial positions are a defining characteristic of many small
firms, and accordingly, as normal financial statement-based bank lending is often not accessible to them, factoring can be useful in alleviating financing constraints.\footnote{Determinants that impact the factoring decision include borrower size, the quality and suitability of the underlying product or service to the customers, industry, management quality, and importantly collectability of the accounts and the issuance of credit notes by the borrowers to its customers. On the demand side, Smith and Schnuker (1994) model and demonstrate that asset specificity is negatively related to the factoring decision, and that factoring is more likely to be used when information and monitoring costs are high. Mian and Smith (1992) report similar evidence regarding the role of asset specificity in determining the use of factoring in the U.S. Sopranzetti (1998) adds more nuance to the factoring decision by developing and finding support for an equilibrium model that predicts the use of factoring without recourse for high-quality receivables, recourse factoring for riskier accounts, and inability of borrowers with high bankruptcy risk to factor their riskiest accounts. Summer and Wilson (2000) is another empirical study that uses data from surveys of U.K. credit managers and finds that smaller firms are more likely to use factoring, and that asset specificity is negatively related to factoring. Asselbergh (2002) reports evidence from Belgium that suggests the use of factoring by small companies that have high-growth potential and investment needs. Carretta (2009) finds that while adoption of International Accounting Standards by firms did not bring about a significant change in their factoring use, it brought about an improvement in their balance-sheet ratios.}

Overall, while there is no explicit evidence on the interaction between financial reporting and the use or terms of factoring, we predict that there is scope for research examination along the following lines: (a) is the factor’s assessment of the creditworthiness of the accounts receivables impacted by obligors’ financial reporting (i.e., does the account obligor’s financial reporting transparency impact deal terms for the seller?), and (b) while not direct, is there a secondary role for sellers’ FRQ, especially when the factoring is done with recourse?

### 2.4. Crowdfunding

Crowdfunding (or crowdsourcing) has recently emerged as an alternative source of external financing for entrepreneurs to help entrepreneurs fund early-stage projects. Similar to other forms of alternative financing, due to a general retrenchment in traditional bank credit since the financial crisis, crowdfunding has become increasingly appealing to SMEs. In fact, crowdfunding is on track to surpassing traditional venture capital in the foreseeable future — growing from $880 million in funding in 2010 to over $34 billion in 2015 (Forbes 2015). In terms of relative importance, crowdfunding constitutes more than 80% of the total out of the total European online alternative-finance market.
crowdfunding relies on an online peer-to-peer financing platform that matches a large audience of online prospective investors to the entrepreneur, in which each investor only provides a small amount of capital. The crowdfunding platforms vary in their investment rules, but crowdfunding can generally be categorized into five types: lending-based, equity-based, hybrid-based, royalty-based, and donation-based (or reward-based) crowdfunding.29

A primary concern with funding young and relatively unknown ventures is severe information asymmetry between the investors and the investee (e.g., Hildebrand, Puri, and Rocholl 2016), and accordingly, the need for ex-ante due diligence and ex-post monitoring is acute. However, unlike traditional bank lending or VC-investing, dispersion (and the small size and potential lack of sophistication of many retail crowdfunders) inhibits efficient monitoring. It is therefore not surprising that the mechanisms used by investees to reduce information asymmetry have attracted regulatory and academic attention. A number of studies examine the signaling mechanisms used by investees to reduce the information asymmetry, including the use of voluntary disclosure.

Many studies examine crowdfunding in the context of personal loans provided on peer-to-peer lending platforms such as prosper.com. Most of these loans are personal, although a significant percentage can pertain to loans that have an explicit business reason. Crowdfund investors primarily rely on hard facts (e.g., credit scores) to make investment decisions, but they do take the soft facts into consideration, especially when borrowers’ credit ratings are poor (Iyer, Khwaja, Luttmer, and Shue 2010). Several papers examine the motives of capital-providers (i.e., crowdfunders) and capital-seekers (i.e., investees). Crowdfunders are generally heterogeneous in their motivations, and are motivated by social and other non-pecuniary considerations in addition to the direct financial motive (Lin, Boh, and Goh 2014; Allison, Davis, Short, and Webb 2015). Firms seek crowdfunding rather than other traditional financing for a number of reasons. First, because companies often face financing gaps in their early startup stage, the access to a large online investor pool alleviates financial constraints (Belleflamme, Lambert, and Schwienbacher 2013). Crowdfunding also allows young firms to attract public attention (without the regulatory burdens associated with public listing), obtain feedback on their products and services, and form relationships and networks (Belleflamme et al. 2013; Hui, Gerber, and Greenberg 2012). In addition, crowdfunding increases visibility and product consumption (Burtch, Ghose, and Wattal 2013), facilitates access to customers, improves press coverage, and attracts interest of potential employees and external funders (Mollick and Kuppuswamy 2014).
Crowdfunding investment decisions are positively associated with the past results of similar projects, the actions of other crowdfunders, popularity rankings, blog posts, media coverage, and features of the platform (Ward and Ramachandran 2010; Qiu 2013). In the mobile-application industry, early-stage investments managed by “experts” are associated with increased funding probability as experts are seen as a signal of credibility (Kim and Viswanathan 2014). Also, external references, recommendations from friends and acquaintances, and social networks serve as positive signals, and thus, increase funding probability (Mollick 2014; Liu, Brass, Lu, and Chen 2015; Moritz, Block, and Lutz 2014; Everett 2015; Liu et al. 2015). In the context of equity crowdfunding, ventures with more board members, higher levels of education, and better networks are positive signals to investors, so they are more likely to be funded (Ahler, Cumming, Gunther, and Schweizer 2015).

Dorfleitner, Priberny, Schuster, Stoiber, Weber, Castro, and Kammler (2016) also find that soft factors derived from the description texts are associated with funding probability and default probability for two leading European peer-to-peer platforms. This is because the soft information helps entrepreneurs establish trust with crowdfunders, and thus, they are associated with a higher likelihood of successful financing, lower interest rates, and a decrease in the probability of loan defaults (Allison et al. 2015; Duarte, Siegel, and Yong 2012; Gao and Lin 2014; Herzenstein, Dholakia, Andrews 2011; Ravina 2012; Yang 2014; Feng, Fan, Yoon 2015). Maier (2014) finds that voluntary verification of information is associated with lower cost of borrowing.

The studies cited above highlight that even in the absence of credible financial reporting information, investors are able to base their funding decisions on alternative sources of information. However, the potential for fraud in this market is omnipresent and the long-term viability of funding based this type of bespoke information gathering remains to be seen. After all, the crowdfunding market of today, especially on the equity side, bears resemblance to the pre-SEC era equity markets in the U.S. — a systematic upsurge in fraud incidences or even widespread materialization of risk (e.g., failing of
ventures) could prompt calls for regulatory intervention. In terms of future research, we believe that the crowdfunding setting is ideal for testing the usefulness of financial statement information compared to alternative softer sources of information for nascent companies. On one hand, the mere act of financial statement preparation could bring credibility to a venture. On the other hand, it is precisely for these types of early ventures that investors have a need for timely and forward-looking information that traditional financial statements cannot provide.

3. Conclusions

In this article we discuss a large literature pertaining to private-company financing sources, with an objective of understanding the drivers of financial reporting by private firms. We consider debt financing (including bank financing, leasing, and government guarantees), equity financing (family ownership, government ownership, private-equity financing, employee ownership), and trade credit (including supplier credit and factoring). We document significant contextual heterogeneity in private companies’ financing sources. We further find or predict that the financing structure is one of the primary drivers of financial reporting within private firms. Finally, some financing structures such as concentrated equity (family, government, and employee ownership), direct or indirect lending by governments, and crowdfunding, give rise to interesting social, regulatory, and policy questions that interact with financial reporting beyond what one might predict using standard agency-theoretic considerations.

We believe that future research can shed light on several interesting questions posed by us throughout the article:

- We suggest that investigation is warranted into what forms of FRQ are particularly relevant for private firms. We further recommend research on whether accounting constitutes a higher percentage of the overall information set for private firms (relative to public firms).
Finally, there is scant evidence on disclosure (i.e., issues other than measurement and recognition) on private firms.

- Prior literature has largely been focused on whether financial reporting is useful for contracting purposes. However, what constitutes high quality financial reporting in the eyes of external capital providers such as bankers and PE investors remains unclear and could be an interesting avenue for future research. Similarly, future research could shed light on how financial vs. non-financial reporting information is weighted by these external capital providers. In terms of outcome variables, while there is evidence on the link between FRQ and loan interest rates, future research could shed light on how various other contractual terms such as covenants, personal guarantees, and collateral vary with FRQ and relative to each other.

- Despite widespread prevalence of government credit-guarantee schemes around the world, research on that topic in accounting is virtually non-existent. We have highlighted several avenues for research, including whether there is any dilution in private bank monitoring due to existence of state guarantees, and whether FRQ could mitigate such dilution, if any.

- With regards to the lease vs. buy decision, we propose that researchers extend the work by Beatty et al. (2010) in the private-firm setting. Further, similar to bank loans, a case could be made for an examination of lease terms over and above the cost of financing/leasing. Finally, researchers could study whether lessors’ views of borrowers’ FRQ is similar to that of bank lenders.

- Government ownership of banks persists despite widely documented inefficiencies — is there any role for traditional notions of borrowers’ FRQ for obtaining government funding, or is funding based primarily on achievement of social-policy objectives?

- The literature on family, state, and employee ownership of equity remains rather limited for
private firms. This may be due to data-availability reasons. Accordingly, this is an area that is ripe for survey or field-based research. We conjecture that potential governance problems, as well as benefits, that accrue on account of such concentrated equity ownership are likely to be amplified for private firms that are not subject to frequent public scrutiny.

- Literature is similarly sparse on the use of supplier credit and factoring by private firms. In addition to being of descriptive interest, such research could examine whether the extent of reliance on supplier credit can inform us about the relative degree of information asymmetry and market power of the firms. We were also unable to glean from the literature whether factors consider the FRQ (of either the obligors or the borrower) in setting the contract terms.

- Finally, we acknowledge the potentially limited role of financial statements for nascent ventures such as those that are funded by crowdfunding. However, this represents an excellent research opportunity in terms of trying to understand the informational needs of crowdfunding agents.
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