Valuation of family firms: The limitations of accounting information

Tim Hasso
Bond University, Tim_Hasso@bond.edu.au

Keith Duncan
Bond University, Keith_Duncan@bond.edu.au

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Tim Hasso
Lecturer
School of Accountancy
Queensland University of Technology
Australia
tim.hasso@qut.edu.au
+61 7 3138 0083

Dr Keith Duncan *
Associate Professor of Accounting & Finance
School of Business
Bond University QLD 4229
Australia
kduncan@bond.edu.au
+61 7 559 52238

* Corresponding author

Abstract

This conceptual paper explores the extent to which reported accounting information captures unique family firm decision-making and intangible asset factors that impact financial value. We review the family firm valuation-relevant literature and identify that this body of research is predicated on the assumption that accounting information reflects the underlying reality of family firms. This research, however, fails to recognise that current accounting technology does not fully recognise the family firm factors in the book value of the firm or the implications for long run persistence of earnings. Thus, valuation models underpinning the extant empirical research, which are predicated on reported accounting information, may not fully reflect the intrinsic value of family firms. We present propositions on the interaction between accounting information, family factors and valuation as a road map for future empirical research with a discussion of appropriate methodologies.

Keywords: Valuation, Intangible Assets, Value-Relevance, Family Firms
Valuation of Family Firms: The Limitations of Accounting Information

1. Introduction

Drawing on multiple theoretical perspectives, the growing body of family firm literature suggests that family firms are systematically different from non-family firms and that these differences are value enhancing (Sirmon and Hitt 2003). Empirical research supports this core tenet finding that relative to non-family firms, family firms exhibit a higher market value to book value ratio, a proxy for Tobin’s q (Anderson and Reeb 2003a; Villalonga and Amit 2006). The implication is that unique family firm factors drive the observed market value differences; however, the nature of the linkages between these family firm factors and market value remains largely unexplored. The unresolved question is how information about the family factors and their implication for firm performance and hence value is captured and transmitted to decision makers in the market. In particular, does current accounting technology measure and inform decision makers about the value enhancing role of families in business?

The extant research suggests that differences in performance and relative value - as measured by return on assets (ROA), return on equity (ROE) and Tobin’s q - is attributed to unique family factors that impact the firm’s decision-making orientation and the intangible assets that family firms generate (Sirmon and Hitt 2003). Specifically, the family’s connection to the firm impacts decision-making in terms of the horizon, strategy, governance, and nature of capital resulting in an accumulation of intangible assets in family firms such as social and human capital (Miller et al. 2008). However, information about these systematic family firm differences are not captured fully under current accounting technology and, thus, financial statement book values and earnings are deficient and biased if used for valuation in family businesses (Lev and Zarowin 1999). Under strong market efficiency, the market would consider these deficiencies and use nonfinancial information to value firms. However, evidence is now suggesting that strong market efficiency may not hold as there are anomalies in the market that should not be present in strong efficient markets (Schwert 2003). Indeed, research has found that the market tends to adjust crudely for the nonfinancial information available, providing further evidence of a semi-strong efficient market (Amir et al. 2003). In essence, we suggest the reliance on accounting information for valuation, and its deficiency in capturing unique family firm factors leads to traditional valuation models and market participants undervaluing family firms. The deficiently in accounting measurement may also
explain the mixed results for the family firm performance literature (Sraer & Thesmar, 2007). Whilst the market may adjust for family firm’s decision-making orientation and the intangible assets, we argue that the adjustment will tend to be crude. Ultimately the relative value relevance of accounting and non-financial information is an empirical question. As a first step towards improving our knowledge of the family firm value drivers this paper explores the interaction between accounting information, family factors and valuation and distils a series of propositions designed to guide future empirical research.

The paper is structured as follows; first we provide an overview of accounting information-valuation linkages and set the framework for the paper. We then review existing valuation literature and the valuation models from practice; common value drivers within these models are identified to be resources, return and risk. Next, we draw on the family business literature to identify family factors that impact valuation. We employ the identified value drivers as a tri-part framework to discuss valuation in the context of family firms. We report on existing research that suggests family factors impact value drivers and consider whether accounting information captures these phenomena. Finally, we present several propositions that provide avenues for further research in the field of valuation of family firms and discuss appropriate methodologies.

2. Accounting Information-Valuation Linkages

The true state of nature for the firm is unobservable, yet in a valuation context decision-makers demand information on the firm attributes that capture the value-creating activities of the firm (Penman and Sougiannis 1998). For family firms this includes information on the additional family firm-specific characteristics that differentiate their performance from non-family firms (Habbershon and Williams 1999). The fundamental accounting information-valuation linkages, depicted in Figure 1, form the framework for this paper. This framework recognises that value to the family in a family firm is a broader concept than value to shareholders in a non-family firm. Family value includes financial value, subject to much research in the valuation literature, as well as non-financial value, the social-emotional value to the family (Astrachan and Jaskiewicz 2008).
Market participants cannot observe directly the state of the firm nor the family differentiating factors. Instead, the minutia that makes up the firm’s day-to-day operation is captured by the financial statements of the firm via the appropriate accounting technology. Reported accounting information (as opposed to the underlying performance) is an aggregated, manipulated, and summarized representation of the state of the firm in accounting terms, accompanied by explanations and notes (Hand and Lev 2003). Researchers employ the reported accounting information as proxy performance measures that form the basis for valuation models and the inputs for the dependant variable in the valuation research reviewed in this paper (see Tables 2 and 3). However as Dechow et al. (2010) observe, reported accounting information is the product of three components: the underlying financial performance, the accounting technology set, and the implementation of the accounting technology. The latter includes estimation and judgement decisions by actors in the firm which gives rise to earnings quality and earnings management issues. We know a lot about implementation issues and the implications for valuation in both the main stream accounting literature (see review by Dechow et al. (2010)) and the family business accounting literature (see review by Salvato and Moores (2010)). However neither the main stream literature (Dechow et al. 2010) nor the family business literature (Salvato and Moores 2010) consider the measurement issues associated with the accounting technology set. This is a critical gap in the research. In the case of family firms the state of nature includes unique family factors that are core value drivers. To date the accounting measurement of these family factors has not been addressed in the literature despite information about the additional family firm factors being of interest to accounting information users.
While the core objective of accounting is to provide decision useful information about the firm’s financial position, performance, and cash flows (International Accounting Standards Board (IASB) 2010), it is acknowledged that accounting information available to the market is not capable of giving a complete picture of the state of the firm (Cañibano et al. 2000). Researchers and standard setters acknowledge the deficiencies in accounting technology when it comes to measuring and reporting all forms of assets, intangible assets in particular (Lev 2001). Among these are the family firm-specific resources bundled under the term ‘familiness’ in the family business literature (Habbershon and Williams 1999). The underlying reality of the business is not captured fully since the current accounting technology embodies a trade-off between the relevance and reliability of information. Whilst there exists additional relevant information, lack of reliable measurement excludes it from being reported in financial statements (Cañibano et al. 2000).

Arguably the market also draws on nonfinancial information about the state of the firm, as depicted in Figure 1, and gathers a richer information base than pure accounting measures (Amir and Lev 1996). However, in contrast to financial reporting, nonfinancial information is not standardized across companies and is not regulated in most cases. Thus, while nonfinancial information has incremental informativeness above accounting information, its limitations cause uncertainty among investors. The result is that at best the market crudely adjusts for nonfinancial information about the unique family firm characteristics; however, due to the uncertain nature of the information, the outcome market values are not completely efficient (Amir et al. 2003). Indeed, there is increasing research evidence that suggests that markets are not completely efficient due to numerous anomalies in markets showing consistent mispricing of securities (Schwert 2003).

Three related questions arise from the accounting information-valuation linkages framework presented: (1) how does accounting information feed into the valuation processes typically employed to value companies?; (2) does current accounting technology fully capture the performance and value-enhancing effects of family firm factors and, if not, what is the impact of measurement error in the accounting process?; and (3) does nonfinancial information - especially with respect to systematic value-enhancing family factors - get impounded into the valuation process, impact market value, and offset errors related to the first two issues? The remainder of our discussion focuses of the first two issues while the third is identified as an avenue for future researchers to pursue.
3. Valuation

Financial value is observable ex post from market transactions in the form of the listed price for public companies or the result of a sales transaction for private firms. However, understanding the drivers of value and being able to determine ex ante or intrinsic value is more problematic. Despite the comprehensive array of valuation models and ex ante value drivers researched in the accounting and finance literature, no single valuation model emerges as superior (Demirakos et al. 2004). There exist dominant paradigms within the finance (i.e. discounted cash flow – hereafter DCF) and accounting (i.e. residual income – hereafter RI) literature as well as practical approaches (i.e. price-to-earnings and price-to-book relatives – respectively hereafter P/E and P/B) that receive research attention. Whilst each of these approaches to valuation differs in terms of emphasis and specific inputs, there exists overlap in the underlying constructs that drive intrinsic value. The drivers common to extant valuation methods are: (1) the resources used to create wealth (i.e. book value of equity or net assets); (2) the return from those resources (i.e. earnings and cash flow); and (3) a risk pricing parameter (i.e. cost of equity capital or weighted average cost of capital (WACC)). Table 1 provides an overview of the four main streams of valuation models.
### TABLE 1: DOMINANT VALUATION MODELS AND VALUE DRIVERS

<table>
<thead>
<tr>
<th>Model</th>
<th>Specification</th>
<th>Resources</th>
<th>Return</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Discounted Cash Flow (DCF)</td>
<td>$P_t = \sum_{t=1}^{\infty} \frac{FCF_t}{(1 + WACC)^t}$</td>
<td>$FCF^\dagger$</td>
<td>$FCF$</td>
<td>$WACC$</td>
</tr>
<tr>
<td>(2) Residual Income (RI)</td>
<td>$P_t = BV_t + \sum_{t=1}^{\infty} \frac{NI_t - k_e \cdot BV_{t-1}}{(1 + k_e)^t}$</td>
<td>$BV$</td>
<td>$NI$</td>
<td>$k_e$</td>
</tr>
<tr>
<td>(3) P/E Valuation (P/E)</td>
<td>$P_t = E_t \cdot \overline{PE}_{it}$</td>
<td>-</td>
<td>$E$</td>
<td>$\overline{PE}$</td>
</tr>
<tr>
<td>(4) P/B Valuation (P/B)</td>
<td>$P_t = BV_t \cdot \overline{PB}_{it}$</td>
<td>$BV$</td>
<td>-</td>
<td>$\overline{PB}$</td>
</tr>
</tbody>
</table>

(1) where $P$ is the firm value, $FCF$ the free cash flows to equity-holders and debt-holders, and $WACC$ is the weighted average cost of capital

(2) where $P$ is the firm value, $BV$ the book value of the equity, $NI$ the net income, and $k_e$ the cost of equity capital

(3) where $P$ is the firm value, $E$ is the earnings of the firm, and $\overline{PE}$ is the benchmark $P/E$ multiple

(4) where $P$ is the firm value, $BV$ is the book value of the equity of the firm, and $\overline{PB}$ is the benchmark $P/B$ multiple

$^\dagger$ the terminal $FCF$ includes liquidation of the firm’s assets
The finance literature is dominated by the DCF approach (Copeland et al. 2000), which states that the value of a firm is equal to the present value of expected future free cash flows. Free cash flows are a return parameter priced for risk using the WACC. The DCF model includes a terminal cash flow for the liquidation of resources at the end of the business. In contrast, recent accounting literature adopts the RI approach and its various derivatives, the most well-known being the model developed by Ohlson (1995) based on earlier work by Edwards and Bell (1961). According to the RI approach, the value of the firm is equal to its book value (i.e. resources) and the present value of future expected residual income (a return measure), the amount by which net income exceeds the rate of return on net assets required by equity-holders (Lundholm and O’Keefe 2001). The two approaches - DCF and RI - are not at odds; theoretically, they are equivalent and should yield similar values for a given firm (Lundholm and O’Keefe 2001). DCF and RI approaches are both intrinsic valuation models in that they focus on the fundamentals of the firm in deriving resource and return measures.

In contrast, P/E and P/B valuation models are relative in that they both value the return/resource stream relative to other businesses. P/E multiples is the most applied valuation method amongst practitioners (Dukes et al. 2006). The wide acceptance and use of the method is attributed largely to its simplicity since the value of a firm is equal to a multiple of its earnings. The multiple is based on observed P/E multiples of the firm’s peers in the market. The underlying assumption is that, on average, firms in the market are priced efficiently. Selection of peers greatly impacts the final value due to the variation in P/E multiples in the market. Selection criteria often consider aspects such as growth, profitability, industry, and size (Alford 1992; Cheng and McNamara 2000). The P/B multiples valuation method is also a relative model. Under the P/B method, the value of a firm is equal to a multiple of its book value (resources). The method is otherwise identical to the P/E approach; the focus is merely shifted from earnings to book value (Alford 1992; Cheng and McNamara 2000). That is, the value of the firm is the book value of assets multiplied by the P/B of peers in the market.

Despite the finance and accounting literature’s extensive theory and empirics on valuation, family firm research has principally used Tobin’s \( q \) as an outcome value measure (Anderson and Reeb 2003a; Maury 2006; Villalonga and Amit 2006). This body of research typically tests if aspects of family business ownership, control, or management correlate with
differences in value measured by Tobin’s \( q \). A significant association is interpreted to mean that the factor (i.e. ownership, control, or management) is value relevant for family firms versus non-family firms. However, it is important to note that Tobin’s \( q \) is similar to the P/B ratio with the exception that it focuses on the replacement value of net assets rather than book value, thus controlling for inflation (Damodaran 2002). Nevertheless, much of the family business research adopts book value as a proxy for replacement value of net assets and is empirically equivalent to the P/B method (Villalonga and Amit 2006). This means that much of the empirical evidence in the family business literature is predicated on only one of the four dominant valuation models from the finance and accounting literature. Such a narrow base represents a significant deficiency in the family business literature and represents a weakness in extant evidence. As the four dominant valuation models will provide differing valuations, the focus on just one may lead to misleading conclusions in terms of firm value.

4. Family Factors
The unique nature of the family firm has been explored through numerous theoretical lenses including agency theory, stewardship theory, and the resource-based view (hereafter RBV). These three theoretical lenses contribute several overlapping family firm factors that impact financial value (Donaldson and Davis 1991; Miller and Le Breton-Miller 2006; Sirmon and Hitt 2003). We draw on Sirmon and Hitt’s (2003) review of the distinctiveness of family firms and utilize their five resources as well as long-term orientation as the factors impacting the valuation process. The six factors are indicative of the firm characteristics discussed in the family business literature that are of relevance for valuation. To focus our analysis, we categorize these factors into two groups based on their nature. The first category is decision-making (hereafter DM) factors; these relate to the way that family firms are managed and the decision processes that give rise to the distinctiveness of these firms. The second group is intangible asset (hereafter IA) factors. These are intangible assets within the firm that are accumulated due to the nature of the family firm. We explore each of these categories of factors in turn.

4.1 Decision-making Factors
The interconnection between owners, managers, and employees gives rise to distinctive DM factors in family firms. These DM factors encompass decision processes in regard to strategy, governance, and capital. The first DM factor is long-term orientation (James 1999). This factor is grounded in stewardship theory, which emerged as a prevailing concept in last the
two decades (Davis et al. 1997; Donaldson 1990; Donaldson and Davis 1991). Recently, it has been applied within the family business context (Arregle et al. 2007; Gomez-Mejia et al. 2007; Miller and Le Breton-Miller 2005). According to stewardship theory, due to the interdependency of the family and its business, family members share a much stronger connection to the firm versus non-family owners. This connection between the family and its business leads to managerial practices that differ from non-family businesses. One of the primary manifestations is long-term orientation (Astrachan 2010; James 1999). The firm is managed with future generations in mind, often by CEOs whose job tenure greatly exceeds those of non-family firms (Beckhard and Dyer 1983). A long-term orientation ensures future returns and also lowers the risk level of the firm. With a long-term orientation, the family firm is able to extend the time horizon of future earnings streams. Additionally, the decrease in myopic behaviour by management leads to a lower risk level for the firm.

The second DM factor is the governance structure of family firms. Research suggests that both agency problems and costs increase as managerial ownership decreases and the interests in a firm diverge (McConnell and Servaes 1990; Morck et al. 1988). Family firm control mitigates the costs and problems that usually arise in the agency relationship between owners and managers (Anderson et al. 2003; Demsetz and Lehn 1985). In effect, the family provides an alternate corporate governance mechanism since there is less classical separation of ownership and control (Jensen et al. 1976) thus lowering the potential for owner manager agency conflict. However, where family control and management are high, there exists greater potential for the family to expropriate wealth from non-family owners and debt holders. In the latter case, the agency cost of descendent CEOs increases the cost of debt (Anderson et al. 2003) and is value destroying for other shareholders (Villalonga and Amit 2006). In sum, the corporate governance factor potentially positively or negatively impacts both returns and risk depending on the nature of family ownership, management, and control of the firm.

The third DM factor is the patient capital of the family firm, which is identified as part of the RBV and the overarching ‘familiness’ phenomenon (Sirmon and Hitt 2003). Patient financial capital refers to the nature of capital invested by the family in its own firm. As established earlier, family firms tend to have a range of nonfinancial goals that result in a long-run orientation. Consequently, the financial capital of the firm invested by the family itself is not under threat of liquidation or seeking immediate dividends (Dobrzynski 1993).
This results in a strategic advantage for the family firm; since capital comes at a lower cost (at least in the short run) and with less short-term demands, the firm is able to leverage these advantages to ensure long-run performance (Fama and French 1999). This has implications for the required rate of return that needs to be factored into any valuation model, dividend levels and timing, and the sustainability of future returns.

The fourth DM factor is survivability capital, which comprises personal resource contributions of family members and is explored through the RBV framework (Sirmon and Hitt 2003). In practice, this resource is exemplified by free or loaned labour, loans to the business at below-market price, and additional equity investments (Haynes et al. 1999). This resource exists due to the emotional and financial bond that families have with their businesses. Survivability capital provides the firm with a safety net that can be used in tough economic times. Whilst non-family firms may have to let employees go in economic downturns and thus decrease productivity, family firms are able to use free or loaned labour to avoid productivity loss. This has implications for the cost of external capital as the inherent risk and probability of failure of the business is lowered by the family’s survivability capital. Furthermore, the increase in survival rates also ensures the existence of future returns in the long run (Sirmon and Hitt 2003).

4.2 Intangible Asset Factors
The nature of the family firm leads to an accumulation of intangible assets and thus distinctive IA factors. We are now in a knowledge economy where intangible assets are the primary source of value, shifting from the traditional physical assets value dominance (Goldfinger 1997). This development is highly relevant in the case of the family firms. The first IA factor is the social capital of family firms. It has also been shown that capital markets see social capital as an intangible asset (Barth et al. 1998). This factor is grounded in stewardship theory and the RBV. In line with the first factor, the family has a deep connection with its business (Astrachan and Jaskiewicz 2008) and family social capital is often intertwined with that of the firm (Anderson et al. 2003; Irava and Moores 2010). Therefore, it is suggested that family firms place greater importance on social-capital-generating activities than non-family firms. These include such elements as reputational development (Habbershon and Williams 1999) and fostering relationships with the firm’s customers and suppliers (Sirmon and Hitt 2003). This notion is supported empirically by Miller et al. (2008), who found that family firms have more personalized marketing, spend
more on reputational development, and focus on markets that are often neglected. These activities are linked to future economic gains in prior research. A favourable reputation has been shown to improve financial performance (Roberts and Dowling 2002) while customer satisfaction has been shown to be a lead indicator of future performance (Ittner and Larcker 1998). Furthermore, the focus on social ties may also impact the cost of capital through close relationships with the firms’ financiers who may provide the family firm with more beneficial capital terms (Uzzi 1999).

The second IA factor is human capital, primarily grounded in the RBV; however, it can also be explained through a stewardship theory lens. In essence, family firms are more likely to perform human capital-increasing activities to ensure longevity than non-family firms (Ward 2004). Miller et al. (2008) showed that family firms invest in more human capital-related activities than non-family firms. These include investment in training, wider job roles, flexible arrangements for work, and longer employment of individual managers. Investment in human capital-related activities such as training has a positive impact on firm performance through productivity gains (Bartel 1994). Furthermore, the human capital of the firm is often described as the most important intangible asset (Hand and Lev 2003).

5. Linking Family Factors to Financial Value
The accounting value-relevance research suggests that both DM and IA factors impact market value (Cañibano et al. 2000; Lev 2001). However, it is well recognised in the accounting literature that financial statements in their current state are limited in their ability to capture nonfinancial information such as those embodied in the six family factors we identify (Aboody and Lev 1998; Cañibano et al. 2000; Cañibano et al. 1998; Goldfinger 1997; Hand and Lev 2003; Lev 2001; Sanchez et al. 2000). In this section, we explore how family factors impact financial value and the extent to which accounting information is deficient in capturing family firm factors for each of the three value drivers: resources, return, and risk.

5.1 Resources
The unique nature of family firms impacts strategic objectives, which are manifested in the development and accumulation of unrecognised intangible assets that represent additional resources of the firm. These activities include establishing and maintaining a favourable reputation (Habbershon and Williams 1999), nurturing relationships with customers and suppliers (Sirmon and Hitt 2003), and investing in human capital (Ward 2004). Social capital with customers and suppliers and human capital of the family and other staff members are
significant intangible assets of the family firm. The wealth exposure of the family provides a long run incentive to build and preserve these intangible assets more so than for non-family firms. In some contexts, the intangible assets of the family might be the most valuable asset the business possesses.

While these family firm-specific intangible assets are resources of the firm, they are not - or at least not fully - captured in the reported book value of a firm under current international accounting regulations. Accounting book value only measures tangible assets plus a limited set of intangible assets (i.e. purchased goodwill, licences, and trademarks). The social and human capital intangible assets of family firms do not meet the definition of intangible assets under the current international accounting standards (Sanchez et al. 2000). To recognize and measure in the accounts as an intangible asset, the resource or asset must: (1) be under the control of the firm and the firm has to be able to obtain the benefits of owning the asset, (2) embody future economic benefits associated with the control of the asset either in the form of increased revenue or decreased expenses, and (3) be identifiable (IAS 38).

The third test of identifiability is the critical stumbling block for family firm intangible assets. To consider an asset identifiable, the firm must be able to separate the asset from the firm. Separability in this respect means that the benefits of controlling the asset are capable of being transferred to a third party, for example, in the form of selling or renting the asset (Bond et al. 2000). If we consider the case of social capital and its reputation subcomponent, while there may be future economic benefits stemming from a positive reputation, the firm’s reputation cannot be severed from the firm itself or the family members (Cañibano et al. 2000). This disqualifies reputation from being an intangible asset for accounting measurement. There is an argument that the reputation may not even be separable from the family or the firm it controls. Thus, for family firms where social and human intangible assets are likely to be significant value drivers, they will not be captured in book value; the accounting book value as a resource measure is mis-specified. While it is true that non-family firms possess unrecognized intangible assets (e.g. brand reputation), we expect that the level of asset or resource mis-specification for family firms is of greater magnitude than for non-family firms.
The question we need to consider is how intangible assets impact value and, in particular, how family firm intangibles differentially impact value. Accounting and finance research typically measure the resources of a firm as the financial statement value of net assets held or as the accounting book value (Cañibano et al. 2000). The family business literature has not addressed directly the valuation of resources. Nevertheless, the research (summarised in Table 2) has found that family firms are in most cases valued higher in the market than non-family firms, based on higher P/B as a proxy for Tobin’s q values (Anderson and Reeb 2003a; Maury 2006; Villalonga and Amit 2006). However, if we accept the argument that family firms hold more unidentifiable intangible assets than non-family firms then their reported book values are relatively more understated compared to the true underlying but unobservable state. A consequence of this understatement of book value is that the Tobin’s q proxy P/B is upwardly biased since the denominator in the ratio is the reported (understated) book value of assets. Thus, we observe inflated price-to-book and Tobin’s q results unless the market uses an adjusted P/B multiplier to offset the bias in book value measurement for family firms.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Sample period</th>
<th>Region</th>
<th>Sample</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson &amp; Reeb (2003a)</td>
<td>1992–1999</td>
<td>U.S.</td>
<td>S&amp;P 500</td>
<td>Family firms are found to have higher Tobin’s $q$ compared to non-family firms.</td>
</tr>
<tr>
<td>Cronqvist &amp; Nilsson (2003)</td>
<td>1991–1997</td>
<td>Sweden</td>
<td>Stockholm Stock Exchange</td>
<td>Firms where the family is a controlling minority shareholder (CMS) have lower Tobin’s $q$ relative to non-family CMS.</td>
</tr>
<tr>
<td>King &amp; Santor (2008)</td>
<td>1998-2005</td>
<td>Canada</td>
<td>613 publicly traded firms</td>
<td>Family firms with control-enhancing mechanisms were associated with lower Tobin’s $q$ values than non-family firms.</td>
</tr>
<tr>
<td>Martinez, Stohr, &amp; Quiroga (2007)</td>
<td>1995-2004</td>
<td>Chile</td>
<td>Companies registered in Bolsa de Comercio de Santiago’s database</td>
<td>Family firms have lower Tobin’s $q$ values than non-family firms. A subsample consisting of the 40 most traded firms shows the opposite effect.</td>
</tr>
<tr>
<td>Maury (2006)</td>
<td>1996–2003</td>
<td>13 countries in Western Europe</td>
<td>WorldScope 2003</td>
<td>Family firms have higher Tobin’s $q$ values than non-family firms.</td>
</tr>
<tr>
<td>McConaughy, Matthews, &amp; Fialko (2001)</td>
<td>1986-1988</td>
<td>U.S.</td>
<td>Firms listed in ‘The Business Week CEO 1000’ in 1987</td>
<td>Family firms have higher P/B ratios. Median P/B ratio for family firms was 2.06, versus 1.42 for non-family firms.</td>
</tr>
<tr>
<td>Miller, Le Breton-Miller, Scholnick, &amp; Montreal (2008)</td>
<td>1995</td>
<td>Canada</td>
<td>676 small businesses with 100 or fewer employees</td>
<td>Family firms engage in more reputational development, training of employees and relationship-building with customers.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sample period</td>
<td>Region</td>
<td>Sample</td>
<td>Main findings</td>
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<td>-----------------------------------</td>
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<tr>
<td>Mishra, Randøy, &amp; Jenssen (2001)</td>
<td>1996</td>
<td>Norway</td>
<td>Oslo Stock Exchange</td>
<td>There is a positive association between founding family control and firm value as measured by Tobin’s q.</td>
</tr>
<tr>
<td>Pérez-González (2006)</td>
<td>1980–2001</td>
<td>U.S.</td>
<td>Firms in Compustat in 1994</td>
<td>Family firms that appoint a family-member CEO as a successor have lower P/B ratios relative to firms that appoint a non-family member CEO.</td>
</tr>
</tbody>
</table>
The core argument that family firms have higher IA factors is supported by a body of literature that uses Tobin’s $q$ as a measure for resource intangibility (Sanchez et al. 2000; Villalonga 2004). Industries such as information technology, where unidentified intangible assets are common, have higher Tobin’s $q$ ratios in comparison to industries where book values reflect the true nature of the asset holdings (i.e. with more tangible asset bases) (Amir and Lev 1996). Family firm evidence of higher Tobin’s $q$ is also consistent with the argument that family firms have higher unreported intangible assets. Evidence suggests that due to the nature of the intangible assets, the book values of family firms are understated relative to the true underlying level that we state formally as follows:

**Proposition 1.** Family firms’ book values of net assets are mis-specified to a larger extent relative to non-family firms.

One implication of this proposition is that the observed higher Tobin’s $q$ values for family firms could be an artefact of the downward accounting measurement bias embodied in reported accounting information. If we consider the model in Figure 1 that links valuation via both the formal financial statement information path and the informal nonfinancial information path (such as media coverage, disclosures, and analysts reports), then it is conceivable that markets do incorporate a valuation of the unidentifiable intangibles assets of family firms. This is consistent with the argument above that a higher Tobin’s $q$ captures the intangible assets of the firm since market value is relatively higher compared with firms that have lower intangibles but a book value that is less understated. Nonfinancial information is likely to be less reliable than the reported accounting information (which is, of course, audited) and is also likely to be less observable and certainly not as transparent or verifiable. These are important qualities of information that impact the information risk for the firm and create uncertainty in value (Amir et al. 2003; Cañibano et al. 1998). Again, the implication is that the family business research evidence may be an artefact of both bias and error in both the numerator and the denominator. This raises a second related proposition:
Proposition 2. Family firms’ market values are mis-specified to a larger extent relative to non-family firms.

5.2 Return
In the family firm literature, the majority of the return-related research is in the form of performance studies (summarised in Table 3). To date, the family firm literature has focused on earnings\(^1\) as a performance measure - such as ROA and ROE - rather than an input to valuation, although the latter is implied. This body of performance research produced substantial evidence of a positive family firm effect (Anderson and Reeb 2003a; Barontini and Caprio 2006; King and Santor 2008; Lee 2006; Martinez et al. 2007; Maury 2006; McConaughy et al. 2001; Sraer and Thesmar 2007; Villalonga and Amit 2006). In addition, family firms have been shown to have higher earnings quality, which is attributed to the corporate governance of the firm (Dechun 2006). However, there is also conflicting evidence since some studies suggest no family effect or even a negative family effect on performance (Barth et al. 2005; Filatotchev et al. 2005; Pérez-González 2006; Sciascia and Mazzola 2008; Villalonga and Amit 2006; Westhead and Howorth 2006).

\(^{1}\) Longitudinal studies have shown that earnings are still very much value-relevant; even if their short term importance has been reduced due to reporting of negative earnings (Hayn 1995) and as the value-relevance of book values have increased (Collins et al. 1997; Ely and Waymire 1999; Francis and Schipper 1999).
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Sample period</th>
<th>Region</th>
<th>Sample</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barontini &amp; Caprio (2006)</td>
<td>1999</td>
<td>11 countries from Continental Europe</td>
<td>Publicly listed firms with more than 300 million euro in assets</td>
<td>Founder-controlled family firms show a higher operating performance.</td>
</tr>
<tr>
<td>Barth, Gulbrandsen, &amp; Schønea (2005)</td>
<td>1996</td>
<td>Norway</td>
<td>1996 survey by the Confederation of Norwegian Business and Industry</td>
<td>Family-owned firms that are managed by a family member are less productive than non-family firms.</td>
</tr>
<tr>
<td>Filatotchev, Lien, &amp; Piesse (2005)</td>
<td>1999</td>
<td>Taiwan</td>
<td>Taiwan Stock Exchange</td>
<td>Family firms are not found to be associated with either a positive or negative impact on performance.</td>
</tr>
<tr>
<td>King &amp; Santor (2008)</td>
<td>1998-2005</td>
<td>Canada</td>
<td>613 publicly traded firms</td>
<td>Family firms with a one share-one vote structure were shown to have higher ROA than non-family firms. No difference for family firms with control-enhancing mechanisms.</td>
</tr>
<tr>
<td>Lee (2006)</td>
<td>1992-2002</td>
<td>U.S.</td>
<td>S&amp;P 500</td>
<td>Family firms have higher revenue and income growth than non-family firms, and generate a higher NPM.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sample period</td>
<td>Region</td>
<td>Sample</td>
<td>Main findings</td>
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<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Martinez, Stohr, &amp; Quiroga (2007)</td>
<td>1995-2004</td>
<td>Chile</td>
<td>Companies registered in Bolsa de Comercio de Santiago’s database</td>
<td>Family firms generate higher ROA relative to non-family firms.</td>
</tr>
<tr>
<td>McConaughy, Matthews, &amp; Fialko (2001)</td>
<td>1986-1988</td>
<td>U.S.</td>
<td>Firms whose CEO was listed in ‘The Business Week CEO 1000’ in 1987</td>
<td>Family firms have higher operating efficiency - higher gross and net margins relative to non-family firms.</td>
</tr>
<tr>
<td>Pérez-González (2006)</td>
<td>1980–2001</td>
<td>U.S.</td>
<td>Firms in Compustat in 1994</td>
<td>Family firms that appoint a family-member CEO as a successor experience a decrease in ROA relative to firms that appoint a non-family member CEO.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sample period</td>
<td>Region</td>
<td>Sample</td>
<td>Main findings</td>
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</table>
The question of why there exists conflicting evidence remains; there are several possible explanations. First, researchers employ a number of different definitions to define what constitutes a family firm (Miller et al. 2007). Since the sample definitions are inconsistent, it is not surprising that results are also inconsistent. Additionally, many studies fail to accurately differentiate between family ownership, control, and management (Villalonga and Amit 2006). As a result of the shortcomings of previous studies, it is difficult to compare the results or draw conclusions from the combined results. Nevertheless, there exists a commonly held view that family involvement has a positive impact on the long-run returns (earnings and cash flows) for family businesses.

If we accept proposition one that the accounting book value of family firms does not reflect true book value then there are several further implications for earnings and operating cash flow that may provide some insight into the conflicting performance evidence. If the family firm’s unrecognised intangible assets were developed internally, then the extant accounting regulations expense the development costs of the intangible assets. However, if we accept that these family resources are additional assets of the business, then the development costs should be capitalised as assets on the balance sheet rather than expensed to profit (Cañibano et al. 2000). The policy of expensing means current accounting practices consistently underestimate the present value of earnings and operating cash flows of family firms. By developing additional intangible assets that are not measured by accounting book value but rather expensed in the period developed, the returns (earnings and cash flows) of family firms are adversely affected, which stated formally is:

**Proposition 3.** *Family firms’ returns are more understated relative to non-family firms.*

There is a potentially more significant return-related impact of family involvement. In addition to the earnings level impact of expensing intangible assets, the DM factors of family firms also have implications for the persistence of the earnings and cash flow streams. The literature suggests that families in business have a longer time horizon since they do not chase short run returns at the expense of long run gains (James 1999). They also have patient capital and strong social networks (Sirmon and Hitt 2003). This means that family firms

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2 It is however important to note that valuing these intangible assets each year for the purpose of capitalization could be impractical as the measurement and valuation of these assets is a costly and time consuming process.
expect returns over longer horizons and that the returns are more persistent and less transitory (Dechun 2006). Research shows that the market values persistent earnings and transitory gains differently (Ohlson 1999). The accounting literature has also shown that earnings and cash flow information signals have a persistence across time in that an earnings innovation in one period has implications for future periods; the impact on value is more than one period magnitude of change in returns (Ohlson 1999). If family involvement translates into a higher proportion of longer run (i.e. more persistent) earnings and cash flows, then this needs to be weighed into valuation. Therefore, regardless of the valuation model employed, the underlying proposition is:

*Proposition 4. Family firms have more persistent returns relative to non-family firms.*

Research relating to proposition four would shed new light on the conundrum of the mixed evidence on the profitability of family versus non-family firms. If family firms - especially those with long-term orientations, better governance structures, and more patient and survivability capital characteristics - have more persistent returns, then the quality of the observed ROA and ROE ratios is demonstrably different in a value sense. It may be that family firms do not earn higher earnings or returns on assets. In some contexts, performance may be lower than for profit maximising, non-family firms. If, however, due to the systematically different family firm factors the lower earnings is perceived to embody higher persistence, then these lower earnings may be given a higher weighing in valuation models. For example, if a firm has lower earnings but this is multiplied by a higher P/E factor to reflect the quality of the earnings, then the observed outcome may be a higher value. Thus, it is the quality of the earnings - not just the level - that drives value.

Finally and from a measurement perspective, proposition one implies that the asset and equity bases for the ROA and ROE performance measures are understated for family versus non-family firms. Thus, the ROA and ROE evidence is dependent entirely on the relative measurement error and bias in both the numerator and denominator making ratios low quality measures of performance for family firms.

### 5.3 Risk

While core to each of the valuation approaches, the concept of risk - or the pricing of risk - is operationalised in different ways. To illustrate we will focus on DCF model’s WACC since
this overlaps with some of the other valuation models (Copeland et al. 2000). WACC is compromised of three components (1) cost of equity (used for the RI model), (2) the cost of debt, and (3) debt-equity leverage weights. Cost of equity \( (k_e) \) is the rate of return required by the shareholders of a firm to compensate for the perceived riskiness of the expected return. Cost of debt \( (k_d) \) is the rate that the firm has to pay to borrow money in the market (adjusted for after-tax cost since interest is tax deductable). The higher the risk of the firm as an investment, the higher is the cost of debt. The leverage weights are respectively the proportion of equity and debt in the capital structure used to weight the costs of the two types of financing to arrive at the WACC as follows:

\[
WACC = \frac{Equity}{Equity + Debt} \cdot k_e + \frac{Debt}{Equity + Debt} \cdot k_d \cdot (1 - TaxRate)
\]

The family firm literature explores several issues related to estimating the three components of WACC (i.e. \( k_e, k_d, \) and leverage). This research has been summarised in Table 4.
<table>
<thead>
<tr>
<th><strong>Author(s)</strong></th>
<th><strong>Sample period</strong></th>
<th><strong>Region</strong></th>
<th><strong>Sample</strong></th>
<th><strong>Main findings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson, Mansi, &amp; Reeb (2003)</td>
<td>1993-1998</td>
<td>U.S.</td>
<td>Firms that are in both the Lehman Brothers Bond Database and the S&amp;P 500 Industrial Index.</td>
<td>Family controlled firms found to have a 32 basis points lower cost of debt than non-family firms. Reduction in debt cost is greatest for firms with less than 12% founding-family ownership.</td>
</tr>
<tr>
<td>Anderson &amp; Reeb (2003b)</td>
<td>1993-1999</td>
<td>U.S.</td>
<td>S&amp;P 500</td>
<td>Family firms are less diversified than non-family firms. No difference in debt level between the two groups is found.</td>
</tr>
<tr>
<td>Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, &amp; Moyano-Fuentes (2007)</td>
<td>1944–1998</td>
<td>Spain (limited to province of Jaén)</td>
<td>Spanish government registry</td>
<td>Family-owned firms are not more risk averse than non-family owned firms. Family firms are more inclined to accept performance hazard risk as a measure to maintain socio-emotional wealth.</td>
</tr>
<tr>
<td>King &amp; Santor (2008)</td>
<td>1998-2005</td>
<td>Canada</td>
<td>613 publicly traded firms</td>
<td>Family firms with a one share-one vote structure were shown to have a higher financial leverage than non-family firms.</td>
</tr>
<tr>
<td>McConaughy, Matthews, &amp; Fialko (2001)</td>
<td>1986-1988</td>
<td>U.S.</td>
<td>Firms whose CEO was listed in ‘The Business Week CEO 1000’ in 1987</td>
<td>Family firms use less debt. Median debt to asset ratio for family firms was found to be 19.6%, compared to 25.8% for non-family firms. Difference in short-term debt usage was even greater.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sample period</td>
<td>Region</td>
<td>Sample</td>
<td>Main findings</td>
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<tr>
<td>-----------------------------------</td>
<td>---------------</td>
<td>--------</td>
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<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Steijvers &amp; Voordeckers (2009)</td>
<td>1993</td>
<td>U.S.</td>
<td>Survey of private company debt lending</td>
<td>Family firms more likely to pledge personal collateral which suggests that agency costs of debt are higher in family firms.</td>
</tr>
</tbody>
</table>
Estimation of cost of equity for family firms is more complex than for non-family firms due to the deep connection between the family and the firm. The family’s total return is more than just financial return on equity (Dobrzynski 1993). Astrachan and Jaskiewicz (2008) propose that family firms require an emotional return in addition to a financial return when considering selling the business and this may positively or negatively influence the value of the firm. If we consider this argument within a cost of equity framework, there are additional consequences. A firm’s cost of equity is the return that the equity holders require in return for the risk of maintaining a stake in the firm. Family firm owners’ total return includes some form of emotional return. In other words:

$$Total \ Required \ Return = f (Financial \ Return + Emotional \ Return)$$

A family that receives a positive (negative) emotional return rationally requires a lower (higher) financial return (McConaughy 1999). While non-family investors may only focus on financial return, at least a portion of the equity holders in family firms have a cost of equity requirement that differs from these non-family investors, and thus the family firms’ overall cost of equity should differ. It has been suggested that the cost of equity estimation for a family firm differs in comparison to non-family firms (de Visscher et al. 1995; McConaughy 1999). We argue that further insight can be gained by drawing on the RBV of competitive advantage. Family firms tend to hold two distinct factors: survivability capital and patient financial capital. These two factors lower the risk of the firm through personal sacrifices of family members and through either providing free/loaned labour or by not choosing to liquidate their investment when the return on equity is insufficient. In the finance literature, availability of these resources to the firm are real options (Kogut and Kulatilaka 2001). The cost of equity estimation for a family firm must also incorporate some form of consideration of the economic climate since these unique features are of greater use in financial downturns. In general, our argument can be stated as follows:

**Proposition 5.** Family firms’ cost of equity is lower relative to non-family firms.

The second WACC component to consider is cost of debt. Research suggests that agency problems and associated costs increase as managerial ownership decreases and the interests become more diverged, implying family businesses have a lower cost of debt (McConnell and Servaes 1990; Morck et al. 1988). There are, however, conflicting views as to who bears
the agency cost of debt. Some suggest that the agency cost of debt is born by stockholders (Jensen et al. 1976) while others argue that bondholders bear the cost (Barnea et al. 1981).

Anderson et al. (2003) explore the relationship between founding family ownership and the cost of publicly traded debt incurred by the firm and found that founding family ownership is associated with lower cost of debt. Specifically, the cost of publicly traded debt of family-firms is 32 basis points lower than for non-family firms. The authors suggest this result indicates that bond investors perceive founding family ownership to be an governance structure that better protects their investment (Anderson et al. 2003). Furthermore, the long-term orientation of family firms and their survivability capital provide signals of risk reduction for creditors. Therefore:

**Proposition 6. Family firms’ cost of debt is lower relative to non-family firms.**

While this evidence is a useful insight, publicly traded debt is but one element in the total cost of debt for a family firm. This is particularly significant for family firms that operate in markets other than the United States where intermediated (bank and other private debt) are more dominant than publicly traded debt. There is scope for a lot more work on the nature of the total cost of debt for family firms.

The final component of WACC is the leverage weight but evidence regarding family firms’ proportion of debt is conflicting. In the United States, Anderson and Reeb (2003b) found that while there is no difference in leverage, listed family firms are less diversified in terms of business segments relative to non-family firms. McConaughy et al. (2001) provide evidence that family firms use significantly less debt with the difference even greater with respect to the use of short-term debt. In contrast, family firms that use control enhancing mechanisms are more leveraged (King and Santor 2008) and in periods of growth, family firms use more debt capital (Schulze et al. 2003). Other family firm research uses the level of leverage as a proxy for risk-aversion. Gomez-Mejia et al. (2007) found that while family firms are risk-averse when it comes to accepting venturing risks, they are willing to accept more performance hazard risk to secure socio-emotional wealth. In sum, the conflicting results and the need to explore the various forms of risk coupled with the paucity of research on risk suggest we need to learn more about the use of debt in the capital structures of family firms. The literature and theory on family factors suggest firms with a long-term orientation and patient capital have lower levels of debt and, hence, the weights in the WACC are more
heavily weighted toward equity than debt (Romano et al. 2001). The following proposition is, therefore, presented:

Proposition 7. Family firms’ leverage is lower relative to non-family firms.

Based on the three propositions that have emerged from the discussion in this section, we expect that a family firm has lower costs of debt, equity, and leverage. Combined, these factors suggest that the overall WACC for a family firm is lower.

6. Discussion

The propositions we have presented link family firm factors to the three drivers common to the extant valuation methods of resources, return, and risk pricing. The family factors we have considered include the four DM factors (1) long-run orientation, (2) corporate governance, (3) patient capital, and (4) survivability capital; and two IA factors (1) social capital and (2) human capital constitute a competitive advantage for family firms (Sirmon and Hitt 2003). While each of the six factors has implications for valuation, it is also important to consider the purpose of valuation. Some of these factors cease to exist when the firm is acquired entirely by an outside investor. Survivability capital and patient financial capital cannot exist outside the family firm; nonetheless, they are present in scenarios where the family divests a portion of the firm. The governance structure advantage can exist outside the family firm; however, it is contingent on any new ownership-management structure. Some social capital may be lost if the firm was branding itself as a family firm prior to an acquisition, while the potential human capital loss will be primarily manifested in any loss of key personnel. Still, some factors remain even in situations where the firm is acquired as a whole, and all factors remain - to varying degrees - when the family maintains a controlling stake.

If the purpose of the valuation is to determine the firm’s intrinsic value rather than liquidation value, then IA factors should be considered legitimate assets. If we value the firm as a going concern, then all the value-relevant assets should be included (Hand and Lev 2003). While it is difficult to quantify the value of these unrecognized intangible assets, their existence cannot be disputed. Moreover, when a family firm is acquired, some of these intangible assets are automatically transferred to the new owner. In accounting terms, these
unidentifiable intangible assets constitute goodwill on acquisitions, which are recognised in the accounts.

Misspecification of resources and returns has implications for the findings of much prior research. We contend that family firms have more unrecognised intangible assets than non-family firms. In addition, costs of developing these assets have been expensed rather than capitalised, thus understating earnings and operating cash flows. Due to DM factors, a higher proportion of returns (earnings and cash flows) for family firms are likely to be persistent over a longer period of time. The inability to capture the true book value, returns and persistence of the earnings will skew accounting based ratios. As performance studies often use earnings and book value-based figures for performance ratios, conclusions from these studies must be limited to accounting performance rather than true performance.

One of the primary purposes of accounting information is to provide current and potential investors a basis for decision-making (Francis and Schipper 1999). If we accept propositions one and three, then accounting information is mis-specified and insufficient for accurately estimating the assets and returns of a family firm. This has serious capital markets implications. Investors relying heavily on accounting information as part of their decision-making are less likely to invest in family firms since the accounting information available implies that family firms are performing at a lower level than they really are. If investors are less likely to invest in family firms, then according to the laws of supply and demand these firms will also be undervalued in the capital markets. Conversely, since investors favour non-family firms, these firms are, in fact, overvalued in the capital markets. The most likely scenario is that the market adjusts the valuation parameters to account for the mis-specified book value and earnings information and thus values the family factors in family firms, albeit imperfectly (Amir et al. 2003). Arguably, if better measures of resources (book value) and returns (earnings and cash flows) were available, then the market would value family firms with less error.

One common aspect of all valuation models is that their risk pricing parameters require market-based data. Either as a direct price relative in the case of P/E and P/B valuation models or beta systematic risk estimates to determine cost of equity \( (k_e) \). When valuing listed public firms, parameter estimation is not a problem as market-based data is
generally available for family and non-family public firms. However, this is problematic when valuing privately held firms including unlisted family businesses.

Nevertheless, all four models in Table 1 can be applied to value private firms. The structure of the valuation models is maintained when a private firm is valued, but with adjustments to some of the key variables to reflect differences between public and private firms (Pratt et al. 2000). The primary adjustment for private firm valuation is the pricing parameter. Either an adjusted public listed company relative is used (i.e. P/E or P/B) or the discount rate cost of equity capital (or WACC in some cases) is adjusted. The adjustment takes the form of reducing the price or increasing the cost of capital for private firms relative to the discount rate used for public firms. This judgement based process (either price relative deflation or cost of capital inflation) reflects the fact that private firms are riskier than public firms due to factors such as reduction in marketability, lower liquidity, and risk factors related to size (Pratt et al. 2000).

Based on our analysis, we conclude that traditional valuation models are inadequate for valuing family firms. Since both resources (book value) and returns (earnings and cash flows) are understated, the models systematically undervalue family firms in relation to their true intrinsic value. In addition, estimation of risk pricing (cost of equity) is more complex due to the factors of survivability capital and patient financial capital. In the RI approach, the book value and the earnings measures are understated, leading to undervaluation. The DCF approach also undervalues the family firm since cash flows and timing are mis-specified. Since the model uses accounting earnings as a starting point, the end result is negatively biased against family firms. In the DCF valuation model, greater earnings persistence means higher FCF over longer periods. Similarly for the RI valuation model, this implies a higher NI over longer horizons. For the Ohlson (1995) and P/E models, greater persistence implies higher earnings, earnings weight, and multiplier. For the P/B model, more persistent long-run earnings also mean higher intangible assets since assets are future benefits (i.e. the higher and longer run returns). Alternatively, more persistent long-run earnings imply growth in book value (or retained earnings) and, hence, justify a larger P/B multiple. For each of the valuation models, the implication is that if the market factors in the additional family firm earnings signal, then value is higher for family firms relative to non-family firms; this is proposition two. So, the existing family business evidence on higher Tobin’s $q$ suggests that, to some extent, the market already factors in the earnings impact of family.
The P/E and P/B multiples methods employed in practice undervalue family firms in terms of the resource, returns, and risk pricing measures. Practitioners do not delineate family vs. non-family firms and thus ignore the distinction in peer selection. Based on extant research, we can assume P/B values of family firms are higher in the capital markets (McConaughy et al. 2001; Villalonga and Amit 2006). If the peer group includes non-family firms whose P/B values are lower than for family firms, then the family firm is undervalued under the method. The book value resource measure is understated as well as the returns measure earnings for the P/B and P/E methods, respectively. We conjecture that the negative impacts are greater for private family firms. While we can observe that public family firm investors are crudely adjusting for the deficiencies of the financial reporting process, there is no evidence of such a practice for private family firms. Due to the lower transparency and less efficient markets for private firms, it is unlikely that the true intangible asset holdings of the firms are recognised by the market.

We identify seven propositions to guide future research agenda. In the process of operationalising these propositions, appropriate methodologies must be considered. To empirically test the mis-specification of book values and earnings of family firms, researchers may use a value-relevance methodology. If the book values and earnings of family firms are mis-specified, then market participants will find them less useful and their association with the market value will be decreased. Given that evidence suggests that family firms’ financial reporting is of higher quality, the earnings quality of each firm should be controlled. It should be noted that while the incremental value-relevance (using both earnings and book value) of earnings may be higher for family firms, regressing standalone earnings on market values should result in lower value-relevance when controlling for earnings quality. The control for earnings quality would isolate the decreased relevance due to expensing of costs associated with developing the intangible assets in the firm. In turn, the persistence of family firm earnings can be tested through use of earnings quality methodology and by separating earnings into persistent and transitory components. Research that investigates the risk of family firms should be examining the individual components of risk. Evidence from United States firms suggests that family firms have lower costs of debt (Anderson et al. 2003); researchers should investigate the issue on an international level. In Australia, firms are

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3 For a overview of this methodology we refer to Kothari (2001a) where researchers can find a thorough literature review.

4 For a review of the earnings quality methodology and literature see Dechow et al. (2010).
obligated to report their weighted average cost of debt; thus, the country lends itself well for a similar study. Additionally, an event study methodology\textsuperscript{5} in the style of Ball and Brown (1968) could be used to empirically test the existence of patient capital and its impact on the cost of equity. When a firm releases market-sensitive information, we can expect the share price of family firms to be affected by a lower magnitude since part of the capital is not traded.

In addressing these propositions, research will progress to understanding family firm valuation. This knowledge will assist researchers in developing family firm specific valuation models or altering existing ones, which can guide both practitioners valuing family firms and research exploring value relevant issues for family firms.

\textsuperscript{5} Comprehensive review of the methodology can be found in Kothari (2001b).
References


