

**University of Ottawa**

**Thesis Submission**  
**A Dual Study Approach to Understanding SME Credit Pricing Influencers:  
Illustrations from the United Kingdom and the Canadian Computer Animation  
and Visual Effects Industries**

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Presented as a requirement of the Master's of Science in Management program to  
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## **Abstract**

It has been empirically established that the differences in the lending rates charged by traditional and large lenders to large versus small creditors can be largely attributed to differences in information opacity (Dietrich, 2012; Holmes *et. al.* 1994). The greater the information possessed by the creditor, the lower the rate charged to the borrower, suggesting again that a risk premium is being charged for information opacity. Securitizing debt with collateral can reduce the lending rate charged, however differences in the rates charged cannot be fully explained by information opacity or availability of collateral. This dual study approach aims at increasing the understanding of loan pricing determinants. The first study uses data from the *UK Survey of SME Finances, 2007* to explore factors internal and external to the firm that are significant in influencing credit prices, providing insight on why credit prices fluctuate from firm to firm. The second study uses interviews with firm owners in the Toronto computer animation and visual effects (CA&VFX) industries to effectively capture the intricacies and gain insight on the nuances involved in the pricing of credit for firms in these industries. The results of the first study suggest that the use of collateral, loan amount, loan duration, and firm size are significant credit pricing influencers while a firm's strategic orientation, specifically product innovation and propensity to export, are of little importance. Results from the second study suggest that firm owner perceptions generally align with the extant literature on collateralization and relationships with lenders.

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## **INTRODUCTION**

It is generally accepted that small and medium-sized enterprises (SMEs) are essential sources of employment and economic growth for the nations in which they do business (Deakins and Freel, 2012). Yet, many SMEs fail and few grow (Storey, 1994). Perhaps the most common lament of the SME owner relates to financing. The importance of ensuring SMEs have access to timely and fairly priced financing instruments cannot be understated (Beck and Demirguc-Kunt, 2006). Without such provisions, the SME's ability to grow and compete is severely inhibited. In response to SME owner concerns, academia has produced a voluminous amount of research investigating certain facets of the SME finance picture.

Scholarly efforts have been dedicated towards understanding the use of venture capital (Bottazzi, Da Rin, and Hellmann, 2008; Lerner, 2010), the extent of credit rationing (Keeton, 1979; Parker, 2002), and, more recently, the characteristics of discouraged borrowers (Levenson and Willard, 2000; Kon and Storey, 2003; Freel, Carter, Tagg, and Mason, 2010). While the previous phenomena are well documented, other facets of the SME finance picture, specifically questions revolving around SME credit pricing, have yet to be fully explored.

Inherent in the credit pricing question is the ability of lenders to identify and quantify risk. While no novel task, evaluating risk is relatively well defined for large publicly listed companies who can rely on years of audited financial statements to convey information at low-cost to potential lenders (Foster, 1986). For smaller privately held enterprises however, information asymmetries between potential lenders and borrowers require lenders to apply a certain degree of creativity when attempting to devise appropriate risk measurements. Whilst recent developments (such as the small business credit scoring technologies) have seen credit providers give greater emphasis to the credit history of the principal owner (Berger and Frame, 2006), it is common practice to mitigate risk through the securitization of SME loans when sufficient collateral is available (Binks, Ennew, and Reed, 1992; Berger *et al.*, 2011). However, in the absence of sufficient collateral, where both firm and owner assets are limited, assessing risk and pricing credit for (typically small) firms is likely to be particularly challenging.

This thesis project will present two separate studies; both designed to increase the understanding of strategic and structural factors relevant in influencing credit prices for SMEs. The first study, a multi-sector design, involves a quantitative analysis of data from the *UK Survey of SME Finances 2007*. Since the data provided by the survey is categorical, Pearson's chi-square tests of independence will be used to test the hypotheses that emerge from the literature.

The second study, a single-sector design, uses qualitative interview data to explore firm-owner perception on loan pricing determinants. These are then transcribed and coded manually to identify prevalent themes.

Of particular concern, given recent emphasis on their importance for economic development (Toward 2025) are firms in creative industries, whose 'assets' are bound up in the expertise of highly qualified owners and employees. Problems of accessing finance are characteristic of the creative industries; they pose challenges for traditional models based on assets and physical property. As Townley *et al.* (2009), note: "there is no collateral for an idea". However, the term 'creative industries' denotes something of a broad church and disguises considerable heterogeneity (see below). Accordingly, I narrow the focus of the second study to a particular subsector within an industry with considerable cultural and economic prominence and impact: viz. the computer animation (CA) and visual effects (VFX) subsector within the Canadian screen-based production industry. These industries are of particular importance to the Ontario economy as the overwhelming majority of global CA&VFX output originates from within its borders. This, coupled with the importance of credit financing for firms operating in the industry, makes CA&VFX companies an ideal setting second study.

The second study touches on the importance of owner/manager perceptions and how these perceptions influence owner/manager behaviour. It has long been established that owner/manager perceptions of the environment are more important influencers of strategic decisions than the actual environment (Hambrick and Snow, 1977; Miller, 1988). Hence, perceptions of a particular environment will lead to behaviors and decisions in line with these perceptions, regardless of the actual state of the environment. It is with this in mind that this thesis contribution takes into account owner-perception of credit pricing influencers as a means of enriching the survey data.

## **BACKGROUND LITERATURE**

Since both studies aim at uncovering factors relevant in influencing credit terms, they will share the same background literature section, yet all other sections will be discussed separately. In order to clearly define where this project is positioned in the umbrella of SME finance, a synopsis of the extant literature will be presented. . With this as the aim, understanding what past research has identified empirically as important contributors and influencers in the broader SME finance picture is important. This review will highlight the projects' projected contribution to academia, its relevance and importance to policy makers, as well as its pragmatism for business-owners. The summary will begin by outlining the sources of SME finance.

### *Consider the Sources*

There are a number of options available to SMEs seeking financing, all of which can be classified as either internal or external sources. Internal sources of finance include using the personal assets of the entrepreneur, or after start-up, the

firm's retained earnings. SME finance of this kind has been denoted as "bootstrapping" (Timmons, Spinelli, and Ensign, 2010). When the amount of financing required by the firm exceeds the internally available amount, they must seek external sources of financing via equity or debt. Equity financing involves the dilution of firm ownership in exchange for funds, sources of which include venture finance from venture capitalists and angel investors, or equity market finance obtained through a stock exchange listing. Debt financing involves borrowing money from another entity (creditors) with a fixed repayment schedule. Attempting research that effectively captures all sources of SME financing is overly ambitious and far beyond the scope of this paper. As such, SME creditors will be the focus of this investigation.

Debt finance is intuitively attractive for SMEs: creditors are easily accessible and no loss of ownership or control is required. Sources of SME debt can include advances from banks, trade credit, hire-purchase arrangements (rent-to-own), factoring (invoice discounting), and leasing (Deakins and Freel, 2012). Acting as the primary small business creditor are commercial financial institutions (FIs), which extend credit to SMEs in the form of short-term loans (Binks et al, 1992; Berger and Udell, 2006; Degryse, de Goeij, and Kappert, 2010). As cited by Berger and Udell (2006), the importance of trade credit is not to be overlooked when considering sources of small firm credit as the amount of credit extended in the US through this medium is only slightly less than FIs. Most pertinent to firms in the manufacturing industry, I do not expect trade credit to be a major source of credit financing for firms in the screen-based production industry. The reasoning behind this claim is intuitive; trade credit applies to the short-term financing of production inputs. To the extent that VFX and animation industries require no production inputs besides a computer and the necessary software application, the use of trade credit in the capitalization of firms in these industries should be non-existent. A study by Nordicity (2012) confirms my intuition, as trade credit is completely absent as a source of financing for VFX studios and accounts for 1% of financing for computer animation studios. Also worth noting are the debt covenants included in many equity contracts created by venture capitalists and angel investors. The previous examples demonstrate that a number of sources result in SME credit. Importantly, however, is that FIs and short-term loans are the main sources of SME credit financing (Berger and Udell, 2006).

Providers of external financing all ask themselves the same question when firms come looking for funds: is the risk worth the return? The idea of risk versus return, or risk-return trade-off, is a phenomenon central to our financial system. To give a brief overview, any investment that is considered risky must be accompanied by a risk premium (added incentive to invest) otherwise investors would channel funds into investments with either a) similar risk and higher returns or b) similar returns and lower risk. In effect, this is exactly how risk, and subsequent risk premiums, are determined: by comparing investment vehicles against one another. In our case, the investors are financial institutions and the investments SME credit

financing. Therefore, if a SME seeking credit financing is deemed riskier in comparison to other SMEs, the market requires it to pay a higher price in order to obtain funds, or will be denied funds altogether. The following section will review how the market arrives at credit-lending decisions and general borrowing prices, along with the problems raised by academia when SME credit pricing is determined purely through market forces.

### *Market Equilibrium and Credit Rationing*

Following economic theory, the small firm credit market should naturally come to a state of equilibrium, where the supply of credit to businesses would satisfy demand at an appropriate price. Theoretically, a credit finance gap exists when the amount of SME credit demanded is greater than the amount of credit FIs are willing to provide. Empirical evidence supports the theory as the existence of finance gaps have been recognized for some time, being first introduced in the UK's McMillan Report of 1931.

Until this point, however, the discussion has operated on the assumption that all SME credit finance applications are homogeneously risky. Naturally, this is not the case. When riskier firms are prepared to pay a higher rate of interest on loans, yet are still denied credit, they are deemed to be credit rationed. Credit rationing is defined by Parker (2002) as applying for credit yet being denied despite 1) being capable and willing to pay a higher rate of interest than the bank's quoted rate in order to obtain a loan, and 2) "being observationally indistinguishable from borrowers who do receive a loan" (Parker, 2002, p163). Keeton (1979) outlines two types of credit rationing. Similar to the definition taken by Parker (2002), the literature on Type II credit rationing investigates firms who actively seek external financing, yet are unable to obtain credit despite being otherwise credit worthy. Research on Type I credit rationing investigates firms that obtain fewer funds than originally sought. In either case, the concern is if firms are able to get, or not get, the funds deemed necessary for business operation or expansion. Put differently, credit rationing attempts to explain disequilibrium in small firm credit markets where the demand for credit outweighs the amount being supplied at a given price. Although theoretically a legitimate concern, empirical evidence provides little support for credit rationing to be an important or widespread concern (Storey, 1994; Parker, 2002). In light of this research, it seems that the concern that small firms are credit rationed may be overstated.

Despite the above, governments have introduced loan guarantee schemes designed to mitigate the risks of providing credit to start-ups (Cowling and Mitchell, 2003; Riding, Madill and Haines, 2007), effectively pushing the credit supply curve to the right. The trend towards providing incentives of this kind appears to be widespread. As Llisteri (1997) outlines, schemes of this type are used in most countries of South and North America, Southeast Asia, and Europe. The premise behind these support programs is that governments will guarantee a significant portion of the loan (70%-85%), which reduces the risk level of the SME to the

lender. Banks, not being bearers of risk, are able to pass the risk profile onto governments, which in turn should loosen the bank's traditional lending criteria (Cowling, 2003). This, in theory, would increase the amount of credit being supplied by FIs and allow more businesses to receive the funds they require.

In an attempt to not tamper with the credit price point set by the FIs, the government guarantee comes with an attached interest rate premium added to the bank's posted rate. Also, to ensure these schemes are only used as a last resort, borrowers wishing to take advantage of the guarantee must have exhausted all personal wealth to be eligible.

In a UK study, Cowling and Mitchell (2003) evaluate the effectiveness of small firm loan guarantee schemes in addressing the capital constraints of small firms. They conclude that, if financial institutions were to increase the cost of borrowing, yet remain bearers of risk by not securitizing the loan, default rates increase and loan duration shortens. However, when financial institutions securitize the loan, in turn increasing the cost of borrowing by adding the government's loan guarantee risk premium, default rates and loan duration do not appear to be significantly affected. This seems to imply that when SMEs take advantage of the government sponsored initiative, it has a greater effect on their willingness to repay than when funded by a traditional bank loan.

#### *Discouraged Borrowers*

Until this point, the discussion has revolved around credit-seeking small firms receiving, or not receiving, external credit financing when they otherwise would be credit eligible. When small firms who would be eligible for credit financing simply do not apply for fear of being rejected, they are classified as discouraged borrowers. Discouraged borrowers can be rightly discouraged in the sense that applying for credit would, in the end, finishes with an application rejection. Of particular concern to policy makers and academics are the wrongly discouraged borrowers: those that could be granted credit if they applied.

Research suggests that this phenomenon could be more important and widespread than that of credit rationing characterized by loan denial. Levenson and Willard (2000), as well as Freel *et al* (2010), conclude that a small firm is twice as likely to be discouraged from seeking credit than to be rejected for a loan. Kon and Storey (2003) offer factors which explain why some economies are home to more discouraged borrowers than others. One factor is the level of screening errors of banks. On the one hand, where banks have perfect information, or where banks have zero information and allocate funds by lottery, discouraged borrowers are essentially non-existent. On the other hand, borrower discouragement appears to be at its maximum when banks have little and imperfect information. In other words, when there are a high level of information asymmetries between lender and borrower. Another factor considered is the cost of applying for credit. Confirming

intuition, the higher the cost of applying for credit, the more likely a small firm is to be discouraged. Within our industry of interest, it is not hard to envision discouraged borrowers being a widespread issue and the topic is quite interesting. Time and accessibility issues limit the investigative power of researchers, especially at the Master's level. While there may be a plethora of prospective animators or visual effects specialists discouraged from seeking financing out of fear of denial, being able to identify and sample this population is difficult at best and a challenge for researchers.

#### *Information Asymmetries: Adverse Selection and Moral Hazard*

A crucial phenomenon relative to the discussion of SME credit, mentioned previously however yet to be expanded on, is that of information asymmetry. Simply put, lending to SMEs is challenging because it is difficult and costly for a lender to know as much about a potential borrower as they would like, and impossible to know as much as those internal to the business. Hence, the information distribution between lender and borrower is asymmetric. Large corporations are able to provide years of certified and audited financial statements, and often have publicly traded debt or equity, allowing outsiders to inexpensively gather pertinent information on the firm. Due to the information's ease of accessibility and low cost, these firms are considered informationally transparent. Conversely, the information acquired from SMEs for a loan contract is usually subjective in nature (Binks *et al*, 1992), and hence costly to verify, rendering them informationally opaque.

For the provision of debt financing, information asymmetry poses two problems: adverse selection and moral hazard. Adverse selection occurs when a FI mistakenly extends or denies credit: either financing a venture that fails or refusing to finance a venture that would have been successful (Deakins and Freel, 2012). This occurs because specific information which is required by the FI for a lending decision is either too costly or unobservable *ex ante* (Binks *et al*, 1992). Moral hazard occurs once a venture has been granted credit. Since there is no assurance that a venture will act in the best interests of the FI by adhering to contract, some form of *ex post* monitoring is required (Binks *et al*, 1992). When the amount of financing sought is relatively small, the cost of closely monitoring these loans can outweigh the revenues gained, making them unprofitable and hence unappealing to lenders (Deakins and Freel, 2012). As Bester (1987) points out, the use of collateral can counteract the effect of these problems as it adds incentive for the borrower to act in a manner consistent with the loan contract.

#### *Pricing of SME Credit*

As explained by Keasey and Watson (2000), there are two fundamental areas of concern to FIs when dealing with small firm credit. Both issues revolve around the fact that lending money is a business, implying the practice of which must be driven by profit seeking motives. The first problem is to ensure that credit is only extended to firms with low probability of default. This issue has largely been

addressed by the credit rationing and discouraged borrower literature as described above. This thesis will address the second area of concern: determining the price to charge for the extension of credit to small firms. The pricing of SME loan contracts must reflect the risks and costs inherent in supplying credit, while simultaneously providing adequate returns for the lending institution's investors. The decision to extend credit, as well as credit terms (price/duration), is often based on a formal credit analysis. This involves looking at the overall financial stability of the applicant, a process often summarized through the "five Cs of credit": character, capacity, collateral, capital, and conditions. These are outlined in Table I.

**Table I: The Five Cs of Credit**

<b>Character</b>	The overall credit worthiness of the individual (or business). Put differently, the individual's (or business') willingness to meet debt obligations. Usually measured through external credit rating agencies (i.e. Equifax).
<b>Capacity</b>	The potential customer's ability to repay credit. Measured by the customer's amount and frequency of expected cash flows, in conjunction with other obligations that must be satisfied. For individuals, this is measured in debt-to-service ratios. For businesses, profitability ratios (profit margin, return on assets, return on equity), liquidity ratios (current ratio, quick ratio, operating cash flow ratio), and turnover ratios (receivable, payables, inventory) are common indicators of a firm's capacity to repay.
<b>Collateral</b>	Pledging of assets in case of default. A pledge of assets is often used as an indicator for willingness to repay.
<b>Capital</b>	Financial reserves of the borrower. For individuals, this is often their net worth. For businesses, this can be the firm's equity buffer, or debt-to-equity ratio.
<b>Conditions</b>	The general business conditions or overall economic climate. The recent global financial crisis is an indicator of how macro fiscal conditions can affect the availability and cost of credit.

In addition to the application of the 5Cs in a credit analysis, other endogenous or exogenous factors may play a role in a credit extension, or credit pricing decision. While maintaining focus on credit pricing, these variables have been organized into either external or internal factors, and will be discussed in turn.

*External Factors*

As mentioned previously, lending money is a business. As such, FIs will fill the supply side of the competitive landscape for small firm credit with small firms occupying the demand side. Knowing this, the conclusion regarding small firm credit pricing ought to follow traditional economic theory: more suppliers translate into greater competition which leads to lower prices. One study by Mallett and Sen (2001) investigates the relationship between the number of local competitors (FIs)

and small business loan rates in Canada. The findings of this study support the abovementioned intuition: a statistically significant negative relationship exists between the number of local competitors and small firm loan rates. Interestingly, this study was conducted in Canada, where the banking industry is fairly concentrated and highly regulated. The effects of market competition on credit pricing could be more pronounced in other geographic areas. In the credit rationing literature, Berger and Udell (2006) imply that the higher the market power of FIs, the greater the reduction in credit access as well as an increase in pricing for the credit extended. Thus, the first external factor bearing on the pricing of small firm loan contracts is the number of local competitors offering small firm loans. The first phase of this investigation focuses on SMEs in the UK, where the banking industry is highly regulated and characterized by a small number of large financial institutions. The second phase focuses on a large Canadian urban centre (Toronto) where FI competition is both homogenous and plentiful. This should ensure that the same number of lending suppliers are available to each company under investigation, and that this number is large enough to allow firms to shop around for ideal credit terms. In consequence, market competition is controlled for in this investigation.

As noted, the industry in which SMEs do business is a significant source of heterogeneity. Regardless of the individual business, certain risks are associated with particular industries. Importantly for this thesis contribution is the extent to which loans in certain industries can be backed by collateral or extended using asset based lending. In other words, some industries have a high asset base can use these assets to securitize loans. For example, a manufacturer or retailer could reduce their perceived risk level by offering their fixed assets or inventory as security against loans. Therefore, as an indirect agent of influence, some industries are more capital intensive than others, allowing for greater securitization of loan contracts by offering collateral, in essence, as default insurance. Firms in the creative industries lack the tangible assets necessary to collateralize credit. As such, a greater range of pricing in loan contracts may be present in the creative industries. Due to this range, the factors influencing the pricing of credit should have a more pronounced and observable effect on the cost of credit. For firms in the screen-based production industry, some subsectors are more capitalized than others. One would suspect that distribution companies, having relatively more assets to use as collateral, would generally have cheaper credit prices than less capital-intensive sub-sectors, such as CA&VFX.

The stage within the industry life cycle could also prove influential (Berger and Udell, 2006) on borrowing prices. An industry in its infancy will have more unknowns and rely more on forecasts than past performance, increasing the amount of information asymmetry. By comparison, a well-known business model operating in a mature industry would provide a certain comfort level for lenders, since they are familiar with the inherent risks. The data used in the first project, provided by the UK survey does not allow for a direct comparison between industry life cycle and loan interest rates. In the interviews used in the second project, this question is

touched upon and it will be interesting to uncover if firm owners within the CA&VFX industries perceive lenders to be familiar and comfortable with their business models, and, more pertinently, if the level of familiarity is perceived to affect lending rates.

Included in the factors external to the individual firm are the loan specifics that affect interest rates. When approached for a loan, bankers often consult a loan pricing matrix which uses loan amount and duration as variables to determine an appropriate interest rate. From the lender’s perspective when issuing credit, generally the longer the loan term, ceteris paribus, the lower the comparative interest rate. The determining factor is the lender will, in effect, provide an incentive for the borrower to lock into a longer commitment. This exists up to a point however, at which time interest rates will continue once again to rise. In this instance, the consumer is hedging against interest rate risk (risk that the base interest rate will rise), by locking into a longer term. By allowing the customer to hedge risk in this way, the lender will charge a premium over shorter term loans. For example, a fixed-rate mortgage loan with a five-year term will usually carry the lowest interest rate in comparison to other term lengths. The five-year year term rate would be lower than a one-year term rate as an incentive is given to the borrower for locking into the lender for a longer term. The five-year term rate would also be lower than a ten-year term rate, as the lender would start to charge a lending premium for the borrower to hedge interest rate risk.

Also, larger loan amounts will, ceteris paribus, lead to lower comparative lending rates. In this instance, the FI provides an incentive for borrowing more money. One motive is to be more profitable by earning more interest on a larger loan amount with a lower interest rate than lower loan amount with a higher interest rate. Another reason is that the monitoring costs of the bank as a proportion of the advanced loan decrease as loan size increases. Suffice to say that the duration and amount of the loan itself, regardless of whom it is being extended to, can affect its pricing.

Factors external to the individual firm which may influence credit prices are summarized in Table II.

Table II

External factors in SME credit pricing
1. Level of FI competition
2. Industry of operation
-Capital intensity
-Life-cycle position
3. Loan amount and duration

### *Internal Factors*

Throughout the literature on both the rationing and pricing of SME credit, there is undoubtedly an overarching theme: information asymmetries. While explained earlier, it is worth revisiting here. One explanation for the informational opaqueness of SMEs is their relative infancy. Some SMEs are small because they're young. Expected profits are determined with a high degree of subjectivity by the firm owner. As such, a high degree of variability and, in turn, riskiness, is associated. The above begs the question: do SMEs truly pay more for credit financing than do large enterprises? A study by Holmes, Dunstan, and Dwyer (1994) on firms in the retail, wholesale, manufacturing, and services sector find a statistically significant difference in the pricing of loan contracts based on size, with small firms paying approximately three percent more per annum. The differences may be more pronounced depending on the particular industry, as a previous study by Holmes and Kent (1990) focusing specifically on the manufacturing industry found no significant difference in pricing based on firm size. This research implies that small firms generally pay more for credit than do their larger counterparts, however the effects of firm size can be mitigated depending on the particular industry. From this, the literature suggests that both younger and smaller firms pay more for credit than larger and established enterprises.

As mentioned throughout the discussion thus far, the level of collateral a firm can provide to securitize a loan will influence interest rates. While using business assets as collateral is ideal when available, insufficient business collateral often results in SME owners offering personal collateral guarantees (Binks *et al*, 1992). In fact, more recently it has been found that banks typically prefer to use the business owner's personal assets (Keasey and Watson, 2000). The logic motivating this preference is sound: putting up personal assets as security should significantly reduce the likelihood of default. Bester (1987) first introduced collateralization of business assets as a means of reducing the effects of moral hazard. Using the same logic for loan securitization through personal assets, the risk of losing personal wealth provides added incentive for borrowers to adhere to the loan contract.

The previous paragraph implies that SME credit pricing and lending decisions often look beyond purely business prospects and inquire into the personal history of the entrepreneur. In fact, Volpe and Sheck (2008) confirm that, in the US, the typical credit granting process involves evaluating repayment ability indicators including business cash flows, collateral, and the personal credit history of the business owners. Ergo, a significant internal factor in SME credit pricing is the credit worthiness of the business owner themselves. Previous research (Volpe and Sheck, 2008) suggests personal credit worthiness is a significant influencer of credit terms. The UK survey does not provide any data in regards to the consumer credit history of the survey respondent, and therefore this study cannot directly analyze the effects of an owner's credit history on business credit prices. This contribution does, however, touch on the subject in the interview phase. Future research in the

area should investigate the issue, as the consumer credit history is an important factor in small business credit scoring. This technique, to be discussed in more detail later, is becoming more common in addressing SME information opacity issues.

While personal credit history of the business owner has been the subject of past research (Volpe and Sheck, 2008); other facets of the owner's character could also influence credit prices, specifically their skill at negotiation. A person's ability to haggle often leads to lower prices in other situations; do negotiating credit terms yield fruit? This potential credit-pricing influencer has not been investigated in any past academic literature; hence there is no foundation on which to build. Much like the personal credit history of the business owner, the survey does not provide any data in regards to a firm owner's perceived skill at negotiation. In this light, this factor will be touched upon in the interview phase since I believe it to be of particular interest and worth considering in future research.

Also worth mentioning as an influencing factor is the degree to which a firm is leveraged. Keasey and Watson (2000) point out that a higher proportion of equity to debt, or the lower the amount of financial leverage, is reflected in the pricing of subsequent borrowing. Parallels can be drawn with non-business borrowers, as an individual would pay a higher interest rate on a second mortgage than the first. Working much in the same way, the higher the proportion of equity in a business, the greater the buffer to mitigate potential downswings in profitability. In other words, the risks associated with the variability of potential earnings are lessened with a higher proportion of equity, and hence reflected in loan contract pricing. Unfortunately, debt-to-equity ratios or other information regarding the capital structure of participating firms is not available in the survey data. In this light, financial leverage will not be tested in this contribution as an influencing agent.

The goal of this contribution is to determine what factors are relevant in quantifying small business risk. The interest rate charged on a loan is an excellent indicator of a lending institution's perceived risk in extending credit. Absent in the literature thus far is how strategic orientation effects a firm's risk profile. A firm's strategic intentions can be viewed as an indicator for risk as some general strategies are inherently riskier than others. Since strategic orientation denotes a broad model, this investigation breaks down the notion into two objective, testable concepts: product innovation and internationalization. Intuition posits that firms involved in a product innovation strategy would be inherently riskier than firms producing proven products. An internationalization strategy would also be intuitively more risky than a domestic strategy, as exchange rate and environmental risk become pertinent. An intuitive approach is forced due to the novelty of research investigating strategic orientation as a credit pricing influencer. This contribution should provide insight as to whether or not a firm's choice of strategy affects their perceived risk profile.

Firm specific factors which may influence credit prices are summarized in Table III.

Table III

Firm-specific factors in SME credit pricing
1. Size
2. Available collateral
3. Equity buffer
4. Owner
-Personal collateral
-Credit worthiness
-Skill at negotiation
5. Strategic orientation
-Product innovation
-Internationalization

#### *Lending Taxonomy*

The above internal factors are associated with transaction based lending as outlined by Berger and Udell (2006). This sort of lending is based on “hard” quantitative information acquired through financial statements and the credit scoring of the owner. Essentially, this lending relies on information where there is no subjectivity in interpretation. This lending is suitable, on the demand side, for capital-intensive companies or companies that are old enough to provide a proven track record of success. On the supply side, this lending suits large FIs, as the costs involved with the application and the monitoring that follows are marginally less. In other words, it requires less time and fewer resources to qualify potential borrowers and monitor thereafter based on hard information than otherwise. More recently FIs are using small business credit-scoring models to evaluate SME credit applications. As outlined by Berger and Frame (2007), this form of “hard” lending technology combines consumer credit data on the owner and business data to arrive at a business credit score. Unfortunately, not all small firms would qualify for credit based solely on hard information. In this case the lender must rely on “soft” information which is more difficult to obtain and verify. This type of lending is called relationship lending and will be discussed in the following paragraph.

Relationship lending is dependent on how much a loan officer knows about the business owner, the prospects of the business and the industry in which it operates. A study by Scott (2006) identified a negative relationship between loan officer turnover and credit availability for small firms. This confirms that soft information is not easily transferrable and is heavily dependent on the individual loan officer. This author was unable to find any empirical evidence in the literature comparing the pricing of small firm loan contracts obtained via relationship or transaction based lending. Intuitively, however, one would expect a loan founded

on relationship lending to be priced higher as the costs of administering and monitoring the loan are greater through this channel. Furthermore, the opaqueness of most small firms would imply that relationship lending is necessary for loan application approval, since there is little other information on which to base the application. While not directly comparing relationship and transaction based lending, a study by Blackwell and Winters (1997) confirms the supposition of a positive relation between a bank's monitoring effort and a loan's interest rate. Interestingly, Degryse & Cayseele (2000) found there to be a positive relationship between lender relationship and borrowing rate, implying that a longer relationship with a lender increases the bargaining power of the lender. Conversely, the same study found that the breadth of the relationship, measured by the amount of other financial products held with the lender, reduced overall lending rates.

The main goal of this thesis contribution is to identify what factors are significant in influencing credit terms for SMEs. This is done through two separate studies. First, a statistical analysis of the data set provided by the *UK Survey of SME Finances 2007*. In the second study, interviews with firm owners in the CA&VFX industry are used as case studies to uncover what owners believe to be significant credit pricing influencers, these interviews should also provide insight regarding the firm owners' knowledge level of their lending environment. Ensuring that firm-owners have an educated view of their financing landscape is critical to ensure they ideally position themselves for the best possible credit terms.

## **PROJECT 1**

### **PURPOSE AND HYPOTHESES**

Using the SME credit literature outlined above as a guide, this contribution will use available data from the *UK Survey of SME Finances 2007* to test which factors are statistically significant influencers of credit prices. These factors are organized into testable hypotheses and are outlined below.

Previous work by Holmes, Dunstan, and Dwyer (1994) as well as Holmes and Kent (1990) provided conflicting results regarding firm size as a significant influencer of SME credit pricing. The first study (Holmes and Kent, 1990) found size to have no statistical significance in influencing credit prices, while the second study (Holmes, Dunstan, and Dwyer, 1994) found size to be a significant influencer of credit terms. These previous studies provide a benchmark for the first hypothesis.

#### **Hypothesis 1**

Ha: Firm size, measured by the number of employees besides the firm owner, is a significant influencer of credit terms.

As mentioned earlier, an industry's capital intensity can influence credit terms for firms operating in that industry. Hence, the more physical assets listed on a balance sheet, the more favorable the credit terms. First introduced by Bester (1987), the pledging of collateral should reduce moral hazard concerns and increase the willingness of lenders to repay loans. Increased incentive to repay should translate into reduced risk for lenders, and, in turn, lower lending rates. Of course, a firm must have the assets available in order for them to be used as collateral. The availability of assets and their use in collateralizing loans leads into the second set of hypotheses.

**Hypothesis 2a**

Ha: The amount of assets a firm controls influences the price paid for credit.

**Hypothesis 2b**

Ha: Securitization of credit through collateral is an influencer of credit pricing.

This contribution will also attempt to confirm if certain loan characteristics, specifically loan duration and amount, are significant influencers of interest rates. If indeed they are significant, future researchers interested in furthering credit pricing research should be cognizant that loan specifics, and not necessarily applicant merit, may be at the root of some credit pricing fluctuations.

**Hypothesis 3a**

Ha: Loan duration is a significant influencer of the loan interest rate.

**Hypothesis 3b**

Ha: Loan amount is a significant influencer of the loan interest rate.

Absent in the SME finance literature thus far is if a firm's strategic orientation has any influence on the prices paid for credit financing. For the purposes of this contribution, a firm's strategic orientation can be looked at through two lenses: product innovation strategy and internationalization strategy. In other words, do firm's self-identify as product innovators or exporters, and does this strategic orientation influence the price paid for credit.

**Hypothesis 4a**

Ha: A strategic orientation of product innovation is an influencer of credit prices

**Hypothesis 4b**

Ha: A strategic orientation of internationalization, measured by a firm's propensity to export, influences the price paid for credit.

Past research by Blackwell and Winters (1997) signal a positive relationship between a bank's monitoring effort and a loan's interest rate. A relatively high level of monitoring effort is a common characteristic of relationship banking. One would assume that as a banking relationship builds, the lender would become comfortable with the credit-seeker, monitoring effort would appease, which would lead to lower lending rates. Surprisingly, Degryse & Cayseele (2000) find the opposite; a positive relationship between the length of the banking relationship and lending rates. This is used as the basis for the final hypothesis.

**Hypothesis 5**

Ha: Having a long-standing relationship with a lender influences the credit prices of the firm.

As previously mentioned, the financial landscape can vary significantly across industries. This project sought to investigate a single industry subsector of particular importance to both Canada and Ontario. The following section outlines the intricacies and importance of both the broader industry and the specific subsector.

**METHODOLOGY**

This study uses data from the *UK Survey of SME Finances 2007*. The accessibility of this survey, coupled with it being located in a nation with highly regulated FIs and having a large number of respondents who received variable rate loans, made it an ideal choice for this investigation.

This survey was administered in the UK via telephone in 2007 to SMEs with less than 250 employees. Respondents were either the business owner or the person who makes financial decisions for the firm. This cross-sectional study targeted 24,870 private sector companies and achieved 2,514 usable interviews, a response rate of approximately 10%. The industries included and excluded in the survey are outlined in Table IV.

**Table IV**

Included	Excluded
Agriculture, Hunting and Forestry, Fishing	Public sector
Manufacturing	Not For Profit Organizations
Construction	Financial Services
Wholesale/retail	Mining and Quarrying
Hotels and restaurants	Electricity, Gas and Water Supply
Transport, Storage, and Communication	
Real estate, Renting & Business Activities	
Health and Social Work	
Other Community, Social and Personal Service Activities	

This research focuses on the respondents that successfully applied for bank loans and that opted for variable rate credit terms. Focusing strictly on variable rate loans controls for the sensitivity of lending rates to exogenous economic conditions. To illustrate, a fixed rate loan received in 2006 would likely carry a higher interest rate than a fixed rate loan received today, regardless of applicant riskiness, due to a higher cost of credit at that time. The general economic conditions of the time translated into higher lending rates. Hence, directly comparing fixed credit terms of unknown time origin would provide little insight into the underlying factors influencing these terms. Focusing only on variable rate loans provides a solution for the time sensitivity of interest rates. The credit terms for variable rate loans involve a certain spread from the prime lending rate. The prime lending rate fluctuates in response to exogenous economic conditions, yet the spread remains unchanged and continues to be a useful tool in understanding the lender-determined risk of the applicant. The riskier the loan, the larger the spread and vice versa. Using only those respondents that applied for and received variable rate loans leaves a sample of 259 respondents. A frequency table of the characteristics of firms, owners, and loan for firms using loan and mortgages with a variable rate is presented in Table V below.

Table V

A.	Freq	Percent	Cum.
<b><u>Experience</u></b>			
Less than 3 years	13	5.12	5.12
4-10 years	36	14.17	19.29
10-15 years	41	16.14	35.43
More than 15 years	164	64.57	100
<b><u>Owner's age</u></b>			
less than 35 years old	11	4.44	4.44
36-45	53	21.37	25.81
46-60	124	50	75.81
>=60	60	24.19	100
<b><u>Sector</u></b>			
Agriculture etc.	21	8.11	8.11
Manufacturing	20	7.72	15.83
Construction	30	11.58	27.41
Wholesale/Retail	32	12.36	39.77
Service sectors	156	60.23	100
<b><u>Size</u></b>			
0 employee	16	6.18	6.18
1-9 employees	66	25.48	31.66
10-49 employees	105	40.54	72.2
50-249 employees	72	27.8	100
<b><u>Loan provider</u></b>			
Only main bank	168	64.86	64.86
Main bank one of the provider	57	22.01	86.87
Main bank not a provider	34	13.13	100

B.	Mean	Std. Dev
Male ownership	82%	0.383

Purchased asset with loan	53%	0.500
More than three years relationship with bank	77%	0.419
Collateral	76%	0.428

Since the *UK Survey of SME Finances* had participants provide their answers within certain response bands or ranges, the data the survey yields is categorical. When conducting quantitative hypothesis testing to determine if two sets of categorical data are related to one another, the Pearson's chi-square test of independence is appropriate. When testing the hypotheses using the chi-square test, this contribution will use the conventionally accepted significance level of 0.05 ( $p < 0.05$ ) to reject the null hypothesis and conclude that the variables are dependent.

## **RESULTS**

As mentioned previously, the Pearson chi-square test of independence will be used throughout the hypothesis testing to determine if there is any association amongst the test variables. Each hypothesis test shares the Rate Above Base variable, which is grouped into three categories: 0.1-2.0%, 2.1-4.0%, or over 4.1% above the prime lending rate. In communicating the results for each test, the first contingency table will show the absolute values of the data used in that particular test. A second table converting the absolute values into percentages and a bar chart will follow to make the output easily digestible and the results straightforward to communicate. The chi-square statistic (along with the appropriate degrees of freedom) and corresponding p-value are then displayed along with a decision narrative to accept or reject the null hypothesis.

### **Test 1**

In the first hypothesis test, the interest is in determining if firm size, measured by the number of employees in addition to the firm proprietor, has any influence on the prices paid for credit. Firm size is separated into four categories: self-employed (0 employees), micro-firms (1-9 employees), small enterprises (10-49 employees), and medium enterprises (50-249 employees).

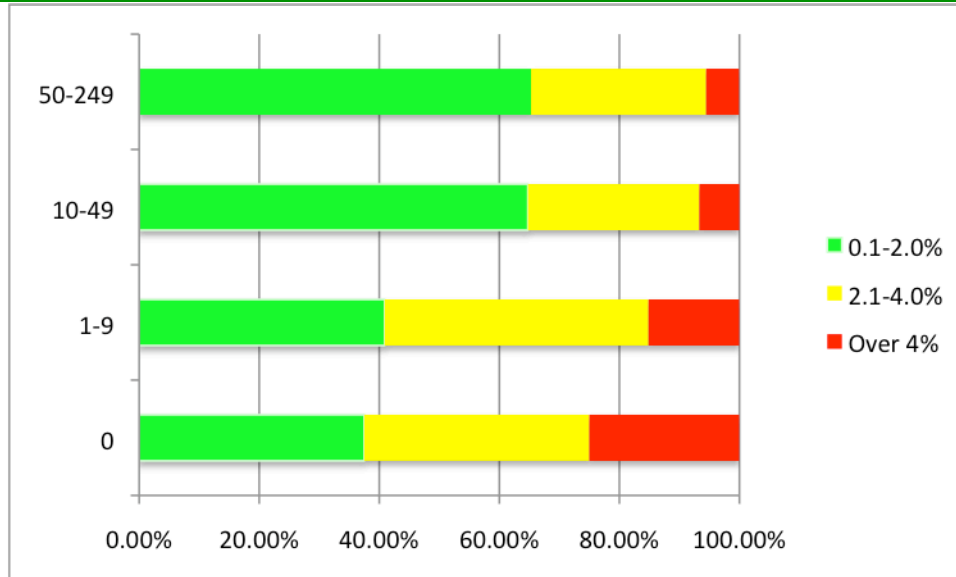
#### Absolute Values

	<b>Employment Categories (# of employees)</b>				
<b>RateAboveBase</b>	<b>0</b>	<b>1-9</b>	<b>10-49</b>	<b>50-249</b>	<b>Total</b>
<b>0.1-2.0%</b>	6	27	68	47	148
<b>2.1-4.0%</b>	6	29	30	21	86
<b>Over 4%</b>	4	10	7	4	25
<b>Total</b>	16	66	105	72	259

#### Percentage Translation by Employment Category

	<b>Employment Categories (# of employees)</b>				
<b>RateAboveBase</b>	<b>0</b>	<b>1-9</b>	<b>10-49</b>	<b>50-249</b>	<b>Total</b>

<b>0.1-2.0%</b>	37.5%	40.9%	64.76%	65.28%	57.14%
<b>2.1-4.0%</b>	37.5%	43.95%	28.57%	29.17%	33.2%
<b>Over 4%</b>	25%	15.15%	6.7%	5.5%	9.66%
<b>Total</b>	100%	100%	100%	100%	100%



**Pearson Chi<sup>2</sup>(6)= 17.6303**

**Pr=0.007**

The results of the test show that there is a strong relationship ( $p=0.007$ ) between firm size and the price paid for bank loans. This is in line with the rejection of the H1 null hypothesis. Specifically, smaller firms appear to pay more than larger firms for their loans. In this data set, 25% of the self-employed (i.e. those with zero employees) and 15% of micro firms (1-9 employees) paid over 4% above base for their loans, compared with only 5.6% of firms employing between 50-249 people. In other words, larger firms appear to pay less for credit than their smaller counterparts.

### Test 2a&b

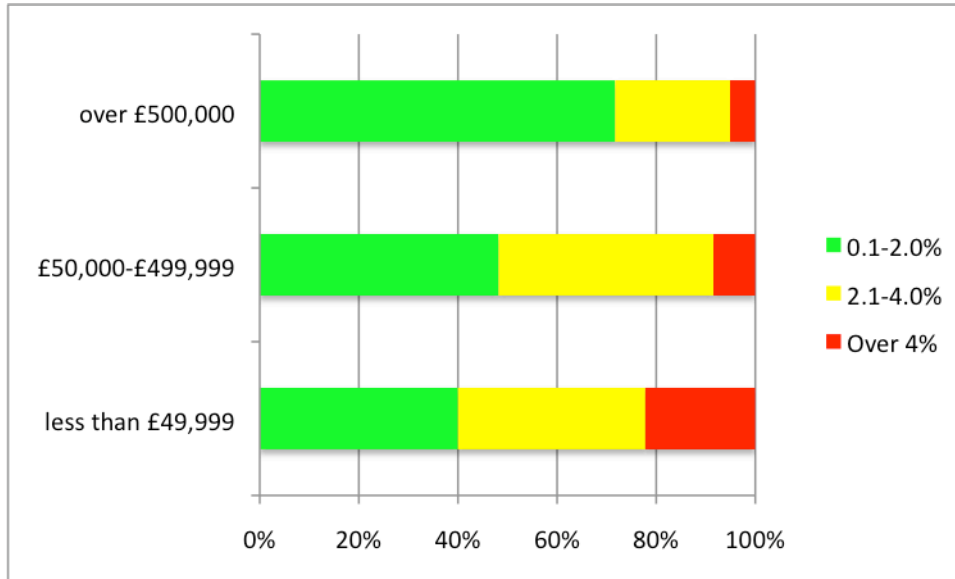
The second set of hypotheses tests attempts to determine if a) a firm's asset base, measured by fixed and current assets held by the business, has any influence on the prices paid for credit and b) if loans secured by collateral carry a lower lending rate. The asset base categories used in test 2a are 1: less than £49,999, 2: £50,000-£499,999, and 3: over £500,000.

#### Absolute Values

	Asset Base			
RateAboveBase	1	2	7	Total
<b>0.1-2.0%</b>	18	40	71	129
<b>2.1-4.0%</b>	17	36	23	76
<b>Over 4%</b>	10	7	5	22
<b>Total</b>	45	83	99	227

Percentage Translation by Asset Base Category

RateAboveBase	Asset Base			Total
	1	2	7	
0.1-2.0%	40%	48.19%	71.7%	56.83%
2.1-4.0%	37.8%	43.37%	23.2%	33.48%
Over 4%	22.2%	8.44%	5.1%	9.69%
<b>Total</b>	100%	100%	100%	100%



**Pearson Chi<sup>2</sup>(4)= 22.5999**

**Pr=0.000**

The above output reveals a very strong relationship ( $p=0.000$ ) between an enterprise's asset base and credit prices. This leads to a rejection of the null hypothesis for H2a. Specifically, firms with fewer assets appear to pay more than firms with more assets for their loans. Looking at the table above, 22.2% of firms with less than £49,999 worth of assets pay over 4% above base, while only 5.1% of firms with over £500,000 worth of assets pay the same. This implies that the higher the asset base of the firm, the lower the price paid for loans.

The following test in the second hypothesis set investigates if the securitization of loans with collateral influences credit prices. The collateral categories used in test 2b are simply Yes: the credit product was secured with collateral and No: there was no collateral used to secure this credit product.

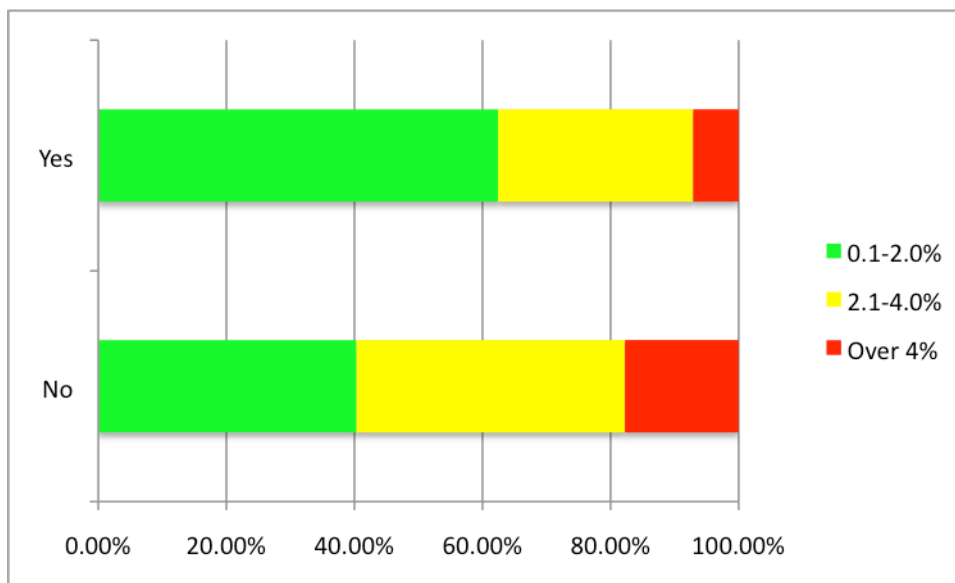
Absolute Values

RateAboveBase	Collateral		Total
	No	Yes	
0.1-2.0%	25	123	148

<b>2.1-4.0%</b>	26	60	86
<b>Over 4%</b>	11	14	25
<b>Total</b>	62	197	259

Percentage Translation by Collateral Category

RateAboveBase	Collateral		Total
	No	Yes	
<b>0.1-2.0%</b>	40.32%	62.44%	57.14%
<b>2.1-4.0%</b>	41.94%	30.46%	33.21%
<b>Over 4%</b>	17.74%	7.1%	9.65%
<b>Total</b>	100%	100%	100%



**Pearson Chi<sup>2</sup>(2)= 11.4332**

**Pr=0.003**

The Stata output above supports intuition in rejecting the null hypothesis for H2b. Thus, the pledging of collateral has a strong influence ( $p=0.003$ ) on the prices paid for credit, with those firms pledging collateral paying less for their credit than otherwise. In the data set, 37.56% of firms who secured loans with collateral paid 2.1% or more above base, compared to 59.68% of firms who did not secure loans. The first table also implies that the pledging of collateral is a common practice for credit seekers, with over three times as many firms pledging collateral for credit than not. To summarize, the pledging of collateral appears to be common practice and pushes borrowing rates downward.

### Test 3a&b

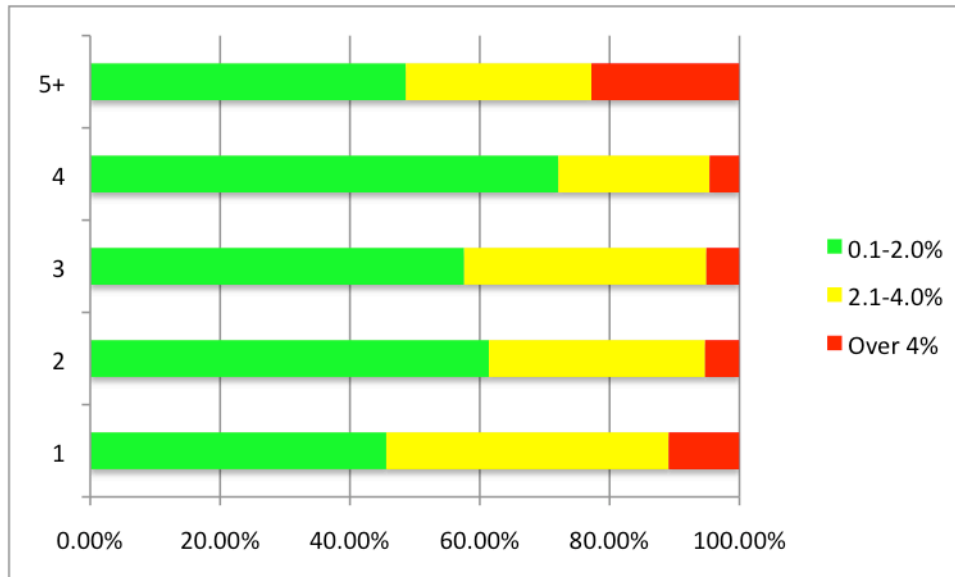
The third set of hypothesis tests attempts to determine if loan specific characteristics, specifically loan length and amount, have a significant influence on a firm's borrowing rate. The first test investigates the length of the loan.

Absolute Values

	Loan Length (years)					
RateAboveBase	1	2	3	4	5+	Total
0.1-2.0%	21	35	34	31	17	138
2.1-4.0%	20	19	22	10	10	81
Over 4%	5	3	3	2	8	21
<b>Total</b>	<b>46</b>	<b>57</b>	<b>59</b>	<b>43</b>	<b>35</b>	<b>240</b>

Percentage Translation by Loan Length Category

	Loan Length (years)					
RateAboveBase	1	2	3	4	5+	Total
0.1-2.0%	45.6%	61.4%	57.6%	72.1%	48.6%	57.5%
2.1-4.0%	43.5%	33.3%	37.3%	23.3%	28.6%	33.75%
Over 4%	10.9%	5.3%	5.1%	4.6%	22.8%	8.75%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Pearson  $\chi^2(8)=17.2650$**

**Pr=0.027**

The test results suggest there is a strong relationship ( $p=0.027$ ) between the length of a loan and the price paid for the loan. Specifically, longer loan terms appear to carry a higher price compared to shorter loan terms. This is in line with a rejection of the null hypothesis for H3a. In this data set, 22.8% of loans of five years or more cost 4% or more above base, compared to 6.34% (13/205) of loans of less than five years.

A closer look at the output reveals tentative evidence towards a u-shaped relationship between loan length and interest rates. 10.9% of one-year loans and 22.8% of loans of five years or more cost 4% or more above base, compared to approximately 5% of loans of two, three, or four years.

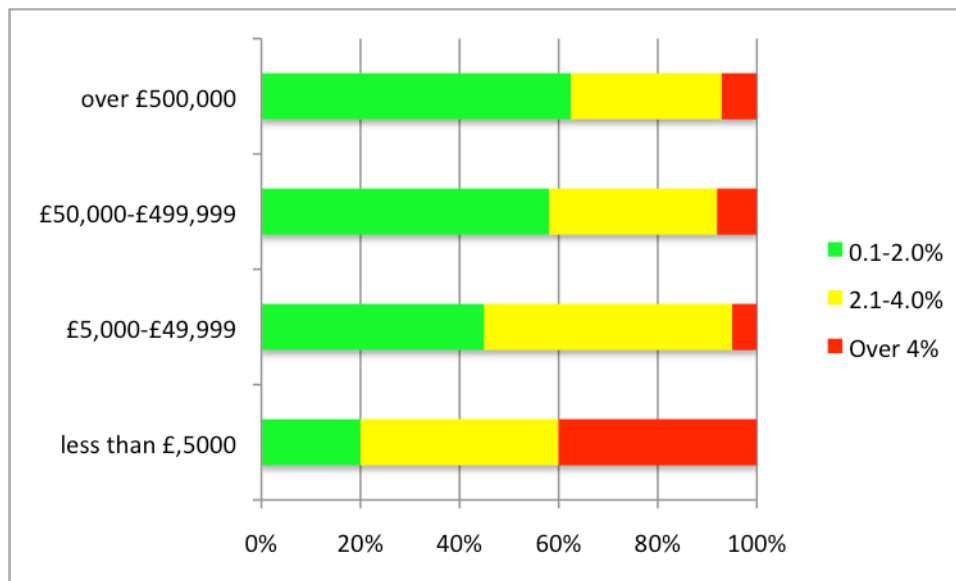
For the second test in this set, the aim is to determine if loan amount acts as a credit price influencer. The Loan Amount variable is separated into four bands: 1=less than £,5000, 2=£5,000-£49,999, 3=£50,000-£499,999, 4=over £500,000.

Absolute Values

	Loan Amount				
RateAboveBase	1	2	3	4	Total
0.1-2.0%	3	9	36	35	83
2.1-4.0%	6	10	21	17	54
Over 4%	6	1	5	4	16
<b>Total</b>	<b>15</b>	<b>20</b>	<b>62</b>	<b>56</b>	<b>153</b>

Percentage Translation by Loan Amount Category

	Loan Amount				
RateAboveBase	1	2	3	4	Total
0.1-2.0%	20%	45%	58.1%	62.5%	54.2%
2.1-4.0%	40%	50%	33.9%	30.4%	35.3%
Over 4%	40%	5%	8%	7.1%	10.5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Pearson Chi<sup>2</sup>(6)= 20.1860**

**Pr=0.003**

The results indicate that loan amount is a significant influencer of credit price (p=0.003). This leads to a rejection of the null hypothesis for H3b. Particularly, lower loan amounts carry higher interest rates than larger loan amounts. Looking at the above table, 40% of lenders who borrow less than £5,000 pay over 4% compared to 5% for loans of £5,000-£49,999, 8% for loans of £50,000-£499,999, and 7.1% for loans over £500,000

### Test 4a&b

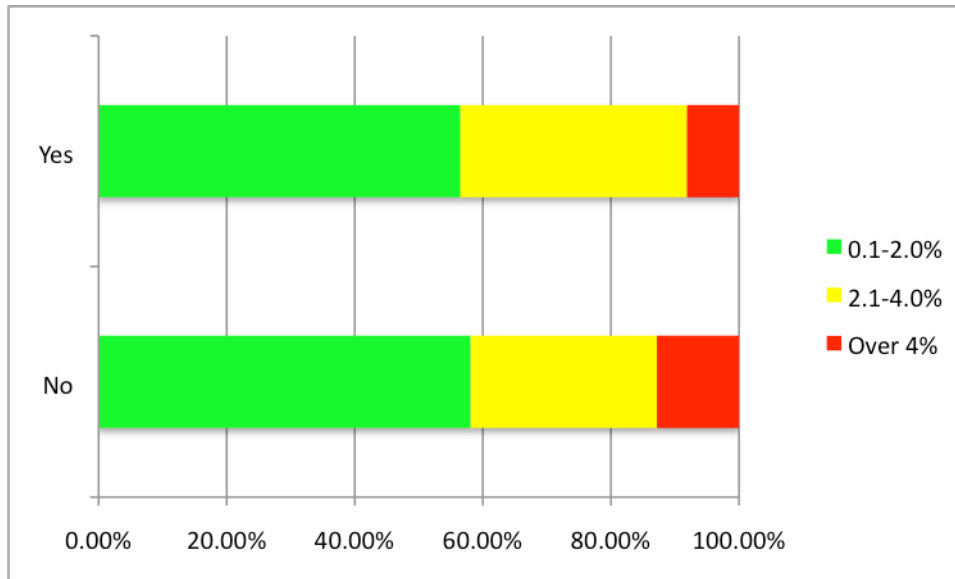
The fourth set of hypothesis tests will investigate if the strategic orientation of the firm, specifically a product innovation or internationalization strategy, has any influence on credit terms. For the product innovation variable, the respondent would identify their business as being a product innovator (Yes) or not (No). For the Export variable, again the respondent would identify their business as exporter (Yes) or not (No).

Absolute Values

Product Innovation			
RateAboveBase	No	Yes	Total
0.1-2.0%	50	98	148
2.1-4.0%	25	61	86
Over 4%	11	14	25
<b>Total</b>	<b>86</b>	<b>173</b>	<b>259</b>

Percentage Translation by Product Innovation Category

Product Innovation			
RateAboveBase	No	Yes	Total
0.1-2.0%	58.1%	56.5%	57.1%
2.1-4.0%	29.1%	35.4%	33.2%
Over 4%	12.8%	8.1%	9.7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



Pearson  $\chi^2(2) = 1.9989$

Pr=0.368

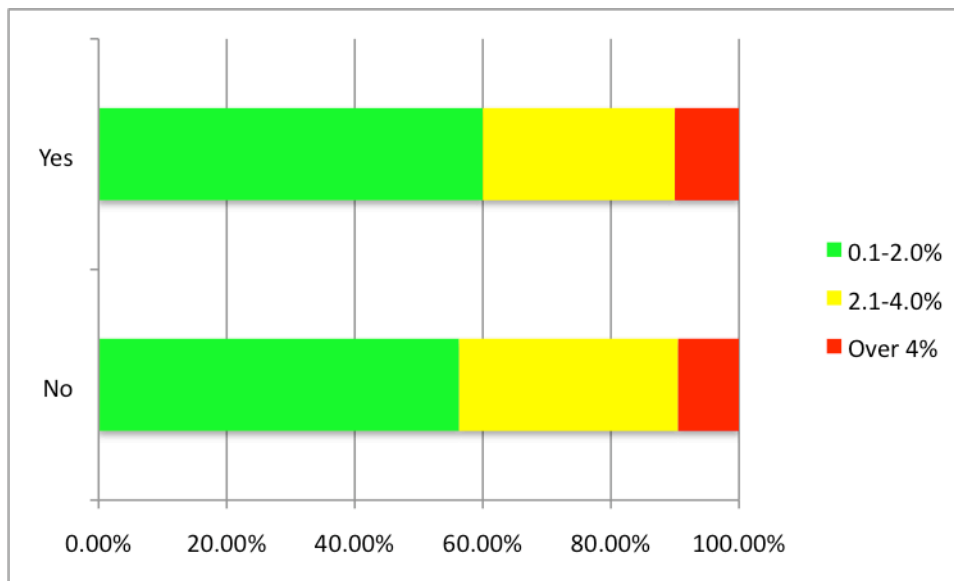
The test results indicate that no relationship exists between a firm's product innovation strategy and loan prices ( $p=0.368$ ). This leads us to accept the null hypothesis for H4a. In other words, a firm's decision to undertake a product innovation strategic orientation has no influence on loan prices for that firm.

Absolute Values

Export			
RateAboveBase	No	Yes	Total
0.1-2.0%	112	36	148
2.1-4.0%	68	18	86
Over 4%	19	6	25
<b>Total</b>	<b>199</b>	<b>60</b>	<b>259</b>

Percentage Translation by Export Category

Export			
RateAboveBase	No	Yes	Total
0.1-2.0%	56.3%	60%	57.1%
2.1-4.0%	34.2%	30%	33.2%
Over 4%	9.5%	10%	9.7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Pearson  $\chi^2(2) = 0.3628$**

**Pr=0.834**

The results of the test show there is no relationship between a firm's decision to export and loan prices ( $p=0.834$ ). This is in line with accepting the null hypothesis for H4b. Hence, an internationalization strategy, measure my propensity to export, has no bearing on loan prices.

### Test 5

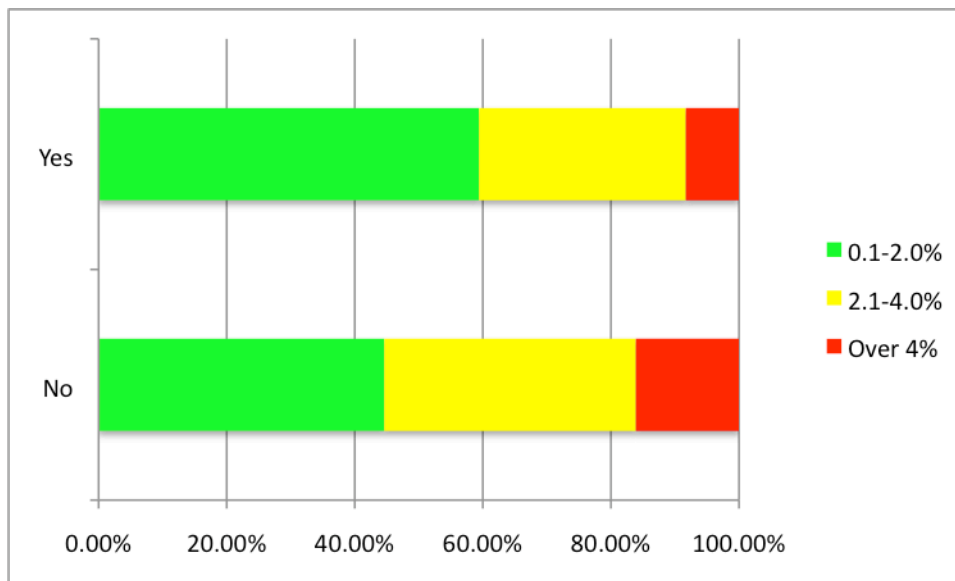
The final hypothesis test is concerned with whether or not a longstanding relationship with a firm's primary lender has any influence on credit terms. The Longstanding Relationship variable is divided into Yes (relationship of 6 years or longer) and No (relationship of less than 6 years).

Absolute Values

RateAboveBase	Longstanding Relationship		Total
	No	Yes	
0.1-2.0%	25	114	139
2.1-4.0%	22	62	84
Over 4%	9	16	25
<b>Total</b>	<b>56</b>	<b>192</b>	<b>248</b>

Percentage Translation by Longstanding Relationship Category

RateAboveBase	Longstanding Relationship		Total
	No	Yes	
0.1-2.0%	44.6%	59.4%	56%
2.1-4.0%	39.3%	32.3%	33.9%
Over 4%	16.1%	8.3%	10.1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Pearson Chi<sup>2</sup>(2)= 4.8802**

**Pr=0.087**

The test statistic indicates that there is not enough of a statistically significant relationship ( $p=0.087$ ) between loan prices and the length of a borrower-lender relationship. In this case, we accept the null hypothesis for H5. Therefore, longstanding relationships with lenders do not positively or adversely affect credit prices for SMEs.

A number of hypotheses have been tested in this section. Table V provides a summary of the test, the accept or reject decision, and the associated p-value.

**Table V**

#	Influencer	Hypothesis	P-Value	Decision
1	Size	Ho: Firm size is not a significant influencer of SME credit prices.	0.007	Reject
2a	Asset Base	Ho: The amount of assets a firm controls does not influence credit prices.	0.000	Reject
2b	Collateral	Ho: Securitization of credit with collateral does not influence the rate.	0.003	Reject
3a	Loan Length	Ho: Loan duration does not influence borrowing rate.	0.027	Reject
3b	Loan Amount	Ho: Loan amount does not influence the borrowing rate.	0.003	Reject
4a	Product Innovation	Ho: A product innovation strategy does not influence credit prices.	0.368	Accept
4b	Exporter	Ho: An internationalization strategy does not influence credit prices	0.834	Accept
5	Relationship	Ho: A longstanding relationship with a financial institution does not influence credit prices.	0.087	Accept

## **DISCUSSION**

The findings of this research reveal factors internal and external to the firm that affect its risk profile, and subsequently, the prices paid for credit. Table VI below outlines what factors were determined to be statistically significant influencers of credit prices

<i><b>Influencing Factor</b></i>	<i><b>Statistically Significant</b></i>
<i><b>1.Firm Size</b></i>	<b>YES</b>
<i><b>2.a)Firm Asset Base</b></i>	<b>YES</b>
<i><b>b)Collateral</b></i>	<b>YES</b>
<i><b>3a)Loan Length</b></i>	<b>YES</b>
<i><b>b)Loan Amount</b></i>	<b>YES</b>
<i><b>4.a)Product Innovation</b></i>	<b>NO</b>
<i><b>b)Internationalization</b></i>	<b>NO</b>
<i><b>5. Relationship with Lender</b></i>	<b>NO</b>

The results of this study provide insight into work done by past researchers. Previous work by Dietrich (2012), Holmes, Dunstan, and Dwyer (1994) as well as Holmes and Kent (1990) provided conflicting results regarding firm size as a significant influencer of SME credit pricing. This study finds that firm size is a significant influencer of credit terms and the results suggest that larger firms do pay

less than smaller firms. When comparing the aforementioned studies, it appears the multi-sector studies (Dietrich, 2012; Holmes, Dunstan, and Dwyer, 1994), this one included, found firm size to be significant credit pricing influencer. Only the isolated manufacturing sector study (Holmes and Kent, 1990) found firm size to be unimportant in influencing credit terms.

This work also mirrors findings from the literature in regards to the securitization of credit with collateral. The provision of collateral as loan security was, unsurprisingly, found to be a significant influencer of credit prices. As Bester (1987) first pointed out, moral hazard concerns of lenders appear to diminish, with a default security mechanism (collateral), leading to less required monitoring effort, a lower perceived risk profile, and, subsequently, a lower interest rate on loans. The dollar amount of a firm's asset base was also found to be statistically significant; displaying a negative relationship. The more assets a firm controls, the lower the cost of borrowing and vice versa. Berger and Udell (2006) demonstrate how the industry in which a firm operates can act as an indirect agent of influence for credit prices as some firms are more capital intensive or positioned differently along the industry life cycle. The finding that asset base is negatively associated with credit prices supports, at least in part, the notion that the level of capital intensity is of significance in deciding credit terms.

While there are no apparent academic projects investigating loan specific characteristics as credit influencers, finding them to be statistically significant comes as no surprise. In my experience as a supply-side finance professional, this association was easily ascertained after frequently consulting loan-pricing matrices. Higher loan amounts generally translate into lower interest rates while a U-shaped relationship appears present between loan duration and interest rate. Smaller and larger term loans appear to carry higher prices. This is significant for future credit-pricing research as this variable should undoubtedly be taken into account in a more sophisticated, multi-variant framework. While the strategic orientation of a firm may be seen as a proxy for inherent riskiness, there was little reflection of this in the cost of borrowing for self-identified product innovators and exporters. Rates paid on loans were found to be statistically independent of strategic orientation.

One interesting result of this investigation is the analysis of how a long-standing relationship with a lender influences credit rates. Degryse & Cayseele (2000) found there to be a positive relationship between lending prices and the length of relationship with a borrower. One possible cause is the increase in lender negotiating power as the level of "soft" information about the borrower accumulates, the transfer of which becomes increasingly difficult (Scott, 2006). While the test statistic in this project yielded a p-value above our margin for rejecting the null hypothesis, it does merit some pause for thought as the p-value for the test (0.087) does imply *some* associate between the variables. In this study, however, the relationship appears negative, with those firms in a long-standing relationship paying less for credit. One possible explanation could be found in the

differing locations of the two studies. This investigation uses data from the UK, where a typical transaction-based, Anglo-Saxon banking with a heavy emphasis on credit scoring characterizes the lending environment. The Degryse & Cayseele (2000) focuses on Belgian firms who are borrowers in a continental Europe lending environment characterized by relationship-based lending. This begs the question that if in the UK, or other markets with similar banking systems, transaction-based lending gets you the loan, but relationships get you the rate.

## **LIMITATIONS AND RESEARCH GAPS**

As with most research, especially at the Master's level, this project was inevitably an exercise in the achievable, not the ideal. An initial attempt in producing original data for this study provided little fruit. A web-based survey was constructed and administered to over 700 companies in the screen-based production industry. Unfortunately, a response rate of less than 2% forced the project to instead use the *UK Survey of SME Finances 2007*. The major limitation this posed was being constrained in the level of statistical analysis that could be achieved. The cross-sectional data of the UK survey allowed for associations to be identified, however provided no insight on causation. A richer data set would have allowed for the application of more sophisticated econometrics and, in turn, more robust results.

Attempting to perform research using a tool that was not specifically designed for the task limits the investigative power of the research. More hypotheses could have been tested had the original survey provided the data necessary. Instead, only the hypotheses of which the data at hand provided insight were tested. A more complete framework of the SME credit finance picture could have been achieved had such variables as financier competition and a firm's equity buffer been taken into account.

This research poses more questions and provides direction for future research. One question raised in this contribution is how the firm size variable and industry of operation variable interplay. The single sector study on firm size found size to be unimportant, while all the multi-sector studies, including this one, found strong associations between firm size and price. Also, research on the implications (default rates, firm performance) of a higher cost of borrowing would be interesting. Comparisons in transaction-based and relationship-based lending are also under researched, especially the degree of effects the length or breadth of a lender-borrow relationship has in different banking systems. Given the questions that remain unanswered, loan rate determinants appear to be a promising stream of future research.

## **PROJECT 2**

### **PURPOSE AND RESEARCH QUESTIONS**

Aiming to provide potential insight regarding owner-perception on SME credit pricing, this paper outlines and communicates the experiences of CA&VFX firm owners in seeking and securing debt financing. This highlights a central theme of this study's contribution: perceptions matter. How an individual perceives their environment is perhaps a more significant factor in influencing behavior than actual environment characteristics. It does not require much imagination to think of real world examples where perceptions influence decisions and behaviors. For instance, if you perceive a mechanic to be under qualified, you would refrain from having your vehicle serviced at that particular mechanic, regardless of actual credentials. Another example can be found in a person's perception of air travel. Should you perceive air travel to be unsafe, you would avoid travelling via airplane regardless of its actual safety record. I believe parallels can be drawn between a business owner and their perceived lending environment. If business owners perceive lending rates to be homogenous amongst financial institutions, those owners would probably avoid the hassle of shopping around and accept the credit terms offered by their lender. In this light, the research questions elaborated in this paper will center around owner-perceptions on their lending environment. Primary research questions for these case studies follow.

- Do owners believe that the size of their firm affects credit pricing?
- Do owners perceive the securitization of loans through personal assets to affect the cost of borrowing?
- Does having an innovative strategic orientation (i.e. use of new technologies, distribution vehicles) lead owners to believe it affects the cost of borrowing?
- Do owners perceive an internationalization strategy to affect credit terms?
- Are FIs perceived to be the major financier of companies in the screen-based production industry?
- Do owners believe competition amongst credit sources affects pricing?
- Are long-standing relationships with lenders perceived to affect credit terms?
- Does an owner's perceived skill at negotiation influence price?

### **METHODOLOGY**

This study involves interviewing Toronto CA&VFX firm owners to effectively capture the intricacies and gain insight on the nuances involved in the pricing of credit for small firms in the CA&VFX industries

As the background literature section suggests, a reasonable amount of work has focused on credit availability and pricing for small firms in capital-intensive industries, yet several questions remain. Specifically, research on the pricing

influencers in less capitalized and creativity focused industries. As will be outlined in more detail in the industry overview section, a single industry subsector, specifically the computer animation and visual effects subsector within the broader creative industries, was chosen for as the focus for the interviews. The reasoning behind focusing on one industry is to investigate firms that are directly comparable in terms of capital intensity, capital structure issues, and employee scale profiles. The CA&VFX industry was chosen in an attempt to balance issues of accessibility, cost, and economic relevance. The Mecca of the CA&VFX universe is found in Toronto, a relatively short distance from Ottawa.

Using a purposive sampling method, six financial decision-makers from Toronto-based CA&VFX companies were selected. Companies were selected either from the Canadian Animation Directory or through referrals from our industry contact Michael Carter. Dr. Carter was an invaluable contact throughout the investigative process. Originally approached through his company listing (The Skonk Works) on the Canadian Animation Directory, he saw the value in a research project designed to uncover owner-perception of the Toronto lending landscape. He recommended that I refrain from cold-calling other animation/VFX studios, and that I meet with him to discuss the project in more detail. After doing so, Mr. Carter provided a list with five of the largest CA&VFX studios in Toronto. These studios included Cuppa Coffee, Yowza, House of Cool, Intelligent Creatures, and Mr. X. Of these studios, Intelligent Creatures has already been identified and contacted by this researcher prior to meeting with Mr. Carter.

The purposive sampling method was useful in targeting companies with the most market share in the targeted urban area of Toronto. Four of the five firms with the highest business activity in terms of gross sales were included in the investigation. Unfortunately, the most active CA&VFX company for film, Mr. X, was unable to participate due to scheduling restrictions, at which point Style5.TV was included. The Skonk Works studio, owned by Dr. Carter, was also included, as it was an animation powerhouse until the global financial meltdown of 2008. It began downsizing at that time, and now acts primarily as a consultancy for other animation/VFX firms. The information from The Skonk Works included in the study was reflective of Dr. Carter's past lending experiences and perceptions. By our industry insider estimates, the companies under investigation account for a very conservative one third of all CA&VFX output in Toronto. Had Mr. X been included, Mr. Carter estimates it would be over half of all output.

In order for a firm to be involved in the investigation, certain inclusion criteria needed to be met. First, the company had to have been in business for at least three years. With only established companies being included, it allowed for owners to express their views on firm growth, and how this may have influenced credit-pricing situations. Furthermore, lending institutions would have at the very minimum two years of documented cash flows on which to base a credit approval and pricing decision. Also, due to the varying financial landscape nation-wide for

firms in the industry, with diverse tax incentives depending on province, strictly Toronto-based firms were selected. This third point also kept the concentration of credit suppliers constant by examining one specific urban center.

An interview guide outlining the general topics to be discussed was adhered to throughout the interviewing process. These topics included demographic information about the participant, educational background, professional experience, company history, financing needs, types, and available sources, and finally, perceptions of credit pricing influencers. Interviews were then transcribed, and coded manually in order to identify prevalent themes.

The following section will outline the characteristics and importance of the creative industries, screen-based production, and the computer animation and visual effects industries.

### **The Creative Industries and Screen-based Production**

Considerable heterogeneity exists amongst SMEs for a number of reasons. One source of diversity is the industry in which they do business. For instance, sector varying factors, such as the level of capital intensity, stage of industry life cycle, as well as perceived profit potential are likely to influence credit availability and price. As such, when attempting to contextualize the findings of a broader analysis, a more narrow scope investigating one specific industry is appropriate.

Satisfying this requirement, this thesis contribution will explore industries where the factors influencing credit pricing have the potential to result in a greater range of SME credit pricing. Among the industries best suited for research with this aim are the creative industries. The low level of capital intensity in these industries will reduce the effects of asset based lending and the high amount of intangible assets should provide a suitable sample where credit-pricing influencers have a more pronounced effect. This research will employ the definition of creative industries used by the *Creative Industries Mapping Document* (1998) which defines the creative industries as “*those industries which have their origin in individual creativity, skill and talent which have a potential for wealth and job creation through the generation and exploitation of intellectual property*”. Encompassed in this definition are industries such as advertising, architecture, art and antiques markets, crafts, design, designer fashion, film and video, software, music, performing arts, publishing, and television and radio (Creative Industries Mapping Document, 2001). As the definition implies, the value proposition of businesses in these industries is centered on the creativity, skill and talent of the individuals within the businesses. I anticipate that a value proposition of this nature would require a certain degree of creativity from lenders when attempting to evaluate a firm’s risk profile, leading to a boarder range of loan prices.

Attempting a research project with a sample that suitably represents all industries encompassed within the creative industries is overly ambitious and beyond the scope of this thesis. In light of this, this investigation will focus on one creative industry: the Canadian screen-based production industry. Specifically, my focus is on the computer animation and visual effects (CA&VFX) subsector.

To begin, an overview of screen-based production industry and its relevance to both the economy and Canadian culture will be presented, followed by the specific case of CA&VFX. The screen-based production industry was chosen for a number of reasons. First, the industry is a major contributor to the Canadian economy. In 2011, film and television production volume was \$5.49 billion, led to the creation of an estimated 128,000 full-time jobs, and contributed over \$7.45 billion to Canada's GDP (Profile 2011). Second, the University of Ottawa is located in the leading province for film and television production in Canada. In terms of volume, Ontario produces over 37% of Canadian output, followed by British Columbia and Quebec, with 31% and 24% respectively (Profile, 2011). Third, a long-range assessment report of Ontario's economic and fiscal environment published in 2005 by the Minister of Finance entitled *Toward 2025: Assessing Ontario's Long-Term Outlook* identified three sectors of growing importance: information and communication technology, financial and business services, and the entertainment and creative cluster (Toward 2025).

A major component of this entertainment and creative cluster is the screen-based production industry (Toward 2025). In addition, a sense of Canadian pride can be found in its screen-based production industry, evidenced by our national broadcaster, the CBC, the established of the Academy of Canadian Cinema & Television in 1979, and the new Canadian Screen Awards initiative expected to launch in 2013. With the industry's significance to both the Canadian and provincial economies, along with the importance to Canadian culture, the screen-based production industry is ideal for this investigation.

### **The Computer Animation and Visual Effects Subsector**

Computer animation and visual effects companies provide content and/or services primarily for film, television, video games, and mobile applications. The subsector is relatively young; with an average age of Ontario computer animation firms of 9 years and VFX firms of 13 years in 2010 (Nordicity, 2012). Firms in these industries are not heavily capitalized, especially in comparison to other subsectors of screen-based production. Large amounts of expensive cinematography equipment are not necessary for firms in CA&VFX. The most expensive production inputs, besides human capital, are a computer and a software program. As such, once the production requirements are in place, the assets of VFX and animation are largely intangible, and can be found in the ability and creativity of the individual animators/visual effects specialists.

In comparison to the entire screen-based production sector, the economic impact of CA&VFX sub-sector is relatively small, yet their contribution is nonetheless significant. Ontario companies in these industries reported revenues of approximately \$156.3 million and employing 1924 workers in 2010 (Nordicity, 2012). Ontario is the ideal setting for an investigation into these industries. Comparing revenues generated by Canada, the United States, Western Europe, and Eastern Europe, Ontario accounts for 78.6% of total computer animation revenues and 49.7% of total visual effects revenues. No other country, let alone province, comes close to the amount of revenue generated through these industries. Los Angeles is the second largest visual effects producer (41.2% of revenues) and New York the second largest computer animation producer (18.6% of revenues). Staggering to imagine, but other parts of Canada and the United States, along with all of Western and Eastern Europe account for a mere 2.8% of computer animation and 9.1% of visual effects revenues (Nordicity, 2012). Suffice to say, Ontario is a world leader in both industries.

As this research is concerned with the perceived lending environment for firms operating in CA&VFX, it is critical that banks act as an important lender to these firms. When looking at sources of ongoing capitalization for these firms, bank credit accounts for 36.4% of externally generated funds and 8% when considering all sources including retained earnings, self-funding, and business development bank loans. Visual effects studios appear to be more reliant on financial institutions for external credit financing. An impressive 91.3% of externally generated credit originates from banks, while banks account for 21% of all sources of on-going capitalization (Nordicity, 2012).

The financing needs of CA&VFX firms stem primarily from the need to pay their employees. HR related expenses account for slightly more than 2/3 of all business expenditures (2010) for both CA&VFX firms in Ontario. One explanation for Canada's, specifically Ontario's, dominance of the global CA&VFX landscape is the generous tax incentives available. The CA&VFX subsector benefits from both broader screen-based production sector incentives and subsector-specific incentives. Screen-based production public supports include the Canadian Film or Video Production Services Tax Credit (CFVPSTC) at the national level, along with the Ontario Production Services Tax Credit (OPSTC) and Ontario Film and Television Tax Credit (OFTTC) provincially. The CFVPSTC relieves 16% of qualified Canadian labour expenses. The OPSTC relieves 25% of qualified Ontario production expenses while the OFTTC relieves 35% of qualified Ontario labour. The subsector-specific tax incentives is the Ontario Computer Animation and Special Effects (OCASE) Tax Credit which relieves 20% of qualified Ontario labour and can be combined with either the OPSTC or the OFTTC (PwC Big Table, Film/Video & Digital Animation). Ontario CA&VFX companies have also reported receiving public support through Scientific Research and Experimental Design (SR&ED) tax credits (Nordicity, 2012). A long list of applicable public support options coupled with a high percentage of company expenditures directed towards wages and employee compensation

explains the importance of these incentives to the competitiveness of firms in this industry.

The revenue stream of CA&VFX companies can be quite erratic since work is accepted on a project-by-project basis. Production output is measured through either VFX shots produced or computer animation minutes produced. The annual output of either minutes or shots produced often originates from a small amount of large projects. When quoting a project to a prospective client, the pricing is largely reflective of the appropriate labour expense, which in this case is heavily subsidized. This creates a financing gap for firms in this industry: the time required to submit and recoup the large amount of cash tied up in the tax credits. While other on-going financing requirements, such as the licensing of software and equipment upgrades, have been identified as reasons for needing bank financing, the bridge financing needed to float production tax credits is the most prominent.

In summary, the CA&VFX industries of Ontario are ideal as the basis for this research project. With low levels of capital intensity, companies will be unable to collateralize their loans with business assets. This should place a higher emphasis on other factors influencing credit prices. In addition, credit is a major source of capitalization for firms in this industry. Finally, Ontario is the ideal setting for a study concerned with computer animation and visual effects, as the province is leading world production in these areas.

The next section provides an overview of the companies under investigation and introduces the interview participants.

### **Participating Companies and Interviewees**

#### **Cuppa Coffee Studios**

*Founded: 1992*

*Number of employees at start-up: 2*

*Number of employees now: 200*

Cuppa Coffee specializes in both stop-motion and 2D animation. After immigrating to Canada from the United Kingdom where he worked as a freelance animator, Adam Shaheen founded Cuppa Coffee in 1992, and is still at the helm as the CEO. As the company has been in business for over twenty years, Cuppa Coffee Studios is the oldest company included in this investigation. The company, with only two employees to start, has grown since its inception. It now boasts approximately 200 employees, making it the largest of the firms under investigation.

One of the leading stop animation studios in the world, Cuppa Coffee Studios has received over 200 international awards in animation, including Geminis in 2003, 2009 and 2010 for best-animated series. A prolific content producer, shows owned by Cuppa Coffee include Life's a Zoo.tv, Nerdland, A Very Barry Christmas, Tigga and

Tonga, and Bruno and the Banana Bunch. The list of clients with whom Cuppa Coffee has done business is equally as impressive as the level of content production, with household names such as the CBC, Warner Brothers, HBO, Walt Disney, ESPN, MTV, Much Music, Alliance Atlantis, and Comedy Central lining the resume as past clients. Unsatisfied with past successes, Cuppa Coffee continues to produce and develop, with 9 new shows filling the production pipeline.

**Interview Participant: Adam Shaheen (founder and CEO)**

*Education:* BA Photography, London College of Printing

*Professional Experience:* Freelance illustrator

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**The Skonk Works**

*Founded:* 2005

*Number of employees at start-up:* 28

*Number of employees now:* 2

After working in multiple capacities for Side Effects Software for many years, Michael Carter brought a wealth of industry knowledge along with him when he founded The Skonk Works in 2005. The company specialized in long-form broadcast and feature film animation. Currently, the Skonk Works is the smallest firm under investigation, as it no longer does full scale production and focuses strictly on consulting.

Mr. Carter is a prominent figure in the Ontario CA&VFX industry. While he maintains The Skonk Works consulting business, he is the Director of Industry Relations and Program Academic Coordinator for the Masters in Digital Media at Ryerson University, as well as the Program Manager for Ryerson's Digital Media Zone, a successful business incubator of upstart CA&VFX companies. The focus of the interview with Mr. Carter was on the past operations of the Skonk Works, specifically from 2005-2008, when the company grew from 28 to 150 employees, with over \$3Million in gross annual sales.

**Interview Participant: Michael Carter (founder and CEO)**

*Education:* University of Western Ontario, Sheraton College, University of Toronto

*Professional Experience:* Side Effects Software

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**Yowza Animation Inc**

*Founded:* 2003

*Number of employees at start-up:* 25

*Number of employees now:* 50

Originally founded in June 1996 by Claude Chiasson, Yowza Animation Inc was strictly a 2D animation studio. After teaming of with Pete Denomme in 2003,

Yowza bolstered its capabilities to include 2D digital and VFX services for feature film. Yowza Animation Inc's footprint is on many popular animated feature films, such as Osmosis Jones and Curious George. The company is starting to bolster production by creating its own content, the most popular of which is the animated series Marco Polo.

The focus of the interview was on the finance-seeking experiences of the digital CA&VFX component of Yowza headed by Mr. Denomme, which had over \$2Million in gross sales in 2012.

**Pete Denomme (Partner, Executive Producer)**

*Education:* Sheraton College

*Professional Experience:* President and Executive Producer at Alliance Atlantis Animation and VFX

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**House of Cool Studios**

*Founded:* 2004

*Number of employees at start-up:* 2

*Number of employees now:* 35

Created in 2004 as a partnership between animation veteran Ricardo Curtis and business partner Wes Lui, the original focus of House of Cool Studios was pre-production animation. With initial success and growth, the company acquired the full-service animation studio Red Rover Studios in 2008, which added full-production capabilities, and grew the company to approximately 90 employees. After the financial crisis of 2008, House of Cool Studios shifted their focus to feature productions, and now boasts 35 employees busy at transforming stories into a compelling visual medium.

Much like the other firms under investigation, House of Cool Studios is heavily decorated in national and international awards. Their animated short, "Plumber", received awards from both the Giggleshorts International Comedy Film Festival (2004) and Chicago International Film Festival (2003) for Best Animated Short. This recognition has led famous production house clients such as Warner Brothers and Disney Studios.

**Wes Liu (Co-founder and Director of Operations)**

*Education:* BSoc Economics, Laurier University

*Professional Experience:* CIBC Wood Gundy

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**Intelligent Creatures**

*Founded:* 2004

*Number of employees at start-up:* 4

*Number of employees now: 50+*

After graduating from Vancouver Film School, Lon Molnar, along with three co-founders, launched Intelligent Creatures in 2002, and began production in 2003. Since then, this artist-driven visual effects house has grown to over 50 employees. It is one of the leading visual effects studios in Canada, attracting clients such as Warner Brothers, Miramax Films, MGM, New Line Cinemas, and Twentieth Century Fox.

The company has a fully integrated 2D and 3D compositing and animation pipeline, which has allowed it to work on Hollywood blockbusters such as *The Watchmen* (2009), *Babel* (2006), *Mr. & Mrs. Smith* (2005), *Stranger Than Fiction* (2006), and *Number 23* (2007). The company has recently received a nomination for the Best Visual Effects in Broadcast Program from the Visual Effects Society for work it has done in the Discovery Channel's TV series *Curiosity*.

**Lon Molnar (Founder and CEO)**

*Education:* Vancouver Film School

*Professional Experience:* Vancouver Film School

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**Style5.TV**

*Founded:* 2007

*Number of employees at start-up:* 2

*Number of employees now:* 8

Sam Chou founded Style5.TV in 2007 after identifying the need for an animation house specializing in character animation and animated design. Style5.TV's projects span across platforms, with experience in web, commercials, and film. The company prides itself on being flexible to accommodate the needs of its clients with a willingness to increase the labour base should a project require more hands on deck.

The smallest company under investigation, Style5.TV is considered a boutique animation studio that recently partnered with Smiley Guy Studios to revamp the web series *Captain Canuck*. The company is most proud of their original content production *CRIME: The Animated Series*, which has been accepted to air as part of the 2014 Sundance Film Festival.

**Sam Chou (Founder and CEO)**

*Education:* Sheraton College

*Professional Experience:* The Skonk Works

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## **RESULTS**

When conducting research of this nature, it is important to remember how the discussion of firm-specific financing intricacies can be a very sensitive issue. The apprehension of firm owners or financial decision-makers to disclose private finance information, specifically perceived credit-pricing influencers in this case, is understandable. In this light, confidentiality is of the utmost importance and will be reflected in the anonymity of the quotes used in the paper unless the question has no relevance to that specific company's financing.

### *Financing Sources*

When companies seek credit financing for a particular project, firm financial decision-makers identify two major sources: traditional financial institutions and industry-specific financing companies. Identified as the most predominant financing need, the gap financing of the provincial and federal tax credits are the primary line of business of the industry-specific financing companies. In addition to providing this gap financing, traditional financial institutions also supply financing for other operational needs, including start-up and expansion.

“You’re looking at either going to a bank or a company like Aver for the that stuff (tax credit financing). We usually go with *companyX*, because of, like I said, I’ve known *personY*, a longtime”

“The bridge financing for OCASE and the others (tax credits) is our main financing need and we deal with *BankX*, but Aver and CFC (Canada Film Capital) are also there. Banks, I think, are your best bet though.”

“We’re with a bank for our bridge loans...Yea, I’ve heard of the others (Aver, Canada Film Capital, etc.) but we have no use for them.”

In trying to determine which source is the primary financier for firms in the industry, it appears that traditional FIs are predominant, as every firm has sought bank financing at some point, which is not the case for the industry-specific financing companies. As would be expected, the industry-specific financiers are very familiar with the business models and cash flow expectations of companies within their industry and require less education and explanation of industry specifics in the application process.

### *Number of employees (firm size)*

After speaking with the financial decision-makers of the above firms, the research questions revolving around organizational structure appear to have generated the greatest uniformity among respondents, both in regards to firm size and securitization of credit. When asked if they perceived the size of their firm affected credit pricing, or, in other words, if they believed they were paying more for credit when their firm was smaller, the overwhelming response was no.

“I’m paying the same price for my credit now as I did when I first started out, and, you know, I’ve had success”

“I feel like there’s no flexibility in the price I’m paying. Even now, after being with *BankX* for almost a decade, they’ve seen me grow, but my size doesn’t affect anything, it’s all the market”

“I don’t believe me being bigger is getting me a better rate, it’s just, like, getting me more money to work with”

“Does me being bigger get me a better rate? I don’t think so. It’s easier to get (credit) now, and it’s cheaper than it was. But I don’t think it has to do with my (company’s) size. The conditions, lending conditions, have changed quite a bit from a decade ago.”

Across all cases, the shared sentiment was that the size of their firm was not an influencer on the pricing of their credit. A follow-up question also aimed at gauging firm size as a perceived credit influencer led to similar results. When asked if they believed they were paying less or more for credit than their smaller or larger competitors, responses mirrored that of Adam Shaheen: “I don’t think so. It’s probably easier for us bigger guys to get it though”. The unanimously shared perspectives on firm size and credit pricing lead to a straightforward conclusion: owner perception is that firm size has not effect on credit pricing, although firm size could be relevant in the credit granting decision.

#### *Structure and Credit Pricing – Securitization of credit*

Respondents were the most adamant about collateral affecting both their credit availability and pricing. In other words, all respondents communicated the importance of collateral when searching for credit. Most of the financial decision-makers agreed that offering collateral was a significant factor in the credit granting decision. A few respondents found collateral to be an important factor in the credit pricing decision.

“I’ve been in business for many years, the bank knows me, knows me well, but I’m still required to pledge personal stuff to get the credit I need”

“I wouldn’t be able to get any credit without using my personal assets as collateral. *Bank X* doesn’t look at *company name’s* stuff, there isn’t enough here for them... I wish I could use my computers, but they’re looking for something more valuable I guess.”

“No, my personal assets are not affecting the pricing of my credit. It’s more like, I need it to make sure I can even get it!”

In fact, only two respondents indicated that the pledging of collateral was more significant in the pricing of their credit than in the credit granting decision itself.

“Last time I went looking for a loan, they offered me a secured and an unsecured. The unsecured was much higher, like two percent. I’m never not going to pay my loans, so, like, I’m not worried about putting up my stuff. So, I guess, ya, collateral really did influence”

“If I went to a bank, I’m presuming offering collateral would probably affect the price. As I said though, you know, I use *companyX*, we’ve known each other, worked together, a long time.”

Speaking with the financial decision-makers, the perception of collateral as a credit influencer in general is quite clear. All firm owners perceived the securitization of company loans with personal collateral as a necessity. The sentiment, however, is more so as an influencer of credit availability than credit pricing. The participants alluded to collateral being essential in the early going of the business to secure any kind of credit product with little to no effect on price. After being in business for some time and proving their ability to repay through verifiable cash flows, personal collateral remained necessary to keep the pricing of credit down.

#### *Loan Specifics – Duration and Amount*

Some participants agreed that loan amount was a significant influencer of credit pricing with higher amounts leading to lower rates, although most admittedly never thought about it: “It probably does, eh?” quipped one respondent. When asked if they believed loan duration was significant, one respondent did well in summing up the sentiment of the group: “I’m sure that it does, you know, speaking from experience in my personal life. But, like I said, the only reason we need (credit) financing is for the tax credits. So we’re always looking at the same term.” On the one hand, despite some general aloofness in regards to loan amount being a pricing influencer, once considered for a moment most respondents believed it to be significant. Loan duration, on the other hand, was identified as significant through personal experiences outside of work and not from enterprise financing experiences.

#### *Strategic Orientation*

##### *Product and/or Service Innovation*

When the participants were asked if they believe they have an innovative business strategy, all indicated that they did. However, they interpreted their innovativeness in a creative sense; communicating the message of their clients in a creative and innovative way. When pressed further and asked if they believed they were innovative in their product delivery or use of technological platforms, the general

sentiment was no. “We’re mostly all using similar software and delivering our services across the same platforms” noted Dr. Carter, a perception shared amongst the participants. In this light, where strategic orientation is concerned, the firms in this industry shared similar risk profiles. Importantly, the shared sentiment of an innovative strategy implies that all firms in this industry are probably considered to have an innovative business strategy by the standards of lending institutions. With this in mind, it would be interesting to investigate if a significant credit pricing discrepancy exists between firms identified as innovative or standardized by lending institution criteria.

### *Internationalization*

This researcher quickly learned that in this industry, at least with the firms under investigation, all business models involved doing business with international clients. Hence, when these firms sought financing, the fact that certain business was originating from outside the country was not uncommon, and in fact homogenous amongst the firms. The reason for this is that the Mecca for film and television production is found across our border to the south in California. One firm however, expressed financing difficulties in doing co-productions with international, overseas partners. Doing so resulted in greater uncertainty for the lender, a more lopsided amount of known information as discussed earlier in information asymmetries, which caused a great deal of hardship:

“You know what, nobody knows anything, and that’s the point. You’re educating them on your business and at the same time trying to give them a comfort level.”

When asked if the more risky, international project carried a higher cost of borrowing, it just simply did not:

“No, costs us the same since we’re putting up the same stuff.”

Another strong indicator that despite apparently higher perceived riskiness, the provision of collateral trumps all.

### *Relationship-based Borrowing*

This question flowed naturally from the two previous. The subject was approached by asked if they believed the relationship with their lender led to lower credit prices, or, if regardless of the relationship, the lender would base a credit granting and pricing decision primarily on the hard financial information they had at their disposal. The responses generally reflected past findings in the academic literature that a long-standing relationship with their credit supplier led to high degree of soft information about the company that was not easily transferrable to a new credit provider.

“It’s funny you ask that question because when I decided to look around, the other guys just didn’t know enough about me, about my business. It’s like, you know, kinda like starting over. I don’t think I would of got a much better deal and starting over just wasn’t worth it”

“After the experience I had with *BankX*, I knew I wouldn’t work with them again. So, you know, I looked around, and ended up going with *BankY*, because they knew more about the industry... I’m paying the same (as I would of at *BankX*)”

“Like I said, I’ve been with my bank for a while and it wouldn’t be worth it, too much work to switch”

The goal of this researcher was to discover how owners perceived their lender relationship affected credit prices. As the literature points out, credit decisions using relationship-based lending require greater verification and monitoring costs than similar transaction-based loans. This higher cost, coupled with the difficulty in transferring soft information about the business, makes switching lenders difficult and reduces the bargaining power of the credit-seeker. The perceptions of CA&VFX owners under investigation mirror the conclusions of the literature. They believed that moving to another lender provided more hassle than benefit. Although, the following section points out that one business owner did find it worthwhile to transfer business to another lender. This merits some criticism towards the owners under investigation. A certain level of conformity or lethargy was apparent in the investigation participants, simply accepting credit terms or showing an unwillingness to educate new lenders on their business. Instead, there was a shared belief that switching lenders was simply not worth the hassle of forging a new relationship. The current relationship they had with their lender did not lead to favourable, or unfavourable, credit terms *per se*. It did, however, allow for greater ease in receiving the credit desired.

The final two factors, financier competition and skill at negotiation, are special interest factors that were impossible to test quantitatively using the data from the *UK Survey of SME Finances 2007*. Nonetheless, they’ve been included as the dialogue from the participants raises some interesting questions for future researchers.

#### *Financier Competition*

There are multiple sources of financing for firms in this industry, as the landscape is rife with competitors in traditional and non-traditional lenders. Much like any major purchase, shopping around for the best deal on credit is commonplace, yet not unanimous. Mixed opinions, however, are present as to whether this competition amongst credit providers is a significant influencer of credit pricing.

“Of course I used to shop around to see who was going to give me the best deal but I wasn’t able to find anything better than who I’m with, so, you know, I’m not shopping around anymore”

“I used to get money from the bank I had my account with as a kid, they offered me something and I took it. When I got bigger, started making good money, I found my bank wasn’t very, I guess, familiar, comfortable with my business model. They just didn’t know enough about it, and it was honestly just a real pain in the ass. That’s when I shopped around... Yea, it really made a difference (on credit price)”

“It’s been a while, but last time I checked, they were all offering the same thing”

“I tried shopping around yes, but there wasn’t anything better”

The opinions appear to suggest that playing potential lenders against one another in order to receive the best credit terms possible has little effect. The one instance where shopping around did lead to more favorable terms was when the initial lender was unaccustomed to lending to firms operating in that industry, and was incapable of effectively estimating the firm’s risk profile.

#### *Personal Credit History*

As outlined in the literature review, small business credit scoring is becoming more commonplace as a tool for arriving at a lending decision, and, subsequently, credit terms. A major component in small business credit scoring is the personal credit worthiness of the business owner. The sentiment of the interview participants, much like the provision of collateral, was that having an acceptable personal credit history was more important in obtaining the necessary credit than as an influencer of credit terms.

“I’m sure the process (of applying for credit) required my personal credit history. I think I remember my banker asking for my permission to go to the credit bureau. I guess I’ve paid my bills on time (because I got the credit I was looking for)”

All participants shared the sentiment of the respondent above. This shows that the firm owners under investigation were all aware that their business and consumer credit inquiries are not analyzed in isolation. That is to say, personal credit worthiness is a relevant factor when seeking credit for business purposes.

### *Skill at Negotiation*

When this investigation began, the question of if a credit-seeker's perceived skill at negotiation was perceived to affect the price paid for credit was of particular interest. The question of credit rationing, or the granting or denial of credit, is fairly black and white and generally well understood. Bankers have little to no flexibility once hard financial information yields a rejection in a credit granting decision. Where there is a certain degree of flexibility is in the price paid for this credit, and I'm curious to see if a credit-seeker's skill at negotiation would be a significant influencer of the price paid for credit. Despite initial assumptions, the general sentiment from the participants that attempted to haggle with their credit provider was that their efforts were spent in vain.

"I asked him if that's the best they could do, he said yes, and that was the end of that"

"Yea I tried (to negotiate), they didn't move. They probably knew I wasn't going to get anything better (at other lenders)... I just asked my guy if it was possible to get a better rate, he said this was their best offer and we moved on"

"Last time I went in I checked to see what they could do for me, they told me there wasn't any moving room and that was it"

"Like I said earlier, I don't find there's any flexibility in the price"

Only one participant found that negotiation did, in the end, result in lower credit pricing. It was, however, only the threat of leaving that prompted action on behalf of the lender.

"So before moving to *BankY*, I thought to myself, why not go in and see what I can do. My mind was already made up after what happened, so I wasn't going to stay either way like I said, right? Ok, so, they did come back with something that was better. I said thanks but no thanks and let me tell you did that feel good! (laughs) But, um, yea, I brought that to the new bank and they ended up matching it."

Overall, the power of negotiation was not found to be a significant influencer of credit prices. Interestingly, most of the participants admitted to some version of a haggling attempt, even if the attempts produced little fruit. From the quotes above however, most haggling attempts were quite timid: simply asking for a better rate, being denied, and then moving on. This can be an indication that the owners were not persistent or aggressive enough in their negotiation attempts. As the owner who was successful in bartering a better deal noted, it was only the threat of leaving that prompted his lender to provide a better rate. This rate was then matched by

another FI. This finding suggests that CA&VFX owners perceive to have very little bargaining power when they may be downplaying their hand.

## **DISCUSSION**

When loan securitization with company assets is improbable, investigating loan pricing influencers in SMEs should reveal other important factors effecting loan pricing beyond that of collateralization. The results of this study mirror findings from the literature: the CA&VFX owners perceive that in order to mitigate risk in the presence of asymmetric information, a) a heavy emphasis is placed on the personal creditworthiness of the SME owner and b) personal collateral matters. Hence, when business capital is insufficient or unacceptable to use as collateral, credit approval, and to a lesser extent, credit pricing, is heavily influenced by the provision of personal assets for loan security. As this study outlines, the perceptions of firm owners in the industry are well aligned with small business credit scoring theory: they understand that their personal credit worthiness is a significant determinant of their credit attractiveness, regardless of the proven success of the business itself. In spite of this, the owners did not display any apprehension in offering personal collateral for their credit, alluding to a confidence in repayment. From the lenders perspective, this surely ameliorates any moral hazard concerns. Another structural factor under investigation was firm size. All the firms under investigation were well established and had experienced significant growth, both in the number of employees and sales, since their inception. Despite this, all the firm owners felt that their size had little to no effect on the pricing of their credit, and that the lower rate paid now was simply a reflection of market conditions. In this light, firm owner perceptions do not align with the findings of previous work by Holmes, Dunstan, and Dwyer (1994) which found firm size to be a significant influencer of credit prices. Admittedly, the empirical, quantitative approach used by Holmes, Dunstan, and Dwyer (1994) is more explanative. It is interesting to uncover, however, that the perception of firm-owners is of size being insignificant, at least in the pricing of credit. There was some sentiment that the size of their firm made it easier to obtain the credit desired, although firm size could easily be viewed as a proxy for stability and regularity of cash flows, the most important indicator of a company's capacity to repay loans. In this respect, owners perceived firm size to be similar to that of personal collateral in the fact that it had little influence on the pricing of credit, yet did have an impact on obtaining the credit desired.

This study also provides insight as to where Toronto-based CA&VFX companies acquire the credit needed for their operations. Traditional financial institutions were identified as the preferred lender of choice, while industry-specific lenders, such as Aver, Espresso Capital, Canada Film Capital, and Tri Star Film Finance, come in a close second. Surprisingly, with a high level of competitors offering credit, firm owners did not perceive these influencing credit prices, with all lenders perceived as essentially offering the same rate. This is contrary to what

Mallett and Sen (2001) found in their investigation, where FI competition was found to be a significant influencer. One explanation could be the narrow focus of this research which only looks at one sub-sector of the screen-based production industry, while Mallett and Sen (2001) had a broader focus. A number of respondents indicated that certain traditional FI were unfamiliar with the industry, making the application process for credit difficult. This eventually led them to move their business to another lender that was more knowledgeable in regards to industry cash flow expectations. So, while a large number of organizations have the potential to provide credit to these firms, a smaller number specializes in the process, reducing the amount of credit alternatives.

When looking at strategic factors that could influence credit prices, specifically an innovative strategic orientation or an internationalization strategy, firm owners were unanimous that this had little influence on credit prices. Firstly, an innovative strategy was perceived to be commonplace among the firms. In other words, all firms of interest for these case studies self-identified as having an innovation-based business strategy. Because the strategic orientation of all firms was found to be equally innovative, this research provided little insight on strategic orientation being a significant credit pricing influencer. This does in no way remove strategic orientation as a potential credit pricing influencer, a hypothesis meriting further investigation. In terms of internationalization, again, this factor was found to be perceived as insignificant. There was a comment on how projects with overseas partners made the application process more cumbersome, but had no effect on the resulting prices paid.

Past academic literature has presented some interesting findings on how long-term relationships with lenders can have adverse effects on borrowers (Degryse & van Cayseele, 2000) and also how soft information pertinent to a lending decision is not easily transferrable (Scott, 2006). This project supports the findings of past research, as the firm owners who attempted to transfer business found it to be a very difficult process, primarily due to the new lender not being aware of their business. While this author would of liked to investigate differing perceptions in the pricing of relationship-based versus transaction-based, the respondents provided little insight. Furthermore, little was discovered in regards to the length of the relationship adversely affecting credit prices for borrowers. The participants did however indicate that having a long-term relationship with the lenders made it easier to obtain the credit desired. I believe it is fair to be critical of the firm owners in this regard. One theme identified through the interviews was that the firm owners, once involved with a particular lender, become overly comfortable and presume the lender is offering the most favourable credit terms. As one respondent exemplified, this is not necessarily the case. With this in mind, one finding of this research is that CA&VFX firm owners should be less satisfied with the status quo and leverage their bargaining power to reduce the cost of borrowing.

Finally, and of most interest to this author, this research attempted to determine if a prospective borrower could influence the price paid for credit by negotiating the price down with their lender. The results were clear in signalling no; owner's perceived negotiation to be insignificant in influencing credit prices. This author remains convinced, however, that an individual's ability to haggle could be a significant influencer of credit prices, evidenced by one respondent's success in doing so. The power of negotiation is drastically underutilized by business owners in CA&VFX who fail to use their bargaining power to obtain favourable credit terms. The participants alluded to not all traditional lenders being willing or able to meet their credit requirements, mostly due to a lack of industry knowledge.

### **LIMITATION AND RESEARCH GAPS**

As with any qualitative interview research with a small sample, it is impossible to generalize the findings of this study to the broader population of all Toronto CA&VFX companies. The aim, rather, was to identify relevant themes for future researchers to investigate. As such, one limitation of this research is the inability to infer statistical generalizations to the entire population. Instead, analytical generalizations are appropriate as enablers for future research. While this study revealed that most owners perceived negotiation to not have much effect on credit terms, there is room for an investigation in an industry where the participants and financial decision-makers have a higher degree of business acumen. Most of the interview participants, with the exception of Wes Liu, were trained and educated as artists, not managers or entrepreneurs. This lack of expertise in financial decision-making may be one reason for the unwillingness to engage in more aggressive negotiations. With this in mind, a study dedicated to understanding how a credit-seeker's business acumen influences their willingness to negotiate could prove interesting.

As with most research, especially at the Master's level, this project was inevitably an exercise in the achievable, not the ideal. Time and access issues limited the number of case studies included in the project. While the companies included in the case studies represent a significant chunk of Toronto's CA&VFX output, some big names such as Mr. X and SPIN VFX were noticeably absent, as were a slew of smaller CA&VFX boutique studios. Needless to say, a larger amount of interviews would paint a more detailed picture on the perceptions of credit pricing influencers. Additionally, time and access issues constrained the research to examine only demand side perceptions. Supply side interviews would of added value to the project, as investigating if demand side perceptions of credit pricing influencers aligned with supply side perceptions would have been interesting. Furthermore, understanding how knowledgeable credit-providers perceive credit-seekers to be of the lending process, and if the level of perceived level of understanding has any influence on credit pricing could be fascinating.

## **REFERENCES**

Beck, T., Demirgüç-Kunt, & A., Levine, R. (2006) Bank concentration, competition, and crises: First results. *Journal of Banking & Finance* 30 (5)

Berger, A. N., & Udell, G. (2007). Small business credit scoring and credit availability\*. *Journal of Small Business Management*, 45(1), 5-22.

Berger, A., & Udell, G. (2006). A more complete conceptual framework for SME finance. *Journal of Banking and Finance* 30, 2945-2966.

Berger, A., Espinosa-Vega, M., & Udell, G., Miller, N. (2011) Why do borrowers pledge collateral? New empirical evidence on the role of asymmetric information. *Journal of Financial Intermediation* 20 (1)

Bester, H. (1987). The Role of Collateral in Credit Markets with Imperfect Information. *European Economic Review, Vol 31 (4), pp887-899.*

*Big Table of Digital Media and Animation Incentives in Canada 2013. PwC (2013)*  
(<http://www.pwc.com/ca/en/entertainment-media/publications/pwc-big-table-digital-animation-2013-08-en.pdf>)

*Big Table of Film and Video Incentives in Canada 2013. PwC (2013)*  
(<http://www.pwc.com/ca/en/entertainment-media/publications/pwc-big-table-film-video-2013-08-en.pdf>)

Binks, M., Ennew, C., & Reed, G. (1992). Information Asymmetries and the Provision of Finance to Small Firms. *International Small Business Journal* 11 (1)

Blackwell, D.W., & Drew B Winters, D.B. (1997). Banking relationships and the effect of monitoring on loan pricing. *The Journal of Financial Research*, 20(2), 275-289.

Bottazzi, L., Da Rin, M., & Hellmann, T. (2008). Who are the active investors? Evidence from venture capital. *Journal of Financial Economics* (89) 488-512

*Canadian Interactive Industry Profile, Nordicity, 2008, p. 6.*

Chetty, S. (1996). The Case Study Method for Research in Small- and Medium-sized Firms. *International Small Business Journal*, 15(1)

Cowling, M., & Mitchell, P. (2003). Is the small firm loan guarantee scheme hazardous for bank or helpful to small business? *Small Business Economics* (21) 63-71

Creative Industries Mapping Document

([http://webarchive.nationalarchives.gov.uk/+http://www.culture.gov.uk/reference\\_library/publications/4632.aspx](http://webarchive.nationalarchives.gov.uk/+http://www.culture.gov.uk/reference_library/publications/4632.aspx))

Cosh, A. et al. (2008) *Financing UK small and medium-sized enterprises: the 2007 survey* University of Cambridge: Centre for Business Research

Deakins, D. and Freel, M. (2012) *Entrepreneurship and Small Firms*, 6th Edition, McGraw-Hill

Degryse, H., & Van Cayseele, P. (2000). Relationship lending within a bank-based system: Evidence from European small business data. *Journal of Financial Intermediation*, 9(1), 90-109.

Degryse, H., de Goeij, P., & Kappert, P. (2012). The impact of firm and industry characteristics on small firms' capital structure. *Small Business Economics* 38 (4)

Dietrich, A. (2012). Explaining loan rate differentials between large and small companies: evidence from Switzerland. *Small Business Economics*

*Economic Profile of the Computer Animation and Visual Effects Industry in Ontario, 2008-2010*. (2012). Nordicity.

Ennew, C., and Binks, M. (1995). The Provision of Finance to Small Firms: Does the Banking Relationship Constrain Performance?. *Journal of Small Business Finance* 4, 69-85.

Foster, G. (1986). *Financial Statement Analysis, 2<sup>nd</sup> Edition*, Prentice-Hall

Frame Work: Employment in Canadian Screen-Based Media – A National Profile (2004). *Ekos Research Associates Inc & Paul Audley & Associates Ltd.*

Frame Work II: Canada's Screen-Based Workforce (2012). *Women in Film & Television Toronto*

Freel, M., Carter, S., Tagg, S., & Mason, C. (2012). The latent demand for bank debt: characterizing "discouraged borrower". *Small Business Economics*

*Guide 09/10: Canada's Ultimate Production Industry Directory, 23<sup>rd</sup> Edition*. Canadian Film and Television Production Association, 2010.

Hambrick, D., and Snow, C. (1977). A Contextual Model of Strategic Decision Making in Organizations. *Academy of Management Proceedings*

Holmes, S., and P. Kent. (1990). A empirical analysis of the financial structure of small and large Australian manufacturing enterprises. *Journal of Small Business Finance*, 1(2), 141-154.

Holmes, S., Dunstan, K., & Dwyer, D. (1994). The cost of debt for small firms: Evidence from australia. *Journal of Small Business Management*, 32(1), 27-27.

Jensen, J. B. and R. H. McGuckin, (1997). Firm Performance and Evolution: Empirical Regularities in the US Microdata. *Industrial and Corporate Change* 6, 25-47.

Keasey, K., & Watson, R. (2000). Interest rate premia on UK small-firm bank borrowings: A research note. *Journal of Business Finance & Accounting*, 27(1-2), 247-259.

Keeton, W. (1979). *Equilibrium Credit Rationing*, New York: Garland Publishing.

Kon, Y., & Storey, D. J. (2003). A theory of discouraged borrowers. *Small Business Economics*, 21, 37-49.

Lerner, J. (2010). The future of public efforts to boost entrepreneurship and venture capital. *Small Business Economics*, 35: 255-264

Levenson, A. R., & Willard, K. L. (2000). Do firms get the financing they want? Measuring credit rationing experienced by small business in the U.S.? *Small Business Economics*, 14, 83-94.

Llisterri, J., (1997). Credit guarantee systems: Preliminary Conclusions. *The Financier* 4(1&2), 95-99.

Mallett, T., & Sen, A. (2001). Does local competition impact interest rates charged on small business loans? empirical evidence from canada. *Review of Industrial Organization*, 19(4), 435-450

Miller, D. (1988). Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications. *Academy of Management Journal*, 280-309

Parker, S., (2002) Do Banks Ration Credit to New Enterprises? And should Governments Intervene?, *Scottish Journal of Political Economy* 49, 162-195.

Profile 2011: An Economic Report on the Screen-based Production Industry in Canada (2011). *Produced by the CMPA and the APFTQ, in conjunction with the Department of Canadian Heritage.*

Riding, A., Madill, J., & Haines, G. (2007). Incrementality of SME loan guarantees.

*Small Business Economics* (29) 47-61

Scott, J.A. (2006). Loan Officer Turnover and Credit Availability for Small Firms. *Journal of Small Business Economics* 44(4) 544-562

Storey D., (1994). Understanding the Small Business Sector. *London, Routledge*.

*Toward 2025: Assessing Ontario's Long-Term Outlook*. Ontario Minister of Finance (2005).

Townley, B., Beech, N., & McKinlay A. (2009). Managing in the creative industries: Managing the motley crew *Human Relations*

Timmons, Spinelli, Ensign. *New Venture Creation*, Canadian Edition, 2010. McGraw-Hill, ISBN 0-070-71995-0

Volpe, R. P. & Schenck, N. A. (2008). Small Business Lending Environment in Emerging Economies: A Comparison of Brazil and Russia. *Journal of International Business Research*, 11(2), 801-827.

Yin, R. (1989). Case Study Research, Design and Methods. *Beverly Hills, CA, Sage*.