Financial institutions and the taxi-cab industry: an exploratory study in Canada

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Abstract: A current challenge taxi-cab owner/operators face in Canada is the lack of financing for taxi-cabs. This article examines business opportunities and lending risk; it also provides risk management strategies for financial institutions to manage the risk of lending to the taxi-cab industry. Members of the boards of directors and shareholders from the Canadian taxi-cab industry,

and lenders from financial institutions that do not provide financing to taxi-cab owner/operators, were interviewed. Board members and shareholders were asked about their perceptions regarding business opportunity, risk, and their willingness to provide collateral for taxi-cab loans. Lenders of financial institutions were asked about their reasons for not providing taxi-cab loans. The findings of this study show that there is a reasonably attractive opportunity for financial institutions to offer financing for taxi-cab owner/operators. However, the findings also show that there are both systematic and unsystematic risks in lending to the taxi-cab industry. This offers recommendations on risk management strategies for Canadian lenders to mitigate the risk in lending to the Canadian taxi-cab industry. Our findings may be useful for new and existing financial/lending institutions, lenders, investors, and taxi-cab owner/operators.

Keywords: banking; credit; finance; financial institutions; risk; service industry.

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1 Introduction

Individual borrowing to buy a taxi-cab license has become popular among new immigrants in Canada. During the past five years, Canada admitted an annual average of over 250,000 new permanent residents (Citizenship and Immigration Canada, 2013). Many new immigrants start driving cabs and invest funds in the taxi-cab industry to start their own micro-businesses. Dana (2007) noted that self-employment and new ventures

are often considered to be among solutions for economic malaise among new-comers. This may be especially relevant in the taxi-cab sector.

The taxi-cab industry is a multimillion dollars industry with over 50,000 taxi drivers in Canada (Xu, 2012) and it provides an interesting opportunity for Canadian lending/financial institutions to offer financing. The attraction emanates both from cab licenses financing and because new immigrants will subsequently be in the market for loans to their family members and friends. According to Xu (2012), more than 50% of the cab drivers in Canada are immigrants. There are approximately 5,000 cabs in the Toronto area alone (Alcoba, 2013). Most new immigrants in Canada live in a joint-family environment and support each other (Gill et al., 2013). Cab license holders are self-employed and are considered owners of small businesses and, as noted by Jamaluddin and Dickie (2011), family support plays an important role in small business growth.

Although lending to finance cab licenses may be attractive, financial institutions are reluctant to provide financing for taxi-cab owner/operators. According to Lee (2013), the Bank of Montreal and the Royal Bank of Canada are the only banks that provide financing to taxi-cab owner/operators. This may be because of the lack of interaction between taxi-cab owner/operators and financial institutions. It also may be because financial institutions lack understanding of the taxi-cab industry.

This study describes the business opportunities for lending institutions, provides information on risk, and offers recommendations to mitigate the risk of lending to the Canadian taxi-cab industry. The research questions related to this study are as follows:

- What types of business opportunities exist in the taxi-cab industry for the lending/financial institutions?
- Why are financial institutions reluctant to start financing for the taxi-cab owner/operators?
- How does market risk impact firm-specific risk?
- What types of risk would lenders face in taxi-cab licenses/shares financing?

The financing issue related to the taxi-cab industry was selected for study because many financial institutions in Canada are reluctant to provide financing to taxi-cab owner/operators. While there are specific business reasons for such reluctance, we found no published study that specifically dealt with the risk and risk mitigation strategies in relation to lending to the taxi-cab industry. Thus, this study can be considered the first to show risk and risk management strategies in the taxi-cab industry; together with the business opportunities that exist for financial institutions to provide lending to this industry.

The nature of the taxi-cab industry is unique in terms of the process of approving credit for individual taxi-cab owner/operators. Notable is that lending risk does not depend on the individual owner/operator or small business, but on the taxi-cab company itself. This is because lenders require that all licenses must belong to the taxi-cab company in order to provide financing to the licensees and shareholders. According to Jorion and Zhang (2007) and Chava and Jarrow (2004) industry characteristics such as this can affect default risk.

While the taxi-cab industry provides business opportunities for financial institutions, there are inherent risks. The business opportunity for financial institutions lies in starting

financing for the taxi-cab companies and their license/shareholders. Risk in the taxi-cab industry can be classified as both systematic and unsystematic. The following sections review the literature on business opportunity, systematic risk, unsystematic risk, and the relationship between systematic and unsystematic risk in the taxi-cab industry.

This study explains the business opportunities for lending institutions, types of risk, and risk management strategies that might be adopted in order to minimise capital losses in lending to the taxi-cab industry. This study fills the gap and contributes to the literature on the business opportunity, lending risk, and risk management strategies for lending institutions at least two ways. First, this study describes the business opportunity for lending institutions not only related to taxi-cab owner/operators, but also to their family members and friends. Second, research on lending risk and risk management strategies in the taxi-cab industry is non-existent. This study describes the risks and provides risk management strategies for lending institutions to mitigate systematic and unsystematic risk and to minimise capital losses related to taxi-cab financing. Thus, the study adds substance to the limited research on risk and risk management strategies in the taxi-cab industry with results that may be generalised to the taxi-cab industry.

2 Literature review

2.1 Business opportunities for financial institutions in the taxi-cab industry

The taxi-cab industry is dominated by new immigrants, particularly from Asian countries, who might have pre-planned to open a small business in Canada before migrating (Xu, 2012). Dana (2007) found that people from entrepreneurial cultures may be pre-disposed to self-employment by virtue of cultural conditioning resulting in pro-enterprise values (thrift, frugality, etc.), which in turn, results in orthodox entrepreneurship; the author also found that individuals from non-entrepreneurial cultures may also become self-employed as a reaction to circumstances. Thus, entrepreneurship among new immigrants in the taxi-cab industry can be considered active self-employment as well as reactive self-employment. In either case, there is an attractive business opportunity for financial institutions in Canada to provide financing to this community.

Although an attractive business opportunity exists in the Canadian taxi-cab industry, majority of the financial institutions are unable to capitalise on it. Business opportunity, in the context of this study, lies in the form of angel financing for the taxi-cab owner/operators to buy cab licenses and cab shares.

Maxwell et al. (2011) argue that most investors are unwilling to provide details on why they do not fund a business opportunity, and entrepreneurs are often not told the real reasons they do not receive funding. Another reason for not identifying business opportunities in the taxi-cab industry may be the flaws in the opportunity diagnosis; that is, just considering taxi-cab owner/operators as a business opportunity and not their immediate family members, relatives, and friends. Maxwell et al. (2011) found that if an opportunity is diagnosed with a fatal flaw, it is rejected in the first stage of the decision making process. The authors also found that angel investors do not use a fully compensatory decision model wherein they weigh and score a large number of attributes related to business opportunity; rather, they use a shortcut decision making model which leads to misunderstanding of the business opportunity. This may also be the case for financial institutions because they are looking at one side of the picture; the risk but not

the return. Therefore, it is important to balance risk and return in evaluating opportunity in the taxi-cab industry.

There is a strong social network among taxi-cab owner/operators. Taxi-cab businesses are considered micro-firms. Zhou (2009) reports that micro-firms have social network ties with family members, relatives, and friends; the majority of whom like to deal with the same financial institutions. Thus, this network provides an opportunity for lending institutions to establish business relationships that may help in obtaining taxi financing.

Yellow Cabs, Blacktop/Checker Cabs, Vancouver Cabs, and MacLure's are the oldest cab companies in Vancouver with about 588 full-time taxi licenses (Lee, 2013). These cab companies sell new cab licenses to individual owner/operators together with company shares. The old licenses are traded between a license holder and a buyer. Most company owner/operators invest funds in residential housing and construction, restaurants, hotels, motels, and other service markets. They need financing for the taxi-cabs, but also for these investments.

In summary, the literature review shows that there are interesting business opportunities for lending institutions to start financing for taxi-cab owner/operators. Hence the following hypothesis is formulated:

H1 The taxi-cab industry provides good business opportunities for financial institutions to gain additional market share.

2.2 Systematic risk in the taxi-cab industry

Understanding systematic risk is essential for assessing, calculating, and characterising the riskiness (Eldomiaty et al., 2011) of the taxi-cab market. Zhou (2012) argued that economic actors will not invest, produce or engage in market transactions unless they are able to benefit from their efforts. There are benefits for financial institutions from selling different types of products to taxi-cab owner/operators and their family members, relatives and friends.

Systematic risk, in the context of this study, is the market risk that lending institutions cannot control and it can lead to capital losses for lending institutions. One of the sources of market risk is the political structure of the country. Although soft bylaws may help certain industries grow, they differ by city and province in Canada. The risk is reduced for lending institutions if government passes bylaws in favour of the taxi-cab industry. Goldman et al. (2009) stated that firms benefit from the support of government officials in reducing regulatory requirements. Conversely, bylaws passed by governments against the taxi-cab industry can adversely impact revenue and costs, and thus the operating profit from a taxi-cab. For example, Toronto city staff is proposing 44 recommendations for the taxi-cab industry and many reforms to Toronto's taxi-cab industry. Included among these is the elimination of a two-tiered licensing system that has been a source of bitterness among some drivers. These 44 recommendations are contained in a report before the licensing and standards committee and aim at improving the experience for passengers and cabbies (Alcoba, 2013). Such recommendations by cities to change bylaws lead to higher systematic risk in the taxi-cab industry and the increase of systematic risk causes barriers to financing for taxi-cab licenses.

Systematic risk causes volatility in the performance of the firm. Volatility in the performance of taxi-cab owner/operators can arise from volatility in other industries.

Notable is that the majority of the taxi-cab renters are business people from other industries. Thus, volatility in other industries, particularly tourism, has an impact on the volatility of the performance of taxi-cab owner/operators. According to Lo et al. (2011) and Williams and Balaz (2013), there has been increasing awareness of the risks associated with natural and societal-originating disasters, ranging from tsunamis and earthquakes to Avian flu and terrorism. Sonmez and Graefe (1998) also found that international attitude, perception of terrorism risk and income were found to directly influence the choices of international vacation destinations. All these systematic risk factors lead to fluctuations in the number of tourists which has a negative impact on the firm. Wang (2010) found that volatility shocks originating from the business supplies and consumer goods industries are sources of risks that affect most other industries. Lee and Jang (2007) also found that profitability, growth, and safety are negatively associated with the systematic risk in the transportation industry. Among the important risk factors that impact the cash flows of taxi-cabs are gross domestic product (GDP), inflation, and interest rates (Tang and Yan, 2010). For example, inflation increases gas prices and increases in interest rates increase debt payments.

In summary, the literature review shows that financial institutions face systematic risk and they are reluctant to provide financing for taxi-cab licenses in the Canadian taxi-cab industry. Hence, the following hypothesis is formulated:

H2 The higher the level of systematic risk perceived by lenders, the higher the level of reluctance to start taxi-cab financing.

2.3 Unsystematic risk

Unsystematic risk comes from work-related factors that can impact individual taxi-cab owner/operators. A wide range of work related problems have been identified in the transportation industry including the nature of the business, the level of commitment to health and safety, remuneration practices and knowledge about fatigue among staff at all levels in the organisation (Arnold and Hartley, 2001; Gander et al., 2011). Fatigue derives from lack of sleep and is defined as the inability to function at the desired level. The cab owner/operators, who own full cabs and do not lease a half-cab, drive the cabs for approximately 15 hours per day. Driving a taxi-cab for an extended period of time leads to fatigue, and health and safety issues. Fatigue issues change brain function and individual behaviour (Gander et al., 2011). Thus, these risk factors have a direct impact on the performance of the taxi business.

Taxi-cab owner/operators also face the risk of physical attacks, accidents, taxi fare evasions, vandalism, verbal harassment, and robberies; with robbery being the primary motive for the physical attacks. Much of the time, these risks originate from high crime areas. Since taxi-cab owner/operators and drivers work alone and deal with strangers, the probability of physical attacks, accidents, taxi fare evasions, vandalism, verbal harassment, and robberies is high. Robbery depletes the revenue of taxi-cab drivers and owner/operators and has the potential for injury and death. Taxi-cab drivers and owner/operators work as independent contractors; therefore, they may not be eligible for workers' compensation (Smith, 2005). Thus, all of these factors have a negative impact on cash inflow. These represent what can be termed unsystematic risk; or risk related to the individual micro-firm. Unsystematic risk (firm-specific risk) may bring about reluctance of financial institutions to start financing because of the perceptions of capital

losses. Part of the unsystematic risk can be eliminated by dispersion in lending practices whereby a financial institution lends to a large number of taxi-cab owners who don't all drive in the same crime-prone area.

In summary, the literature review shows that financial institutions face unsystematic risk in the Canadian taxi-cab industry. Hence the following hypothesis is formulated:

H3 The higher the level of unsystematic risk perceived by lenders, the higher the reluctance to start taxi-cab financing.

2.4 Impact of market risk on firm-specific risk

Market risk (systematic risk) factors such as unexpected inflation, unexpected changes in the GDP, monetary policy, and exogenous shocks have a negative impact on the cash flows of the firm (Tang and Yan, 2010). The fluctuation in cash flow caused by systematic risk factors is considered as the firm specific risk. Thus, the fluctuation in cash flow creates credit difficulties for tax-cab owner/operators. Tang and Yan (2006) indicate that incorporation of the view of macroeconomic risk factors into the financing decision raises the perceived probability of default.

Systematic risk is measured by beta. One of the firm-specific factors related to the taxi-cab industry is the liquidity of the cab licenses and cab shares. Research studies found a negative relationship between liquidity and beta which suggests that firms with greater liquidity have lower systematic risks (Logue and Merville, 1972; Moyer and Chatfield, 1983). The taxi-cab companies in Canada are not publically traded companies; therefore, licenses and shares are not very liquid. Previous studies also indicated a negative relationship between the profitability of the firm and systematic risk (Borde, 1998; Gu, 2002). Systematic risk impacts smaller firms more than larger firms because larger firms tend to diversify the risk more efficiently (Titman and Wessels, 1988). Huang and Lee (2013) found that market competition (one of the market risk factors) impacts credit risk and credit risk is much more sensitive to the number of firms when firm size is small. Firm size in the taxi-cab industry is small as it pertains to individual taxi-cab owner/operators. Thus, the impact of systematic risk can be higher on firm-specific risk in the taxi-cab industry. Moreover, large firms are more capable of lessening the negative influences of economic, social, and political changes on their management and, therefore, expose their businesses to less risk (Sullivan, 1978). Therefore, it is hypothesised that:

H4 The higher the market risk the higher the firm-specific risk.

3 Methods

3.1 Research design

This study relied on in-depth interviews. The concepts of systematic and unsystematic risk in the context of the present study were adopted from Eldomiaty et al. (2011). Appendix shows the interview questions that were used in this study. The taxi-cab industry (independent variable) was measured as the way taxi-cab corporations operate.

The business opportunity for financial institutions (independent variable) was measured as the products that the family members, relatives, and friends of taxi

owner/operators buy and the extent to which they would be willing to do businesses with the same financial institutions after the taxi financing starts.

The systematic risk (independent variable) was measured as the extent to which taxi-cab owner/operators and lenders perceive that government, recession, interest rates, and inflation negatively impact the income of the taxi-cab industry and individual owner/operator, debt capacity of owner/operators, and the licenses and share prices of taxi-cabs.

The unsystematic risk (independent variable) was measured as the risk perceived by members of the board of directors and shareholders and lenders related to individual owner/operators of the taxi-cab.

The propensity of financial institutions to start financing for taxi-cab owner/operators (dependent variable) was measured as the extent to which lenders think about starting financing and will start financing taxi-cab owner/operators in the near future.

3.2 Sampling frame, questionnaire distribution, and collection

The current study consisted of the population of the members of boards of directors and shareholders of Canadian taxi-cab companies and lenders at financial institutions. Members of the boards of directors and shareholders of Canadian taxi-cab companies and lenders living in the area of British Columbia (North Vancouver, Vancouver, Surrey, Abbottsford, Victoria Island, and Kelowna) and the Toronto area of Ontario, Canada were chosen as a sampling frame. To solve sampling frame issues, it was ensured that subjects were selected from the board members and shareholders of Canadian taxi-cabs and credit departments of financial institutions only.

3.3 Sampling method, sampling issues, and possible planned solutions

The current study applied snowball sampling (a sampling method which is appropriate in research when the members of a population are difficult to find) and convenience (non-random) sampling methods to select and recruit research participants. These methods were selected because board members and shareholders of Canadian taxi-cabs and credit managers were reluctant to participate in the research. Therefore, there was the possibility of sampling bias. To avoid sampling bias, research participants were selected who are indeed representative of the population. For example, all non-board members and non-shareholders and non-credit managers were excluded from the study.

To achieve a convenience sample, a list of names and telephone numbers of the members of the boards of directors and shareholders of the Canadian taxi-cab companies and credit managers living in the British Columbia and Toronto areas of Canada was created to conduct telephone interviews.

The sample included approximately 50 research participants encompassing board members and shareholders of Canadian taxi-cabs and lenders from financial institutions. Out of 50 research participants, only 18 interviews (14 interviews from the taxi-cab industry and 4 from 4 different financial institutions) were conducted successfully.

3.4 Issues related to confidentiality of the research participants

To overcome confidentiality issues, all subjects were assured that their names would not be disclosed and their confidentiality maintained. Since the research was based on a telephone interview questionnaire, board members and shareholders of Canadian taxi-cabs and lenders were not forced to respond to each specific question. There was no obligation for the subjects to answer questions over the telephone or in person. To conduct the telephone interviews, all subjects were asked for their permission to participate. Any information that was obtained in connection with this study, and that can be identified with subjects, will remain confidential and will be disclosed only with subjects' permission or as required by law.

4 Findings and discussion

4.1 Findings

Appendix shows the results of this study.

4.2 Operations of taxi-cab companies financed by banks

The findings show that taxi-cab companies operate as corporations. Cities issue new licenses to taxi-cab companies and taxi-cab companies sell licenses to individuals together with cab shares. In order to buy a license, all new cab owners must have at least 6 months taxi-cab driving experience and the board of directors must approve the sale of the license before existing and new cab owner/operators trade among themselves. The cab shares are sold as half-share and full-share.

Banks are reluctant to provide financing for other, less financially strong, cab companies due to their financial position and because licenses at these companies are issued directly to individual cab owners instead of the taxi-cab company (*e.g.*, Toronto). It follows that taxi-cab companies that currently do not receive bank financing should consider the above structure and enhance their financial strength such that banks may also consider financing for them. For the existing taxi-cab owner/operators, this will increase the liquidity of cab licenses. For the cab drivers, it will be easier to buy a cab share with bank financing. Thus, increased commitment to financial strength metrics and adherence to commonly accepted industry practices such as those followed by taxi-cab companies that do receive bank financing (see Table 1), will create opportunities for these other non-financed cab companies and financial institutions.

4.3 Business opportunities for financial institutions and taxi financing opportunities for taxi-cab companies

It was hypothesised that the taxi-cab industry provides profitable business opportunities for financial institutions to gain additional market share. Our findings show that taxi-cab owner/operators and their family members, relatives and friends invest in the real estate market, hospitality industry, construction, transportation, service, and manufacturing industries. They have personal loans, credit cards, personal lines of credits, commercial lines of credits, commercial loans, residential mortgages and commercial mortgages.

They also own term investments, registered retirements savings plans (RRSPs), registered education savings plans (RESPs), savings accounts, chequing accounts, mutual funds, and tax free savings accounts. Thus, the taxi-cab industry offers profitable opportunities for financial institutions in regards to these financial instruments. Hence, H1 was supported.

4.4 Systematic risk as a barrier to financing taxi-cab owner/operators

It was hypothesised that the higher the level of systematic risk perceived by lenders, the higher the reluctance to start taxi-cab financing. The results show that financial institutions are indeed reluctant to start financing for taxi-cab companies because of high market risk which can lead to loan defaults and capital losses from lending to the taxi-cab industry. Hence, H2 was supported. The findings of this study lend some support to the argument of Zhou (2012) who stated that economic actors will not invest, produce, or engage in market transactions unless they are able to benefit from their efforts. The findings of this study also support the findings of Lee and Jang (2007) who found that profitability is negatively associated with the systematic risk in the transportation industry. However, financial institutions do not observe that the benefits outweigh the costs in providing financing to some companies in the taxi-cab industry because of the perception of high default risk (see Appendix). Nevertheless, high default risk can be mitigated by using different risk mitigation strategies.

4.5 Unsystematic risk as a barrier to financing taxi-cab owner/operators

It was assumed that the higher the level of unsystematic risk perceived by lenders, the higher the level of reluctance to start taxi-cab financing. The findings show that lenders perceive high firm-specific risk. Among the reasons cited was the statement that the taxi-cab industry is a seasonal industry and, in addition, there is high volatility in cash flows (see Appendix). For this reason, financial institutions are reluctant to start lending to taxi-cab owner/operators. The results show that firm-specific risk in the transportation industry arises from accidents, robberies, cash flow fluctuations, physical attacks, and damages to cabs, which lead to taxi loans' default risk. Hence, H3 was supported. The findings of this study lend some support to the findings of Arnold and Hartley (2001) and Gander et al. (2011) who identified a wide range of work related problems in the transportation industry including the nature of the business, the level of commitment to health and safety, remuneration practices, and knowledge about fatigue among staff at all levels in the organisation. The findings also support the argument of Smith (2005) related to the risk of physical attacks, accidents, and robberies.

4.6 Impact of market risk on firm-specific risk

It was hypothesised that the higher the market risk, the higher the firm-specific risk. The results show that market (systematic) risk causes firm-specific (unsystematic) risk in the taxi-cab industry (see Appendix) because it has a negative impact on the firm's cash flow. Hence, H4 was supported. The findings of this study lend some support to the findings of Tang and Yan (2006, 2010) who found that market risk causes credit issues for a specific firm. The results also lend some support to the findings of Borde (1998) and

Gu (2002) who indicated a negative relationship between the profitability of the firm and systematic risk.

5 Conclusions

Despite the profitable opportunities for financial institutions to start financing in the taxi-cab industry, they are reluctant to do so. Taxi-cab companies may have to make changes in operations according to demands made by financial institutions. Canadian government approvals may also be required. Financial institutions started to provide financing to financially strong taxi-cab companies such as Black Top Cabs, MacLure's Cabs, North Shore Taxi, and Yellow Cabs more than a decade ago in the Lower Mainland area of BC, Canada. These cab companies may help other cab companies to get reorganised such that they too might begin receiving bank financing.

It is important to understand causes of credit losses and how to mitigate them because financial institutions need to have price structured credit products that are heavily exposed to correlations in credit risk (Pu and Zhao, 2012) caused by systematic and unsystematic risks. To mitigate the risk in the taxi-cab industry, it is important to understand the different communities that operate in the industry. Agarwal et al. (2007) found that relationship accounts exhibit lower probabilities of default compared to non-relationship accounts; that is, account managers responsible for taxi-cab industry loans should be able to lower default risk by establishing relationships with different communities in the industry because they will then understand these communities' lifestyles. Lending institutions should consider using the five Cs because these play an important role in mitigating lending risk. The five Cs are character, capacity, capital, conditions, and collateral (Strischek, 2009).

Credit bureau history shows the past payment record of individual borrowers. Bad credit may stem from disputes between creditors and customers over credit card fees. Notwithstanding the credit history reported by the credit bureau, Masood and Thapa (2012) found that the character of the borrower is also an important determinant of risk management. Dierkes et al. (2013) also found that the higher the value of business credit information, the lower the realised default rates for financial institutions in the small business industry.

Importantly, a majority of taxi-cab owner/operators are from India and Pakistan (Xu, 2012) and joint family systems are prevalent in these communities. Therefore, the role of a joint family environment in debt capacity should be considered; that is, it should be noted that parents provide financial support to individual borrowers. High debt might have been created by borrowings for the immediate family members and relatives and liability payments, in this situation, are made by family members and relatives; not only by the borrowers. To ascertain these relationships, strong relationship banking is required. The debt capacity of taxi-cab owner/operators can be measured with their average net income per month, and per year, which can be obtained from the taxi-cab companies. Masood and Thapa (2012) also found that understanding cash flow is an important determinant of risk management.

As described, joint family systems are prevalent in Asian communities; which are prevalent in the taxi-cab industry. Residential and other properties are sometimes registered in the names of parents out of respect. It may be the case that a taxi-cab

driver/operator has invested capital in the residential real estate market and has registered a residential property at his or her parents' name. Therefore, parents should be included in the taxi-cab loan applications where applicable for the collateral purposes. Collateral is defined as the availability of tangible and intangible assets to be pledged by borrowers. Financial/lending institutions should look at collateral as a second way out to collect funds in the case of bankruptcy.

There should be a limit on financing based on the taxi-cab license and taxi-cab shares only; that is, granting loans to taxi-cab owner/operators by pledging taxi-cab licenses and taxi-cab shares and not pledging any tangible assets such as residential properties. The risk premium should also be higher for the taxi-cab loans when there is a lack of tangible collateral for the second way out to payback the taxi loan to the financial institutions. It is recommended that the financial institutions should consider registering collateral second mortgages for the taxi-cab loans to reduce default risk. If a taxi-cab owner/operator has a mortgage with a financial institution that grants taxi loans, the letter of undertaking may also be considered for small taxi-cab loans.

Promissory notes should be drafted as demand loans. Demand loans will help financial institutions mitigate default risk if the level of systematic risk rises in the future. Although taxi-cab owner/operators have accident/illness and life insurance, financial institutions should make it compulsory for the cab owner/operators to mitigate the unsystematic risk. Financial institutions that would like to start financing for taxi-cab owner/operators should consider signing a contract with the taxi-cab companies so that they can sell the cab license(s) back to taxi-cab companies to collect loaned funds. This will help financial institutions mitigate systematic and unsystematic risks. The loan prices may be adjusted based on the level of risk. Masood and Thapa (2012) found that risk adjusted return for risk pricing is an important determinant of risk management.

To mitigate future risk, financial institutions should monitor the taxi-cab industry to analyse the bylaw changes by cities. Financial institutions should ask for financial statements from the taxi-cab companies and analyse them carefully to understand the changes in financial positions. Masood and Thapa (2012) also found that due to the complex nature of financing, the Islamic banks frequently assess credit risk. The same should also apply to the taxi-cab industry in Canada.

Credit managers must understand the different communities and the nature of the taxi-cab industry in order to manage risk and to generate profitability for financial institutions. Taxi-cab companies are willing to establish relationships and interact with financial institutions. Financial institutions should consider cooperating and interacting with the board members and taxi-cab license holders in order to succeed.

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Appendix

Data analysis

Table 1 Operations of taxi-cab companies in BC, Canada

Findings related to cab companies for which financial institutions have started providing financing	
1	Taxi-cab companies operate as corporations.
2	Cities issue new licenses to cab companies.
3	Taxi-cab companies sell new cab licenses together with shares to owner/operators and they drive and/or lease the taxi cabs.
4	All the new cab owners must drive a cab for at least six months before a taxi-cab company or a license and shareholder sells first license to them.
5	All the licenses and shares are approved by the Board of Directors before licenses and cabs shares can be transferred to new owner/operators.
6	The operation of cab companies is inspected by cities.
7	Cab licenses and shares are sold as i) half cab license and half share and ii) full cab license and full share.
8	Taxi-cab companies do not require taxi-cab owner/operators to buy accident/illness and life insurances.
9	All the taxi-cab owner/operators buy accident/illness and life insurances.
10	Majority of the taxi-cab owner/operators have cosigned loans of the immediate family members, relatives, and friends in the past by providing collaterals.
11	Majority of the taxi-cab owner/operators may cosign loans for the immediate family members, relatives, and friends by providing collaterals in the future.
Findings related to operations of taxi cab companies in Toronto, Canada	
1	Taxi-cab companies operate as corporations.
2	Cities issue new licenses to cab owner/operators.
3	Taxi-cab owner/operators can be affiliated with any cab company and change the affiliation if they wish.
4	The operation of cab companies is inspected by cities.

Note: Perceptions of Members of Board of Directors and Shareholders

Table 2 Other industries in which taxi-cab owner/operators, their immediate family members, relatives, and friends invest in and investment and loan products they buy

		a	*b*	*c*	*d*	*e*	*f*
1	Industries	Real estate	Hospitality	Construction	Transportation	Service	Production
2	Loans	Personal loans	Credit cards	Personal line of credits	Commercial line of credits	Commercial loans	Residential and mortgages
3	Investments	Term investments	RRSPs	RESPs	Savings accounts	Checking accounts	Mutual funds and tax free savings accounts
4	Possibility of immediate family members to deal with same institution if taxi financing starts: high (mean score = 4.21 out of 5)						
5	Possibility of a taxi-cab owner/operators' relatives to deal with same institution if taxi financing starts: high (mean score = 4.29 out of 5)						
6	Possibility of a taxi-cab owner/operators' friends to deal with same institution if taxi financing starts: high (mean score = 4.20 out of 5)						

Table 3 Systematic risk

	Cities/districts/provincial/federal governments create risk for the taxi-cab industry by:
1	Issuing new taxi operating licenses which increases market competition.
2	Passing new bylaws against the taxi-cab industry.
3	The extent to which recession negatively impacts the revenue/income of overall taxi-cab industry: medium (mean score = 3.36 out of 5)
4	The extent to which recession negatively impacts individual taxi-cab owner's revenue/income from taxi-cab: medium (mean score = 3.43 out of 5)
5	The extent to which the increase in interest rates negatively impacts the debt serving capacity of the taxi-cab owner/operator: medium (mean score = 3.29 out of 5)
6	The extent to which the increase in inflation impacts the prices of taxi-cab shares and licenses: medium (mean score = 3.29 out of 5)

Note: Perceptions of Members of Board of Directors and Shareholders)

Table 4 Systematic risk

	Cities/districts/provincial/federal governments create risk for the taxi-cab industry by:
1	Issuing new taxi operating licenses which increases market competition.
2	Passing new bylaws against the taxi-cab industry.
	Negative impact of recession, interest rates, and inflation on taxi-cab owners and industry
1	Impact of recession on revenue/income of overall taxi-cab industry: high (mean score 4 out of 5)
2	Impact of recession on individual revenue/income from taxi-cab: high (mean score 4 out of 5)
3	Impact of interest rates on debt serving capacity of the taxi-cab owner/operators: high (mean score 4 out of 5)
4	Impact of inflation on the prices of taxi-cab licenses and shares: high (mean score 4 out of 5)

Note: Perceptions of lenders

Table 5 Unsystematic risk

1	Average number of hours cab owners/drivers drive taxi-cabs per day: 12
2	Personal risk taxi-cab owners face in the taxi-cab industry: accidents, robberies, cash flow fluctuations, physical attacks, and damages to cabs.
3	Taxi-cab company requires accident/illness and life insurances for the taxi-cab owner/operators but they buy insurances themselves.
4	Average life of a new taxi-cab: 5.75 years
5	Average number of years it takes to payback taxi-cab loans: 6.15 years
6	The possibility of taxi-cab loans defaulted in near future: low to medium (Mean score = 2.64 out of 5)
7	Fluctuation of share/license prices in the taxi-cab industry: low to medium (Mean score = 2.71 out of 5)

Note: Perceptions of members of board of directors and shareholders

Table 6 Unsystematic risk and propensity of financial institutions to start financing

1	Personal risk taxi-cab owners face in the taxi-cab industry: accidents, robberies, cash flow fluctuations, physical attacks, and damages to cabs
2	The possibility of taxi-cab loans defaulted in near future: high (mean score = 4 out of 5)
3	Propensity of financial institutions to start financing in near future: low (mean score = 1 out of 5)

Note: Perceptions of lenders

Table 7 The reasons for reluctance of banks to start financing

	Financial institutions are reluctant to start financing for the taxi-cab owner/operators because of:
1	High systematic risk in the taxi-cab industry.
2	High unsystematic risk in the taxi-cab industry.

Note: Perceptions of lenders