CCUA
Canadian Credit Union Association

REPORT

Credit Union Commercial Lending: Mitigating Risk through Recording, Monitoring, and Reporting

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Executive Summary

Overview

Through effective recording, monitoring, and reporting of loans and delinquencies, credit unions can substantially reduce their commercial lending risk exposure.

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Effective risk management has become a critical element and a key differentiator for commercial lending operations. . . . [This includes] relevant systems and the expertise to manage commercial lending portfolios.

—Mikael Krohn, "Business Controls and Risk Analysis in Commercial Lending" (2010)

In recent years, there has been significant growth in commercial lending by Canadian and American credit unions. While commercial lending represents an important area of revenue growth, it is not without potential risk, particularly for small and medium-size credit unions.

Our research found that reporting of commercial loan delinquency is recorded in aggregate format rather than by industrial sector, thereby limiting the opportunity to monitor and identify risky sectors. This report examines risk exposure related to recording, monitoring, and the reporting of loan concentrations and delinquencies.

What Is the Research About?

In this research report, the authors investigate the recording, monitoring, and reporting of issued loans and delinquency by Canadian and US credit unions. This is done by determining whether commercial lending presents higher risks to the credit union than consumer lending; whether credit unions utilize adequate risk monitoring measures, such as the North American Industry Classification System (NAICS) for commercial loan categorization and the identification of sectoral risk; and the extent that collaboration and cooperation among credit union can reduce risk.

What Are the Credit Union Implications?

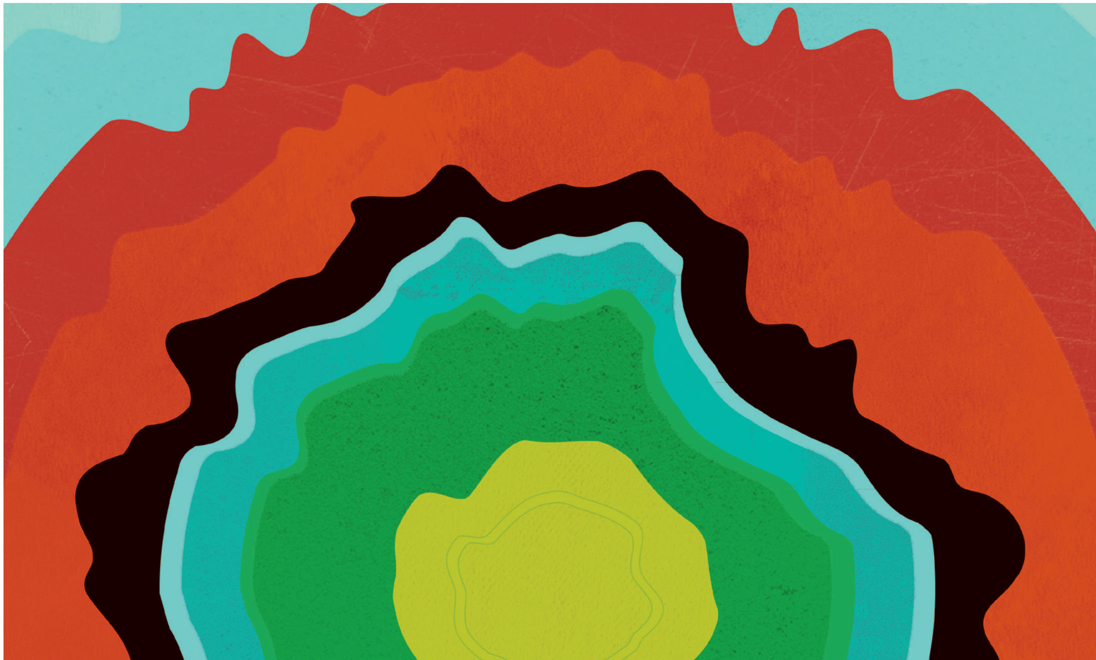
- To mitigate risk associated with commercial lending, credit unions should consider taking steps to ensure they are recording, monitoring, and reporting lending and delinquency in a sufficient level of detail using NAICS. In many situations, this may result in investment in information technology.
- Credit unions should take steps to address the growing decline of commercial lending expertise. In smaller credit unions, this may necessitate increased collaboration among credit unions.

- Strategic plans should include objectives regarding acquisition of lending expertise (through training and/or collaboration) and investment in IT infrastructure to record comprehensive loan and borrower data in order to meet the credit union's growing commercial lending portfolio.
- Enhanced board oversight in the following areas is critical as credit unions embark on increased commercial lending:
  - Establish protocols for how the board of directors is to be informed by management about delinquency—e.g., by combined or single amounts of consumer and commercial loans or by industrial sectors.
  - Use NAICS to establish procedures and control systems for the board of directors to monitor the loan portfolios and record loans and delinquencies.
  - Establish commercial loan pricing policies combining interest rates and fees that result in maximum residual contribution.
  - Provide more training to board members to ensure they have the knowledge level to fulfill their commercial lending oversight responsibility.

In addition to introducing measures to reduce risk, credit unions have a unique opportunity to demonstrate their cooperative difference through increased lending to small and medium-size enterprises (SMEs), home-based businesses, visible minorities, first nations, and new immigrants.

> *Overall, credit unions outperform other financial institutions when it comes to serving micro, small, and mid-sized businesses in Canada. Among the big five banks, Scotiabank received the highest overall score from their business clients while TD Canada Trust and Bank of Montreal are at the bottom of the pack.*
>
> —Battle of the Banks, Canadian Federation of Independent Business (October 2016)

Credit Union Commercial Lending: Mitigating Risk through Recording, Monitoring, and Reporting



CHAPTER 1

Introduction

The credit union system has long focused on providing personal financial services for its members. Typically, this included personal checking accounts, savings accounts, term deposits, loans, residential mortgages, credit cards, and Registered Retirement Savings Plans (RRSPs). However, the gradual commoditization of many of these products has narrowed credit unions' profitability margins and return on assets. As a result, credit unions are turning increasingly to the commercial lending sector.

This report looks at credit union commercial lending risk, particularly the potential differences in commercial lending risks for different credit unions, primarily due to

varying degrees of commercial lending expertise. The research focuses not on commercial loan delinquency as a percentage of aggregate lending, nor does it make an assessment on the quality of lending; rather, the researchers are looking at the process of recording, monitoring, and the reporting delinquency.

The report concentrates on a strategic and supervisory view of commercial lending rather than on lending management and application assessment and processing, such as the underwriting of individual loans. The report includes the following components:

- Literature review.
- Methodology.
- Structured and semi-structured Canadian and US credit union and regulator interviews.
- Discussion and analysis.
- Recommendations.

In Canada, credit unions are regulated by various provincial statutes and regulatory authorities. Commercial lending limits are established by the provincial regulator and vary from credit union to credit union depending on the capacities (financial, nonfinancial, and managerial) of the individual credit union as assessed by the regulator. Larger asset credit unions, with greater lending resources and expertise, are generally permitted a higher level of commercial lending independence than smaller asset, less resourced credit unions that may need to obtain "outside" commercial lending expertise. Such expertise may be offered by the various Centrals, other credit unions, or from the private sector.

Additionally, Canada has two operational structures for credit unions: the "autonomous independent" credit union and the "federated network" of credit unions. The former permits each credit union to operate in an independent manner within the established statutory and regulatory framework of the province in which it resides. The latter requires its member credit unions to operate within the provincial statutory and regulatory framework but additionally with stricter compliance to the rules, regulations, and opportunities established by the network of which they are a member.

In the United States, credit unions are divided between those that are state registered and those that are federally registered. The former are subject to the statutes and regulations established by the various states in which the credit union is located. The latter are subject to the federal statutes and regulations governed and monitored under the auspices of the National Credit Union Administration (NCUA). For these US federally registered credit unions under the auspices of the NCUA, commercial lending is restricted by a 12.5% cap of the credit unions' assets and is generally mortgage-based security lending only, regardless

of asset size or capability. These restrictions on US credit unions, however, do not reduce the commercial lending sophistication compared to Canadian credit unions because of managerial and commercial lending expertise available.

In this research, we investigate the recording, monitoring, and reporting of issued commercial loans and delinquency by Canadian and US credit unions.

The determination of the acceptable level of risk exposure to the credit union is a strategic issue and as such very much in the bailiwick of the board of directors. Boards need to ensure that appropriate commercial lending policies, effective operational and management information systems (MIS), and the necessary managerial skills and expertise are available and reflect the degree of risk the board is prepared to accept. In this regard, the following NCUA "Supervisory Letter" may be considered as pertinent:

> *The board of directors has ultimate responsibility for the level of risk assumed by the credit union. The board must establish policy guidelines and approve the overall lending strategy that addresses the level and nature of exposure acceptable to the credit union. This includes evaluating resources to ensure staffing levels and expertise are appropriate for the level and complexity of the portfolio and establishing [a] suitable MBL (member business lending) pricing model that integrates into the credit union's overall asset liability management program.*

CHAPTER 2

Present Environment: Canadian and American Credit Unions

For the most part, restricted access to Canadian credit union financial and loan data limits the capacity of outside researchers to conduct robust analysis. In some cases, Centrals do not have or are not allowed to share the data. We were, however, able to obtain enough data to paint a broad picture of the Canadian credit union sector's involvement in commercial lending. For a historical and macro-perspective, we drew on aggregate data provided by the Canadian Credit Union Association (CCUA). For loan delinquency data,

Deposit Insurance Corporation of Ontario (DICO) provided information for 117 credit unions with assets ranging from under $10 million (M) to in excess of $5 billion (B), which we have taken as generally representative for the other Canadian provinces (excluding Quebec and the Desjardins system) but not reflective of the US credit union environment.

Figure 1 shows the aggregate loan portfolio of all credit unions affiliated with CCUA for the period 2010 to 2015. The data are arranged by loan category as a percentage of total lending, and it should be noted that over the period:

- Total loans increased 50% from $105B to $158B.
- There was a steady proportionate decline in consumer lending (including lines of credit) as a percentage of the overall lending portfolio, from 10.3% of total loans in 2010 to 7.5% in 2015.

FIGURE 1

CANADA LOAN CLASSIFICATIONS (EXCLUDING DESJARDINS)

Loan classification	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)
Residential mortgages	57.3	58.5	58.7	58.6	58.9	58.9
Consumer (including lines of credit)	10.3	9.7	8.8	8.3	7.9	7.5
Total consumer	*67.6*	*68.2*	*67.5*	*66.9*	*66.8*	*66.4*
Commercial mortgages	13.8	13.9	14.1	14.3	14.3	14.3
Commercial (including lines of credit)	12.7	12.4	13.3	13.4	13.6	13.9
Total commercial	*26.5*	*26.3*	*27.4*	*27.7*	*27.9*	*28.2*
Agricultural mortgages	1.8	1.7	1.5	1.5	1.6	1.7
Agricultural	3.0	2.8	2.8	2.8	2.7	2.7
Local government	0.008	0.008	0.015	0.024	0.022	0.022
Other	1.1	1.0	0.8	1.1	1.0	1.0
Total loans	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total loan growth over previous year		10.01	9.66	7.70	6.57	8.25

Source: Canadian Credit Union Association (CCUA).
Note: As of 2013, Prince Edward Island (PEI) has been unable to provide a breakdown of loans. All PEI loans have been included in "other."

- Agriculture and agricultural mortgages have remained as a relatively constant percentage of the total lending portfolio throughout the period (4.8% in 2010 and 4.4% in 2015).
- Mortgage lending (residential, commercial, and agricultural) increased from 72.9% in 2010 to 76.9% 2015.
- Consumer lending decreased from 67.6% to 66.4%.
- Commercial lending increased from 26.5% to 28.2%.

(Caution: These figures must be viewed as indicators only as it appears, from our research and credit union interviews, that the categorizing of commercial loans by either sources of security or use of funding is not clearly and consistently defined.)

In comparison, Figure 2 outlines how loans are recorded by federally registered credit unions in the United States. The NCUA does not categorize these loans as consumer or commercial or by subcategory. Rather, they are recorded by the collateral/security type held. Consequently, "first mortgage real estate loans/lines of credit" are not broken out by residential or commercial, although the respective lending risks may vary significantly.

NCUA-affiliated credit unions also use this format to report the composition of their loan portfolio and their loan delinquency data on a quarterly basis to the NCUA via the "5300 return." Some credit unions may also internally record their loans and delinquency by security held rather than use of funds.

In contrast, Ontario credit unions are required to record and report commercial loan and other loan delinquency separately, as depicted in Figure 3. This distinguishes Ontario from some other provinces where credit unions are only required to provide aggregate loan (commercial and consumer) delinquency data. Researchers speculate, however, that these credit unions probably record delinquency in greater detail for their own internal monitoring and control use.

FIGURE 2

FEDERALLY INSURED US CREDIT UNION LOANS

Loans and leases	June 2015 (%)
Unsecured credit card loans	7.3
All other unsecured loans/lines of credit	5.2
Payday alternative loans (PALs; federal credit unions only)	0.009
Non-federally guaranteed student loans	0.04
New vehicle loans	12.5
Used vehicle loans	19.7
First mortgage real estate loans/lines of credit	39.8
Other real estate loans/lines of credit	10.1
Leases receivable	0.12
Total all other loans/lines of credit	5.36
Total loans	*100.0*
Delinquency to total loans	0.78

Source: National Credit Union Administration (NCUA).
Note: Data represent a total of 3856 credit unions.

The Ontario data in Figure 3 show that commercial loan delinquency is historically approximately three times higher than "other loan" delinquency. However, delinquency figures decreased over the period from 2010 to 2015. This may be due to either higher quality lending or a recovery from the economic downturn of 2008–2009 or both.

FIGURE 3

ONTARIO CREDIT UNION DELINQUENCY

Year	Commercial loan delinquency (%)	Other loan delinquency (%)	Total loan delinquency (%)
2010	3.05	0.63	1.32
2011	2.54	0.58	1.13
2012	2.58	0.52	1.10
2013	1.87	0.58	0.94
2014	1.77	0.54	0.89

Source: Deposit Insurance Corporation of Ontario (DICO).
Note: Although specific to Ontario, these data are generally considered to be representative of the entire Canadian credit union system.

The limited data available, the numerous variables and anomalies, and the residual distortions created by the 2008–2009 economic downturn mean that no definitive correlation can be made between credit union asset size and delinquency (Figure 3). However, smaller asset and mid-asset-size credit unions may be more exposed to potential delinquency and loss because of their more limited resources to acquire commercial lending expertise and to implement enhanced and sophisticated monitoring procedures and protocols. As one credit union representative stated, "Our commercial lending needs sophistication." This situation is alleviated to some extent by their use of outside expertise if loans are above the credit unions' "regulatory authorized lending limits." It is, perhaps, a balance between commercial lending sophistication and the credit union's authorized lending limits, as determined and established by the Canadian provincial regulators and the NCUA in the United States.

A key tool in monitoring and managing loan concentration risk is the use of an industry coding mechanism to classify loans and delinquencies. For example, the North American Industry Classification System (NAICS) would give the credit union board and management a clear picture of industrial concentration of loan exposure as well as the percentage delinquency by industrial sector. Several provincial credit union regulatory authorities require recording and reporting of commercial lending by NAICS. However, not all provinces require delinquency or collateral security be reported in this format. Again, individual credit unions may be recording commercial loan data in this format anyway. As discussed in Chapter 4, most provincial regulators expect most credit unions to maintain data in this format. However, with the exception of one credit union interviewed, this expectation was not supported in the authors' discussion with credit unions.

A key tool in monitoring and managing loan concentration risk is the use of an industry coding mechanism to classify loans and delinquencies. For example, the NAICS would give the credit union board and management a clear picture of industrial concentration of loan exposure as well as the percentage delinquency by industrial sector.

Figure 4 shows the aggregate Ontario credit union commercial loan portfolio and the growth from 2010 to 2014. Just over half of this portfolio is concentrated in commercial property mortgages—that is, real estate plus construction (50.6% in 2010, 50.6% in 2014).

However, this figure may be somewhat ambiguous given the less clearly defined and documented loan classification regime. The credit unions we interviewed sometimes record a loan in an NAICS category based on the underlying security, even though the funding is going to support a different activity. For example, credit unions may categorize a loan as a mortgage even though it is lent to an accommodation/food service business because the underlying security relates to the sale/value of property rather than the viability and risks associated with accommodation/food service.

FIGURE 4

ONTARIO CREDIT UNION COMMERCIAL LOANS BY NAICS (INCLUDING AGRICULTURE)

	2010	2011	2012	2013	2014
Agriculture (11)	$605 (10.5%)	$1,128 (12.9%)	$1,230 (12.7%)	$1,329 (12.4%)	$1,512 (12.6%)
Construction (23)	$728 (12.5%)	$971 (11.5%)	$1,054 (10.8%)	$1,201 (11.2%)	$1,394 (11.6%)
Manufacturing (31–33)	$233 (4.0%)	$333 (3.8%)	$367 (3.8%)	$343 (3.2%)	$356 (3.0%)
Retail (44–45)	$298 (5.1%)	$428 (5.1%)	$442 (4.6%)	$478 (4.5%)	$466 (3.9%)
Real estate (53)	$2,211 (38.1%)	$3,244 (37.1%)	$3,681 (38%)	$4,156 (38.7%)	$4,684 (39.0%)
Health care (62)	$244 (4.2%)	$412 (4.7%)	$474 (4.9%)	$556 (5.1%)	$627 (5.2%)
Accommodation/ food service (72)	$514 (8.8%)	$817 (9.3%)	$930 (9.6%)	$1,026 (9.6%)	$1,207 (10.1%)
Other services	$951 (16.6%)	$1,322 (15.1%)	$1,518 (15.6%)	$1,645 (15.3%)	$1,765 (14.7%)
Total	$5,792 (100%)	$8,753 (100%)	$9,695 (100%)	$10,737 (100%)	$12,008 (100%)

Source: Deposit Insurance Corporation of Ontario.
Note: Figures in $M with key percentages.

Although classification may be less rigorous, outstanding credit union service may help mitigate risk. The Canadian Federation of Independent Business (CFIB) asked its members to assess their dealings with financial institutions. The CFIB then ranked the support offered by those institutions to small and medium-size enterprises (SMEs) in the areas of financing, fees, account manager, and service. Results are summarized in Figure 5. Account manager, financing, and fees all relate to commercial lending risk, but particularly the account manager, because the quality of the account manager relationship largely determines the quality of the underwriting of the loan.

The CFIB has defined financing as (a) the willingness to lend, (b) lending terms (interest, collateral, etc.), and (c) information requirements requested by the lending institution. Fees are defined solely by the fees charged.

> *Overall, credit unions outperform other financial institutions when it comes to serving micro, small, and mid-sized businesses in Canada. Among the big five banks, Scotiabank received the highest overall score from their business clients while TD Canada Trust and Bank of Montreal are at the bottom of the pack.*
>
> —Battle of the Banks, Canadian Federation of Independent Business (October 2016)

FIGURE 5

2015 OVERALL BANK SCORES BY AREA: ALL SMEs

	Overall	Financing	Fees	Account manager	Service
Credit union	7.2	6.1	6.6	7.2	8.8
ATB Financial	5.5	5.6	3.4	6.3	6.6
Scotiabank	4.8	4.0	2.0	5.8	7.2
National Bank	4.7	4.2	1.3	5.8	7.6
CIBC	4.7	3.8	1.5	5.8	7.7
Royal Bank	4.4	4.2	0.5	5.6	7.4
Bank of Montreal	4.3	3.7	1.5	5.2	6.8
TD Canada Trust	4.3	2.8	1.3	4.6	8.4
Desjardins	4.3	3.7	1.2	5.4	6.7
HSBC	3.0	3.8	3.0	3.1	2.1

Source: Canadian Federation of Independent Business (CFIB), Battle of the Banks (2016).
Note: Best = 10, worst = 0.

For “member service and relations,” the credit unions have consistently been second to none and should be extremely proud of this position and recognition. It is a strong and valuable foundation from which the credit unions can continue to build their business.

However, having the highest overall score in “financing” and “fees” is a different issue. The report obviously represents individuals and businesses whose interests are best served in seeing lower interest rates, less information requirements, lower fees, and a greater willingness to lend. Given the disparity between credit unions and the remainder of the Canadian financial services sector in these critical risk and revenue-generating areas, the question is whether credit unions are taking on unjustified risk and selling themselves short with fees and interest rates that are below the industry norm. This may reflect the credit union principles of service rather than profit. It is always encouraging to see credit unions out in front, but is it financially appropriate and sustainable to be that far “out in front” in these critical areas? Alternatively, it can be argued that the cooperative business model does not demand the same return on equity as joint-stock entities. Consequently, credit unions may be deciding to effectively allocate part of their surplus to SME lending through lower prices.

CHAPTER 3

Commercial Lending Risks

The following lending risks were identified from the data:

- Significant growth is evident in commercial lending by Canadian credit unions.
- Based on delinquency data, commercial lending presents greater potential risk of loss to the credit union than consumer lending.
- Reporting of commercial loan delinquency is in aggregate format rather than by industrial sector.
- There is high exposure to property market price fluctuations and conditions because aggregate credit union mortgage-based lending represents 74.9% of total loans.

- Commercial sector lending is concentrated in real estate.
- There is inconsistency when defining the use of funds rather than security held.
- In comparison to the situation in the United States, there are major difficulties in obtaining individual Canadian credit union financial data, and provincially based aggregate financial data place severe restrictions and limitations on credit union research and analysis. This restricted access to data may contravene the Basel Pillar 3 disclosure requirements related to:
  - Disclosure of credit risk exposures and credit risk mitigation techniques.
  - Clarifying and streamlining the disclosure requirements for securitization exposures.
- Perhaps the credit unions "allow the commercial loan borrowing sector to like them too much" at the expense of increased lending risk.

CHAPTER 4

Review of Previous Literature

The literature review encompasses several key topic areas that contribute to our understanding of credit union commercial lending: lending technologies, relationship lending, credit scoring, lender size, small business lending, commercial real estate concentration, borrowers' value chain, and lending to visible minorities.

Overall, there is limited literature focused on commercial lending by credit unions, so research conducted on US community banks is included as well as research on lending to SMEs. These studies are relevant to credit unions since a significant portion of community bank lending is to SMEs and many credit unions in Canada are similar in size. The following sections include a high-level summary of our review of the literature. (More detailed information is provided in Appendix 1.)

Lending Technologies

Risk exposure in commercial lending is often mitigated through lending technologies. Most lending technologies are based on hard data, meaning quantifiable information. Of the various lending technologies,[1] only relationship lending and trade credit are based

on soft data. The remaining technologies (financial statements, asset-based, factoring, leasing, small business credit scoring, equipment, and real estate) are based on hard data. The different technologies available can be used in conjunction with each other.

Key Findings

- Credit unions need more robust MISs to record, monitor, and manage all the relevant information for various types of commercial loans.
- Systems need to have the capability to record both qualitative and quantitative information about borrowers in a manner that can be shared across various business lines of credit unions.

Relationship Lending versus Credit Scoring

Both academics and practitioners debate the role of relationships versus credit scores in commercial lending.

Financial scholars define relationship lending as a form of loan that is issued based on soft, qualitative information about the borrower accumulated over time through multiple interactions with the borrower and through interactions with the borrower's suppliers, customers, competitors, and other business contacts in the local market.[2]

While soft information provides lenders with in-depth understanding of the borrower's business, this type of information is difficult to transmit throughout the lending institution.[3]

Researchers do not agree on the impact of credit scoring in the United States. Some found that business loans based solely on credit scoring increased lending to marginal borrowers and this increased credit risk, leading to high loan prices. In contrast, other researchers contend that credit scoring has enhanced small business lending because it reduces the cost of gathering and analyzing financial information.

The argument is also made that credit scoring is most effective when used in conjunction with other information. For example, research in Canada found that when the capture of soft information is low, household bankruptcy rates are higher. In fact, the study shows that one standard deviation in the use of soft information can result in up to a 10% increase

in bankruptcies. Similarly, another study[4] found that the decentralized, soft information approach of Svenska Handelsbanken (SK) could be equally successful for credit unions. SK's success is credited to the following factors:

- Core values of customer centricity.
- Decentralization.
- Employee empowerment.
- Local accountability for profit and loss.
- Peer comparison.
- Layered oversight through regional managers.
- Employee selection process of hiring young people with no bank experience and starting with higher base salaries.

Key Findings

- Credit unions may want to look not at relationship lending versus credit scores, but relationship lending and credit scores.
- While credit scores are helpful in establishing risk, it is important to recognize the value of developing a relationship with the borrower. The knowledge gained certainly adds a more comprehensive dimension to credit union personnel understanding the business and its risks.

Lender Size

While most business lending in Canada is in the domain of large banks, studies suggest that small financial institutions can also generate profit from commercial lending due to structure performance, information advantage, and relationship development.

Key Findings

- Structure performance: Many small banks operate in smaller banking markets and have fewer competitors, so they can charge higher interest rates.
- Information: Small banks have access to better credit information than large banks.
- Relationship banking: Small banks tend to depend more on soft, subjective information and relationship development than large banks, which rely more on quantitative data.

Small Business Lending

Key Findings

- Separate line of business: Typically, because it is seen as too costly to develop separate administration, SME lending is lumped in with commercial lending, where it is viewed as the poor cousin to consumer lending. Small business information can therefore be found in both consumer and commercial relationship management systems.[5] Treating small business lending as a separate line of business allows lenders to specialize, develop expertise, improve the quality of loan monitoring, and lower operating costs through economies of scale.[6] It also has the potential to enhance relationships by pulling together fragmented information.
- Rural relationships: Loans issued by rural banks are significantly less likely to default than loans made by urban banks. The authors also found that loan default rates are significantly higher when the borrowers are located in a different geographic area than their lenders.[7] These findings support the value of the soft information and personal knowledge held by lenders in rural areas. An article in Bloomberg[8] noted that small banks in rural areas do a better job of lending than large banks. This is attributed to the competitive advantage of having in-depth knowledge of their customers and the local economy. Furthermore, borrowers in small communities are less likely to default due to the shame and embarrassment it causes.
- Government backing: The impact of government-backed funding for small business lending was examined by several studies. To address the challenges faced by SMEs in obtaining credit, governments have introduced loan guarantees. An examination of the Canada Small Business Financing (CSBF) program found that 75% of loans made with the guarantees of this program would have been classified as turndowns.[9]

Commercial Real Estate Concentration

A high concentration of loans in any industrial sector poses a risk. Since most Canadian credit unions' commercial lending is composed of real estate, lenders are more vulnerable to the cyclical nature of the commercial real estate market. Different types of commercial real estate lending pose different types of risk. For example, multifamily housing may pose a lower risk than speculative office space construction.

American banking lending agencies indicated that lenders should stratify their commercial real estate lending into segments that have common risk characteristics, such as economic, financial, or business development.

Key Findings

- Loans should not be divided into multiple segments to hide concentration risk.
- In addition to appropriate board oversight, effective portfolio management, market analysis, and portfolio stress testing, credit unions should implement a robust MIS to report on key variables related to commercial real estate.

Understanding Product Life Cycle

A better understanding of the business helps mitigate risk. To gain a more comprehensive understanding of a borrower's business, lenders are increasingly evaluating the product's life cycle.[10]

Key Findings

- An in-depth examination of the borrower's resource acquisition, research and development, production, marketing, distribution, and customer service provides lenders with a more comprehensive understanding of the risks associated with the business.
- Each of these stages of the business enterprise life cycle may be exposed to risks related to the environment, information technology, human resources, and infrastructure.

Lending to Visible Minorities

In its research, Statistics Canada found:

- Visible minority-owned SMEs are similar in size to businesses owned by other entrepreneurs.
- They are concentrated in service and technology sectors.
- Their demand for loans and loan approvals mirror other businesses.
- The one area of difference: Visible minorities relied more on personal savings and money from friends or relatives. This might be more reflective of the sector of operation.

Credit unions' commercial lending profitability and adherence to cooperative principles and values would be enhanced through lending to visible minorities.

A US Federal Reserve study found that personal wealth, as demonstrated through home ownership, explained more than 10% of loan denials for Hispanic- and Asian-owned businesses in comparison to those owned by whites. However, the study found that credit history played a more important role in loan denials for African-American-owned firms.

Key Finding

- Credit unions' commercial lending profitability and adherence to cooperative principles and values would be enhanced through lending to visible minorities.

CHAPTER 5

Methodology

This research was based on a case study approach composed of quantitative and qualitative analyses.

Quantitative analysis examined delinquency rates of credit union commercial loans and, for comparative purposes, "other lending" delinquency rates in Canada and America were analyzed by commercial/industrial categories based on NAICS. These delinquency rates were then categorized by accommodation type, new loans, renewals, revolving credit, term lending, and working capital. Given that a large number of credit unions do not record or maintain data in this format, aggregate data provided by the provincial credit union regulatory authorities in Canada and the NCUA in the United States were used.

The qualitative analysis comprised in-person and telephone interviews with a cross-section of Canadian and American credit unions. These data helped ascertain how credit unions analyze applications, their approval processes, and their use of collateral security. Researchers also looked at loan monitoring, collection procedures, and portfolio management as well as other commercial lending due diligence, including lending limits, lender expertise, and risk-profiling techniques. The sample included small, medium, and large credit unions in urban and rural areas in Canada and the United States.

Eight Canadian and three US credit unions were selected as semi-structured interview candidates. The selection reflected asset size, geographical diversity across the countries, and a mix of urban and rural settings. Additionally, attempts were made to select credit unions in locales with specific industrial sectors including agriculture, lumber, and tourism.

Researchers also interviewed eight Canadian regulators in the provinces of Newfoundland and Labrador, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. The following stratified, nonrandom sample of representative credit unions was selected for semi-structured interviews:

Canada

Group A: Three credit unions with assets above $1B (average commercial loan to total loan portfolio 32.2%).

Group B: Four credit unions with assets between $250M and $1B (average commercial loan to total loan portfolio 23%).

Group C: One credit union with assets between $100M and $250M (less than 1% commercial loan to total loan portfolio and those commercial loans are primarily municipal loans).

United States

Three credit unions with assets above $1B.

All interviewed credit unions had well-managed commercial lending programs with professional loan application analysis, underwriting, and monitoring. This operational lending profile has been developed over many years of successful lending, primarily in the areas of personal residence purchase and construction and, more recently, expansion in the commercial lending sector. Possibly due to regulatory asset limits on commercial lending, US credit unions tend to have less need for varied and well-defined commercial lending practices. One US respondent noted that “they started business lending only 10 years ago, and they do just commercial real estate.” This reality eliminates the need for industrial categorization of commercial loans by NAICS.

Appendixes 2 and 3 identify the overall topics that were addressed in the unstructured and informal interviews with both the Canadian and US credit unions and regulators. However, given the differences in commercial lending operations, in legislative and regulatory limits, and in recording and reporting practices, the results are presented as general comments and considerations rather than as tabulated results. As noted above, this research is not looking at commercial loan delinquency as a percentage of aggregate lending or making an assessment on the quality of lending, but rather examines the process of recording, monitoring, and reporting delinquency.

Interview Results

Risk and Enhanced Monitoring

In the interviews, respondents acknowledged a proportionate shift in their credit union's loan portfolio from consumer to commercial lending, and that this shift necessitated revised internal operational changes. Most credit unions view commercial lending as the establishment of a new, separate, and distinct "department" within their operations, rather than an add-on to existing consumer lending.

Respondents acknowledged a proportionate shift in the credit union's loan portfolio from consumer to commercial lending, and that this shift necessitated revised internal operational changes.

Commercial Lending as Share of Total Portfolio

The respondents agreed that the larger the asset base of the credit union, the higher the levels of commercial lending as a percentage of overall lending. The respondents generally acknowledged that this shift in loan portfolio structure is in response to external market demand, but also to reduced margins resulting from an increasingly competitive consumer lending market where the individual lending products have become commoditized.

As credit union lending portfolios add more commercial lending, credit union operational and organizational structures need to prepare for this lending reality.

Defining Commercial Loans and Associated Risk

The respondents interviewed generally differentiated commercial lending from personal lending by either the "source" of the funds used for the repayment of the loan or the use of the loan funds lent. Sole proprietorship presents a challenge to this definition especially when funds are used for the purchase of rental housing. For example, some respondents classified loans for less than six rental units borrowed by a sole proprietor as consumer lending; above six rental units would be considered commercial.

The respondents interviewed generally differentiated commercial lending from personal lending by either the "source" of the funds used for the repayment of the loan or the use of the loan funds lent.

Regardless of definition, all Canadian respondents recognized that commercial lending generally presents greater risk exposure. This is due to the higher number of unknowns and unverifiable assumptions in commercial lending compared to the more direct and verifiable income, employment, and financial history associated with consumer lending. These differences are exacerbated when assessing applications for new business start-ups, working capital accommodations, and certain industrial sectors.

By contrast, only one of the three US respondents believed commercial loans were riskier than consumer loans, perhaps reflecting an emphasis on commercial collateral-based lending rather cash-flow-based lending. The respondents explained that they look at how easy it is to convert the security to cash. The following reasons were offered:

> *"For example, with a manufacturer of equipment . . . we could sell the equipment more easily than the assets of a pharma start-up." Another respondent cited "a couple of cases where commercial loans were falling behind in their payments and because the businesses were located on land that was desired by developers, the businesses were purchased by developers before the loan had to be called." The respondent continued by saying "that when they made the loans initially, they knew the land was worth a lot more than the actual business, so that's why they issued the loan."*

This collateral-based rather than cash-flow-based lending might reflect the historic required practice of reporting loans and delinquency on the credit union's quarterly return to the US regulator, NCUA (5300), by collateral held rather than lending category. This type of assessment is risky in a dynamic and unstable market.

One US credit union respondent described this practice as "shades of the 2007 housing market."

Risk Management

Our research found credit unions are responding to increased risk through loan pricing, but relatively few use NAICS coding to record loans and delinquencies and to price-risk loans for specific categories.

Risk Pricing Challenges

Several credit unions found the pricing of commercial lending risk by either, or both, interest rate and fees challenging. Generally, all utilized some form of "risk pricing model";

however, determining a balance between interest rates charged and fees levied presented some difficulties. Pricing models tend to "risk value" the structure of the loan as well as collateral, client management ability, length of loan, etc., but do not consider specific industrial-sector risk.

One respondent mentioned a current issue that has significantly increased risk/cost of an outstanding loan: environmental contamination of the security held and the potential legal and "cleanup" costs relating to it.

For most, this separation of rates and fees is determined by market competition: the competition may offer loans at a lower rate of interest but with higher fees. Clients may find it hard to figure out how much they are actually paying for the loan between the setup fees, annual fees, renewal fees, as well as the interest rate charged. Applicants tend to focus on the advertised interest rate only, and for the credit union this is a marketing challenge in a highly competitive market. Perhaps this in some way questions the "fees" and "financing" responses in Figure 5, introduced in Chapter 2 (Battle of the Banks, Canadian Federation of Independent Business, October 2016). Regardless of fees or interest rates, the overall consideration for credit unions is the income generated by the loan.

Loan Classification and the Use of NAICS

In Canada, the use of NAICS is standard in the majority of credit unions outside the Atlantic provinces where, given the low level of commercial lending loan classification, the recording of loans by industrial sector is neither warranted nor justified.

Credit unions use the NAICS system in a variety of ways, many beyond its basic loan classification system. This ranges from fundamental classification to a system for strategic planning, allocation of sectoral caps (dollar value, percentage, and diversification), diversification measurement, collateral concentration identification, and sectoral and aggregate delinquency recording and monitoring. The degree of NAICS usage and sophistication generally parallels increases in the average asset size of the credit union and the extent of commercial lending as a proportion of its aggregate loan portfolio.

NAICS is a vital basic commercial lending classification tool and it is generally underutilized by the majority of the credit unions.

Some respondents referred to the provincial regulator's policy manual in the establishment of internal risk assessment policies.

Loan Volumes and Portfolio Mix

Credit policy must limit the overall volume and mix of credit risk to be included in the loan portfolio. Credit policies should specify prudent limits on concentration of risk as follows: Establish prudent limits (either as a percentage of total loans or of total assets) and/or prohibitions on higher risk loan categories, including syndication loans, brokered loans, and loan concentrations within certain industries (NAICS), or riskier categories of loans. . . .

Provincial regulators generally "assume" that the credit unions are making greater use of the NAICS internally than simply for regulatory reporting requirements. This assumption is generally supported from regulatory inspections of the credit union. Credit unions are not required to report delinquency on an NAICS basis.

Several credit unions expect to make greater use of NAICS as their commercial loan portfolio increases and additional services and products are offered. Some thought this might require additional software; others have the software capacity but do not fully utilize it. All the respondents fully appreciate the potential for significant growth in commercial lending opportunities and that this growth must be accompanied by improvements and developments in the internal commercial lending information and monitoring systems and procedures, along with clearer segmentation of the commercial loan portfolio.

Several respondents recognized the need for better segmentation. Classifying so many commercial loans simply as "commercial real estate," reflecting the collateral security held but not necessarily the purpose of the loan, leads to misleading aggregate delinquency data.

US respondents generally do not classify commercial loans by sector. The majority of commercial loans are classified by the security held which, for the most part, is again commercial real estate (refer to Figure 2).

One US respondent indicated that "if they provided a loan to a storage company, the collateral would be based on the building and still [be] considered commercial real estate and not a loan to a storage company." Another respondent confirmed that "they do not currently code loans to industrial sectors"; however, he acknowledged that the US regulator had recently recommended a review of their loans by sector. This regulatory request may lead to a change in the reporting design for commercial lending on the US quarterly "Call Report" (5300).

Geographic Concentration

Most respondents acknowledged that, in addition to sectoral concentration, geographic concentration is a concern. The national banks diversify their portfolios on a national basis: a concentration in agriculture, for example, in Saskatchewan/Iowa can be offset by a concentration in retail in Toronto/New York. However, credit union concentrations are determined by locale. All respondents recognize this reality as a risk, or potentially a risk. For example, some regulators and credit unions expressed concerns about a credit union that has a diverse portfolio of consumer and commercial lending but is located in an area dominated by a single primary economic entity such as a mine, a pulp and paper mill, or tourism based primarily on the US dollar.

Several respondents intentionally "offer" or "buy into" syndicated loans to diversify the risk in their own portfolios, which further allows the credit union to potentially acquire outside sectoral expertise and use surplus liquidity. This practice tends to vary by province, with some provinces allowing both inter- and intra-provincial syndication. Others restrict the practice to the latter. It is not clear if the loan syndicators, the individual credit unions, or the provincial regulatory authorities establish this restriction, but it addresses many portfolio risk factors as well as expertise and liquidity issues.

From the interviews, we found that larger asset credit unions tend to include loan syndication by specific sectors into their strategic plans. This, along with portfolio sector limits by dollar amount and percentage of total commercial lending and sectoral concentration, supports diversified commercial lending and mitigates concentration risk.

Perhaps given the imposed lending limit of 12.5% and the focus on real estate and mortgage security, commercial lending among US credit unions appears to "lessen" the importance and justification for in-depth strategic analysis and planning in the commercial lending portfolio.

For example, one US respondent suggested that they simply operate on the theory that "a good loan is a good loan." However, they did suggest that this could lead to undirected "sector drifting" in commercial lending by simply considering a commercial loan as a commercial loan rather than meeting any specific strategic goals and objectives.

One US respondent explained that their strategy is to diversify and do more, smaller loans to more members. They do not focus on any one sector. Another US respondent indicated their strategic plan is solely focused on commercial real estate because they have expertise in that area.

The National Credit Union Share Insurance Fund (NCUSIF) recently indicated that "most of the recent large losses presented to them are due to poor management of large concentrations in various asset classes in relation to asset size and net worth levels of failed institutions. Credit unions actively involved in any business lending should perform ongoing risk assessments to identify concentrations."[11]

Several Canadian regulators indicated that as the commercial portfolio expands, increased regulatory reporting of commercial lending and commercial loan delinquency on a sectoral basis will be required.

The interviews indicated that in both Canada and the United States there is virtually no internal recording by industrial sector of commercial loan delinquency or any regulatory reporting requirements by industrial sector. Thus, it is impossible to assess commercial lending risk other than on an aggregate commercial basis. The larger credit unions apparently have the necessary software to track delinquency by industrial sector, but do not generally do so, perhaps because it is not a regulator reporting requirement. However, as previously mentioned, regulators assume credit unions are using NAICS more extensively in their internal processes, and this is not necessarily the case.

Several Canadian regulators indicated that as the commercial portfolio expands, increased regulatory reporting of commercial lending and commercial loan delinquency on a sectoral basis will be required.

Commercial Lending Expertise

Both credit unions and regulators consistently raised concerns about the lack of commercial lending expertise and inadequate commercial lending support systems and staff.

The shortage of qualified commercial lending expertise surfaced as an issue in all interviews with Canadian credit unions and regulators. Not surprisingly, the former group saw it more as a restriction on potential growth while the latter considered it more as a risk factor. This shortage manifests itself as sectoral expertise in larger asset credit unions and general commercial lending expertise in smaller asset credit unions. Additionally, credit unions expressed concern about the age and pending retirement of current commercial lenders in credit unions and the inability of smaller asset-band credit unions to afford the hiring of commercial expertise.

The majority of credit unions state that they generally have the necessary personnel and skill sets for the provision of consumer credit. However, they do not have all the necessary expertise for some expanded commercial sectoral credit products and services. It is generally acknowledged by the banking profession that a consumer lender cannot simply take a few courses and immediately change into an expert commercial lender. As one regulator emphasized, "Good commercial loan decisions come from experience and experience comes from bad decisions."

This professional shortage is being addressed to a certain degree by the use of "outside" expertise such as the private sector, Centrals, or other credit unions via loan syndication, but this is a limited and interim solution given the increased commercial lending opportunities open to the credit unions.

CHAPTER 7

Research Results

As competition in the consumer banking sector grows and profit margins shrink, credit unions are looking to the business and commercial banking sector to maximize asset utilization and open a path for expansion and profit growth.

It is evident from the data, and more pertinently from discussions with credit unions and regulators, that lending risk is not primarily on a loan-by-loan basis; rather, it lies within the structure and design of the commercial loan portfolio. Credit unions face specific portfolio challenges, including the availability of expertise, loan concentration in both lending and collateral security, delinquency monitoring, and board of director oversight.

Our conclusions and recommendations, while applicable to all sizes of credit unions, are primarily directed toward small to medium-size credit unions since they have a greater degree of risk exposure from commercial lending than larger credit unions. The following conclusions and recommendations should not be construed to mean that small to medium-size credit unions should refrain from commercial lending. In fact, we are suggesting just the opposite. We believe that small to medium-size credit unions should capitalize on their reputation for excellent service and competitive pricing, as highlighted by the Canadian Federation of Independent Business (2016).

Our research objectives related to examining three main hypotheses, and our conclusions regarding these hypotheses are presented in the following sections:

1. *Commercial lending presents high risks*. As discussed, the lack of lending expertise and level of portfolio concentration increases lending risk.
2. *Credit union management has adequate risk control measures such as recording the NAICS for each loan and delinquency*. We conclude that measures to mitigate risk include recording loans and delinquencies by industrial sector as well as investment in MISs and training.
3. *Collaboration and cooperation can address risk*. Finally, credit unions are in a unique position to mitigate risks through increased collaboration with other credit unions.

Hypothesis #1: Commercial Lending Presents High Risks

Expertise

The level of expertise required for commercial lenders cannot be overstated. Although there is increased reliance on credit scores, there is a consensus that scores should be supplemented with information gained from relationships with the borrower and in-depth knowledge of the borrower's business. Clearly, to have a comprehensive understanding of the borrower's business value chain and the related risks, lenders must take a considerable amount of time to conduct such an analysis.

All the Canadian interviews pointed to the lack of expertise as a challenge. Perhaps due to far less commercial lending in the United States, none of those interviewees considered this an issue. In Canada, this shortage of expertise is both in general commercial lenders and in specific NAICS sectors including R&D, IT, and mineral resources, as well as in more sophisticated commercial lending products. This shortage is evident in the wider employment hiring market as credit unions have been unable to appropriately fill advertised commercial lending positions.

For many credit unions, this expertise shortage is being addressed by Canadian provincial Centrals, other credit unions, and the outside private sector. However, credit unions do not consider this to be a temporary situation; instead, several credit unions worry that the situation may worsen because their existing lenders are nearing retirement age.

Key Conclusions

- Given that commercial lending is going to be a significant growth area for credit unions, a more "movement-focused" approach might be warranted to address this expertise shortage.
- Strategies could include syndicated expertise, syndicated expertise mentoring, and training programs. Smaller asset credit unions could benefit from increased commercial lending support from Centrals.
- Increasing loan syndication would also help with shortage of commercial lending expertise.

Given that commercial lending is going to be a significant growth area for credit unions, a more "movement-focused" approach might be warranted to address this expertise shortage.

Portfolio Concentration

Historical experience shows that concentration of credit risk in asset portfolios has been one of the major causes of bank distress.

—Basel Committee on Banking Supervision, *Studies on Credit Risk Concentration: An Overview of the Issues and a Synopsis of the Results from the Research Task Force Project* (2006)

The Canadian credit union system has high aggregate levels of concentration in both residential and commercial real estate; specifically, the concentration level was 75% in 2015. In the United States, it was 50% for 2015. This concentration is further exacerbated for individual credit unions, given tighter geographic areas that can restrict economic activity to a single or very few industries.

Credit union reliance on commercial real estate lending has both risks and rewards. While credit unions believe there was reduced risk with commercial real estate compared to other types of business loans, the literature review indicates that there are inherent risks associated with loan concentrations in commercial real estate.

Key Conclusions

- The research recommends commercial real estate loans be stratified by type to enhance lenders' evaluation of the risk.
- All commercial loans and delinquencies should be recorded by detailed NAICS codes.

- Utilization of NAICS would permit a closer monitoring of potential concentration both by loan and by collateral security held.
- Expanded use of NAICS to establish sectoral lending caps and limits would allow credit unions to more closely monitor potential concentrations. Many credit unions, especially those in the larger asset bands, already utilize such a practice.
- An appropriate MIS is a fundamental requisite for the design and monitoring of the portfolio structure. Effective risk management of the portfolio requires the measurement of each commercial product, service, or concentration to the credit union's net worth as well as the measurement of the total of the various commercial lending risks to net worth.
- The MIS should provide the credit union's management and board with the necessary information to determine whether their business lending strategies, policies, and loan concentration are appropriate in changing market conditions, whether in the local, provincial, national, and/or industrial sector.
- The cost associated with developing or purchasing a robust MIS is often beyond the financial resources of many small and medium-size credit unions. The acquisition of a system could be achieved with more "cooperation among cooperatives" by sharing the cost.

The ability to document the risk profile of the portfolio, which requires the availability of quality data, risk models, and ongoing expertise, is a major factor in the successful management of risk in commercial lending.

—Mikael Krohn, "Business Controls and Risk Analysis in Commercial Lending" (2010)

Board Oversight

While credit unions are regulated provincially, responsibility for making sound decisions rests with the board of directors as succinctly described by the NCUA in the Supervisory Letter in Chapter 1.

Key Conclusions

- The board of directors needs to ensure the credit union does not exceed a tolerable level of risk.
- Credit unions should also provide training for board members to enhance their understanding of the risks related to commercial lending. It is difficult to exercise effective oversight if the board members don't know the questions they should raise with management.

Hypothesis #2: Credit Union Management Has Adequate Risk Control Measures

Delinquency

Many credit unions are recording loan delinquency in a manner that meets the needs of the reporting structure, as determined by the provincial regulator. This varies from a single aggregate delinquency figure for all loans to a separation of consumer and commercial loans. It cannot be assumed that the credit union internally records delinquency for its own information in the same manner as it reports to the regulator. No regulatory delinquency reporting in any province requires the credit union to report delinquency on a sectoral rather than an aggregate commercial basis.

Key Conclusions

- Sectoral reporting would be of greater benefit in assessing concentration risk.
- Most credit unions record delinquency data in a manner that is compliant with regulatory needs rather than for internal sectoral monitoring.
- We suggest the existing delinquency reporting protocols be reviewed in light of the significant and continuing increase in credit union commercial lending.

Benchmark Data

Not only will the investment in MISs enable individual credit unions to capture key data regarding commercial loans (such as loans issued and delinquencies by industrial sector), it will also facilitate the collection of industry data by Centrals.

The interviews revealed that publicly available data are largely driven by the reporting requirements of provincial regulators. If the credit union industry is to develop relevant industry benchmark data related to loans and delinquencies by NAICS codes, Centrals will need to play a more active role in encouraging regulators to require these data be captured and reported.

Key Conclusion

- It would be very beneficial for credit unions to compare their performance on commercial lending and delinquency by sector to credit unions of similar size in their respective jurisdictions. This would help identify best practices and also provide a gauge to evaluate risk relative to their peers.

Hypothesis #3: Collaboration and Cooperation Can Address Risk

Risk for Small to Medium-Size Credit Unions

When considering the future potential for credit union commercial lending, our research indicates that small to medium-size credit unions will encounter more challenges than large credit unions in mitigating risk. Two of the main areas that require human and capital investment relate to lender training and a robust MIS to capture comprehensive lender data (both qualitative and quantitative).

Key Conclusions

- Clearly, large credit unions are better positioned financially to provide lender training and to develop expertise in analyzing borrowers' business environments. Small to medium-size credit unions face the prospect of key person dependency: having only one or two lenders trained creates risk exposure for the credit union in the event these employees leave the organization.
- As credit unions increase commercial lending, particularly to sectors outside commercial real estate, they will need a robust MIS to capture the relevant data regarding the borrowers. Purely from a financial perspective, large credit unions have sufficient financial resources to invest in IT, whereas such investments are not financially feasible for small to medium-size credit unions.
- Small to medium-size credit unions may have to consider cooperating/ collaborating with other credit unions to pool their lending knowledge and resources to acquire IT infrastructure.

Demonstrating the Cooperative Difference

While the topic of demonstrating the cooperative difference was not one of our research objectives, throughout the research (literature review and interviews) it nevertheless became abundantly clear that credit unions do not appear to utilize commercial lending in a manner that would demonstrate their cooperative difference from banks. Indeed, this is an area where credit unions can set themselves apart from banks by focusing on SMEs, small home-based businesses, visible minorities, first nations, and new immigrants.

Key Conclusions

- Demonstrating the cooperative difference through a unique credit union approach to commercial lending does not necessarily result in increased risk.

- Many small to medium-size credit unions are positioned geographically and structurally to take advantage of the knowledge gained through personal relationships with borrowers and the community. This soft knowledge can have a positive impact in mitigating risk often associated with lending to small businesses as well as to visible minorities, first nations, and immigrants.
- Given Canada's ongoing emphasis on increasing the number of immigrants, credit unions are well positioned to capitalize on the opportunity to expand their knowledge of immigrant communities, particularly those interested in starting small businesses.

CHAPTER 8

Final Recommendations and Conclusion

Based on our interviews, literature review, and personal credit union management experience, we offer the following recommendations:

1. Clearly distinguish between consumer lending and commercial lending and recognize the very different risk profiles.
2. Determine the level of risk that is acceptable to the credit union.
3. Establish strategic commercial lending objectives for the credit union and ensure management has sufficient resources (HR and IT) to meet these established lending objectives.
4. Determine the availability of commercial lending expertise within the credit union or available to it and determine shortfalls.
5. Develop a commercial lending policy statement together with general guiding principles.
6. Use NAICS to establish limits for portfolio concentration and which industrial sectors the credit union will lend to, and establish sector caps and limits both by dollar amount and as a percentage of overall commercial lending portfolio.
7. Establish policies for the use of loan syndication to control portfolio concentration, diversify risk, and partner with required lending expertise.

8. Establish protocols for how the board of directors is to be informed by management about delinquency—e.g., by combined or single amounts of consumer and commercial loans or by industrial sectors.
9. Use NAICS to establish procedures and control systems for the board of directors to monitor the loan portfolios and record loans and delinquencies.
10. Establish commercial loan pricing policies combining interest rates and fees that result in maximum residual contribution.
11. Provide more training to board members to ensure they have the knowledge level to fulfill their commercial lending oversight responsibility.
12. Ensure the strategic plan includes objectives regarding acquisition of lending expertise (through training and/or collaboration) and investment in IT infrastructure to record comprehensive loan and borrower data, in order to meet the credit union's growing commercial lending portfolio.
13. Renew the credit union's return to the cooperative principles through increased collaboration with other credit unions to collectively obtain the necessary lending expertise and IT infrastructure.
14. Demonstrate their cooperative difference through increased lending to SMEs, home-based business, visible minorities, first nations, and new immigrants.

APPENDIX 1

Additional Reading

1. Research Methodology

Case study methodology is ideally suited to the stated objectives of this study. Case studies have been defined as a multifaceted research strategy, which typically involves an in-depth examination of one organization, situation, or community.[12] Case studies can be described as holistic investigations that generate both quantitative and qualitative data from archival material, interviews, surveys, and observations.[13] Indeed, a case study is not simply a single qualitative method; rather, it is an approach to research.[14] Face-to-face and telephone interviews, associated with case studies, provide an opportunity to probe for additional information and result in richer and more in-depth information than could be derived solely from a survey of a statistical sample of the credit union population at large.

This methodology provides flexibility to adjust data collection methods as the study proceeds, and it yields comprehensive results and rich data.[15] The face-to-face and telephone interview process enables the researcher to control the line of questioning, particularly in situations where it may become apparent that some of the questions need to be amended to ensure clarity or when the responses may generate additional questions. This flexibility deepens understanding of the issues.

On the other hand, case studies are time-consuming and costly. They lack rigorous control, which can compromise validity,[16] though these disadvantages can be minimized. As the methods of analyzing qualitative data have not been well formulated, this approach has limitations in terms of replicating the study.[17] Moreover, findings cannot be readily generalized because of the typically small sample size.[18] While all the disadvantages cannot be mitigated, a case study is the most appropriate approach due to the complex nature of the research questions and the need to solicit feedback from a number of credit unions and their regulators.

2. Lending Technologies

Our review of the literature revealed there is a wide array of lending technologies used to evaluate borrowers' risk. Figure 6 depicts the source (relationships or transactions) and type of information (soft or hard)[19]; the authors provide the following descriptions of the

FIGURE 6

LENDING TECHNOLOGIES

Technology	Type	Information
Relationship lending	Relationship	Soft
Financial statement lending	Transaction	Hard
Asset-based lending	Transaction	Hard
Factoring	Transaction	Hard
Leasing	Transaction	Hard
Small business credit scoring	Transaction	Hard
Equipment lending	Transaction	Hard
Real estate–based lending	Transaction	Hard
Trade credit	Transaction and relationship	Hard and soft

various lending technologies and indicate whether they are based on information gained from relationships or transactions:

- Relationship lending—based on information gathered over time about the borrower.
- Financial statement lending—based on information from the financial statements.
- Asset-based lending—provision of working capital secured by accounts receivable and inventory.
- Factoring—similar to asset-based lending, but based on the lender taking ownership of the receivables.
- Leasing—based on hard information about the underlying assets.
- Small business crediting scoring—based on statistical models.
- Equipment lending and real estate lending—lending based on the appraised value of the underlying assets that are used as collateral.
- Trade credit—based on both transactions and relationships.

In a study that examined the use of qualitative information in peer-to-peer lending, the authors defined online lending as the use of platforms that provide a market-based mechanism to facilitate screening by aggregating information on borrower creditworthiness over multiple individual lenders.[20] This mechanism involves borrowers posting loan listings; in response, multiple individual lenders bid to fund a portion of the loan at a specific interest rate. Lenders have access to standard financial information commonly used by banks, such as income. They also have qualitative information such as the maximum rate the borrower is willing to pay and a description of the reasons for the loan application. The study explored how these screening mechanisms compared to loan evaluation based on credit score and traditional methods. The authors found that lenders in the peer-to-peer market were able to outperform the credit score by 45% in predicting default.

3. Relationship Lending and Credit Scores

A study found that small business lending has grown as a result of credit scoring and the subsequent involvement by underwriting staff.[21] In fact, score-only thresholds have enabled lenders to increase the dollar-value definition of small business loans. The authors point out that it is too expensive to gather and analyze financial statements for small business loans.

In a study of credit scoring by community banks, the authors found that credit scores were used to a much greater extent than anticipated.[22] Furthermore, the authors point out that personal financial data about the business owner, available through consumer credit scores, are also used in conjunction with information on the business. The study also found that community banks relied exclusively on scores for small business loans of less than $50,000. This literature review identified many examples of lenders supplementing quantitative data with qualitative information about borrowers. For example, credit scores were not used for automated approval or rejection of applicants. Instead, lenders also relied on information derived from relationships with the borrower and business community.

A similar study found the small business credit scoring may serve as a substitute for, or function as a complement to, other lending technologies.[23] The authors describe two types of lenders: rules based and discretion based. Rules-based lenders tend to use automated pricing and approve or reject loans based on purchased credit scores. In contrast, lenders that exercise more discretion tend to use small business credit scoring as a complement to other technologies in order to improve accuracy in evaluating credit risk. Furthermore, the adoption of small business credit scoring in the United States is correlated with increased credit availability, higher prices, and greater loan risk for loans under $100,000. The authors attribute this to increased lending to marginal borrowers who pay high loan prices because they have higher credit risk. In comparison, for discretion lenders, there was no increase in credit availability, prices, or risk.

Further evidence of supplementing quantitative data with qualitative information was identified in a study of small business lending in the United States[24] that found lenders used small business scores (3%) as well as individual owner credit scores (78%) or both (19%). Lenders did not rely exclusively on credit scoring; instead, 60% relied on cash flow, and the next highest ranking factor was collateral. The authors also found that 75% of respondents indicated that a previous relationship with the borrower was a key component of their lending decision.

Relationships have a significant impact on the probability of loan acceptance, collateral/guarantee requirements, and loan rates for lines of credit and traditional loans, including commercial mortgages, and equipment loans.[25] The authors also found that relationships appear to have a more significant impact on traditional loans than lines of credit. Lenders who have information obtained through relationships with borrowers potentially approve larger loans, reduce interest rates, and reduce required collateral.

Some lenders use credit scores exclusively, while others use a combination of scores and relationship information.[26] Despite the purported benefits of credit scoring, the authors conclude that a lending decision should not be made only on the basis of the score, which reflects only past performance and does not provide a forecast of future performance.

4. Understanding Product Life Cycle

The importance of lenders acquiring a comprehensive knowledge of the borrower's value chain is illustrated[27] in Figure 7, which depicts the six main components in a business enterprise's value chain:

1. Resource acquisition—use financial capital (loans or equity) to acquire human or physical capital.
2. Research and development—develop and design a product or service to meet customers' needs.
3. Production—convert human capital (labor) and physical capital (material) into a finished product or service.
4. Marketing and sales—promote the product or service.
5. Distribution—deliver product or service to customers.
6. Customer service—provide after-sales service to customers.

Lenders need to have an understanding of the borrower's value chain as well as the various elements that make up each of the six core business processes. For example, with respect to resource acquisition, the business faces risks pertaining to pricing, contract commitment,

FIGURE 7

VALUE CHAIN RISK MODEL—A PROCESS-FOCUSED BUSINESS RISK FRAMEWORK

Acquire resources	Research and develop product	Produce product	Analyze market and sell	Distribute product	Provide customer service
Pricing	Product development	Efficiency	Customer demands	Alliances/ partnerships	Customer satisfaction
Contract commitment	Life cycle	Quality	Responsible marketing	Coordination and communication	Product/service failure
Sourcing	Partnerships	Capacity	Sales channels	Cycle time	Product safety
Obsolescence and shrinkage	Contingencies	Performance gap		Outsourcing	
Resource allocation	Terms and conditions			Distribution channels	
	Trademark/brand erosion				

sourcing, obsolescence and shrinkage, and resource allocation. All these factors pose a risk to the business's ability to acquire the appropriate resources, at competitive pricing from a reliable source.[28]

Understanding a borrower's value chain is critical to identifying and evaluating business risks. It also provides a framework that is efficient, practical, and thorough in identifying risks that might not be captured through traditional loan underwriting procedures. The value chain risk model is composed of five major risk categories[29]:

- Environment—risks from outside the organization; they can be natural, economic, political, and social.
- Business processes—risks associated with the interrelated processes that borrowers must execute to accomplish their business strategy.
- Information technology—risks related to data security, integrity, and effective use of automated business processes.
- Human resources—recruitment, retention, and training competent and ethical employees.
- Infrastructure—effective internal controls and reporting systems.

5. Small Business Lending

Since a significant portion of credit union lending is made to small businesses, it is beneficial to examine the risks and profitability of this sector. While some of the studies examined were based on banks, they still provide evidence likely relevant for credit unions. A study found that small business lending is associated with higher return on equity and is not as risky as perceived by many; instead, it actually tends to reduce risk.[30]

A key issue in small business lending is information asymmetry, since there tends to be less information available to lenders about smaller firms. In fact, borrowers are more knowledgeable about their financial situation and future prospects than the lender. Consequently, borrowers can use this information to their advantage. In contrast, various academic studies have concluded that small business lending is risky due primarily to information asymmetry. To mitigate information asymmetry, lenders should ascertain a greater level of knowledge about borrowers through building a long-term lending relationship. Furthermore, lenders need to focus more on soft information obtained through these relationships rather than relying solely on credit scores.[31]

Loans issued by rural banks are significantly less likely to default than loans made by urban banks. The authors also found that loan default rates are significantly higher when the borrowers are located in a different geographic area than their lenders.[32] These findings support the value of the soft information and personal knowledge held by lenders in rural areas. An article in Bloomberg[33] noted that small banks in rural areas do a better job of lending than large banks. This is attributed to the competitive advantage of having in-depth knowledge of their customers and the local economy. Furthermore, borrowers in small communities are less likely to default due to the shame and embarrassment it causes.

In a study of the relationship between community banks and small businesses, the authors found very little support for the concept that community banks have an advantage in serving small businesses that are new and are deemed to be high risk.[34] Another study found that most financial services for small businesses were provided by local institutions. Indeed, 50% of all services were provided by institutions located within five miles of the business.[35]

To address the lack of credit for small businesses in the United States, the federal government implemented the Small Business Lending Fund as part of its 2010 Small Business Jobs Act. The fund provided community banks with low-cost funding that can be lent to small businesses. Banks participating in the lending fund expanded their small business lending at a faster rate than banks that did not participate. This differential existed before the introduction of the small business loan fund. Consequently, government provision of capital did not play a role in increasing lending to small businesses.[36]

Canada has a similar program—called the Canada Small Business Financing Program—that was launched in 1961 and has grown steadily from issuing 2,977 loans in its first year to 7,141 loans by 2011, valued at $978M (Industry Canada). Furthermore, 75% of the loans would not have been made if this government program had not existed.[37]

The findings of Baker Hill's 2005 Small Business Lending Benchmark Report for the United States identified a number of recommendations, as presented in the following sections. Credit scoring should include the following components[38]:

- Liquidity (cash-to-assets ratio, quick ratio).
- Leverage (debt-to-net worth ratio).
- Payment history (personal credit reports, business report, business debt-service ratio, EBIT-to-interest ratio),
- Longevity (time as current owner),
- Market (global economy, local economy, and industry trends).

The study's author also recommends the following portfolio factors[39]:

- Identify industries negatively affected by current economic environment.
- Of those industries impacted, determine whether the impact is severe enough to restrict lending to that sector.
- Identify characteristics that would need to exist in a negatively affected industry to place the loan application in a position for further consideration.

As part of the lender's ongoing due diligence, the author suggests consideration of the following[40]:

- Is the population of applicants constant?
- Are the approval percentages constant?
- Are overrides within acceptable ranges and are override reasons appropriate?
- Are loans performing as expected within certain score bands?
- For those loans performing outside the norms, what are the distinguishing characteristics of the borrower relative to the population?

6. Commercial Real Estate Concentration

The US banking agencies provided the following guidance to mitigate risk related to commercial real estate concentration[41]:

- Board oversight—The board has ultimate responsibility for the level of risk assumed, and if there is a high level of real estate concentration, its strategic plan should address this. Board members are responsible for ensuring policies include levels/limits related to borrower types and reviewing changes in market conditions.
- Portfolio management—Lenders should manage not only the risk related to individual loans, but also to portfolio risk. There may be situations where each loan is appropriately underwritten, but there could be an unacceptable level of risk related to the commercial real estate market. Furthermore, if the lenders' contingency plan involves selling the collateral or securitizing the loans, they should periodically assess the marketability of the portfolio.
- Information systems—It is imperative that MISs provide information to identify, measure, and monitor commercial real estate concentration and risk. The systems should have the capability to report the following stratification of commercial real estate:
    - Property type.
    - Geographic market.

- Tenant concentrations.
- Tenant industries.
- Development concentrations.
- Risk rating.
- Loan structure (fixed or variable rate).
- Loan purpose (construction, short term).
- Loan-to-value limits.
- Debt-service coverage.
- Affiliated loans (loans to tenants).

- Market analysis—It is important for lenders to conduct regular market analysis for the property types and geographic locations in their portfolio. The agencies also strongly advised that lenders conduct market analysis when entering new markets or expanding in existing markets.
- Credit lending policies—US banking agencies recommended that commercial lending policies include the following:
    - Maximum loan amount by type of property.
    - Loan terms.
    - Pricing structures.
    - Collateral valuation.
    - Loan-to-value limits by property type.
    - Requirements for feasibility studies and sensitivity analysis/stress testing.
    - Minimum requirements for hard equity by borrower.
    - Minimum standards for borrower net worth, property cash, and debt-service coverage.
- Portfolio stress testing and sensitivity analysis—The banking agencies suggest the sophistication of testing should be consistent with the size and complexity of the loans. They suggest taking into consideration the vulnerable segments of the commercial real estate portfolio and, in particular, the market environment.
- Credit risk review—The agencies indicated that a risk-rating system should provide the foundation to assess credit quality and potential problem loans.

- Evaluation of commercial real estate concentrations—Lenders should consider the following factors:
  - Portfolio diversification across property types.
  - Geographic dispersion.
  - Underwriting standards.
  - Level of presold units.
  - Portfolio liquidity.

7. Keys to Success in Commercial Lending

When considering a move into commercial lending, it is suggested that credit unions consider the following[42]:

- Identify members with a business credit need and develop an understanding of how their business operates, since this information will help structure and price the loan.
- Closely administer the loan, which requires monitoring, anticipating problems, and remediating on a timely basis; delegate responsibility for loan administration to qualified staff who have sufficient time.
- Offer a package of credit and noncredit services to businesses.
- Concentrate first on small business loans.

The following top 10 list, based on American credit unions with experience in commercial lending, provides further guidance for credit unions venturing into commercial lending[43]:

1. Listen to your members—especially when they are asking for more business services.
2. Evaluate the competition.
3. Decide how to gain needed expertise (e.g., in-house training and hiring from banks).
4. Evaluate your technology capabilities.
5. Start small—start with small loans first.
6. Keep it local—a local focus helps with knowing your borrowers and the market conditions.
7. Increase credit union visibility—go to chamber of commerce and other business events.
8. Educate your entire team—from board to frontline staff.
9. Manage your risk—have a healthy mix of loans and collateral.
10. Show businesses they won’t get lost in the shuffle.

Credit Union Interview Questions

1. Commercial/business loans
   a. How do you define a business loan?
   b. Do you consider that commercial lending presents greater risks than consumer lending? Why?
   c. How does the credit union price consumer and commercial loans? Does it rely on interest rates and fees, risk/return, the bottom line?
2. Lending to business sector
   a. Do your credit union policies restrict the industrial sectors (NAICS, Figure 8) to which loans may be made?
   b. Does the credit union have the necessary expertise to assess and analyze applications and to lend to all these industrial sectors?
   c. Does the credit union seek outside (Centrals/consultants/other credit unions) expertise when considering sectors for which it does not have the necessary lending assessment expertise?
   d. Does the credit union record business lending by individual (NAICS) sector or aggregately as business/commercial lending?
   e. Does the credit union's strategic plan prioritize (via advertising or pricing model, etc.) business lending by various industrial sectors in order to mitigate portfolio concentration risk or does it simply respond to the borrowing requests of its members regardless of industrial sector?
   f. Are limits (percent of total lending and dollar amounts) established for commercial lending aggregately and/or by industrial sector individually?
   g. Are interest rates and fees determined by individual industrial sector?
   h. Does the credit union undertake market analysis of the individual NAICS lending categories?
3. Portfolio
   a. Does the credit union maintain a commercial lending portfolio structure. Is it based on the NACIS classification identified above or another?
   b. If yes to (a) above, what portfolio risk analysis is undertaken by the credit union, and how often?

FIGURE 8

INDUSTRIAL SECTORS (NAICS, NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM)

	Sector	Credit union policies permit	Currently loan outstanding
i.	Agriculture (11)	yes / no	yes / no
ii.	Mining/oil/gas exploration (21)	yes / no	yes / no
iii.	Utilities (22)	yes / no	yes / no
iv.	Construction (23)	yes / no	yes / no
v.	Manufacturing (33)	yes / no	yes / no
vi.	Wholesale (41)	yes / no	yes / no
vii.	Retail (44 & 45)	yes / no	yes / no
viii.	Warehousing (49)	yes / no	yes / no
ix.	Information/cultural (51)	yes / no	yes / no
x.	Finance/insurance (52)	yes / no	yes / no
xi.	Real estate (53)	yes / no	yes / no
xii.	Professional/scientific/tech (54)	yes / no	yes / no
xiii.	Management (55)	yes / no	yes / no
xiv.	Administration (56)	yes / no	yes / no
xv.	Education (61)	yes / no	yes / no
xvi.	Health care (62)	yes / no	yes / no
xvii.	Arts/recreation/entertainment (71)	yes / no	yes / no
xviii.	Accomm/food services (72)	yes / no	yes / no
xix.	Other services (81)	yes / no	yes / no

c. Is the risk analysis undertaken on an aggregate basis of the entire portfolio or by the individual industrial categories?

d. How does the credit union assess industrial sector risks—e.g., locally and nationally?

e. Do you consider that sector concentration might be a risk issue—e.g., Property: residential and commercial currently 74.9% (58.9 + 16) of total Canadian credit union lending?

4. Delinquency
    a. How does the credit union record delinquency? Refer to examples outlined at the beginning of the questionnaire; e.g., by:
    - Total aggregate delinquency for all credit union lending.
    - Total aggregate consumer and total aggregate business.
    - Total aggregate consumer and business lending by industrial sector.

    b. Do you record delinquency in a form solely to meet regulatory reporting requirements or additionally in a manner that addresses the specific requirements of the credit union?

APPENDIX 3

Regulator Interview Questions

1. How do you define a commercial/business loan?
2. Following on from question 1, if the credit union lends funds for a business and takes charge on a personal residence, is the collateral deemed to be a consumer loan with an equity injection into the business or would it be categorized as a commercial loan?
3. How does the regulation of commercial lending by credit unions compare to banks?
4. How would you generally rate the risk associated with commercial lending versus other types of loans in the credit union?
5. Do you establish a credit union's authorized commercial lending limits by industrial sector?
6. How does a credit union report business loan delinquency figures?
    a. Is it included in total aggregate of all lending?
    b. Is consumer lending reported in aggregate and, separately, commercial lending in aggregate?
    c. Is consumer lending reported by type and commercial lending by industrial sector?

7. How do regulators make use of the commercial lending data collected?
    a. Are the aggregate data that you collect readily available to all credit unions in your regulatory jurisdiction?
    b. Is a risk assessment made of the data of various industrial sectors collected by you, and is it disseminated to the credit unions in your regulatory jurisdiction?
8. At the time of your inspection, do you provide individual credit unions with loan portfolio risk assessment, or is the assessment on an individual loan basis?
    a. Is it expected that individual credit unions will conduct a self-evaluation of lending risk in a manner similar to your assessment protocols? (Could you provide a copy of the business loan assessment form?)
    b. What is the level/degree of subjectivity/professional judgment in assessing level of risk, or are there specific numerical measures (financial ratios, etc.)? Do you encountered situations where your assessment would differ significantly from the CU's assessment?
9. Are there risk concerns regarding current credit union NAICS category concentrations (e.g., commercial mortgages approximately 50–70%)?
10. With margins/interest rates so low, what do you consider as an acceptable level of commercial loan impairment for credit unions?
11. What is the approximate current aggregate impairment for commercial loans in the credit unions?
12. Do you record loan impairment by individual NAICS categories? If not, do you plan to?
13. Given that lending within certain NAICS categories is highly specialized, is any assessment of a credit union's available lending expertise undertaken by you at the time of your inspections?
14. Is lending expertise in the credit unions an issue? Is there any concern with the breadth and depth of commercial lending expertise in small CUs?
15. Is there a direct relationship between the level of lending expertise within the credit union and authorized lending limits?
16. Does that level of available expertise influence the lending limits authorized to the credit union?
17. Are economic market conditions analyzed by NAICS categories (e.g., oil and gas) provided to the credit unions by you or Centrals, or are credit unions expected to undertake this assessment/analysis themselves?

18. Do you consider that credit unions are undertaking comprehensive local market conditions analysis by NAICS categories themselves?
19. Do you have any general/specific concerns regarding risks in commercial lending by the credit unions in your regulatory jurisdiction?
20. Do you have any recommendations/suggestions regarding the content and approach of this research project?
21. Do you have any recommendations/suggestions regarding the proposed credit union interview questionnaire? (Use Appendix 2 as a proposed draft.)
22. What role do you think that loan syndication plays in risk mitigation?

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