INSTITUTE OF
URBAN STUDIES
UNIVERSITY OF WINNIPEG

LIVING IN THE RED
Exploring Winnipeg's Debt-Scape

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The IUS In-Brief series provides new space for thought on urban issues from a variety of perspectives: from academic research to journalistic investigation, from editorial comments to public stories. The In-Brief series is intended to provide concise comment, thought and informed discussion on a range of urban issues. We invite submissions: ius@uwinnipeg.ca

The Institute of Urban Studies is an independent research arm of the University of Winnipeg. Since 1969, the IUS has been both an academic and an applied research centre, committed to examining urban development issues in a broad, non-partisan manner. The Institute examines inner city, environmental, Aboriginal and community development issues. In addition to its ongoing involvement in research, IUS brings in visiting scholars, hosts workshops, seminars and conferences, and acts in partnership with other organizations in the community to effect positive change.

Abstract

Canadian households are now deeper in debt than at any time since Statistics Canada began collecting debtor data in 1961. Debt, payment delinquency, and bankruptcy are increasingly a part of the lives of the young, the socioeconomically marginalized, and renters. This *In-Brief* explores the *TransUnion* dataset available through Winnipeg's Community Data Consortium, including the spatial patterns of non-mortgage debt, bankruptcy risk, and the back-end debt ratio in Winnipeg. We find that low income areas have lower levels of non-mortgage and back-end debt but are at a higher risk of bankruptcy. The outer suburbs and high-wealth emerging areas have the highest levels of overall non-mortgage and back-end debt but the lowest bankruptcy risk.

Introduction

Large-scale economic trends such as financial deregulation, financial product innovations, low interest rates, and an increase in available credit influence the amount of debt a household will take on (Barba & Pivetti, 2008; Hurst, 2011; Walks, 2013). Credit use can be grouped into two categories based on the underlying causes. The first involves using credit to respond to unexpected expenses (such as replacing an appliance) or changes in earning power (such as job loss or temporary illness). This category describes 40% of indebted households. People who use debt for these reasons typically repay it during higher income periods (Barba & Privetti, 2008; DeVaney & Lytton, 1995). The second category uses credit to maintain a desired standard of living that is no longer sustainable because of long-term economic changes like salary stagnation (Barba & Pivetti, 2008). This group accounts for the other 60% of indebted households (DeVaney & Lytton, 1995). While both categories of borrowers risk accumulating unsustainable levels of debt, the second group is especially vulnerable (Barba & Pivetti, 2008).
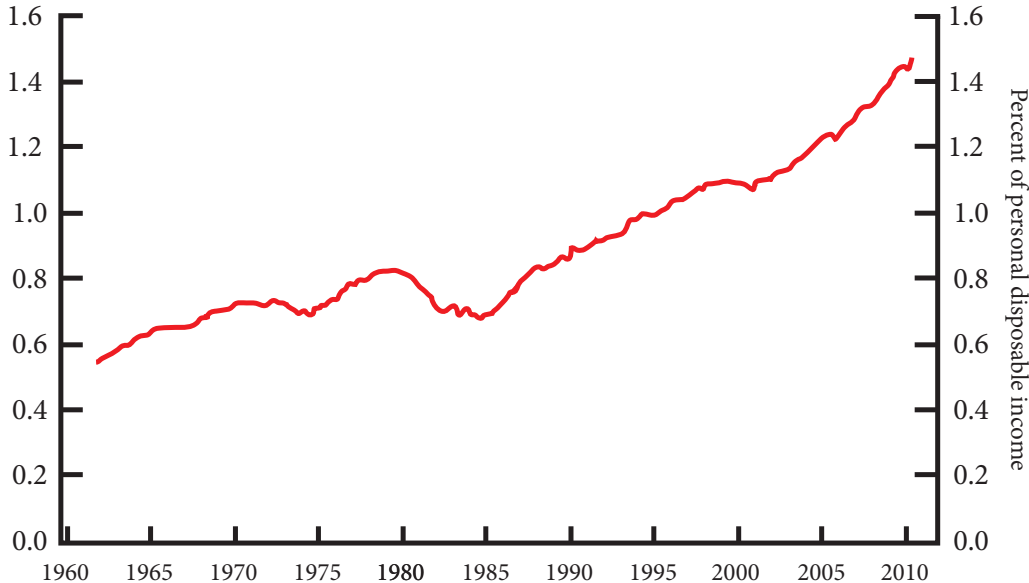
Note: Data not available before 1961

C H A R T 1 : **Household debt as a share of personal disposable income. Source: Bank of Canada 2010. Reprinted with permission.**

The number of households with unsustainable debt has risen in the past 40 years (Barba & Pivetti, 2008; Hurst, 2011; Walks, 2013). This trend has become more pronounced since the 1990s. Between 1990 and 2009 the level of debt in Canada grew faster than disposable income. In 1994 total household debt was 93% of after-tax income, but by 2009 that number had climbed to 148% (Hurst, 2011). This increase in debt has disproportionately affected young people, young families, single-parent households, and renters (Hurst, 2011). However, these studies do not reveal **where** indebted households are concentrated. Therefore, this In-Brief explores the spatial patterns of *non-mortgage debt*, *bankruptcy risk*, and *back-end debt ratio* for four areas within Winnipeg using TransUnion data. Each of the three variables provide detailed information about an aspect of the city's "debt-scape":

1) *Non-mortgage consumer debt* is debt related to consumer purchases but excludes mortgages.
2) *Bankruptcy risk* is a measure of the risk of declaring bankruptcy in the next year and a half.
3) *Back-end debt ratio* uses non-mortgage debt and annual income data to determine vulnerability to bankruptcy if interest rates change.

Previous efforts to map debt

Most of what is known about the spatial distribution of debt comes from Walks' 2013 study that describes the spatial pattern of debt in Canadian cities. This study maps a measure of total debt that includes mortgage and non-mortgage debt. The Walks study finds that areas with rising real estate values, gentrification, or a high proportion of commuters are associated with high-debt neighbourhoods. Areas with higher levels of completed post-secondary education or larger immigrant populations are associated with lower levels of debt.

Since the Walks paper uses data that combine non-mortgage and mortgage debt, it did not investigate whether they differed spatially. TransUnion's Credit Report Characteristics can be used to explore this question because it provides information separately on non-mortgage debt, and bankruptcy risk at the six-digit postal code level.

Data and Methods

TransUnion data were obtained from the Winnipeg Consortium of the Community Data program. This Consortium was established in the 1980s when a group of social agencies, academics and governmental departments collaborated to find more accurate data related to poverty and urban change in Winnipeg. This included establishing neighbourhood boundaries and defining the inner city of Winnipeg. The result was the purchase of custom data from Statistics Canada for over 600 unique geographic areas (such as city neighbourhoods) that allowed for a more detailed assessment of urban level change to be undertaken. The Winnipeg Data Consortium is now partnered with the Canadian Council on Social Development and is part of a multi-city group that obtains data from a range of sources including TransUnion.

TransUnion is a credit rating agency. Their data were collected for financial companies to manage individual portfolios and to maximize profit through better lending decisions. Most financial institutions submit client information to TransUnion; therefore, most Canadians have a TransUnion record, whether they know it or not. Individuals without lines of credit, people younger than 18 years old, and those without TransUnion records are excluded from the dataset. The data are aggregated to the six-digit postal code level. Any postal code with a population of less than fifteen people is suppressed (not included) for privacy reasons. For Winnipeg, 89.7% of the adult population is included in this dataset. Exceptional geographic detail and population sample size make this one of the best datasets available for investigating debt and personal bankruptcy in Canadian cities.

TransUnion performs data quality checks, but responsibility for accuracy falls on the organizations who submit it. The consumer debt dataset is based on information that is updated almost daily, and the Data Consortium receives information that is aggregated quarterly (Werner, personal communication, April 14, 2014).
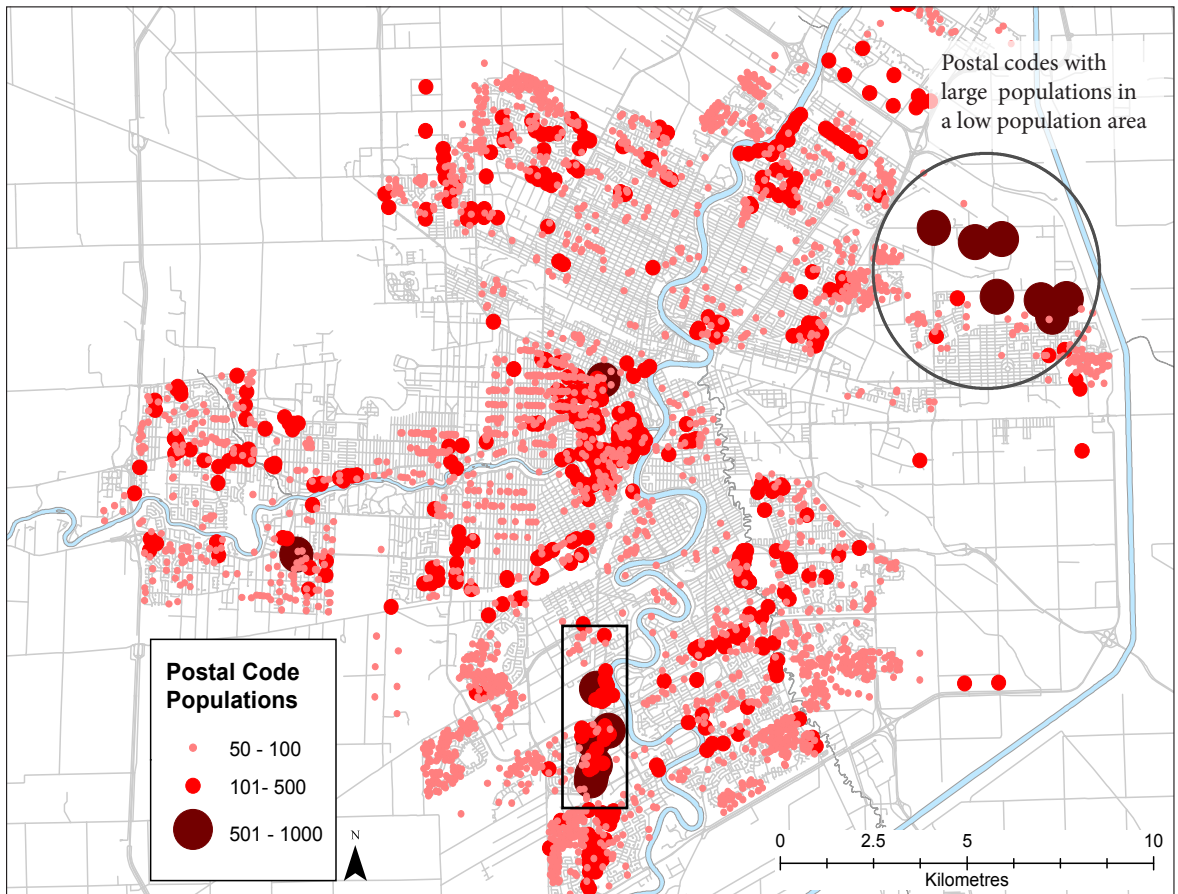
Postal codes with
large populations in
a low population area

**Postal Code
Populations**

- 50 - 100
- 101- 500
- 501 - 1000

0   2.5   5   10

Kilometres

N

FIGURE 1: **The number of people with TransUnion records in each postal code area. The areas with large populations north of Transcona (indicated with a circle) are in areas with low populations but share the same postal code with more populated locations closer to the centre of the city. Areas with less than 50 people are suppressed (not shown).**

Figure 1 maps the number of people with TransUnion records in each postal code area. For urban postal codes, this population varies between zero and over 1000 people. The largest populations are shown as dark red circles. These densely populated areas usually contain apartment blocks. A good example of this type of postal code area can be found along Pembina highway close to the University of Manitoba, indicated by a rectangle in Figure 1. Residential postal code areas with populations between 50 to 100, and 100 to 500, are shown with two sizes of red dots. Those with populations less than 50 do not appear on the map. Industrial, commercial, and park land areas have no permanent population, no non-mortgage debt, and should appear white on the map.

There are data challenges with interpreting maps of postal code data. The area indicated by the black circle indicates a large cluster of postal codes with very large populations. In reality these areas have

very small permanent populations, but because of the complexities of the postal code system they share the same code as parts of downtown Winnipeg.

Living in the Red

This paper now describes the spatial pattern of non-mortgage consumer debt, bankruptcy risk, and back-end debt in Winnipeg in order to determine whether they display similar spatial patterns to mortgage debt information presented by Walks (2013). The spatial variation of non-mortgage consumer debt, bankruptcy risk, and back-end debt ratio are presented using four areas (Zones 1-4) defined in Table 1 and shown in Figures 2-4. Lastly we examine back-end debt ratio, which is a comparison of non-mortgage consumer debt to income. This ratio is useful in studying insolvency risk.
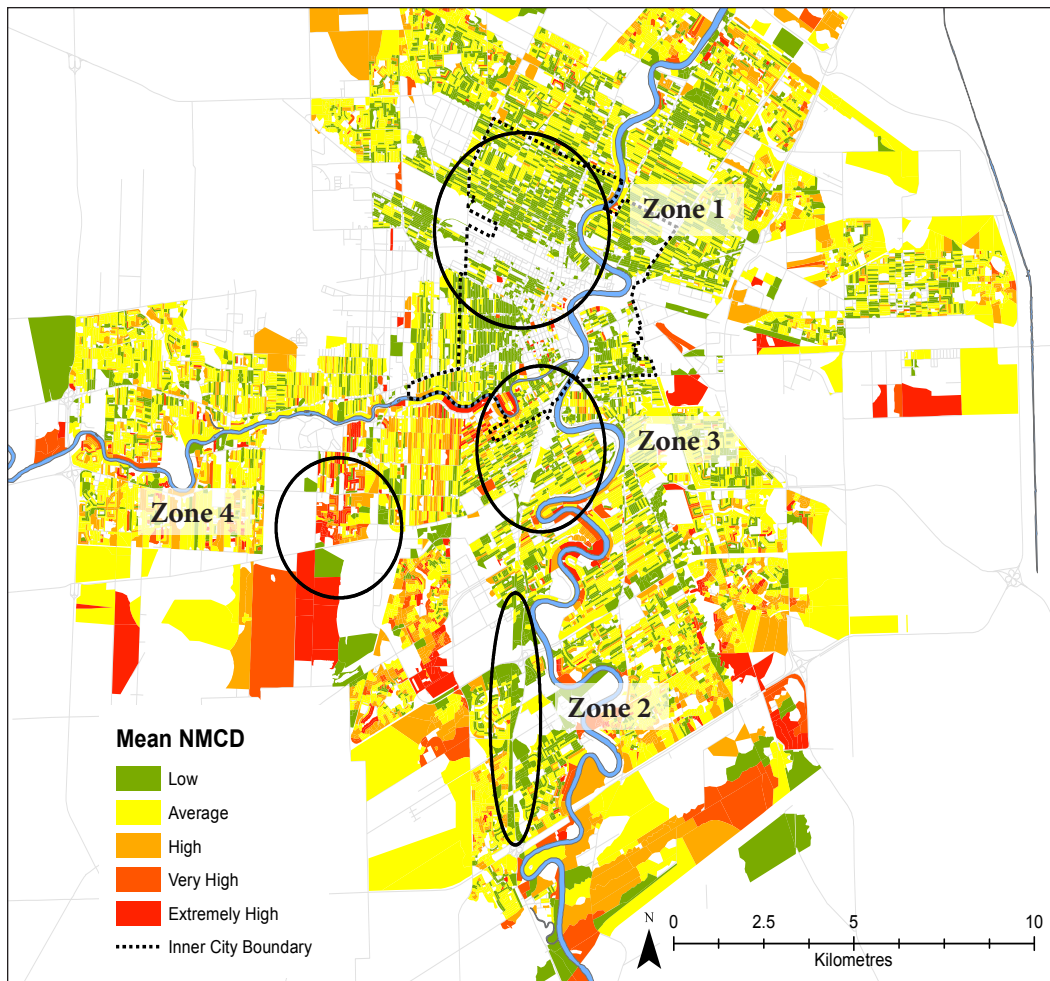
FIGURE 2: **The distribution of non-mortgage consumer debt in Winnipeg by postal code. The zones described in Table 1 are indicated as black circles.**

Non-mortgage consumer debt

The non-mortgage consumer debt variable includes the amount of debt owed on credit cards, car loans, lines of credit, and consumer product financing; but excludes mortgages, student loans, and household refinancing loans. These consumer debt products are called *trades*. Non-mortgage debt may seem trivial compared to mortgage debt, but multiple lines of evidence suggest otherwise. Walks (2013) states that 57% of indebted Canadians reported daily expenses as the cause of their increased reliance on credit. Non-mortgage debt is also the major cause of financial problems in British households (Del Río & Young, 2008), and in a 1991 survey of 1534 U.S. consumers DeVaney & Lytton (1995) found that 14% of indebted households reported missing at least one credit payment, and many more reported late payments. They also found that

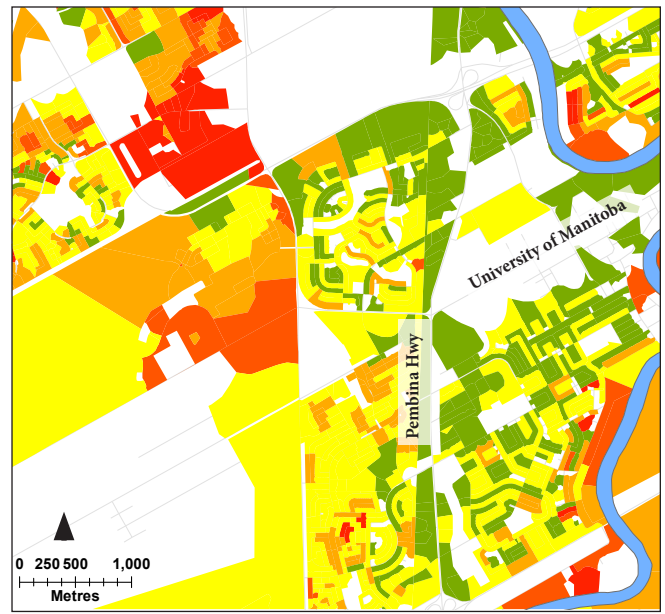| Zone	Description	Examples
Zone 1: low income	Low non-mortgage consumer debt, high bankruptcy risk	North End, West End
Zone 2: low to moderate income	Low non-mortgage consumer debt, moderate bankruptcy risk	Pembina Highway apartments
Zone 3: moderate income	Moderate non-mortgage consumer debt, moderate bankruptcy risk	Parts of Fort Rouge and the West End
Zone 4: high income	High non-mortgage consumer debt, low bankruptcy risk	Tuxedo

TABLE 1: **The characteristics and locations of the four zones.**

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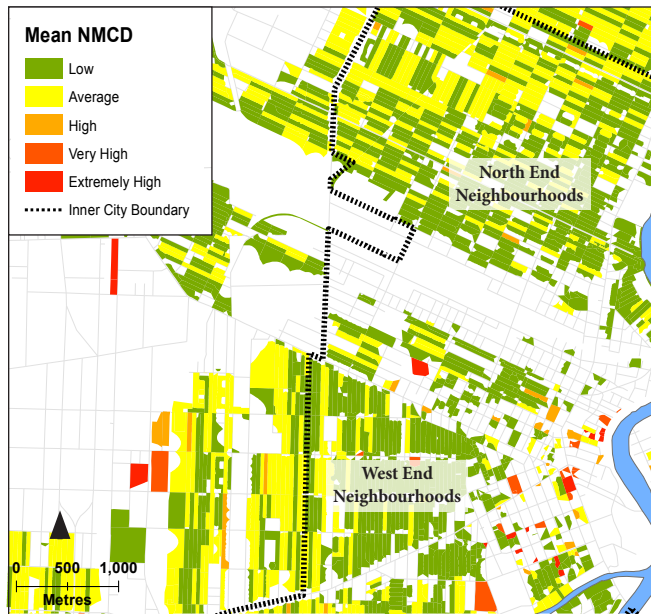
ZONE 1 : **Mean non-mortgage consumer debt by postal code in North and Central Winnipeg. Note the low debt loads.**

ZONE 2 : **Mean non-mortgage consumer debt by postal code near Pembina Highway and the University of Manitoba.**

comparing non-mortgage debt to disposable income is the second most accurate predictor of household insolvency.

Many of the wealthiest neighbourhoods in Winnipeg, such as Tuxedo, have the highest levels of non-mortgage consumer debt. This may indicate that the household incomes are sufficient to allow them to borrow large sums of money. The reverse is true in the

lowest income areas (Zone 1), which have very low levels of non-mortgage consumer debt. The series of apartment blocks near the University of Manitoba (Zone 2) is anomalous because there is a narrow corridor with a high number of households with non-mortgage consumer debt but each debt is low. This is an area that has a large concentration of young tenants and newcomers. The anomaly of this debt pattern could therefore indicate a student neighbourhood
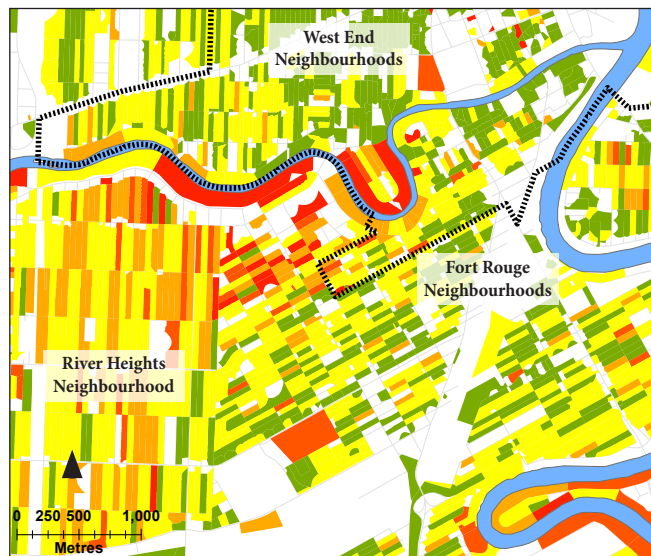
ZONE 3 : **Mean non-mortgage consumer debt by postal code in older neighbourhoods south of the Assiniboine River.**
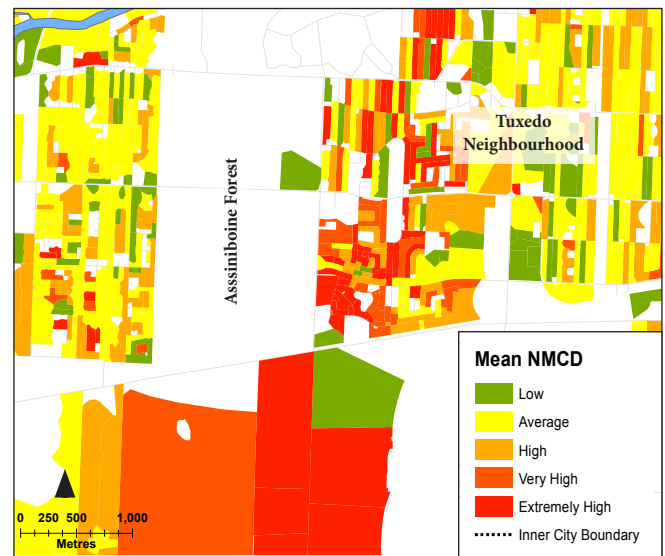
ZONE 4 : **Mean non-mortgage consumer debt by postal code in a wealthy suburban area (Tuxedo) in Winnipeg.**
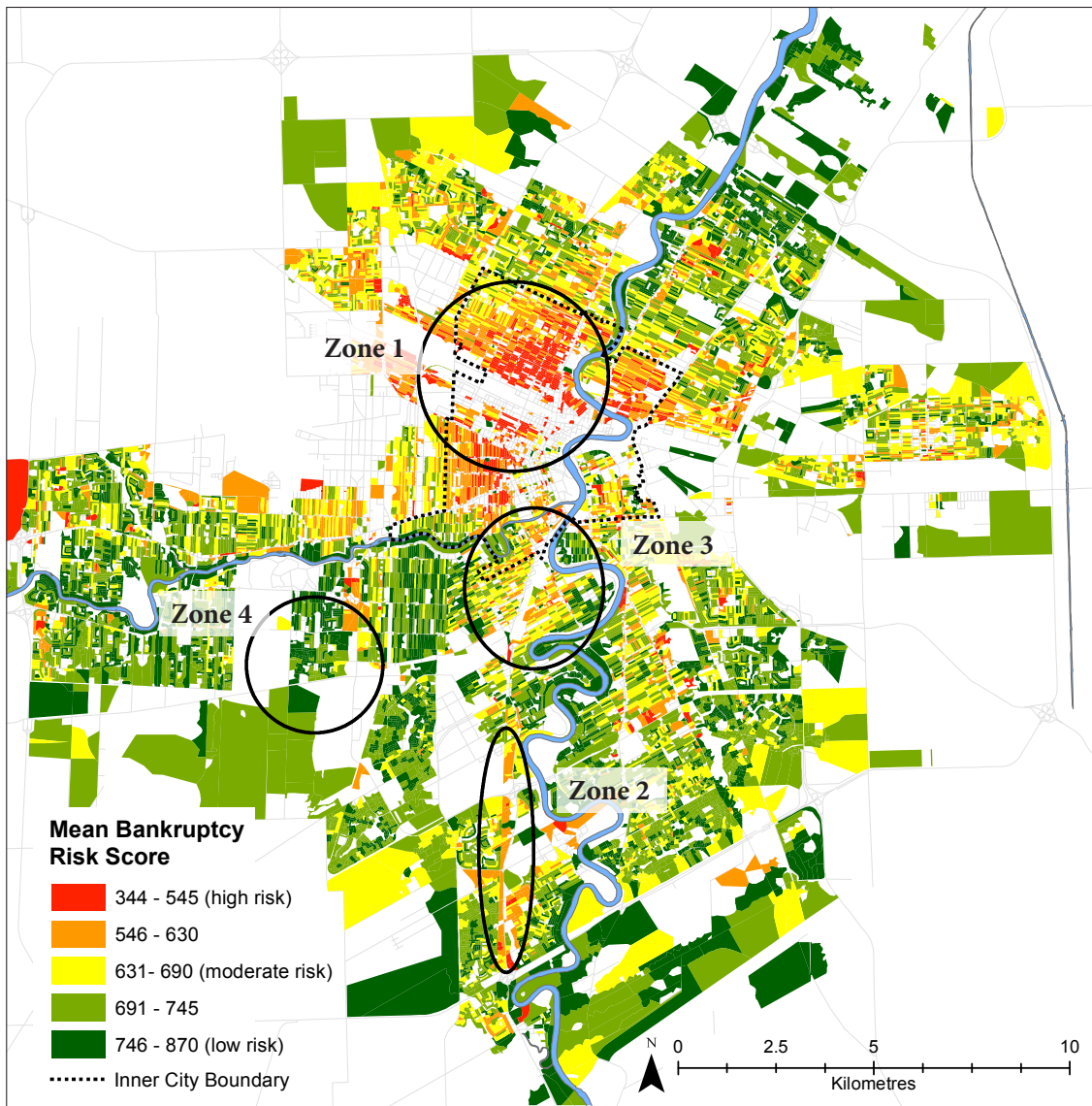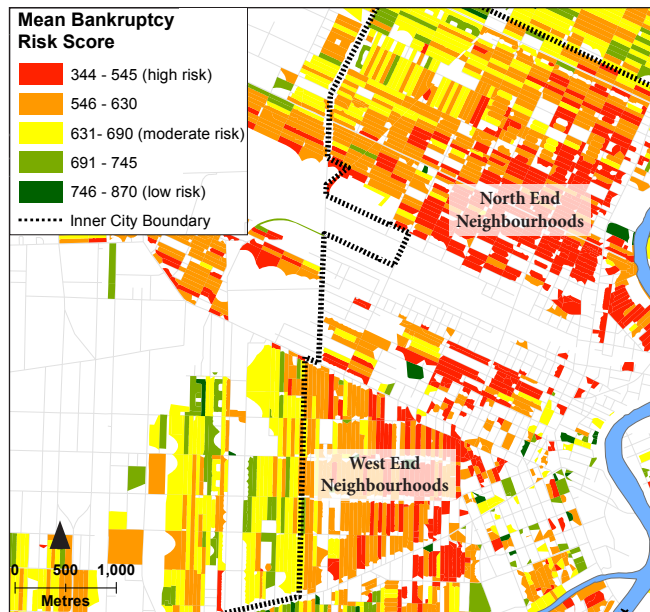
FIGURE 3: **The distribution of bankruptcy risk across Winnipeg by postal code. Zones 1-4 are indicated by black circles.**

related to the University of Manitoba. This needs to be studied in greater depth before the relationship can be confirmed. Fort Rouge (Zone 3) has a moderate level of non-mortgage consumer debt that varies noticeably from block to block. This may indicate an area that is in transition.
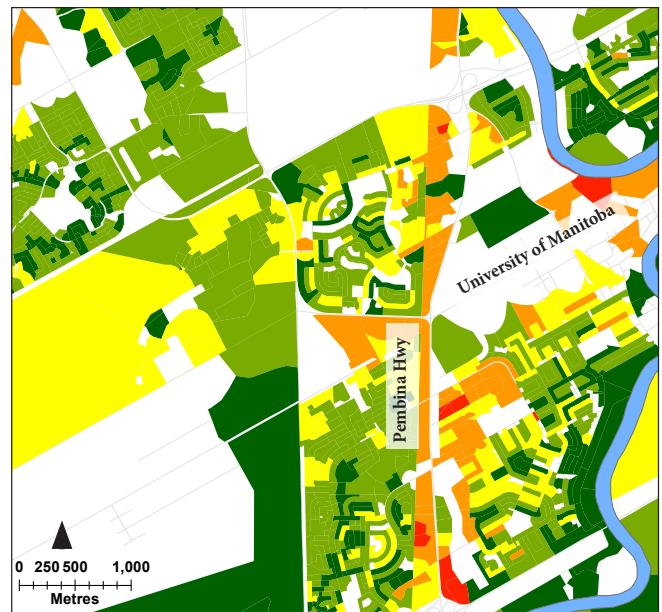
Bankruptcy risk score

Bankruptcy risk score indicates an individual's risk of going bankrupt in the next 18 months. Someone with a score of 999 is at the lowest possible risk and

someone with a score of 10 is the highest (Higgins, 2008, 2012). Individuals who are deceased, have no trades, or have deferred student loans are not included in this calculation. The group with the highest risk of declaring bankruptcy are those who have declared bankruptcy previously — 77% of people who have declared bankruptcy will do so again. The group with the second highest risk of bankruptcy are those who have missed a payment on a loan, credit card statement, or other trade, 11% of whom declare bankruptcy. The third highest risk group includes those

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Mean Bankruptcy Risk Score

- 344 - 545 (high risk)
- 546 - 630
- 631- 690 (moderate risk)
- 691 - 745
- 746 - 870 (low risk)
- Inner City Boundary

North End Neighbourhoods

West End Neighbourhoods

Z O N E 1 : **Mean bankruptcy risk in north and central Winnipeg. Red areas show a higher risk.**

University of Manitoba

Pembina Hwy

Z O N E 2 : **Mean bankruptcy risk by postal code in the area surrounding the University of Manitoba.**
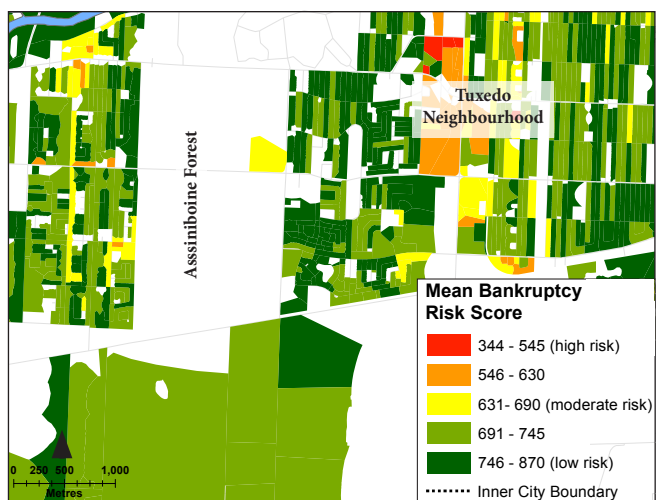
who have opened multiple new trades in the last two years (5%). The lowest risk group are those who have opened a revolving trade (such as a credit card) in the past 10 years (3%). These groups account for 96% of total bankruptcies (Higgins, 2008, 2012).

The highest risk of bankruptcy in Winnipeg is located in the north and central areas of the city (Zone 1). The population living in apartments on Pembina Highway near the University of Manitoba have lower levels of debt

and a higher risk of bankruptcy than in the surrounding areas (Zone 2). Fort Rouge neighbourhoods (Zone 3) show characteristic block by block variation and moderate levels of bankruptcy risk. Despite having low amounts of non-mortgage consumer debt, the areas with the highest levels of non-mortgage consumer debt have the lowest risk of bankruptcy (Zone 4). **This may suggest that bankruptcy risk is associated with lower income, not higher spending.**

West End Neighbourhoods

Wellington Cres. (Zone 4)

Fort Rouge Neighbourhoods

River Heights Neighbourhood

Z O N E 3 : **Mean bankruptcy risk in older neighbourhoods south of the Assiniboine River. Green areas show a lower risk.**

Tuxedo Neighbourhood

Asssiniboine Forest

Mean Bankruptcy Risk Score

- 344 - 545 (high risk)
- 546 - 630
- 631- 690 (moderate risk)
- 691 - 745
- 746 - 870 (low risk)
- Inner City Boundary

Z O N E 4 : **Mean bankruptcy risk by postal code in a wealthy suburban area (Tuxedo) in Winnipeg.**
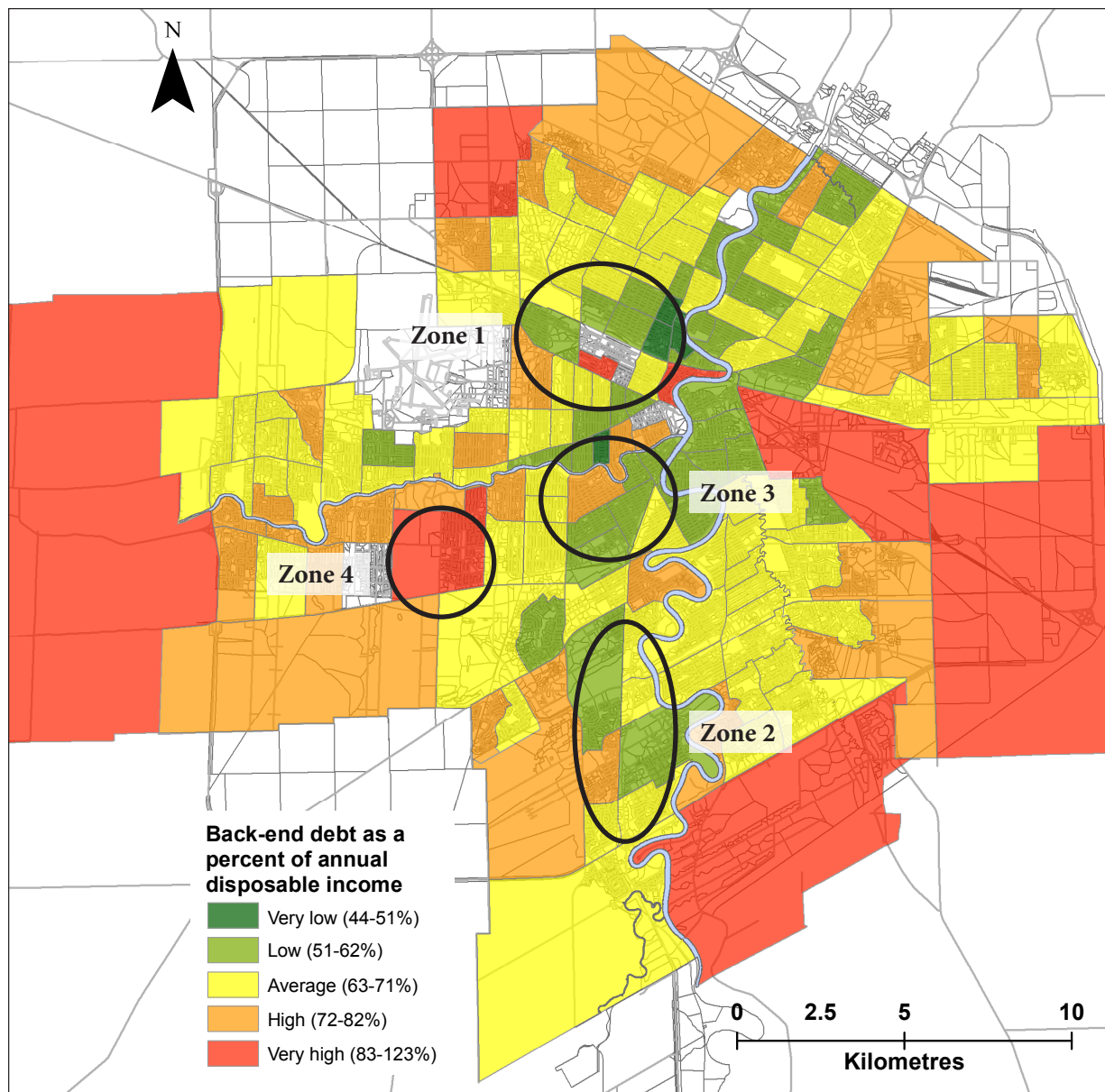
F I G U R E 4 : **Back-end debt ratio in Winnipeg census tracts indicating the percent of annual income required to pay off household non-mortgage debt.**

Back-end debt ratio

Figure 12 shows the *back-end debt ratio* mapped across Winnipeg. It is calculated by dividing non-mortgage consumer debt by annual disposable income. This measure can be used as an indicator of insolvency risk. It represents the proportion of a year's disposable income that someone would have to use to pay off their total non-mortgage consumer debt. This map shows that this back-end debt ratio ranges from 44% to 123% of

annual income. For individuals, when non-mortgage debt reaches 100% of annual income any increase in interest rates results in considerably higher bankruptcy rates (DeVaney & Lytton, 1995; Hurst, 2011). The implications of this at the neighbourhood level are not well studied.

The north end neighbourhoods highlighted show low levels of back-end debt this means that they have low levels of debt compared to disposable income, but still have higher bankruptcy risk. The characteristics of back-end debt ratio in Zone 2 are not clear. Different portions of Zone 3 display different back-end debt ratios but most of the region has lower than average levels. Despite having a low risk of bankruptcy, it is clear that Zone 4 has a high amount of non-mortgage debt compared to annual income. This suggests that if interest rates rise there will be increased risk of insolvency for high debt households in this zone.
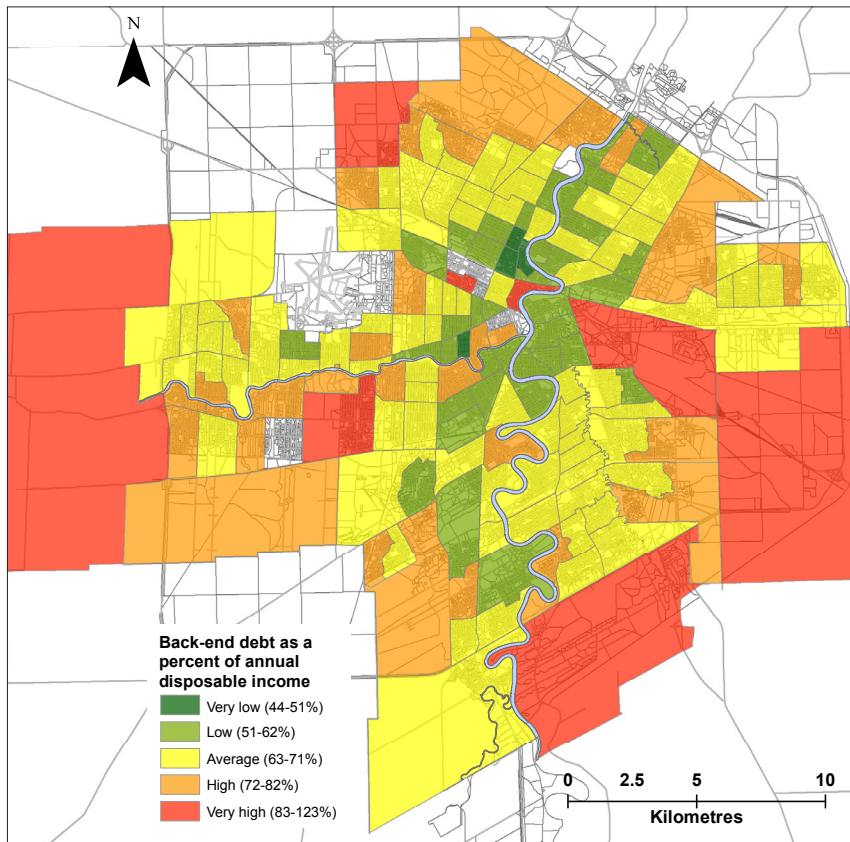
Conclusion

Canadian households are facing historically high levels of non-mortgage consumer debt. If interest rates creep higher the trend of increased debt has the potential to adversely impact the economy by increasing the number of bankruptcies. The purpose of this In-Brief report was to map this debt in Winnipeg. This graphical depiction provides a powerful portrait of Winnipeg's emerging "debt-scape".

To provide a more detailed assessment, four zones were created to differentiate the data based on income characteristics and geographic location. The result was the identification of four distinct *debt-scapes* that offered a snapshot of Winnipeg's diverse urban fabric. Within Zone 1, an area overrepresented by higher levels of poverty, the overall level of debt remained low but there was a heightened risk of bankruptcy. Whereas in the remaining zones, the total non-mortgage consumer debt rose while the risk of bankruptcy decreased. Household income plays a mitigating role, meaning that higher earning individuals can sustain higher debt loads without necessarily increasing risk.

This report establishes the usefulness of the Trans-Union dataset by exploring the financial circumstances of urban areas using a spatial lens. The advantage of this approach is its ability to drill down to the block level to not only assess varying levels of financial risk, but to capture the diversity and uniqueness of Winnipeg and its neighbourhoods.

Notes

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Back-end debt as a
percent of annual
disposable income

- Very low (44-51%)
- Low (51-62%)
- Average (63-71%)
- High (72-82%)
- Very high (83-123%)

0   2.5   5   10

Kilometres

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