



Canadian Payments Forecast, 2023



Copyright Notice

Canadian Payments Forecast, 2023 is a copyrighted publication of Technology Strategies International Inc., and may not be reproduced or distributed in whole or in part in any form without the express written permission of Technology Strategies International Inc. Photocopying, printing or other forms of mechanical or electronic reproduction are strictly prohibited.

Corporate Subscribers

Canadian Payments Forecast, 2023 is a copyrighted publication of Technology Strategies International Inc. Licensed corporate subscribers may store the electronic version of the publication on the corporate intranet or shared directory available to company employees. The electronic version of the report may be transmitted to employees by e-mail and copies of the publication made, either by printing or photocopying, provided that reproduction or distribution of this report, in whole or in part, is limited to employees of the corporate subscriber only. Details of our Corporate User License can be found [here](#).

Table of Contents

EXECUTIVE SUMMARY

INTRODUCTION

Objectives

Methodology

Forecasts

Currency

Some Notes on this Year's Report

Document Navigation

Acknowledgements

List of Abbreviations

MARKET ANALYSIS

The Canadian Economy

Consumer Payments in Perspective

Cash

Cheques

Debit

Credit Cards

Contactless

Mobile

MARKET ANALYSIS (CONTINUED)

Online

Bill Payments and Transfers

Wearable Payments

Prepaid Cards (Payment Brands)

Gift Cards

Person-to-Person (P2P) Payments

International Remittances

Virtual Currencies

List of Charts and Tables

INTRODUCTION

Forecasting Approach

USD/CAD Exchange Rate

THE CANADIAN ECONOMY

Economic Highlights

Annual Change in Real GDP, PCE and Retail Sales (2011 - 2022)

Canadian Retail Sales by Sector (2022)

Growth in Retail Trade by Segment (Growth in 2022; CAGR: 2017 - 2022)

Forecast Real Growth in GDP (2022 - 2027)

Canadian Consumer Confidence Index (December 2006 - July 2022)

Forecast Real Growth in GDP, Retail Sales and PCE (2022 - 2027)

Components of PCE (2022 and 2027)

CONSUMER PAYMENTS IN PERSPECTIVE

Primary Payment Highlights

Bill Payments Highlights

Secondary Payment Highlights

Vertical Market Highlights

Share of Value of PCE by Payment Type (2007 - 2022)

Number of Payment Transactions by Payment Instrument Type (2007 - 2022)

Forecast Share of Value of PCE by Payment Type (2022 - 2027)

Forecast Number of Payment Transactions by Payment Instrument Type (2022 - 2027)

Forecast Value of Payment Transactions by Payment Instrument Type (Total; 2022 - 2027)

Forecast Total Number of Payment Transactions by Payment Instrument Type (Total; 2022 - 2027)

Forecast Annual Growth Rates for Primary Payment Instruments (CAGR: 2022 - 2027)

Forecast Growth for Secondary Payment Segments (CAGR: 2022 - 2027)

List of Charts and Tables

CASH

Cash Highlights

Canadian Bank Notes and Coin in Circulation (2009 - 2022)

Number of ABMs in Canada by Ownership (2007 - 2022)

Volume and Value of Cash Withdrawals at ABMs in Canada (2007 - 2022)

Cash Available for Consumer Payment Transactions (2007 - 2022)

Value and Volume of Cash Transactions (2007 - 2022)

Forecast Number of ABMs in Canada by Ownership (2022 - 2027)

Forecast Volume and Value of Cash Withdrawals in Canada (2022 - 2027)

Forecast Cash Available for Consumer Payment Transactions (2022 - 2027)

Forecast of Cash-based Retail Payment Transaction Volumes in Canada (2022 - 2027)

CHEQUES

Cheque Highlights

Volume and Value of Personal Cheques Cleared through the ACSS in Canada (2007 - 2022)

Reasons for Using Personal Cheques (P12M)

Forecast Volume and Value of Personal Cheques Cleared through the ACSS in Canada (2022 - 2027)

DEBIT

Debit Highlights

Value and Volume of Interac Debit Transactions (2008 - 2022)

Forecast Value and Volume of Interac Debit Transactions (2022 - 2027)

Forecast Number of Merchants and Terminals Accepting Interac Debit Payments (2022 - 2027)

List of Charts and Tables

CREDIT CARDS

Credit Card Highlights

Forecast Total Number of Credit Cards Issued in Canada (2022 - 2027)

Gross Volume and Value of Credit Card Transactions (2008 - 2022)

Value of Credit Card Transactions by Type (2008 - 2022)

Volume of Credit Card Transactions by Type (2008 - 2022)

Forecast Gross Volume and Value of Credit Card Transactions (2022 - 2027)

Forecast Value of Credit Card Transactions by Type (2022 - 2027)

Forecast Volume Credit Card Transactions by Type (2022 - 2027)

Forecast Number of Merchant Outlets Accepting Visa and MasterCard (2022 - 2027)

Forecast Canadian Credit Card Loans (2022 - 2027)

CONTACTLESS

Contactless Highlights

Contactless Payment Values and Volumes (2015 - 2022)

Ownership of Contactless Card Brands in Canada

Usage of Contactless Payments Cards at Merchants (P6M)

Forecast Contactless Payment Card Users and Terminals (2022 - 2027)

Forecast Contactless Payment Values and Volumes (2022 - 2027)

Contactless as a Proportion of Total Cash, Debit and Credit Transactions

List of Charts and Tables

MOBILE

Mobile Highlights

Forecast Number of Mobile Subscribers in Canada
(2022 - 2027)

Primary Smart Phone Operating System Ownership
(2015 - 2022)

Payment Applications Installed on Smart Phones

Usage of Smart Phones for Mobile Banking (P6M)

Payments Made Using a Smart Phone (P6M)

Volume and Value of All Mobile Payments Transactions
(2014-2022)

Forecast Volume and Value of All Mobile Payment
Transactions (2022 - 2027)

Forecast Volume and Value of In-Store Mobile Payments
(2022 - 2027)

ONLINE

Online Highlights

Volume and Value of Online Purchases in Canada
(2008 - 2022)

Categories of Canadian Online Purchases (P12M)

ONLINE (CONTINUED)

Payment Methods for Online Purchases (P12M)

One Click Checkout Services (P12M)

Online Purchases by Region (P12M)

Forecast Volume and Value of Online Purchases
in Canada (2022 - 2027)

BILL PAYMENTS AND TRANSFERS

Bill Payments and Transfers Highlights

Transfers and Payments by Delivery Channel
(2009 - 2022)

Share of Transfers and Payments by Delivery Channel
(2009 - 2022)

Online Bill Payments by Category (P12M)

Forecast Transfers and Payments by Delivery Channel
(2022 - 2027)

Forecast Share of Transfers and Payments by Delivery
Channel (2022 - 2027)

Forecast Value of Bill Payments (2022 - 2027)

Growth by Delivery Channel and Transaction Type
(CAGR: 2017 - 2022, 2022 - 2027)

List of Charts and Tables

WEARABLE PAYMENTS

Wearable Highlights

Forecast Ownership of Fitness Trackers and Smart Watches (2017 - 2027)

Forecast Wearables Payment Values and Volumes (2022 - 2027)

PREPAID CARDS (PAYMENT BRANDS)

Prepaid Card Highlights

Total Prepaid Value and Volume (2012 - 2022)

Brand of Prepaid Card Purchased (P12M)

Forecast Prepaid Value and Volume (2022 - 2027)

GIFT CARDS

Gift Card Highlights

Total Gift Card Value and Volume (2012 - 2022)

Categories of Gift Cards / Vouchers Purchased (P12M)

Forecast Gift Card Value and Number of Cards Purchased (2022 - 2027)

PERSON-2-PERSON (P2P) PAYMENTS

P2P Payment Highlights

Value and Volume of P2P Transactions (2013 - 2022)

Methods of P2P Payment (P6M)

Forecast Value and Volume of P2P Transactions (2022 - 2027)

INTERNATIONAL REMITTANCES

International Remittance Highlights

Value and Volume of International Remittances (2013 - 2022)

Services Used for International Remittances (P12M)

International Remittances by Region (P12M)

Forecast Value and Volume of International Remittances (2022 - 2027)

VIRTUAL CURRENCIES

Awareness and Usage of Cryptocurrencies (2023)

Virtual Currency Usage Intent Trend

Executive Summary

The Canadian Economy and Impact on Payments

- Real growth in GDP maintained a healthy pace of 3.4% in 2022, somewhat lower than the 5.0% experienced in the rebound of 2021, but still significant enough for the Canadian economy to surpass the pre-pandemic level of GDP.
- Real Personal Consumption Expenditure (PCE) increased by 4.8% in 2022, demonstrating an extended rebound as pent-up consumer demand is satisfied in the post-pandemic economy.
- Real growth in retail sales, which spiked at 8.4% in real terms in 2021, decreased to just 1.3% in 2022.
- The real growth rates in GDP, PCE and retail sales hide the effects of inflation that took hold in 2021 and 2022. Nominal GDP grew by 10.6% in 2022.
- In 2024, we expect that the economy will be in a mild recession. Real GDP and PCE growth is forecast to grow at 0.8% each in that year, with retail sales showing a marginally higher growth rate at 1.0%.
- Real GDP growth is expected to average 1.5% p.a. (CAGR) over the period 2022 to 2027.
- Real PCE is expected to grow at 1.4% p.a. (CAGR) over the forecast horizon.
- Real Retail Sales are expected to grow at 1.0% p.a. (CAGR) over the forecast horizon.
- The value of payments is driven by PCE evaluated in current dollars. PCE is expected to reach \$1.77 trn by 2027.
- The number of payment transactions on PCE is expected to grow throughout the forecast period, from 20.3 bn transactions in 2022 to 23.7 bn transactions in 2027.

Executive Summary (continued)

Primary Payment Instruments: Debit, Credit, Cash and Cheque Payments

- The value of credit card transactions reached \$803 bn in 2022, a surge of 12.6% over the previous year. In 2023, the gross dollar value of credit card transactions is expected to increase by 7.8% to \$866 bn. Gross dollar values are expected to reach \$1.05 trn by 2027, representing an average growth of 5.5% p.a. (CAGR) over the five-year period. By 2027, credit card expenditure is expected to account for 59.3% of PCE by value.
- The number of credit card transactions is expected to increase by 6.9 % in 2023. Total credit card transactions are expected to reach 11.7 bn by 2027. This represents an annual growth rate of 6.4% p.a. (CAGR) over the five-year period. Credit card transactions' share of PCE is expected to reach 49.6%.
- Debit card payments increased in value by 8.3% in 2022, coming in at \$289 bn for the year. There were 6.30 bn debit card payments in 2022, an increase of 5.9% over the previous year.
- Over the period 2022 to 2027, debit transaction values and volumes are expected to grow at a rate of 3.9% p.a. (CAGR) and 2.0% p.a. (CAGR) respectively, reaching \$351 bn in 2027 on the back of 6.95 bn transactions. Debit purchase transaction values are expected to account for 19.3% of PCE, while transaction volumes are expected to account for 29.3% of PCE.
- Cash withdrawals and payments rebounded in the wake of the pandemic. The value of cash payments increased by 20.5% in 2022, to \$85 bn and accounting for 5.8% of PCE. After this brief rebound, the downward trend in cash usage is expected to continue, although at a slower rate than during the pandemic, reaching \$75 bn by 2027, or 4.2% of PCE.
- The value of cheque payments also recovered in 2022, growing by 13.6% over the year. Cheque payments are expected to resume their pre-pandemic decline trajectory from 2023 onwards, to account for just 2.3% of PCE by value by 2027.
- The share of PCE, by value, accounted for by credit and debit cards combined was 73.4% of PCE in 2022 and is set to increase to 78.5% by 2027, mainly as a result of strong growth in credit card purchases.

Executive Summary (continued)

Contactless, Mobile and Online Payments

- The value of contactless payments reached \$380 bn in 2022, growing 9.8% over the previous year. The number of contactless transactions was 7.5 bn. The value of contactless payments is expected to reach \$585 bn by 2027, on the back of 10.2 bn transactions.
- Smart phone penetration reached 81.2% of mobile subscribers in 2022, representing a user base of 27.4 m subscribers. About eight out of ten smart phone owners have at least one payment app or wallet on their smart phone and about three quarters have conducted a payment using their mobile phone in the past six months (including both remote and proximity payments).
- The value of mobile payments (remote and proximity mobile payments) reached \$105 bn in 2022. Growth is expected to be high over the next five years with the value of all mobile payments set to increase by 80% by 2027, reaching \$191 bn.
- In-store mobile payments still only accounts for a small share of total mobile payment value, 10.3% in 2022, or \$10.8 bn. Consumer adoption is increasing, as is usage frequency. This is set to propel the market on a supernormal growth trajectory, with in-store mobile payment value reaching \$36 bn by 2027, on 944 m transactions.
- The value of online purchases amounted to \$69 bn in 2022, a growth of 9.8% over the previous year and accounting for 9.2% of retail sales. By 2027, the value of online purchases is set to reach \$106 bn, representing an annual average growth rate of 9.0% p.a. (CAGR) over the period. The number of online purchase transactions is expected to grow from 530 m in 2021 to 701 m in 2027, a growth rate of 5.7% p.a. (CAGR) over this period. Online purchases are expected to account for 11.2% of retail sales in 2027.

Executive Summary (continued)

Bill Payments and Transfers, Wearables, Prepaid Card, Gift Cards, Remittances, Virtual Currencies

- There were 1.80 bn transfers and bill payment transactions in 2022, an increase of 8.8% over the previous year. The total number of transactions will reach 2.37 bn by 2027. The highest growth area in bill payments and transfers will be in the mobile channel, which accounted for 71.4% of all bill payments and transfers in 2022, and which is expected to gain further ground over the next five years reaching a share of 81.5% by 2027.
- More than 9.7 m fitness trackers and smart watches were on the arms of consumers in Canada in 2022, of which 54.1% could be used to make payments. The nascent wearables payment market is showing signs of high growth, with payments value expected to reach \$2.4 bn by 2027.
- The combined value of the open-loop prepaid cards and closed-loop gift cards purchased was \$9.9 bn in 2022, with gift cards accounting for 77% of the total. Both markets experienced substantial volatility over the pandemic period. By 2027, the combined total of gift cards and prepaid cards purchased is expected to reach \$13.2 bn, of which \$3.6 bn will be for prepaid cards.
- The value of remittances increased by 20.4% to \$13.0 bn in 2022, a strong reversal of the decline in 2021. Remittance values will drop to \$11.1 bn by 2027, on the back of 22.2 m transactions.
- P2P payments increased drastically in 2022, growing by 25.9% to \$28.8 bn. Growth will moderate from 2023 onwards, averaging 5.9% in value over the forecast horizon. By 2027, the value of P2P payments will reach \$38.4 bn, representing 317 m transactions.
- Awareness of virtual currencies is stable, but usage has increased substantially, with 23.4% of adult Canadians having used or traded in a virtual currency. Bitcoin remains the most visible and most used of the vast number of cryptocurrencies available. Usage intent has decreased over the past year mainly as a result of strong shocks in the crypto market.

Introduction



Objectives

Canadian Payments Forecast, 2023, is an in-depth assessment of how the consumer payments landscape in Canada is likely to be transformed over the next five years based on the severe disruptions over the past few years – the pandemic, supply chain issues, geopolitical conflict, inflation, rapidly increasing interest rates, and the prospect of a recession. Subscribers will be in a unique position to make well-founded, research-based, strategic decisions about how best to steer their business in the turbulence that is affecting the Canadian payments industry. The primary information objectives of the 2023 study are to:

- Undertake an in-depth analysis of how the economy, personal consumption expenditure and retail sales are expected to evolve over the next five years in light of the developments highlighted above
- Provide a comprehensive review of how consumer payments in Canada is expected to evolve based on these developments
- Provide quantitative forecasts for payments across all the major consumer payment modalities.

This study provides essential information for organizations interested in gaining an understanding of, and tracking developments in, the Canadian payments marketplace. This is particularly important in the current economic context where the disruption to economic activity is likely to have a profound impact on consumer payments in the future.

Methodology

In assembling the information for this study, TSI drew on a wide range of information resources, including the following:

- **Desk Research:** TSI consultants carried out in-depth desk research into the payments industry, both in Canada and internationally. There is vast literature on payments available on the internet. Our skill lies in identifying credible sources, sifting through the information to extract the most valuable elements, and verifying facts that appear to be suspect, or that do not appear to be supported by any substantiated argument. In addition, TSI has, over the past twenty-five years, built up a comprehensive database on the payments industry in Canada based on past studies conducted in this area. Our database provides a rich source of information in this analysis, especially in providing the baselines for establishing the most important trends in the Canadian market.
- **Executive Interviews and Discussions:** While desk research can provide an important backdrop and some basic data for a project such as this, it was important for us to gain in-depth insights into the market directly from key players in the industry, both within Canada and globally. We did this through interviews, discussions, and participation in major conferences and seminars (more recently mostly online seminars) relevant to the Canadian payment marketplace.
- **Consumer Research:** This is the ninth year in which we have used data from our Canadian Consumer Payments Survey (CCPS) market research to inform our analysis and projections in Canadian Payments Forecast. While in the past we have found this to be an important source of supplementary information to obtain granularity on developments in the market especially in areas relating to the adoption of new technologies, it has been particularly important over the last three years since it allowed us to get feedback directly from consumers on the impact that the significant changes in the economic environment has had on their economic activity and payments behaviour.
- **Analysis:** The information obtained through primary and secondary research was collated and analysed within TSI's strategic market analysis framework. This report embodies the analysis and findings of the research.

Forecasts

An important aspect of this study is to provide subscribers with a well-founded look ahead to the prospects for the payments industry in Canada. As a result of the dramatic changes to the economy and consumer behaviour that have resulted from regional and international developments over the past three years, we have had to develop new approaches and models for our economic and payments forecasts. In 2023, we have refined these even further, based on what we have learnt so far about how the last few tumultuous years have influenced the economy and what is likely to happen in the future. We have tried to keep the publication on track, from a timing perspective. At the time of publication, there was still some uncertainty about the trajectory that the economy would take, given the strains arising from the war in Ukraine, global supply chain issues, inflation, rising interest rates and prospects of a recession – which is yet to arrive.

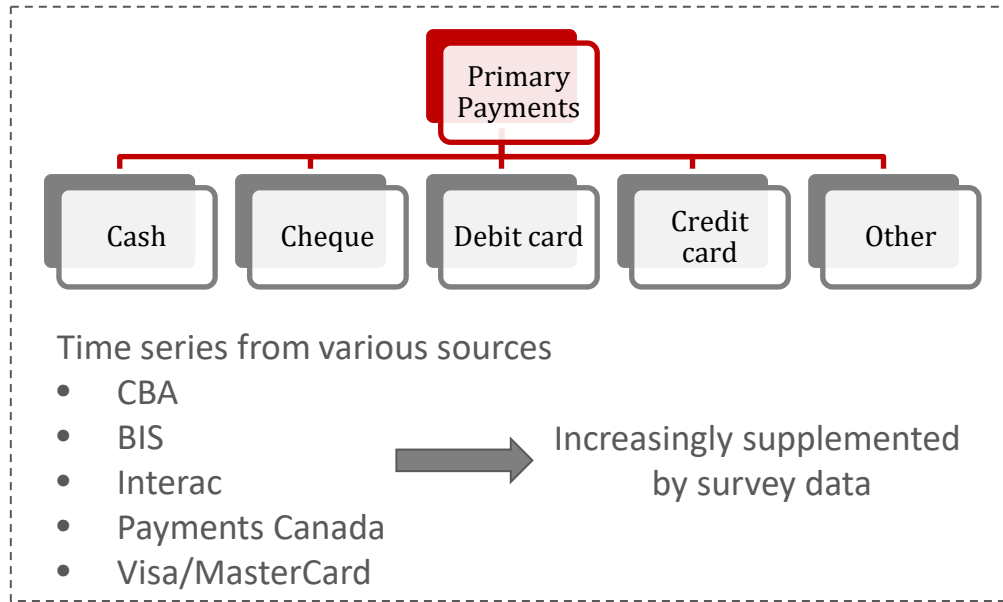
Many of our forecasts use the survey data that we collect from TSI's annual Canadian Consumer Payments Survey as inputs to our models. There can be substantial variation in the accuracy of survey data from year to year based on sampling error. As a result, from time to time we revise some time series retrospectively where a parameter estimate used in a prior forecast appears to be an outlier, or inaccurate.

Forecasts in this report cover a **five-year time frame**, with the **base year of 2022**. Where we have been unable to source key primary payment statistics for 2022 due, for example, to statistical lag, we have provided our own estimates. Projections are prepared for 2023 through to the end of 2027.

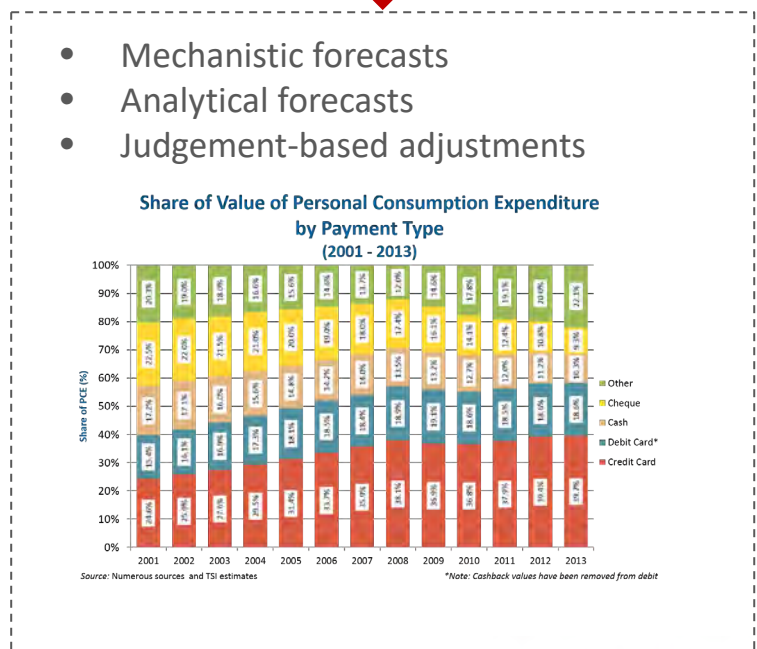
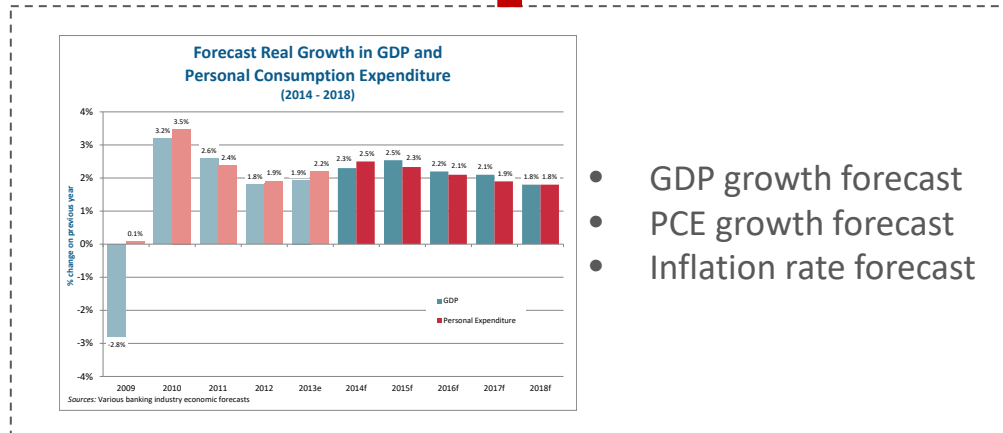
Forecasting, by its very nature, cannot be an exact science. The forecasts presented in this report represent what we believe to be the best view available of prospects for Canadian payments. However, the global economy is experiencing unprecedented turbulence at present and the cone of uncertainty around these forecasts is therefore higher than normal. While we believe that the information contained in this document is as accurate as is possible for a review of this nature, TSI accepts no liability for any errors, inaccuracies or omissions.

Our approach to forecasting is shown on the next chart.

Canadian Payments Forecast: Forecasting Approach

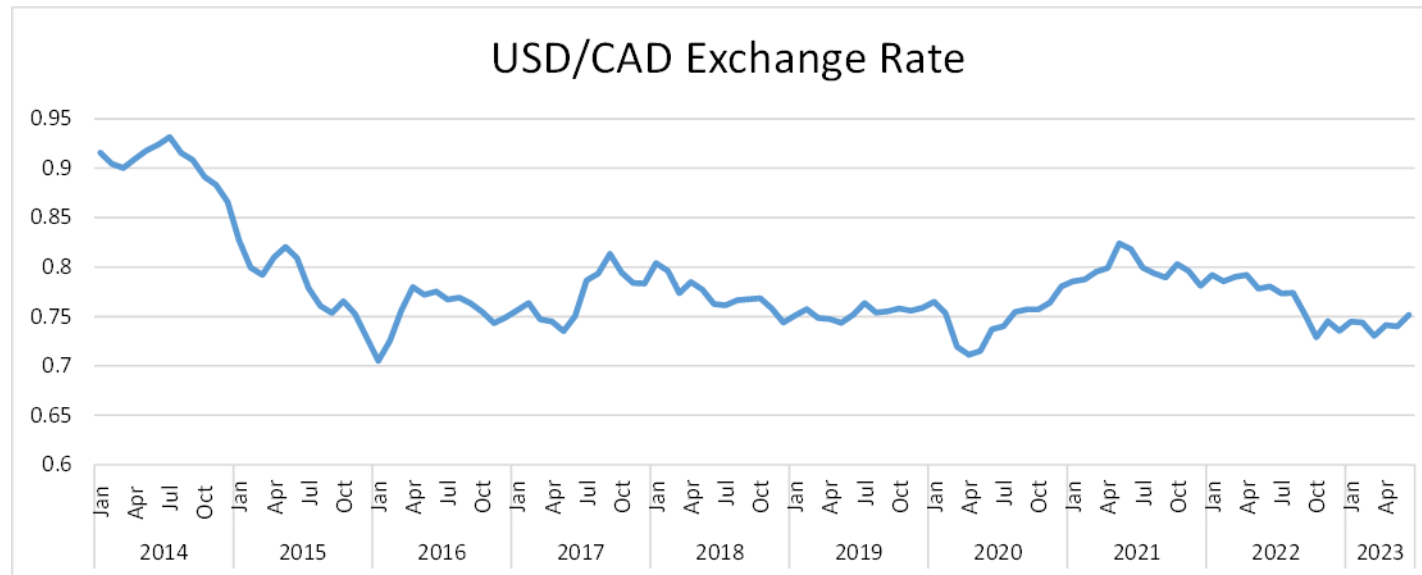


- Forecasting**
- Time series analysis (turning points, trend, seasonal and cyclical variations)
 - Survey data analysis
 - Diffusion models and substitution models
 - Causal models
 - Multiple regression
 - Judgement



Currency

- All revenue and investment figures included in this report are presented in Canadian dollars (CAD), unless otherwise specified.
- At the time of publication of this report one Canadian dollar (CAD) was worth 0.751623 US dollars (USD), compared with 0.77277 at the time of publication in 2022. The average for exchange rate for 2022 was 0.768977.



Some Notes on this Year's Report

- As a result of the rapidly changing global and local economic environment, the short- and medium- term economic future of Canada is likely to be structurally different from the past. The forecasts that we have presented are anchored in the base case scenario for the economy. Prospects for the Canadian economy could change as the Bank of Canada continues its attempts to curb inflation, with rising interest rates and deteriorating consumer and business confidence.
- There are also likely to be fundamental structural changes influencing consumer behaviour and payments in the Canadian market. We capture the behavioural component through the Canadian Consumer Payments Survey (CCPS), which was conducted at the height of the pandemic (April 2020) and every year since then. We believe that this has given us an excellent baseline against which to measure consumer behavioural changes in payments over the past three years and has helped inform us of the most likely paths forward.
- We have streamlined the way that we have done the historical economic analysis since it provides only a basic context for our current economic environment. The emphasis has been placed more on where we are headed, from an economic standpoint, than where we have been.
- In some cases, we rely on secondary data to examine historical patterns in the payments market. In several cases these time series undergo substantial revisions, which we then incorporate into our analysis. Statcan, for example, revises their economic time series for the previous five years almost every year. These are usually slight tweaks to the numbers. In other cases, the revisions are major. For example, the Canadian Bankers Association recently revised their bill payments by channel time series radically since the mobile component was grossly underrepresented in previous analyses. We have also revised our time series based on those revisions. A consequence of this is that the data presented in this report may not be strictly comparable with our previous reports in certain payment segments. We have taken pains to point this out in the report in situations where the impact is significant.

Some Notes on this Year's Report (cont'd)

- We have streamlined some sections to make the information included in the report more accessible, and easier to navigate. In some cases, this has been achieved by including the historic analysis and forecast on the same chart.
- Over the last three years we have started to collect data on loyalty redemptions and preauthorized payments through our Canadian Consumer Payments Survey. We will include analyses of loyalty and preauthorized payments in future editions of this once we have stable data on which to base our analyses and forecasts. Subscribers interested in loyalty redemption and preauthorized payment data are encouraged to consult our Canadian Consumer Payment Survey data (also available through a subscription).
- Subscribers to the Canadian Consumer Payments Survey 2023 have access to all the findings of survey data gained across all modalities. It provides additionally granularity on payment behaviour and is an essential resource for those interested in analyzing specific segments in more detail.

Document Navigation

- The Table of Contents and List of Charts and Tables contain hyperlinks to the sections, charts and tables in the document.
- In order to make navigation easier within the document, we have included hyperlinks on each page as follows:

Section Contents

- Clicking on the 'Section' block will take the reader to the start of the current section. Clicking on the 'Contents' block will take the reader to the Table of Contents.
- These navigation blocks are included on the bottom of all pages.
- The 'List of Charts and Tables', which follows the 'Contents' section, serves as a detailed table of contents.

Acknowledgements

- We would like to place on record our thanks to our subscribers to whom we are indebted for providing the financial backing for this project. We thank you for your input to the study—the information that you have provided as well as your unique insights and perspectives—and above all, for your continued financial support, which makes this study possible on a periodic basis.
- A continuing objective of ours every year is to obtain feedback from clients as to how we could improve the report. Our special thanks go to those subscribers who made the effort to engage with us in this process. We have used your valuable feedback to make modifications to the presentation, structure and content of the report.
- We would also like to record our thanks to all participants that contributed to this study, for the time and effort that they took to answer our questions and provide us with information. This study would not have been possible without their contribution.

List of Abbreviations used in this Document

We use the following abbreviations in this report:

ABM – Automated Banking Machine

bn – billion

CAGR – Compound Average Growth Rate

CCPS – Canadian Consumer Payments Survey

CPI – Consumer Price Index

FI – Financial Institution

GDP – Gross Domestic Product

GDV – Gross Dollar Volume (the total value of credit card transactions)

k – thousand

m – million

PCE – Personal Consumption Expenditure

trn – trillion

TSI – Technology Strategies International Inc.

The Canadian Economy



Economic Highlights

Indicator	2022	Real Growth (2021-2022)	2027	Real CAGR (2017-2022)	Real CAGR (2022-2027)
Gross Domestic Product (GDP – current\$)	\$2,783 bn	3.4%	\$3,277 bn	1.5%	1.5%
Personal Consumption Expenditure (PCE – current\$)	\$1,470 bn	4.8%	\$1,773 bn	1.4%	1.4%
Retail Sales (current\$)	\$735 bn	1.3%	\$889 bn	1.8%	1.5%
Population	39.3 m	2.3%	41.4 m	1.5%	1.1%

Economic growth moderates in 2022

Real growth in GDP maintained a healthy pace of 3.4% in 2022, somewhat lower than the 5.0% experienced in the rebound of 2021, but still significant enough for the Canadian economy to surpass the pre-pandemic level of GDP.

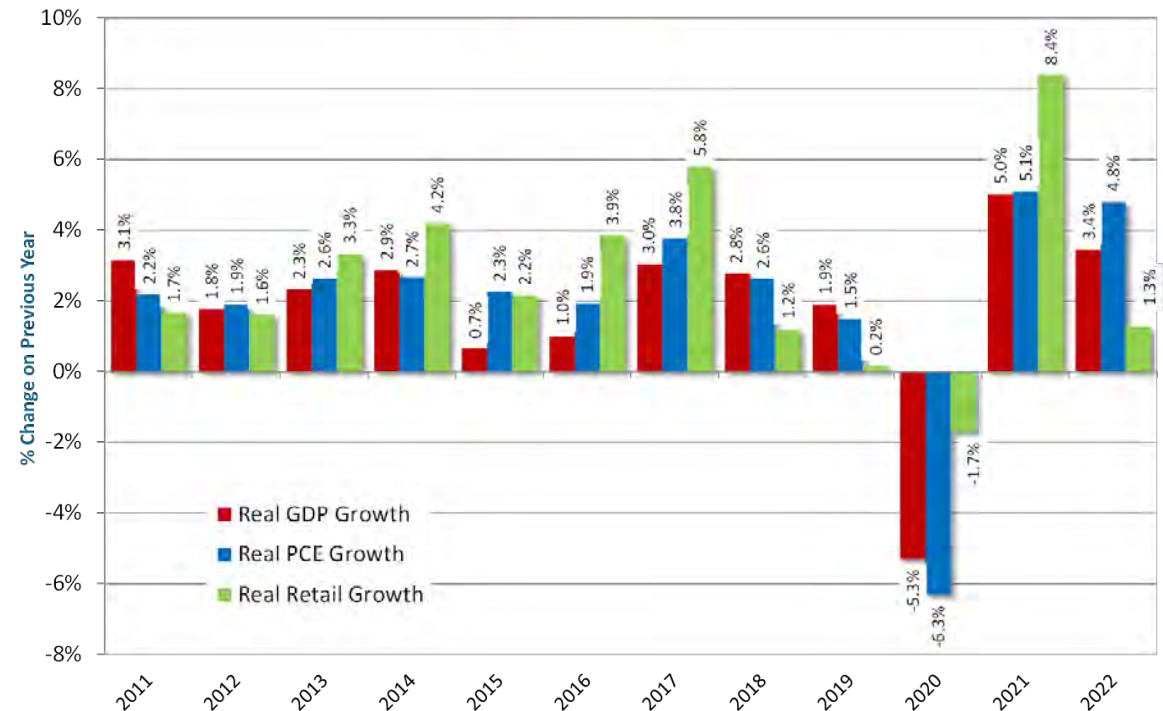
Real Personal Consumption Expenditure (PCE) increased by 4.8% in 2022, demonstrating an extended rebound as pent-up consumer demand is satisfied in the post-pandemic economy.

Growth in retail sales, which spiked at 8.4% in real terms in 2021, decreased dramatically to just 1.3% in 2022.

The real growth rates in GDP, PCE and retail sales hide the effects of inflation that took hold in 2021 and 2022. Nominal GDP grew by 10.6% in 2022. The inflation rate, as measured by the Consumer Price Index (CPI), was 6.8% for the year, and the GDP deflator was 7.2% indicating that there were significant inflationary forces at play both within the consumer sphere, as well as in the domains of business and government expenditure.

The nominal growth rate for PCE was 10.7% in 2022, while retail sales grew at a significantly lower rate of 8.1% in nominal terms over the year.

Annual Change in Real GDP, PCE and Retail Sales (2011-2022)



Source: Statistics Canada, TSI analysis

Retail sales exceeded \$735 bn in 2022

Canadian retail sector sales increased by 8.1% to \$753 bn in 2022. Over the past two years (2021 and 2022) more than \$127 bn has been added to retail sales. In part this was due to the post-pandemic rebound in retail purchases, but it is also indicative of the relatively high inflation environment over this period, indicating.

Automotive sales remained the single most dominant category in the retail sector in 2022, amounting to \$189 bn, adding just \$4.5 bn over the year, compared to the \$29 bn added in the peak rebound period of 2021. Automotive sales' share was 25.6% of total retail sales in 2022.

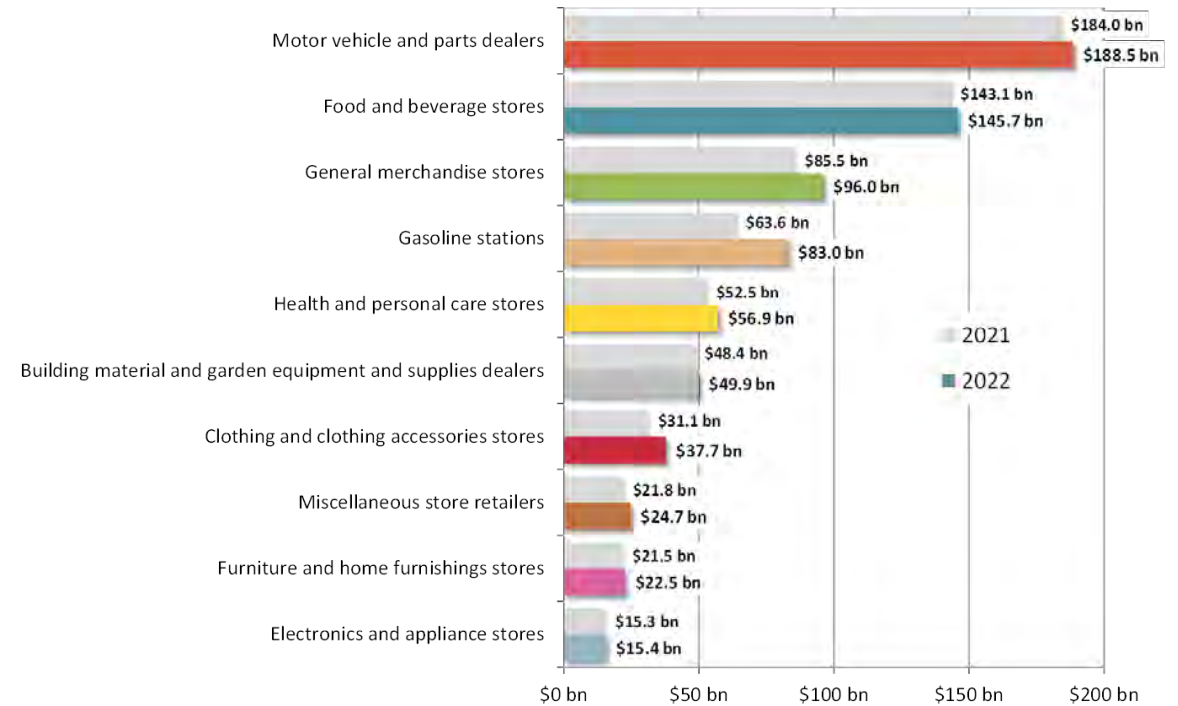
Non-auto retail sales weighed in at \$647 bn in 2022, growing by 10.2% in nominal terms over the year vs. only 2.5% for automotive sales.

Food and beverages, the next biggest retail category, accounted for \$146 bn in sales in 2022, a dismal 1.8% higher than the previous year suggesting that, given the high inflationary environment, consumers have cut back in real terms.

General merchandise stores and gasoline stations, the next largest segments, and which accounted for 17.6% and 15.2% of non-auto retail trade respectively, added almost \$30 bn to their sales in 2022.

Retail sales represented 50.0% of PCE in 2022, a slight decrease from the 51.2% recorded in 2021.

**Canadian Retail Sales by Sector
(2022)**



Source: Statistics Canada

Spike in gasoline sales in 2022

The high growth in retail sales in 2022 was spurred on by double-digit growth in four main retail segments: gasoline stations, clothing and accessories stores, general merchandise stores, and miscellaneous store retailers.

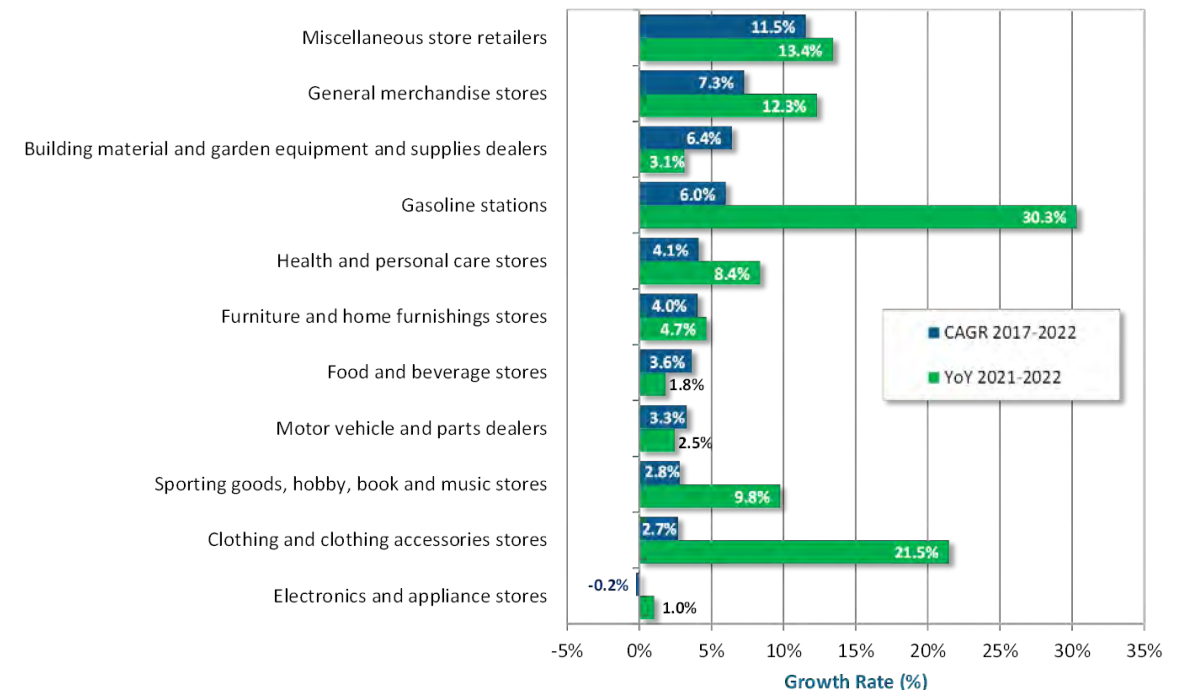
The spike in sales at gasoline stations was the most pronounced, with a growth of more than 30% over the year. This was a result of increased mobility in the post-pandemic period and also sky-rocketing gasoline prices, which have remained stubbornly high partly as a result of the war in Ukraine.

Clothing and accessories, the category that was hit hardest by the pandemic-related restrictions in 2020, grew by more than 20% in nominal terms for the second year in a row. By the end of 2022, sales in this category were 7.1% higher than in 2019.

Miscellaneous store retailers, general merchandise stores, building materials suppliers and gasoline stations have exhibited the highest average annual growth rates over the past five years, with miscellaneous store retailers experiencing a growth rate almost double that of gasoline stations.

Food and beverage sales showed the lowest growth over the year, at just 1.8% in nominal terms.

Growth in Retail Trade by Segment
(Growth in 2022; CAGR: 2017 - 2022)



Source: Statistics Canada

Lackluster GDP growth expected over the forecast period

Prospects for the Canadian economy remain uncertain. Inflation has been a top concern of the Bank of Canada for two years, and the Bank has acted with zeal to increase interest rates sharply over this period in an effort to curb inflation. There is concern among some economists that the central bank has gone too far and that their interest rate hikes could precipitate a severe recession. Others believe that there will be a 'soft-landing' and point to indicators of economic strength and resilience in the Canadian economy.

There are signs that the Bank of Canada's monetary policy initiatives are starting to have an impact on the economy and Canadian consumers. The unemployment rate is expected increase to about 6.3% in 2024, with CPI inflation weighing in at 2.3%, still slightly higher than the target rate of 2.0%. The impact of higher interest rates will have filtered through to consumers by the end of 2024, reducing demand for goods and services. However, the Bank of Canada has signalled that their interest rate hikes may not be at an end yet.

Our forecast is based on the view that real GDP growth will decrease to 0.8% in 2024 (a less pessimistic view than some of the doomsday scenarios), followed by a mild bounce-back in 2025. Growth throughout the remainder of the forecast period is expected to remain subdued with a slight cyclical downswing in 2026 and 2027.

**Forecast Real Growth in GDP
(2022 - 2027)**



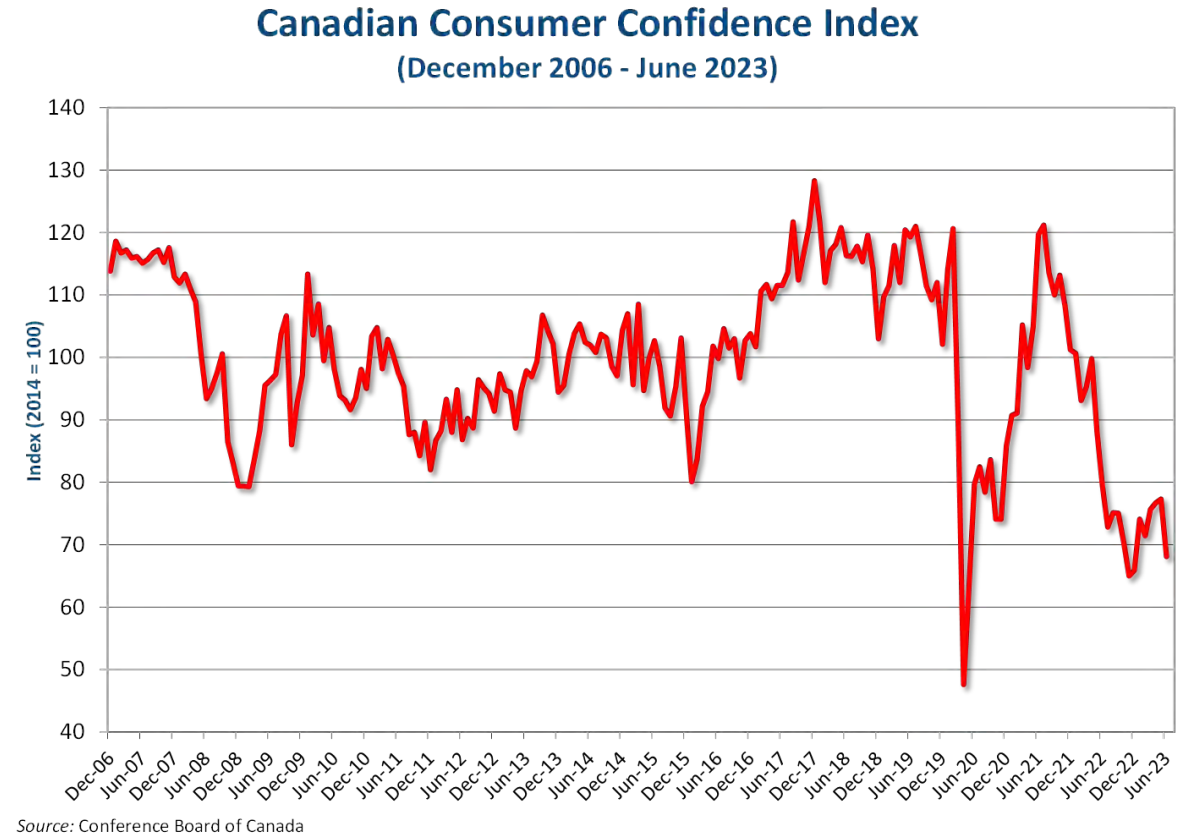
Sources: Various economic forecasts

Consumer confidence below levels of 2008 recession

The Conference Board of Canada's Consumer Confidence Index has plummeted dramatically since the local peak of 121.2 that it reached in July 2021. The spike in consumer confidence in 2021 was a result of the relaxation of pandemic related restrictions and hence more confidence amongst consumers that the worst was behind us.

Since then, consumer confidence has worsened considerably. The COVID-19 wave in December 2021 put a damper on confidence, but since then rapidly rising interest rates, the increasing cost of housing, continued supply chain issues, and increasing food and gasoline prices, prospects of a recession and as a result, job and income insecurity, have worked to demolish consumer confidence.

In June 2023, consumer confidence in Canada was lower than that at any time during the 2008/9 recession.



Recessionary forces shape the economic forecast

The real growth in GDP in 2023, which is expected to be just 1.8% over the year, will be supported by a modest 1.9% growth in PCE. Retail sales are expected to grow at just 1.1% in 2023.

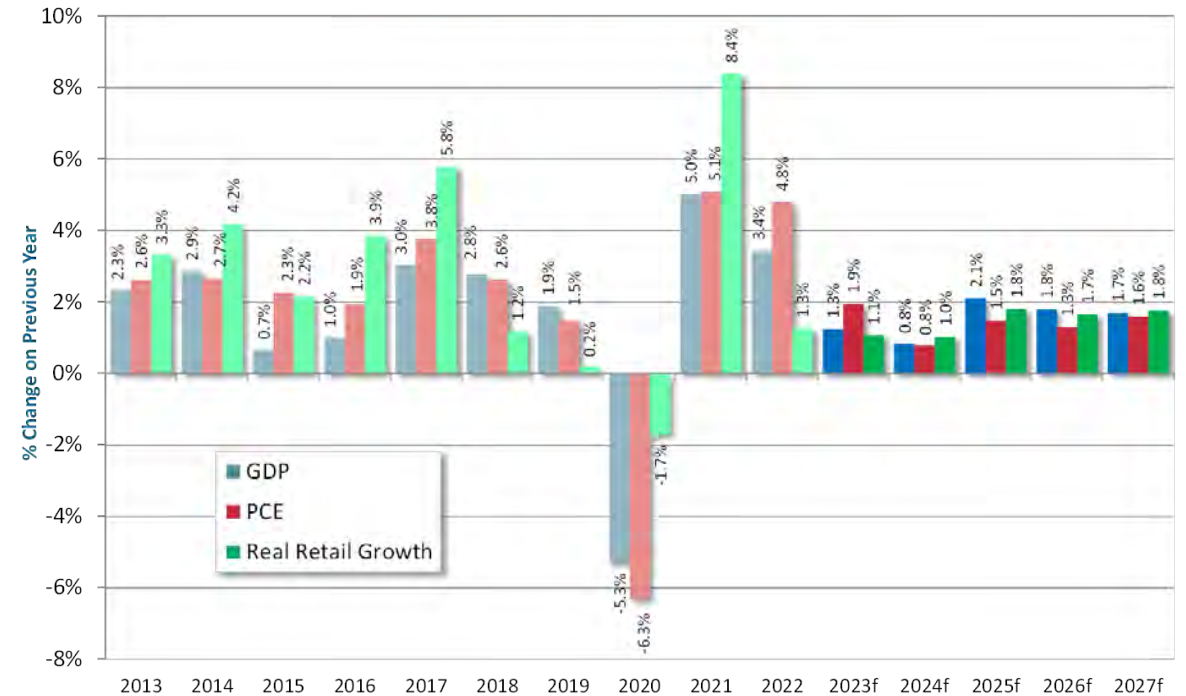
In 2024, we expect that the economy will be in a mild recession. Real GDP and PCE growth is forecast to grow at 0.8% each in that year, with retail sales showing a marginally higher growth rate at 1.0%.

Throughout the remainder of the forecast period, real growth in GDP, PCE and retail sales is expected to be modest at best, and well below Canada's economic capacity.

Real GDP growth is expected to average 1.5% p.a. (CAGR) over the period 2022 to 2027, which is the same growth rate experienced over the period 2017 to 2022. Real PCE is expected to grow at 1.4% p.a. (CAGR) over the forecast horizon, which is also the same average growth rate as in the prior five years. The corresponding real CAGRs for retail are 1.5% p.a. (2022 to 2027) and 1.8% p.a. (2017 - 2022) respectively.

By 2027, GDP is expected to reach \$3.28 trillion (current \$) with PCE making up \$1.77 trillion. Retail sales are expected to reach \$889 bn, more than \$150 bn more than in 2022.

**Forecast Real Growth in GDP, PCE
and Retail Sales (2022 - 2027)**



Sources: Various economic forecasts

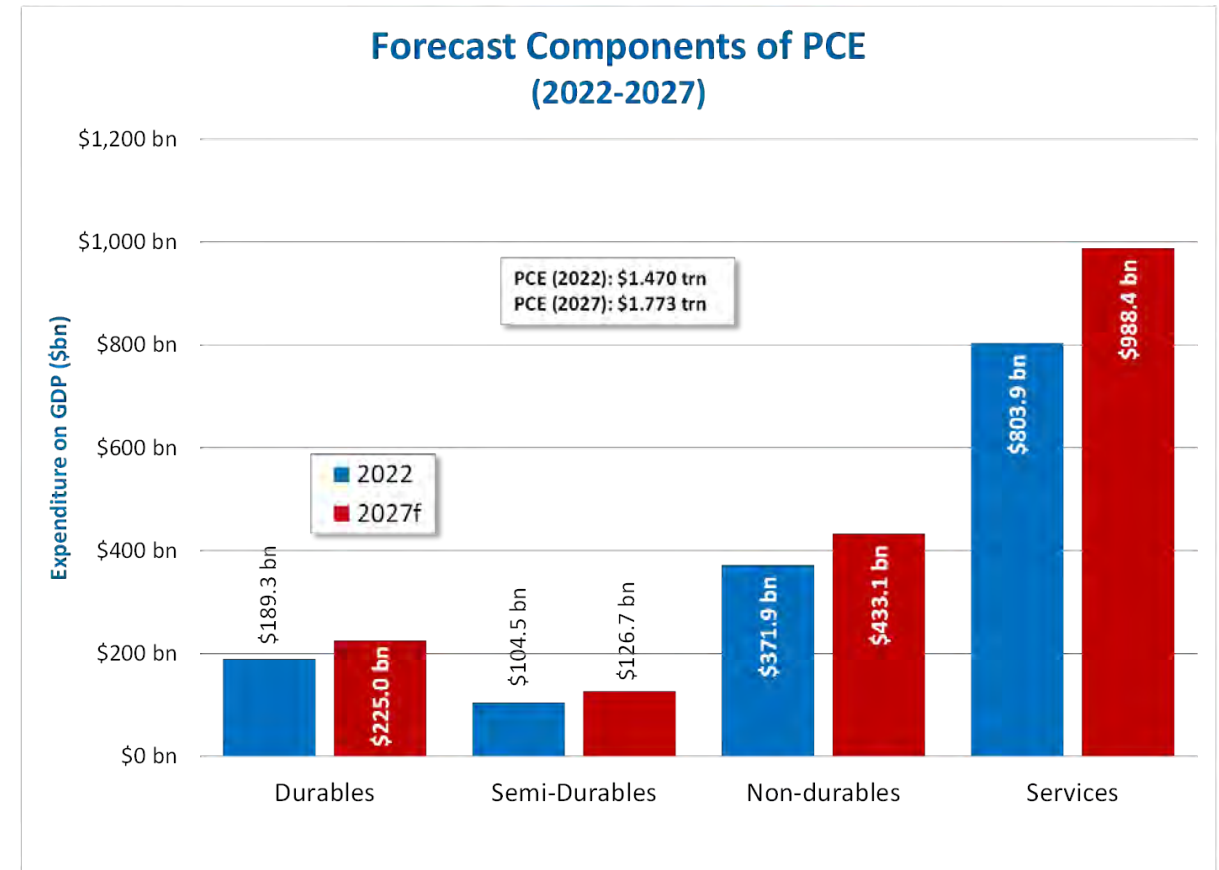
PCE to reach \$1.77 trillion by 2027

PCE is expected to weigh in at \$1.77 trn by 2027, adding more than \$300 bn over PCE in 2022, exhibiting an annual average growth rate (CAGR) of 3.8% p.a. in current dollars.

Indicator	2022 Share (%)	2027 Share (%)	Nominal CAGR (2022-2027)
Durables	12.9%	12.7%	3.5%
Semi-durables	7.1%	7.1%	3.9%
Non-durables	25.3%	24.4%	3.1%
Services	54.7%	55.7%	4.2%

The Services category of PCE is expected to increase its share of PCE from 54.7% in 2022 to 55.7% in 2027. The nominal growth rate in services is forecast to outstrip the growth rates of all other categories of PCE over the five-year forecast horizon, averaging 4.2% p.a. (CAGR). As a result, the increase in value of services is expected to account for 61% of the total increase in PCE over the forecast period, with the balance shared across all other categories.

Non-durables, which is the most stable component of PCE is expected to grow at an average rate of 3.1% p.a. in nominal terms (CAGR), adding more than \$60 bn to PCE by 2027.



Consumer Payments in Perspective



Primary Payment Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Value of Payment Transactions					
<i>Cash</i>	\$85.0 bn	20.5%	\$74.7 bn	-0.9%	-2.5%
<i>Cheque</i>	\$58.2 bn	13.6%	\$41.2 bn	-2.2%	-6.7%
<i>Debit Card*</i>	\$275.0 bn	7.8%	\$341.4 bn	3.3%	4.4%
<i>Credit Card</i>	\$803.2 bn	12.6%	\$1,050.6 bn	8.0%	5.5%
<i>All Other</i>	\$248.3 bn	4.5%	\$265.1 bn	-1.8%	1.3%
Volume of Payment Transactions					
<i>Cash</i>	2,845 m	17.0%	2,236 m	-8.5%	-4.7%
<i>Cheque</i>	154 m	9.9%	106 m	-2.3%	-7.2%
<i>Debit Card</i>	6,301 m	5.9%	6,950 m	1.7%	2.0%
<i>Credit Card</i>	8,592 m	10.9%	11,742 m	9.0%	6.4%
<i>All Other</i>	2,436 m	1.0%	2,656 m	-1.4%	1.7%

*The value of cashback transactions has been transferred to cash

Bill Payments Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
TOTAL Bill Payments and Transfers – All Channels	1,801 m	8.8%	2,366 m	10.0%	5.6%
Bill Payments	832 m	7.7%	1,298 m	12.9%	6.0%
<i>ABM</i>	<i>28.1 m</i>	<i>-3.0%</i>	<i>23.0 m</i>	<i>-3.1%</i>	<i>-3.9%</i>
<i>Telephone</i>	<i>13.6 m</i>	<i>-8.1%</i>	<i>9.1 m</i>	<i>-10.1%</i>	<i>-7.8%</i>
<i>PC/Internet</i>	<i>208.9 m</i>	<i>-6.3%</i>	<i>180.3 m</i>	<i>-4.6%</i>	<i>-2.9%</i>
<i>Mobile</i>	<i>581.8 m</i>	<i>14.9%</i>	<i>856.1 m</i>	<i>16.7%</i>	<i>8.0%</i>
Value of Bill Payments	\$117.4 bn	6.5%	\$160.0 bn	7.4%	6.4%
<i>Mobile</i>	<i>\$82.1 bn</i>	<i>13.7%</i>	<i>\$128.2</i>	<i>17.0%</i>	<i>9.3</i>
<i>All other channels</i>	<i>\$35.4 bn</i>	<i>-7.0%</i>	<i>\$31.8 bn</i>	<i>-4.5%</i>	<i>-2.1%</i>

Secondary Payment Highlights – Value of Payments

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Value of Payment Transactions					
<i>Online</i>	\$69.2 bn	9.8%	\$106.4 bn	12.4%	9.0%
<i>Contactless</i>	\$379.7 bn	17.6%	\$585.1 bn	23.2%	9.0%
<i>All Mobile (incl. in-store)</i>	\$104.8 bn	15.5%	\$190.9 bn	21.7%	12.7%
Mobile: In-Store Payments	\$10.8 bn	31.9%	\$36.3 bn	44.8%	27.5%
<i>Wearable payments</i>	\$0.62 bn	34.6%	\$2.4 bn	85.2%	31.3%
<i>Gift Card</i>	\$7.6 bn	52.1%	\$9.4 bn	15.4%	4.4%
<i>Prepaid Card</i>	\$2.3 bn	38.8%	\$3.6 bn	6.7%	9.3%

Secondary Payment Highlights – Transaction Volumes

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Volume of Payment Transactions					
<i>Online</i>	530 m	5.6%	701 m	9.0%	5.7%
<i>Contactless</i>	7,554 m	11.3%	10,235 m	17.2%	6.3%
<i>Mobile (incl. in-store)</i>	1,033 m	14.3%	1,974 m	22.2%	13.8%
Mobile – in-store payments	376 m	22.6%	944 m	33.0%	20.2%
<i>Wearable payments</i>	25 m	23.2%	75 m	24.3%	24.5%
<i>Gift Card</i>	99 m	31.8%	110 m	8.0%	2.2%
<i>Prepaid Card</i>	15 m	45.9%	19 m	2.1%	4.2%

Vertical Market Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Value of Payment Transactions					
<i>P2P Payments</i>	\$28.8 bn	25.9%	\$38.4 bn	6.3%	5.9%
<i>International Remittances</i>	\$13.0 bn	20.4%	\$11.1 bn	23.0%	3.1%
Volume of Payment Transactions					
<i>P2P Payments</i>	278 m	15.9%	317 m	7.7%	2.7%
<i>International Remittances</i>	29 m	22.2%	22 m	23.7%	-5.3%

Credit card payments dominate consumer payment landscape

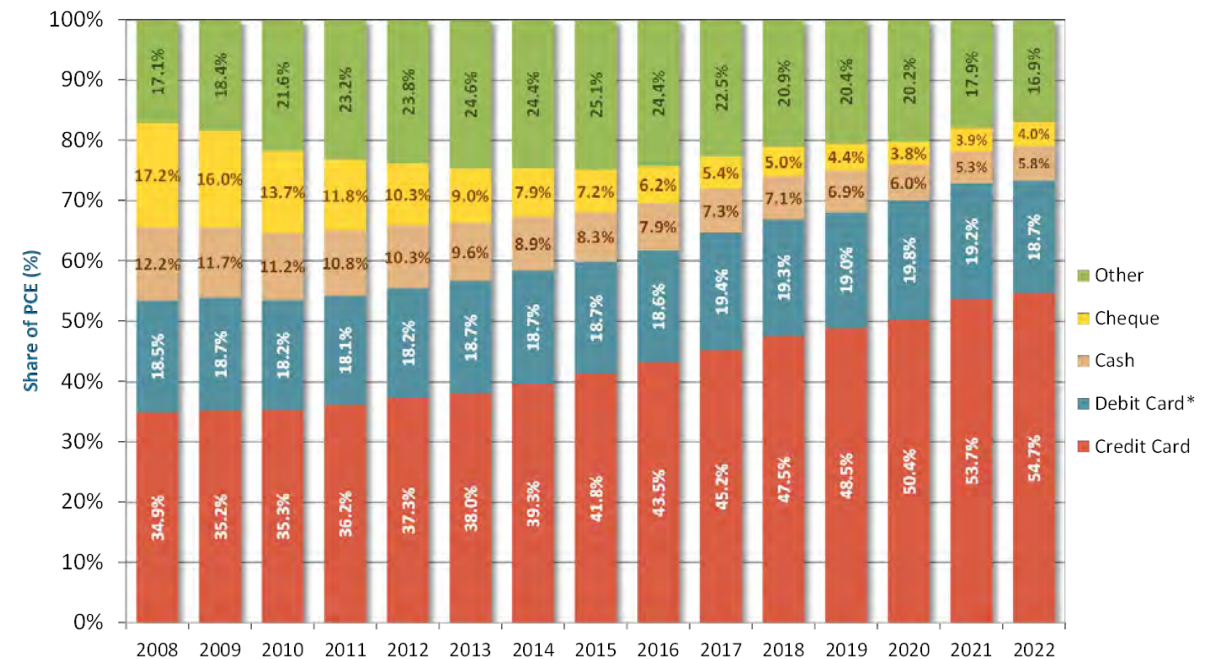
Consumer payments are linked to PCE. The structure of payments has changed dramatically over the years as electronic payments have gained traction, but credit cards' share of payments, by value, has exceeded that of all other primary payment mechanisms since 2020, reaching 54.7% in 2022. Debit's share of PCE was a little over one third of that in 2022, weighing in at just 18.7%. Debit's share by value was 50 basis points lower than in 2021.

Credit and debit card payments, between them, now account for 73.4% of the value of payments on PCE, representing \$1.08 trn in value in 2022.

These forms of payment have displaced specifically cash and cheque payments over the past two decades. Cash and cheques accounted for \$143 bn in value, or 9.7% of all payments in 2022. This is an increase from the 9.2% recorded in 2021, highlighting the fact that in the post-pandemic period there has been a rebound in both cash and cheque usage. However, in 2001 the combined value of cash and cheque payments accounted for 40.3% of PCE.

All other forms of payments, which includes preauthorized debits and direct transfers from a bank account, have shown a decrease in share over the past decade.

Share of Value of Personal Consumption Expenditure
by Payment Type (2008 - 2022)



Source: Numerous sources and TSI estimates

*Note: Cashback values have been removed from debit

Credit card transaction volumes grow rapidly

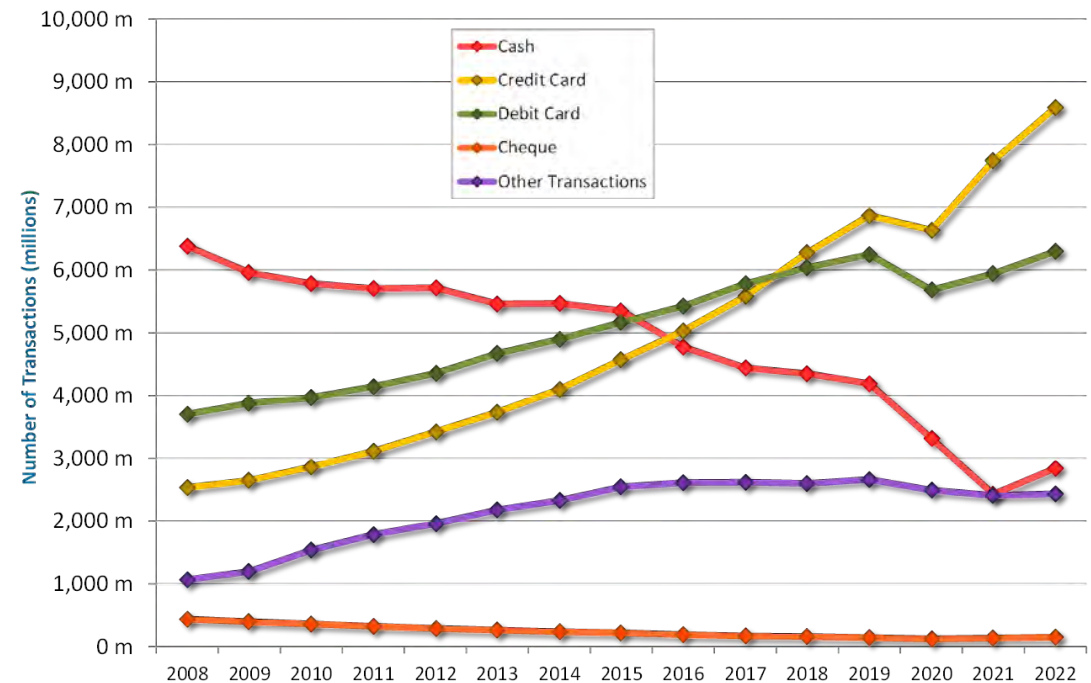
Prior to the COVID-19 pandemic, cash and cheque transaction numbers were on a long-term declining trend. In 2020 and 2021 cash usage plummeted as a result of the reduced ability of consumers to use cash for their purchases. The number of cash transactions in 2021 was only 58% of those in 2019. Cash transactions rebounded again in 2022, growing by 17.0% over the year, but remains well below pre-pandemic levels.

Cheque transactions, however, increased in both 2021 and 2022 (off a very low base), as did debit and credit card payment transactions.

Credit card and cash transactions both experienced double digit growth rates in 2022, while the growth in debit card transactions, at 5.9% was even lower than that for cheques (9.9%).

Growth in the number of credit card transactions has averaged a remarkable 9.0% p.a. (CAGR) over the 2017 to 2022 period, compared with 1.7% p.a. (CAGR) for debit card transactions. Consumer cash payment transactions have declined at an annual average rate of 8.5% p.a. (CAGR) over the past five years while the usage of cheques has declined on average at 2.3% p.a. (CAGR). The relatively slow rate of decline of cheques compared to cash over the past five years is a consequence of the significant rebound in cheque usage over the past two years, masking the long-term declining trend in cheque usage.

**Number of Payment Transactions
by Payment Instrument Type (2008 - 2022)**



Source: Interac, CBA, Payments Canada, Visa, MasterCard and TSI estimates

Credit card payments value set to approach 60% of PCE by 2027

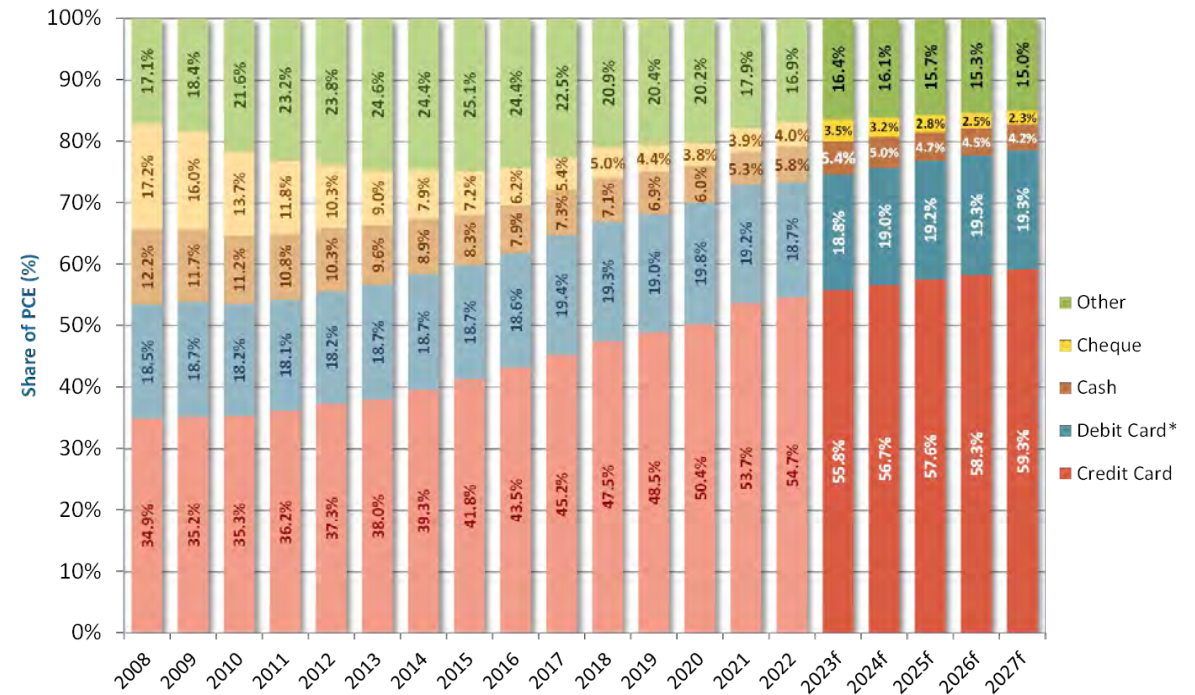
The COVID-19 pandemic and its fallout on the Canadian economy caused significant disruptions in the structure of payments, by value. The economic rebound in 2021 and 2022 has seen growth return to all primary forms of payment as PCE has grown. Although the value of cash and cheque payments increased in 2022, the share of PCE of each of these forms of payments has been on a monotonic decline since 2001. This decline in share of PCE is expected to continue throughout the forecast period, with cash and cheques accounting for just 6.5% of PCE by value by 2027, compared with 9.8% in 2022.

Debit and credit card payments are expected to continue to grow as a proportion of PCE over the period 2022 to 2027, accounting for almost 80% by 2027.

By value, credit cards will gain the most ground, at 59.3% of PCE by 2027, after having breached the 50% mark in 2020, and continuing to dominate the payments landscape by value by a wide margin.

Debit cards payments value is expected to account for 19.3% of PCE by value in 2027, edging up from 18.7% in 2022.

Forecast Share of Value of Personal Consumption Expenditure by Payment Type (2022 - 2027)



Source: TSI projections

*Note: Cashback values have been removed from debit



Credit card transactions to show strong growth to 2027

The total number of consumer payment transactions is expected to continue to grow from 2023 onwards, but growth will be limited to debit and credit card payments.

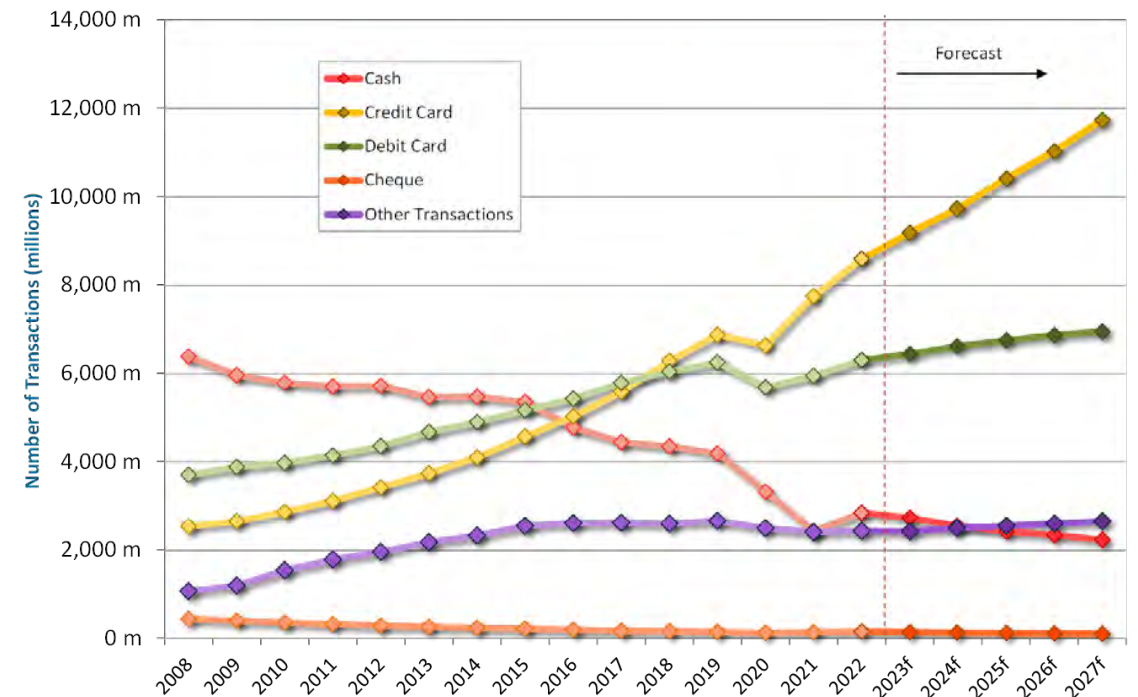
Growth in credit card transactions is expected to be particularly robust, averaging 6.4% p.a. (CAGR) over the period 2022 to 2027 and outstripping growth in debit card transactions by an average of 4.5% p.a. (CAGR).

The number of credit and debit transactions is expected to increase by a combined 3.8 bn transactions by 2027. In 2027, debit and credit payment transactions will account for 78.9% of all consumer payment transactions.

The number of cash transactions is expected to continue its descent, shedding 0.87 bn transactions by 2027, and accounting for 9.4% of all payment transactions on PCE in that year.

Personal cheque transactions will dwindle to an insignificant 106 m by 2027, with a share of just 0.4% of all PCE payment transactions, reinforcing its position as a niche payment instrument.

**Forecast Number of Payment Transactions
by Payment Instrument Type (2022-2027)**



Source: TSI projections

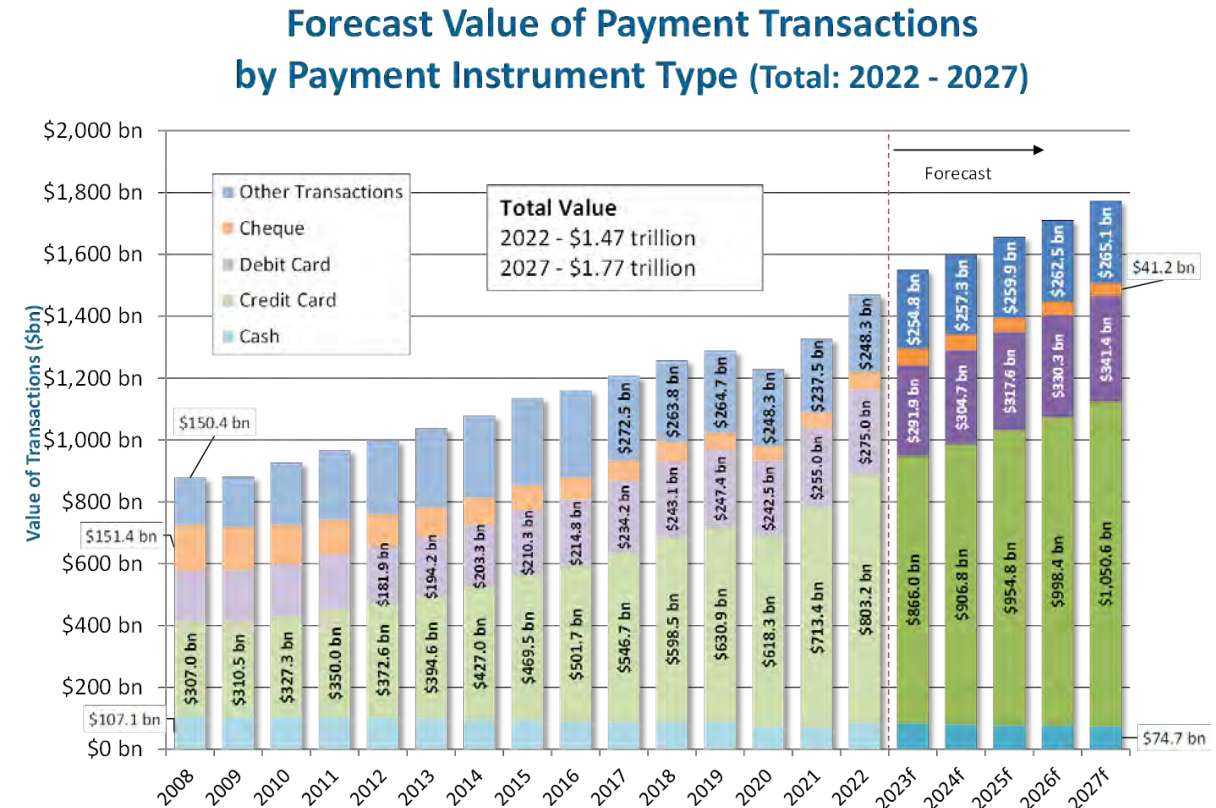
The total value of consumer payments to reach \$1.77 trn by 2027

PCE growth is expected to continue throughout the forecast period, reaching \$1.77 trn by 2027, representing an average annual growth rate of 3.8% p.a. in nominal terms.

By 2027, debit and credit card transactions will account for \$1.39 trn by value between them, or 78.5% of PCE. The combined value of credit and debit transactions is expected to increase by \$314 bn by 2027.

Between them, cash and cheques will reach \$116 bn by 2027, about \$27 bn less than in 2022.

The 'other' category will weigh in at \$265 bn by 2027, accounting for 15.0% of the value of all payments on PCE.



Source: TSI projections

Transaction volumes to approach 24 bn by 2027

The number of payment transactions on PCE breached the pre-pandemic levels by the end of 2022, totalling 20.3 bn transactions in that year. Growth is set to continue throughout the period 2023 to 2027, averaging 3.1% p.a. (CAGR) over the forecast horizon and adding 3.4 bn transactions over that period.

Debit and credit transaction volumes will continue to grow, while cash and cheque volumes will resume their downward trajectory.

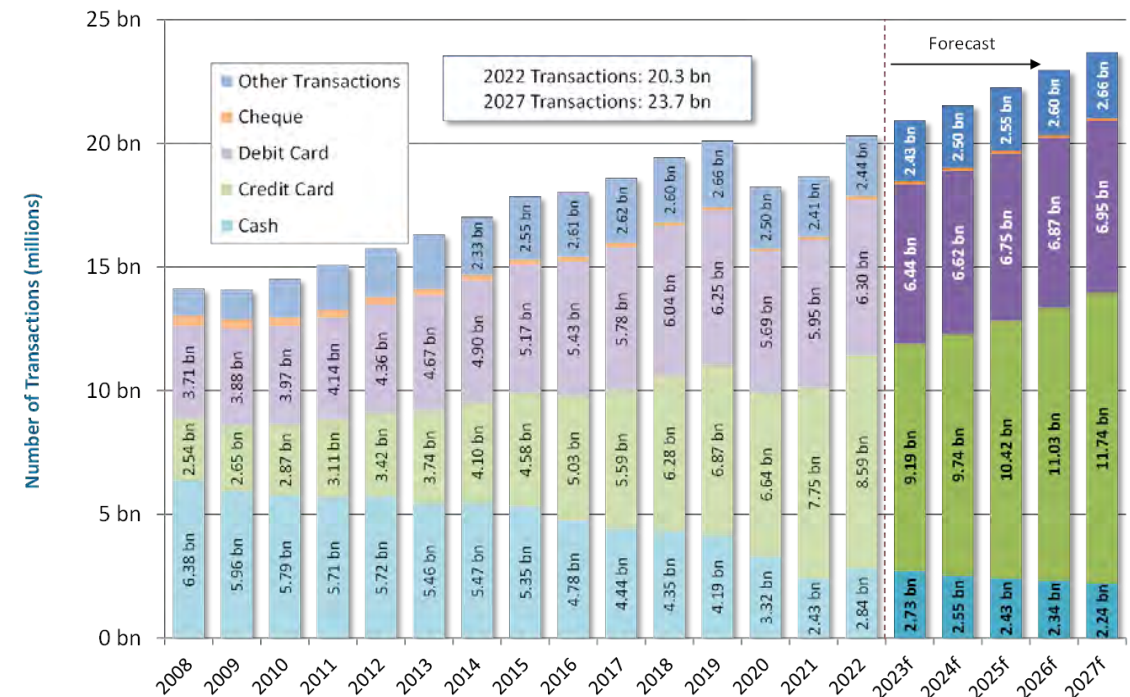
By 2027, the number of debit and credit transactions will reach 18.7 bn between them, accounting for 78.9% of all payment transactions on PCE.

Cash payments will drop to 2.2 bn by 2027, and account for 9.4% of all transactions on PCE, while cheque transactions will whisper in with just 0.4% of PCE, based on 106 m personal cheque payments.

The category of 'other transactions' is expected to reach 2.66 bn by 2027, and account for 11.2% of PCE transactions.

The total number of payment transactions on PCE is expected to reach 23.7 bn by 2027, a significant recovery off the local trough of 18.3 bn in 2020.

Forecast Number of Payment Transactions by Payment Instrument Type (Total: 2022 - 2027)



Source: TSI projections

Cash and cheque payments sustain declines over the long term

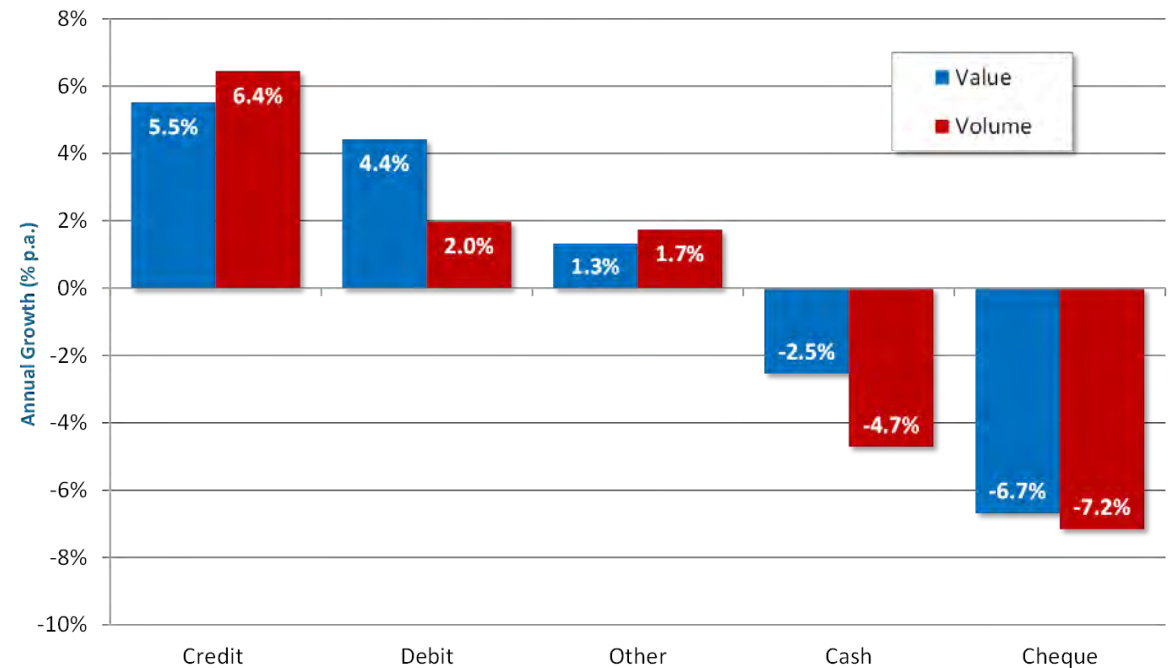
Growth in credit card transactions is expected to weigh in at 6.4% p.a. (CAGR) in transaction volumes, and 5.5% p.a. (CAGR) in value, over the period 2022 to 2027. The differential in volume and value growth rates points to a continued shift to lower payment value regimes for credit cards.

Growth in debit card value is expected to be 4.4% p.a. (CAGR) over the forecast horizon, lower than the comparable growth rate for credit card value. Debit card transaction volumes are projected to grow at 2.0% p.a. (CAGR), indicating a slight shift to higher average transaction values for debit transactions.

While there is still a large difference in average transaction values between credit and debit cards – the average value of a credit card transaction is more than twice that of the average debit card transaction – there is evidence of convergence between the two, albeit at a very slow rate. In 2022 the average debit card transaction was 47% of the average credit card transaction. By 2027 this proportion is expected to increase to 55%.

Both cash and cheques are expected to resume their long-term rate of decline in both value and transaction volumes, notwithstanding the volatility experienced throughout the COVID-19 pandemic and subsequent rebound.

Forecast Annual Growth Rates for Primary Payment Instruments (CAGR: 2022 - 2027)



Source: TSI projections

*Note: Cashback values have been removed from debit

In-store mobile and wearable payments set for high growth

Wearable payments are the highest growth segment in the consumer payments industry in Canada, with an annual average growth rate of 31.3% p.a. (CAGR) in value expected over the period 2022 to 2027. This is indicative of a market in the earliest stages of adoption.

The in-store mobile payments market is also expected to grow rapidly and appears to be on the verge of ignition. It is set to make a meaningful impact on the Canadian payments landscape by 2027, although it will be some years before it becomes mainstream.

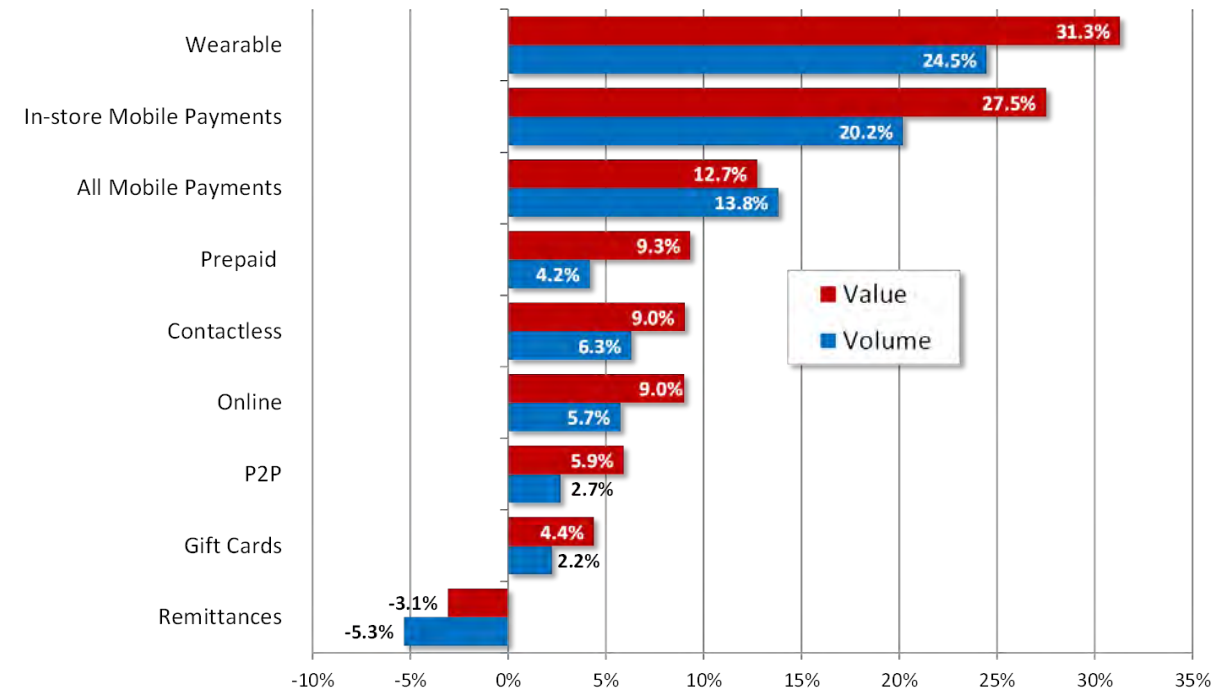
The bounce back in prepaid card purchases has been phenomenal, but the market is still plagued by extreme volatility.

Contactless payments, which are already very substantial in Canada and account for 25.8% of PCE by value, are projected to continue on a high growth trajectory, averaging 9.0% p.a. (CAGR) growth in value over the forecast horizon, and 6.3% in transaction volumes.

Growth in online payments, which surged during the worst period of the pandemic, is expected to moderate over the forecast period, although still recording high growth in value and volume.

The value of P2P and gift cards is expected to grow moderately over the forecast horizon, while the value and volume of remittances are expected to decline as the market settles back to its pre-pandemic levels.

**Forecast Growth for Secondary Payment Segments
(CAGR: 2022-2027)**



Source: TSI projections

Cash



Cash Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Cash Transactions					
<i>Value</i>	\$85.0 bn	20.5%	\$73.1 bn	-0.9%	-3.0%
<i>Volume</i>	2.84 bn	17.0%	2.19 bn	-8.5%	-5.1%
<i>Value of Average Transaction</i>	\$29.87	3.0%	\$33.43	8.4%	2.3%
Number of ABMs	67,727	-1.1%	68,505	-0.7%	0.2%
Cash Withdrawals (excl. Cashback)					
<i>Value</i>	\$70.7 bn	21.1%	\$63.6 bn	-2.6%	-2.1%
<i>Volume</i>	410.4 m	10.5%	350.5 m	-8.3%	-3.1%
<i>Value of Average Transaction</i>	\$172.19	9.5%	\$181.46	6.2%	1.1%
Value of Cashback Transactions	\$14.3 bn	18.1%	\$9.5 bn	12.1%	-7.8%

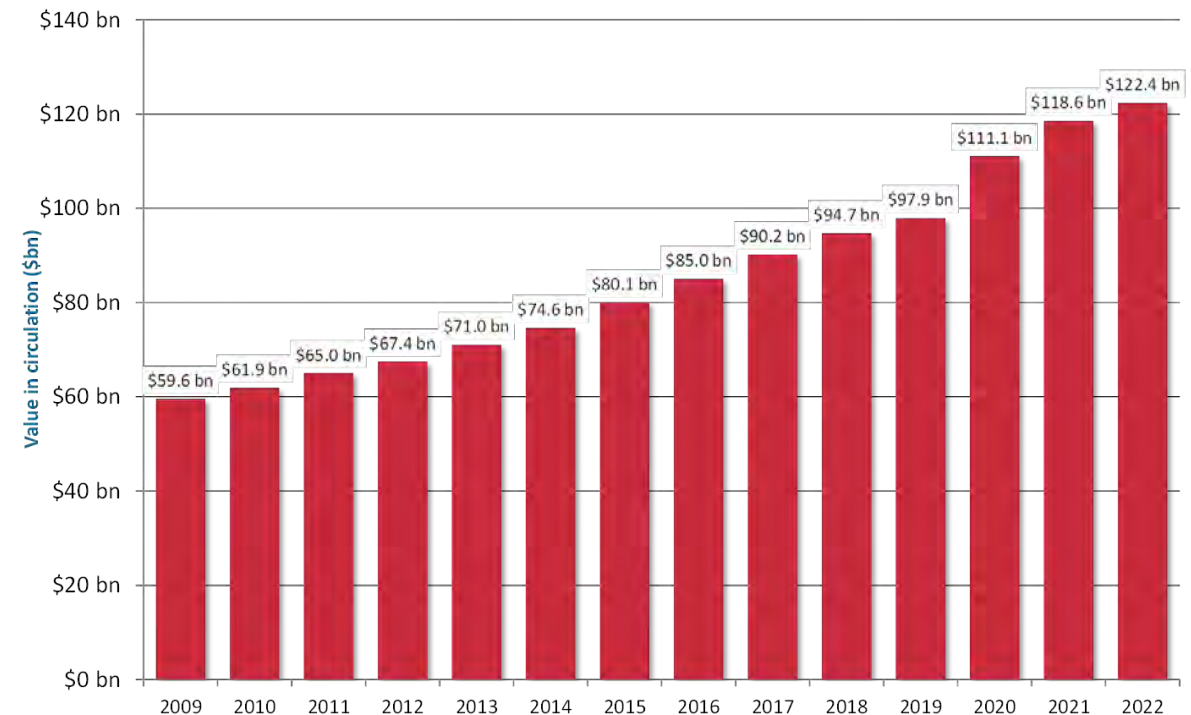
Cash in circulation increases modestly in 2022

The value of cash in circulation increased modestly in 2022, growing by 3.2% over the year, about half the rate of growth recorded in 2021, and reaching \$122.4 bn. Growth in 2021 was also about half of that in 2020, the height of the pandemic. Even though there was a sharp pull back in cash purchases during the various waves of the pandemic light, consumers and businesses stockpiled cash as an emergency source of funds. The lower growth in cash in circulation throughout 2021 and 2022 was a result of fewer businesses and consumers feeling the need to stockpile cash as well as drawing down on stockpiled cash reserves.

The value of cash in circulation has grown by 6.3% p.a. (CAGR) over the period 2017 to 2022, higher than the ten-year average growth rate of 6.1% p.a. (CAGR).

Coins made up approximately \$3.1 bn of the total cash in circulation in 2022, the lowest level since 2006. Coins in circulation have decreased by almost 36% since 2019.

**Canadian Bank Notes and Coin in Circulation
(2009 - 2022)**



Source: Bank of Canada

Installed base of ABMs dips in 2022

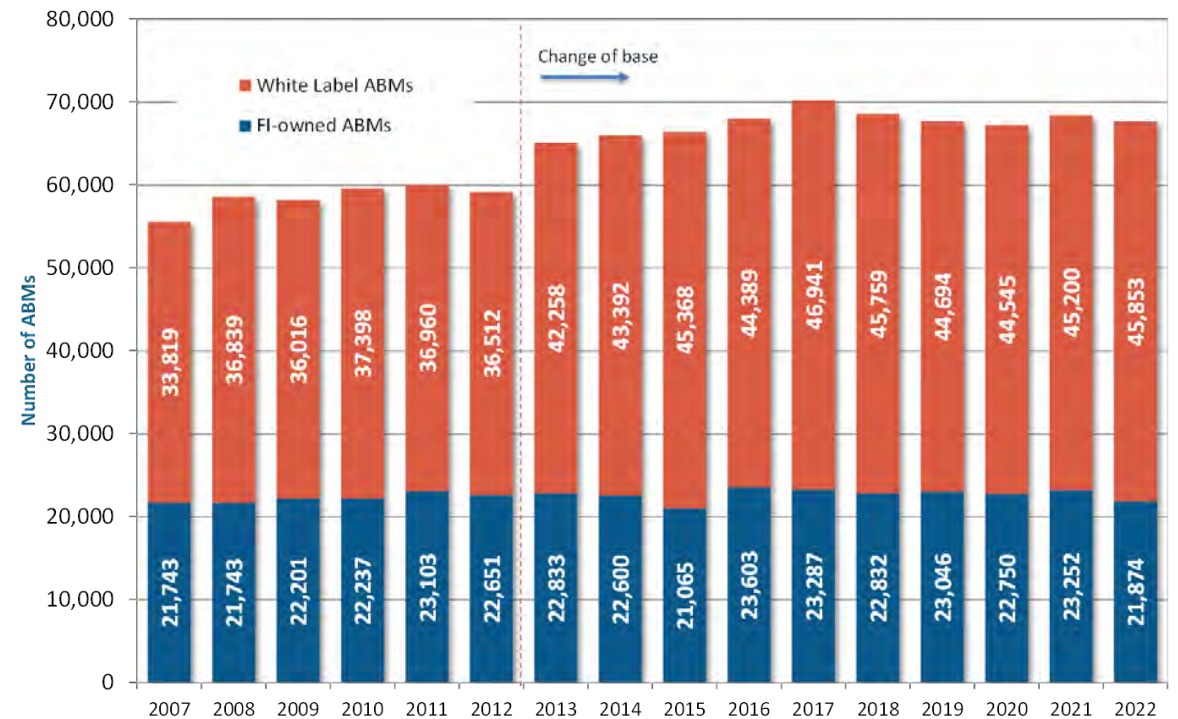
The installed base of ABMs was 67,727 units at the end of 2022, a decrease of 725 units, or 1.7% of the installed base. This may indicate that the declining trend that emerged from 2018 onwards has resumed after the brief uptick in 2021.

In 2022, financial institutions owned 21,874 operational ABMs, or 32.3% of the total installed base, with more than 80% of those being owned by the top eight FIs in Canada. The installed base of white-label ABMs amounted to 45,853 units.

The overall decrease in the size of the installed base of ABMs in 2022 was the result of an increase of 653 white-label ABMs over the year, offset by a decrease of 1,378 units among financial institutions. This represents a decrease in of 5.9% in FI-owned ABMs over the year, versus an increase of 0.1% for white-label ABMs. The drop in FI-owned ABMs is significant and is likely a consequence of branch consolidation and transformation.

Over the five-year period 2017 to 2022, the installed base of FI-owned ABMs decreased at a rate of 1.2% p.a. (CAGR) – which is similar to the rate of branch colures – compared with a decline of 0.5% p.a. (CAGR) for white label ABMs.

**Number of ABM's in Canada by Ownership
(2007 - 2022)**



Source: Interac

ABM withdrawals surge upwards in 2022

The volume of cash withdrawals at bank branches and ABMs in Canada has declined in most years since 2006. In 2022, the number of cash withdrawals increased by 10.5% over the previous year, to reach 410 m transactions.

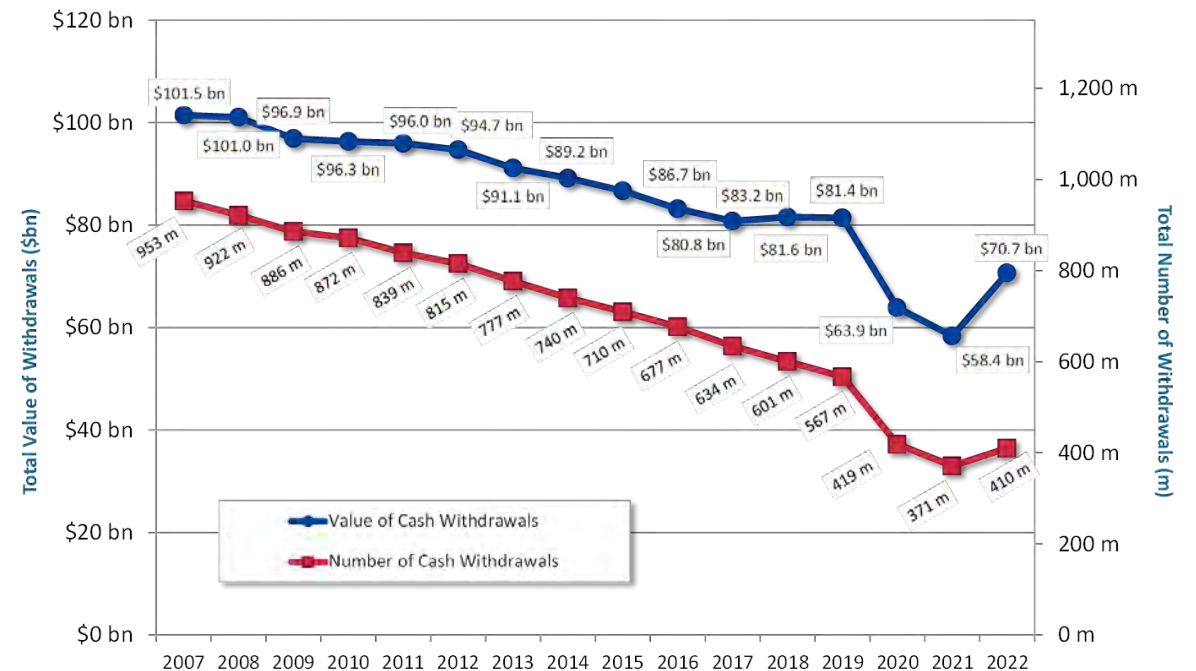
The value of these cash withdrawals increased even more significantly in 2022, from \$58.4 bn the previous year to \$70.7 bn, a growth of 21% over the year.

The increase in transaction volumes and total cash withdrawal values represents a reversal of the strong declines in 2020, suggesting that the switch to non-cash payments in 2020 did not represent a sustainable change in consumer behaviour. Rather, it was brought about by the exigencies of the situation and the increase in withdrawals demonstrates there was still a strong latent need for cash usage.

Over the period 2017 to 2022, the rate of decline in the value of cash withdrawals was 2.6% p.a. (CAGR) accompanied by a decline of 8.3% p.a. (CAGR) in the volume of cash withdrawals.

Average withdrawal values have increased from \$127.34 in 2017 to \$172.19 in 2022, representing a jump of 35% over this period. The increase in average withdrawal values is a continuation of the trend to pay fewer visits to ABMs.

Volume and Value of Cash Withdrawals in Canada (2007 - 2022)



Source: Payments Canada, Interac, Canadian Consumer Payments Survey and TSI estimates

Cash available for retail payments increases in 2022

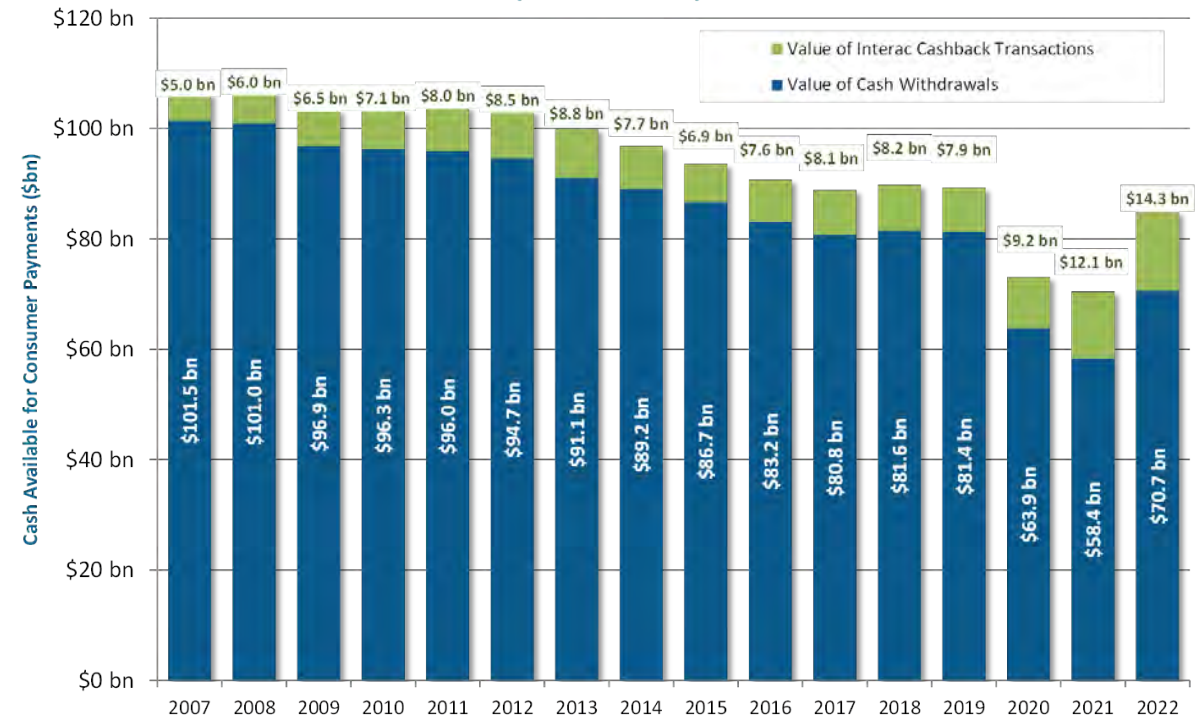
The total value of cash available for retail payments increased by 20.5% in 2022, reaching \$85.0 bn, more than \$14 bn more than in 2021. This resurgence of cash usage in the wake of the pandemic resulted in cash representing 5.3% of PCE by value, an increase of 50 basis points from 2021. Over the period 2017 to 2022, the value of cash-based retail payments decreased by 0.9% p.a. (CAGR).

The substantial return to cash usage in 2022 was accompanied by a high growth of 18.1% in the value Interac cashback transactions, amounting to \$14.3 bn and representing 16.8% of the total value of cash available for consumer payment transactions. This was the third straight year of supernormal growth in the value of Interac cashback withdrawals.

Over the period 2017 to 2022, the value of cash-based retail payments decreased by 0.9% p.a. (CAGR), while the value of Interac cashback withdrawals increased by 12.0% p.a. (CAGR), indicating a significant shift to Interac cashback withdrawals.

In 2022, the average cashback withdrawal value was \$75.45, an increase of 1.8% over the average withdrawal value of the previous year. Average cashback withdrawal transaction values were 43.8% of average cash withdrawal values at ABMs and bank branches in 2022.

**Cash Available for Consumer Payment Transactions
(2007 - 2022)**



Source: Interac, Canadian Consumer Payments Survey, TSI estimates

Consumer cash payments grow rapidly in 2022

In 2022, there were an estimated 2.84 bn cash-based consumer payment transactions in Canada*, an increase of 17.0% over the previous year. The large increase in cash transactions is a result of consumers resuming cash-based retail payments in the wake of the COVID-19 pandemic.

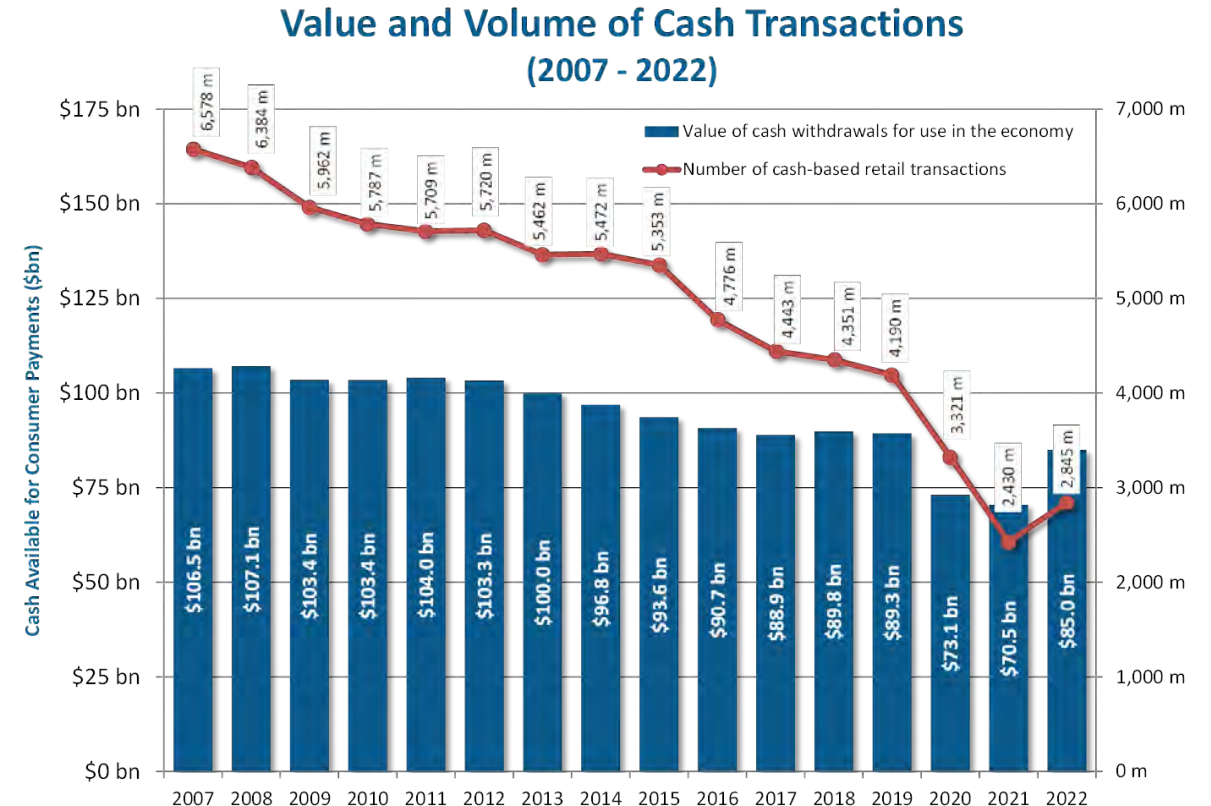
Many merchants resumed the acceptance of cash at checkout lanes in 2021 restoring it as a viable payment option for consumers, but the rebound in cash transactions only emerged in 2022.

The number of cash transactions represented 14.0% of all consumer payment transactions in Canada in 2022, a full percentage point higher than in 2021, indicating a return to more 'normal' consumer payment patterns. In 2001, cash payments accounted for 62.6% of all consumer payment transactions.

The number of cash payment transactions has declined at an average annual rate of 10.1% p.a. (CAGR) over the 2017 to 2022 period.

The average value of a cash purchase transaction was \$29.87 in 2022, an increase of 3.0% over the previous year, but a 35.8% increase over 2020 (see note below).

***Note:** We have undertaken a major revision of the time-series representing the number of cash-based payment transactions made by consumers in the Canadian economy. This update has been based on revised estimates of average transaction values using Bank of Canada (BoC) survey data, which show significant increases in average transactions values over the past two years. As a result, the number of cash payment transactions has shown much larger declines than in our previous estimates.



Source: Interac, Canadian Consumer Payments Survey, TSI estimates

ABM installed base remains stable over the forecast horizon

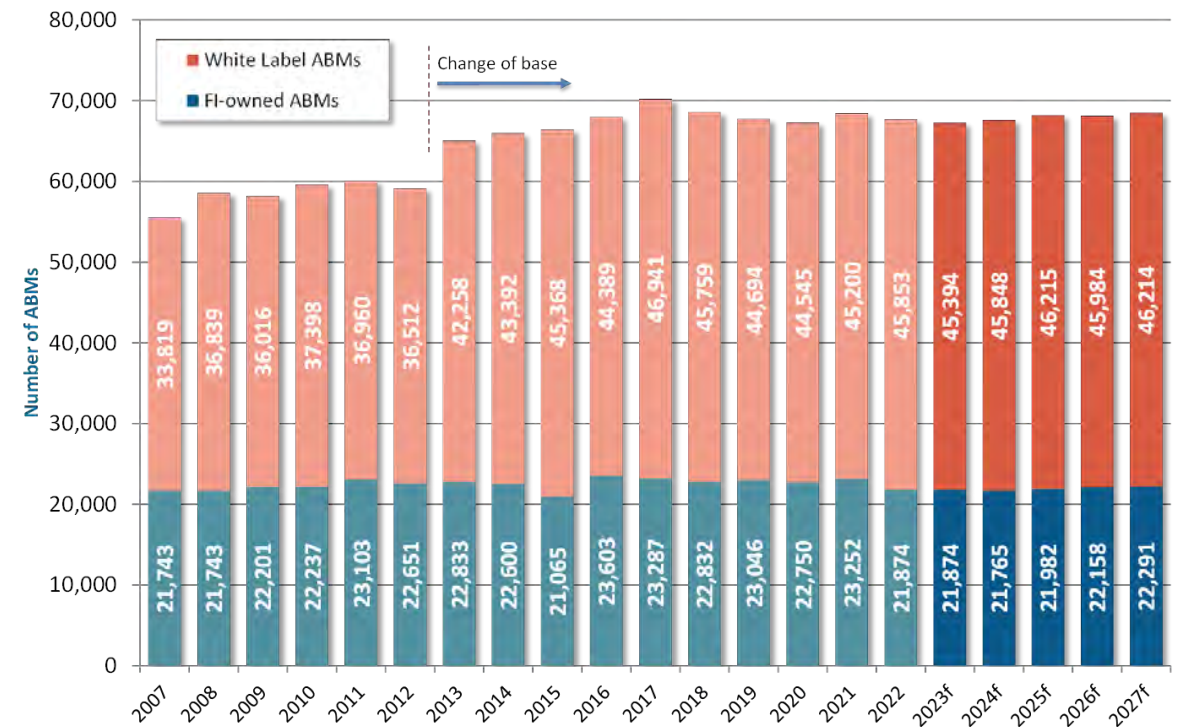
There are a number of different dynamics at play in the ABM market. Population growth keeps the long-term overall decline in cash usage at Fis moderate levels, even though per capita cash usage is declining more rapidly. Increased population would put upward pressure on the number of ABMs required to serve the population, but this is offset by the decline in cash usage.

FI-owned ABMs typically have more than double the number of cash withdrawals per ABM than white-label ABMs (while transaction values are similar). Consumers also have a strong preference for using ABMs from their own financial institution due to the costs of withdrawals at other ABMs and to brand loyalty, whereas the core value proposition of a white-label ABM is locational convenience.

The number of ABMs installed in Canada is likely to remain relatively stable over the next five years, with most of the new ABMs installed representing replacements for existing installations. This is characteristic of a mature and saturated market.

The number of bank-owned ABMs is set to increase by 0.4% p.a. (CAGR) over the period 2022 to 2027, versus 0.2% p.a. (CAGR) for white-label ABMs. In total, we expect an additional 778 ABMs to be installed over this period.

**Number of ABM's in Canada by Ownership
(2022 - 2027)**



Source: Interac, TSI projections

Cash withdrawals to resume modest downward trend

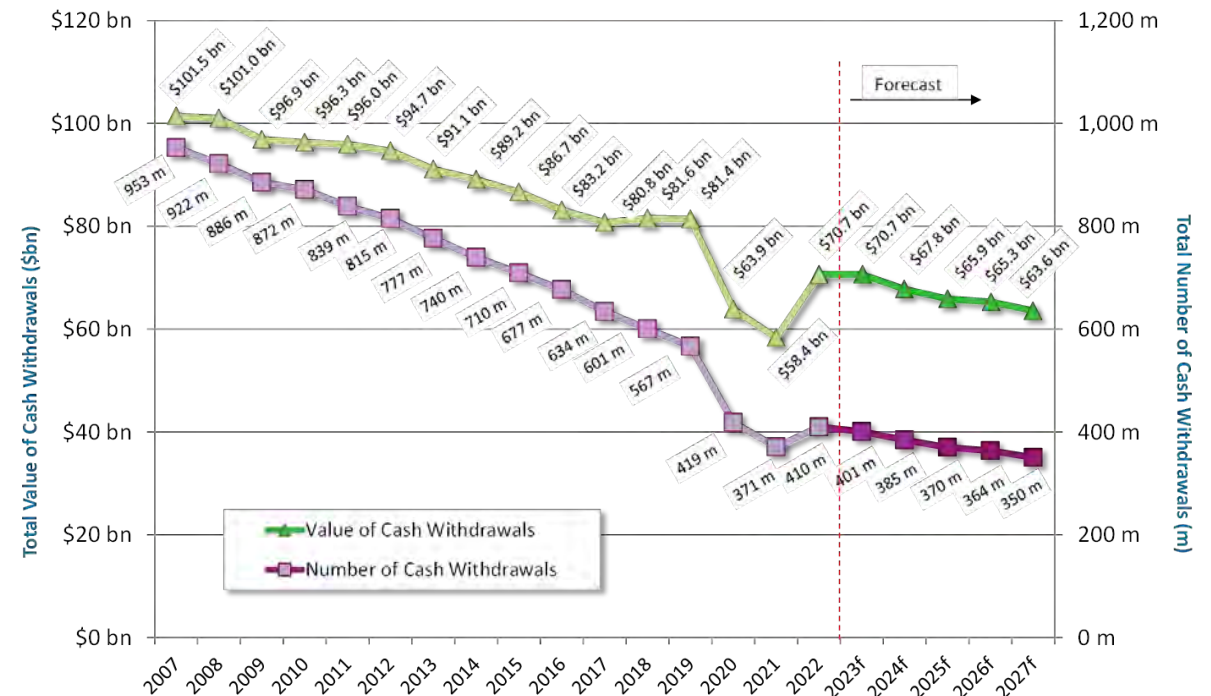
The sharp downward reduction in the value of cash withdrawals at banks and ABMs experienced in 2020 and to a lesser extent in 2021 was followed by a strong resurgence in 2022. However, the value of cash withdrawals is expected to remain stable in 2023 before settling on a steady, but modest, downward trajectory throughout the forecast period as more and more opportunities emerge for substitution of cash payments with digital payments.

The value of cash withdrawals from bank branches and ABMs is expected to decrease to \$63.6 bn by 2027, shaving off \$7.7 bn from 2022. This represents an annual average decline of 2.1% p.a. (CAGR) over the five-year period.

The number of cash withdrawal transactions is expected to decrease by an average of 2.1% p.a. (CAGR) over the period 2022 to 2027, reaching 350.5 m in 2027.

The average value of a bank and ABM cash withdrawal transaction is expected to increase from \$172.19 in 2022, to \$181.46 in 2027, representing an annual increase of 1.1% p.a. (CAGR) over this period.

**Forecast Volume and Value of Cash Withdrawals
(2022 - 2027)**



Source: TSI projections

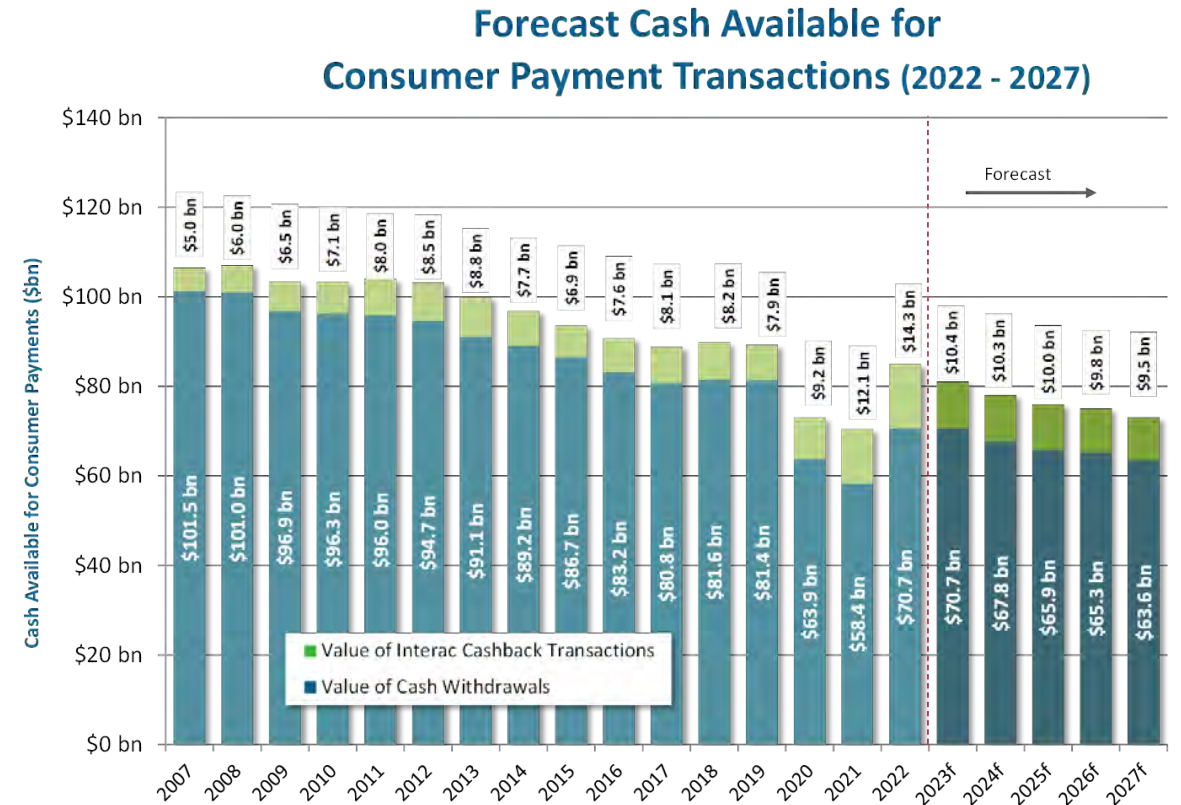
Cash payments set to resume their long-term decline

The resurgence of cash usage in 2022 is expected to be short lived, with a return to the long-term declining trend from 2023 onwards. Over the long term, the switch to digital payment mechanisms is likely to endure and continue throughout the forecast period.

By 2027, we expect that Interac cashback withdrawals will drop to \$9.5 bn in that year, a decline of 7.8% p.a. (CAGR) from the high recorded in 2022. That, combined with the \$63.6 bn in cash withdrawals at banks and ABMs in that year, will see the total value of cash available for consumer payments drop to \$73.1 bn by 2027. This represents a 3.0% p.a. decline over the period 2022 to 2027.

The number of cashback transactions is expected to decrease significantly to 120 m by 2027, from a high of 190 m in 2022.

The share of PCE accounted for by cash transactions, based on value, is expected to drop to 4.2% by 2027, from 5.8% in 2022.

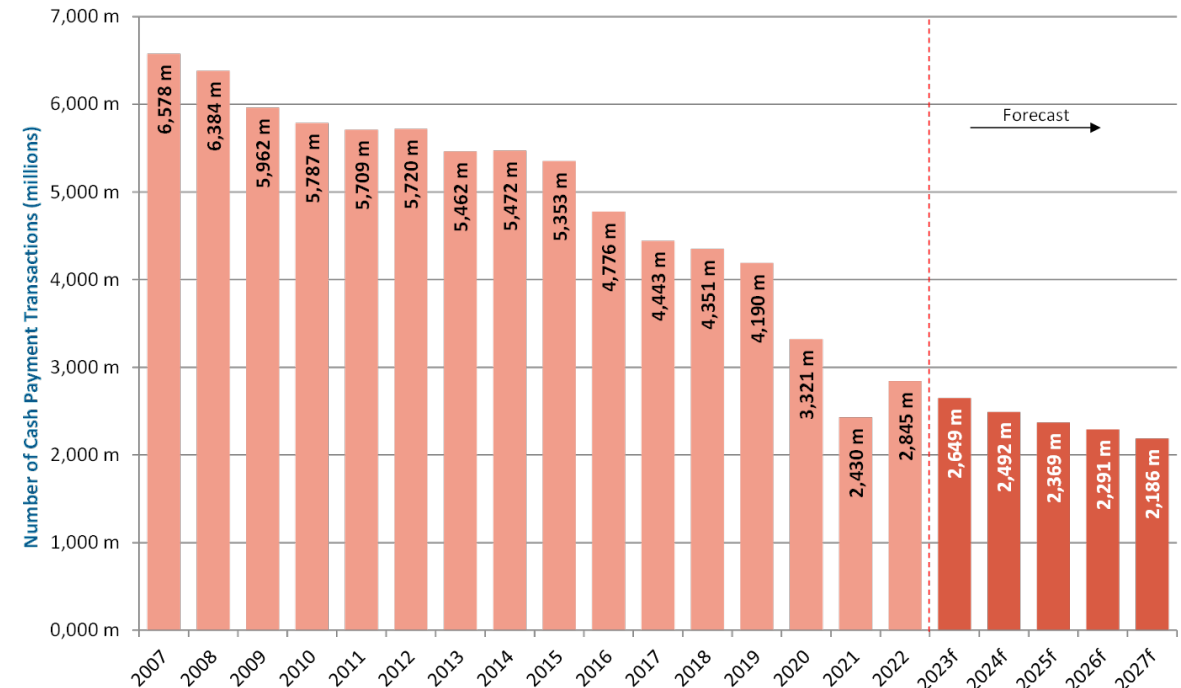


Number of consumer cash payments to decrease steadily

The volume of cash-based consumer payment transactions is expected to continue its long-term downward trend throughout the forecast period, decreasing from 2.44 bn cash-based retail payment transactions in 2022 to 2.24 bn in 2027, shaving off about 200 m transactions over the period. This represents an annual average decline of 4.7% p.a. (CAGR) over the forecast horizon.

By 2027, cash transactions will account for just 9.4% of all consumer payment transactions, a drop of more than four percentage points from 2022.

Forecast of Cash-based Retail Payment Transaction Volumes in Canada (2022 - 2027)



Source: TSI projections

***Note:** We have undertaken a major revision of the time-series representing the number of cash-based payment transactions made by consumers in the Canadian economy. This update has been based on revised estimates of average transaction values using Bank of Canada (BoC) survey data, which show significant increases in average transactions values over the past two years. As a result, the number of cash payment transactions has shown much larger declines than in our previous estimates. This has also affected our forecasts.

Cheques



Cheque Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Personal Cheques					
<i>Value</i>	\$58.2 bn	12.5%	\$41.2 bn	-2.2%	-6.7%
<i>Volume</i>	153.5 m	9.8%	105.9 m	-2.3%	-7.2%
<i>Value of Average Transaction</i>	\$378.99	2.5%	\$388.81	0.2%	0.5%

Cheque payments increase in 2022

The value of personal cheque payments increased to \$58.2 bn in 2022, 12.5% higher than the previous year, and the second year of growth for a payment mechanisms that has been in decline since 2008. The value of cheque payments in 2022 was only 38.4% of the peak value of \$151.4 bn recorded in 2008. At the end of 2022, personal cheque payments accounted for 4.0% of PCE.

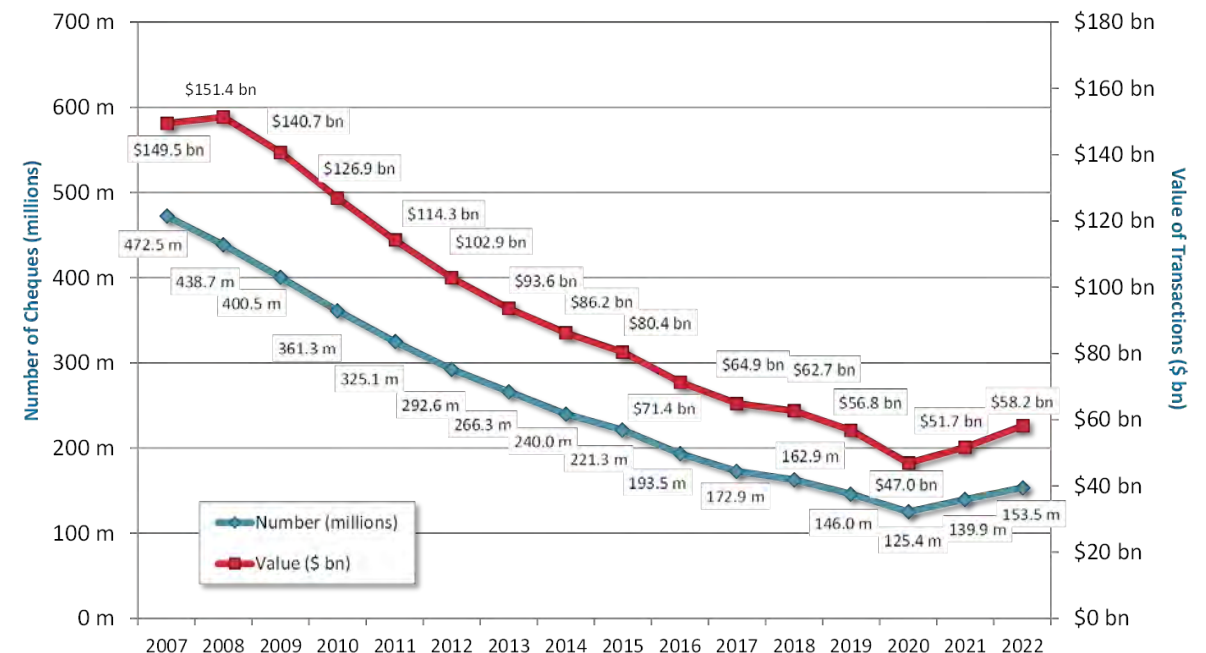
The volume of consumer cheque transactions in 2022 increased from 139.9 m to 153.5 m, an increase of 13.7 m cheque payments over the year, representing an annual growth of 9.8%.

Over the period 2017 to 2022, the value of personal cheques used for consumer payments declined at an average annual rate of 2.2% p.a. (CAGR). This is a significantly slower rate of decline than the average rate of decline experienced over the pre-pandemic period from 2008 to 2019. The increases over the past two years have served to mask the long-term rate of decline,

The volume of personal cheques declined at a comparable rate of 2.3% p.a. (CAGR) over this period.

The average personal cheque transaction value was \$378.99 in 2022, an increase of 2.5% over the previous year. The average value of personal cheques has increased at 0.2% p.a. (CAGR) since 2017.

Volume and Value of Personal Cheques Cleared through the ACSS in Canada (2007 - 2022)



Source: TSI estimates

Increase in cheque payments across most categories

The increase in cheque payments observed from the lows recorded in 2020 have resulted in an increase in the incidence of payments across most categories for which cheques are used.

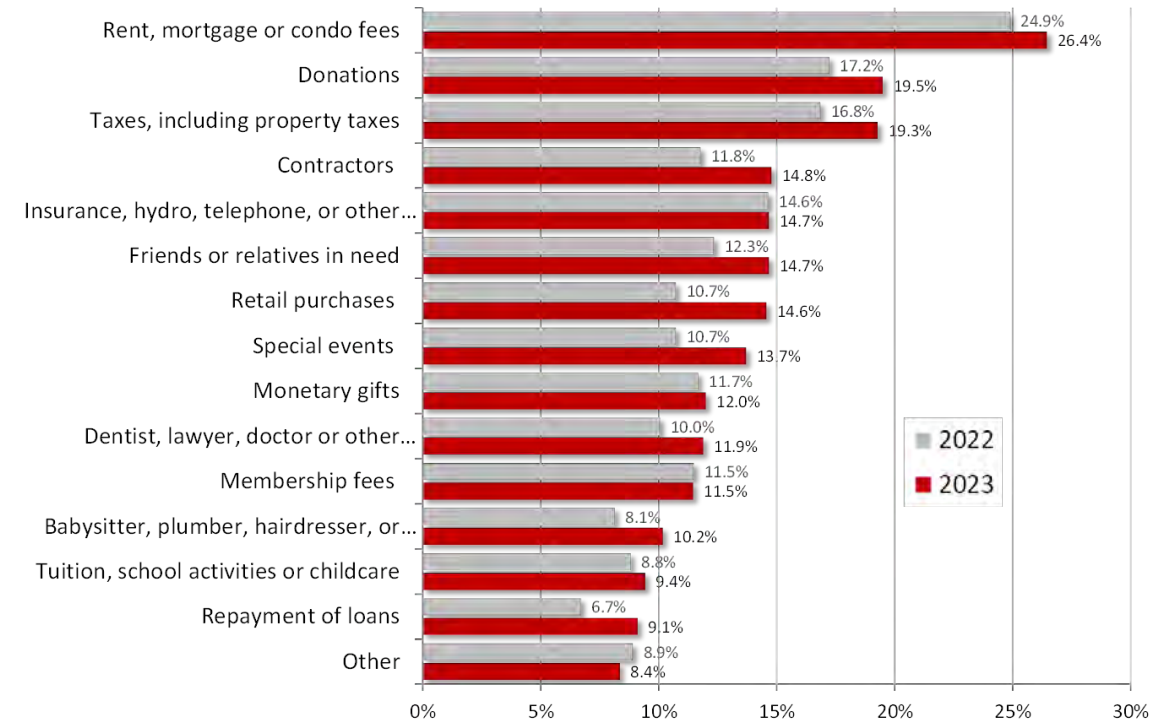
Rent/mortgage payments continue to be the most common reason cited for using personal cheques for payments, with more than one quarter (26.4%) of cheque users in the 2023 CCPS mentioning this category.

Payments for special events, at retailers, and for contractors saw the most dramatic increase in incidence over 2022, indicative of the fact that many activities that were put on hold during the pandemic (e.g. weddings, in-person shopping, renovations), resumed in 2022 and early 2023.

The increase in the use of cheques at retail locations over the year, despite the myriad of alternative payment options, is perhaps the most surprising development.

In 2022, the average value of the personal cheque written was four times the value of the average credit card transaction, almost nine times the value of the average debit card transaction and more than 12 times the average cash transaction value.

Reasons for Cheque Usage (P12M)



Base: Respondents who paid with cheques P12M 2023 (n=934)

Source: Canadian Consumer Payments Survey
Note: Responses include multiple mentions

Use of personal cheques to resume long-term downward trend

The resurgence in cheque usage in 2021 and 2022 is expected to be short-lived, and from 2023 onwards the value and volume of personal cheque payments is expected to resume its long-term decline.

In 2023, the number of personal cheques used for payments is expected to decrease by 5.9% to 144.5 m, while the total value of personal cheque payments is expected to drop by 5.5% to \$55.0 bn.

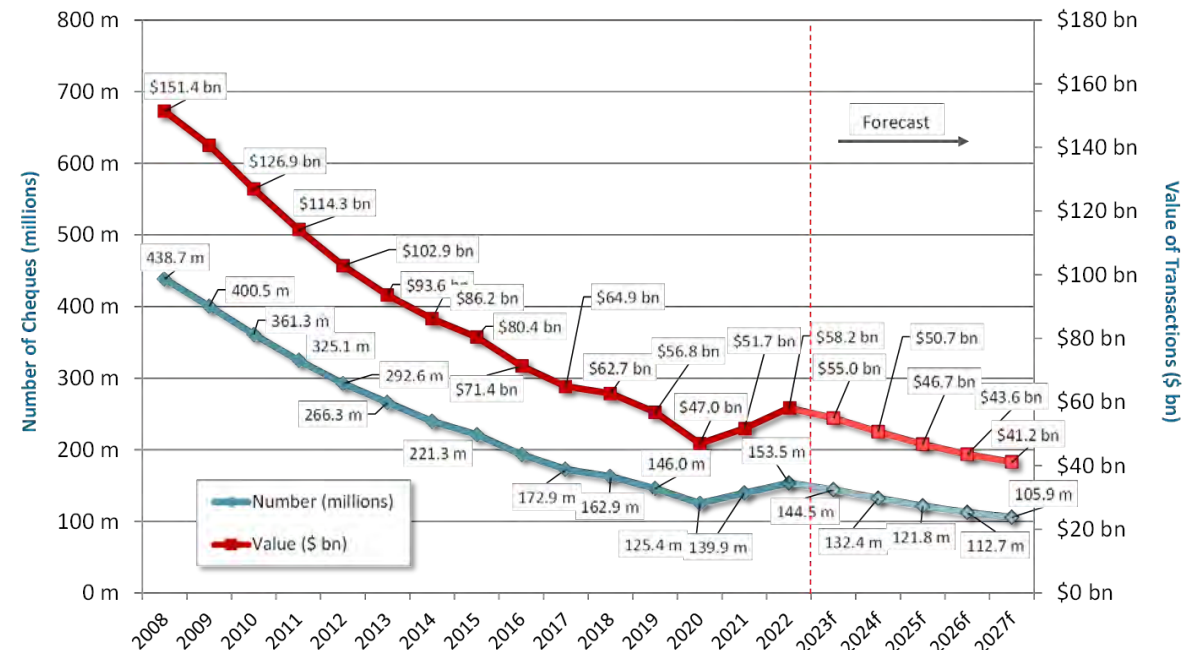
In the remaining four years of the forecast horizon the total value of personal cheque payments is expected to decrease at 7.0% p.a. (CAGR) to \$41.2 bn, while the number of personal cheques written will decrease by 7.5% p.a. (CAGR) to 105.9 m.

By 2027, we expect that the total value of personal cheque payments in Canada will account for just 2.3% of PCE.

The number of personal cheque payments will only account for 0.4% of all payments on PCE by 2027.

The average value of personal cheques used for payments is expected to increase at the very modest rate of 0.5% p.a. (CAGR) over the period 2022 to 2027. The average cheque transaction value is expected to reach \$388.81 by 2027. This will still be lower than the average value of personal cheques written in 2019, which peaked at \$389.21.

Forecast Volume and Value of Personal Cheques Cleared through the ACSS in Canada (2022-2027)



Source: TSI projections

Debit



Debit Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Interac Debit Payments					
<i>Value (includes cashback)</i>	\$289.31 bn	8.3%	\$350.9 bn	3.6%	3.9%
<i>Volume</i>	6,301 m	5.9%	6,950 m	1.7%	2.0%
<i>Value of Average Transaction</i>	\$45.92	2.2%	\$50.50	1.9%	1.9%
Interac Debit Merchants	482,800	3.8%	506,087	0.9%	0.9%

Value of debit card payments increases in 2022

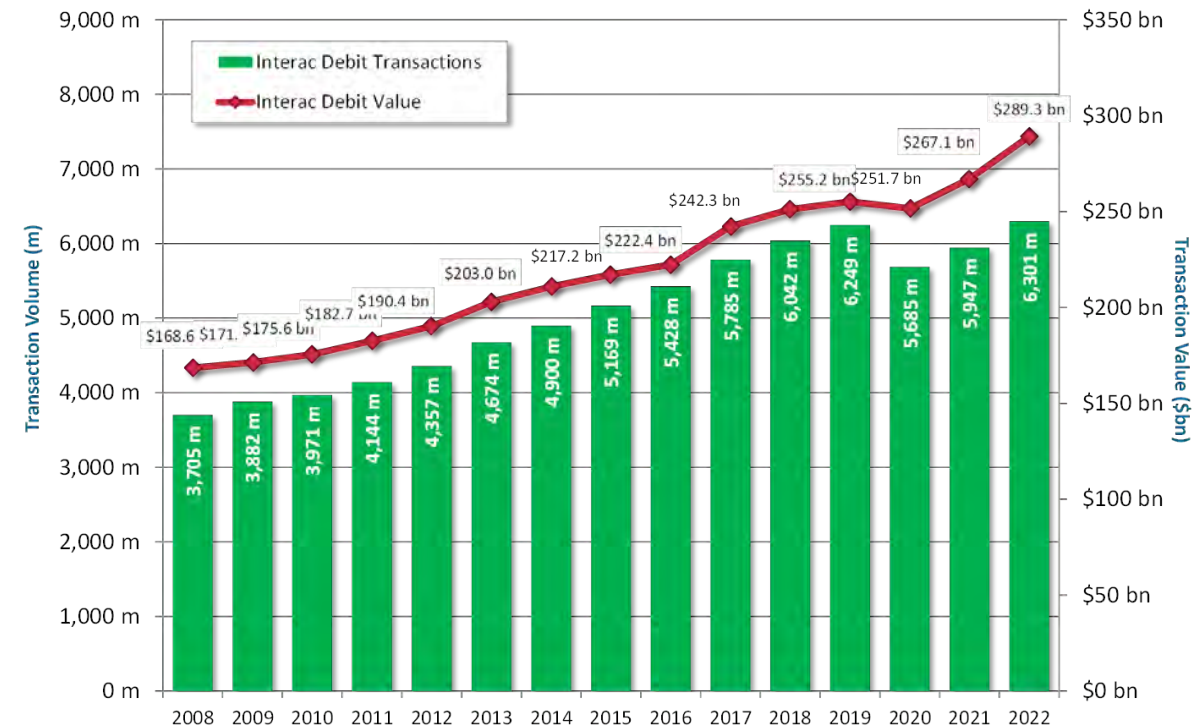
The value of debit card payments increased by 8.3% in 2022, reaching a total of \$289.3 bn, way surpassing the previous peak of \$255.2 bn recorded in 2019.

In 2022, there were 6.30 bn debit card transactions, an increase 5.9% over the year. Debit transaction volumes in 2022 were slightly higher than those in 2019.

In 2022, average transaction values increased by 2.2% to reach \$45.92. Over the past five years, growth in total annual debit card transaction volumes has averaged 1.7% p.a. (CAGR), while growth in total annual debit card transaction values was more than twice as high at 3.6% p.a. (CAGR). These average annual growth rates are lower than their historical trajectories, dragged down by the declines in 2020.

Debit card purchases (excluding Interac cashback) accounted for 18.7% of PCE by value in 2022, and 31.0% by volume.

**Value and Volume of Interac Debit Transactions
(2008 - 2022)**



Source: Interac

Debit card value growth set to grow moderately until 2027

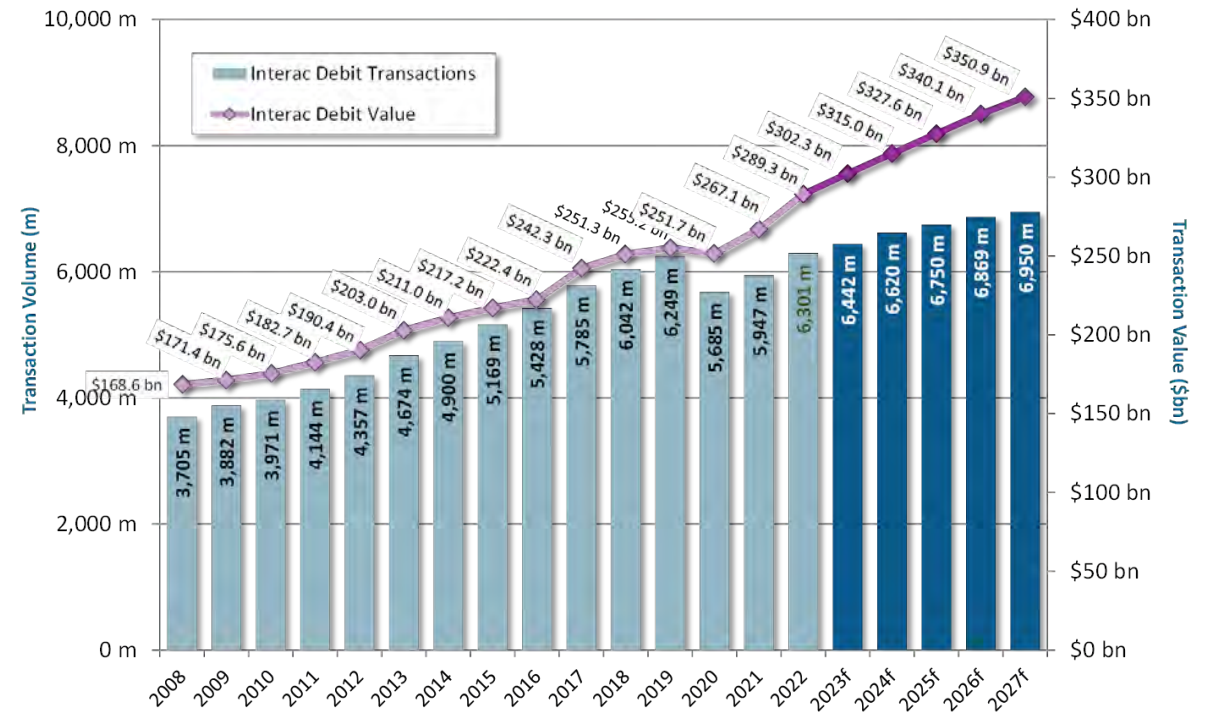
The value of debit card payments is expected to increase by 4.5% in 2023, almost half the growth rate experienced in 2022. This growth in value of debit transactions is more than one percentage point below the projected PCE growth rate for 2023.

In 2024, there is likely to be a short-lived economic slowdown, while inflation is still expected to remain more than one percentage point above the Bank of Canada's 2% sweet spot, ultimately leading to a slightly lower growth in debit value in that year, moderating further throughout the forecast period. By 2027, total debit payment value is expected to reach \$350.9 bn, a growth of 3.9% p.a. (CAGR) over the period 2022 to 2027.

Transaction volumes are expected to demonstrate a similar growth pattern, although at an average two percentage point discount over the period. Debit transaction volumes are expected to grow at 2.3% in 2023, to reach 6.44 bn transactions. By 2027, the number of debit transactions is forecast to be 6.95 bn, an average growth of 2.0% p.a. (CAGR) over the period.

By 2027, debit purchase transaction values (excluding Interac cashback) are expected to account for 19.3% of PCE, a 60 basis-point increase in share, while transaction volumes are expected to account for 29.3% of PCE, a decrease in share of 1.7 percentage points.

Forecast Value and Volume of Interac Debit Transactions (2022 - 2027)



Source: TSI projections

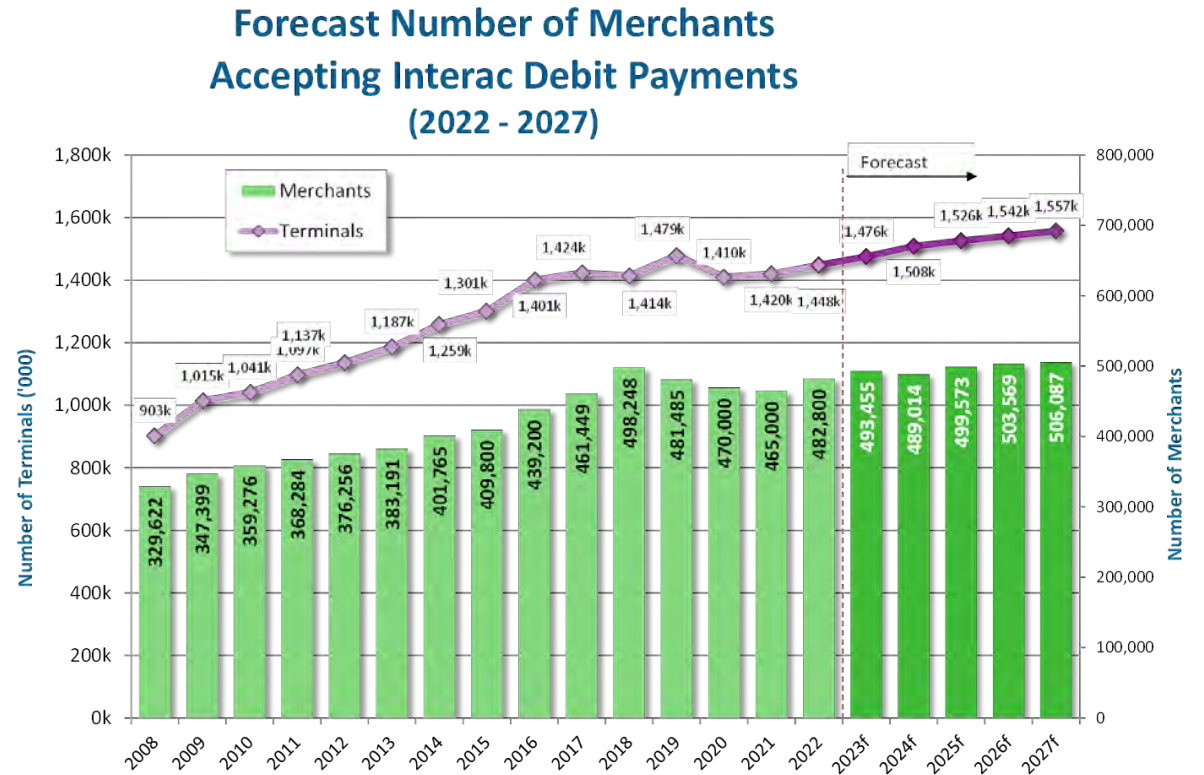
Interac debit acceptance to sustain a modest increase

The low economic growth in 2020 as a result of the pandemic had a measurable impact on merchant acceptance of debit, with the number of merchant outlets accepting debit decreasing by 2.4% over the year. The decrease in number of Interac debit merchants continued at a more modest rate in 2021, dropping to 465,000. This downward shift was reversed in 2022, with the number of merchants growing by 3.8%. The number of merchants is expected to increase by 1.2% in 2023 followed by a slight decline in 2024, on the back of a mild recession. Over the period 2022 to 2027, the number of merchants is expected to grow at a modest rate of 0.9% p.a. (CAGR) to reach 506 k merchants by the end of 2027.

The installed base of terminals that accept Interac debit payments is expected to reach 1.56 m units by 2027. This represents an average growth rate (CAGR) of 1.5% p.a. between 2022 and 2027.

The average annual value of debit card transactions per merchant was \$599 k in 2022, a growth of 4.3% over the year. It is expected to reach \$693 k by 2027.

The average annual number of transactions per merchant increased by 2.0% to 13.1 k in 2022 and is expected to grow at a rate of 1.0% p.a. (CAGR) over the forecast horizon, reaching 13.7 k per year per merchant in 2027.



Source: TSI projections

Credit Cards



Credit Card Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Number of Active Credit Cards	43.4 m	-1.8%	45.7 m	0.9%	1.0%
Credit Card Purchases					
<i>Value</i>	\$762 bn	13.2%	\$1,006 bn	8.4%	5.7%
<i>Volume</i>	8,531 m	10.9%	11,682 m	9.1%	6.5%
<i>Value of Average Transaction</i>	\$89.31	2.1%	\$86.18	-0.7%	-0.7%
Credit Card Cash Advances					
<i>Value</i>	\$41.3 bn	2.4%	\$43.9 bn	2.0%	1.2%
<i>Volume</i>	61 m	15.1%	60 m	-1.9%	-0.3%
<i>Value of Average Transaction</i>	\$677.05	-11.0%	\$732.11	3.9%	1.6%
Number of Credit Card Merchants	934,412	1.0%	992,501	1.0%	1.0%

Credit cards in circulation to exceed 90 million by 2027

The number of credit cards in circulation dropped to 85.5 m cards in 2022, a decrease of 1.1% over the previous year. The number of active credit card accounts also decreased, slightly more aggressively at 1.8%, to 43.4 m accounts.

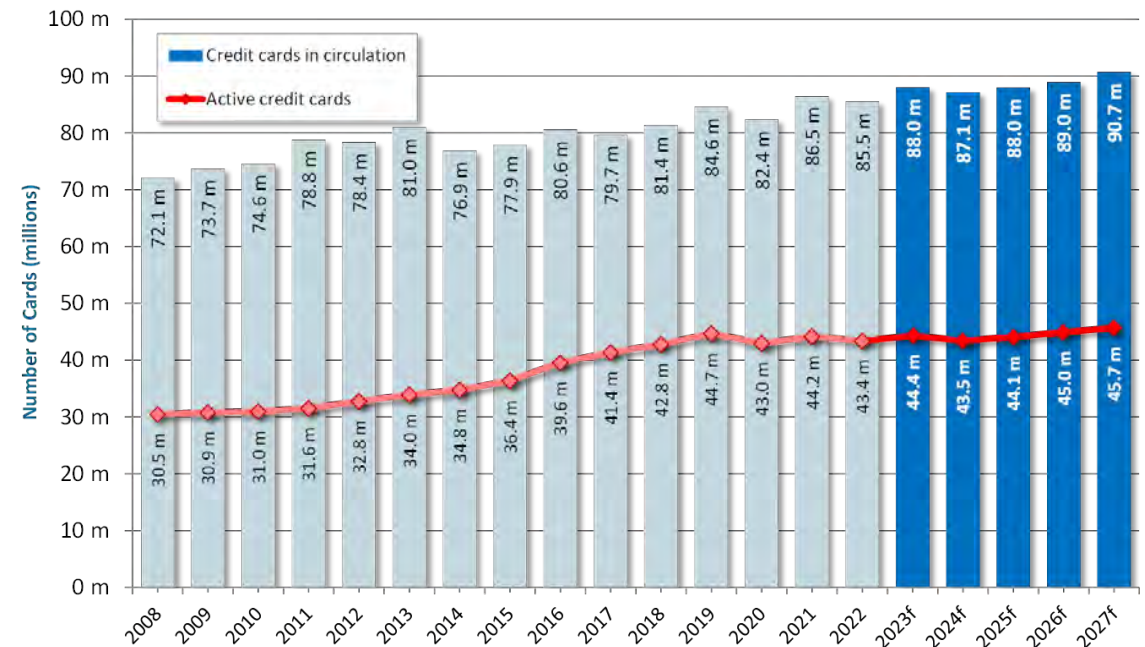
Active accounts made up 50.8% of all credit cards in circulation, in 2022, slightly down from 2021.

Over the period 2017 to 2022, the number of credit cards in circulation has grown at 1.4% p.a. (CAGR), while the number of active cards has grown at 0.9% p.a. (CAGR).

The number of cards in circulation is expected to grow at an annual average rate (CAGR) of 1.2% p.a. over the period 2022 to 2027, ending the period with a credit card circulation base of 90.7 m cards, while the number of active accounts forecast to reach 45.7 m by 2027, representing an annual average growth rate of 1.0% p.a. (CAGR).

In 2027, it is expected that active accounts will represent 50.4% of the number of credit cards in circulation.

Forecast Total Number of Credit Cards Issued in Canada (2022 - 2027)



Source: TSI projections

Note: The basis of reporting cards in circulation changed in 2014

Credit card payments grow rapidly in 2022

Credit card gross dollar volume (GDV) increased by almost \$90 bn in 2022, to \$803.2 bn, a growth of 12.6% over the year. This was the second year of supernormal growth in the wake of the pandemic.

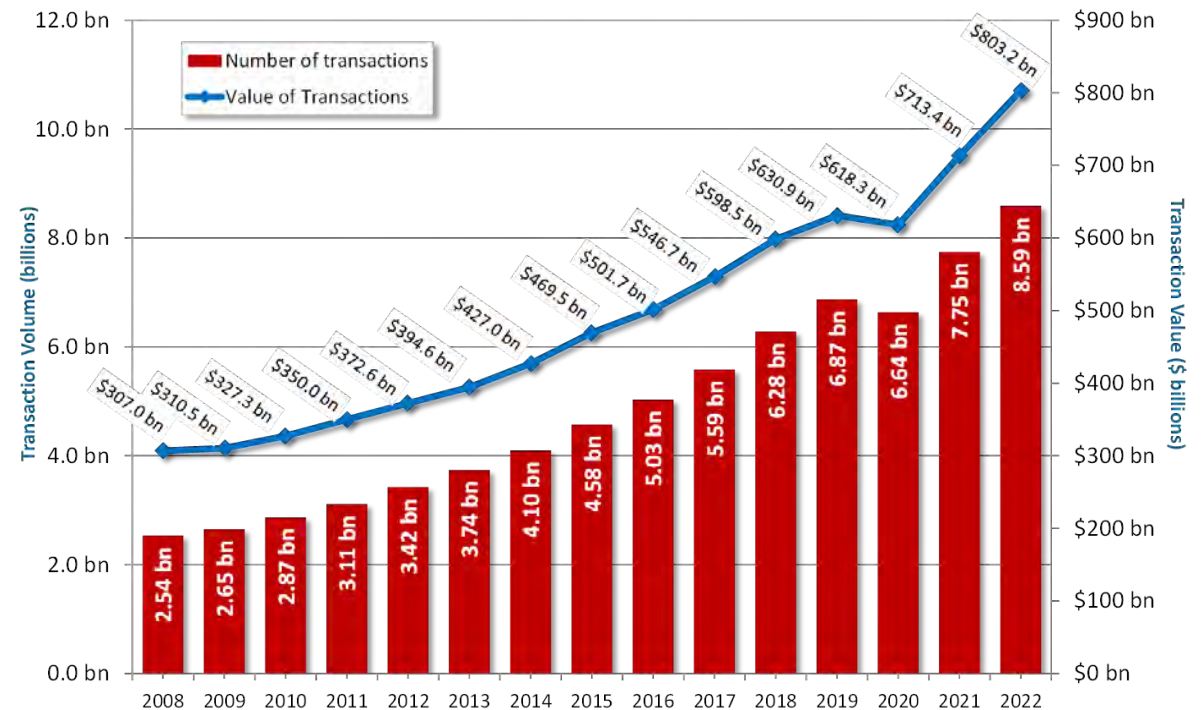
The number of credit card transactions increased by 10.9% in 2022, with a total of 8.6 bn credit card transactions processed in that year.

By the end of 2022, credit card transactions accounted for 54.7% of PCE by value and 42.3% by volume.

Growth in total transaction volumes has averaged 9.0% p.a. (CAGR) over the past five years (2017 to 2022), higher than growth in gross dollar value, which averaged 8.0% p.a. (CAGR) over this period. These average growth rates have been inflated by the surge in total credit card values and volumes experienced in 2021 and 2022.

The average transaction value, based on gross value, was \$93.48 in 2022, an increase of 1.5% over 2021, halting the general downward trend. Average transaction values have been on a predominately downward trend since 2009, having declined at an annual rate of 0.9% p.a. (CAGR) over the past five-year period.

Gross Volume and Value of Credit Card Transactions (2008 - 2022)



Source: Visa, MasterCard, TSI estimates

Credit card purchases continue their post-pandemic surge

The value of credit card purchases accounted for 94.9% of GDV in 2022, amounting to \$761.9 bn and representing a growth of 13.2% over the year or an increase of almost \$90 bn. This follows an even more impressive growth of 17.8% recorded in 2021, as pandemic restrictions were eased.

Growth in the value of credit cards purchases has averaged 8.4% p.a. (CAGR) since 2017, buoyed by the high growth rates experienced over the past two years.

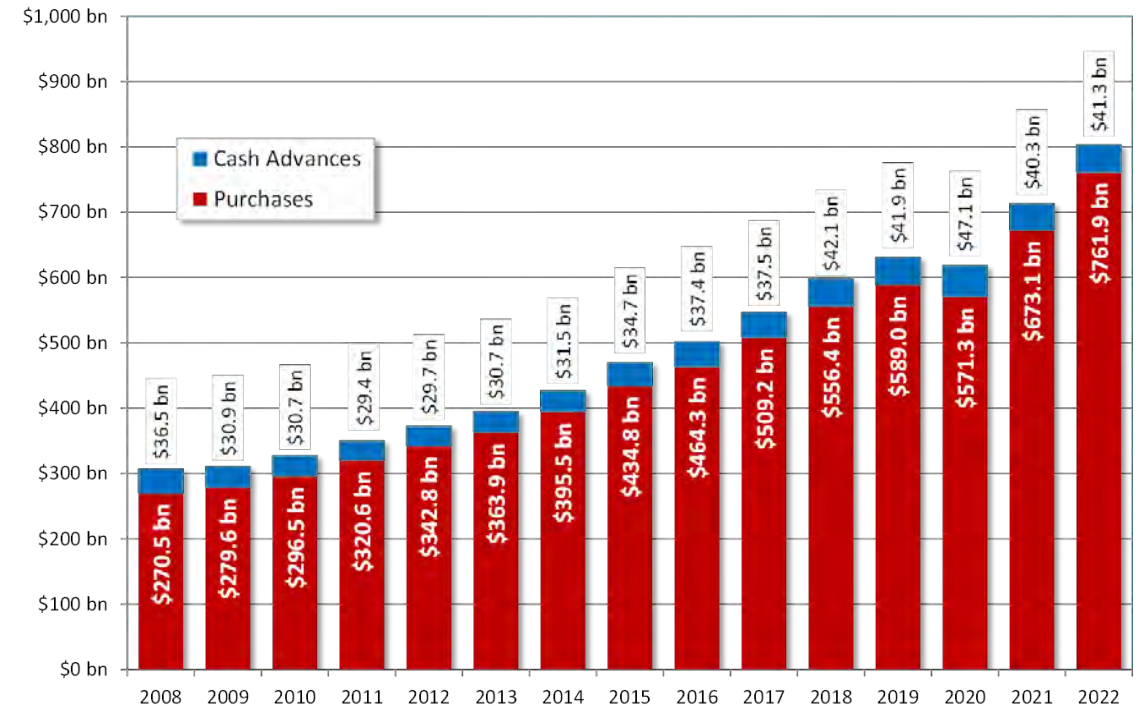
Cash advances, the other component of GDV amounted to \$41.3 bn in 2022, an increase of 2.4%, or \$1.0 bn over 2021. Cash advances are characteristically volatile with growth rates oscillating between +16% and -16% from year to year depending on the prevailing economic climate. Growth tends to be countercyclical.

Over the period 2017 to 2022, the value of cash advances grew at an average rate of 2.0% p.a. (CAGR). The average cash advance transaction value was \$677.05 in 2022, a drop of 11.0% over the year.

The average credit card purchase transaction value in 2022 edged up to \$89.31, or 2.1% higher than 2021.

The average annual value of purchases per active card increased by 15.3% in 2022 to \$17.5 k.

**Value of Credit Card Transactions by Type
(2008 - 2022)**



Source: Visa, MasterCard, TSI estimates

Credit card transaction volumes grow vigorously in 2022

In 2022, 8.59 bn credit card purchase transactions were processed in Canada, an increase of 10.9% over the previous year. Purchase transactions accounted for more than 99% of all credit card transactions in 2022, with only 61 m cash advance transactions being processed.

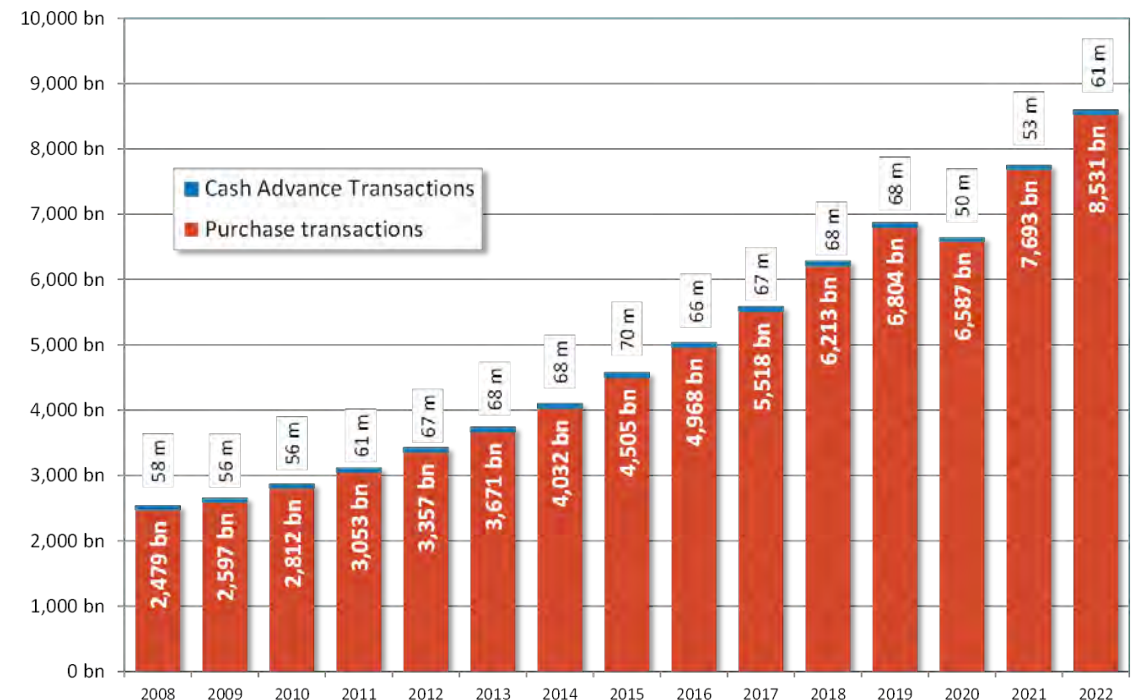
Growth in purchase transaction volumes has averaged 9.1% p.a. (CAGR) over the past five years (2017 to 2022), higher than the growth in purchase values, which averaged 8.4% p.a. over the same period. This growth differential points to a general downward trend in transaction values.

Cash advance transaction volumes increased by 15.1% in 2022, while the average value of cash advance transactions decreased appreciably.

Credit card transactions accounted for 42.3% of PCE by volume in 2022, up from the 41.5% share recorded in 2021, continuing the trend whereby credit cards are displacing other forms of consumer payments.

The average number of purchase transactions per active credit card was 16.4 transactions per month in 2022, or 12.9% higher than in 2021. The corresponding number of Interac debit card transactions was 20.6 per month per active user, illustrating the continued popularity of debit card payments for everyday payments.

**Number of Credit Card Transactions by Type
(2008 - 2022)**



Source: Visa, MasterCard, TSI estimates

Credit card payments to grow rapidly through to 2027

The economic rebound from the pandemic resulted in two years of double-digit growth in credit card payments, both in terms of total transaction values and volumes. Growth is expected to moderate over the forecast period, returning to the normal long-run trajectory for credit card payments.

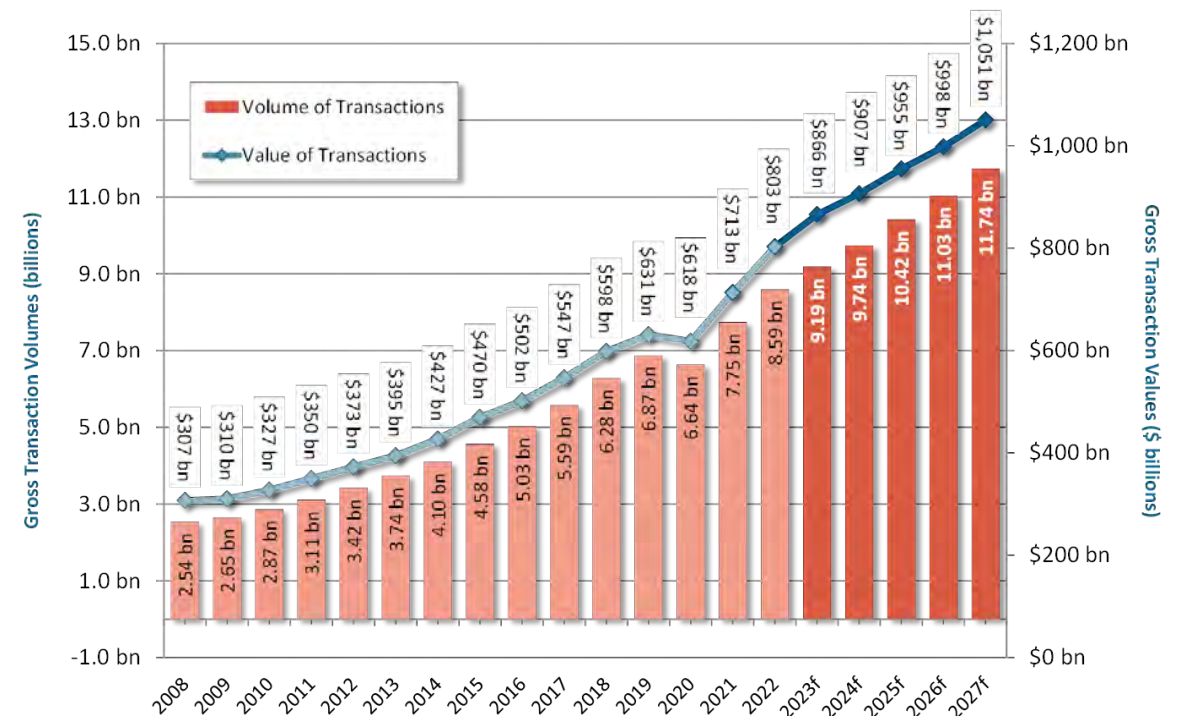
In 2023, the gross dollar value of credit card transactions is expected to increase by 7.8% to \$866 bn. Growth in gross dollar value is expected to vary in the range 4.6% p.a. to 5.2% p.a. through the remaining years of the forecast period, reflecting the state of the economy in any given year.

Gross dollar values are expected to reach \$1,051 bn by 2027, representing an average growth rate of 5.5% p.a. (CAGR) over the five-year period.

The number of credit card transactions is expected to follow a similar pattern, increasing by 6.9% in 2023 and then returning to a more stable growth trajectory from 2023 onwards. Total credit card transactions are expected to reach 11.7 bn by 2027. This represents an annual growth rate of 6.4% p.a. (CAGR) over the five-year period.

By 2027, credit card expenditure is expected to account for 59.3% of PCE by value. The transaction share of PCE is expected to increase by more than 10 percentage points, reaching 49.6% in 2027.

Forecast Gross Volume and Value of Credit Card Transactions (2022-2027)



Source: TSI Projections

Value of credit card purchases to exceed \$1 trn by 2027

The value of credit card purchase transactions is expected to increase by 8.0% in 2023, coming in at \$762 bn for the year. This will be bolstered modestly by an increase of 5.3% in cash advances.

Over the remaining four years of the forecast horizon growth in credit card purchase values are expected to stabilize averaging 5.2% p.a. (CAGR) over this period. By 2027, credit card purchases will reach \$1,006 bn.

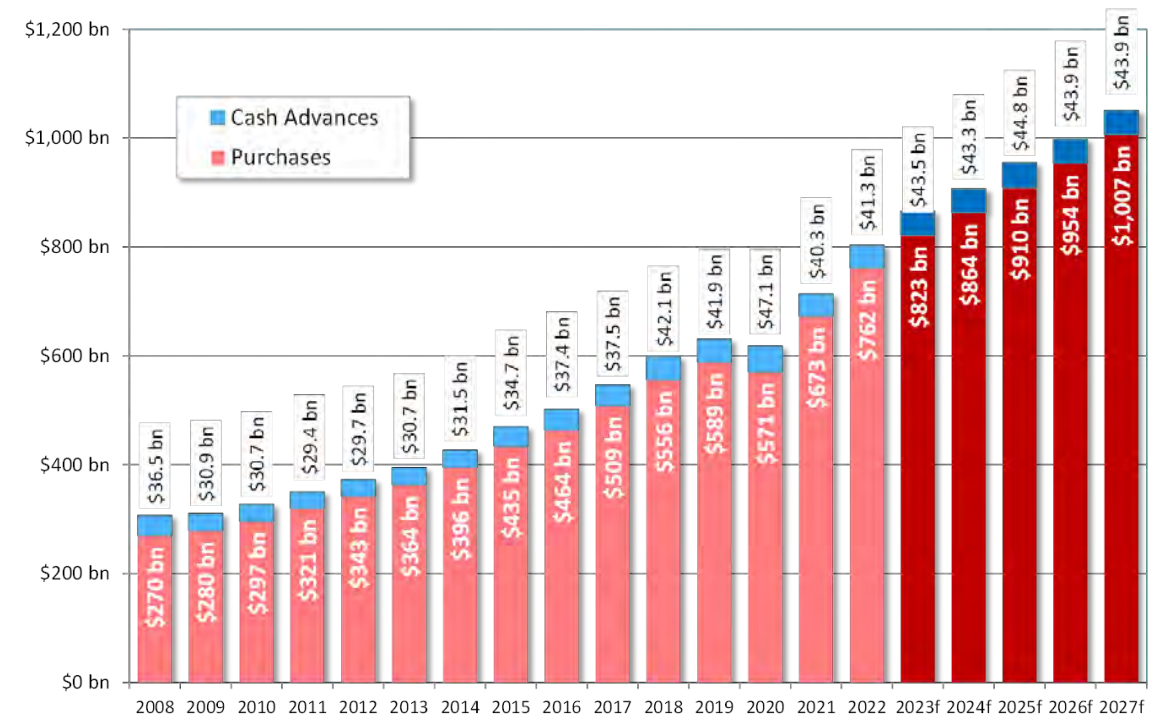
Cash advance values are expected to increase to \$43.5 bn in 2023, with the growth outlook being one of modest oscillation throughout the remaining years of the forecast period as a result of changing economic conditions. By 2027, cash advances will reach \$43.9 bn, about \$2.6 bn higher than in 2022.

The average cash advance transaction value is expected to oscillate over the forecast period, ending the period at \$732.11.

The average value of a purchase transaction is expected edge downward to end the period slightly lower than current levels, from \$89.31 in 2022 to \$86.18 in 2026. This masks a period of upward movement followed by downward movement.

The average annual spend per active card is expected to reach \$22.0 k by 2027, growing at an average annual rate of 4.6% p.a. (CAGR) over the forecast horizon.

**Forecast Value of Credit Card Transactions by Type
(2022 - 2027)**



Source: Visa, MasterCard, TSI projections

Credit card transaction volumes to approach 12 bn by 2027

The number of transactions is expected to follow the general pattern of dollar volumes over the forecast period. In 2023, we expect the number of purchase transactions to increase by 7.0% over the year. Growth will remain moderate throughout the forecast period, averaging 6.5% p.a. (CAGR), reaching 11.7 bn transactions by 2027.

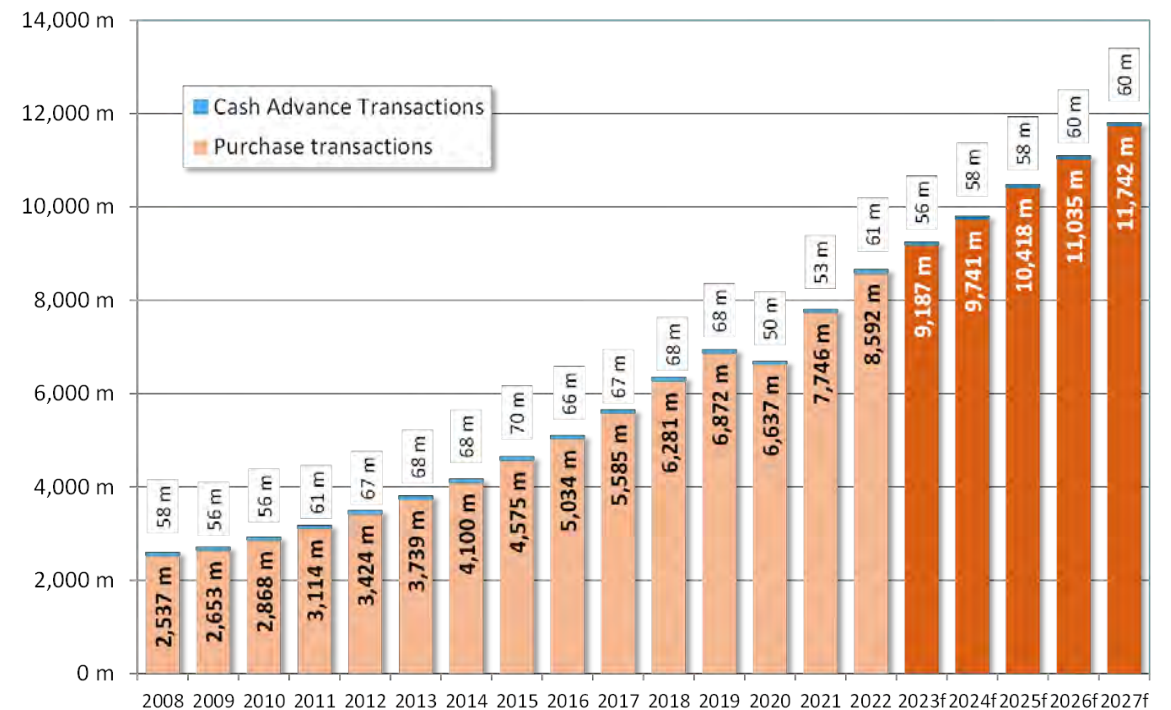
The number of credit card purchase transactions will continue to dominate the transaction repertoire on credit cards by a wide margin, accounting for more than 99% of the total in 2027.

The number of cash advance transactions is expected to oscillate over the forecast horizon, netting out at an average annual rate of decline of 0.3% p.a. (CAGR), coming in at 60 m in 2027.

The average number of purchase transactions per active credit card is expected to reach 21.2 transactions per month by 2027, overtaking the number of purchases transactions among active debit card users (20.9 per month) for the first time ever, in that year.

By 2027, credit cards' transaction share of PCE is expected to reach 49.6%, compared with 42.3% in 2022.

**Forecast Volume of Credit Card Transactions by Type
(2022 - 2027)**



Source: Visa, MasterCard, TSI estimates

Modest growth in credit card merchant outlets to continue

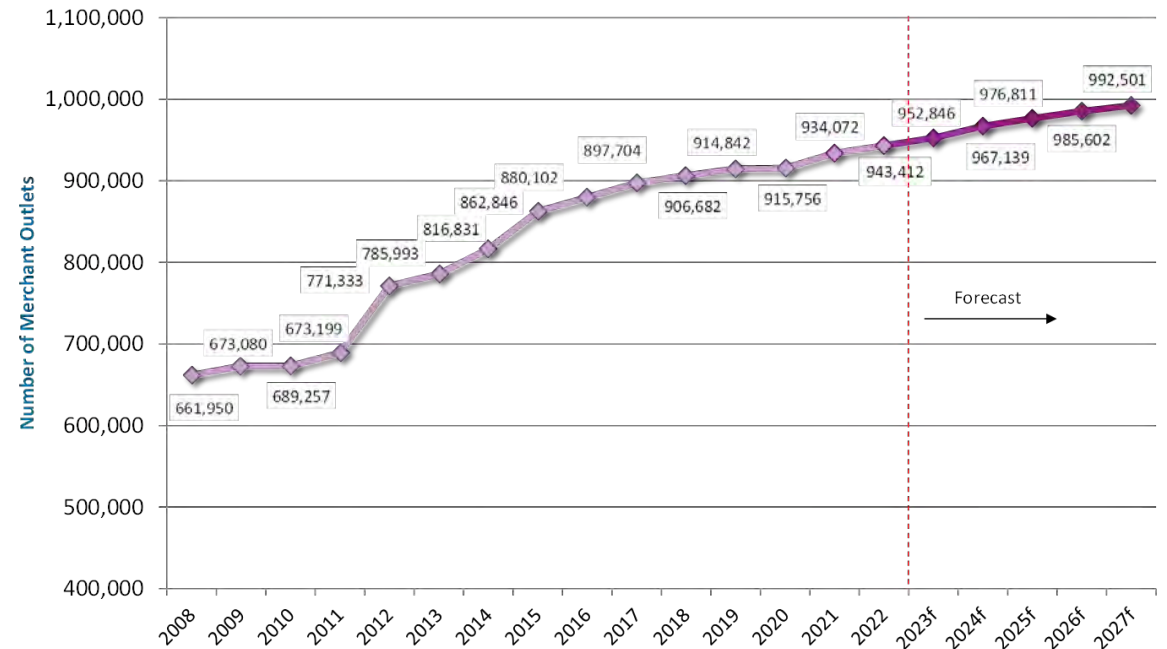
Growth in the number of merchant outlets accepting credit cards is expected to continue at a modest rate throughout the forecast period. At the end of 2022 there were 943 k outlets accepting credit cards (this includes online outlets) in Canada.

The growth in the number of credit card merchant outlets is expected to average 1.0% p.a. (CAGR) over the period 2022 to 2027, reaching 993 k in that year and representing a net increase of 49 k merchant outlets above the 2022 level.

The average annual purchase transaction value per merchant outlet is expected to grow at 4.7% p.a. (CAGR) over the period 2022 to 2027, from \$808 k in 2022 to \$1,01 m by 2027.

The average number of purchase transactions per merchant outlet per year is expected to reach 11.8 k in 2027, from 9.0 k in 2022, representing an annual average growth rate (CAGR) of 5.4% over the period.

**Forecast Number of Merchant Outlets
Accepting Visa and MasterCard (2022 - 2027)**



Source: TSI projections

Note: The basis of merchant reporting changed in 2012

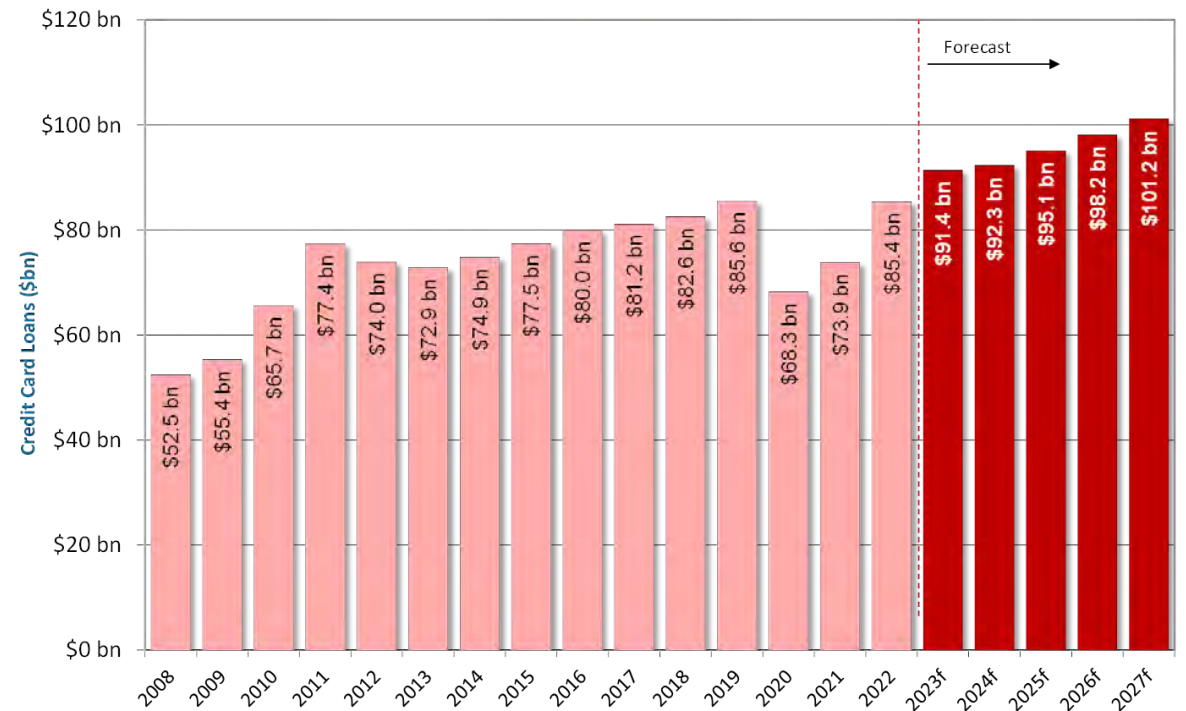
Credit card loan growth stabilizes

The value of credit card loans outstanding in Canada, which represents the outstanding debt on retail credit cards at the end of a billing cycle, increased to \$85.4 bn in 2022, adding \$12.0 bn from 2021 levels and representing an increase of 15.7% over the year. This represents a major rebound in credit card loans in the wake of the pandemic.

From 2023 onwards we expect growth in the value of credit card loans to continue at a moderate pace. By the end of 2027 the value of credit card loans is expected to reach \$101.2 bn. This represents a growth rate of 5.9% p.a. (CAGR) over the period 2022 to 2027. The untraditionally high five-year growth rate is bolstered by the past two years of supernormal growth as the effects of the pandemic have died down.

At the end of 2022, credit card loans amounted to 10.6% of GDV in that year. By 2027, credit card loans are expected to account for 9.6% of GDV, suggesting that the rate of loan uptake is unlikely to keep up with growth in GDV.

**Forecast Canadian Credit Card Loans
(2022 - 2027)**



Source: TSI projections

* Revised series to include personal credit card loans in Canada only

Contactless



Contactless Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Contactless Card Users	17.5 m	2.2%	19.5 m	3.4%	2.2%
Contactless Payments					
<i>Value</i>	\$397.7 bn	17.6%	\$585.1 bn	23.2%	9.0%
<i>Volume</i>	7,554 m	11.3%	10,235 m	17.2%	6.3%
<i>Value of Average Transaction</i>	\$50.33	5.6%	\$57.16	5.1%	2.6%
Number of Contactless Terminals	987,300	1.0%	1,112, 330	11.2%	2.6%

Contactless payments continue vigorous growth

The value of contactless payments increased by \$57 bn in 2022 to reach \$378 bn. This represents a growth of 17.6% over the previous year, a similar growth rate to that experienced in 2021, indicating a continued strong uptake of contactless payments as consumers embrace the convenience even at higher transaction values.

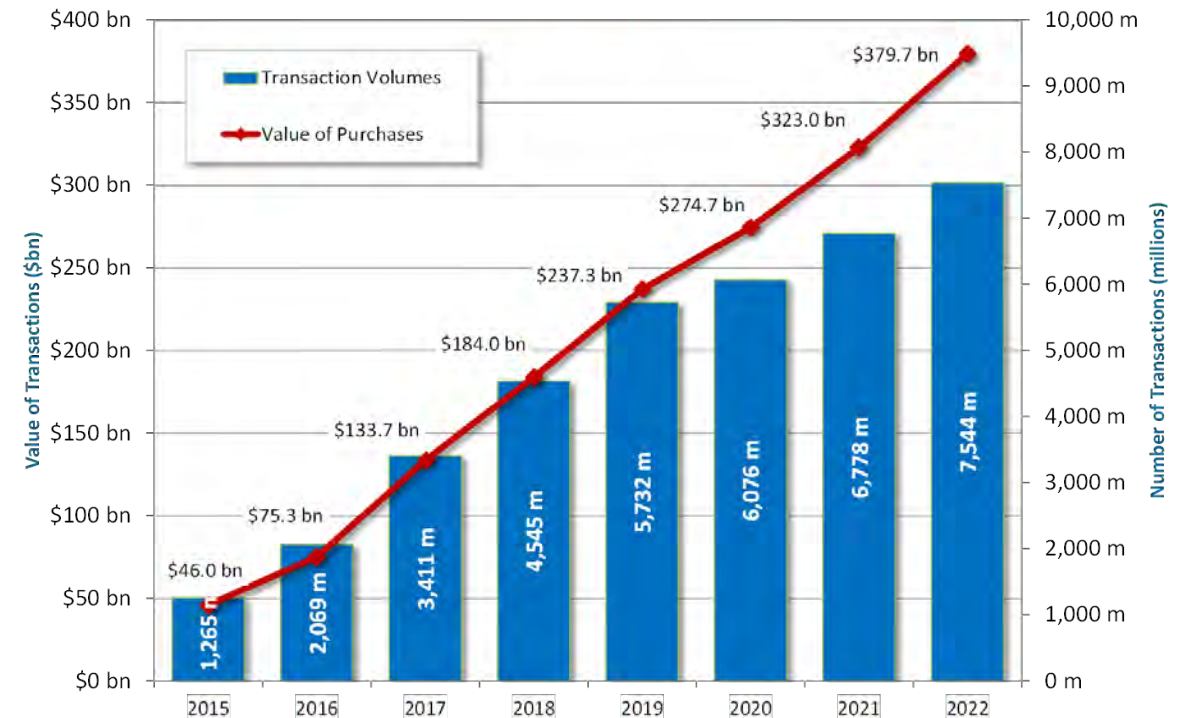
In 2022, the number of contactless payment transactions increased by 11.3%, to 7.5 bn transactions.

The average transaction value increased from \$47.66 in 2021 to \$50.33 in 2022, a growth of 5.6% over the year. The average value of contactless debit card transactions was \$27.33, pointing to the fact that contactless credit card transactions dominate by value. The number of contactless debit card transactions was, however, 33% higher than the number of contactless credit card transactions in 2022.

Over the past five years (2017 to 2022) the number of transactions has grown at an average rate of 17.2% p.a. (CAGR), while the total value of contactless transactions has grown at a rate of 23.2% p.a. (CAGR). These supernormal growth rates are indicative of rapid diffusion of contactless payments into the payment market in Canada, but growth is slowing as the market approaches saturation.

We revised the contactless time series this year to take into account more accurate contactless transaction value information at our disposal.

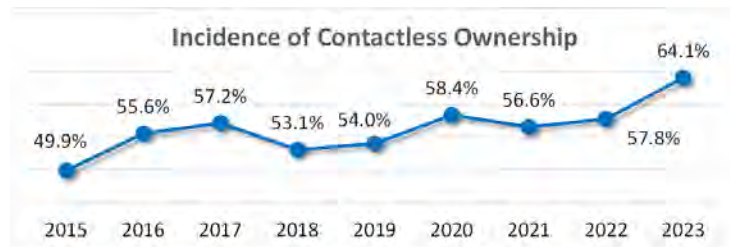
**Contactless Payment Values and Volumes
(2015 - 2022)**



Source: TSI estimates, Canadian Consumer Payments Survey

Interac Flash contactless ownership maintains its dominant position

The incidence of contactless ownership increased substantially over the past year, reaching 64.1%, after having stayed in a fairly narrow band over the previous five years.



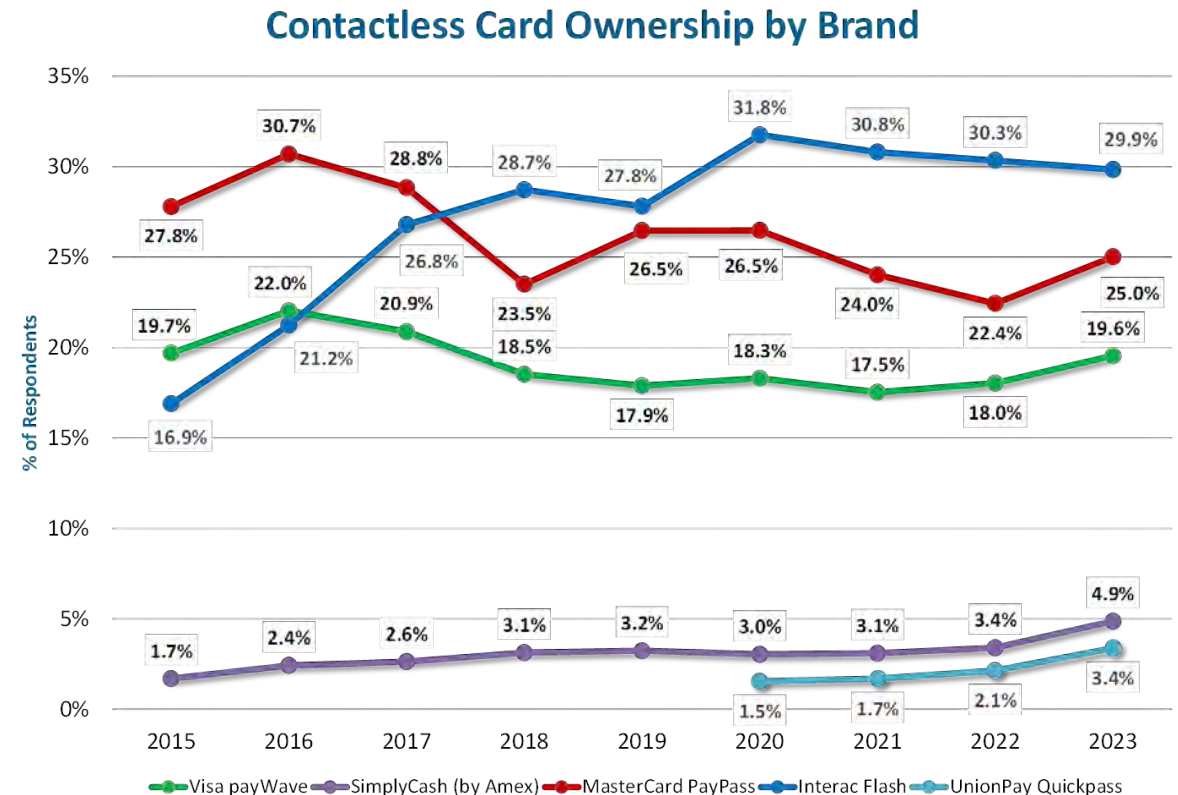
Usage of contactless cards overall is high, with 94.9% of contactless card owners saying that they have used their contactless cards to make a contactless payment in the past six months.

Interac Flash has been the dominant contactless card brand since 2018 but appears to be on a gently declining trajectory.

Other than Interac Flash, the incidence of ownership of all other contactless brands has increased over the past year.

Visa payWave ownership continues to lag the two leaders, with an incidence of 19.6%, but this is still four times higher than the incidence of Amex's SimplyCash at 4.9%.

Ownership of UnionPay QuickPass reached 3.4% in the 2023, the same level recorded for SimplyCash in the 2022 survey.



Base: Total Sample: 2023 (n=2010)

Increase in contactless payments across a broad range of categories

Almost seven out of ten contactless card users (68.8%) have used their cards to pay for goods at grocery stores or supermarkets over the past six months, a decrease over the past year.

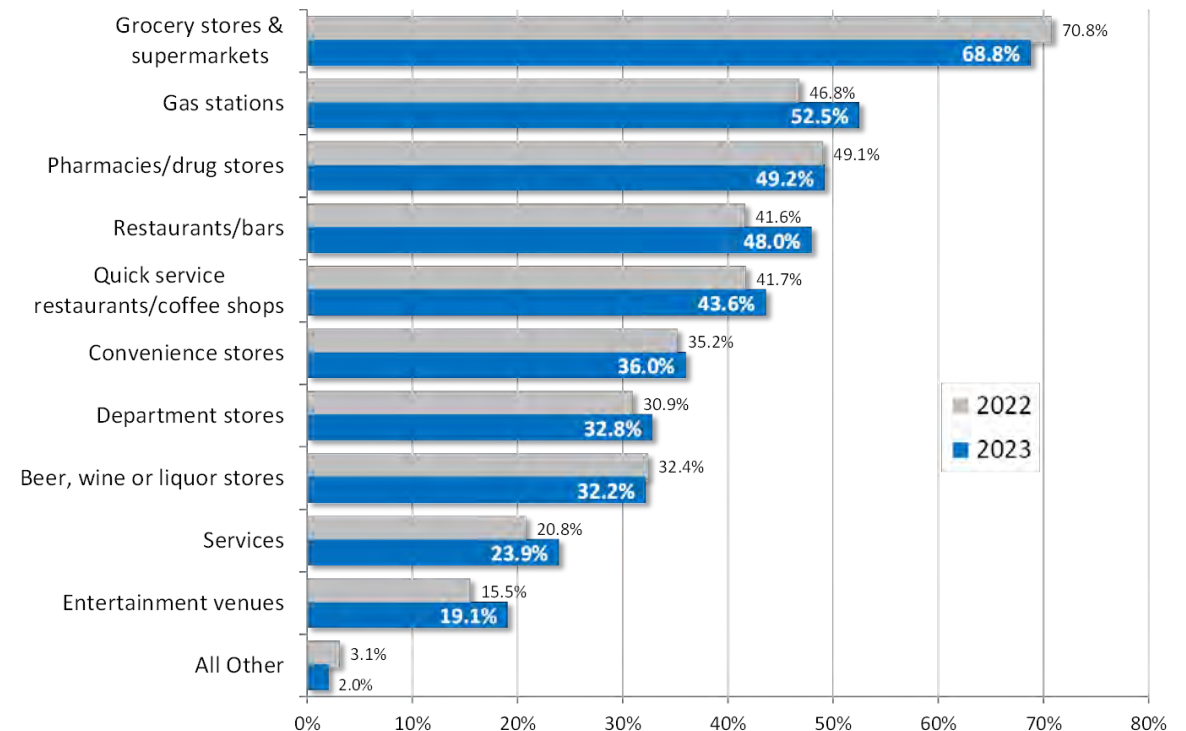
Gas stations attracted more than one half (52.5%) of all contactless users in the 2023 survey, increasing significantly over the year. Some gas stations still do not accept contactless transactions, which does limit the penetration of contactless payments in this category.

Restaurants and entertainment venues saw significant increases in the number of users making contactless payments in these categories, continuing the bounce back to in-person activities in the post-pandemic era.

The incidence of usage of contactless payments at pharmacies, convenience stores and outlets selling alcohol products remained fairly static over the year, hinting that these categories may have reached saturation levels for contactless payments.

On average, contactless card users have used 1.4 contactless payment card brands for payment transactions in the past six months. This is a significant jump from the previous survey year, when the number of brands used was 1.16. This indicates a broader range of usage across different contactless card products.

Usage of Contactless Payments at Merchants (P6M)



Base: Contactless card users 2023 (n=1128)

Source: Canadian Consumer Payments Survey

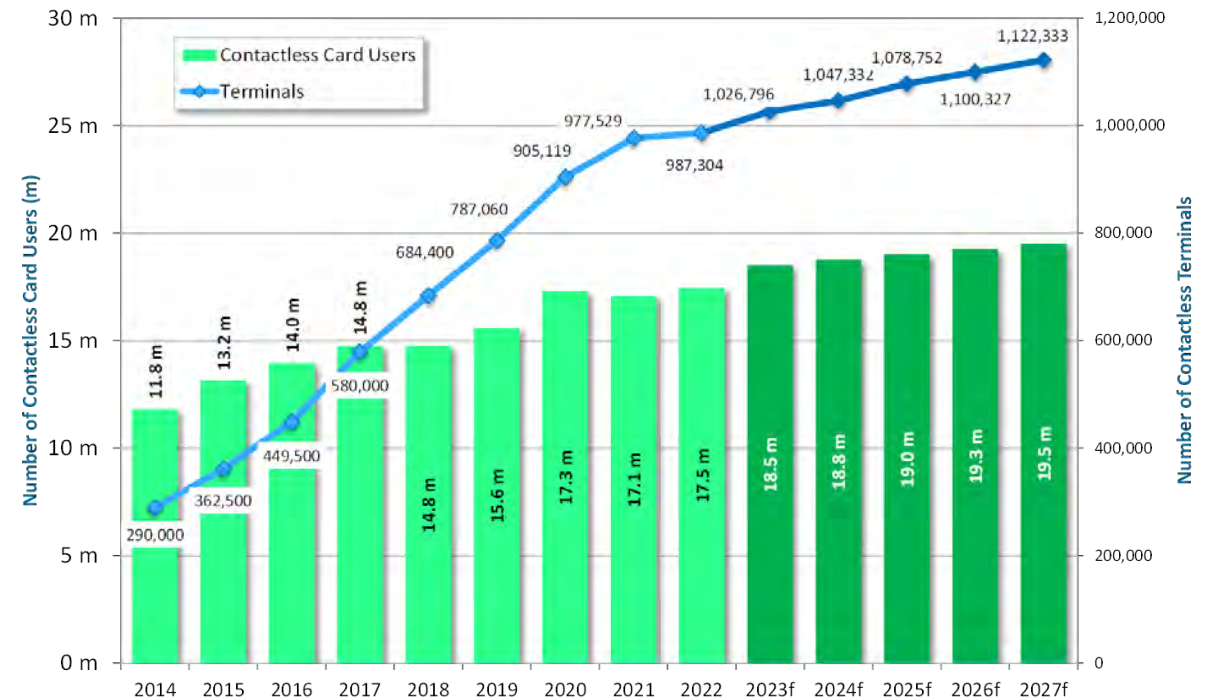
Contactless acceptance growth to moderate

In 2022, there were 17.5 m contactless card users in Canada. We expect the number of contactless users to show modest growth over the next five years, driven largely by population growth. By 2027, we expect the number of contactless payments users (which includes users of contactless cards, payment-enabled mobile phones and payment-enabled wearable devices) to increase to 19.5 m, representing an annual average growth rate of 2.2% p.a. (CAGR) over the period 2022 to 2027.

The rollout of contactless payment terminals, which accelerated in 2020, and then plateaued in 2021 and 2022, will resume a steady growth trajectory from 2023 onwards and the remainder of the forecast period. The number of contactless payment terminals is set to reach 1.12 m by 2027, representing an annual average growth rate of 2.6% p.a. (CAGR) in the installed base.

The success of the increase in transaction limits during the pandemic period is likely to see further increases over time. The market potential for contactless terminals is therefore less likely to expand, extending into locations where higher transaction values dominate.

Forecast Contactless Payment Card Users and Terminals (2022 - 2027)



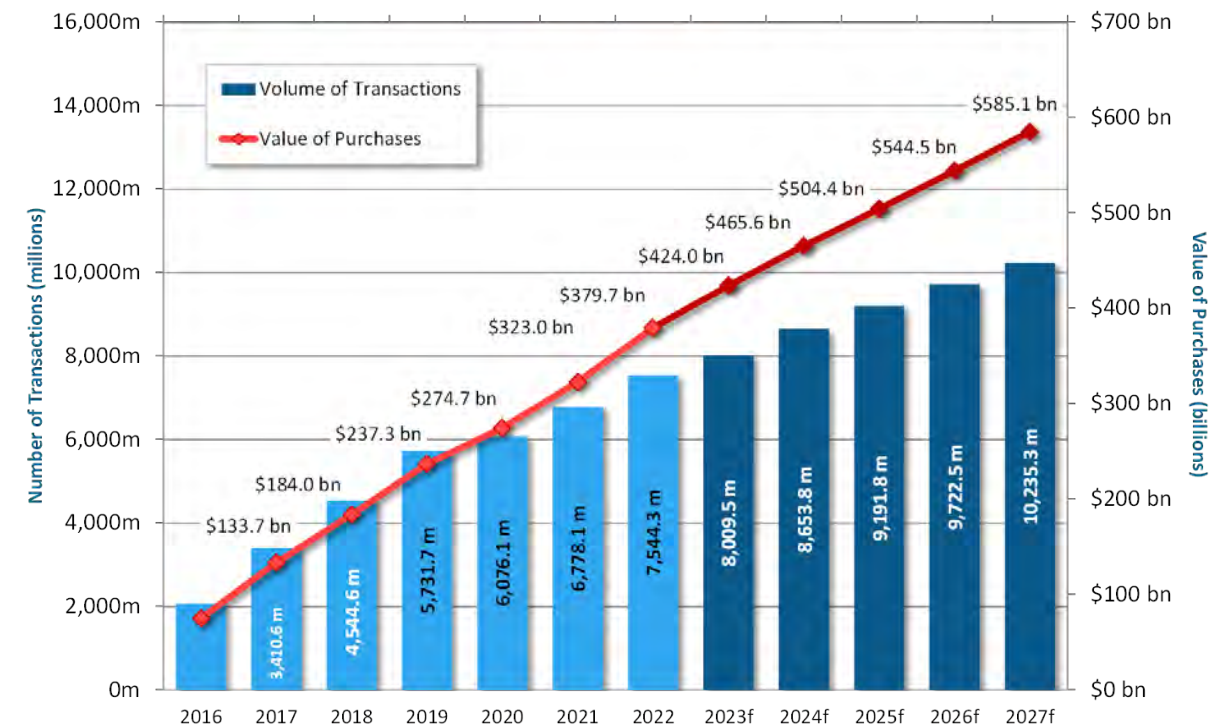
Source: TSI Projections

Strong growth in contactless payments to continue

Contactless payments are expected to continue on a high growth trajectory up to the point where it eventually becomes ubiquitous for the allowed transaction value regime. The increase of contactless credit card transaction limits to \$250 has enabled payments for larger ticket purchases. It is also likely that these limits will gradually move upwards over time as the risks of higher valued contactless payments become manageable.

Over the next five years growth is expected to moderate compared with historical levels, although remaining high and off a high base, trending downward to more sustainable levels as the opportunities for contactless payments approach their limits. By 2027, the value of contactless payments is expected to reach \$585 bn, representing a growth rate averaging 9.0% p.a. (CAGR) over the period 2022 to 2027. Contactless transaction volumes are expected to grow at a slightly lower rate over the forecast horizon, averaging 6.3% p.a. (CAGR) and reaching 10.2 bn transactions by 2027. This growth differential points to transaction values that will edge up over the period, from an average of \$50.33 in 2022 to \$57.16 in 2027.

Forecast Contactless Payment Values and Volumes (2022 - 2027)



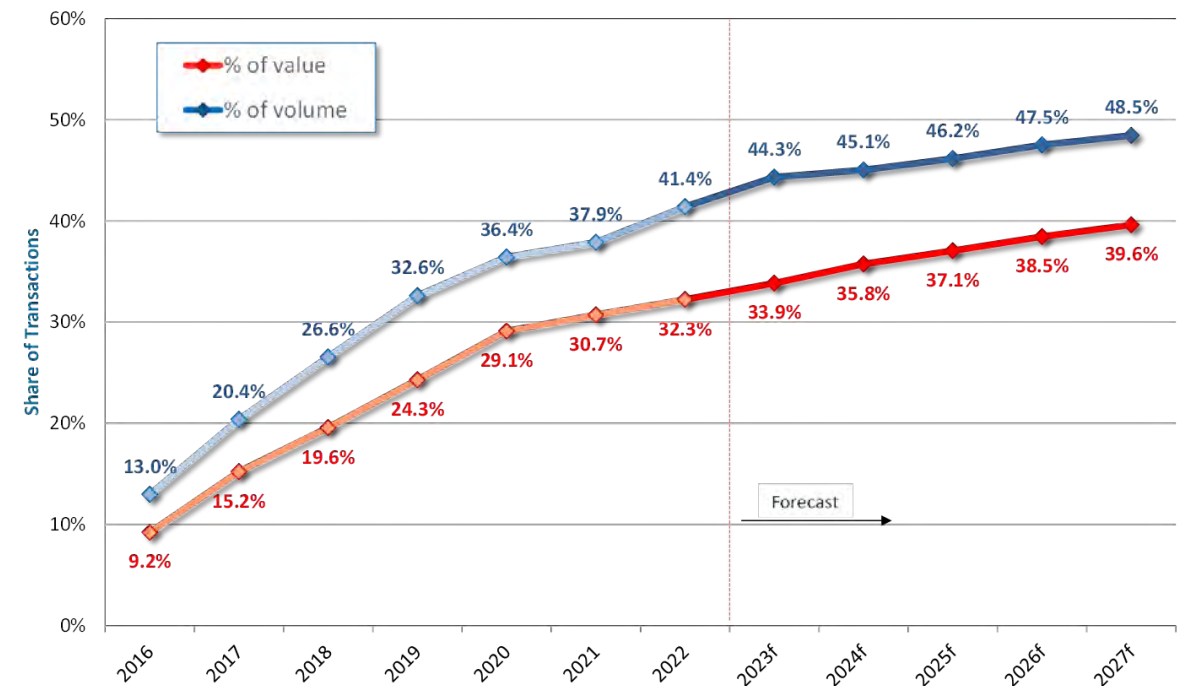
Source: TSI Projections

Contactless payments share to increase steadily

Contactless payment value represented 32.3% of the value of credit, debit card and cash payments in 2022, while the corresponding share of contactless transactions was 41.4%. By 2027, we expect the value of contactless payments to reach 39.6% of all credit, debit and cash transactions (\$1.48 trn), while the associated transaction share is expected to reach 48.5% of all cash, credit and debit payment transactions (21.1 bn).

There are numerous dynamics at play influencing contactless' share of in-scope transactions. Credit card payment growth is significantly outstripping debit payment growth, while cash is declining. Contactless payments originally gained traction as a vehicle to displace cash but have more recently become a debit/credit battleground, with debit having an advantage due to lower average transaction values. This was especially true in a regime where contactless transaction values were limited to \$100. Increased transaction limits tend to favour credit cards, and as noted previously, there is upward pressure on these transaction limits. In addition, much of the growth in PCE is moving towards credit payments providing further impetus to contactless credit card payments.

Forecast Contactless as a Proportion of Total Cash, Debit and Credit Transactions (2022 - 2027)



Source: TSI projections

Mobile



Mobile Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Smart phone subscribers	27.4 m	2.4%	30.9 m	5.0%	2.4%
<i>NFC Phones</i>	19.2 m	8.6%	25.7 m	17.5%	6.0%
Mobile Payments (Total)					
<i>Value</i>	\$104.8 bn	15.5%	\$190.9 bn	21.7%	12.7%
<i>Volume</i>	1,033 m	14.3%	1,974 m	22.2%	13.8%
<i>Value of Average Transaction</i>	\$101.43	1.1%	\$95.79	-0.4%	-1.1%
In-Store Mobile Payments					
<i>Value</i>	\$10.8 bn	31.9%	\$36.3 bn	44.8%	27.5%
<i>Volume</i>	376 m	22.6%	944 m	33.0%	20.2%
<i>Value of Average Transaction</i>	\$28.64	9.0%	\$38.50	8.9%	6.1%

More than 30 million smart phone subscribers by 2027

At the end of 2022 there were 33.8 m mobile subscribers* in Canada, up 1.5% over the year and corresponding to a mobile penetration rate of 87.0% of the population. Mobile penetration is expected to reach 91.2% of the total population by 2027 representing some 37.2 m subscribers, and an average annual growth rate of 2.0% p.a. (CAGR).

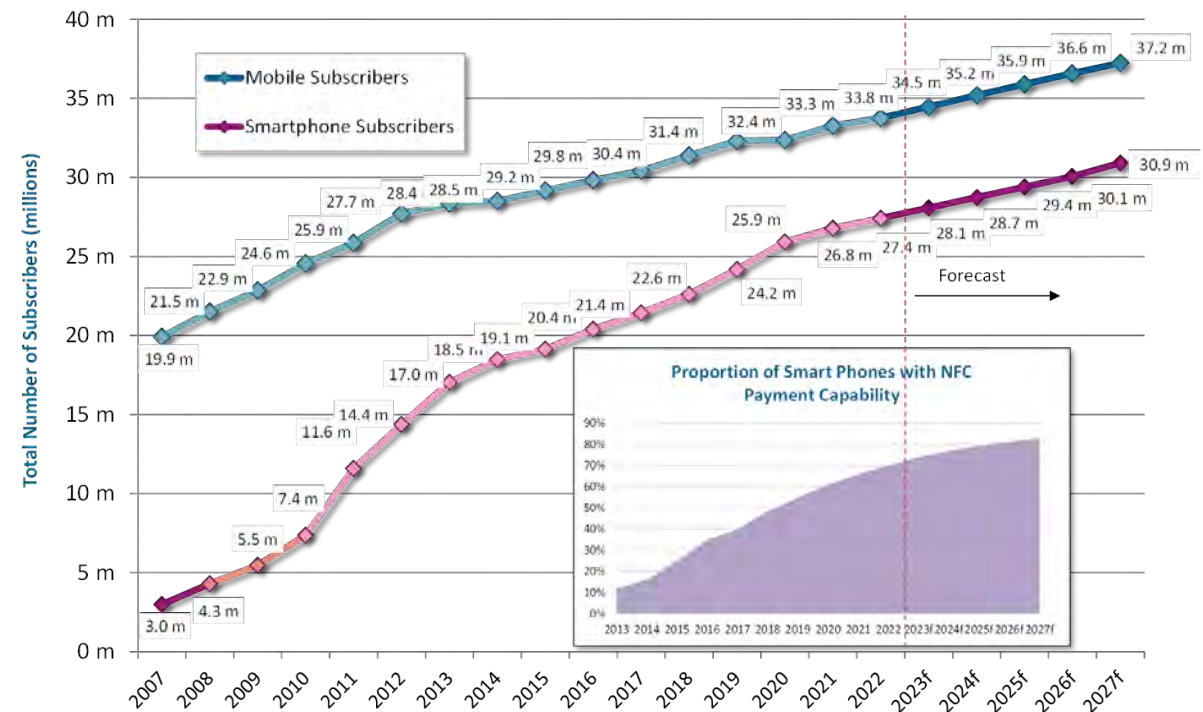
At the end of 2022 there were 27.4 m smart phone subscribers, representing a smart phone penetration of 81.2%. Smart phone subscriptions grew at 2.4% in 2021.

By 2027, we expect smart phone subscriptions to reach 30.9 m, corresponding to a smart phone penetration rate of 83.0%. The annual growth in smart phone subscribers is expected to average 2.4% p.a. (CAGR) over the period 2022 to 2027.

In 2022, some 70.0% of smart phones in Canada were NFC-enabled, allowing them to be used for contactless mobile payments in-store. By 2027, we expect that 83.1% of all smart phone devices will be NFC-enabled, amounting to 25.7 m smart phones. Over the period 2022 to 2027, the average growth rate for NFC-enabled phones is expected to be 6.0% p.a. (CAGR).

***Note:** This time series has been revised based on revisions in reporting by the CRTC. Historically, the reported number of mobile did not differentiate between mobile phone, mobile broadband and IoT subscriptions. As these latter two categories have gained in prominence, they have been separated out to provide a more realistic view of actual mobile phone subscriptions. The revisions have affected our assessment of smart phone subscriptions as well as NFC penetration.

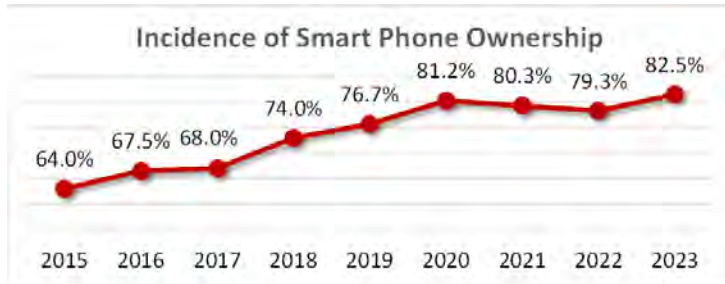
**Forecast Number of Mobile Subscribers in Canada
(2007 - 2027)**



Source: TSI Projections

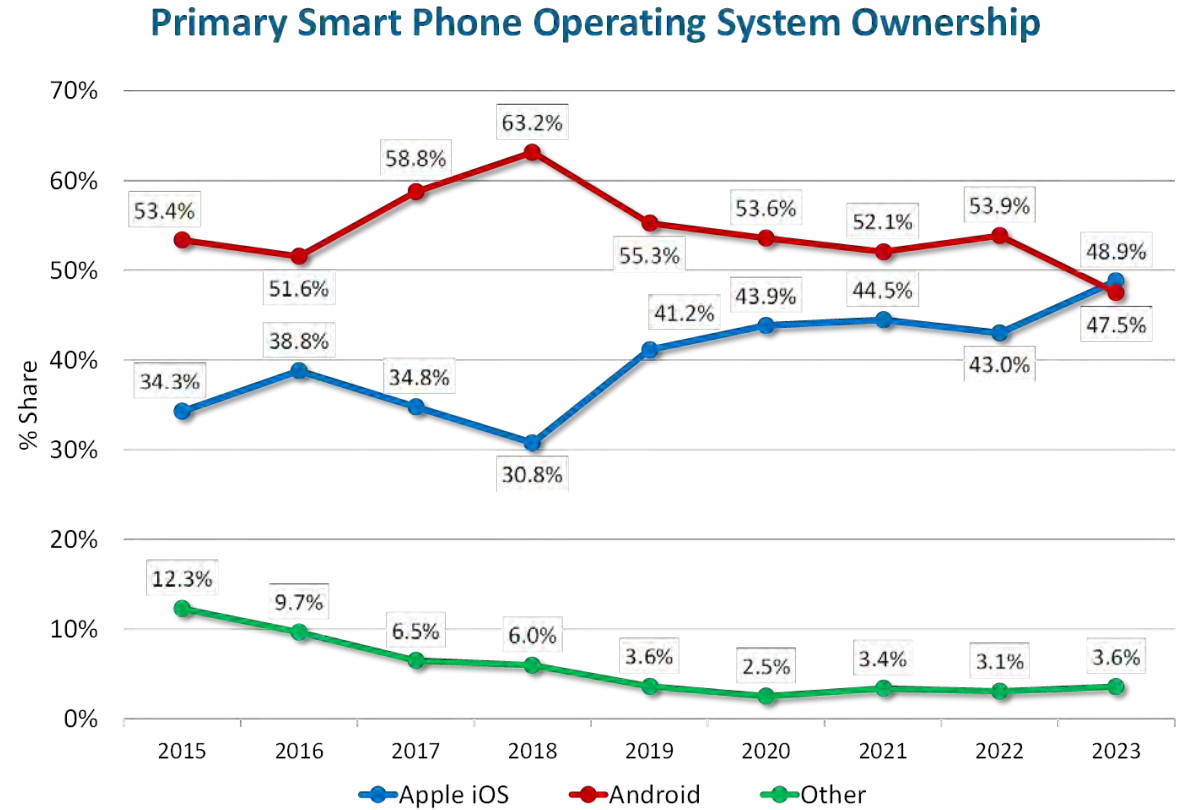
Apple iOS edges past Android as primary device OS

Smart phones remain the most dominant mobile connectivity device in Canada, with more than eight out of ten adult Canadians (82.5%) owning a smart phone in the 2023 Canadian Consumer Payments Survey.



Android’s share of operating systems of primary smart phones in Canada dropped by 6.4 percentage points over the year, to 47.5%. Apple iOS edged past Android as the dominant smart phone operating system. iOS’s share gained 5.9 percentage points over the prior survey year.

The average smart phone age has edged up every year since 2019, from 2.0 years to 2.4 years in 2023.



Base: Respondents who own a smartphone: 2023 (n=1658)

Source: Canadian Consumer Payments Survey

Apple Pay footprint expands in 2022

More than eight out of ten smart phone owners (81.8%) have at least one payment app installed on their smart phones, with a mobile banking app being the most prevalent, and showing the highest growth over the year.

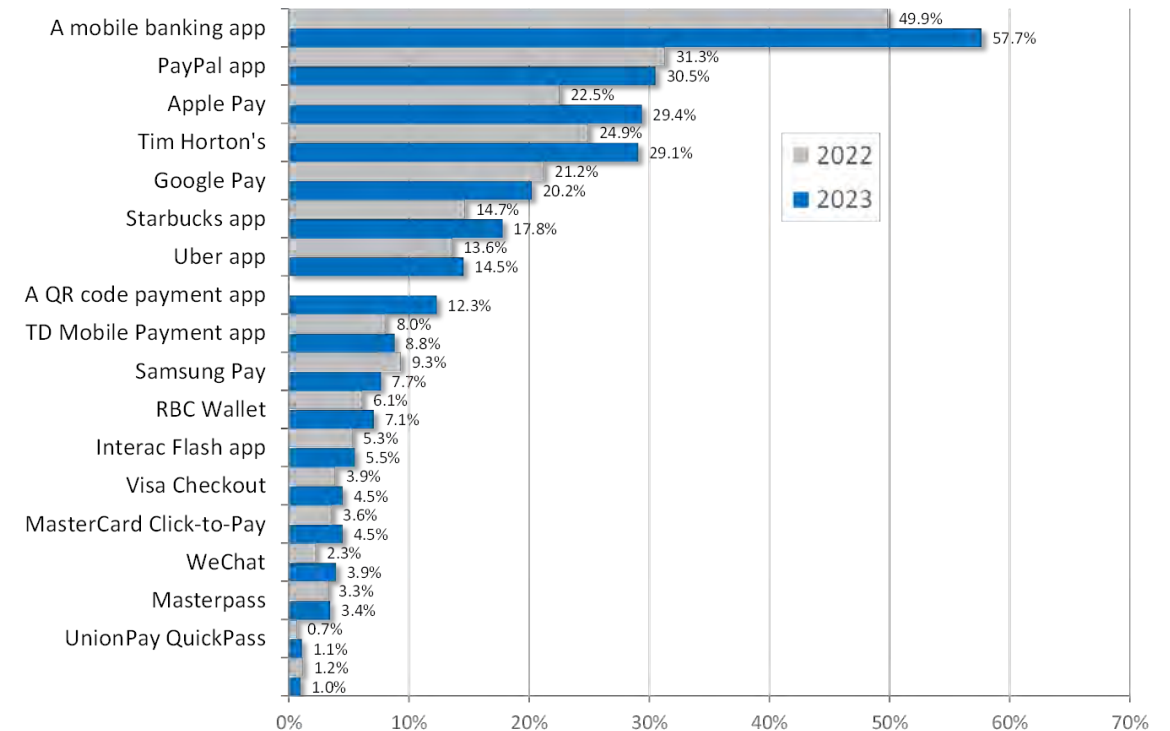
Almost six out of ten smart phone owners (57.7%) have at least one mobile banking app installed on their smart phone. Very few of the mobile banking apps available on the market in Canada have integrated in-store payment capability, and by and large, when used for payments they tend to be used mainly for mobile bill payments or transfers.

PayPal remains most dominant branded payment application wallet installed on smart phones, with about three out of ten (30.5%) smart phone owners reporting that they had this wallet installed on their devices.

The incidence of Apple Pay rose substantially over the past year, in line with the increase in share of primary smart phones.

QR code payment apps (a new category added this year) are found on 12.3% of smart phones, indicating that this may be an emerging payment mechanism on smart phones.

Payment Applications Installed on Smart Phones



Base: Smart phone owners 2023 (n=1658)

Source: Canadian Consumer Payments Survey



Checking account balances remains top mobile banking activity

The proportion of smart phone owners who have conducted a mobile banking transaction of some description on their smart phones in the past six months increased to 80.6% in 2023.

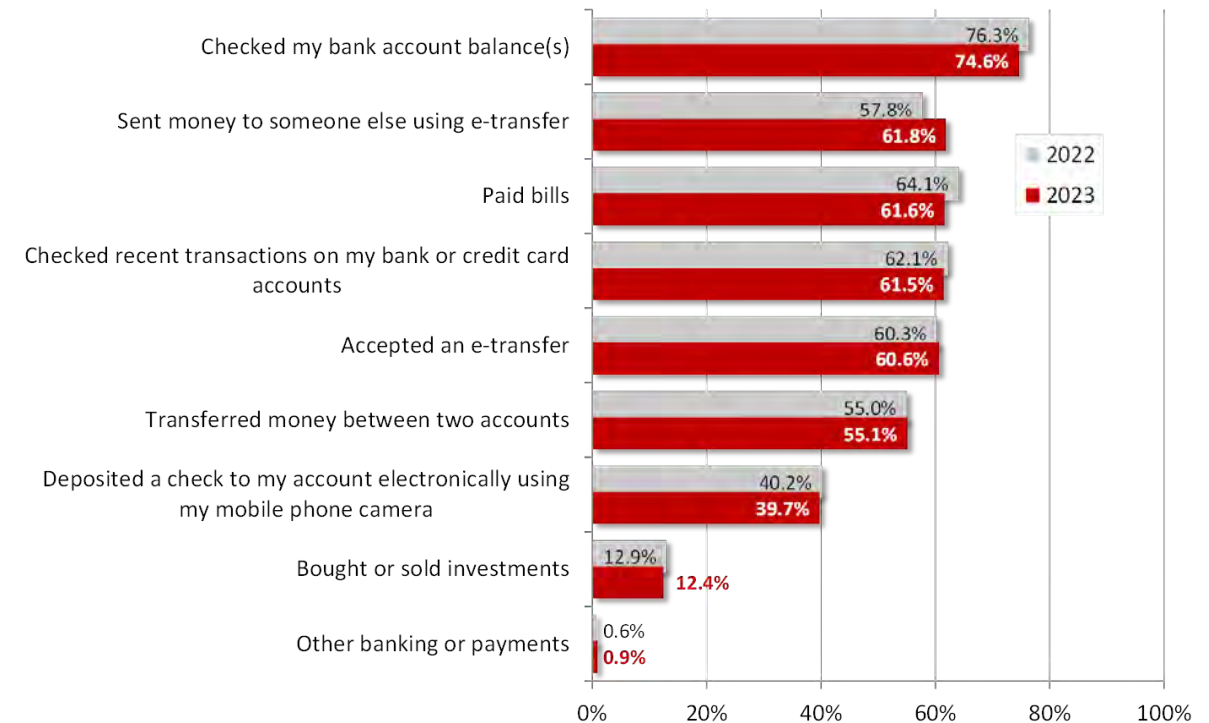
Mobile banking behaviour of smart phone owners has not changed appreciably over the past year, indicating that this has become a mainstream method of banking for consumers.

Checking account balances remains the most popular mobile banking activity with 74.6% of mobile banking users having done so in the past six months.

Sending and receiving Interac e-transfers remain popular with those doing mobile banking, with around six out of ten smart phone owners reporting these mobile banking/payment activities.

A similar proportion of mobile banking users (61.6%) paid bills using their smart phones in the past six months. Checking recent transactions on an account were as popular, with 61.5% of mobile banking users having conducted done this over the past six months.

Use of Smart Phones for Mobile Banking (P6M)



Base: Those who conducted a mobile banking transaction P6M: 2023 (n=1336)

Source: Canadian Consumer Payments Survey
Note: Responses include multiple mentions

Incidence of in-store mobile payments increases substantially

Smart phones provide access to a wide variety of payment choices, either through web-based access, or according to the specific hardware capabilities, level of enablement and apps loaded onto the device.

Almost three quarters of smart phone owners (74.2%) have made a payment originating on their smart phone in the past six months. This is substantially higher than the 68.9% recorded in the 2022 survey year. The incidence of mobile payments increased across most categories over the past year.

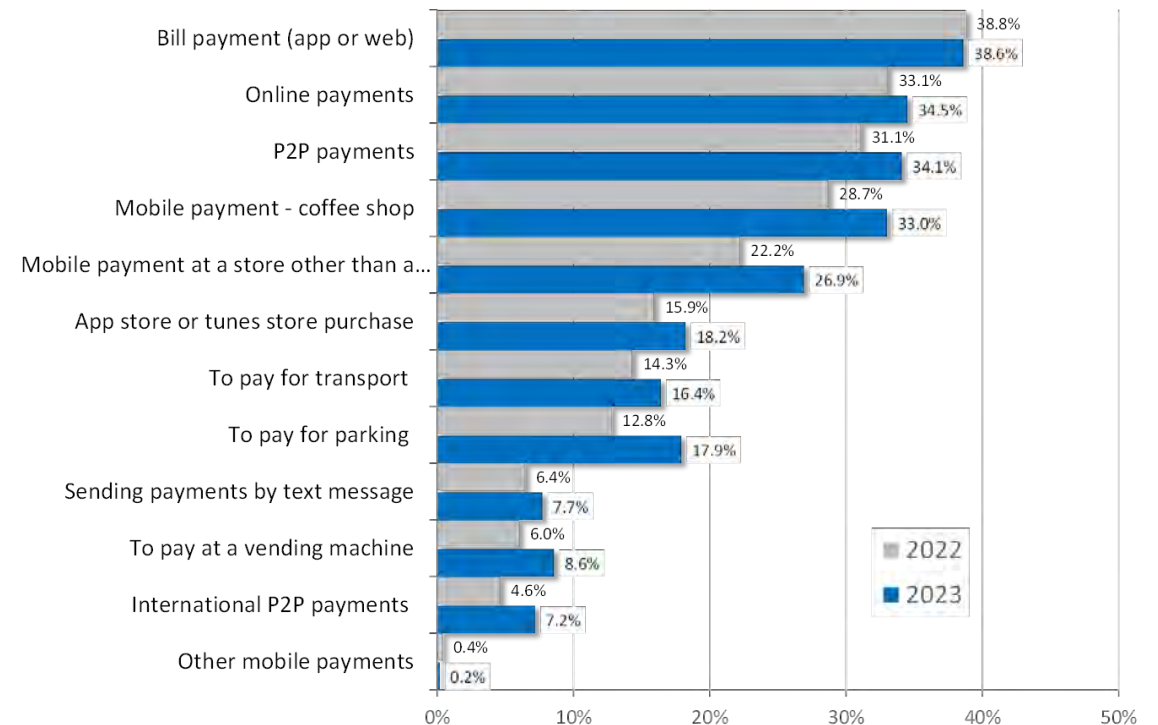
Bill payments using mobile banking remain the most common form of mobile payment, with 38.6% of smart phone owners saying they have done so in the past six months.

Mobile P2P payments are also gaining more traction with 34.1% of smart phone owners having conducted a P2P payment transaction over the past six months.

Both categories of in-store mobile payments experienced substantial increases over the year, indicating greater penetration of in-store smart phone payments. The increased penetration of smart phones with NFC payment capability, 53.7% of all smart phones in the 2023 survey year, contributed to the increase in in-store payments.

Remote payments dominate the mobile payments landscape and are represented by the top three categories of mobile payments.

Payments Made Using a Smart Phone P6M



Base: Smart phone owners 2023 (n=1658)

Source: Canadian Consumer Payments Survey

Value of mobile payments exceeds \$100 billion in 2022

About three quarters of smart phone owners (74.2%) have used their smart phones to make a payment in the past six months, with the majority of those users engaging in remote payments only.

The value of mobile payments (all payments that are initiated on a smart phone, including bill payments through a mobile banking app, payments made in-store using a mobile wallet or on the mobile web) reached \$104.8 bn in 2022*, a growth of 15.5% over the previous year.

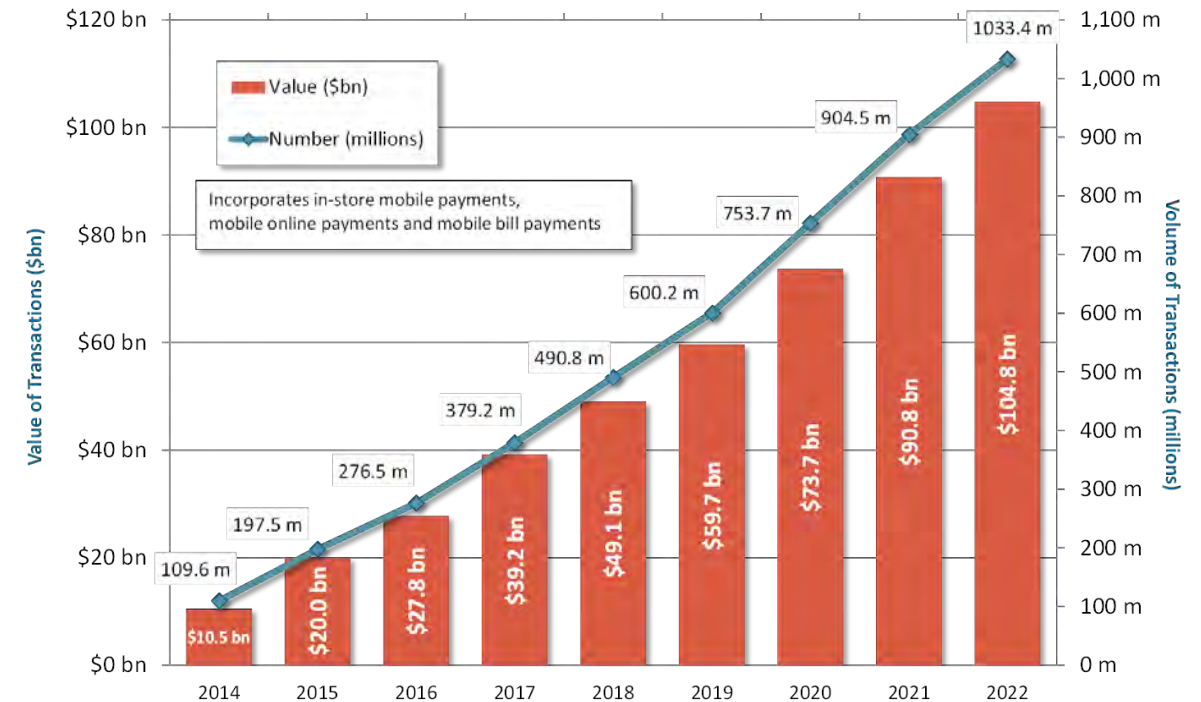
The number of mobile payment transactions, which is still dominated by remote mobile payments, and in particular bill payments, increased by 14.3% over the year, from 905 m in 2021 to 1.03 bn in 2022.

The value of mobile payments has, on average, grown at a rate of 21.7% p.a. (CAGR) over the period 2017 to 2022, compared with 22.2% p.a. for mobile payment transactions.

In 2022, the average transaction value was \$101.43, up 1.1% over the previous year. This relatively high average transaction value is heavily influenced by bill payments, which typically have far higher transaction values than in-store mobile payments.

***Note:** This time series has been revised based on revisions in reporting by the Canadian Bankers Association (CBA). The CBA undertook a major revisions of their number of transactions by channel over the past five years as a result of the mobile channel being greatly underestimated. This has had a major impact on our analysis of the size of the market. In the previous report our estimate for all mobile payments in 2021 was \$58 bn, compared with \$90.8 bn for 2021 in the current analysis – a 56% increase. This has also affected our mobile payments forecasts.

Volume and Value of All Mobile Payments Transactions (2014-2022)



Source: TSI estimates

Mobile payments continue high growth trajectory

Mobile payments represent a small proportion of the overall payment pie and are just one option from a wide array of payment options available to consumers in Canada.

Growth in the value of all mobile payments is expected to remain high throughout the forecast period, since there is much headroom for mobile payments to gain share.

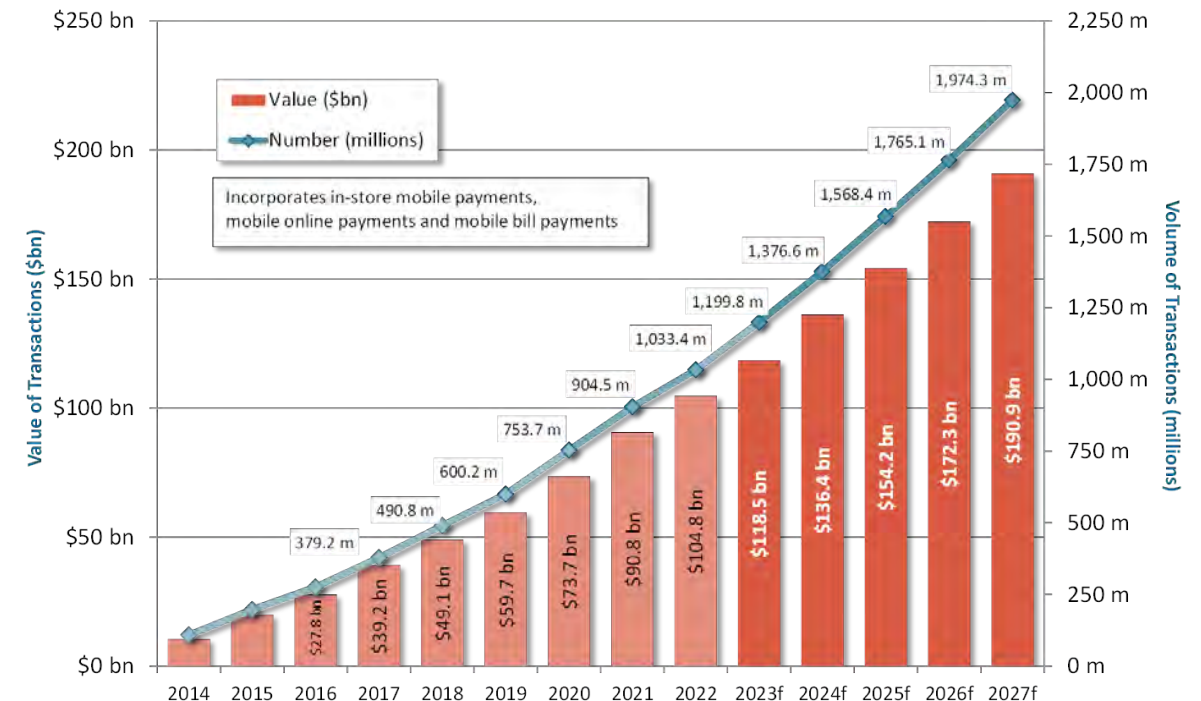
By 2027, the value of mobile payments will reach \$191 bn*, representing an annual average growth rate of 12.7% p.a. (CAGR) over the period 2022 to 2027.

The increase in the number of transactions will be more substantial as mobile purchase transactions become more frequent and the average value of a transaction drops as a result of a greater proportion of in-store and in-app purchases. By 2027, the number of mobile transactions is expected to reach 1.97 bn transactions, representing an annual average growth rate of 13.8% p.a. (CAGR) over the period.

Mobile payments accounted for 7.1% of PCE in 2022 and are expected to reach 10.8% of PCE by 2027.

***Note:** This time series has been revised based on revisions in reporting by the Canadian Bankers Association (CBA). The CBA undertook a major revision of their number of transactions by channel over the past five years as a result of the mobile channel being greatly underestimated. This has had a major impact on our analysis of the size of the market and our mobile payments forecasts.

Forecast Volume and Value of All Mobile Payment Transactions (2022-2027)



Source: TSI Projections

In-store mobile payments to reach \$35 bn 2027

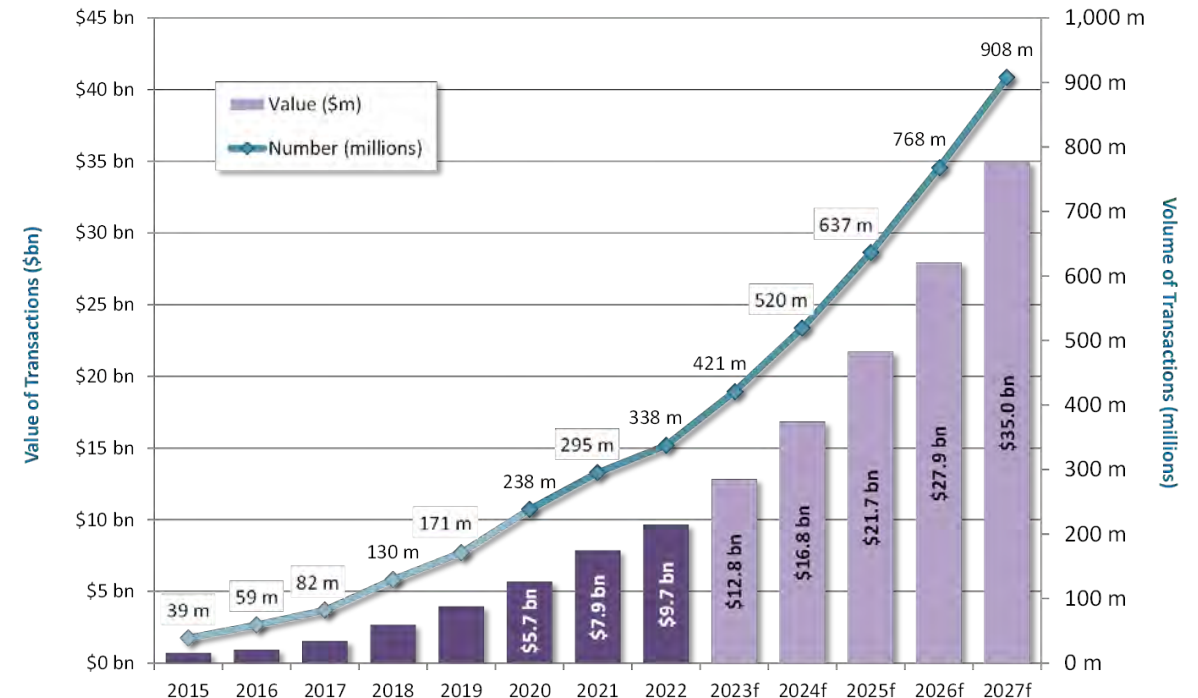
In-store mobile payments are currently miniscule by any measure, weighing in at just \$9.7 bn in 2022, but a significant 22.9% higher than the previous year.

There are many factors fueling growth. Mobile payment offerings are coming of age and are focusing on creating compelling user experiences rather than just basic functionality. The penetration of NFC-enabled phones has increased dramatically and is still growing. Consumers have become avid users of contactless payments, especially since the advent of the pandemic, which has, in turn, promoted trial of mobile payments as contactless payment option. As a result, consumers are growing accustomed to using their smart phones for contactless payments. Consumer uptake is accelerating, which is leading to high growth in in-store mobile payments.

In 2022, the number of in-store mobile payments transactions (including coffee shop payments with dedicated payment apps) reached 338 m. By 2027 we expect the value of in-store mobile payments to reach \$35.0 bn, on the back of 908 m transactions.

The average annual growth rates are expected to be 21.9% p.a. (CAGR) in transaction volumes and 29.3% p.a. (CAGR) in transactions values, respectively, over the period 2022 to 2027, with average transaction values increasing to \$38.50, some 34%, or \$10, higher than in 2022.

Forecast Volume and Value of In-Store Mobile Payments (2012-2027)



Source: TSI Projections

Online



Online Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Online Payments					
<i>Value</i>	\$69.2 bn	9.8%	\$106.4 bn	12.4%	9.0%
<i>Volume</i>	530 m	5.6%	701 m	9.0%	5.7%
<i>Value of Average Transaction</i>	\$130.52	4.0%	\$151.88	3.1%	3.1%

Growth in online purchases continues in 2022

The value of online purchase payments in Canada grew to \$69.0 bn in 2022, a healthy 9.8% over the year, but not quite as vigorous as the growth rates over the prior two years when consumers flocked to online shopping during the height of the pandemic restrictions.

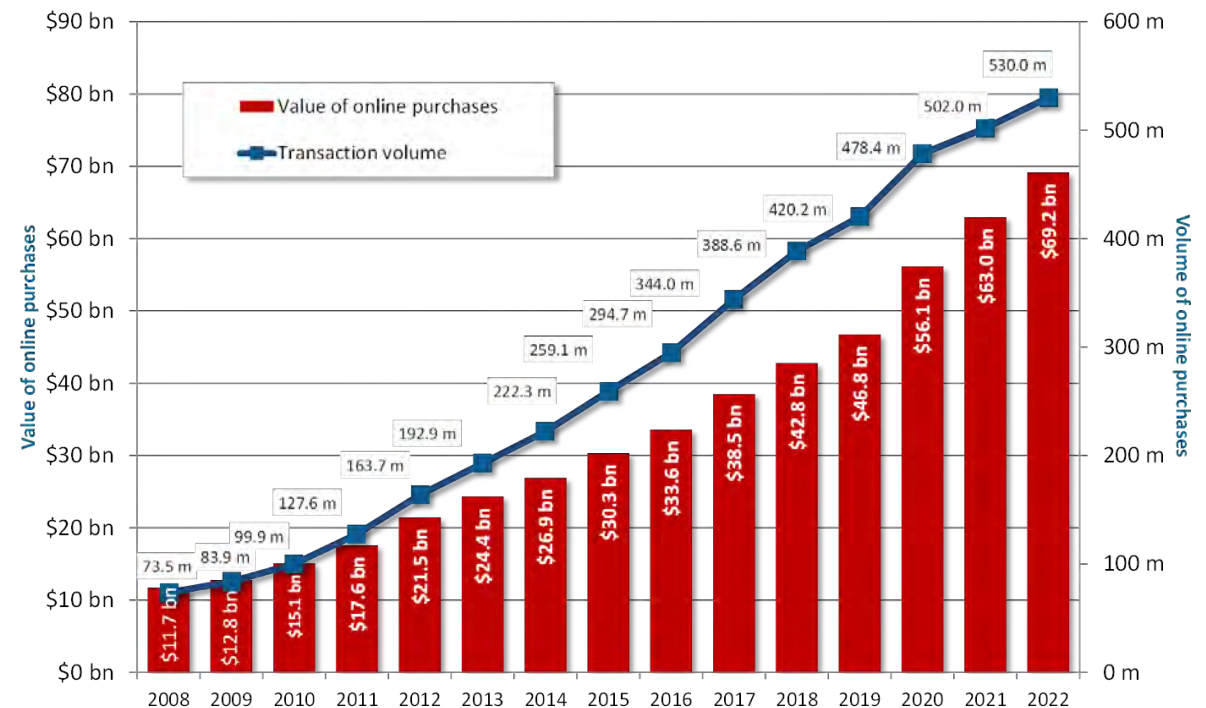
Over the period 2017 to 2022, growth in the value of online purchases averaged 12.4% p.a. (CAGR), compared with the growth rate of 5.0% p.a. (CAGR) for retail sales. Online purchases accounted for 9.2% of retail sales in Canada in 2022.

The number of online payment transactions increased by 28 m transactions over the year to 530 m in 2022. Over the period 2017 to 2022 the volume of online transactions has lagged growth in online value, growing 9.0% p.a. (CAGR) vs. 12.4%, indicating higher transaction values.

In 2022, the average online purchase transaction value increased to \$130.52, representing a 4.0% increase over the year. Over the past five years average transaction values have grown at 3.1% p.a. (CAGR).

The average annual spend for an online shopper was \$ \$1,633 in the 2023 survey, up 8.9% from the previous year. The average annual purchase frequency (in the past twelve months) also increased, to 12.3, returning to levels recorded in the 2021 survey year.

Volume and Value of Online Purchases in Canada (2008 - 2022)



Sources: TSI estimates, Canadian Consumer Payments Survey

Shifts in online shopping categories in the post-pandemic economy

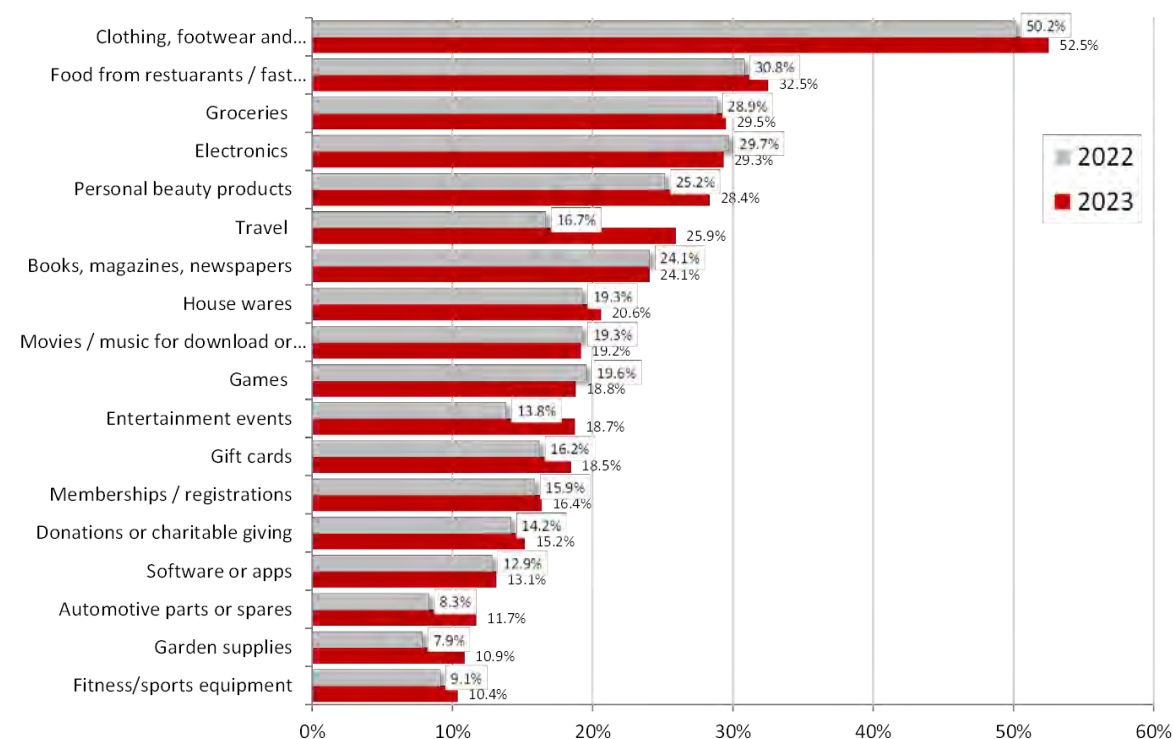
The incidence of online purchases in the past twelve months increased to 90.5% in 2023, resuming the gentle upward trend that has been in place since 2015.



'Clothing, footwear and accessories' continue to dominate the online shopping space with more than one half of online shoppers (52.5%), up slightly from the previous year.

The impact of the reopening of the economy in the wake of the pandemic can be seen across a number of other categories, most notably travel and entertainment.

Purchase Categories for Online Purchases (P12M)



Base: Online purchasers P12M: 2023 (n=1820)

**Multiple mentions
Source: Canadian Consumer Payments Survey

Credit cards dominate the online payments landscape

Credit cards remain the most popular method of payment for online purchases, with 56.2% of online shoppers paying by credit card in the past twelve months. This is down 7 percentage points over the year.

PayPal continued to be the second most popular payment method for online purchases, with 33.5% of online shoppers using this form of payment in the past twelve months, also down significantly over the year.

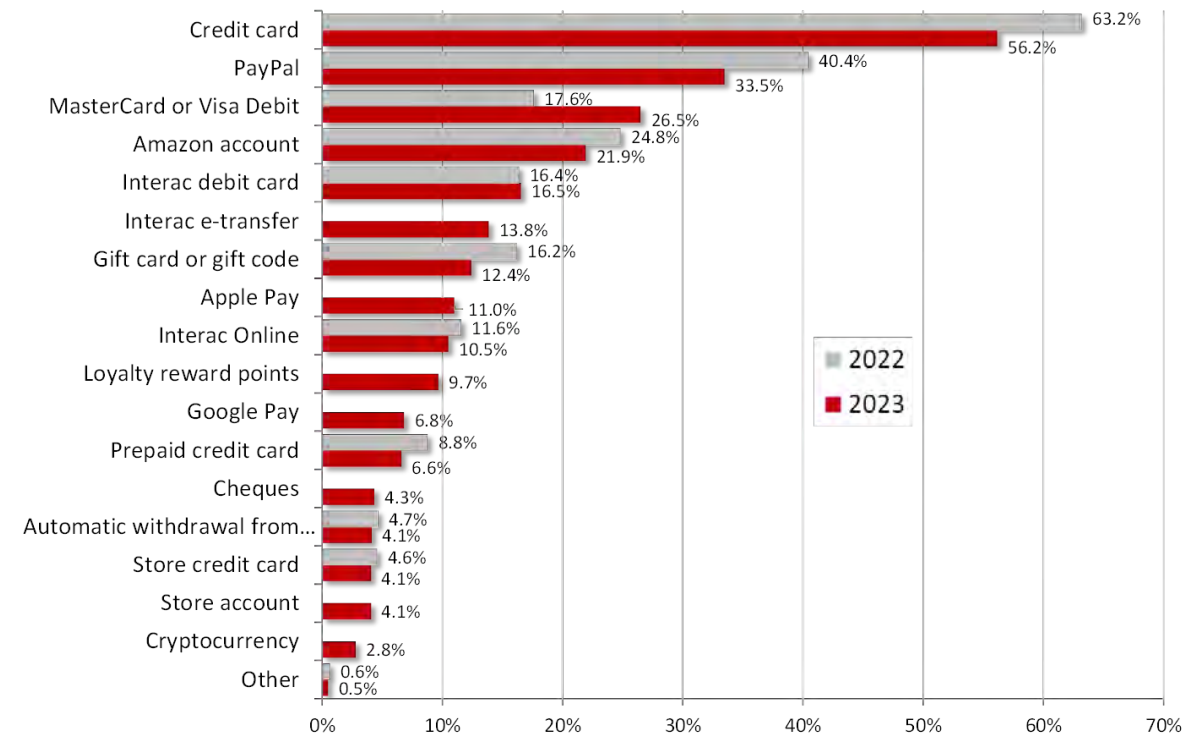
MasterCard/Visa debit cards showed the strongest gains over the year.

Payment by Interac e-transfer, Apple Pay, Loyalty Reward Points and Google Pay (new categories added this year) received moderate coverage, with Interac e-transfer leading the pack.

On average, online shoppers used 2.5 payment mechanisms for their online shopping in the past twelve months. Only 40.8% of online shoppers remain loyal to only one payment mechanism.

Almost half (48.8%) of those who use only one payment mechanism for their online shipping use only credit cards, the next most popular payment method being scheme debit but trailing at only 15.0%.

Payment Methods for Online Purchases (P12M)



Base: Online purchasers P12M: 2023 (n=1820)

**Multiple mentions
Source: Canadian Consumer Payments Survey

Card-on-File most popular One-Click checkout service

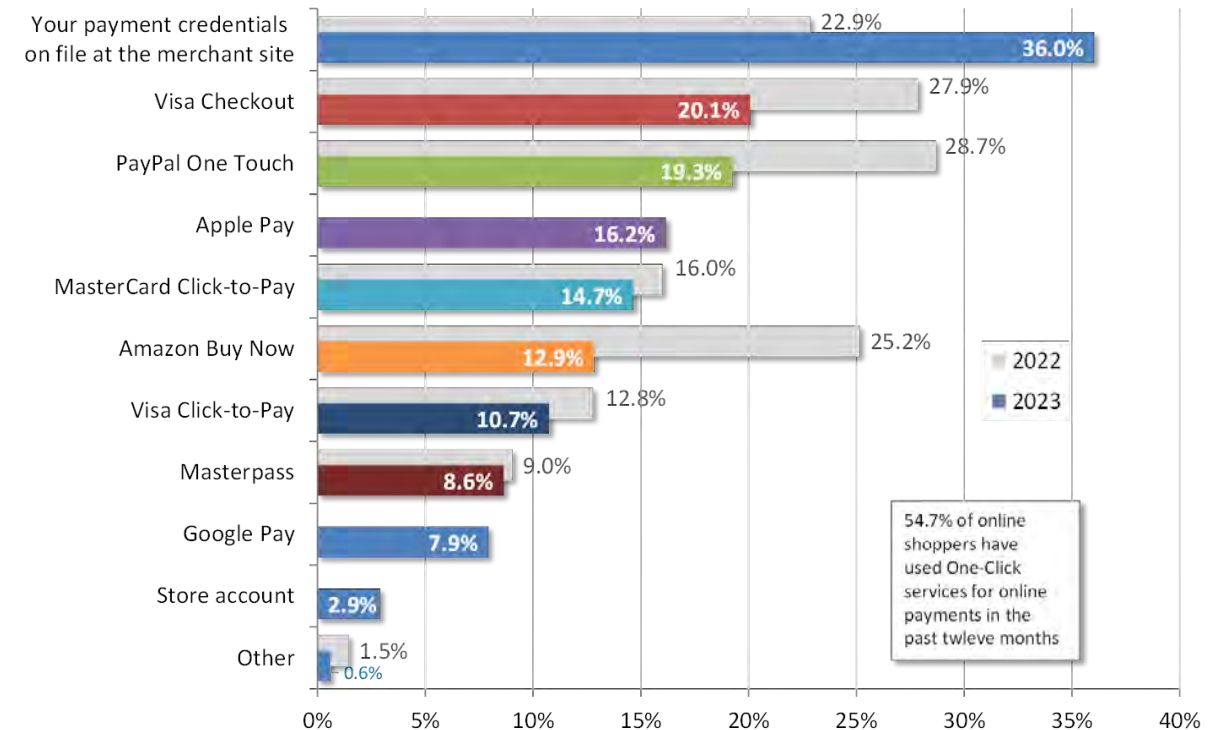
One-click services are becoming an important way to ensure rapid payments in the online checkout process, reducing the amount of friction in the checkout process, and thereby reducing the rate of cart abandonment. The incidence of use of one-click services at checkout was 54.7% among online shoppers in the 2023 CCPS compared with 47.7% in the previous survey year and 44.9% the year before that, indicating the rapid adoption of one-click checkout.

Among those that used the service in the past twelve months, more than one third (36.0%) used their payment credentials on file at a merchant.

PayPal OneTouch was neck and neck with Visa Checkout at approximately 20%.

The wide apparent swings over the year are likely an artefact of respondents' understanding of questions posed in the survey. For example, Amazon Buy Now could also be construed as payment credentials on file at a merchant.

Use of One-Click Services for Online Purchases (P12M)



Base: Respondents who used One-Click services for online purchases P12M: 2023 (n=996)

Source: Canadian Consumer Payments Survey

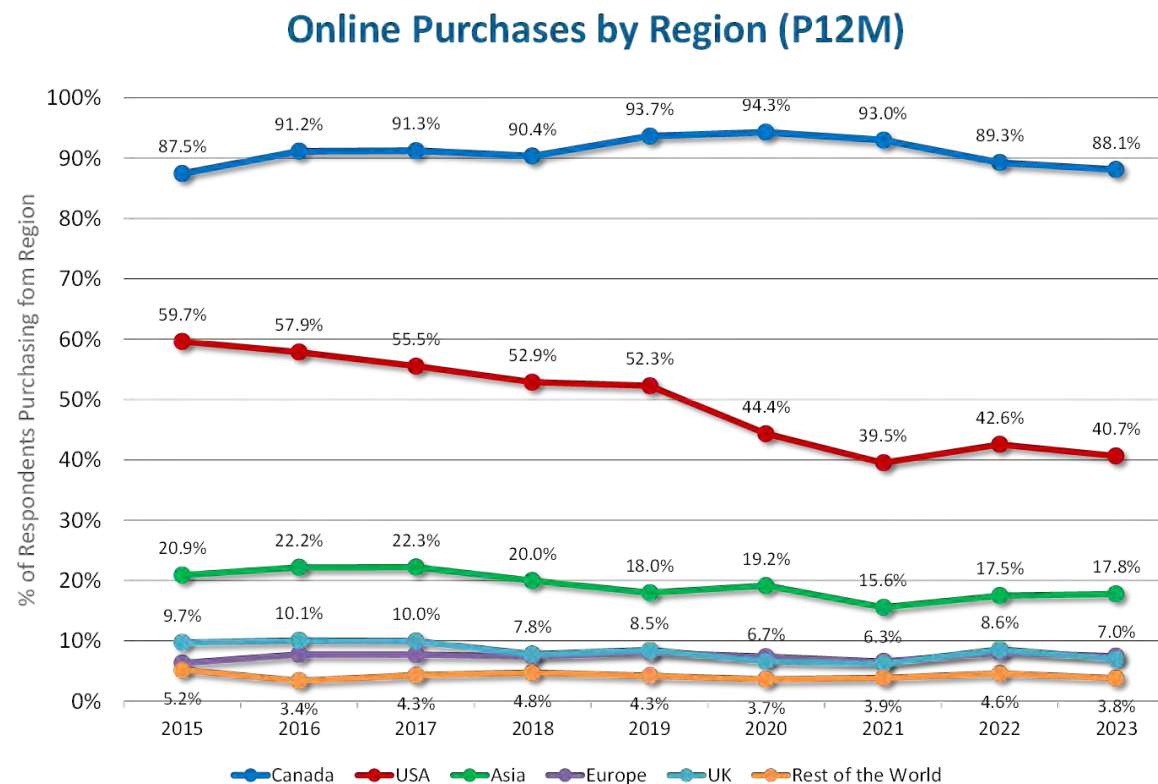
Online shopping from different regions remains fairly stable

Almost nine out of ten online shoppers (88.1%) have bought something online from Canada in the past twelve months.

In the 2023 survey, 30.1% of online shoppers bought something from only one region in the past year. This is a marked drop from the 54.7% recorded in the previous year and shows a broadening of the base regionally. This is further evidenced by the fact that in 2023 online shoppers purchased from 2.1 regions over the past twelve months, compared with 1.7 in the previous year.

The USA continues to be the second most popular online shopping destination among Canadian online shoppers with an incidence of 40.7% in 2023. This is almost 2 percentage points lower than the previous year and resumes the gentler long-term declining trend, one that accelerated during the pandemic, and which was temporarily checked in 2022.

Online purchases from Asia remained stable over the past year, as did those from Europe, although at less than half the incidence.



Base: Online purchasers P12M: 2023 (n=1820)

Multiple mentions
Source: Canadian Consumer Payments Survey

Online purchases revert to pre-pandemic growth trend

The sharp growth in online purchases experienced in 2020 moderated in 2021, placing online purchases back on the pre-pandemic growth trend. While the exigencies of pandemic-era online shopping have abated, high growth is expected to continue over the next five years.

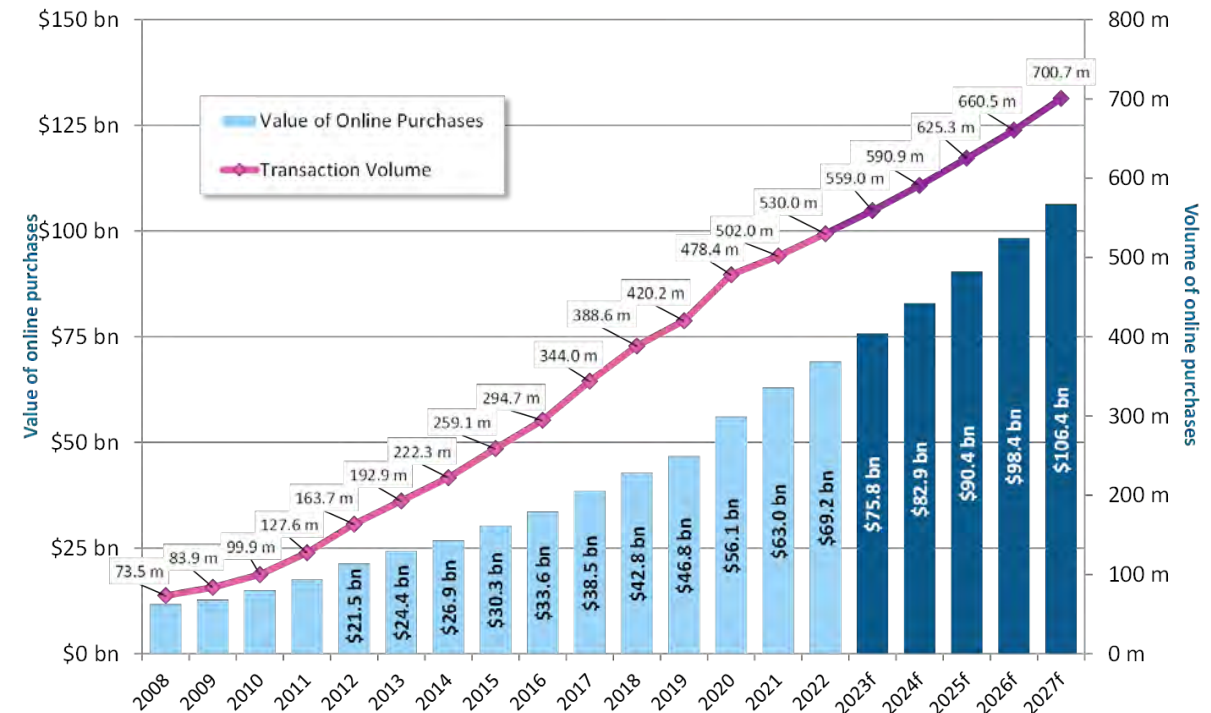
By 2027, the value of online purchases will reach \$106.4 bn, adding \$37.3 bn to the levels in 2022, and representing a growth rate of 9.0% p.a. (CAGR) over the forecast horizon. The value of online purchases in 2027 is expected to represent 12.0% of retail sales in that year.

The number of online payment transactions is forecast to grow to 700.7 m by 2027, a growth rate of 5.7% p.a. (CAGR) over this period.

The average transaction value will increase to \$151.88 by 2027, growing at an average rate of 3.1% p.a. (CAGR) over the next five years. One of the contributing factors to this relatively high rate of growth in transaction values is the high inflation rate, which is only expected to return to the Bank of Canada's acceptable levels by 2024.

Online shopping using a mobile device accounted for 16.0% by value in 2022 and this share is expected to increase to 21.3% by 2027. The proportion of online transaction volume from the mobile channel was 21.5% in 2022 and is expected to reach 30.0% by 2027.

Forecast Volume and Value of Online Purchases in Canada (2022 - 2027)



Sources: TSI Projections

Bill Payments



Bill Payments Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
TOTAL Bill Payments and Transfers – All Channels	1,801 m	8.8%	2,366 m	10.0%	5.6%
Bill Payments	832 m	7.7%	1,298 m	12.9%	6.0%
<i>ABM</i>	<i>28.1 m</i>	<i>-3.0%</i>	<i>23.0 m</i>	<i>-3.1%</i>	<i>-3.9%</i>
<i>Telephone</i>	<i>13.6 m</i>	<i>-8.1%</i>	<i>9.1 m</i>	<i>-10.1%</i>	<i>-7.8%</i>
<i>PC/Internet</i>	<i>208.9 m</i>	<i>-6.3%</i>	<i>180.3 m</i>	<i>-4.6%</i>	<i>-2.9%</i>
<i>Mobile</i>	<i>581.8 m</i>	<i>14.9%</i>	<i>856.1 m</i>	<i>16.7%</i>	<i>8.0%</i>
Value of Bill Payments	\$117.4 bn	6.5%	\$160.0 bn	7.4%	6.4%
<i>Mobile</i>	<i>\$82.1 bn</i>	<i>13.7%</i>	<i>\$128.2</i>	<i>17.0%</i>	<i>9.3</i>
<i>All other channels</i>	<i>\$35.4 bn</i>	<i>-7.0%</i>	<i>\$31.8 bn</i>	<i>-4.5%</i>	<i>-2.1%</i>

Mobile bill payments and transfers continue to grow rapidly

The total number of transfers and bill payments rose to 1.80 bn in 2022*, up 8.8% over the previous year. Over the period 2017 to 2022 the average growth rate for all bill payments and transfers was 10.0% p.a. (CAGR).

In 2022, an estimated 1.29 bn mobile bill payments and transfers* took place, an increase of almost 170 m transactions, or 15.0%, over the year. Mobile bill payments accounted for 581.8 m transactions, or 45.2% of mobile bill payments and transfers in 2022.

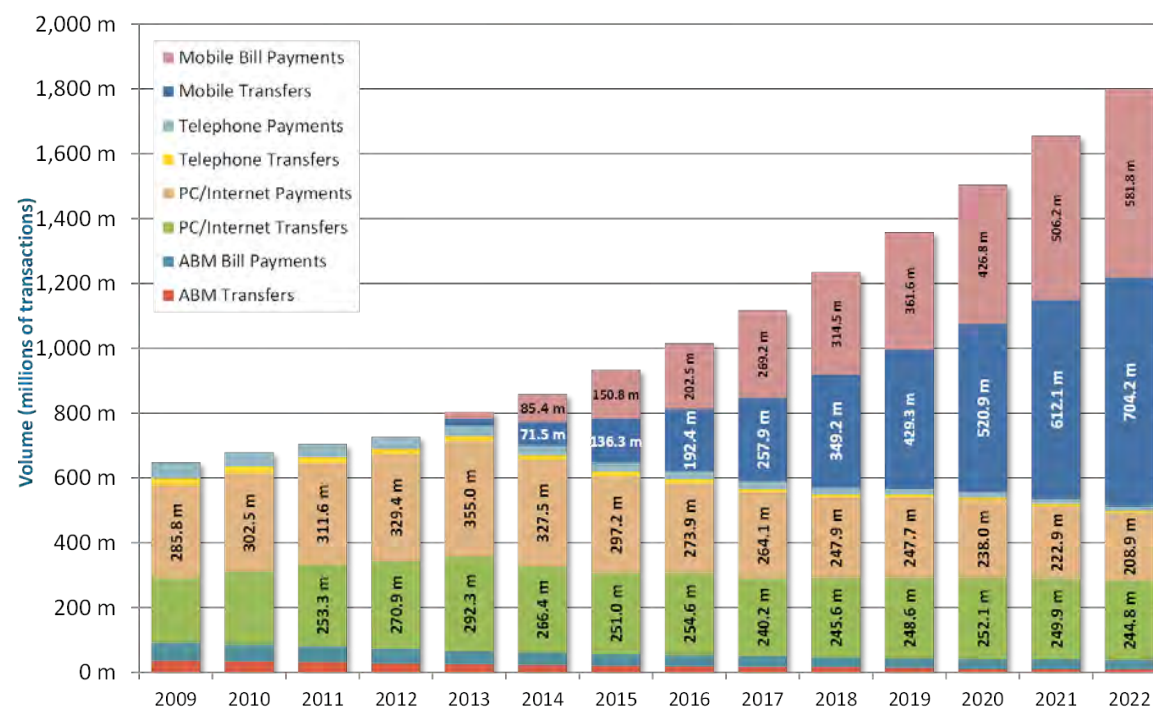
Mobile bill payments and transfers exceed PC/Internet payments and transfers for the first time in 2017.

Transfer transactions have trebled over the past 10 years, reaching 969 m in 2022, while bill payments have only doubled over this period, to reach 618.4 m.

ABM and telephone bill payment and transfer transactions have been on a declining trend since at least 2002, the earliest data that we have available on this series. Between them they accounted for 108 m transactions.

***Note:** This time series has been revised based on revisions in reporting by the Canadian Bankers Association (CBA). The CBA undertook a major revision of the number of transactions by channel over the past five years, as a result of reporting changes by participating banks. The mobile channel was vastly understated. In addition, this has boosted the overall number of bill payments and transfers reported by the CBA.

**Transfers and Payments by Delivery Channel
(2009 - 2022)**



Source: CBA & TSI estimates

Note: Revised time series based on revisions in CBA reporting from 2015 onwards

Mobile bill payments and transfers share exceed 70% in 2022

In 2022, bill payments accounted for 46.2% of all bill payments and transfers, a modest decrease over the previous year. In 2002, bill payments had a share of 69.2% recorded, indicating the significant increases in share of transactions experienced by account transfers.

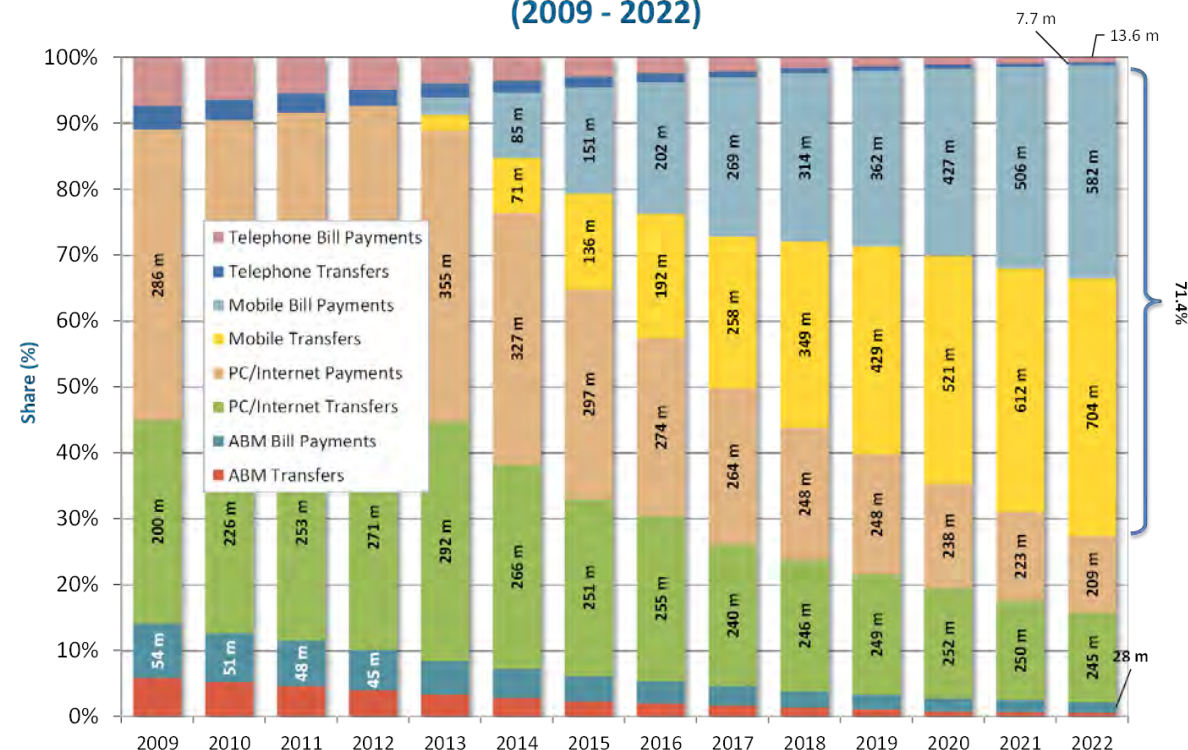
Mobile bill payments and transfers accounted for 71.4% of all transactions in 2022*, with bill payments recording a share of 32.3% against mobile transfers' share of 39.1%.

Telephone bill payments and transfers accounted for just 1.2% of all channel transfers and bill payments in 2022, while the ABM channel accounted for 2.2%. The combined ABM and telephone channels accounted for 58.2% of all bill payment and transfer transactions in 2002.

The decrease in share of non-mobile PC/Internet channel over the past few years demonstrates the extent to which substitution to the mobile channel has taken place. At its peak in 2013, PC/Internet channel commanded a share of 84.8% of all bill payments and transfers, compared with 25.2% in 2022.

***Note:** This time series has been revised based on revisions in reporting by the Canadian Bankers Association (CBA). The CBA undertook a major revision of the number of transactions by channel over the past five years, as a result of reporting changes by participating banks. The mobile channel was vastly understated. In addition, this has boosted the overall number of bill payments and transfers reported by the CBA.

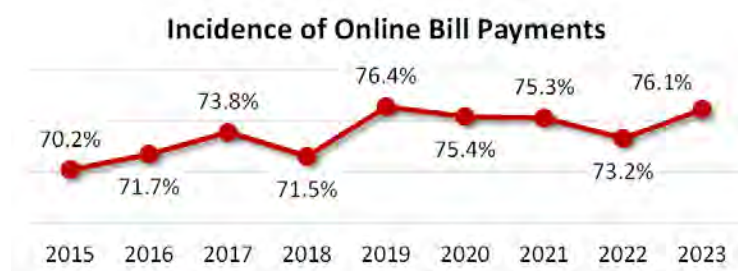
Share of Transfers and Payments by Delivery Channel
(2009 - 2022)



Source: CBA & TSI estimates

Online bill payments across categories remains fairly stable

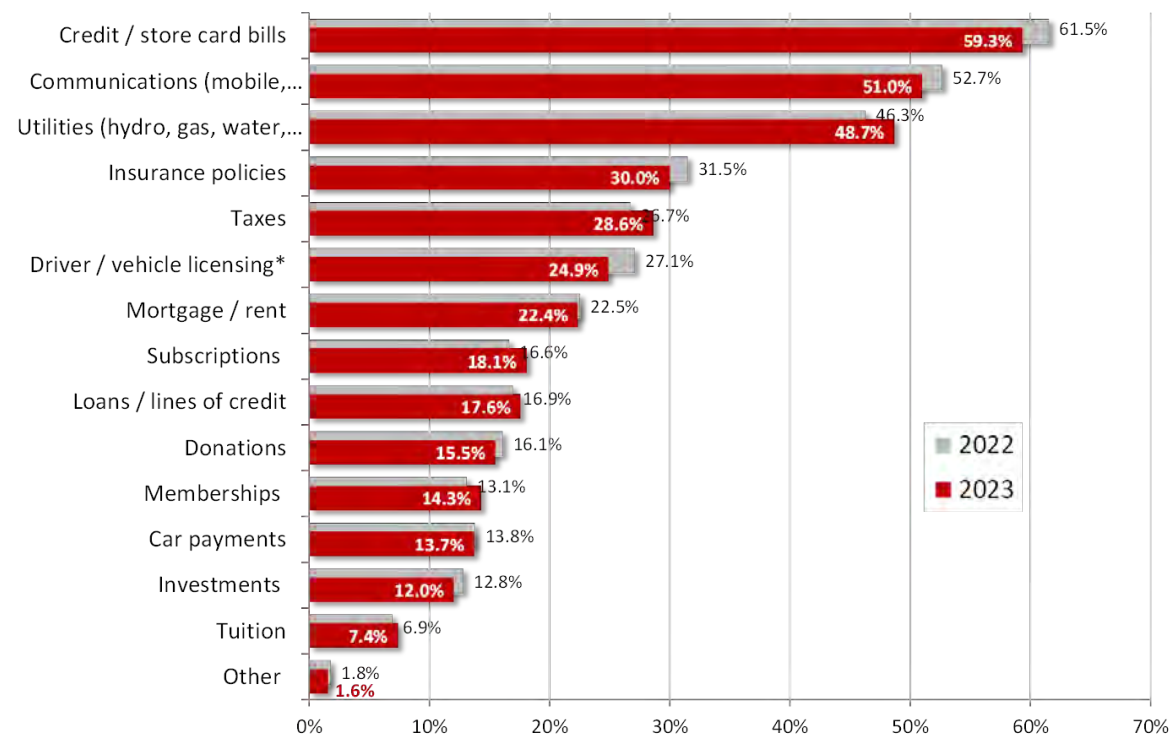
About three quarters of adult Canadians (76.1%) made online bill payments in the past twelve months. The incidence increased by 2.9 percentage points over the past year.



Credit and store card bills remain the most popular online bill payment category, with about six out of ten of online bill payers (59.3%) paying this type of bill online, followed by communications services at 51.0%. Bill payments across different categories tend to be fairly stable year on year and, other than vehicle licensing (Ontario did away with the requirement to pay for vehicle licenses), there have been no major shifts in the incidence of bill payments across categories.

The average number of bills paid online per month was 4.6 in the 2023 CCPS, almost the same as in the previous survey year. The total value of bills paid was, on average, \$649 vs \$660 in the 2022 survey year.

Online Bill Payments by Category (P12M)



Base: Online bill payers P12M: 2023 (n=1530)

Source: Canadian Consumer Payments Survey

Growth in bill payments and transfers to moderate

Growth in bill payments and transfers will continue throughout the forecast period, but at a lower rate than historically as the market approaches saturation. By 2027, the total number of bill payments and transfers is expected to reach 2.37 bn, representing a growth rate of 5.6% p.a. (CAGR) over the period.

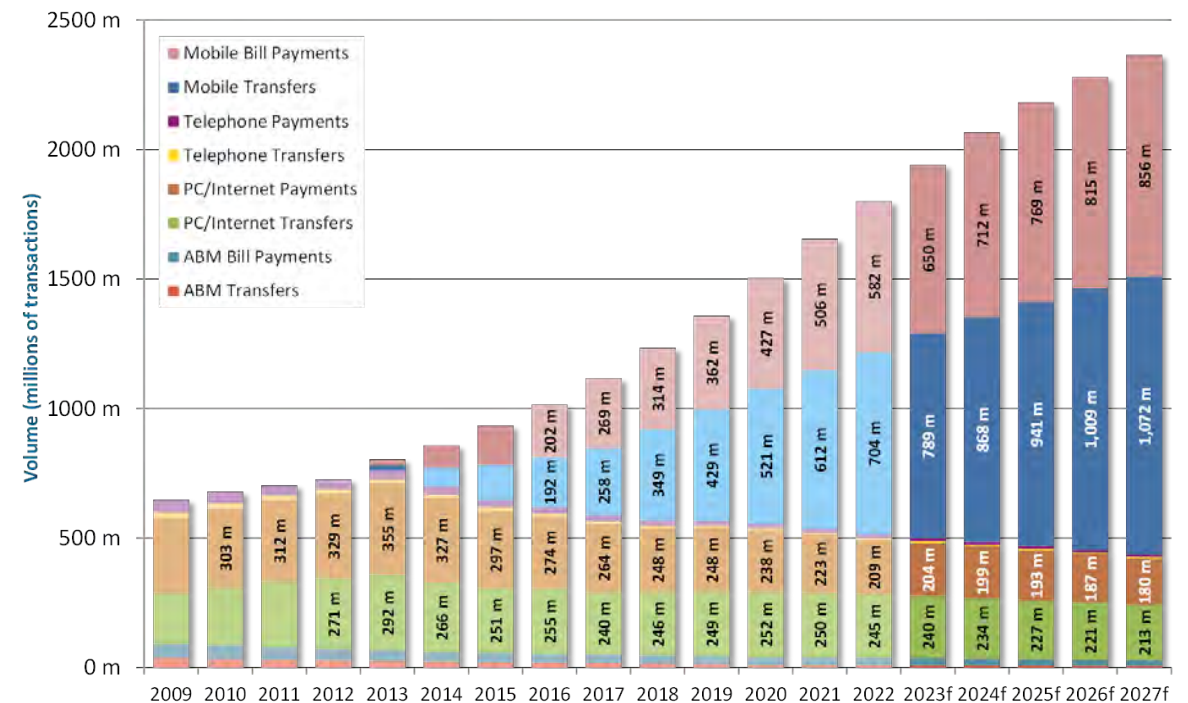
Transfers are expected to grow at a rate of 6.0% p.a. (CAGR) over this period, slightly higher than the 5.1% p.a. (CAGR) growth rate for bill payments.

Mobile payments and transfers are expected to grow rapidly over the next five years, reaching 1.93 bn transactions by 2027, representing an annual average growth rate (CAGR) of 8.4% p.a. (CAGR), displacing all other channels.

PC/Internet bill payments and transfers not conducted on a mobile device will total 393 m by 2027, shedding more than 60 m transactions over the period, which represents an average rate of decline of 2.8% p.a. (CAGR).

The ABM and telephone channels will dwindle to a combined 45.3 m bill payments and transfers by 2027. This represents an average rate of decline of 5.8% p.a. (CAGR) over the period.

**Forecast Transfers and Payments by Delivery Channel
(2022 - 2027)**



Source: TSI projections

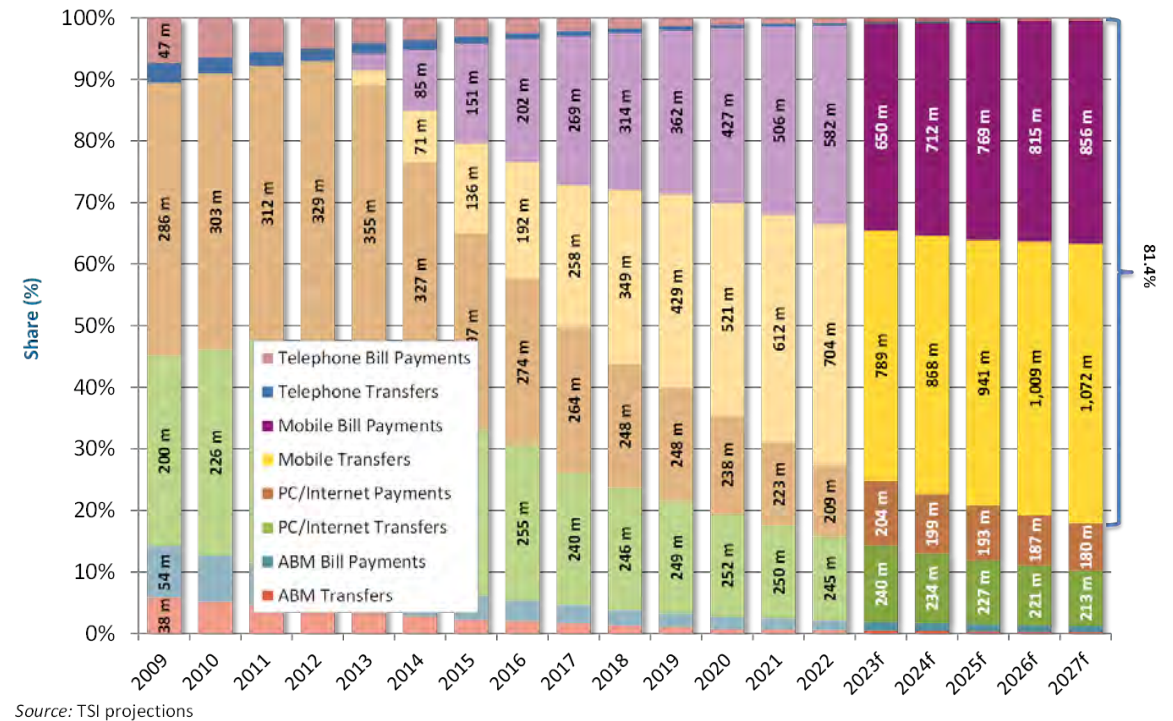
Mobile channels to increase their dominance by 2027

In 2022, the combined PC/Internet/mobile bill payments and transfers accounted for 96.6% of the total across all channels. By 2027, this share is expected to increase to 98.1%.

The mobile channel is expected to further displace all other channels as consumers embrace the convenience and effectiveness of bill payments and transfers on that channel. By 2027, the mobile channel will account for 81.5% of all bill payments and transfers, with mobile transfers at a share of 45.3% of the total, and mobile bill payments taking a share of 36.2% of the total.

The traditional PC/Internet channel's share of transfers and bill payments will shrink to 16.6% of all transfers and bill payments in 2027, while the telephone and ABM channels will account for a combined share of just 1.9%.

Forecast Share of Transfers and Payments by Delivery Channel (2022 - 2027)



Value of mobile bill payments to reach almost \$130 bn by 2027

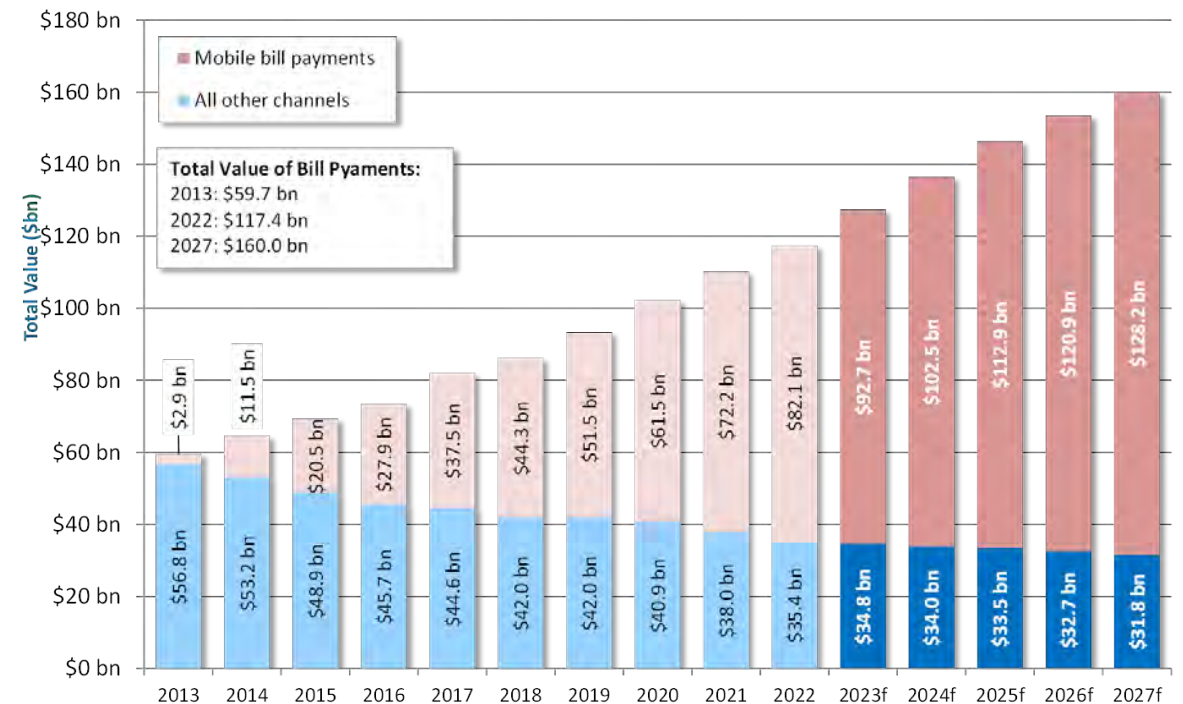
The value of mobile bill payments was \$82.1 bn in 2022, up 13.7% over the previous year. Growth in the value of mobile bill payments averaged 17.0% p.a. over the period 2017 to 2022.

All other bill payment channels between them accounted for \$35.4 bn of bill payment value in 2022, a decrease of 7.0% over the year. The value of bill payments through these non-mobile channels has been decreasing consistently over at least the past decade and averaging a rate of decline of 4.5% p.a. from 2017 to 2022.

By 2027, the value of mobile bill payments is expected to reach \$128.2 bn, for a share of 80.1% of all bill payments by value, compared with 69.9% in 2022. The growth in mobile bill payment value is forecast to be 9.3% p.a. (CAGR) over the period 2022 to 2027, versus 6.4% p.a. for the total value of bill payments. The value of bill payments via all non-mobile payment channels is expected to decrease to \$31.8 bn by 2027, representing an annual average rate of decline of 2.1% p.a. (CAGR) over the forecast period.

The average transaction value is expected to be stable across all channels. In 2022 the average value of a bill payment was \$141.07. This is expected to edge up slightly every year to reach \$149.73 by 2027, representing an annual growth rate of 1.2% p.a. (CAGR).

**Forecast Value of Bill Payments
(2022 - 2027)**



Source: TSI projections

Mobile remains only growth channel in bill payments and transfers

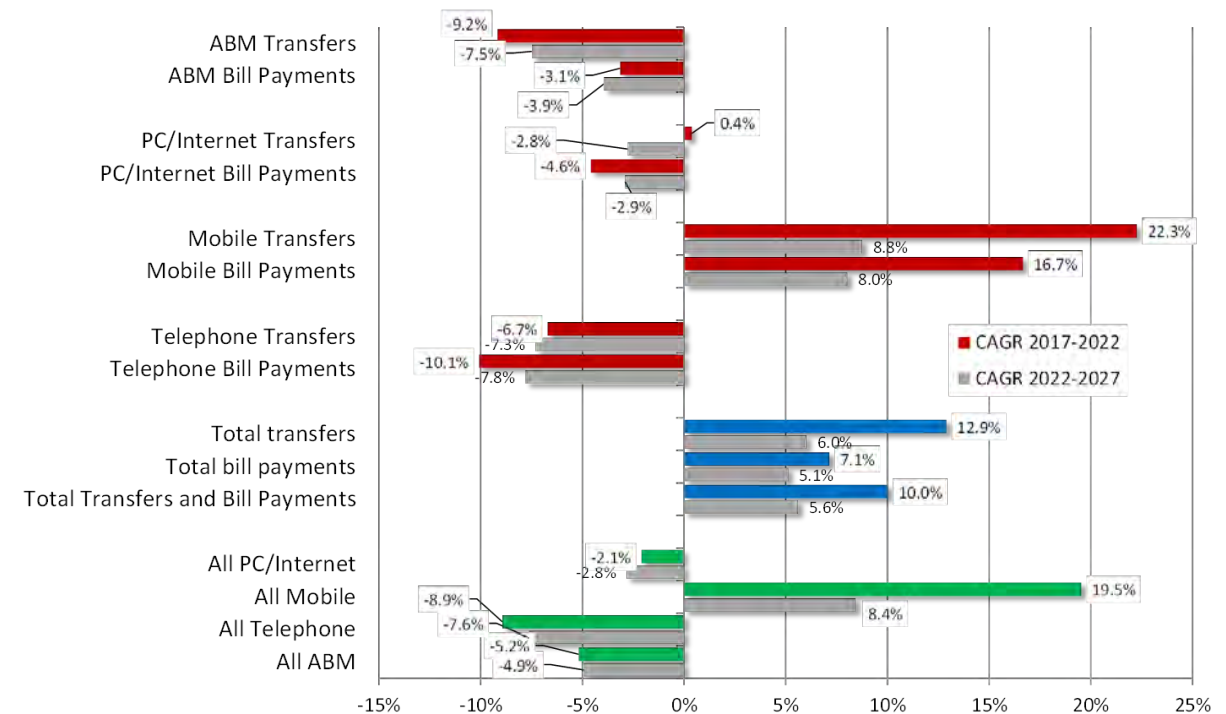
The mobile channel has experienced supernormal growth over the past decade, characteristic of a market where rapid technological substitution is taking place. Over the period 2017 to 2022, mobile transfers grew at a rate of 22.3% p.a. (CAGR), while the corresponding growth in mobile bill payments was 16.7% p.a. (CAGR).

Apart from mobile, only transfers done via the PC/Internet channel experienced any growth over the past five years.

The rate of growth of bill payments and transfers in the mobile channel is expected to moderate over the next five years given the substantial share that it has achieved already. Growth over the period 2022 to 2027 is expected to be 8.8% p.a. (CAGR) for mobile transfers and 8.0% p.a. (CAGR) for mobile bill payments.

ABM and telephone transfers and bill payments, which have been showing strong rates of decline over the past two decades, are expected to continue their decline over the next five years, accompanied by more modest declines in the PC/Internet channel.

Growth by Delivery Channel and Transaction Type
(CAGR: 2017 - 2022, 2022 - 2027)



Source: TSI projections

Wearable Payments



Wearable Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Payments capable wearable devices	5.2 m	16.3%	8.4 m	38.8%	18.4%
Wearable Payments					
<i>Value</i>	\$626 m	34.6%	\$2,443 m	120.3%	33.1%
<i>Volume</i>	25.2 m	23.2%	75.4 m	106.8%	25.2%
<i>Value of Average Transaction</i>	\$24.81	9.2%	\$32.40	6.6%	6.3%

Ownership of wearables set to grow rapidly through to 2027

About four out of ten adult Canadians (39.3%) own at least one smart wearable device. This is significantly higher than the 33.7% recorded in the 2022 survey year. Fitness trackers and smart watches represent 90% of all wearables owned. The majority of wearable owners (75%) own a single device.

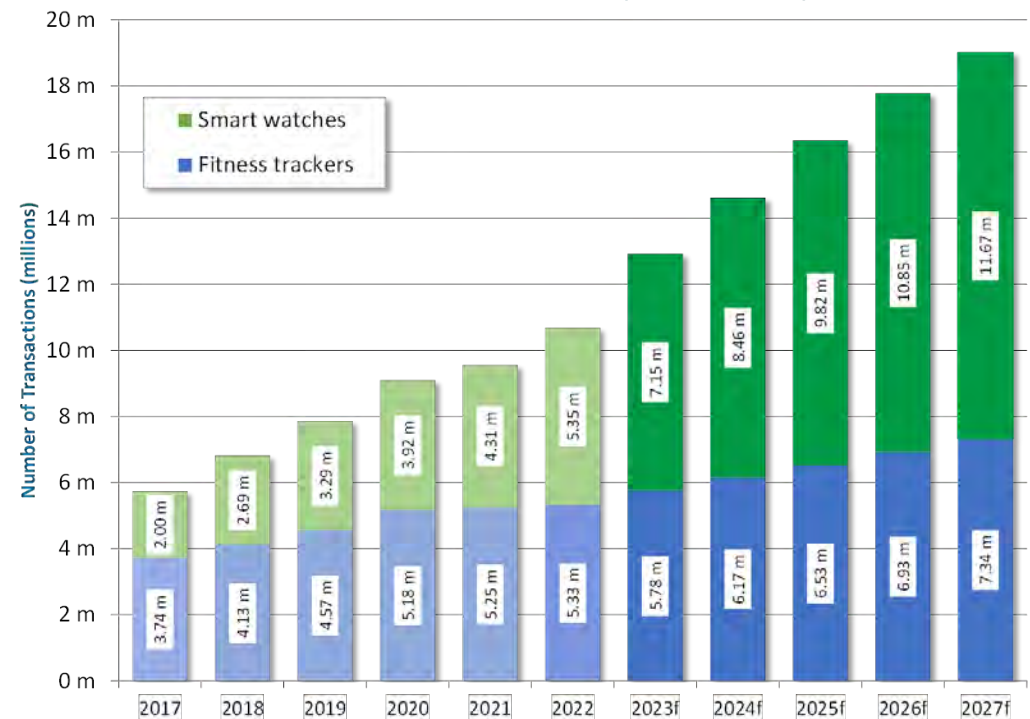
Fitness trackers have been around for decades but became popularized and affordable with the advent of Fitbit trackers from 2009 onwards. In 2022, 5.33 million fitness trackers were owned by adult Canadians, a slight increase over the previous year.

Smart watches have become a key aspirational device for many Canadians, supplanting the need for a fitness tracker since most smart watches today include fitness tracking functionality, but arguably with greater style. Their appeal has gained traction in the market, with smart watches ousting fitness trackers from their top spot in 2022.

Over the period 2022 to 2027, growth in ownership of smart watches will outpace that of fitness trackers, bringing the smart watch population up to 11.7 m devices by 2027, compared with 7.3 m fitness trackers. although by then the differences between these devices will be largely indistinguishable.

In 2022, 67.1% of smart watches had NFC payments functionality embedded in the devices, compared with 35.5% for fitness trackers.

Forecast Ownership of Fitness Trackers and Smart Watches (2017 - 2027)



Source: TSI projections, Canadian Consumer Payments Survey

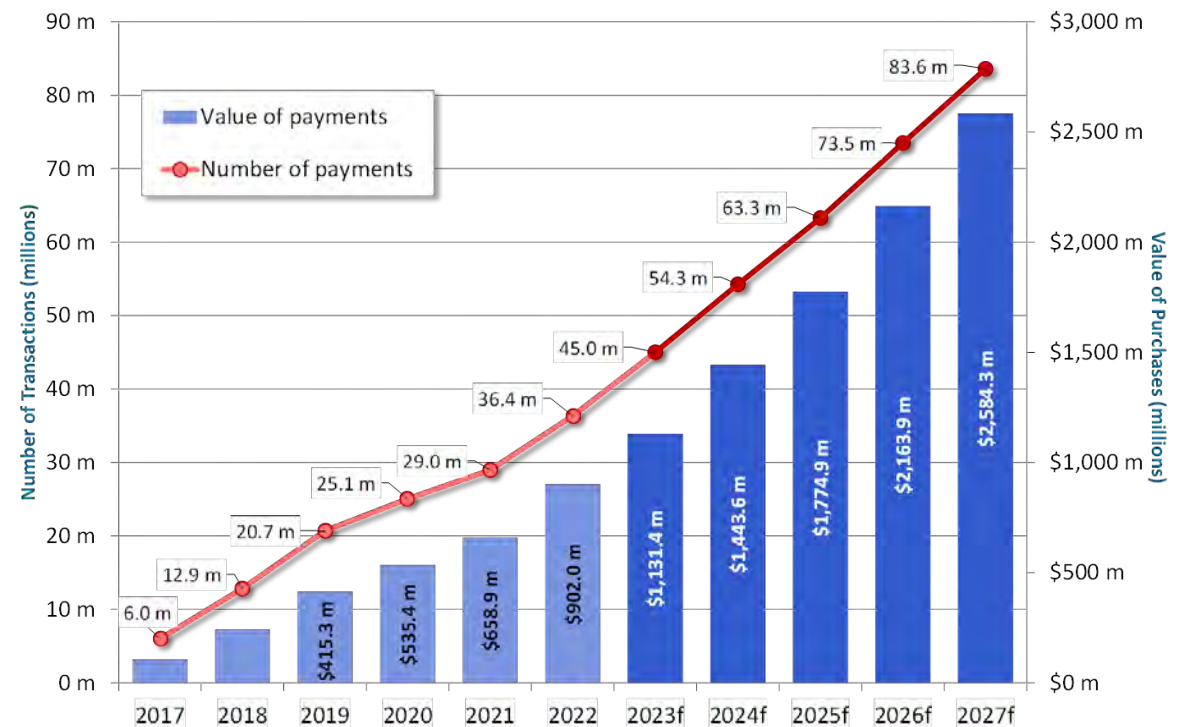
Strong growth in wearables payments expected

Wearable payments remain rare in Canada, with relatively low uptake. Few consumers are familiar or comfortable with using wearable devices to make payments, and for the next few years the adoption of wearable payments is likely to be squarely in the ranks of early adopters. It will be a number of years before wearable payments become mainstream, but the early signs of growth are clearly evident. In 2022, there were 5.5 m payment capable smart watches and fitness trackers active in Canada, representing 51.4% of the total number of devices. The proportion of payment capable devices is expected to reach 63.8% by 2027.

The number of wearable payments reached 36.4 m in 2022, with the associated value of payments totalling \$902 m, representing growth rates of 25.3% and 36.9% respectively. The average transaction value in 2021 was \$24.81, which was 87% of the value of an in-store mobile payment in that year.

By 2027, the number of wearable payments is expected to reach 83.6 m transactions, while the value of wearable payments is expected to more than double to \$2.58 bn. This represents a growth rate of 18.1% p.a. (CAGR) in transaction volumes over the period, and 23.4% p.a. (CAGR) in total transaction values. The average transaction value is expected to increase to \$30.91 by 2027.

Forecast Wearables Payment Values and Volumes (2022 - 2027)



Source: TSI projections, Canadian Consumer Payments Survey

Prepaid Cards (Payment Brands)

Prepaid Card Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Prepaid Cards Purchased					
<i>Value of cards purchased</i>	\$2.32 bn	38.8%	\$3.62 bn	6.7%	9.3%
<i>Volume (number of cards)</i>	15.4 m	45.9%	19.0 m	2.1%	4.2%
<i>Average Value of Cards Purchased</i>	\$150.17	-4.0%	\$191.02	4.5%	4.9%

Prepaid card market exhibits record growth in 2022

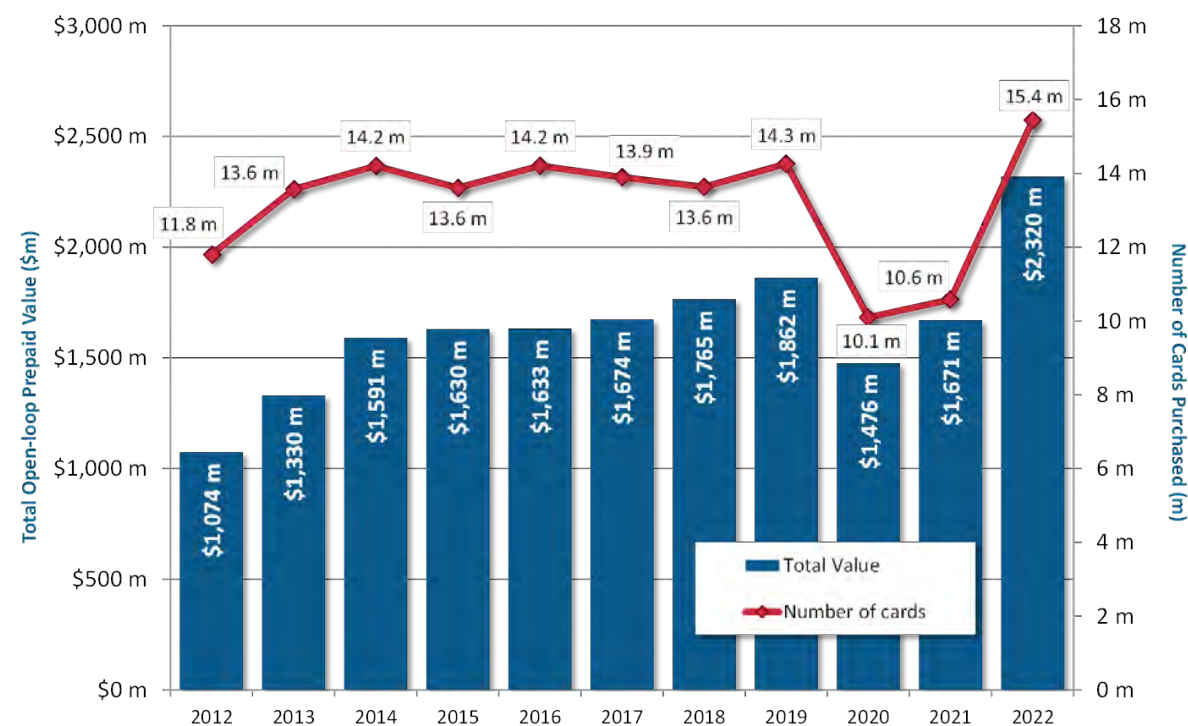
The prepaid card bounced back with a vengeance in 2022, after the precipitous plunge in 2020 and humble growth experienced in 2021. The value of prepaid cards purchased increased by 38.8% in 2022 to reach \$2.32 bn, almost \$650 m more than in 2021.

The number of cards purchased increased by 45.9% over the year, amounting to 15.4 m cards in 2022. The wild swings in growth have been characteristic of the prepaid market which has demonstrated substantial volatility over the past decade, although not quite as pronounced as the past few years.

The average annual growth rate (CAGR) in cards purchased over the past five years, 2017 to 2022, was 2.1% p.a. The corresponding growth rate in value of cards purchased was 6.7% p.a. (CAGR). These average growth rates mask the recent period of turbulence in the prepaid card market.

In 2022, the average value of prepaid cards purchased decreased by 4.0% to \$150.17. The change in average card values also tends to be quite volatile, with double digit growth rates in some years and declines in others. Average card values have risen by 4.5% p.a. (CAGR) over the period 2017 to 2022.

**Total Prepaid Value and Number of Cards Purchased
(2012 - 2022)**



Source: TSI estimates

Visa remains the dominant prepaid card brand, but loses ground

Visa branded prepaid cards remain the dominant brand, chosen by almost six out of ten (58.4%) of those who bought prepaid cards in the past twelve months in the 2023 CCPS. This is a decrease over the past survey year and puts Visa prepaid cards on a firm downward trend.

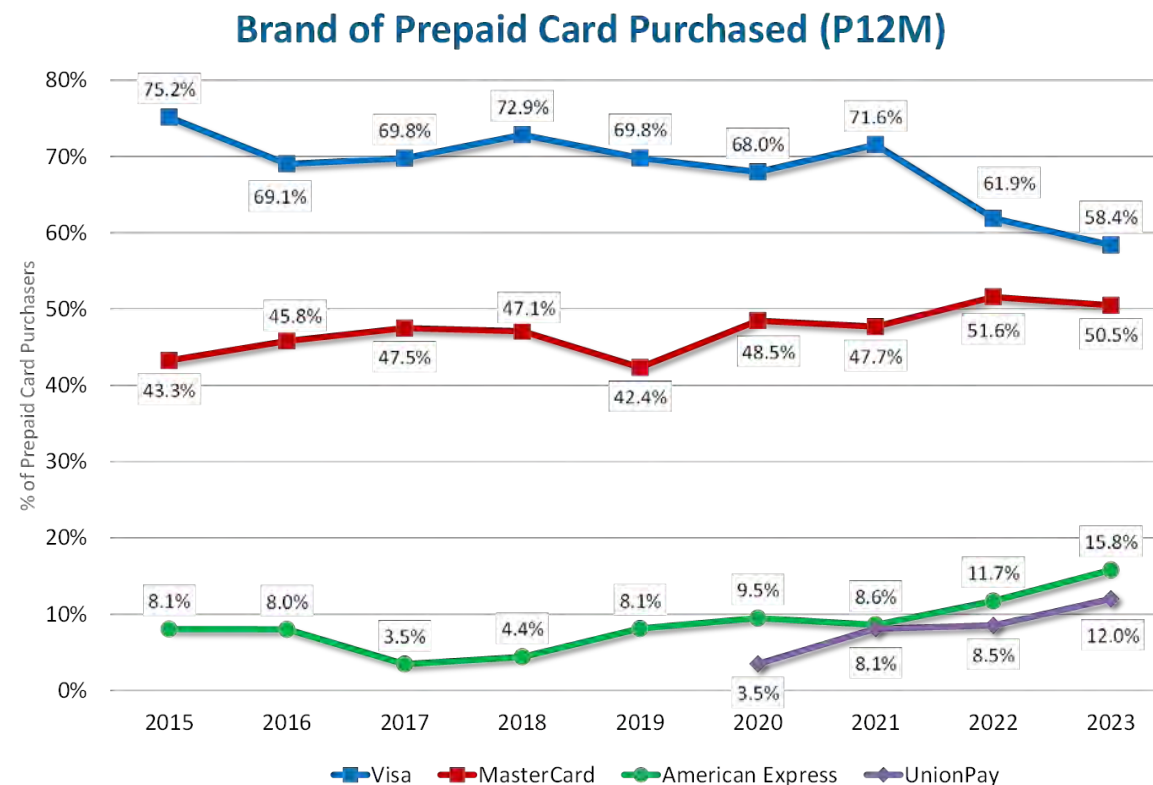
A little more than one half (50.5%) of prepaid card purchasers bought a MasterCard prepaid card in the past twelve months.

The incidence of American Express prepaid card purchases in the past twelve months increased substantially once again, to 15.8% in the 2023 survey.

UnionPay prepaid cards have shown remarkable growth in purchase incidence over the past three years, with 3.5% being recorded in the 2020 survey year, compared with 12.0% in 2023.

The incumbent brands appear to be faltering, while the challenger brands are increasing their penetration of the branded prepaid card market.

On average, prepaid card purchasers bought 4.1 prepaid cards in the past twelve months in the 2023 survey, up 7.5% over the year, and 1.37 brands of prepaid card.



Base: Prepaid card purchasers: 2023 (n=291)

Source: Canadian Consumer Payments Survey

Prepaid card market growth to moderate by 2027

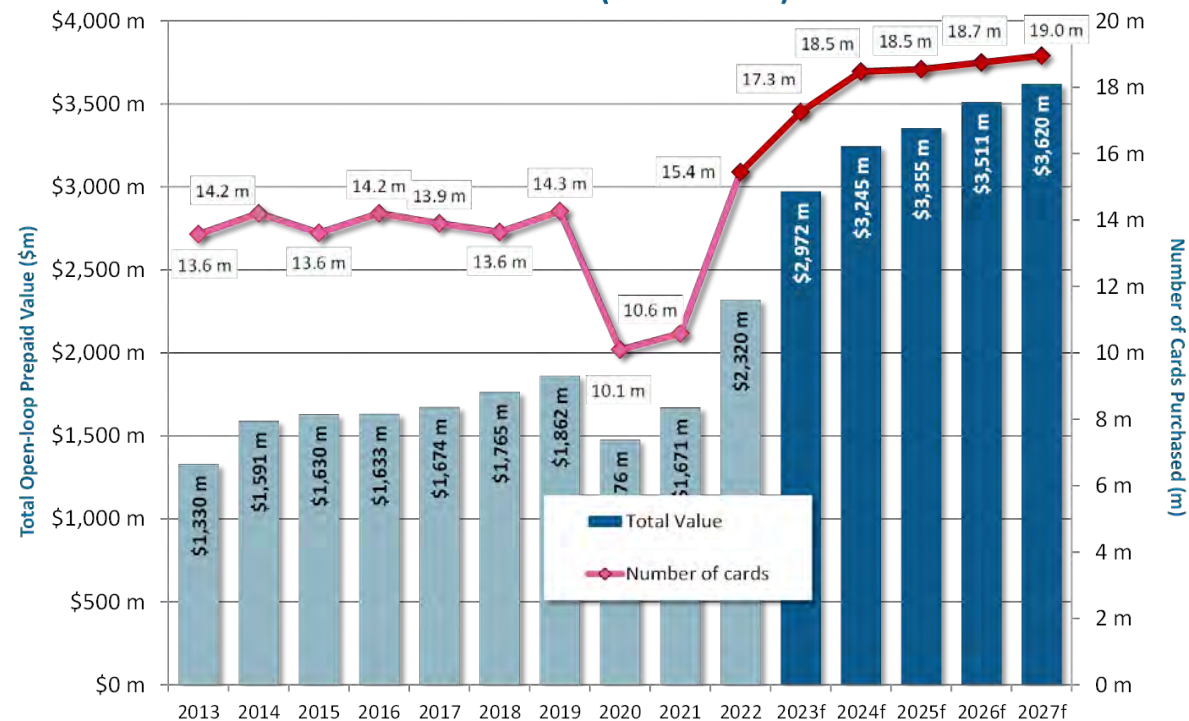
Growth in the prepaid card market is expected to continue, but at more attenuated levels, over the period 2022 to 2027.

The value of prepaid cards purchased is expected to reach \$3.6 bn by 2027. The growth in prepaid value purchased is expected to be 9.3% p.a. (CAGR) over the five-year period, buoyed by strong growth in 2023 and to a lesser extent in 2024.

The number of prepaid cards sold is expected to reach 19.0 m by 2027, a growth rate of 4.2% p.a. (CAGR) over the period. One of the reasons for the relatively muted growth in prepaid card sales is that more and more prepaid card purchasers are purchasing reloadable prepaid cards.

The average value of prepaid cards purchased is expected to grow moderately over the forecast horizon, reaching \$191.02 by 2027, representing an average annual rate of growth rate of just 4.9% p.a. (CAGR).

Forecast Prepaid Value and Number of Cards Purchased (2022 - 2027)



Source: TSI Projections

Gift Cards



Gift Card Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
Gift Cards Purchased					
<i>Value</i>	\$7.6 bn	52.1%	\$9.4 bn	15.4%	4.3%
<i>Number of cards / vouchers</i>	98.6 m	31.8%	110.2 m	8.0%	2.2%
<i>Average value of card purchased</i>	\$76.89	15.4%	\$85.31	6.9%	2.1%

Gift card market exhibits post-pandemic surge

The value and volume of gift card purchases have shown volatility since 2015, with two years of decline, followed by a surge in 2018 and 2019 and then a strong decline in 2020 as the pandemic struck, a plateau in 2021 and another more pronounced surge in 2022.

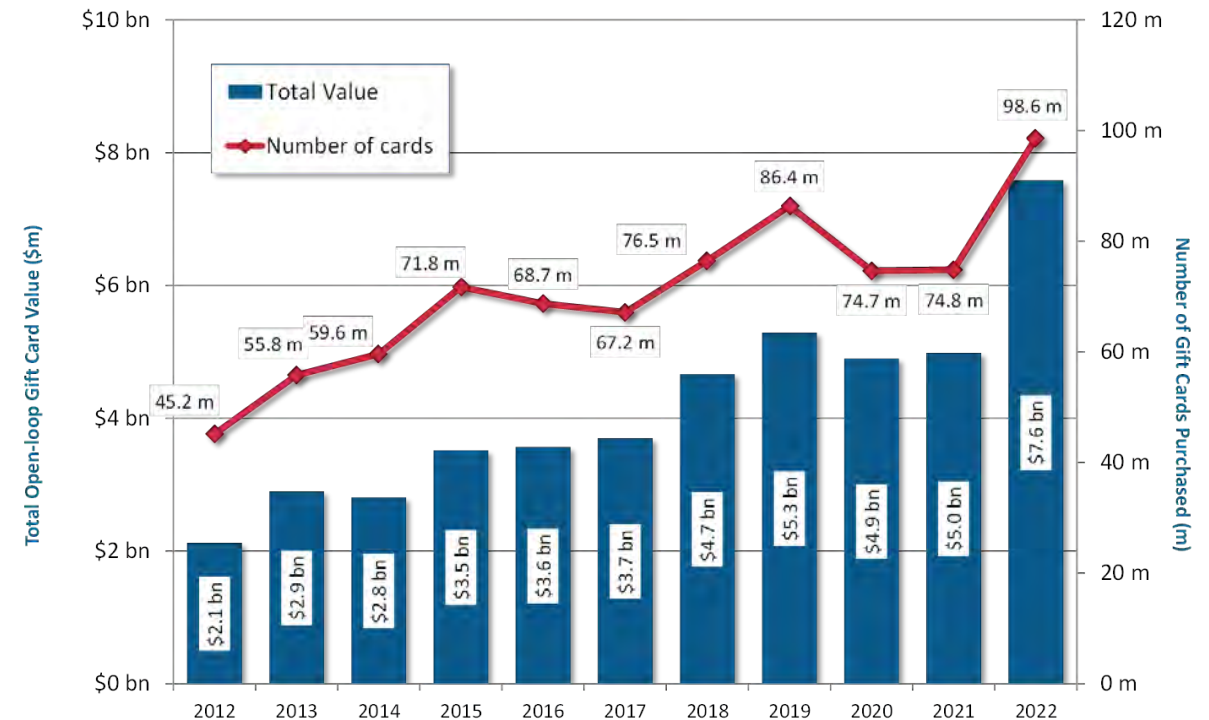
The value of gift cards purchased reached \$7.58 bn in 2022, up 52.1% over the previous year. A total of 98.6 m gift cards were purchased in 2022, a 31.8% increase over the number purchased in 2021.

The average value of gift cards purchased increased by a significant 15.4% in 2021, to \$76.89. This is partly inflation driven, but also based on pent up demand for gifting over the pandemic period.

From 2017 to 2022 the average value of gift cards purchased grew at 6.9% p.a. (CAGR), but year-on-year growth has also been volatile over this period.

The average annual growth rate over the period 2016 to 2021 was 15.4% p.a. (CAGR) in total gift card purchase value and 8.0% p.a. (CAGR) in number of gift cards purchased.

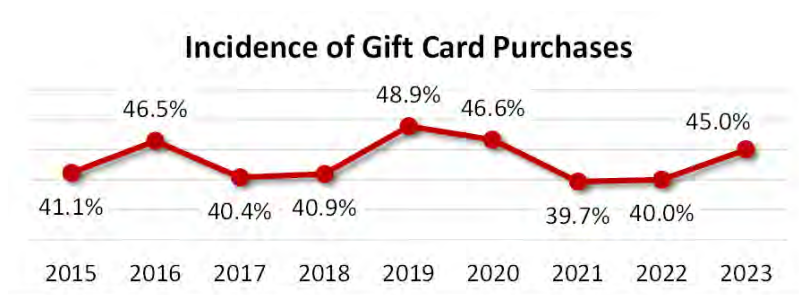
Total Gift Card Value and Number of Cards Purchased (2012 - 2022)



Source: Canadian Consumer Payments Survey

Increase in incidence across most gift card categories

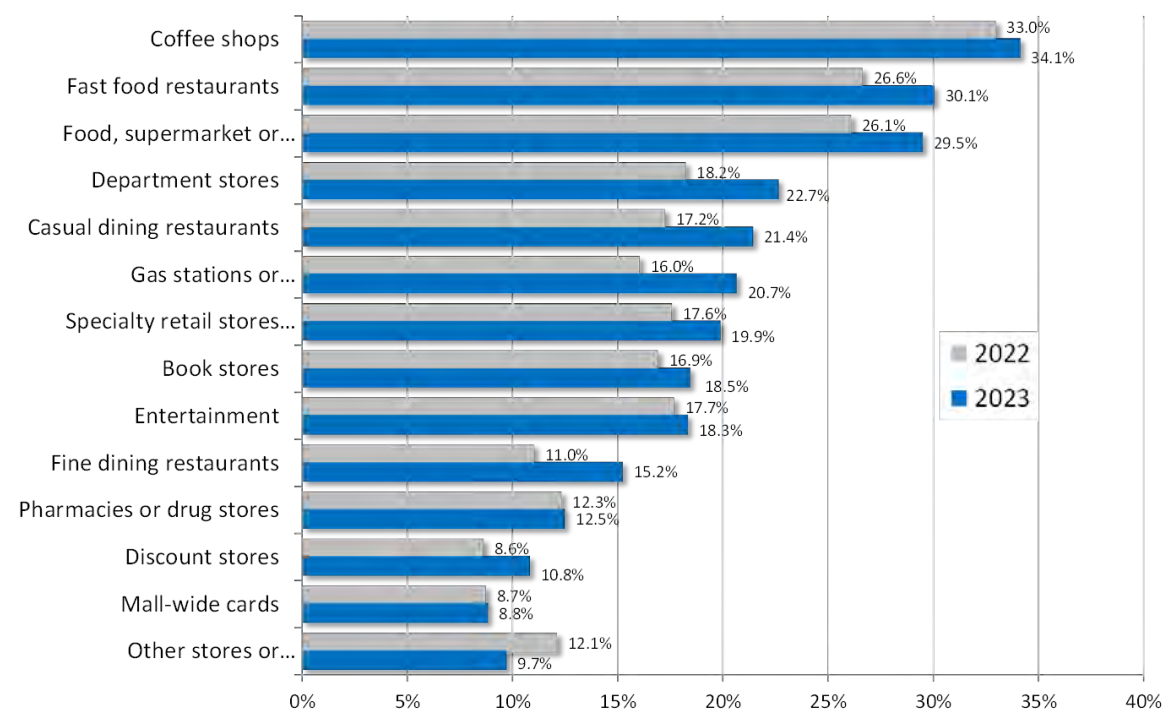
More than four out of ten adult Canadians (45.0%) have purchased a gift card in the past twelve months in the 2023 CCPS, a significant increase over the previous survey year. The incidence of gift card purchases in 2023 is still well below the peak reached in 2019.



Coffee shop gift cards remain the most popular category with one in three (34.1%) gift card purchasers buying them in the past year, followed by fast food restaurants (30.1%) and food, supermarket or grocery stores (29.5%).

There have been substantial increases in the incidence of past-twelve-month gift card purchases across almost all categories, an indication that shopping behaviour has resumed in the wake of the pandemic.

Categories of Gift Cards / Vouchers Purchased (P12M)



Base: Gift card purchasers P12M: 2023 (n=905)

Multiple responses
Source: Canadian Consumer Payments Survey

Gift card market to grow modestly over the forecast horizon

The volatility in the gift card market is largely a function of the economic environment. The turbulence of recent times is unlikely to be repeated over the next five years, although there is a prospect of a recession in 2024. We therefore expect the growth in the gift card market to stabilize throughout the forecast period.

The value and volume of gifts card purchases are expected to rise by 7.4% and 4.7% respectively, before dropping in 2024 as consumer confidence falters through the expected recession.

Growth is expected to return to modest levels over the remaining three years of the horizon with the number of gift cards purchased reaching 110.2 m by 2027, and the value of gift cards purchased amounting to \$9.4 bn in that year. This represents a growth rate of 4.4% p.a. (CAGR) in value and 2.2% p.a. (CAGR) in volume over the period 2022 to 2027.

The average gift card value is expected to increase steadily at a rate of 2.1% p.a. (CAGR) over the period, reaching \$85.31 by 2027.

Forecast Gift Card Value and Number of Cards Purchased (2022 - 2027)



Source: TSI projections

Person-2-Person (P2P) Payments

P2P Payment Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
P2P Payments					
<i>Value</i>	\$28.8 bn	25.9%	\$38.4 bn	6.3%	5.9%
<i>Volume</i>	277.6 m	15.9%	316.8 m	7.7%	2.7%
<i>Value of Average Transaction</i>	\$103.75	8.6%	\$121.08	-1.3%	3.1%

Value of P2P payments ramps up in 2022

The value of P2P payments jumped to \$28.8 bn in 2022, up 25.9% over the year. This corresponds to 278 m P2P payments, which increased by 15.9% over the year.

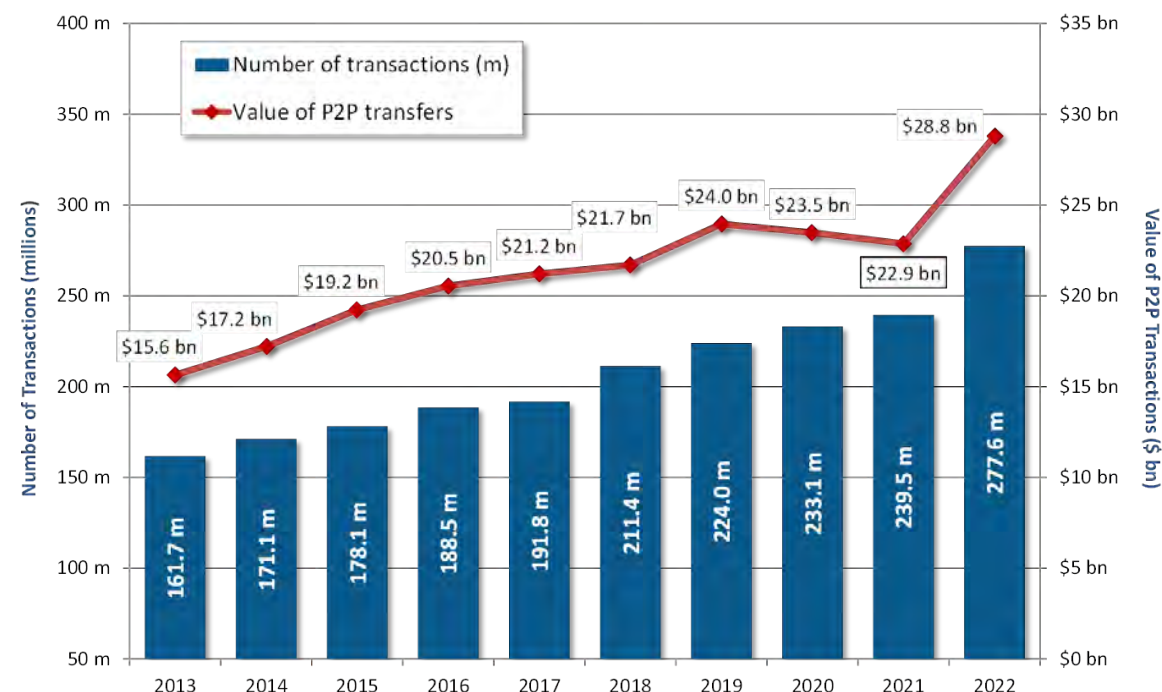
These high growth rates in values and volumes were a result of a convergence of factors, namely, the increasing incidence of P2P payments over the years, coupled with increases in the average number of payments and average value of payments.

The growth rate in the volume of P2P transfers has averaged 7.7% p.a. (CAGR) over the period 2017 to 2022, while the corresponding growth in value of P2P payments was 6.3% p.a. (CAGR).

The average transaction value in 2022 was \$103.75, vs \$95.51 the previous year, an increase of 8.6% over the year. The distribution of payment values is bimodal, with one mode in the \$26 to \$50 range and one above \$200. There are different motivations for P2P payments. Splitting bills or repaying small loans from friends dominates at the low end, while support payments for children and family members outside of the home dominate the high end.

The most common reason for making a P2P payment is to repay someone for purchases made on the payer's behalf.

**Value and Volume of P2P Transactions
(2013-2022)**



Source: TSI estimates

Interac e-transfer remains dominant method for P2P payments

Interac e-transfer continues to dominate as the preferred method for conducting P2P payments, holding its ground at 69.4% in 2023, and almost three times as popular as its closest rivals.

Bank transfers to a recipient's account and PayPal / PayPal Me both trail at some distance, being used by one quarter or less of P2P transferors (25.0% and 21.2% respectively)

The use of cash for P2P payments increased slightly over the year, to 16.7%, demonstrating a modest rebound in the use of cash for P2P payments in the post-pandemic period.

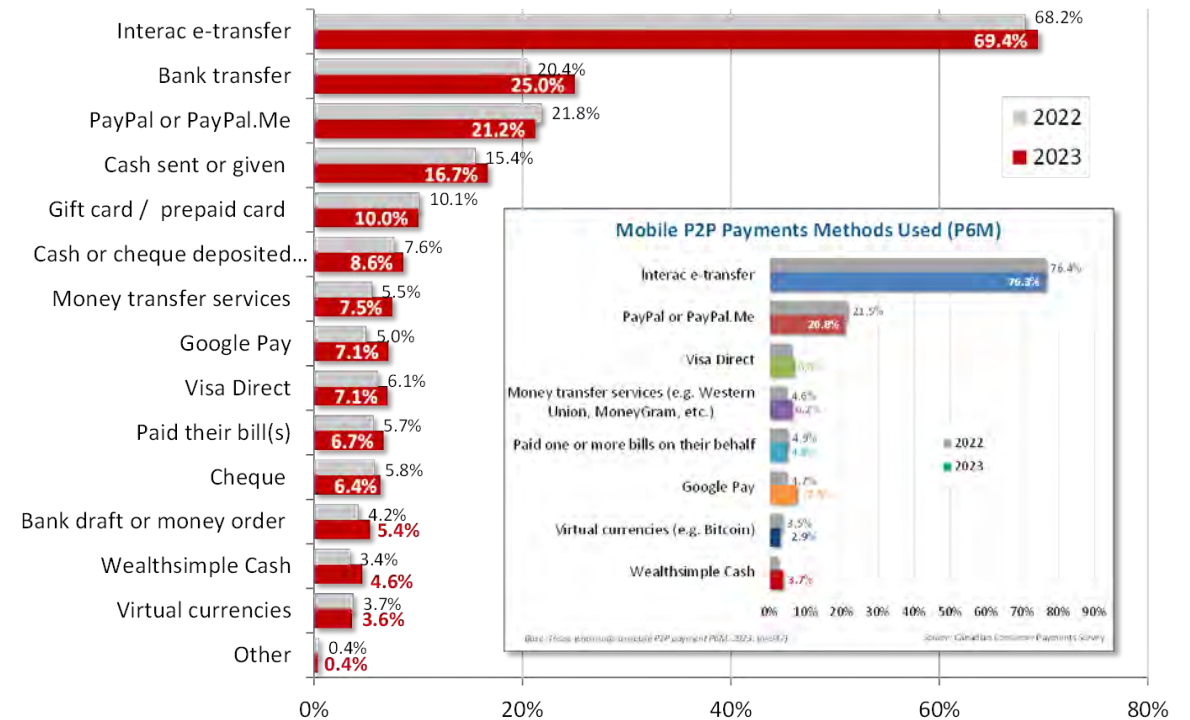
The use of different transfer methods increased virtually across the board over the past year, once again pointing to the increased use of P2P transfers overall.

More than seven out of ten (71.8%) of those who made a P2P payment in the past six months made at least one P2P payment using their mobile phones. This represents 83.8% of those who had the ability to make a mobile P2P payment.

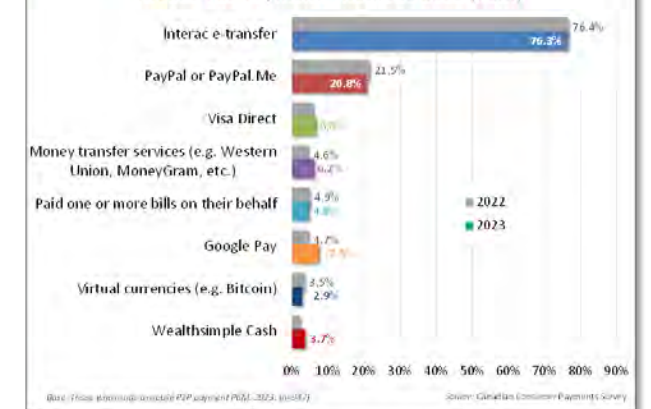
More than three quarters (76.3%) of those who made a mobile P2P payment did at least one mobile Interac e-transfer.

About one out of five mobile P2P payers (20.8%) made a mobile P2P payment using PayPal. All other mobile channels were used by fewer than 7% of mobile P2P payers.

Methods of P2P Payment (P6M)



Mobile P2P Payments Methods Used (P6M)



Base: Those who made a P2P payment P6M: 2023 (n=1319)

Source: Canadian Consumer Payments Survey
Note: Responses include multiple mentions

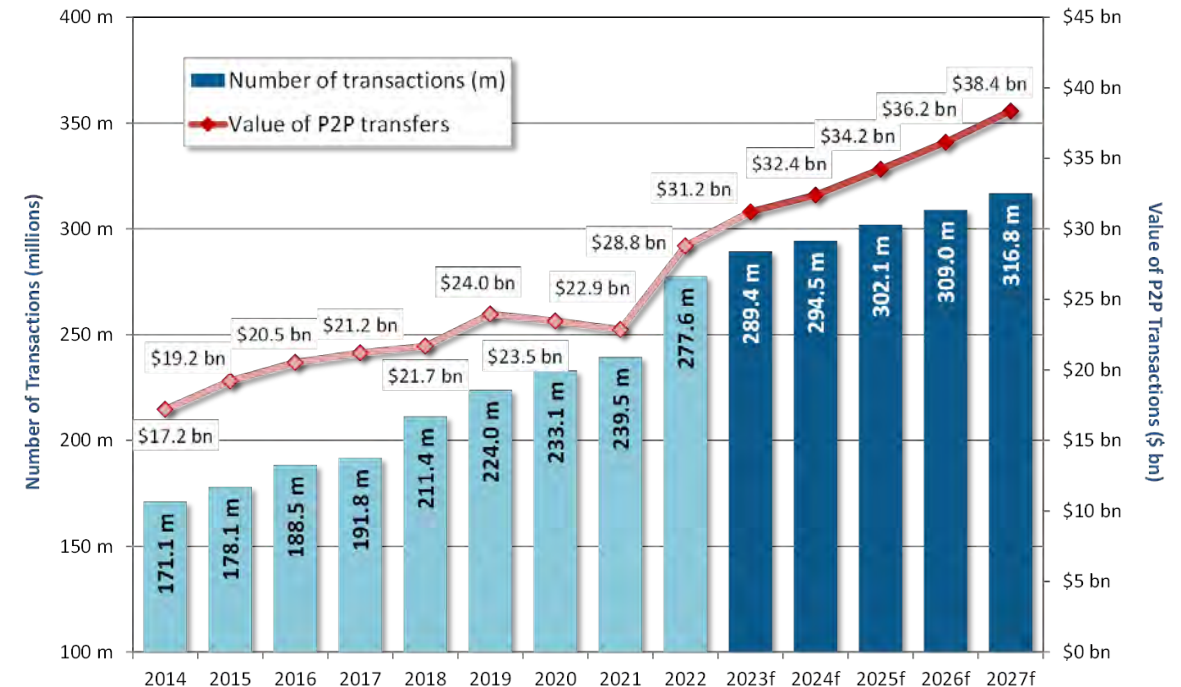
P2P payments to resume normal growth through 2027

In 2023, the value of P2P payments is expected to increase by 8.4%, to \$31.2 bn. In the remaining years of the forecast horizon, growth is expected to moderate with the value of P2P payments reaching \$38.4 bn in 2027. This represents a growth rate of 5.9% p.a. (CAGR) over the period 2022 to 2027.

The number of P2P payments is expected to increase by 4.2% in 2023, to 289 m in that year, and then moderate throughout the remainder of the forecast period, averaging 2.7% p.a. (CAGR) over the period 2022 to 2027. By 2027, transaction volumes are expected to reach 317 m.

The widening differential growth rate between values and volumes points to increasing average transaction values, from \$103.75 in 2022, to \$121.08 in 2027.

**Forecast Value and Volume of P2P Transactions
(2022-2027)**



Source: TSI Projections

International Remittances



International Remittance Highlights

Indicator	2022	Growth (2021-2022)	2027	CAGR (2017-2022)	CAGR (2022-2027)
International Remittances					
<i>Value</i>	\$13.0 bn	20.4%	\$11.1 bn	23.0%	-3.1%
<i>Volume</i>	29.3 m	22.2%	22.2 m	23.7%	-5.3%
<i>Value of Average Transaction</i>	\$444.19	-1.5%	\$499.49	-0.6%	2.4%

Value of international remittances reaches \$13 bn in 2022

The incidence of international remittances has increased every year since 2017, from 8.2% to 22.0% in the 2023 survey year.

The value of remittances lurched to \$13.0 bn in 2022, an increase of 20.4% over the year. The number of remittances reached 29.3 m in 2022, a growth of 22.0% over the previous year.

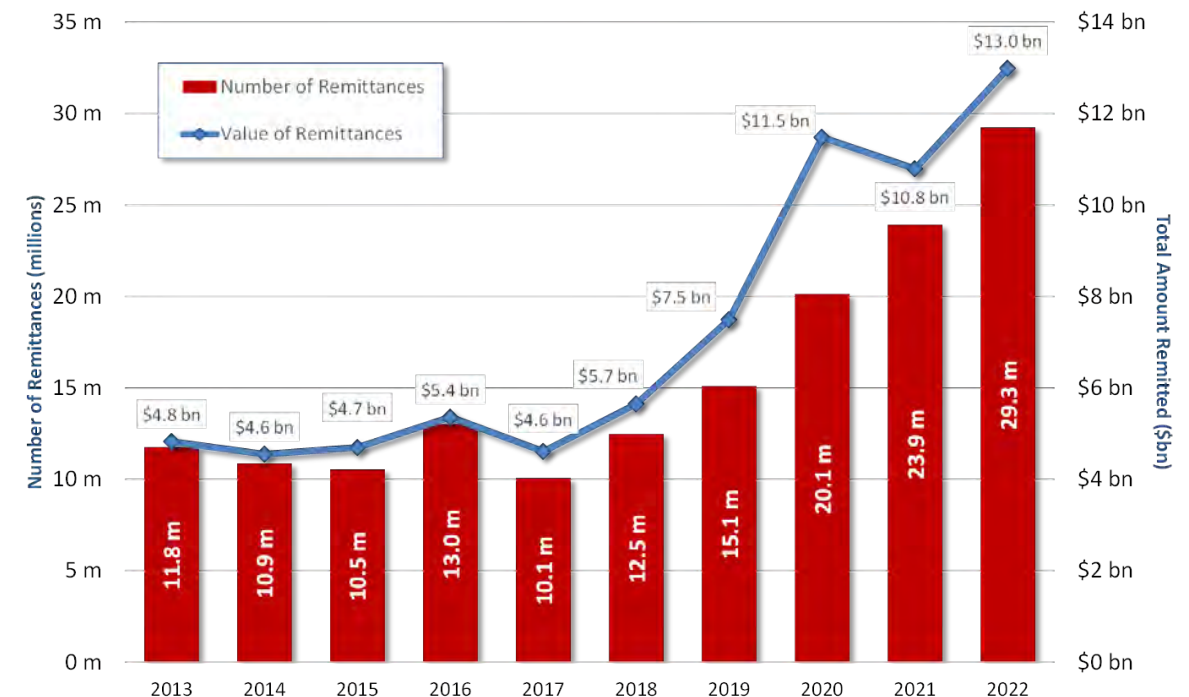
The strong increase in value and volume of remittances represents countercyclical behaviour compared to other payment verticals and is a result of Canadians sending support payments to friends and family in the darkest days of the pandemic.

The surge in 2022 appears counterintuitive but for the heavy increase in immigration in 2022, with 1 million immigrants entering the country in that year, two to three times the normal level. This has fuelled growth in 2022.

The average annual growth rate in value of remittances over the period 2017 to 2022 has been elevated to 23.0% p.a. (CAGR) as a result of the surges in 2020 and 2022. The corresponding growth rate in number of international remittances was 23.7% p.a. (CAGR).

The average value of remittance transactions was \$444.19 in 2022 and has decreased at a rate of 0.6% p.a. (CAGR) over the past five years, dragged down by the decreases in 2021. The average annual amount remitted by each remitter was \$2,015, an increase of 3.6% over 2021.

**Value and Number of International Remittances
(2013 - 2022)**



Source: TSI estimates

Bank/wire transfers and PayPal remain popular remittance methods

Bank or wire transfers were used to send remittances by more than one third (36.9%) of international remitters in the past twelve months. The incidence of bank transfers has increased significantly over the past year.

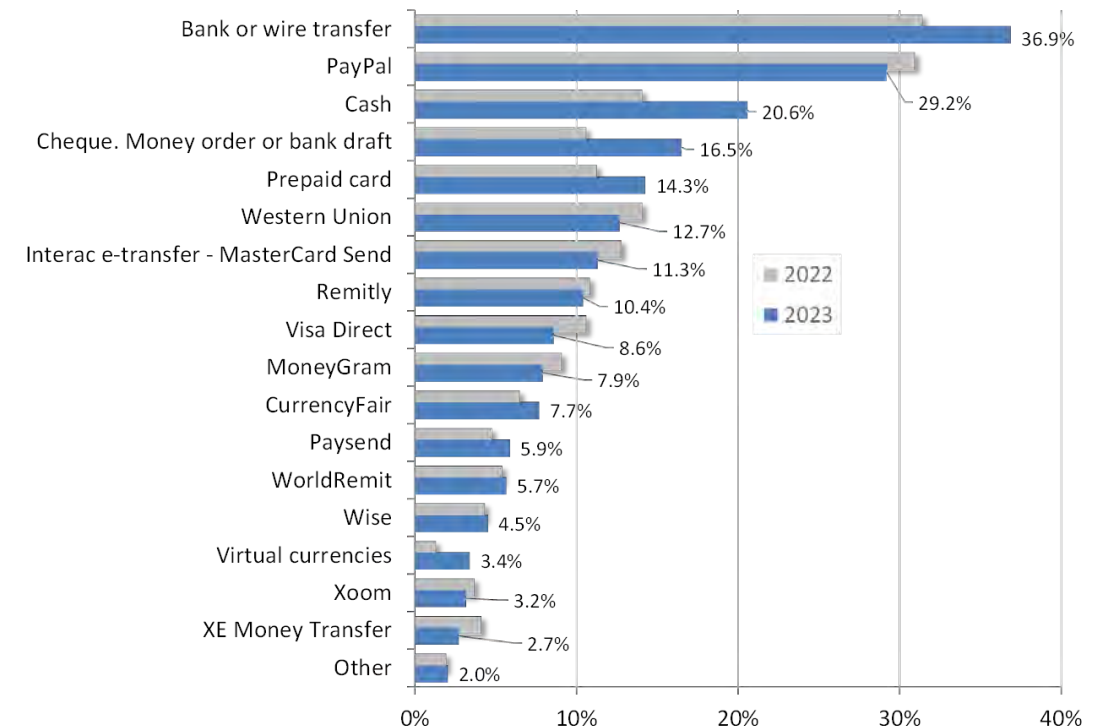
PayPal attracted about three out of ten (29.2%) international remitters for their international payments over the past twelve months and has lost some ground over the year.

The use of cash, money orders/bank drafts/cheques and prepaid cards has increased appreciably over the year as vehicles for international remittances.

The wide array of remittance services available and the relatively small pool of remitters makes the remittance market very competitive, although some service providers have a limited number of corridors that they are able to serve.

On average, each remitter used 2.03 services for their international remittance payments in the past twelve months, an increase from the 1.88 recorded in the 2022 survey. This points to increased choice for international remitters.

Services Used for International Remittances (P12M)



Base: International remitters P12M: 2023 (n=442)

Source: Canadian Consumer Payments Survey

USA remains top remittance destination

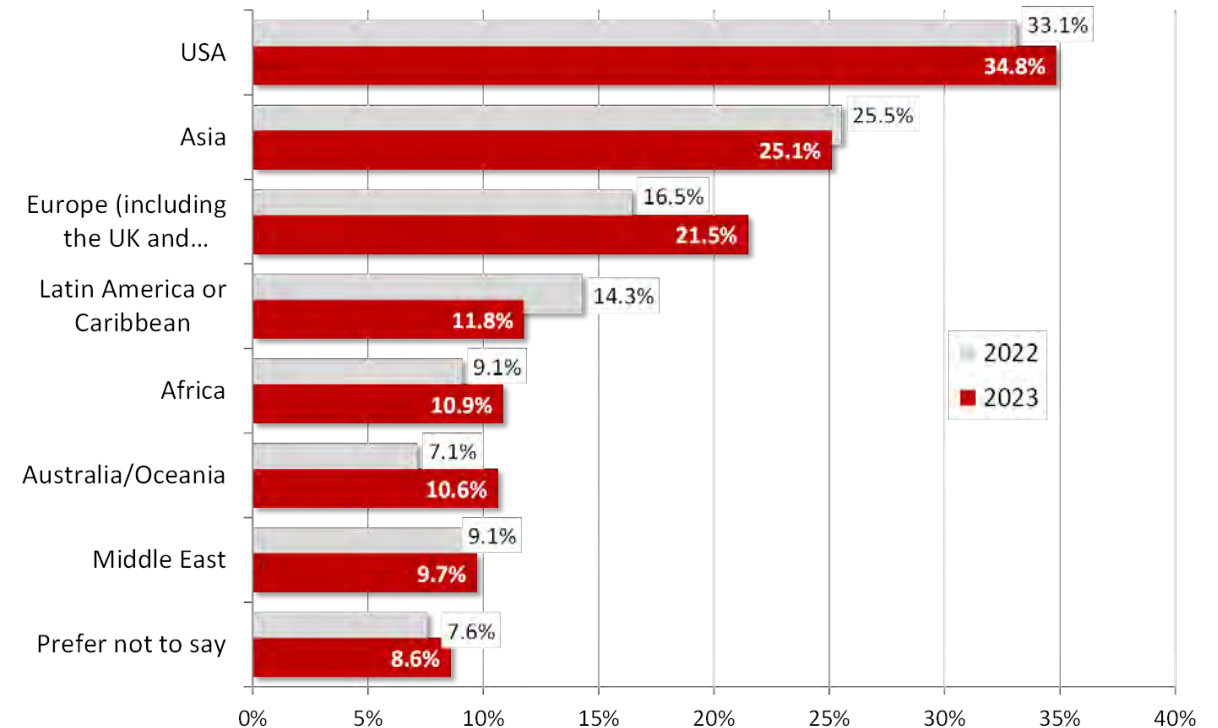
The incidence of remittances is, not surprisingly, significantly higher among foreign-born Canadians (32.2%) than those born in Canada (19.9%). Among the foreign-born Canadians, the incidence of remittances drops off rapidly after ten years of residency in Canada.

The USA remains the most popular destination for international remittances from Canada, with more than one third of remitters (34.8%) sending money to the USA in 2023, a slight increase from the 2022 survey. The incidence of remittances to Europe and Australia/Oceania rebounded strongly over the year.

Historically, Asia and Europe have vied for second place as remittance destinations. Europe has gained significant ground over the past year, which could be due to the hardships being experienced in that region as a result of the war in Ukraine.

In the 2023 CCPS, 79.6% of remitters sent money to just one destination.

International Remittances by Region (P12M)



Base: International remitters P12M: 2023 (n=442)

Source: Canadian Consumer Payments Survey

Value of remittances to move towards pre-pandemic levels

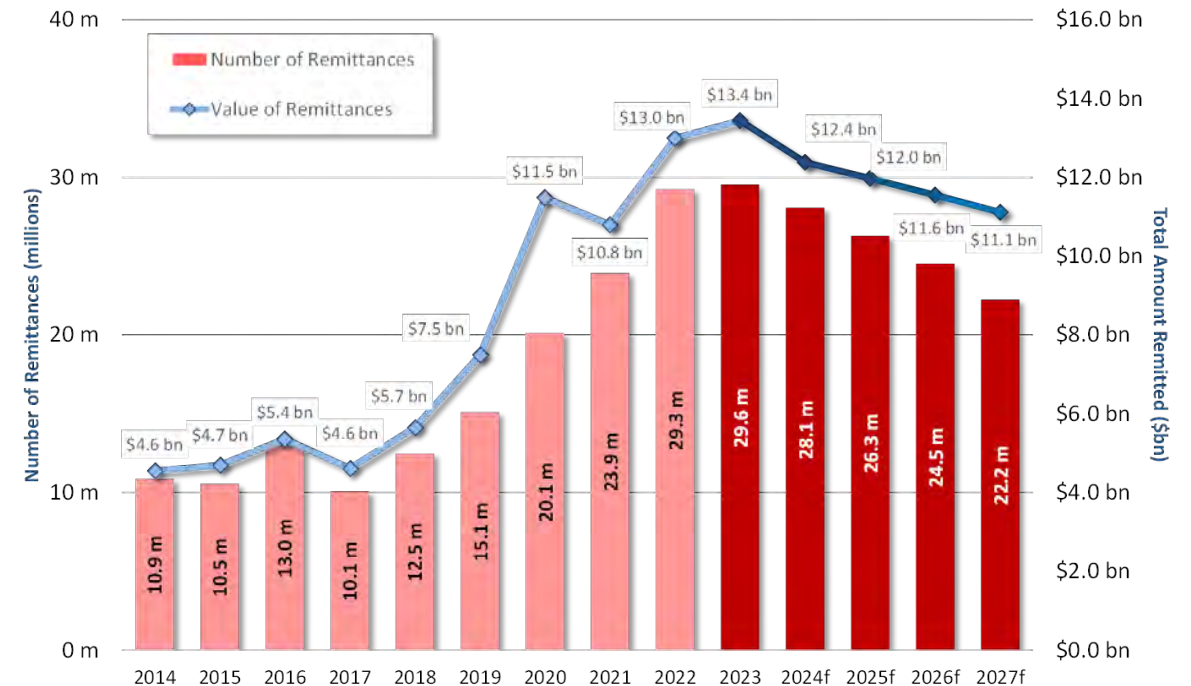
The extraordinary surge in remittances in 2020 is an anomaly related to the onset of the pandemic and is expected to place the remittance market on a different trajectory to that experienced pre-pandemic. The war in Ukraine is also likely to result in elevated remittance levels, as is the strong increase in immigration in 2022, although the onset of a recession in 2024 will have a moderating effect.

In 2023, the value of international remittance payments is expected to increase by a modest 3.6%, to \$13.4 bn. In the remainder of the forecast period, we expect a sustained period of decline as the market tends towards more sustainable levels. By 2027, we expect the value of remittances to drop to \$11.1 bn, a decline of 3.1% p.a. (CAGR) over the period.

The number of international remittance transactions is expected to follow the broad trends in remittance values, recognizing that average transaction values will change according to prevailing economic conditions. By 2027, the number of remittances will drop to 22.2 m, representing an annual rate of decline of 5.6% p.a. (CAGR) over the period 2022 to 2027.

The average value per transfer is set to increase modestly, on average, over this period to \$499.49 in 2027. The average total remittance value is expected to be \$2,048 per remitter by 2027.

Forecast Value and Volume of International Remittances (2022 - 2027)



Source: TSI Projections

Virtual Currencies



Usage of virtual currencies grows modestly over the past year

Almost eight out of ten adult Canadians (77.5%) are aware of virtual currencies, not significantly different from the previous survey year.

Usage of cryptocurrencies – that includes investing in, trading and paying with any one or more of them – increased to almost one quarter of adult Canadians (23.4%) in the 2023 survey. This increase occurred in the face of strong shocks in the crypto market and suggests that there is some durability to interest in cryptocurrencies.

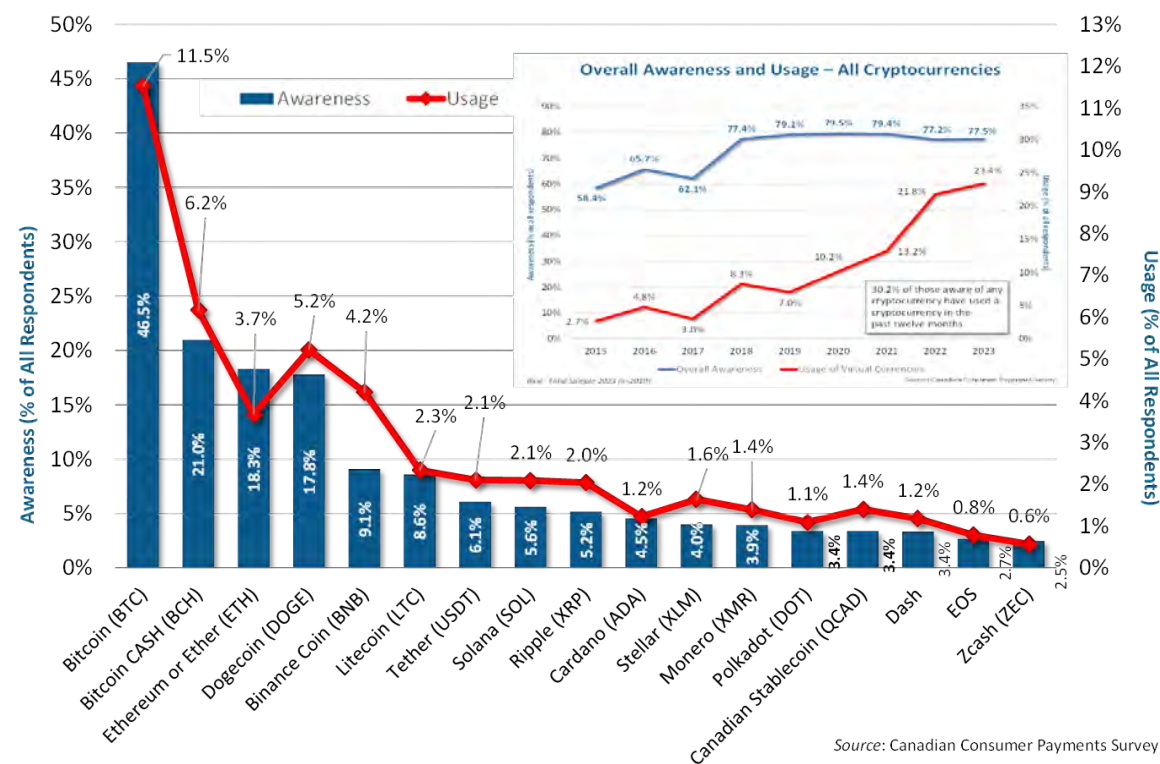
Bitcoin remains the most traded cryptocurrency, with 11.5% of adult Canadians having bought, sold, paid with or invested in the currency in the past twelve-month period. It also, not surprisingly, has the highest awareness of all cryptocurrencies, although this has dipped to below the 50% mark.

Bitcoin Cash was the next most frequently used cryptocurrency, with 6.2% of adult Canadians having used it over the prior twelve months, ousting Ethereum, which ended up in fifth place overall.

Dogecoin showed a significant level of usage, topping Ethereum in the 2023 survey year.

Activity involving Ethereum decreased substantially over the year, from 7.5% of adult Canadians having used it over the prior twelve months in CCPS 2023, to 3.7% in the 2023 survey year.

Awareness and Usage of Cryptocurrencies



Base: Total Sample: 2023 (n=2010)

Source: Canadian Consumer Payments Survey

*Note: Responses include multiple mentions

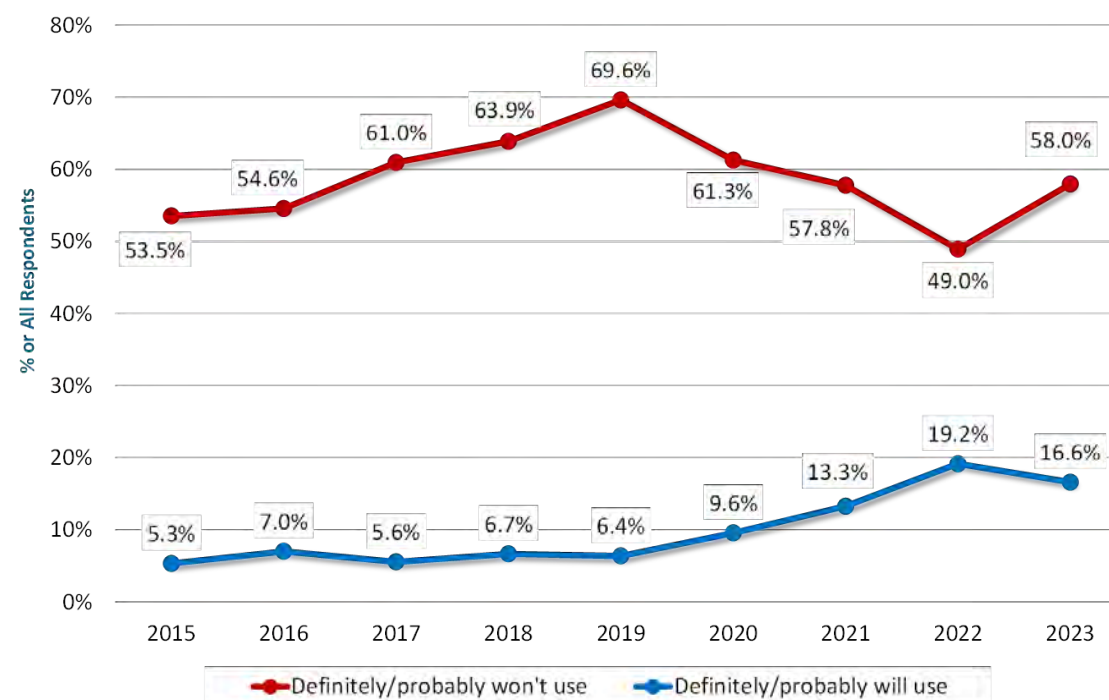
Canadians' resolve NOT to use a virtual currency in future increases

After decreasing consistently over the previous three years, the proportion of adult Canadians who DO NOT intend to use a virtual currency in the next twelve months spiked in 2023, jumping from 49% on 2022 to 58.0% 2023, reversing the previous downward trend, and signaling that adult Canadians have perhaps become more aware of the risks of using cryptocurrencies.

At the same time, the proportion of adult Canadians intending to use a virtual currency in the next twelve months decreased from 19.2% in 2022 to 16.6% this year, Reversing the previous upward trend.

This widening gap between those that are likely to use cryptocurrencies and those who are not points to a significant cooling off in usage intent over the past year.

Virtual Currency Usage Intent Trend



Base: Total Sample 2023 (n=2010)

Source: Canadian Consumer Payments Survey

Canadian Payments Insights

In-depth insights into Canadian Payment Frontiers

For more information, please contact:

Christie Christelis
Technology Strategies International Inc.
+1 416 628 0796
christie@tsiglobalnet.com
www.tsiglobalnet.com
<https://canadianpaymentsinsights.com>