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# Introduction



## **Objectives**

**Canadian Payments Forecast, 2021,** is an in-depth assessment of the how the consumer payments landscape in Canada is likely to be transformed over the next five years as a result of the dramatic disruption to economic activity caused by the COVID-19 pandemic in 2020, and its lingering effects into 2021. 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 2021 study were 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 the light of the COVID-19 pandemic
- Provide a comprehensive review of consumer payments in Canada and how the recovery from COVID-19 pandemic is expected to impact on consumer payments in Canada across all major payment modalities
- Provide quantitative forecasts of payments (by channel), cards and terminals.

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 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, and in particular 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. This was the second year in which we had to navigate through the COVID-19 pandemic. 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 eighth 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 two years since it allowed us to get feedback directly from consumers on the impact that the COVID-19 pandemic 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 the COVID-19 pandemic, we have had to develop new approaches and models for our economic and payments forecasts. In 2021, we have refined these, based on what we have learnt so far about how the pandemic has influenced the economy and how the recovery is likely to take place. 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 recovery would take both globally and in Canada.

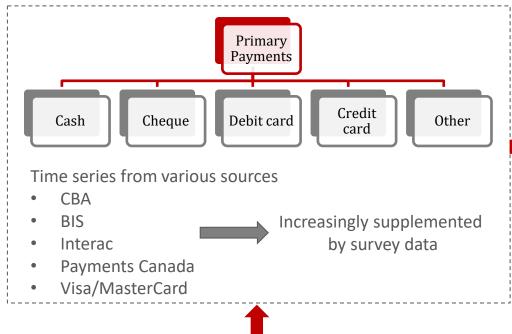
Many of our forecasts use the survey data that we collect from TSI's annual Canadian Consumer Payments Survey as inputs to our models. There can be substantial variation in the accuracy of survey data from year to year based on sampling error. As a result, from time to time we revise some time series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

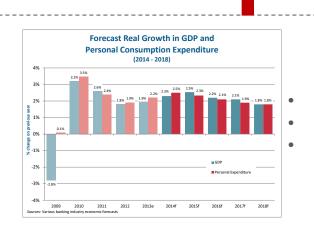
Forecasts in this report cover a **five-year time frame**, with the **base year of 2020**. Where we have been unable to source key primary payment statistics for 2020 due, for example, to statistical lag, we have provided our own estimates. Projections are prepared for 2021 through to the end of 2025.

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 to be 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**





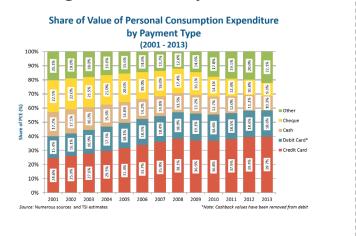
- GDP growth forecast
- PCE growth forecast
- Inflation rate forecast

### **Forecasting**

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



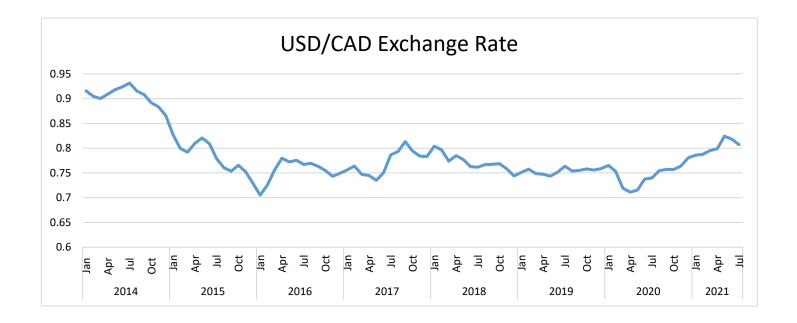
- Mechanistic forecasts
- Analytical forecasts
- Judgement-based adjustments





### 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 1 Canadian dollar (CAD) was worth 0.80332 US dollars (USD), compared with 0.75113 at the time of publication in 2020. The average for exchange rate for 2020 was 0.746198. The COVID-19 pandemic has had an impact on the exchange rate, with a rapid decline in the early months of 2020 but a recovery to pre-COVID levels apparent in the past six months.



### Some Notes on this Year's Report

- We have continued with widescreen format that we introduced last year and have made some additional adjustments this year.
- As a result of the COVID-19 pandemic, 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 reopening unfolds and greater clarity emerges on how we emerge from pandemic.
- 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 then again in April 2021. We believe that this has given us an excellent baseline against which to measure consumer behavioural changes in payments over the past two 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.
- We have not included the preauthorized payments section this year again. Our time series analyses in this area have traditionally been based on the total commercial and consumers automated funds transfers provided by Payments Canada in their ACSS data. We are not able to separate the consumer portion out and hence to maintain consistency with other segments of the report we have kept it out again this year. Subscribers interested in the consumer survey data associated with preauthorized payments will find that in the Canadian Consumer Payments Survey 2021 report. We are likely to reinstate this section of the report in 2023, when we will have had a few years of consecutive quantitative data on preauthorized payments based on our survey findings.

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

- Over the last two years we have started to collect data on loyalty redemptions and wearables. We have included an analysis and forecast for wearable payments once again in this year's report. We will include an analysis of loyalty payments in the 2022 report should we have more meaningful time series data available on which to base our forecasts. Subscribers to the Canadian Consumer Payments Survey 2021 have access to the findings of survey data gained from the loyalty payments section. These are two emerging areas that are likely to gain in importance in future and will be dealt with in more depth in future editions of this report.
- 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 and forecast analysis on the same chart.

### **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

CERB – Canadian Emergency Response Benefit

FI - Financial Institution

GDP - Gross Domestic Product

k - thousand

m - million

PCE – Personal Consumption Expenditure

trn – trillion

TSI – Technology Strategies International Inc.



# The Canadian Economy

## **Economic Highlights**

Indicator	2020	Real Growth (2019-2020)	2025	Real CAGR (2015-2020)	Real CAGR (2020-2025)
Gross Domestic Product (GDP)	\$2,204 bn	-5.3%	\$xx bn	0.6%	xx%
Personal Consumption Expenditure	\$1,231 bn	-6.1%	\$xx bn	0.7%	xx%
Retail Sales	bn	-2.3%	\$xx bn	1.7%	xx%
Population	٦m	1.4	XX	3%	xx%



## Economy takes a nosedive in 2020

The measures taken to halt the spread of the COVID-19 virus had a rapid and severe impact on the Canadian economy in 2020, exacerbated, to some extent, by an economy that was already showing signs of softening in 2019. Real Personal Consumption Expenditure (PCE) declined by 6.1% over the year, dragging Gross Domestic Product (GDP) down by 5.3%.

Retail sales, which had already experienced a modest decline of 1.1% in 2019, decreased by a further 2.3% in real terms.

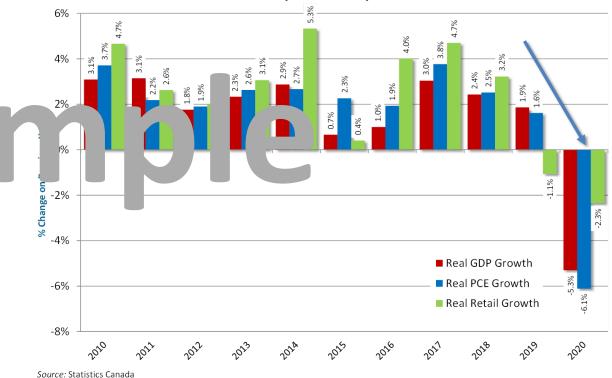
Government stimulus by way of support measures to tumers a businesses did much to bolster the economy throughout provided a lifeline for those who were unable to wo.

mandatory business closures, and for those businesses that were unable to function in as a result of the pandemic.

There is clear evidence, however, that the uncertainty brought about by the pandemic led to consumers conserving their resources as a result of the uncertainty of the future, and consumer savings increased to record levels. This came at the expense of PCE, which could otherwise have created less of a downward drag on GDP.

The recession brought about by the COVID-19 pandemic was, however, not a typical recession in that contraction in activity brought about by public health policy rather than a lack of business confidence. This alters the likely trajectory of the recovery.

# Annual Change in Real GDP, PCE and Retail Sales (2010-2020)



## PCE drops to \$1.23 trillion in 2020

In 2020, Personal Consumption Expenditure (PCE) on Goods and Services (PCE) amounted to \$1,231 bn in expenditure (in current dollars), shedding some \$68 bn over the \$1,299 bn recorded in 2019.

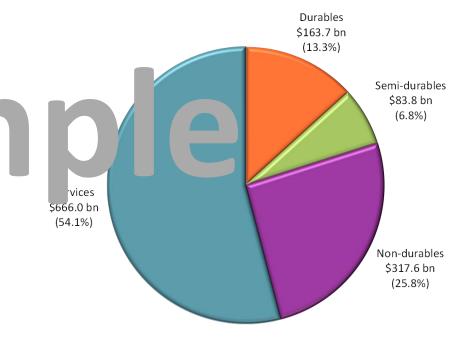
The decline, in nominal terms, was 5.2% over the year, corresponding to a real rate of decline of 6.1%. Over the period 2015 to 2020, real growth in PCE edged up at 0.7% p.a. (CAGR), not much higher than the 0.6% recorded for GDP over the same period. Historically real PCE growth has tended to be higher than GDP growth by wider margin.

Expenditure on services, which includes anything from ying a dentist bill, to internet and communications services, to the internet are restaurant, continues to dominate PCE, but decrease 1.0% he year, coming in at \$666.0 bn. This was the highest decline across all PCE categories.

Durables, at \$163.7 bn, declined by 2.1% over the year, but increased its share of PCE mainly as a result of consumers spending more on certain categories of durable goods (office furniture, TV sets, home appliances etc.) relative to services and semi-durables during 2020.

Semi-durables declined at 7.5% over the year, while expenditure on non-durable goods increased to \$317.6 bn in 2020, a growth of 2.7%, the only category of PCE to increase throughout the pandemic year.

# Components of Personal Consumption Expenditure (2020)



Total: \$1,231.1 bn

Source: Statistics Canada



# **Debit**



# **Debit Highlights**

Indicator	2020	Growth (2019-2020)	2025	CAGR (2015-2020)	CAGR (2020-2025)
Interac Debit Payments					
Value (includes cashback)	\$251.7 bn	-1.4%	\$xx bn	xx%	xx %
Volume	5,685 m	-9.0%	xx m	xx%	xx%
Value of Average Transaction	\$44.28	8.4%	\$xx.xx	xx%	xx%
Interac Debit Merchants	4. 70	-2.4	x)	xx%	xx%

## Number of debit card payments plummets in 2020

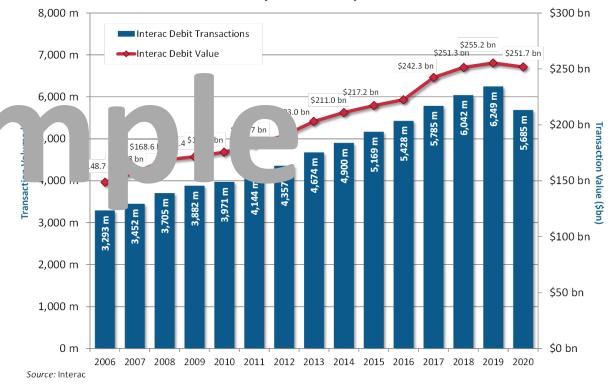
The measures taken to mitigate the impact of the COVID-19 pandemic caused a sharp pullback in PCE. This had a direct impact on debit card payments, which decreased in value by 1.4% in 2020, coming in at \$251.7 bn for the year. Given the strong decline in PCE, the decrease in debit value was relatively modest by comparison.

In 2020, there were 5.69 bn debit card transactions, a decrease of 9.0% over the year. The growth differential between debit value and volume points to a marked upward shift in average debit cartransaction values. This is in line with expectations, given the improve of lockoryn measures and limits on mobility in 2020, with consumer transaction reon each shopping trip.

Over the past five years, growth in total annual debit card transaction volumes has averaged 3.0% p.a., while growth in total annual debit card transaction values has been lower at 1.9% p.a. (CAGR). These average annual growth rates are lower than their historical trajectories, dragged down by the declines in 2020.

The average value of an Interac debit transaction increased from \$40.85 in 2019, to \$44.28 in 2020, an increase of 8.4% over the year. Debit card purchases accounted for 19.8% of PCE by value in 2020, and 30.5% by volume.

## Value and Volume of Interac Debit Transactions (2006 - 2020)



# Mobile



# Mobile Highlights

Indicator	2020	Growth (2019-2020)	2025	CAGR (2015-2020)	CAGR (2020-2025)
Smart phone subscribers	30.9 m	7.1%	xx m	xx%	xx%
NFC Phones	18.8 m	18.8%	xx m	xx%	xx%
Mobile Payments (Total)					
Value	Şxx bn	15.1%	\$xx bn	xx%	xx%
Volume		2: %	) n	xx%	xx%
Value of Average Transaction	→xx.xx	-£%	ېXX.XX.	xx%	xx%
In-Store Mobile Payments					
Value	\$xxbn	72.5%	\$xx bn	xx%	xx%
Volume	xx m	51.6%	xx m	xx%	xx%
Value of Average Transaction	\$xx.xx	13.8%	\$xx.xx	xx%	xx%



### Gap between Android OS and Apple's iOS narrows

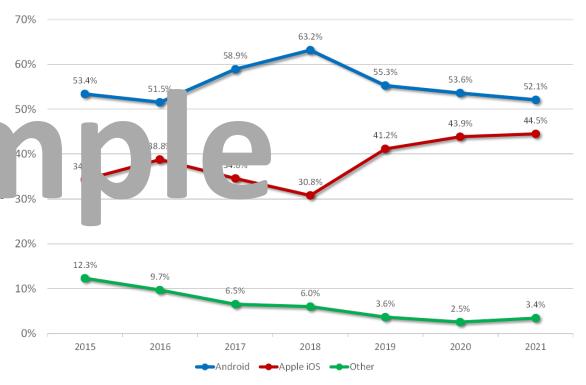
Android remains the most popular operating system of primary smart phones in Canada, but gave up 1.4% of its share, falling to 52.1% in 2021. Android's loss of share was accompanied by an increase in Apple iOS's share of the market, but also by a slight increase in the share of other niche operating systems.

All other operating systems have declined over the years, with the exception of 2021, and between them accounted for just 3.4% of smart phone subscribers in the 2021 CCPS.

More than four out of ten smart phone owners (42.9) te Apple iPhone as their primary smart phone device vs. 30.4% w or a Samsung devices. LG devices trail in a distant third pass the primary smart phone device of 8.1% of adult smart phone owners.

The average smart phone age is 2.2 years, which has remained stable over the past year.

### **Primary Smart Phone Operating System Ownership**



Base: Respondents who own a smartphone: 2021 (n=1607)

Source: Canadian Consumer Payments Survey

# **Consumer Payments in Perspective**

## Credit card payments dominate consumer payment landscape

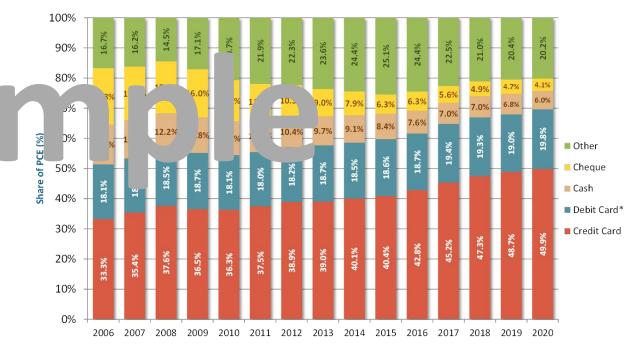
Consumer payments are linked to PCE. The structure of payments has changed dramatically over the years as electronic payments have gained traction, but credit cards' share of payments is on the verge of exceeding all other primary payment mechanisms combined, accounting for 49.9% by value in 2020. Debit's share of PCE was less than half that at 19.8%.

Credit and debit card payments, between them, now account for 69.6% of the value of payments on PCE, representing \$858 in in value in 2020.

These forms of payment have displaced specifically cash dequations are supported by a factor of four since 2001.

All other forms of payments, which includes preauthorized debits and direct transfers from a bank account, have shown a slight decrease in share over the past year, mainly as a result of curtailed economic activity in 2020.

# Share of Value of Personal Consumption Expenditure by Payment Type (2006 - 2020)



Source: Numerous sources and TSI estimates

\*Note: Cashback values have been removed from debit



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