

SPEED MERCHANTS

Clearing and settlement systems around the world are becoming faster, but research shows that approaches vary. Carol Ann Northcott explains

➤ New research by Payments Canada and the Bank of Canada has shown that countries around the world are making innovative changes to their systems to pave the way for faster payments.

As Payments Canada moves forward with its modernisation strategy, the research looked at how 27 jurisdictions compared to Canada in their response to new technologies, evolving user demands and a changing regulatory landscape. The research, *Clearing and Settlement Systems from Around the World: A Qualitative Analysis*, compared timeliness, access, functionality, interoperability and risk management in payment systems.

The world is getting faster

A major driver for modernisation around the world is the push for faster retail payments systems that deliver funds to the end user in a timely manner.

Most large-value payments systems (LVPS) around the world have already developed real-time processing, but some retail systems are lagging behind. For example, the decision to implement the UK's Faster Payments Scheme (FPS) was made by the government after a review of the payments system's inefficiencies, including the need for faster access. FPS is available day and night all year to support the demands of personal and business customers to move money quickly.

The FPS is an example of an Expedited Retail Payment System (ERPS), which provide interbank clearing and are typically integrated into large-value systems for settlement. These kinds of systems are developed, under construction or planned in 17 of the 27 jurisdictions analysed.

Jurisdictions are also enhancing the timeliness of their retail batch-processing systems by adding intraday clearing and settlement. As a result, all but three countries (Canada, Egypt and Israel)

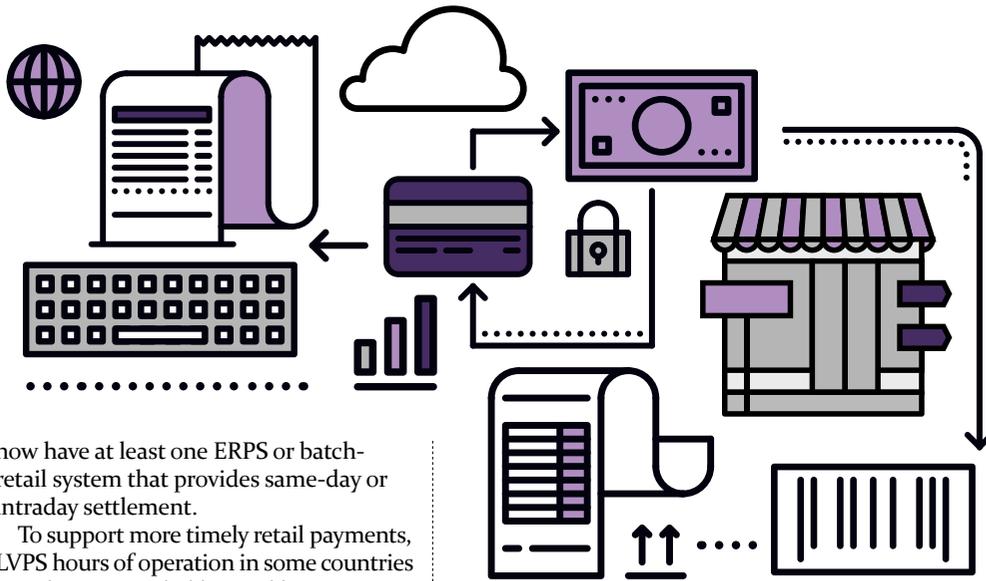
CHARACTERISTICS OF SELECT ERPS (AND THE E-TRANSFER SYSTEM)							
System	Direct central bank role in ERPS processes	ERPS inter-operable with settlement system or LVPS	System availability	Wide-use cases for business and consumers	Consumer fees	Value limits ^a	Recipient access to funds ^b
FPS (UK)	✓	✓	24x7	Both	Free	\$460,000	Near RT
BIR (Sweden)	✓	✓	24x7	Consumers	Free	None	RT
Straksclearing (Denmark)	✓	✓	24x7	Consumers	Unknown	\$100,000	RT
SITRAF (Brazil)	✓	✓	10x5	Business	Nominal	\$500,000	RT
FAST (Singapore)	✓	✓	24x7	Both	Bank set	\$100,000	RT
RTC (South Africa)	✓	✓	24x7	Both	>\$1	\$27,500	RT
TEF (Chile)	✓	✓	24x7	Both	Unknown	\$13,000	RT
EBT (South Korea)	✓	✓	24x7	Both	Unknown	>\$1m	RT
Zengin (Japan)	✓	✓	24x7	Both	Free - \$2 (can vary by FI)	>\$1m	RT
Express Elixir (Poland)	✓	✓	24x7	Consumers	£0.35 (can vary by FI)	\$30,000	RT
e-Transfer (Canada)	No	No	24x7	Consumers	\$1-2	\$3,000	<30 minutes

^a ALL AMOUNTS CONVERTED TO CANADIAN DOLLARS

^b REAL TIME (RT) = UNDER ONE MINUTE AND NEAR REAL TIME (NEAR RT) = >1 MINUTE AND <THREE MINUTES

COUNTRY COMPARISON OF LVPS TRANSACTION VOLUME AND DIRECT ACCESS				
Country/system	Policy or objectives to increase access	Number of direct participants	Millions of transactions per participant	Core system risk management upgrades
Denmark (KRONOS)	✓	94	0.01	✓
US (Fedwire)	✓	7,866	0.02	✓
Japan (BOJ-NET)	✓	473	0.04	✓
Australia (RITS)	✓	89	0.12	✓
New Zealand (ESAS)	✓	21	0.12	✓ (pending)
Sweden (RIX)	✓	30	0.14	✓
South Africa (SAMOS)	✓	23	0.28	✓
Canada (LVTS)	-	17	0.46	-
Switzerland (SIC)	✓	412	1.04	✓
UK (CHAPS)	✓	22	1.66	✓
Mexico (SPEI)	✓	98	2.68	✓
Mean		0.60		
Median		0.14		

MOST DATA ARE FROM THE COMMITTEE ON PAYMENTS AND MARKET INFRASTRUCTURES, SEPTEMBER 2015



in 2015 on the benefits of ISO 20022 suggests that it could save more than \$4.5bn over five years. Payments Canada plans to implement ISO 20022 for its core payment system to improve interoperability and provide more services for participants and end users.

Risk management is evolving

Risk management processes in retail systems have evolved to accommodate interoperable systems, more participants and faster availability of funds. Risk management is being addressed primarily through faster settlement processes and enhanced collateralisation use. Large-value systems are seeing more advanced liquidity-saving tools and real-time monitoring to help mitigate risks. Payments Canada's Automated Clearing Settlement System was designated for oversight by the Bank of Canada in May, which means it will be subject to more stringent risk management criteria going forward.

No 'one-size-fits-all'

Core payment systems around the world have significantly evolved since 2005. Of the 27 countries examined, 24 have redesigned or added at least one core payment system. Of these jurisdictions, 20 have made, or are in the process of making, major changes to more than one core payment system.

However, there is no one-size-fits-all approach to modernisation. Each jurisdiction has modernised based on its own public policy objectives, user needs and legacy systems. What does seem clear is that success is enhanced by taking a holistic, multi-system approach to modernising core payment systems that complement each other. ♦

now have at least one ERPS or batch-retail system that provides same-day or intraday settlement.

To support more timely retail payments, LVPS hours of operation in some countries have been extended beyond business hours. Significant changes to settlement systems have been made in Australia, Sweden and the UK to accommodate faster settlement of retail systems.

Participation

A major finding in the research has been that direct participation in core systems is widening. Many jurisdictions have an explicit public policy objective to increase access for direct participants in their batch or retail systems and LVPS. This has resulted in a steady rise in direct participation, along with the need to upgrade technology and improve risk management.

For example, the batch retail system in New Zealand, with multiple settlements a day, was established largely to reduce credit risk to allow international banks to become direct participants. China established more than 268 direct participants in its national automated clearing house when the China National Advanced Payments System was introduced, while managing credit risk with collateralisation and same-day settlement.

Other examples include Mexico's SPEI, which has grown to 98 direct participants, including non-banks, ancillary payment systems and a telecom services provider. The Reserve Bank Information and Transfer System (RITS) in Australia has 89 direct participants, which is up from 67 in 2008.

Enhancing the functionality of retail systems around the world was identified as a clear trend in the Payments Canada and Bank

of Canada research. Payment operators are leveraging centralised architecture to implement advanced system capabilities.

We found higher functionality in centralised retail systems, including the ability to sort, validate, route payment batches to financial institutions and interact with other systems. For example, if the system can scan payments for fraud and errors, the participants don't have to.

Interoperability

Systems are becoming more interoperable. There is a trend among the countries studied to move towards more interoperability between systems, which enables automation. For example, TARGET2 in Europe has one of the most interoperable systems identified in the research, connecting to 83 ancillary payment and security systems, and supporting more than 2,000 direct participants across 23 jurisdictions.

The research also found that ISO 20022, a messaging standard, is becoming the most prominent international standard for electronic payment messages. ISO 20022 will help businesses and financial institutions move away from paper by creating the conditions for data-rich electronic payments. ISO 20022, which can be found in EU countries, Japan and New Zealand, can also help streamline cross-border payments by using a common language for payments data.

In Canada, the ability to use rich standardised payments information will save businesses time, and our research released



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