



NEWS RELEASE

# New Report from Payments Canada, the Bank of Canada, TMX Group, Accenture and R3 Proves that Distributed Ledger Technology Can Enable Equity Settlement

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TORONTO; Oct. 22, 2018 – Payments Canada, the Bank of Canada, TMX Group, Accenture (NYSE: ACN) and R3 have published a **report** demonstrating the feasibility of clearing and settlement of securities using distributed ledger technology (DLT).

The findings are a result of the third phase of Project Jasper, a collaborative research initiative between Payments Canada, the Bank of Canada and TMX group to experiment with an integrated securities and payment settlement platform based on DLT.

Whereas previous phases of Project Jasper focused on the clearing and settlement of high-value interbank cash payments using DLT, phase III explored an integrated payments and securities infrastructure.

The project involved a hands-on exploration of settlement and payment interactions in a private distributed ledger network by building and testing a proof-of-concept (POC) system designed to be integrated with existing market infrastructure. Securities and cash were brought on ledger through the issuance of digital depository receipts (DDRs) by the Canadian Depository for Securities and the Bank of Canada respectively, allowing POC participants to



settle simulated securities against simulated central bank cash on the distributed ledger. Equity and cash DDR could be redeemed after their transfer since settlements were final and irrevocable.

The proof of concept allowed clearing and "delivery versus payment" settlement —and when more broadly implemented, would reduce counterparty risk and free up collateral— demonstrating that it is possible to complete post-trade settlement of netted and novated transactions on a DLT platform, while preserving privacy for market participants and their transactions.

The 36-page report provides the comprehensive findings of the research; Payments Canada, the Bank of Canada, TMX Group and Accenture presented initial findings from the research at the Payments Canada SUMMIT this past May. Among the report's key findings:

- A distributed ledger technology platform can be used for a payment and securities settlement system. The proof-of-concept platform constructed was able to process pledge, transaction and redeem functions in a manner designed to address the privacy and scalability requirements of the Canadian system. The platform was also capable of handling the different participant sets so that each participant was only capable of performing those functions for which they were authorized.
- The loose integration framework of the project left the two authorities involved — the Bank of Canada for cash and Canadian Depository for Securities for equities — in full control of their respective instruments or tokens.
- Jasper Phase III was a focused proof of concept, and expansion to multiple parties and asset classes, will require further study to determine the impact of DLT with respect to cost savings or efficiency gains. An expansion of scope could span a number of possible dimensions — e.g., multiple assets, more of the trade and post-trade settlement lifecycle, and additional types of trades.

"We are pleased with the Phase III outcomes and the results achieved by bringing members of Canada's financial market ecosystem, including TMX, financial institutions and the Bank of Canada," said Andrew McCormack, CIO at Payments Canada. "Our results demonstrate the need to continue to broaden the scope of Project Jasper and actively explore what opportunities, and challenges, DLT could offer in the integration of financial markets and for the Canadian economy."

John Lee, Managing Director of Enterprise Innovation & Product Development at TMX Group, said, "Project Jasper findings offer critical insight to understanding how we can adapt as an industry to a rapidly evolving global financial ecosystem. There is more to be explored to define how this technology will best serve the capital markets space. We look forward to the continued narrative."

Scott Hendry, Bank of Canada Senior Special Director, Financial Technology, said, "DLT is a promising technology that has the potential to reduce costs for participants and open new opportunities. Phase III of Project Jasper gave us the opportunity to test the technology further, and work remains to be done to determine how it can be set up to maximize the benefits for the whole financial system."

John Velissarios, Accenture's Blockchain Technology & Security Lead, said, "We're very excited to make available the full report of Project Jasper Phase III, which shows that it's possible to deliver payments by directly swapping cash from buyers to sellers. Phase III has proven that distributed ledger technology can be used for clearing and settlement of securities and could play an important role in promoting financial market integration."

#### About Payments Canada

Payments Canada ensures that financial transactions in Canada are carried out safely and securely each day. The organization underpins the Canadian financial system and economy by owning and operating Canada's payment clearing and settlement infrastructure, including associated systems, bylaws, rules and standards. The value of payments cleared by Payments Canada's systems in 2017 was approximately \$50 trillion or \$200 billion every business day. These encompass a wide range of payments made by Canadians and businesses involving inter-bank transactions, including those made with debit cards, pre-authorized debits, direct deposits, bill payments, wire payments and cheques. Payments Canada is a proud supporter of the Catalyst Accord and the 30% Club. For more information, visit [payments.ca](https://payments.ca)

#### About TMX Group (TSX: X)

TMX Group's key subsidiaries operate cash and derivative markets and clearinghouses for multiple asset classes including equities and fixed income. Toronto Stock Exchange, TSX Venture Exchange, TSX Alpha Exchange, The Canadian Depository for Securities, Montréal Exchange, Canadian Derivatives Clearing Corporation, Trayport and other TMX Group companies provide listing markets, trading markets, clearing facilities, depository services, technology solutions, data products and other services to the global financial community. TMX Group is headquartered in Toronto and operates offices across North America (Montréal, Calgary, Vancouver and New York), as well as in key international markets including London, Beijing and Singapore.

#### About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills

across more than 40 industries and all business functions — underpinned by the world's largest delivery network — Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 459,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at [www.accenture.com](http://www.accenture.com).

#### About the Bank of Canada

The Bank of Canada is the nation's central bank. Its principal role is "to promote the economic and financial welfare of Canada," as defined in the Bank of Canada Act. The Bank's four main areas of responsibility are: monetary policy —keep inflation low and stable; financial stability—promoting a safe, sound and efficient financial system; currency —designing, issuing and distributing Canada's bank notes; and funds management—acting as fiscal agent for the Government of Canada.

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