


## ISSUER COMMENT

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## IBRD (World Bank)

### Success of blockchain bond demonstrates potential of distributed ledger technology

On 23 August, the [International Bank for Reconstruction and Development \(IBRD, Aaa stable\)](#) issued an AUD\$110 million, two-year bond using blockchain technology. The bond, dubbed "bond-i" (Blockchain Operated New Debt Instrument), is the world's first bond to be created, allocated, transferred and managed through the use of distributed ledger technology. Although the issuance was small, accounting for less than 1% of the IBRD's average annual borrowing program, and has no impact on the bank's credit profile, the transaction's success exemplifies the institution's leading role as a sophisticated capital markets issuer, and more broadly, demonstrates the potential for distributed ledger technology to reduce transaction costs and improve efficiencies in international capital markets.

Capital market debt transactions typically involve numerous intermediaries and transacting agents to build a functioning market. The blockchain technology used in this transaction demonstrates potential to streamline processes and improve operational efficiencies. As a result, these benefits can accrue to both the issuer and arranger by simplifying settlements and offering instantaneous transactions between market participants, limiting time and resources spent during reconciliation and increasing market efficiency.

Moreover, given the IBRD's business model and its large borrowing program, a significant reduction in transaction costs could potentially translate into lower borrowing costs for the developing countries to which it offers loans.

The IBRD is an active and innovative issuer in the international capital market. The bank uses funds raised through its diverse and sophisticated borrowing program to support lending operations that promote development objectives. The institution typically raises between \$50-\$60 billion annually and diversifies both the tenor and currency composition of its borrowing. For instance, in the fiscal year ending in June 2018, the IBRD raised medium- and long-term debt in 27 different currencies.

Since June 2017, in addition to the usage of blockchain technology in its debt issuance, the IBRD also studied the potential of blockchain technology, among other financial technologies, in advancing sustainable development goals in areas such as land administration, health, education, cross-border payments, and carbon-market trading. The IBRD selected the [Commonwealth Bank of Australia \(CBA, Aa3/Aa3 stable\)](#) as the exclusive arranger for the bond sale because of its experience in researching and applying distributed ledger technologies to financial transactions, including global trade transactions.

The bond-i transaction occurred over a private blockchain and allowed both the IBRD and CBA to confirm investors' purchases in the offering in real time, as investors placed orders directly into the order book held on the blockchain platform. The IBRD and CBA developed a private Ethereum blockchain for the project, with review of the platform's architecture, security, and resilience performed by [Microsoft \(Aaa stable\)](#).

### Moody's related publications

- » **Sector Comment:** [Supranationals - Global: Credit profiles of multilateral development banks show some resilience to Turkey developments](#), 4 September 2018
- » **Issuer Comment:** [CBA arranges world's first bond issuance solely using blockchain, a credit positive](#), 15 August 2018
- » **Credit Opinion:** [IBRD \(World Bank\) - Aaa Stable: Regular update](#), 10 July 2018
- » **Issuer In-Depth:** [IBRD \(World Bank\) - Aaa Stable: Annual credit analysis](#), 1 February 2018

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