Federal Ministry
for Economic Cooperation
and Development

Financial inclusion with blockchain

Transparency-promoting technology as a catalyst for financial participation

(Much) more than just Bitcoin

Blockchain technology promises traceable and manipulation-proof data exchange, offering a wealth of potential including easier access to financial services in developing countries and emerging economies. In the financial sector, the first practical use of blockchain technology was with the digital currency Bitcoin in 2009, which is still its main application. The confidence-building distributed ledger technology behind Bitcoin is commonly known as blockchain and soon proved itself to be the real revolutionary aspect in the form of new enabling technology.

The technology

Blockchain is based on a database that can be accessed by all participants and is operated by a distributed network of computers. The result is a permanent record that is protected against manipulation by any individual party. Information is not overwritten; rather, changes are added to a new data block. These are gradually 'chained' to one another, meaning modifications remain traceable and transparent for all parties.

In addition to cryptocurrencies, blockchain technology is currently used in the financial sector for investment and financing purposes, in trade financing and for remittances. The overall potential of the technology is to make transactions quicker, cheaper and more transparent.

Stimulating green investment through blockchain

The Green Assets Wallet is a piece of blockchain-based technology that validates green projects (solar panels, sustainable buildings, wind power, etc.) by taking the square footage of constructed solar collectors or kilowatt-hours of renewable energy produced from data sources and verifying them. By building trust and increasing transparency and efficiency, this stimulates the market for green investments in emerging markets. The project is implemented by the Emerging Markets Dialogue on Finance (EMDF) on behalf of BMZ and in cooperation with Stockholm Green Digital Finance.

Its structure means that blockchain can also reduce dependence on local circumstances, such as non-existent financial infrastructure, which can be particularly important in fragile contexts. Blockchain-based payment infrastructure can also be linked with biometric data, such as facial and speech recognition, which can be used as identification when opening an account, for example, where identification documents do not exist. Blockchain technology thus allows for independence of central databases. The decentralisation of digital identities also offers protection against cyberattacks.

Challenges involved in widespread implementation

Cooperation between financial institutions using blockchain, public sector partners and mobile network operators is essential to improve access to financial services using the confidence-building technology. These partnerships can benefit

banks, which are then able to grow their customer base and use their existing infrastructure. Regulatory uncertainties in developing countries and emerging economies pose a major challenge. Technical requirements, such as computer capacity and the associated costs, and greater governmental control can also be reasons why financial institutions have so far refrained from using the technology.

Engaging German development cooperation

On 18 September 2019, the German Government adopted a blockchain strategy outlining its goals and principles in relation to blockchain technology and specific measures.

Since 2018, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has been developing the transformational potential of blockchain and related technologies for implementing the 2030 Agenda for Sustainable Development. A lab approach can support the creation of framework conditions for the use of innovative blockchain solutions. The experimental format allows for proof of concepts and pilot projects as a basis for upscaling with the develoPPP programme. It serves as a test laboratory where regulators and the private sector can work together on solutions.

TruBudget platform – supporting the transparent implementation of public investments in emerging markets

KfW uses blockchain technology for a digital process platform. With TruBudget, the work processes of a defined group of partner institutions are portrayed in a transparent and tamper-proof manner, enabling projects to be carried out more efficiently and sustainably via partner structures. TruBudget is already being used in Brazil, Burkina Faso, Ethiopia and Georgia.

Recommendations for stakeholders in international development cooperation

- Advising regulatory and supervisory authorities on creating clear and technology-neutral legal frameworks to facilitate private investment
- Supporting financial and insurance supervisory authorities in advising financial service providers and consumers on blockchain
- Promoting access to blockchain technology for private sector stakeholders in partner countries
- Promoting innovative projects that use blockchain, for example for digital payment transactions, insurance and digital ID, and that open up approaches for other areas and sectors in development cooperation
- Advising on sustainability with respect to the energy consumption of blockchain

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