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Expert Q&A: Blockchain in Real Estate

by Practical Law Real Estate

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An Expert Q&A with Kris Ferranti of Shearman & Sterling LLP on using blockchain technology in the real estate industry.

Blockchain technology is being adopted across many industries and has wide-ranging implications in almost every area of the law. Despite the real estate industry's traditional hesitancy to embrace new technology, there are compelling arguments for using blockchain in real estate transactions and property management.

Practical Law asked Kris Ferranti of Shearman & Sterling LLP to discuss potential uses of blockchain in real estate and hurdles that must be overcome before the widespread adoption of blockchain by the real estate industry. Kris represents clients in a wide range of real estate transactions and is part of his firm's FinTech team.

For an overview of blockchain technology, see Practice Note, Blockchain and Distributed Ledger Technology (DLT): Overview. For additional blockchain resources, see Blockchain Toolkit.

What are some of the use cases for blockchain in real estate?

Blockchain is expected to have a long-lasting and wide-ranging impact on real estate and the real estate industry as a whole. One need only to understand blockchain to understand the endless possible use cases.

Blockchain is a digital distributed ledger, which is a form of database. Its chief characteristic is that it is immutable, and so information entered cannot be deleted, modified, or altered. Blockchain technology has the potential to replace any third-party intermediary that serves the commercial real estate industry.

An early application has been blockchain's use to tokenize equity interests in real estate. Digital tokens that evidence an investor's ownership in an entity have been offered to fund and joint venture investors as a method of funding commercial real estate projects. With tokenization of equity, ownership interest registries of any entity up and down the capital stack of any real estate project may be replaced with a blockchain-based ledger system.

A blockchain-based ledger system could also potentially be used to register land records, such as deeds, mortgages, mechanics liens, and other recordable instruments. Currently, there is no universal system for government certification of title, and each county and town has its own title recording system and local recording offices. This system relies on parties manually and accurately recording every property transfer, mortgage, and encumbrance. These paper registries are susceptible to fraud and mismanagement. Using an immutable blockchain ledger, once accurate transaction data enters the blockchain it could be updated in real time and be continuously protected. Any change to property ownership in a blockchain land registry would be recorded in a block with a timestamp.

Blockchain technology has other practical applications as it relates to diligence, property management, leasing, corporate governance, data analytics, and marketing. Through secure data sharing and smart contracts, blockchain can facilitate broad oversight of property management, for example by streamlining rental collections and payments. Blockchain technology combined with smart contracts may also increase transaction efficiency by allowing certain actions to automatically occur, like the release of funds when certain contractual obligations are satisfied. Parties can also sign leases and pay rent through smart contract technology, automating payments and renewals.

What are the primary benefits of using blockchain in real estate?

One of the greatest benefits of blockchain technology in real estate transactions is that it allows for a more secure ledger system for positions throughout the capital stack. With tokenization, a much more efficient system is created to trade and track interests. This is likely to result in enhanced connectivity, single-platform integration, and faster transaction timelines. Blockchain can also combat fraud and almost completely reduces its likelihood because hackers would have to expend significant time and resources to successfully tamper with the data on a blockchain system.

Additionally, blockchain is likely to unlock liquidity in real estate, which is historically a relatively illiquid asset. Real estate investors would be able to quickly and easily sell their commercial real estate positions in the open market. Values are anticipated to increase by the elimination of the illiquidity discount which is estimated to be as high as 30%. Barriers to entry are likely to also be reduced for investors who want to invest directly in real estate. Investors could invest on a smaller scale due to increased fractionalization and in a much more efficient and cost effective way.

Regarding land registration and conveyances, blockchain would nearly eliminate fraud in the title recording system. Since blockchain ledgers are immutable and updated in real time, it is much harder for bad information to interrupt the chain and any tampering of recorded data is easily detectable.

Finally, a secondary market on a blockchain platform would create a much more efficient market for real estate because real estate assets could be freely and transparently traded. Currently, real property value is determined in one of many ways, including the sales comparison approach, the capitalization rate model, the income approach, and the cost approach. In any case, the valuation process occurs months before a closing and requires the hiring of professionals to perform valuation analysis and conduct inspections, making the whole process inefficient. With a blockchain-based secondary market, the real estate asset could be priced in real time based on the most current trading information available to investors.

Are there any drawbacks of blockchain?

The real estate market in some ways arguably benefits by valuation inefficiencies. When property ownership is tokenized, the market may reveal greater volatility in values since pricing could be determined in real time. Some could argue that the valuation process and illiquid nature of real estate assets has kept real estate values more stable compared to other asset types.

Additionally, certain covenants and obligations typically found in governing documents cannot be encoded on a blockchain. Smart contract technology is not yet capable of the advanced compliance mechanisms that are required to enforce special covenants and rights. Therefore, provisions in contracts that can be objectively determined to have been breached are the only provisions that could be enforced through the use of blockchain technology alone. The regulatory framework surrounding blockchain is also still evolving.

Raising capital by issuing blockchain tokens (known as tokenization) has been touted as a prime early application of blockchain for real estate, and there have been a handful of real estate transactions that have successfully used tokenization. What are the benefits and disadvantages of tokenization?

Some benefits of tokenization include enhanced efficiency and transparency of trading and fractionalization of digital tokens. Fractionalization of digital tokens allows investors to invest on a smaller scale, significantly reducing barriers to entry. Investors would also be able to see real time data on the pricing of previous trades. Each token would get an individual code and time stamp, and once it is shared on the blockchain network, it can be visible to all parties involved in a transaction. There would be virtually no opportunity for fraudulent transfers or susceptibility to hacking, making third-party intermediaries unnecessary. Without third-party intermediaries, transaction processes can be streamlined or even automated.

Some drawbacks of tokenization include the problems noted earlier with enforcing certain covenants and rights with the sponsor that cannot be objectively determined to have been breached. Certain investment terms can be complicated and subjective in nature. It is impossible to enforce these terms through smart contract technology.

Similarly, digitizing a controlling interest would be difficult because of the subjective nature of requirements and covenants regarding transfer. Although token investors are predominately passive, minority stakeholders with limited governance rights, tokenization creates unique problems for large institutions with significant governance protections or a controlling interest.

What legal or other roadblocks currently exist for the widespread adoption of blockchain in real estate? How far is the industry from participating in blockchain in a meaningful way?

The limitations with smart contract technology create a roadblock to the extent to which blockchain can be used. Additionally, there are uncertainties regarding the rules and regulations affecting digital transactions. Regulators in developed markets have been slow to lay the foundation for the creation and exchange of digital asset tokens. The real-time data and immutability of data held in a blockchain ledger would enhance the role that regulators aim to provide, which is clarity and protection for investors. As a result, blockchain could integrate any regulatory body's internal and external compliance operations onto a singular platform. Many have started to contemplate legislation, but not all have developed a system to accommodate the technology.

Additionally, if the digitized ownership interest constitutes a security and is being offered for public sale, then the issuer must register the interest with the Securities and Exchange Commission (SEC). In 2018, the SEC issued a public statement warning that they are closely monitoring blockchain and that existing federal securities laws apply to tokenized securities. The offering may qualify for an exemption under Regulation D or Regulation S, but it will still be subject to various restrictions.

Creating and implementing a blockchain registering land ownership requires a complete overhaul of a local government's land registration system. Before a blockchain system can be implemented, the state or county legislature must learn how blockchain technology works and how to use it most effectively, and assess the risks involved. Additionally, state and county legislatures have to update local laws to enable and regulate a blockchain land recording system. Finally, land records currently in physical document form must be digitized. For many jurisdictions, the digitization process will take considerable time.

In your experience, are stakeholders in the real estate industry ready to adopt blockchain once the technology and legal framework are ready? Are there certain types of companies that are more likely to become early adopters than others (for example, lenders, private developers, property managers, institutional investors, government entities, title companies, brokers, law firms)?

Several stakeholders are beginning to adapt to blockchain, although there are some groups of investors that are unlikely to benefit from the use of blockchain.

As an example, large institutional investors that invest directly in real estate may not benefit much from the tokenization of interests. When large institutions invest directly in real estate, they typically comprise a significant percentage of the debt or equity in the project. These institutional investors negotiate and demand unique covenants and rights, and it is impossible to enforce these terms through smart contract technology which is limited to simple if/then coding. The only way to enforce these unique provisions is through the use of oracles, which act as a referee when a covenant is breached. Because a primary benefit of using blockchain technology is to eliminate these sorts of third-party intermediaries, token investors are typically minority stakeholders with passive non-controlling interests.

Title companies are also not likely to reap significant benefits from the adoption of blockchain. Blockchain would significantly reduce the possibility for fraud in land registration and conveyances. Since blockchain works like a record book, safely storing information in the blockchain database, any change would be recorded with a public timestamp. Bad information or tampering of records would be difficult and easily detectable, reducing the need for title insurance. However, because blockchain

would not completely prevent every potential title defect, purchasers of real property will still likely obtain title insurance (although streamlined title searching and reduced risk will probably lower title insurance premiums).

Despite the potential disadvantages, title insurance companies are beginning to adapt to blockchain. In late 2018, First American Financial announced it was launching a shared blockchain system to be used in the title insurance process. The first company to sign on to First American's blockchain system was Old Republic Title Insurance Group, the nation's third largest title insurance underwriter. The blockchain system, which First American designed, is intended to facilitate the exchange of prior title insurance policies between underwriters that contribute to the system.