

## Financial Services

# How Blockchain is Transforming the Mortgage Industry

## Introduction

The use of blockchain technology for financial transactions continues to accelerate and there are examples of it being used across many industries—from lending, to insurance, to processing payments. There are an estimated 4,000 financial assets and processes operating on blockchain technology, and it's more than just the buying and selling of Bitcoin.<sup>1</sup> Recently, blockchain technology has been integrated in the **mortgage lending** market, used for securing title insurance, and in the **same-day settlement of US equities**.

The US mortgage system is primed for rapid process and technology change, driven by shifting demographics, rising consumer expectations, technological innovations, increased regulatory expectations, and outdated legacy infrastructure. Collectively, these factors require homebuyers, governments, and real estate and mortgage-related companies to reimagine US housing finance and homeownership. In response to these trends, consumer-centric, digital mortgage, and housing finance solutions are forming across the US at unprecedented speed and scale.

We see blockchain technology becoming the solution of choice to address the needs of a shifting mortgage environment because it can dramatically improve the efficiency and security of financial transactions. To explore its potential in revolutionizing the mortgage industry, Guidehouse spent considerable time and effort to understand how blockchain is being used in the mortgage industry, and where it may provide additional unforeseen benefits.

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Blockchain is one of the key technology components that will help transform the current US mortgage system. The potential to improve the efficiency and security of financial transactions, while providing benefits to all eco system participants will revolutionize the industry as we know it today.”

**Sherlonda Goode-Jones,**  
**Partner and Public Sector Financial Services practice lead**

1. Gillian Tett, “Blockchain may change equities trading for good,” Financial Times, April 8, 2021, <https://www.ft.com/content/9e38bee8-d70a-4f28-a771-c3d77068e9ba>.



# How is Blockchain Being Used Today?

The mortgage industry is vast, with many market participants, requiring significant manual interactions. With closing times historically averaging more than 30 days, it's no surprise that blockchain is emerging as a market disruptor.



## LENDING

### HOW

Several lending institutions are experimenting with blockchain technology to improve the efficiency of the mortgage lending and closing processes, by using it to record, share, and exchange data about the loan.

With a loan file housed on blockchain, institutions are now able to leverage blockchain as the custodian, performing validation checks on the loan file and storing outputs of those checks to ensure transparency. Blockchain adds a greater level of security by providing a record of the loan file that cannot be tampered with or lost.

### WHY

With blockchain acting as the custodian, mortgage lenders can remove many manual processes related to document verification, saving time (and, in some instances, cost) in the process. This can help to speed up settlements, create more accurate records, and make the process more affordable for all involved. In addition, the improved accuracy enables lenders and servicers to respond to and resolve regulator inquiries more efficiently.

With blockchain able to act as a decentralized database for all types of information relating to a mortgage, it is not surprising that the exchange of title emerged as a prime candidate for leveraging the technology.



## TITLE and CLOSING

### HOW

Several title insurance companies have adopted blockchain technology to facilitate the exchange of prior insurance policies and support remote online notarization.

### WHY

Leveraging blockchain technology to exchange title insurance policies enables these companies to improve efficiency while reducing risk. The decentralized database capable of providing transparency to all involved parties reduces the risk of unwarranted data modification. By storing title information on the blockchain with a unique identifier, the databases streamline the search process, and increase accuracy and reduce timelines and costs for securing title during closing.



## How is Blockchain Being Used Today? (Cont.)

US capital markets have embraced blockchain in recent years, leveraging the technology to trade new assets, find market efficiency and provide greater transparency. It likely won't be long before the fixed income MBS trading market sees greater adoption of this technology to seize similar opportunities.

### HOW



#### **MORTGAGE-BACKED SECURITIES (MBS) TRADING**

There are several companies trading cryptocurrencies, US equities, and securities on blockchain. Guidehouse has seen this emerge as a method to increase liquidity and cut settlement times, as well as reduce risk and expenses. Blockchain is being used for securities trading to record the trades and verify underlying collateral on the shared digital ledger—improving transparency, speed of settlement, and reducing risk.

### WHY

Using blockchain for MBS trading provides increased transparency and allows for a much faster settlement time and duplicate reconciliation across stakeholders and ratings agencies. What used to take two days can now be completed in hours and eventually instantaneously.

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While blockchain is already impacting the mortgage industry, it is primed to impact it more profoundly. Activities that take weeks and months to facilitate, can take place real time. Also, with fewer intermediaries, the process becomes less resource intensive which is ultimately better for the consumer.”

**Matthew Moosariparambil,**  
Director

# What Areas are Primed for Disruption through Use of Blockchain?

## MORTGAGE CLOSING

Mortgage closings have historically taken at least 30-90 days for properties that involve contingencies such as financing, appraisals, and securing title. Closings have also been in-person, involved hundreds of documents and multiple re-verification steps, adding time and expense to the process.

1. **Document Verification:** Expect more lenders to use blockchain to conduct validation checks and certify information just once. The information is then securely, reliably, and instantaneously made available to all privileged entities.
  2. **Title Transfer:** Expect more title companies to use blockchain technology to identify and validate title. This will improve accuracy and efficiency, and potentially remove the need for title insurance entirely.
  3. **Notarization:** The next generation of e-notarization and e-mortgages will use blockchain to ensure information accuracy, while preventing tampering and fraud.
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## MORTGAGE SERVICING

Mortgages on blockchain and using distributed ledger designs can save mortgage servicing companies time and expense—and reduce the operational burden of meeting regulatory requirements—by eliminating document tracking and information reconciliation, and digitizing payments and payment reporting with embedded credit, compliance, and risk alerts and reporting.

1. **Smart Contracts:** The use of smart contracts, blockchain, and smart contract technologies with embedded AI and security offers the potential to digitize and automate the entire loan application process. Automation upfront creates numerous opportunities to enhance downstream processes for servicers.
  2. **Payments:** Blockchain technology offers the opportunity for digital payments that could be exchanged across the platform in a synchronized fashion without intervention.
  3. **Regulatory Compliance:** Servicers are constantly being monitored for regulatory compliance, requiring proof for proper servicing protocol. Blockchain's immutable record could eliminate the risk of manual errors, increase the efficiency of addressing regulator audits and reduce regulatory violations.
  4. **Mortgage Servicing Rights:** By using blockchain technology to allow for greater transferability of Mortgage Servicing Rights, you could see greater liquidity in this market.
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## MBS SETTLEMENT

Certain organizations have had control over the MBS clearing and settlement process for years, but blockchain technology is beginning to challenge that. As blockchain technology continues to prove its ability to provide safety and soundness in this market—through small pilot trades—we can expect to see its role in providing a platform for securities trading, without a clearinghouse, grow.








1. **Speed:** By trading MBS securities using blockchain technology, the settlement could be completed in hours rather than days, thus reducing the transaction expenses and margin volatility exposure.
2. **Posting Collateral:** By reducing the transaction time, blockchain could effectively remove the need to post margin to protect against the risk of a trade collapsing.



# Actions to Consider

The use of blockchain technology is becoming more common in the mortgage industry, and there are several areas ripe for disruption through this technology. Blockchain, distributed ledger, and smart contract capabilities will rapidly transform the property ownership and mortgage finance ecosystem. For that reason, it may be time to assess how your organization will be impacted by these technologies and how to develop a plan to exploit emerging solutions to benefit your company, stakeholders, employees, and customers.

## Don't Let Weak Links Break Your Blockchain Performance - Things to Consider

	BLOCKCHAIN PREPARATION CHECKLIST	Y/N
	Have you analyzed your business processes to identify opportunities to use blockchain technology?	
	Have you analyzed the areas where blockchain technology could have the greatest impact on your customers?	
	Do you understand what blockchain technologies are available?	
	Do you understand what blockchain technology is best suited for your service offerings?	
	Do you understand what it would take to integrate existing technology platforms with blockchain technology?	
	Have you developed a strategic plan for how to adopt blockchain technology?	



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Guidehouse is a leading global provider of consulting services to the public sector and commercial markets, with broad capabilities in management, technology, and risk consulting. The company helps clients address their complex challenges and navigate significant regulatory pressures focusing on transformational change, business resiliency, and technology-driven innovation. Across a range of advisory, consulting, outsourcing, and digital services, Guidehouse creates scalable, innovative solutions that prepare our clients for future growth and success. The company has more than 10,000 professionals in over 50 locations globally. Guidehouse is a Veritas Capital portfolio company, led by seasoned professionals with proven and diverse expertise in traditional and emerging technologies, markets, and agenda-setting issues driving national and global economies. For more information, please visit: [www.guidehouse.com](http://www.guidehouse.com)

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