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Your guide to DeFi

Article

What we've been thinking: We've spoken at length about **fintechs launching DeFi services**—but until now, we haven't zoomed in on how DeFi actually works, what it's trying to solve, and how it may develop in the coming years.

Here's how it works: DeFi stands for **decentralized finance**. As its name suggests, it aims to remove traditional intermediaries like banks from financial services processes by using **blockchain technology**.

This is not Bitcoin. The Bitcoin blockchain—the first blockchain to be launched in 2009—is used to accurately and securely record Bitcoin transactions, creating an alternative payment system that doesn't need to be validated by going through traditional players like banks. DeFi services run on other blockchains, primarily Ethereum, and these take the idea of removing intermediaries from transactions to a much wider range of applications.

- For example, on the Ethereum blockchain, DeFi services are created via agreements known as **smart contracts** that are automatically enforced via code.
- **Ether, its cryptocurrency,** is the form of payment that developers use to buy computation power on the Ethereum blockchain and execute their operations.
- Over the past few years, other blockchains have launched to host DeFi services, like **Cardano** and **Solana**. Even the Bitcoin blockchain may host DeFi services one day, per Square.

Who runs it? Voluntary groups of people often with no connection to one another power DeFi services across thousands of computers. These volunteers are rewarded with Ether for providing the processing power.

How do you use it? On the user side, one needs a **crypto wallet** to interact with DeFi. The wallet is protected by a **private key**—a random string of numbers and letters, much like a strong password—and is used to access and move crypto funds to pay for these services.

- There are two types of wallets: custodial and non custodial.
- Users of **custodial wallets** outsource the handling of private keys to third parties, like crypto exchanges. Users of **non custodial wallets** retain ownership of private keys. We've previously discussed the risks and benefits of each type.

What problem is it trying to solve? DeFi attempts to overcome the shortcomings of running financial services on centralized platforms.

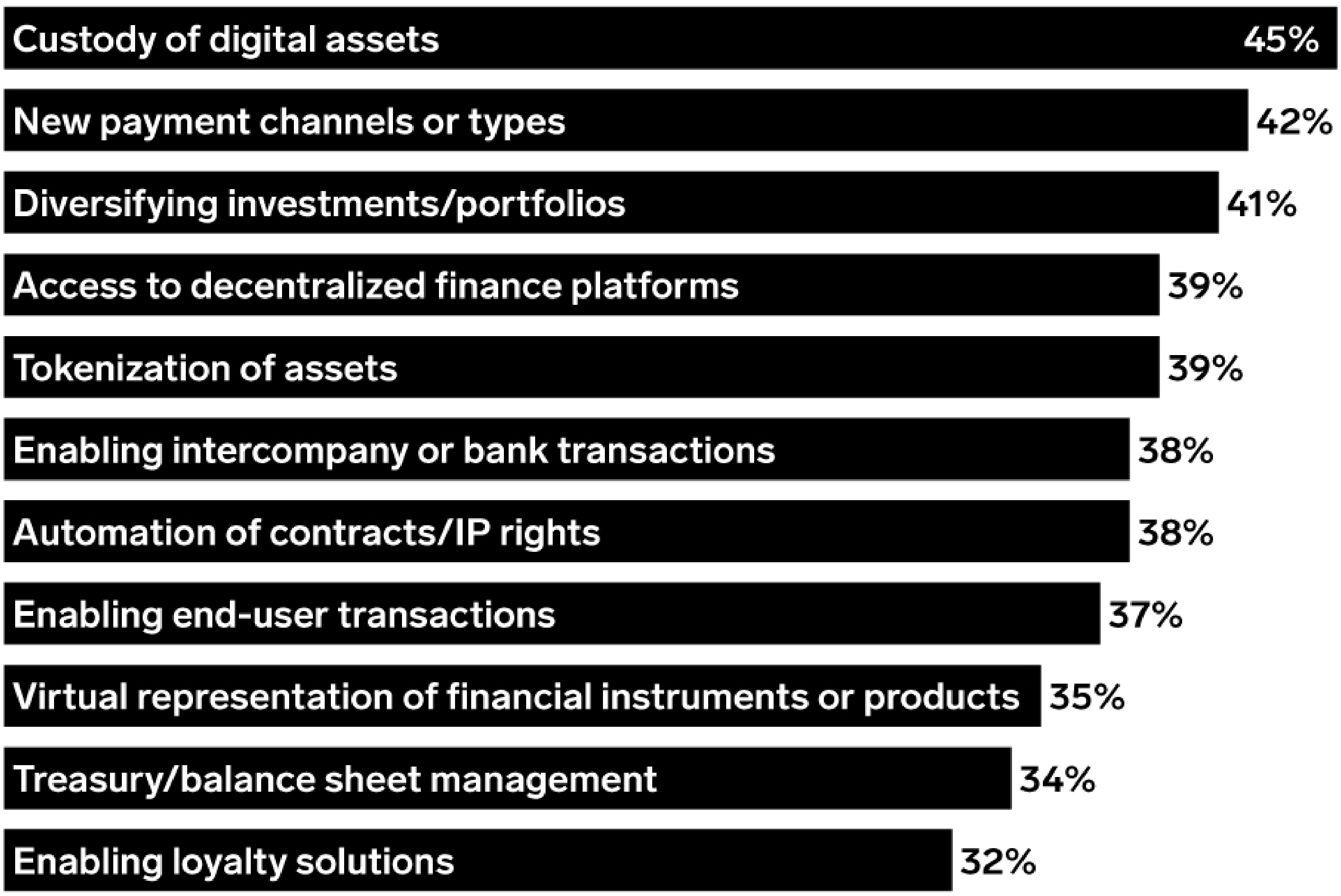
The traditional system can be cheaper to operate and supervise than a decentralized group of people. But large financial institutions can also engage in monopolistic behaviors—as seen with the recent spat between **Visa** and **Amazon** over transaction fees. Big players can also slow innovation from smaller aspiring competitors and even potentially act against customer interests, epitomized in the 2008 financial crisis.

Blockchain-run services, by contrast, distribute power across the network of participants, which in theory prevents monopolies from forming. Here are three DeFi use cases that aim to improve on centralized counterparts:

- **Decentralized exchanges.** Trades on these are executed by smart contracts and don't rely on the intermediaries usually required to update records, ensure compliance, and manage counterparty risk. This removes transaction friction, enhances asset liquidity, and removes the risk of human error. **UniSwap** is one of the largest decentralized exchanges and processes **$1.5 billion trades on average a day**. And Square recently announced it would develop a decentralized exchange.
- **Stablecoins. Tether**, the largest stablecoin globally, and its parent company, **Bitfinex**, were **fined $42.5 million** this month for lack of transparency regarding the composition of its reserves. Rather than being fully backed by US dollars, Tether is partially backed by assets like debt securities and bonds. As a centralized company, Bitfinex can be opaque about its books. DeFi platforms, by contrast, can create a more transparent stablecoin with reserves that can be checked by anyone on a blockchain. **Dai** is a decentralized stablecoin—anyone can create new Dai tokens if they offer enough other cryptos as collateral.
- **Lending protocols.** Some DeFi protocols let users earn interest on crypto deposits or borrow more cryptos without having to go through a financial intermediary or pass long credit checks. The **Compound** protocol has processed **more than $12 billion in loans** as of October.

Digital Assets that Will Have a Very Important Role in Organizations/Projects According to Financial Services Executives Worldwide, April 2021

% of respondents



Note: n=1,280
Source: Deloitte, "2021 Global Blockchain Survey," Aug 19, 2021

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The challenges ahead:

- **High barrier to entry for everyday users.** By now, you may have noticed it can be hard to wrap one's head around the DeFi sector. It's easy for users to make mistakes and suffer financial losses. That can put off further adoption: Mainstream users are often reluctant to trust a technology they don't understand with their money.

- **Lack of regulatory protection.** Financial firms that act as intermediaries in the legacy financial system are heavily regulated, and consumers can rely on bodies like the **SEC** to police the sector and remedy any faults. But there are no legally recognized, centralized entities that can be held responsible for smart contract problems like a mistake in the code.
- **Prone to crime. DeFi losses from fraud and theft reached $10.5 billion** this year, up from $1.5 billion in 2020. The confusion around how to use DeFi services and the lack of regulatory protection, combined with the significant money moving through these protocols, make it a fertile ground for illicit activity.

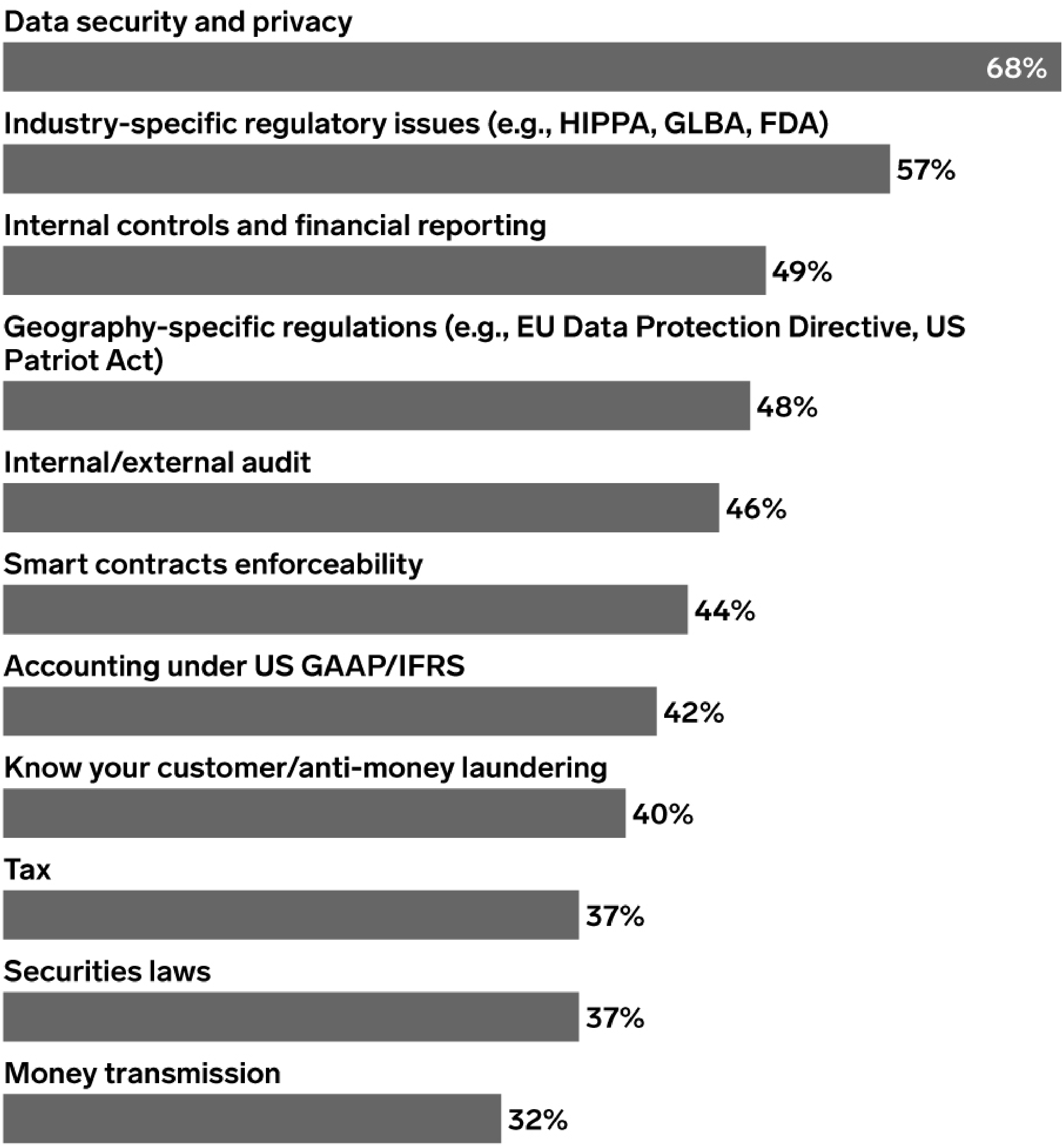
What's next?These barriers won't slow DeFi adoption over the long term due to three trends.

- **Crypto adoption.** 2021 was the year of crypto adoption, with the **global market hitting the $3 trillion mark** for the first time earlier this month. And now that everyday people are accustomed to trading cryptos on the likes of **Coinbase** and **Robinhood**, many will be open to experimenting with more complex use cases. And consumer-facing fintechs like **eToro** are also adding DeFi services and removing the barriers to entry.
- **Significant capital pouring in. Global blockchain funding reached $8.7 billion** in H1 2021, up from $4.3 billion for all of 2020, and 12 new crypto unicorns were born in Q3. Venture firm **Paradigm's** recently closed **$2.5 billion crypto fund** underscores that investments will keep flowing into blockchain startups with the potential to innovate financial services, like DeFi firms.
- **Promise of the metaverse.** Recent moves by crypto firms show that they expect DeFi services will play a key role in facilitating transactions within the metaverse. **Consensys** just **raised $200 million** thanks to its crypto wallet, MetaMask, which now has **more than 21 million** monthly active users—**a 38-fold increase from 2020**—to access such services. And crypto exchanges Coinbase and Gemini are planning to expand their crypto wallets' compatibility with the DeFi sector in a nod to the metaverse.

Areas of Regulation Most in Need of Change to Facilitate Adoption of Blockchain and Digital Assets According to Financial Services Executives

Worldwide,
April 2021

% of respondents



Note: n=1,280; respondents could select more than one
Source: Deloitte, "2021 Global Blockchain Survey," Aug 19, 2021

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