

# Blockchain Adoption: the Tipping Point Is Near

Findings from Ripple's  
Blockchain in Payments Report 2018



## Key Findings

The Blockchain in Payments Report reveals the adoption of blockchain-based global payments is reaching critical mass in 2018 and organizations are already looking to incorporate digital assets into payment flows.

**This year blockchain moves from experiments to production:**

18%

of respondents are in production or near production for the payments use case

**The tipping point for mass adoption of blockchain is fast approaching:**

45%

of those surveyed said they are already in production, piloting or close to signing with a blockchain provider

**Use of digital assets in payments are experiencing breakthrough interest:**

75%

of respondents state they are extremely or very interested in using a digital asset as a settlement and/or a base currency

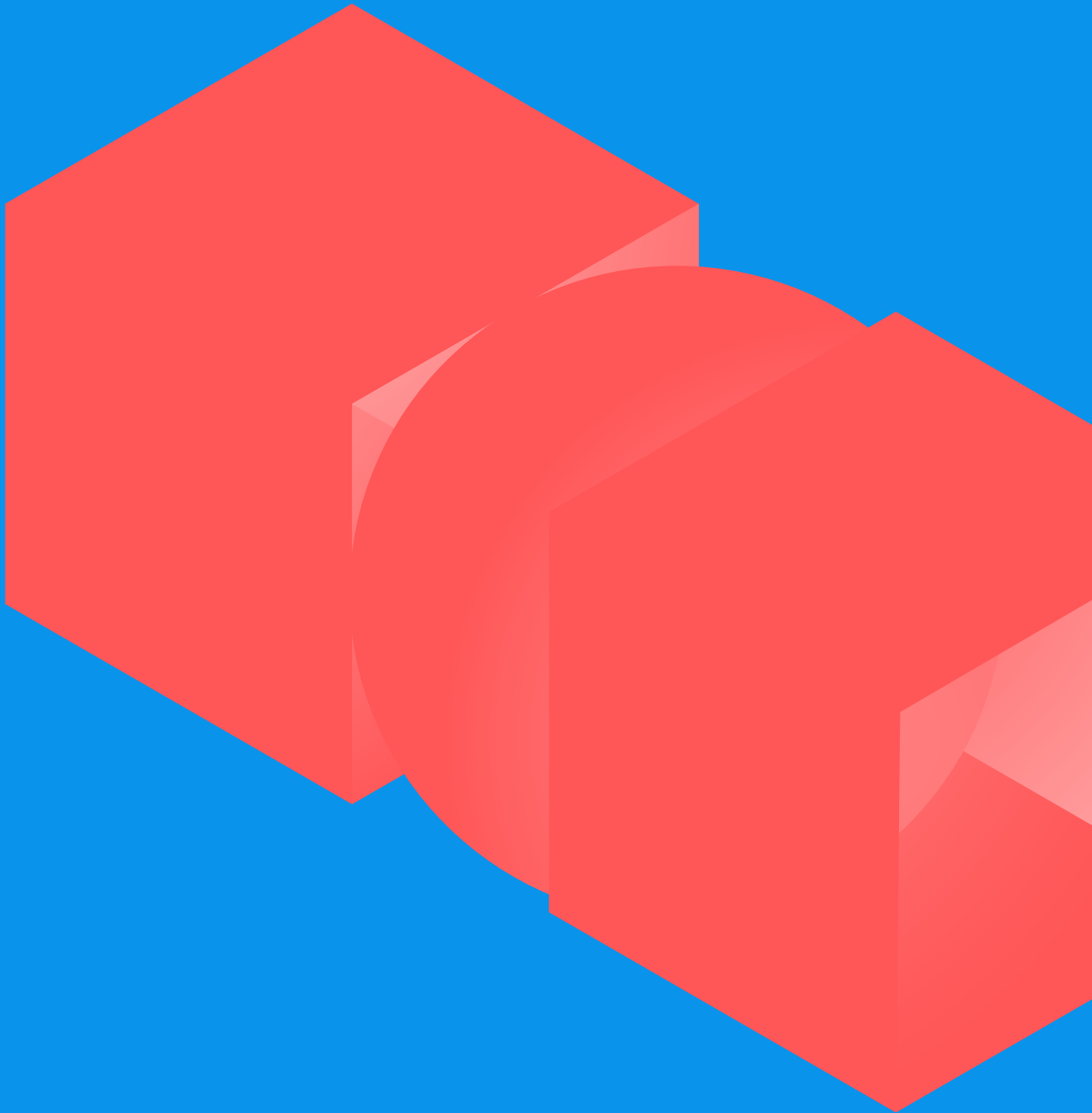
**Growing blockchain connectivity facilitates digital asset adoption:**

85%

of those using blockchain in production and 90% of those quickly moving to production are either extremely or very interested in using digital assets as a form of payment

SECTION I

# Introduction



# Connect the Global Economy

Globalization has steadily connected people, governments and businesses worldwide. It has created new ecosystems, such as the gig economy, and more evenly distributed wealth and opportunity across the globe. It has also reshaped expectations among consumers and businesses by creating a shared desire for immediate, reliable exchange of goods, information and value — no matter who or where you are in the world.

This move towards a more interconnected world began with the introduction of the shipping container in 1956 — a standardized approach to global trade that laid the groundwork for commerce as we know it today. Several decades later, the World Wide Web standardized how we send information and transformed how we work, get around and communicate.

But while containers and the Web brought unprecedented efficiency to the way we move goods and information, the movement of value around the world has not kept pace.

Much of the world's value currently resides within an international payments infrastructure that was created nearly 50 years ago, and moving money across this system is plagued by convoluted, fragmented connectivity.

## Global Payments as a Use Case for Blockchain

Blockchain and digital assets can solve this problem. They offer an opportunity to modernize today's international payment rails and make sending money across borders as fast, easy, transparent and reliable as it is to move information (also known as the Internet of Value).

This new technology dramatically improves the speed and certainty of sending payments, introducing real-time tracking and accountability not available with current systems. Further,

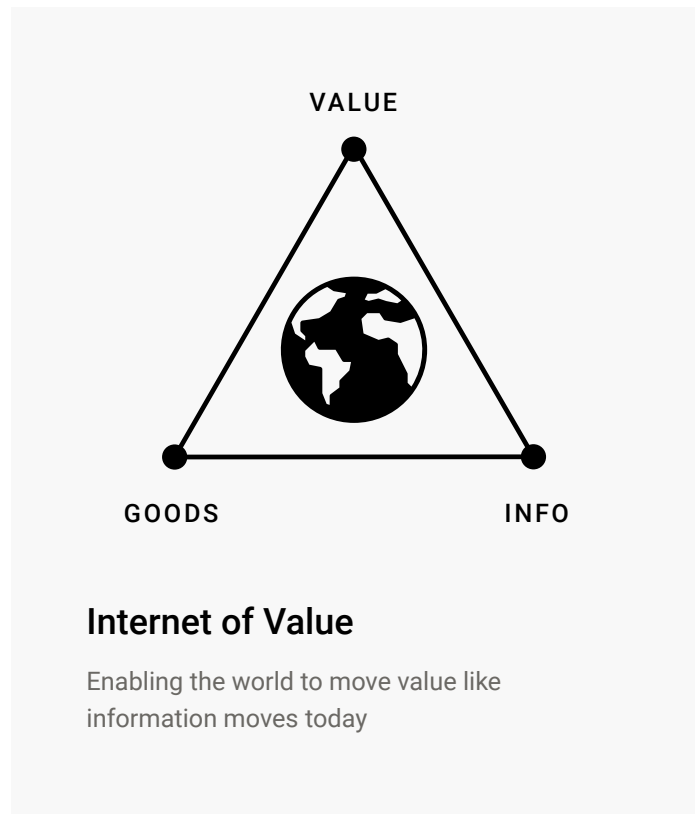
digital assets can be used in settlement to eliminate the expense of pre-funding accounts around the world and offer a way to source liquidity on demand — in just a few seconds.

## What's at Stake? Market Size and Opportunity

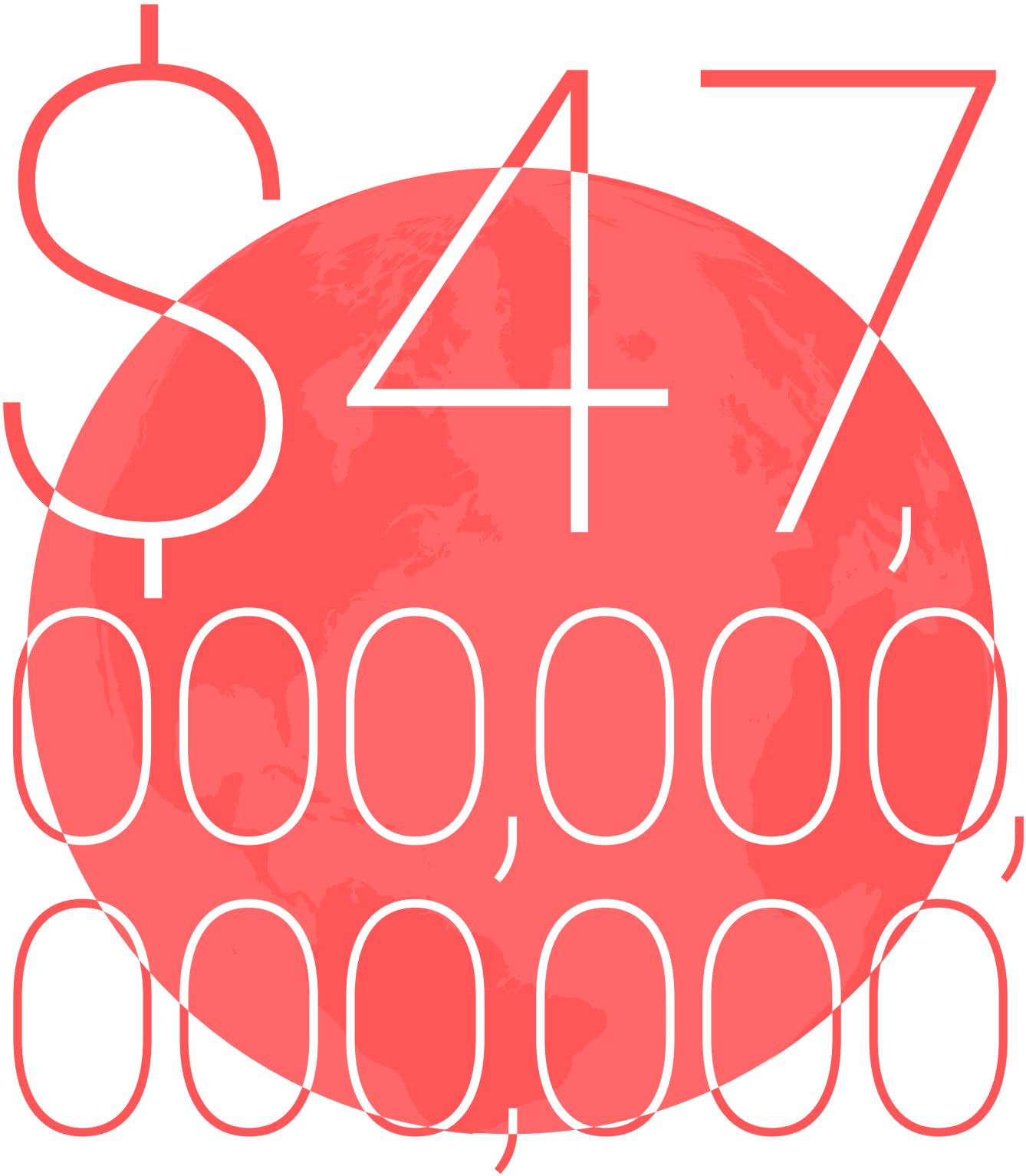
For those who harness this opportunity, the upside is huge. Data from The Boston Consulting Group (BCG) puts the size of the global market for cross-border payments volume at \$27 trillion. Another \$20 trillion in growth could be up for grabs between 2018 and 2026. And, recent data from the World Bank suggests global remittances alone will reach \$642 billion this year.<sup>1</sup>

Yet, despite market size and the benefits of adopting this new technology, friction in the international payments system remains. Few financial institutions have established global payment reach that extends into emerging markets or connects seamlessly those who are unbanked with international payments services. Until this is accomplished on a broad scale, we will not have a truly global economy.

In its inaugural Blockchain in Payments Report, Ripple set out to gauge industry adoption and identify at what point interests give way to mass adoption of this new technology.



Global market  
for cross-border  
payments volume

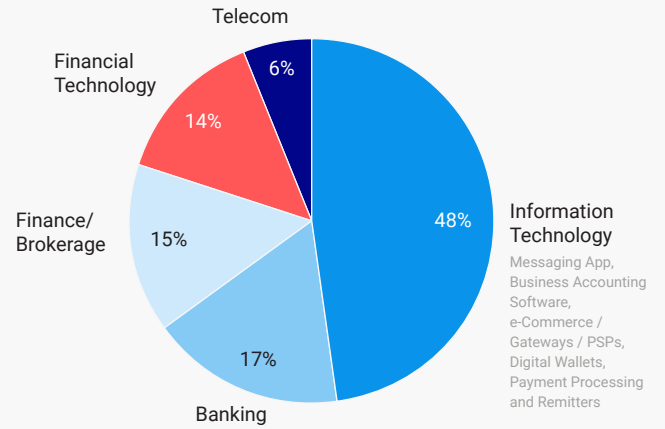


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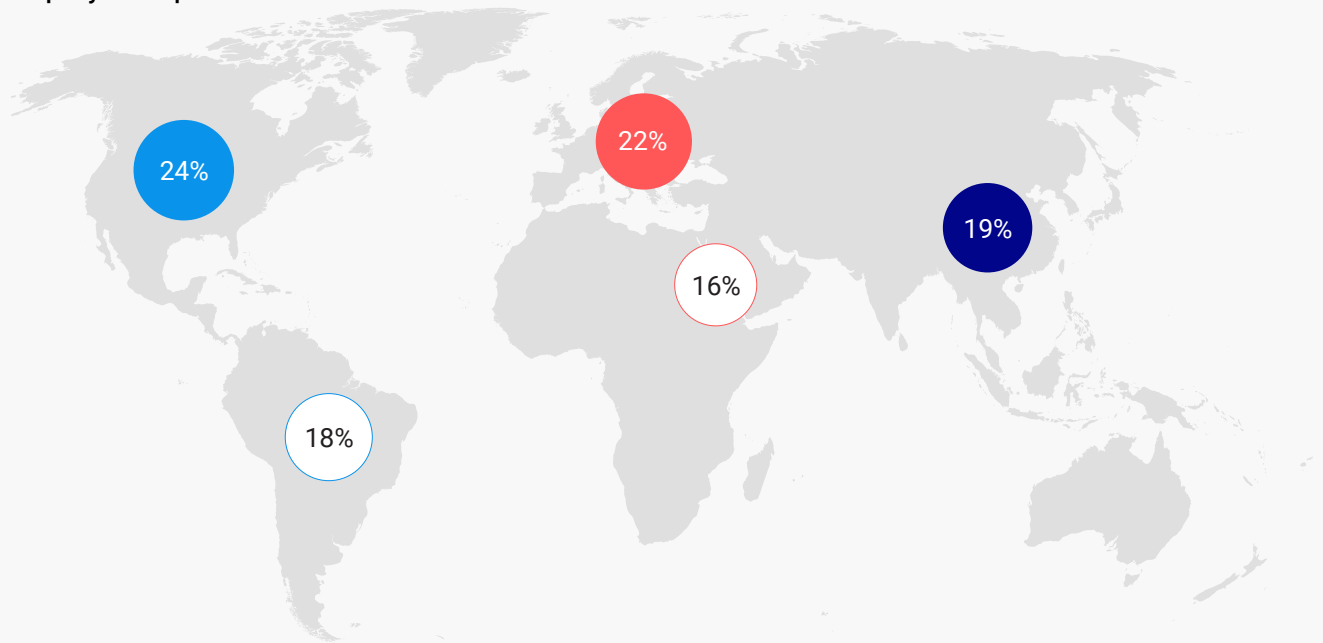
## Survey Respondents

Conducted in August of 2018, the Blockchain in Payments Report analyzed data from 676 respondents across 22 countries who are directly involved with payment services at their organization. These were not necessarily Ripple customers. The survey was completed by a third-party research organization, with insights and analyses carried out jointly by Ripple and Celent.

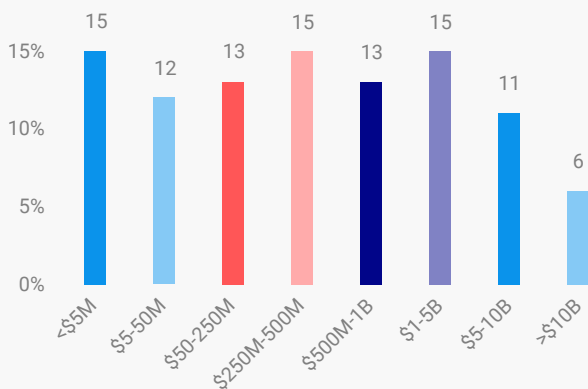
## Company Industry



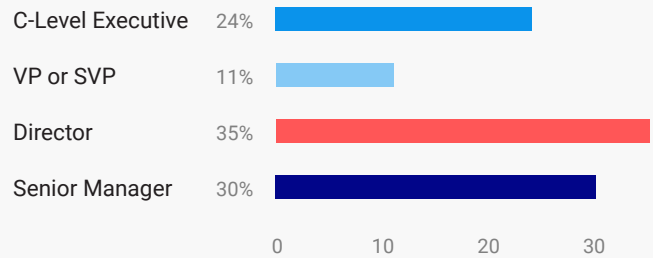
## Company Headquarters



## Company Size (in Revenue)

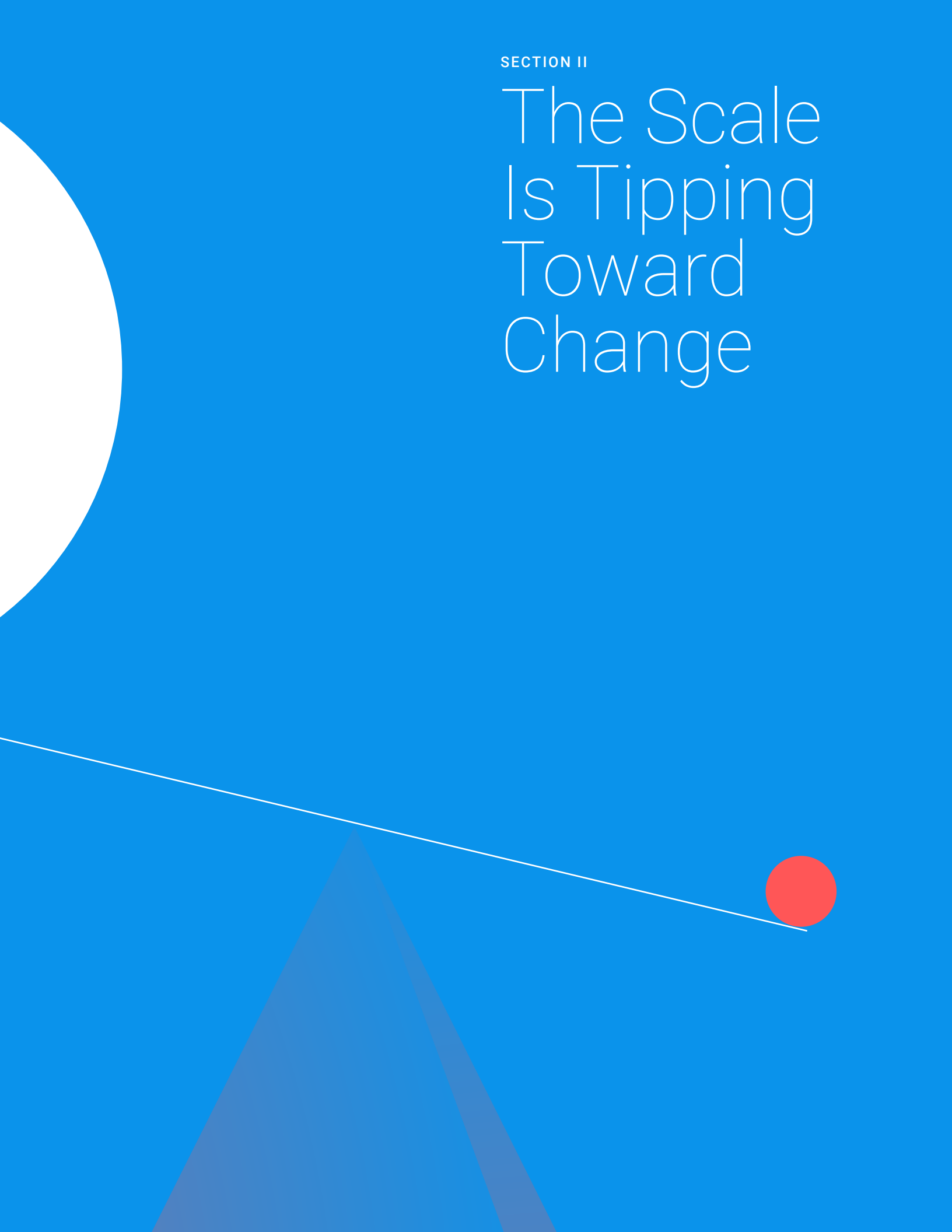


## Respondent Title



SECTION II

# The Scale Is Tipping Toward Change



## Stay the Course or Innovate?

Key overall findings in the Blockchain in Payments Report underscore new characteristics that are motivating companies to take action.

On one hand, respondents revealed a common urge to maintain the status quo and accept that the payments system is the way it is. They also showed a disconnect between customer satisfaction and market demand.

In contrast, they overwhelmingly acknowledged that improvements can be made in cross-border payments, especially in regards to the pre-funding system and real-time gross settlement (RTGS), and how both help expand businesses' scope and scale.

As Figure 1 illustrates, these are the forces of change that are gaining momentum and moving companies beyond the status quo. They suggest that we are approaching the tipping point.

**Figure 1: Forces of Change Outweigh Status Quo**

**▲ Weight of Status Quo**

Misconception that customers are satisfied

—

Pre-funding as a necessary evil

**▼ Forces of Change**

Acknowledgment that improvements can be made

—

Strong ambition to expand scope and scale

—

Understanding of blockchain's strengths







The riskiest thing we can do is maintain the status quo.

Bob Iger, Chairman and CEO of The Walt Disney Company

## The Status Quo

Most businesses reach a point when they believe customers are satisfied and their competitive advantage is established. This perceived groove, however, can become a rut, and the status quo drags down innovation until disruption once again sparks progress. The protracted and failed response of Research In Motion (RIM), BlackBerry's manufacturer, to the launch of the iPhone is a classic example.

### Perception they are delivering on customer needs.

The majority of survey respondents believe they are in a groove. They reported their customers are very to extremely satisfied. Those who are most confident are respondents whose offerings include messaging apps (93%), followed by business accounting software (88%) and digital wallets (85%). Slightly less confident are those who offer remittances at 79%.

**Customers tell a different story.** This perception stands in stark contrast to data about customer need. In McKinsey & Company's *Global Payments* report, data suggests that both retail and corporate banking customers are dissatisfied with traditional services and turning to payment providers as an alternative for cross-border payments.<sup>2</sup>

In another McKinsey study of U.S. consumers sending money internationally, respondents ranked speed and price among the most important buying factors when selecting a new payment provider. And, among those consumers switching payment providers, 45% said that they make the switch because of issues with cost and 30% cited concerns about speed.<sup>3</sup> This suggests that consumers are also dissatisfied with the services provided by non-bank providers, switching from provider to provider in search of faster speeds and lower costs – two clear benefits of using blockchain and digital assets instead of traditional rails for cross-border payments.

**Pre-funding as a necessary evil.** Respondents show an acceptance of pre-funding as a necessary evil. 95% of all respondents pre-fund either all their accounts across geographies (59%) or some of their accounts (36%).

While only 19% stated that given the opportunity, they would rather not be pre-funding, 50% of the total respondents also said they were open to solutions that provide real-time gross settlement (RTGS). If respondents want real-time settlement for global payments without any incremental costs, the only way to achieve this is by using blockchain and digital assets to source liquidity. These findings suggest that they are looking for an alternative to pre-funding.

Additionally, the fact that half the market is not open to this alternative signals the time is ripe for disruption in cross-border payments. It's an opportunity for those open to innovation to break from the field and set a new pace.

Not unlike the evolution of the smartphone, where competitors stood blind to alternatives and were caught flat-footed, those who choose to ignore the benefits of blockchain and digital assets stand to lose.

## Forces of Change

While respondents believe they are in a groove with customers, they do not lack ambition. They expressed an overwhelming desire to expand services. They not only acknowledged that blockchain could bring improvements to cross-border payments, they also attributed benefits such as speed and greater geographic access to this new technology. In many capacities, respondents are signaling that they would like to explore alternatives to rise above the status quo.

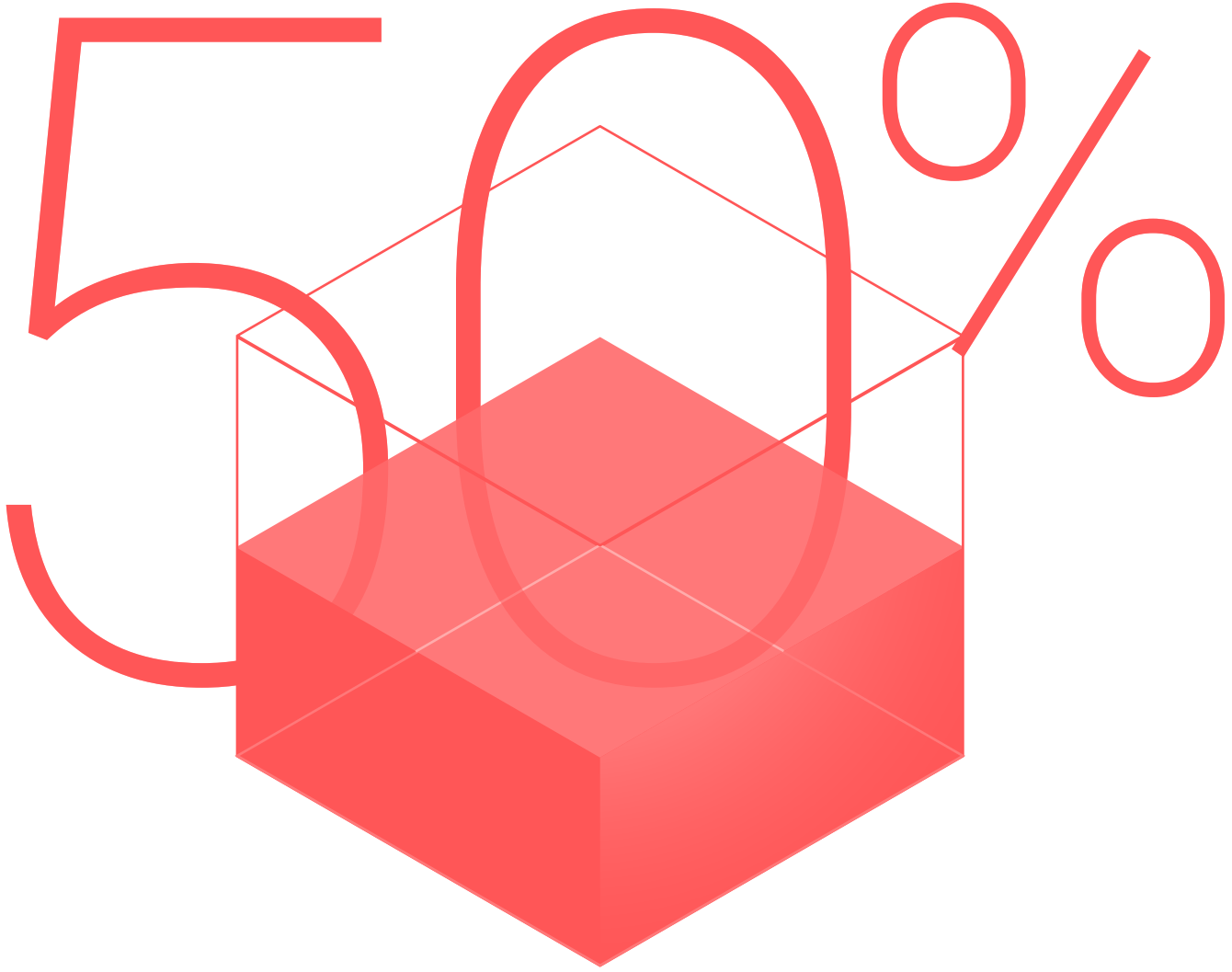
**There must be a better way.** A strong majority of respondents (81%) stated that they are extremely (36%) to very interested (45%) in real-time gross settlement (RTGS). These

respondents tend to be those with the strongest expansion ambitions, including adding remittances, mass payouts, digital payments, micro-payments and fraud prevention.<sup>4</sup> Amongst those who responded extremely interested, the highest percentage were messaging application (45%) and accounting software providers (41%). Their relatively high interest could indicate that they strongly recognize cross-border pain points and are striving to solve them.

**Strong ambition exists.** 94% of respondents see opportunity to expand their geographic footprint and/or product scope. Most want to expand to new regions, with banks and FinTechs favoring expansion in their product offering (Figure 2).

**Figure 2: Ambition to Expand into New Regions or Products**

	Banks	Finance/ Brokers	FinTech	IT	Telecom
Expand into New Regions	35%	<b>50%</b>	38%	<b>41%</b>	<b>38%</b>
Expand Product Set	<b>42%</b>	25%	<b>42%</b>	31%	30%
Both	17%	16%	13%	23%	25%
None	6%	9%	7%	5%	7%



of the total respondents  
said they were open to  
solutions that provide real-  
time gross settlement

**Blockchain strengths are acknowledged.** A strong minority thought that blockchain could lead to specific improvements, signaling recognition of the potential for disruption. Of these improvements, speed ranked first (42%), followed by greater geographic access (40%), cost reduction (38%), and improved transparency (36%). The rank of blockchain's strength varies by service type (Figure 3).

Ripple's client experience echoes this finding. Customers state that two of the top reasons to use Ripple's blockchain technology is to expand to new geographies and to access new partnerships.

A drill down by industry in Figure 4 reveals that respondents in the finance and broker category show the strongest recognition of blockchain's potential with 60% saying they were very interested, followed by FinTech (47%) and banking (46%).

In a separate drill down that looked at respondents based on the services they provide, remittance providers showed the strongest recognition of blockchain's advantages with an average of 49%. Interestingly, remittance providers who believe that their customers are extremely satisfied felt the strongest about blockchain's strengths, signaling that they have been vetting blockchain solutions.

**Figure 3: Speed and Access  
Top Benefits of Blockchain**

**SPEED**

42%

of respondents believe speed is improved with blockchain

**ACCESS**

40%

of respondents believe blockchain can connect them to more parts of the world

**COST**

38%

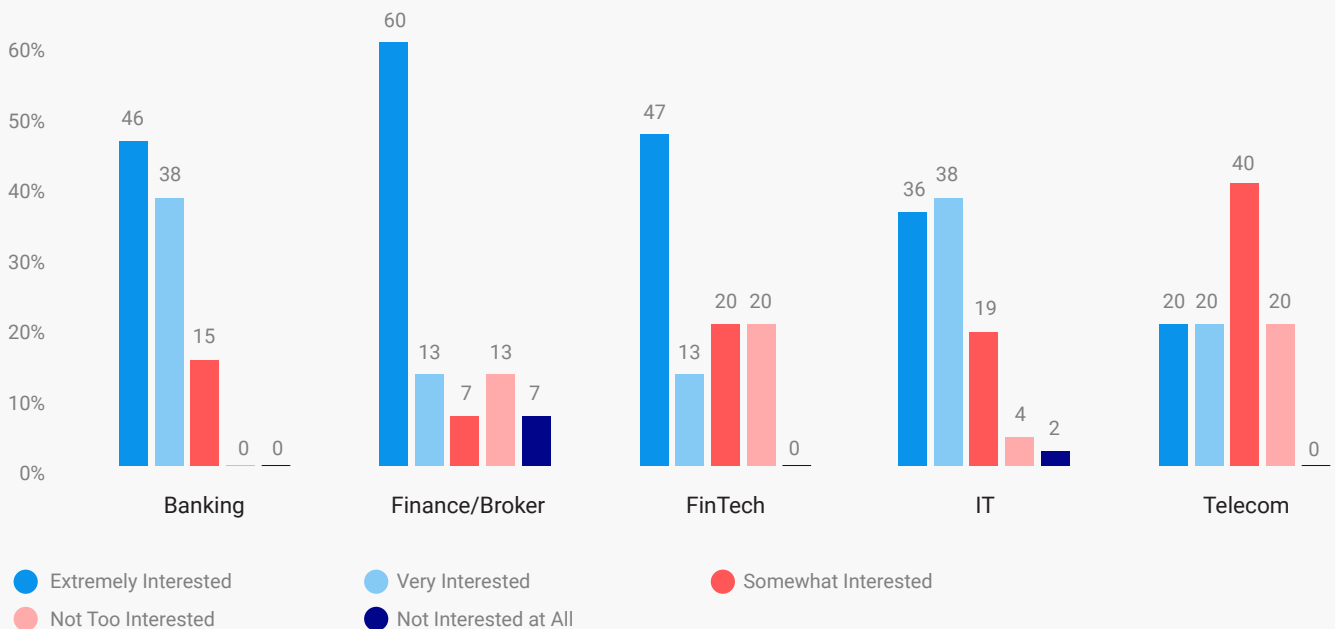
of respondents believe blockchain can lower costs

**TRANSPARENCY**

36%

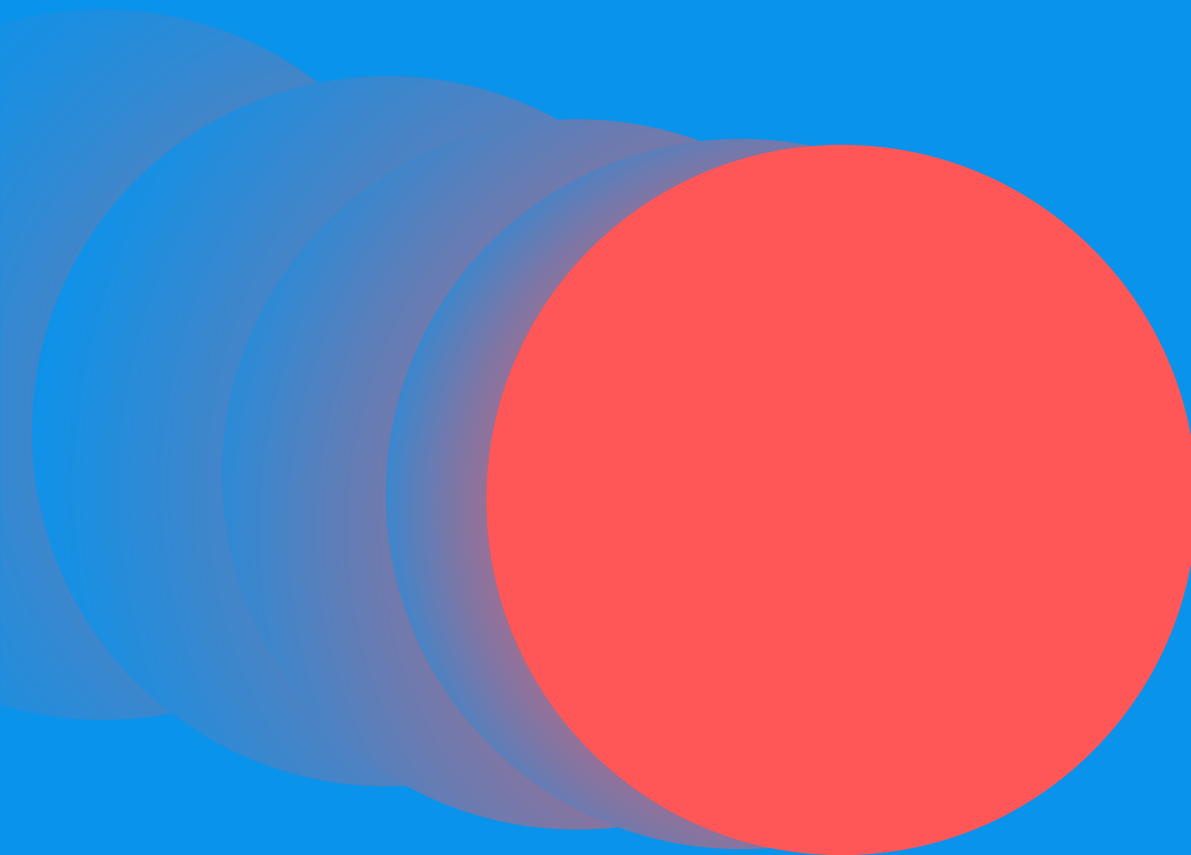
of respondents believe blockchain can increase transparency

**Figure 4: Interest in Blockchain Payments**



SECTION III

# Momentum Toward Broad Blockchain Adoption



## Moving from Experiments to Production

To assess the progress toward broad adoption of blockchain, the Blockchain in Payments Report used several frameworks to evaluate the data set:

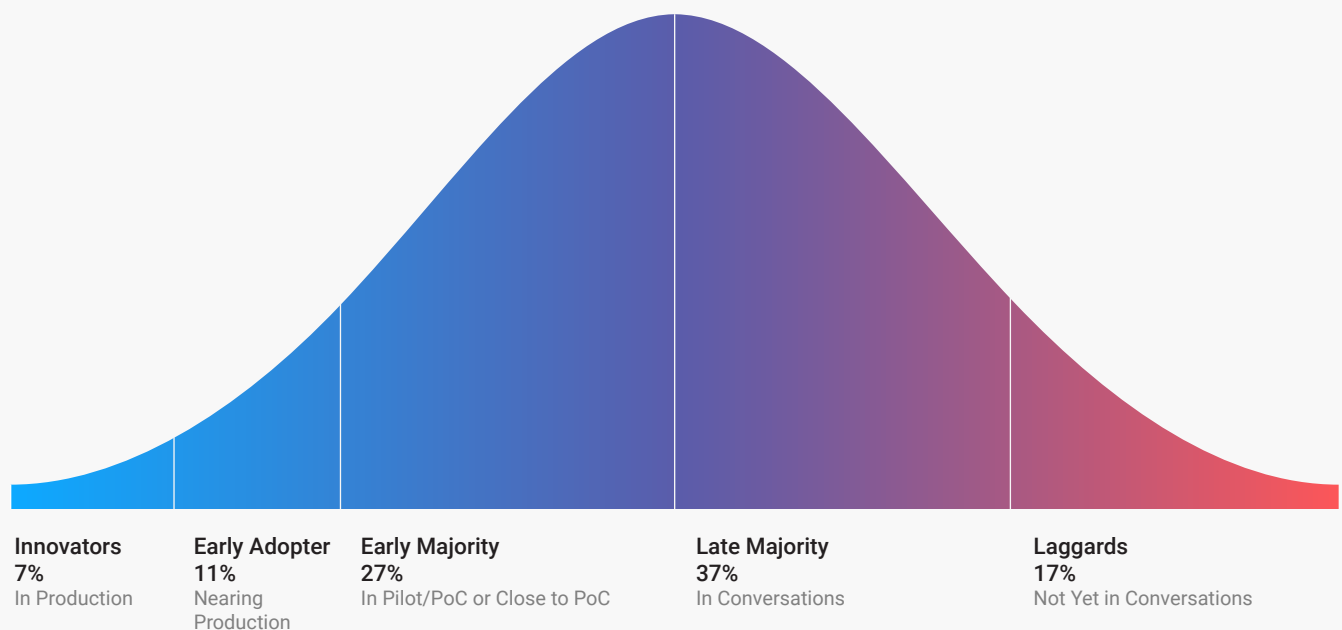
- An adoption bell curve to evaluate how close we are to the tipping point and who's in the lead
- Archetypes of adoption to outline the characteristics of each group within the bell curve, from the most to least innovative
- An S-curve to show what the future might look like for adoption

The findings provide clear signals that blockchain is moving from experiments to production in 2018. Additionally, clear characteristics — such as company size, attitudes toward blockchain and comfort with digital assets — distinguished the five groups from one another. And, growth of adoption will accelerate dramatically over the next five years.

## Adoption Bell Curve: The Tipping Point Is Near

Respondents who are using blockchain in production or near production for the payments use case came in at 18%. These respondents are called Innovators and Early Adopters. On their heels are the 27% of respondents running pilots or proofs of concept (PoC) or who are close to signing a PoC. In the figure, they're known as the Early Majority. The relative size of this entire group — nearly 45% of all respondents — is a clear indication that the tipping point for mass adoption of blockchain is fast approaching (Figure 5).

**Figure 5: Blockchain Adoption Bell Curve for Payments**



## Archetypes: From Innovators to Laggards

What does the Blockchain in Payments Report tell us about the Innovators, Early Adopters and the rest? What traits do they share? We applied a statistical analysis to surface the characteristics that best describe different archetypes for each adoption group (Figure 6).<sup>5</sup>

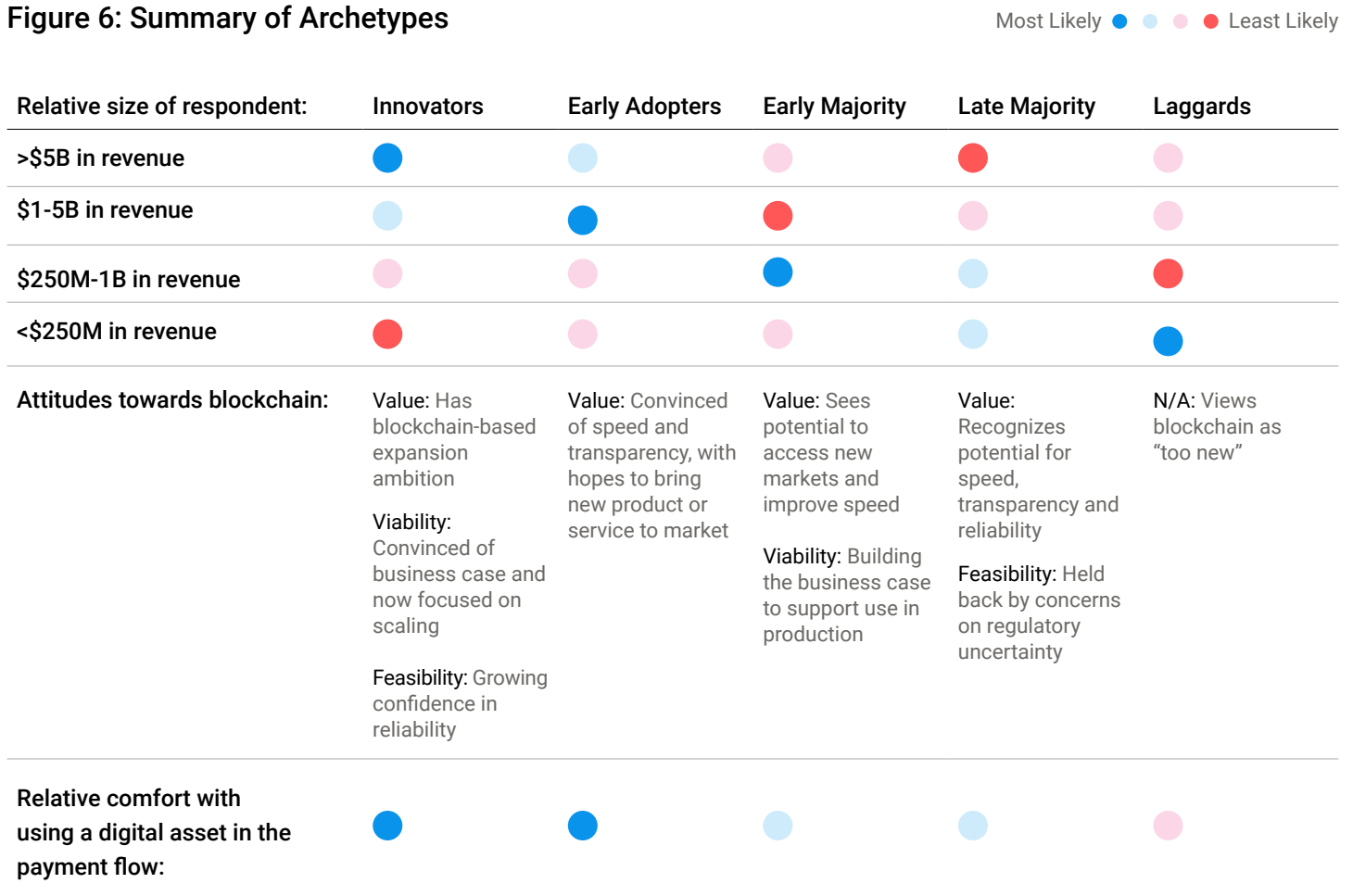
### Those in the middle of the curve are likely to surge ahead.

The Early Majority (27%) and Late Majority (37%) represent the group that's moving the fastest from experimentation to production, and are more likely to leverage blockchain technology in international payments across multiple product and service offerings in the next two years. They're operating on tighter margins, unable to participate in the current system because of the cost of pre-funding or

regulation that make partnerships and expanding into new regions difficult. Once the regulatory structure is in place for digital assets, and they're leveraging the appropriate business case to justify the investment in blockchain, we believe these companies – the vast majority of all respondents – will be the ones to surge ahead and tip the scale of adoption (Figure 6).

**First-movers stand to lose.** While it is somewhat surprising the Innovators (7%) and Early Adopters (11%) are predominantly made up by larger organizations, these players are facing increasing competitive pressures – perhaps the most pressure of any of the groups surveyed. Findings seem to suggest that they have started deploying blockchain technology in production as a way to survive in their markets (Figure 6).

Figure 6: Summary of Archetypes



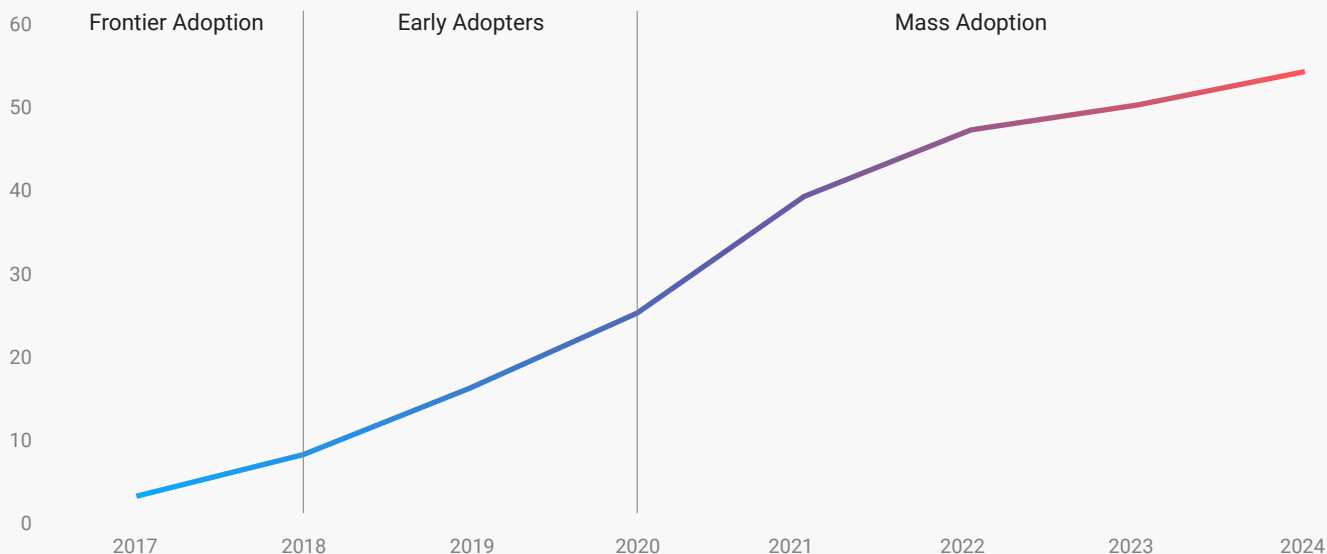
But these same organizations also stand to lose in the face of the smaller, more nimble mid-market organizations that make up the bulk of Early Majority and Late Majority groups. Larger businesses, in practice, are the most likely to apply this new technology narrowly across product and service offerings, or limit its use after it's deployed. With revenues of more than a billion, they have more latitude to experiment. Some may even control global payment flows and dominate markets across certain regions today. They may have the least to gain from changing the existing system.

**Are smaller firms the most behind?** Smaller organizations in the global payments space generally start with niche use cases (for example, a single corridor, one region or limited currency pairs). But the benefits of blockchain technology are best realized when companies start scaling to many corridors, regions and currencies. They have less of a reason right now to invest in blockchain technology (Figure 6).

### S-Curve: A Look Forward

The findings of the Blockchain in Payments Report project the beginning of an S-curve (Figure 7). Based on adoption patterns and continued momentum, analysis suggests approximately 25% of those involved in payments will be implementing a blockchain product or solution sometime in 2020. In the two years to follow, adoption accelerates and progresses towards 50% in 2022. This trajectory signals a move past interest to mass adoption is fast approaching. Like other technologies generating the network effect, this broad blockchain adoption will be spurred by those with the desire to maximize their investment and increase the number of connections (Figure 7).

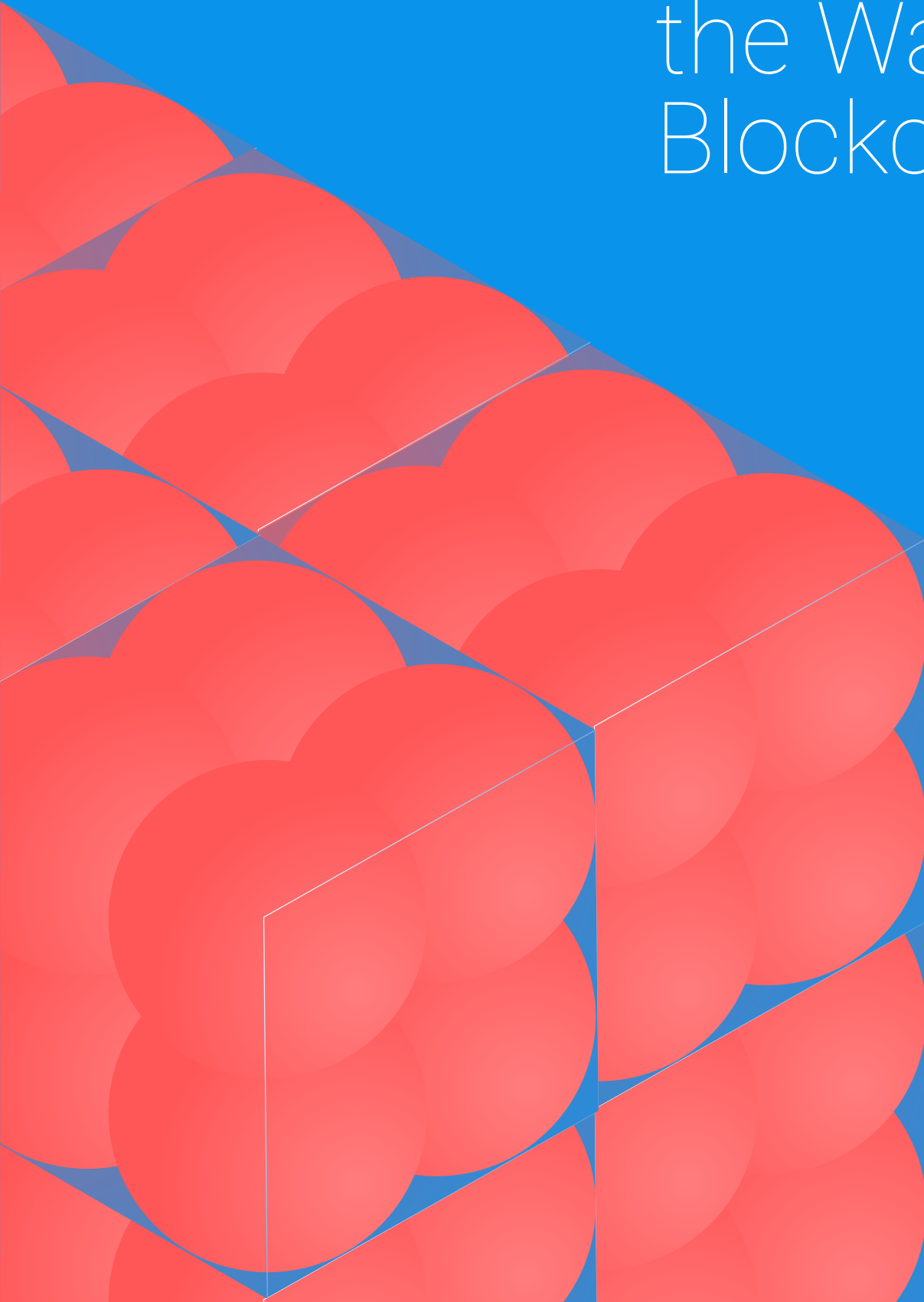
Figure 7: An S-Curve Forming





SECTION IV

# Digital Assets in the Wake of Blockchain



## Breakthrough Moment in Digital Asset Interest

The Blockchain in Payments Report found that respondents strongly recognize the advantages of using a digital asset in settlement and/or as a base currency. Respondents across industry and service types agreed on the specific advantages, signaling a consistent understanding of digital assets. Both these findings bode well for adoption. Moreover, the growing implementation of blockchain and the quest to monetize it through the network effect makes digital asset adoption the natural next step change.

### The advantages of using digital assets for settlement.

Respondents across industries and segments are open to using a digital asset in a settlement and/or as a base currency with 75% of the total stating they are extremely or very interested. Interest levels were above average for remittances, digital wallets, accounting software and messaging app providers. There was a distinction in interest level by institution size with mid-sized to large institutions being more interested than small institutions (64%).

The top three advantages selected for digital assets mirrored those selected for use of blockchain, though the ranking differed: speed, lower cost and geographic expansion (whereas for blockchain, it was speed, geographic expansion and cost). There was also near 100% consensus on these advantages across industry and service types. This signals that respondents have a consistent understanding of digital asset advantages (Figure 8).

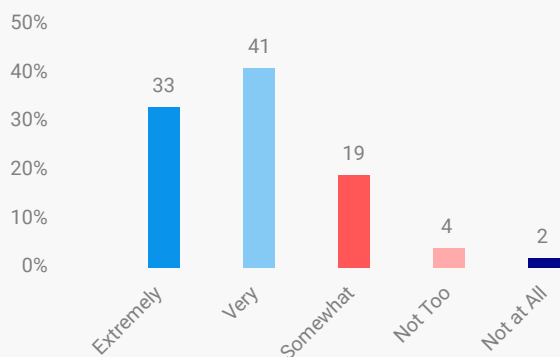
A further regression analysis showed that the strongest predictors of interest were: extent of pre-funding (the top driver), customer satisfaction and interest in real-time gross settlement (RTGS). The fact that respondents who believe their customers are very to extremely satisfied and have a strong digital asset interest is another signal that the forces of change are outweighing the status quo.

A strong correlation between interest level in RTGS for cross-border and in digital assets for settlement shows understanding in the marketplace. For example, within the banking industry, amongst respondents stating that they were extremely interested in RTGS, 74% were also extremely interested in using digital assets (Figure 8).

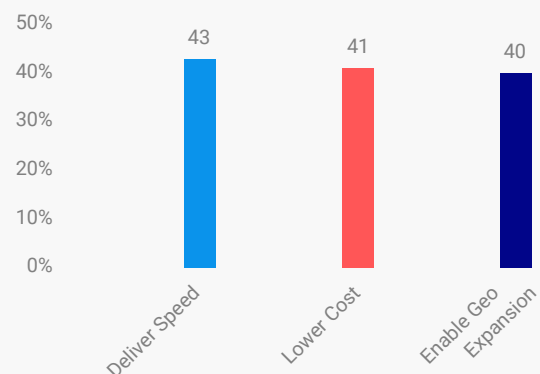
**Figure 8: Overwhelming Interest in Digital Assets**

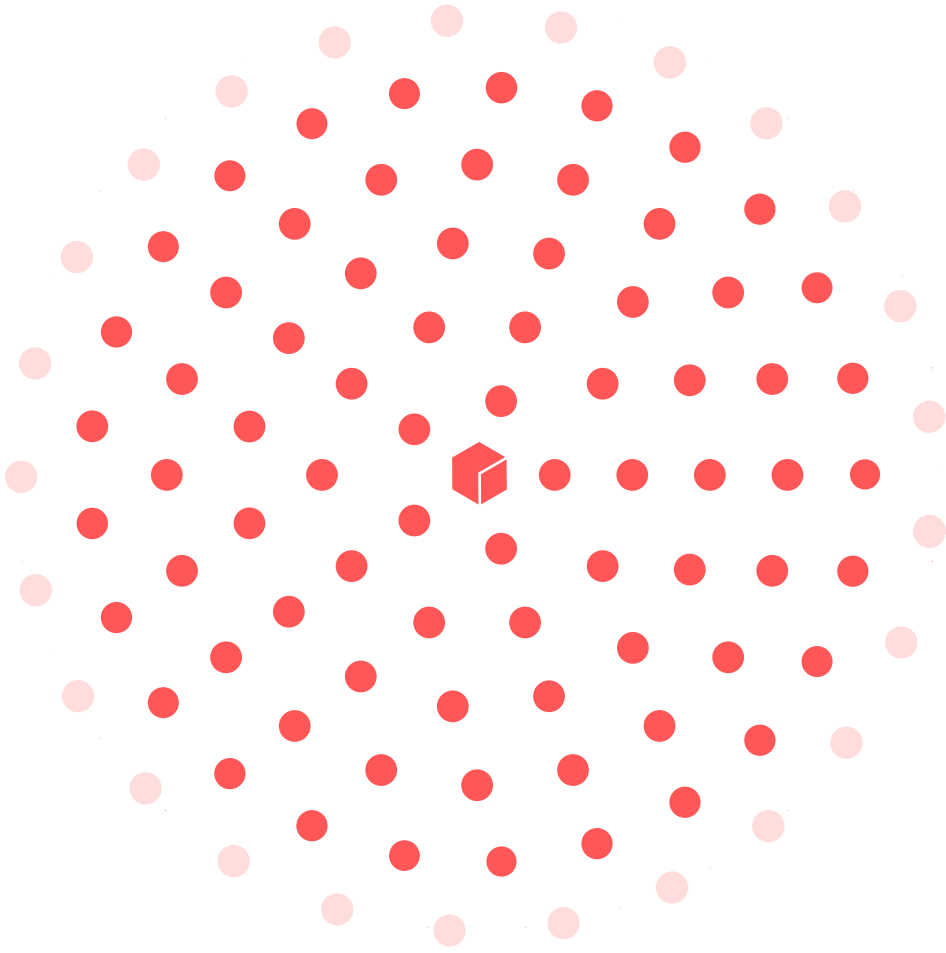
### High Degree of Interest

The extent of pre-funding for cross-border transactions and interest in real-time gross settlement is correlated to the interest in using digital assets



### Expectation Digital Assets Will:





75%  
are extremely or  
very interested  
in using a  
digital asset in  
settlement

**Potential for stronger adoption momentum.** Because the foundation to using digital assets is blockchain, once the technology is broadly adopted, digital assets should face less friction and status quo resistance. Further, the findings showed 85% of those using blockchain in production and 90% of those moving to production shortly are either extremely or very interested in using digital assets as a form of payment. This indicates that once blockchain technology is being used in a real business environment, those using it understand the further potential it offers when paired with digital assets.

**A strong correlation between interest level in digital assets and real-time gross settlement for cross-border shows understanding in the marketplace.**



## The next chapter in the history of globalization has begun. Organizations around the world are leveraging blockchain technology to transform global payments and change the way we move money around the world.

The Blockchain in Payments Report 2018 offers clear indicators that the tipping point from interest in blockchain to mass adoption is near. Forces of change are converging. From interest in real-time gross settlement (RTGS) to understanding the speed and cost saving benefits of blockchain, organizations across the industry are feeling the pressure to innovate, to differentiate how they send and receive money across borders. An increasing number are turning to blockchain — leveraging this new technology as an alternative to traditional international payment rails. They believe blockchain will help them realize ambition to expand product offerings and geographic reach.

It is also striking how many respondents are already in production or nearing production with technology: 18%. What is more striking, however, is the 64% that fall in the middle of the adoption curve: Early Majority (27%) and Late Majority (37%). These are respondents who are running a pilot, close to a PoC or already in discussions with blockchain vendors. The sheer number of respondents across these groups is an early indicator of quick movement from experimentation to production.

In many ways, those in the Early Majority and Late Majority stand to gain the most from leveraging blockchain. These respondents tend to face the greatest barriers to entry in cross-border payments today, and it is more difficult for them to expand within the traditional payments system. These groups are more motivated, perhaps, than first movers to deploy the technology broadly across services and to move large volumes across blockchain-enabled payment networks. And, once they start implementing blockchain in production — once we cross the tipping point to broad adoption — the world will be very close to moving money like information moves today.

The final piece is the use of digital assets in exchanges as an alternative to pre-funding. Already the momentum in blockchain adoption is generating similar energy with

digital assets. Almost 90% of the those using blockchain in production today are extremely or very interested in also using digital assets as a settlement and/or a base currency. They are motivated by a combination of ambition to grow, a desire to reduce reliance on pre-funding and to have access to RTGS.

As the pace of blockchain and digital asset adoption picks up, the stakes are rising. The cross-border payments market is expected to grow 74% through 2026. The organizations that set the pace stand to win a disproportionate share of the \$20 trillion in new payments flow. The race is on.

### References

- 1 *Migration and Development Brief 29*. World Bank. <http://www.worldbank.org/en/news/press-release/2018/04/23/record-high-remittances-to-low-and-middle-income-countries-in-2017>
- 2 *Global Payments 2015*. McKinsey & Company. <https://www.mckinsey.com/industries/financial-services/our-insights/global-payments-2015-a-healthy-industry-confronts-disruption>
- 3 *US Consumer Survey on Cross-Border Remittances 2018*. McKinsey & Company, Payments Practice.
- 4 Findings are based on regression analysis of data set.
- 5 The analysis checked whether variables were related to levels of blockchain adoption in a three-step process. First, experts combed the survey data for variables that, in their experience, reflected behaviors related to blockchain adoption. Then the relationship of all those variables to blockchain adoption levels was measured using a full correlation matrix. We then took those variables with (statistically) significant relationships and confirmed the association with a second measure, called Chi-Square.

## Contact Us

To learn more about how your financial institution can be Ripple-enabled, please contact us at [ripple.com/contact](https://ripple.com/contact)

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## About Ripple

Ripple provides one frictionless experience to send money globally using the power of blockchain technology. By joining Ripple's growing, global network, financial institutions can process their customers' payments anywhere in the world instantly, reliably and cost-effectively. Banks and payment providers can use the digital asset XRP to further reduce their costs and access new markets.

Globally recognized venture capital firms and strategic partners invest in Ripple.

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