

Q&A

January 2016

What's next for blockchain in 2016?*

We see three trends related to blockchain that we believe will be important in 2016: incumbents focus on protecting their intellectual property as they explore new collaborative opportunities with customers, suppliers, and competitors; large financial institutions will need strategic plans to set parameters for technology risk taking; and market participants will start to develop the processes that surround the transactional layer.

The speed at which blockchain technology is being explored and adopted is unprecedented. We are watching it move from a startup idea to an established technology in a tiny fraction of the time it took for the Internet or even the PC to be accepted as a standard tool. Financial institutions are already beginning to realize the potential of this next-generation business process improvement software to structurally alter shared practices between customers, competitors, and suppliers.

In our view, blockchain may result in a radically different competitive future in the financial services industry, where current profit pools are disrupted and redistributed towards the *owners* of new highly efficient blockchain platforms. We see three trends we believe will be important: incumbents focus on protecting their intellectual property as they explore new collaborative opportunities with customers, suppliers, and competitors; large financial institutions will need strategic plans to set parameters for technology risk taking; and market participants will start to develop the processes that surround the transactional layer.



* Note: This [article](#) was originally published by Coindesk on Dec 30, 2015. After publication, we received feedback from some readers who noted that one idea seems to run counter to an ongoing narrative in the industry. Here we include a follow-up that frames our thinking on the topic.

Questions and answers

Q: What is trend #1?

A. Incumbents focus on protecting intellectual property. If you operate anywhere in the FinTech space, it's likely that you're already considering how to incorporate blockchain into your business. Established players, such as banks and exchanges, are looking for ways to refine and improve all kinds of transactions, while startups and service providers that understand blockchain technology are trying to learn how best to connect to and complement these business processes.

As we enter 2016, we encourage established financial institutions entering into these conversations to understand what intellectual property they are sharing. Many industry participants have focused on the positive impact of industry collaboration from a technology standpoint. However, strategic and business collaboration certainly do not fit this open model. Consequently, we believe established financial institutions should build a core level of technical proficiency and understanding so they can better determine what information they should share in open forums versus what they should keep confidential.

Q. What is trend #2?

A. Strategic plans should drive technology risk taking. We see 2016 as a year in which financial institutions will be inundated with many options as new participants enter the market and start to compete with early movers. In 2015, we saw a large number of market participants begin to talk publicly about their innovative offerings related to blockchain. However, there were numerous other companies working on solutions. The fruits of those investments will certainly come to market as the year unfolds.

As financial institutions explore their options in 2016, another challenge will be assessing the potential long-term viability of their FinTech partners. Companies looking to develop proofs of concept, pilots, and even make direct investments must understand the financial position and strategic focus of their potential partners as well as the ecosystems that support them.

We don't know at this point who will survive to see their next round of funding, but we certainly see a divergence of the successful startups from those that are running low on funding or being acquired. How can financial institutions filter, evaluate, and assess these new solutions to make sure it's a good investment? We advocate for strategic plans that help set parameters and steer the direction of investments and establish solid criteria for selecting projects and partners.

Q. What is trend #3?

A. Market participants will begin to develop the processes that build on the transactional layer. In 2015, most of the focus of the market was on new transactional-based proof-of-concept solutions. As financial institutions enter 2016, we see attention shifting to the supporting systems and processes that underpin ongoing transactional excellence. The industry will need to explore governance, auditing, and IT security, to name a few. We also see the beginning of the shift from financial institutions asking, “How can we utilize blockchain?” to, “How can we establish the supporting processes to leverage this new technology?” and, more importantly, “How do these new processes impact our risk profile?” We advocate for early involvement of various corporate functions (such as compliance, risk, and internal audit) so that proofs of concept don’t get stalled and can more easily make the jump to the next round of internal funding.

Q. What are the lessons for 2016 and beyond?

A. The benefits of new technology are rarely shared equally among market participants. Said differently, there are always winners and losers. As a result, the business benefits for many players may not materialize as promised. We see a possible future in which savvy market participants partner with only a handful of players (in strategic partnerships that we call microconsortiums) to focus on transforming expensive internal processes into efficient shared platforms. The resulting platforms could then be sold as a service to smaller competitors. The ability to collaborate on both the strategic and business levels with a few key partners, in our view, could become key to competitive advantage in the coming years.

Given the speed of adoption of blockchain, it may feel as though you’re sending your recent kindergarten graduate off to college. We see 2016 as the summer break, when a great deal of preparation must be packed into a short time frame. Our advice? Make sure that you are not teaching too much more than you are learning. You’ll need a strategy for where you are going to place your bets. And you’ll need to understand much more than the technology itself in order to benefit from it.

[New Content]

Q. I thought that the network effects of blockchain meant that the right solution is to join a large group. Why do you suggest that smaller groups will be more successful?

A. After the original material (above) was released, we received feedback that our observation of industry participants joining microconsortiums runs counter to the industry narrative.

Many people think that, because blockchain offers increasing returns based on network effects, the right solution is to join and participate in a large peer group to get (your portion of) the benefit. Based on our observations of the industry, our project work in this space, as well as our review of recent research¹, it is our view that forming or joining a smaller group increases the probability of success for each participant. Let's examine a few reasons why.

- The ability to capture financial returns from implementing blockchain technology requires collaboration with multiple participants. However, as group size increases, participants become less connected, changing the decision-making dynamics of the group. Based on our analysis, this can result in less effective outcomes.
- Because of the complexity of the technology, the tasks needed for successful outcomes are often difficult, unknown, and, in many cases, unknowable. A smaller group is more likely able to deal with the uncertainty and experimentation that will be necessary to uncover, and ultimately move forward on, a successful path.
- Finally, we believe that the decisions around collaboration, especially when

relying on other participants to support a common future vision, are inherently strategic questions that must be asked, answered, and acted upon in small groups.

It should be noted that we distinguish *learning* about the technology to inform your strategic perspective from *executing* a blockchain-based business strategy. We believe financial institutions should test and learn the technology themselves, even if they plan to join a larger group to participate in “network learning.” We contrast this with joining a small strategic group in order to successfully execute a blockchain-based business strategy.

Q. How many participants should you have in a microconsortium and how do you frame processes, such as governance and decision making, so that they will hold up over time?

A. We did not write about these issues in our original article, but they are questions we are focused on helping to answer. We plan to detail our findings to these and other related questions in future writings.

As this ecosystem continues to evolve, we will revise and update our thoughts and predictions. At present, however, we have done our best to provide our current thinking based on our engagements, research, and observations of the market to date.

Note: In 2015, PwC spent more than 10,000 hours doing an analysis of more than 1,000 blockchain-based companies. In addition, we performed due diligence (commercial and technology) on a smaller subset of startups. The resulting unique dataset forms the basis of our insights and suggestions.

¹ Galesic, Mirta and Barkoczi, Daniel and Katsikopoulos, Konstantinos V., Small Crowds are Wise When the World Can Surprise (August 20, 2014). Available at SSRN: <http://ssrn.com/abstract=2484234>. Barkoczi, Daniel and Galesic, Mirta, Social Learning Strategies Reconcile the Relationship Between Network Structure and Collective Problem Solving (December 15, 2015). Available at SFI: www.santafe.edu/media/workingpapers/15-12-052.pdf.

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