



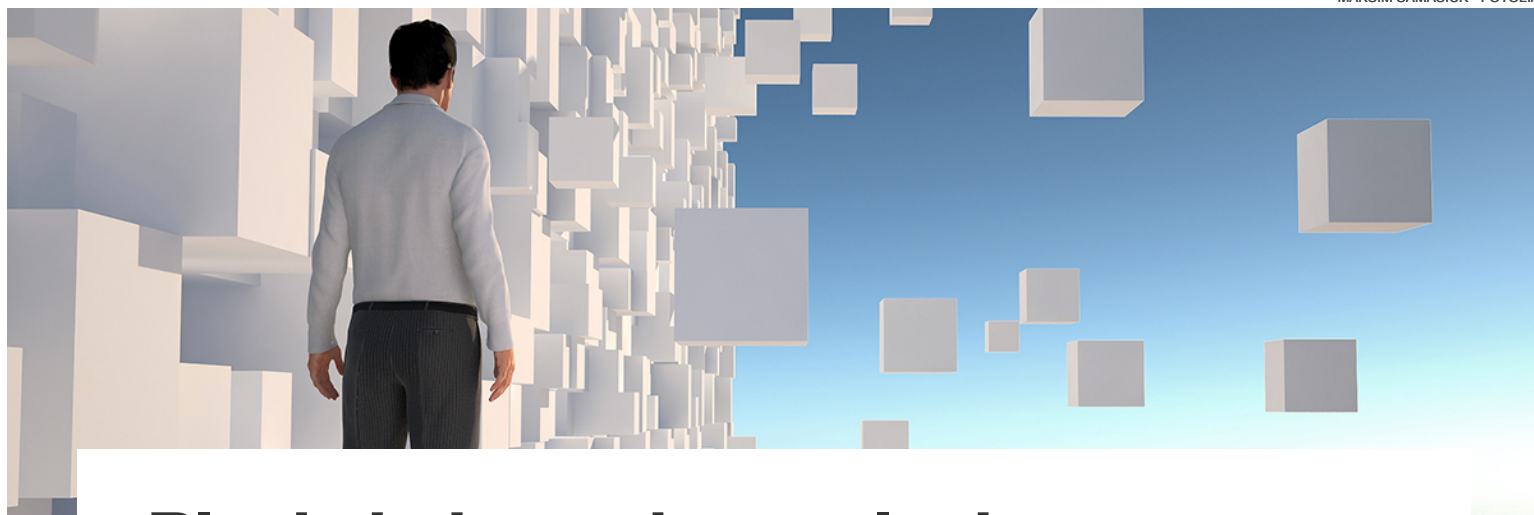
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# Blockchain market outlook: Hype vs. reality



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by  
**Sue Troy**  
Editorial Director



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There are predictions that the blockchain market will change the nature of business transactions. But how much of that is hype? One analyst weighs in on the topic.

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*Blockchain technology -- essentially a distributed ledger that uses cryptography to create what are considered immutable records -- has been heralded as having the potential to eliminate friction and cut costs in transactions in a number of vertical industries, most notably financial services. But is that just vendor hype? Or is the potential real?*

We spoke with [Carl Lehmann](#), research manager at [451 Research](#), to explore those questions. Lehmann recently co-authored a report on the blockchain market, in which he examined blockchain technologies under development for a range of uses, including [financial](#)

[services](#), productivity, storage, social networking, supply chain management, identity management, governance and retail. The technology does indeed hold potential, he said, but businesses will need to discern where it really makes sense. And, he cautioned, many blockchain startups are "chasing rainbows" and are likely to fail.

Read on for Lehmann's opinion on the [value of blockchain](#), how it will make its way into companies, the role of vendors like IBM and the outlook for the blockchain startup community.

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*Editor's note: The interview has been edited for length and clarity.*

## **What's your take on the blockchain market and the technology's ability to deliver competitive advantage?**

Lehmann: It depends on the industry.

Obviously, if you're in the financial industry you need to understand blockchain and how it replaces traditional transactional systems. It has many use cases in the financial market, not the least of which is in digital currency.

Banks are a natural for [blockchain] because the state of a transaction [is important]. A transaction is a process, and it goes through multiple steps, and each one of those steps is a state. The more knowledge you have about a current state, the more value you can extract from that process. That's why financial transactions make perfect sense [for blockchain]. [In a transactional scenario] blockchain makes a copy of the state from all participants in the trading community, and they share the state, which is great. I know where everybody is all at once. That's something we didn't have before. You have perfect knowledge in that realm because the state is always changing and you would have an update, a picture of that in a given period of time, say a day or half a day or an hour or even in a second. That's a really big deal in stock trading and [foreign exchange]. If you've got perfect knowledge instantaneously of the state of things, that changes the nature of certain financial products. And that's why the banks are [saying], "I have to get all over this. What used to take a second, a minute, an hour or even a microsecond, now takes me half of that time or no time at all. Uh oh, my arbitrage business just went out the door."



Carl Lehmann

Blockchain also can play very practically in some [other] very challenging financial transaction environments: for example, rolling up your [financial] books across a distributed holding company with multiple geographies, multiple companies, [multiple ERP systems](#).

In the past, companies have standardized on a common ERP package, like

SAP, and they minimized the number of those packages from, say, 50 to five, and that made it a lot easier to roll up books. Or a more sophisticated enterprise might upgrade to [SAP HANA](#), in which case they can roll up books very fast.

But if you've grown through acquisition, you've got multiple ERP systems across multiple geographies and multiple industries, [and] rolling up consolidated financials can be a challenge. Blockchain can be used to do just that. For example, in a very narrow use case for blockchain, wouldn't it be great if the [CFO](#) of a distributed conglomerate understood [the company's] cash position instantly? A blockchain system can link to the financial systems of all those distributed companies' [ERP systems](#) and/or link to their bank accounts directly and understand the exact cash position at any given time

across the enterprise across the globe. You could actually watch it go up and down in real time practically. That kind of knowledge is pretty valuable, and the blockchain enables the financial arm of a company instant or almost-instant access to current information about current assets [and] cash positions and can rapidly roll up consolidated financials.

**I studied to the best of my ability what about 50 of [blockchain startups] were up to. I'm shocked and amazed at how they lack a value proposition in any way, shape or form. You really struggle to understand what they're trying to bring to a customer segment.**

**Carl Lehmann**

research manager, 451 Research

### **Would that capability be layered on top of existing systems?**

Lehmann: Yes. You would create a blockchain using a cloud provider or in your own private cloud and you would create an integration or a brief link or a publish-and-subscribe call via API to each of the ERP systems and to each of the bank accounts. And every time a change would be made, the blockchain would capture that change and be able to share it across the

blockchain with permissions, but in this instance the only permission would be the CFO at the head of the conglomerate who needs to know that information. So blockchain just gets added to the environment. You don't have to buy anything or redo anything. You just need to integrate at certain points the various financial systems to the blockchain so that it exposes its data to it.

[Blockchain will also be useful for the] supply chain. The typical way a supply chain works is a buying company requisitions an order to a supplier. A supplier responds with an acknowledgement. Then the supplier responds eventually with a ship notice. Then the buyer acknowledges receipt and authorizes funds for disbursement. That five-step process is shared among two parties: a buyer and a supplier. But if you're [Home Depot](#) or Lowe's and you've got 30,000 suppliers, you can imagine that there's going to be errors. A blockchain allows everyone to see the same information at the same time about the purchase order, the acknowledgement, the advance ship notice, the return receipt and the invoice.

### **Do [smart contracts](#) play a role in that?**

Lehmann: Yes, absolutely. In a supply chain relationship, the buyer and the seller typically have some contractual relationship, negotiated via a strategic sourcing initiative or some other standard terms and conditions that they use to do business. That would be the contract. The contract isn't necessarily automated in the blockchain, but the state of each phase of that contract is. ... Everyone's got the same visibility. ... They have perfect visibility of at what stage in the supply chain process each party is in. That's very valuable stuff.

### **How do you project blockchain technology will make its way into companies? Are we going to see big companies like IBM developing products for these use cases? Or is it going to be companies saying, "Hey, I have a use case here; let's see how we can make this happen"?**

Lehmann: Right now it's very much experimental. [IBM](#) has taken the lead in the [blockchain] market and Red Hat is paying close attention from an open source perspective, as they should. Then there are a range of smaller

startups engaged in experiments, particularly with the financial services market.

IBM is trying to contribute to the open source development of blockchain technology, productize it to some extent and put it in their [Bluemix platform as a service](#) and then allow companies to experiment through their [IBM] Garages. The Garages are resource centers for development. But they also include a very structured methodology for development so you can track progress. And then they're using that as a learning laboratory to see what sticks.

I honestly don't know what's going to stick. [In my report](#) there are a lot of emerging vendors and venture-backed startups that are looking at [blockchain] from all kinds of angles -- from a legal perspective and a social perspective and a government perspective and all that. I studied to the best of my ability what about 50 of those companies were up to. I'm shocked and amazed at how they lack a value proposition in any way, shape or form. You really struggle to understand what they're trying to bring to a customer segment. I think a lot of venture-backed [blockchain] startups are likely to fail, simply because they're chasing rainbows of some sort, some of which make perfect sense. For instance, one of the ones I looked at was in identity management [and] has some opportunity there although I'm not a security analyst so I really couldn't speak to it directly other than to say that understanding the current state of one's geographic presence and authority can benefit from blockchain tech. I think IoT has got a lot of opportunity, especially in, say, a process manufacturing environment, where upstream and downstream a lot of things have got to happen for a product to remain at consistent quality in the volume expected by the manufacturer. In a process manufacturing stream, a blockchain technology could find value.

This experimental model that's being pursued by IBM and the financial industry at large and some core venture capital teams is very valuable. One of the key things to keep our eye on is [Ethereum](#). They seem to have their fingers in a lot of different things and are close to a lot of activities. And also [R3 for the distributed ledger group](#). Those are the kinds of bellwethers to keep an eye on to see what comes of it.

[Within the blockchain community] the experiments are key. The keys to

success are twofold. One is the capability and quality of a technology and its [distributions]. So the [[Hyperledger](#)] [Project](#) is going to develop blockchain technology. And the open source community is going to make contributions to it. What you don't want is what has happened in the [OpenStack world](#), where it's just a bunch of convoluted challenges that are being gradually overcome but many chefs spoiling the soup. You don't want blockchain to suffer from that type of confusion. The other [key relates to] the blockchain distributors. IBM is one, Ethereum is another, and there are a handful of others that take the open source code and productize it for a fee. ... Every credible distro vendor of the technology would have a learning laboratory, and that's where the rubber meets the road. That's where the fun begins. And that's what to keep your eye on.



Sue Troy asks:

## Which startups in the



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[jorrerenterghem](#) – 13 Jul 2016 3:27 AM



There is something that puzzles me in this contribution: when stating that "*You would create a blockchain using a cloud provider or in your own private cloud and you would create an integration or a brief link or a publish-and-subscribe call via API to each of the ERP systems and to each of the bank accounts. And every time a change would be made, the blockchain would capture that change and be able to share it across the blockchain with permissions, but in this instance the only permission would be the CFO at the head of the conglomerate*", I don't see why applying blockchain technology brings added value, compared to more old-school technologies. For, if you need to synchronize in real-time the blockchain with the different ERP systems, and the goal is only to read the consolidated position on the blockchain, and especially with only 1 permissioned user, then why would you not be able to do that on any other centralizing database. That's what banks are doing today in the e-banking packages they offer to their customers. The real problem there remains collecting the information from the 'local' ERPs, and that problem needs to be solved when using blockchain technology for the aggregation layer, too.

Can anyone clarify how blockchain technology is better suited

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