Blockchain: From Hype Cycle to Adoption Cycle

Theo C. Stratopoulos
School of Accounting and Finance
University of Waterloo
Disclosure

- The views and opinions expressed herein are the personal views and opinions of the author based on his personal research experience, and do not necessarily represent the views or opinions of the School of Accounting and Finance, University of Waterloo or UWCISA.
Motivation: Are we there yet?

The Economist (May 19th 2016) Hype springs eternal

... Normally, it is Simon Taylor’s job to persuade sceptical colleagues at Barclays that rapid technological change will disrupt the bank’s business. So it comes as something of a surprise to have to dampen the excitement about the blockchain. “It’s quite silly. I get ten invitations to speak at a conference every day,” he says ...

- “The technology will have real impact, but it will take time.”
Motivation: How to tackle this question?

CoinDesk (May 11 2016) State of Blockchain Q1 2016

... As blockchain hype begins to subside and entrepreneurs and organizations get down to the business of implementation and execution, a new debate has emerged over timing. Splitting industry observers is a key question

- **Are we just short distance (1-2 years) away from witnessing the radical, transformative effects of blockchain technology?**
- **Or is five to 10 years a more realistic timeframe before blockchain technology fully matures and achieves wide adoption?**
What is the adoption cycle?

Implications for adopters, vendors, investors, consultants, etc.
Our objectives

- Understand how to leverage various hype cycles to make predictions about the adoption cycle of any emerging technology.
- Generate our own predictions regarding the time frame before blockchain technology fully matures and achieves wide adoption.
- Develop a thinking process for justifying/leveraging new (possibly private) information to fine tune our predictions of the blockchain adoption cycle.
- Leverage our blockchain adoption cycle predictions to develop an adoption strategy or predict adoption implications for key stakeholders.
From Hype Cycle to Adoption Cycle

The time from the commencement to peak of hype cycle of the emerging technology reflects approximately one standard deviation in adoption cycle.

Gartner Hype Cycle (Technology life cycle)
Cloud Computing: Commencement 2006 with AWS, peak of hype around 2011-12, hence one st. dev. ~ 5 years
External Events & Adoption Cycle

When adoption is related to external events - e.g., tech or market bubble - the time from commencement to peak of hype cycle reflects two, rather than one, st. deviations in adoption cycle.
ERP: Commencement 1992 with SAP R/3, peak of hype around 1999-2000, hence two st. dev. ~ 4 years
Gartner Hype Cycle: Blockchain is at the Peak

Hype in Google Searches

Worldwide Google Search Interest in Blockchain. Have we reached the top yet?
De Javu

- Compare blockchain statement with ERP statement
  - Anderson et al. (2003): In the late 1990s companies treated the ERP implementation as an opportunity to deal with Y2K and replace outdated IT systems.
  - Wild et al. 2015 - Financial Times: “... For big banks, scrambling to modernise their often outdated IT systems in the face of pressure from regulators, digital challengers and cyber criminals, blockchain represents an opportunity to rethink much of what they do.”
ERP: Book Count

All Classifications

Business & Economics

Computer Science
Blockchain: Book Count
Startups ... 670 in my dataset
Startups count (new)

Cryptocurrency  Cryptocurrency & Blockchain  Blockchain
Funding Rounds for Cryptocurrency Startups

- **Seed**
- **Series A**
- **Series B**
Funding Rounds for Crypto & Blockchain Start’s
Funding Rounds for Blockchain Startups

Variable:
- blockchain_Seed
- blockchain_SeriesA
- blockchain_SeriesB

Count of Funding Rounds vs. Time:
- Seed
- Series A
- Series B
It’s tough to make predictions, especially about the future

Yogi Berra
Blockchain Adoption Cycle in Finance

- Commencement
  - Maturity of Startups?
  - R3 Consortium?
  - Other?
- Adoption Cycle
Blockchain Adoption Cycle in Accounting

Audit Data Analytics (ADA): Current State & Future Directions

Clark Hampton & Theo Stratopoulous
School of Accounting and Finance
University of Waterloo
Google trends: analytics - big data
Role of Client Expectations on ADA adoption?

Client Expectations
- 0.354
- 0.324
- 0.314

Audit Data Analytics Use
- 0.168
- 0.146
- 0.266

Litigation Risk
- 0.467
- 0.480
- 0.424

Audit Opinion Confidence

All Firms
Small/Medium Firms
Large Firms
Google trends: big data - Internet of Things (IoT)
References

It’s tough to make predictions, especially about the future

Yogi Berra
Additional Slides
Commencement

- There must be a public signal indicating that the emerging technology is available for adoption through a vendor or it has been developed internally by at least one potential adopter.
- The emerging technology should be a potential source of competitive advantage.
- The technology must have some inherent barriers to adoption.
ERP: Log of Book Count

All Classifications

Business & Economics

Computer Science
Blockchain: Log of Book Count