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## *IT Funnel*

*Stephen Reyes*

*Saltmarsh, Cleaveland & Gund*



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# *IT Audit notes*

- *FFIEC Management IT Exam Handbook*
  - *Updated Nov 2015*
  - *High level of Board involvement*
  - *A **credible challenge** involves being actively engaged, asking thoughtful questions, and exercising independent judgment.*
  - *Mitigate the risks to an acceptable residual risk level in conformance with the board's **Risk appetite**.*
    - ***Risk appetite** is the amount of risk a financial institution is prepared to accept when trying to achieve its objectives*

# *We all know simple math*

- $6+1=7$
- $6+2=8$
- $6+3=10$
- $6+4=10$
- $6+5=11$
- $6+6=12$
- $6+7=13$
- $6+8=14$
- $6+9=15$
- $6+10=16$





***STOP TRYING TO  
PROTECT YOUR  
NETWORK!***

*September 26, 2016*



***BY PREVENTING  
A BREACH OR  
ATTACK***

September 26, 2016

***IT CAN HAPPEN  
TO ANYONE!!***



*September 26, 2016*

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# *Consider the following*

- <http://fortune.com/2016/02/10/irs-hack-refunds/>
- <http://motherboard.vice.com/read/teen-who-hacked-cia-email-is-back-to-prank-us-spy-chief>
- <http://arstechnica.com/security/2016/09/two-men-charged-with-hacking-cia-director-and-other-high-ranking-officials/>
- <http://www.huffingtonpost.com/news/pentagon-hacked/>

# NSA's Hacking Group Hacked! Bunch of Private Hacking Tools Leaked Online

Monday, August 15, 2016 Mohit Kumar

314 Like 22K Share 23.1K Tweet 2782 Share 1017 share 32K

Name

Size

▶  BANANAGLEE	 	6 items
▶  BARGLEE		1 item
▶  BLATSTING		7 items
▶  BUZZDIRECTION		2 items
▶  EXPLOITS		8 items
▶  OPS		6 items
▶  SCRIPTS		33 items
▶  TOOLS		15 items
▶  TURBO		2 items





# **White House staffer's email is hacked revealing Joe Biden and Hillary Clinton's private schedules, Secret Service plans, and even Michelle Obama's PASSPORT**

- **DC Leaks released the email of a White House staffer, revealing what they claim to be Michelle Obama's passport**
- **The private schedules of Hillary Clinton, Michelle Obama and Joe Biden are also revealed in the emails**
- **An email from Arielle Medina, Clinton's travel coordinator, also reveals how much those who are working on the campaign are getting paid**
- **Team members get \$150 a day, must share rooms and have to take public transportation to the airport for flights between 7am and 10pm**

# *Consider the following*

- <http://money.cnn.com/2016/07/13/technology/china-fdic-hack/>
- <http://arstechnica.com/security/2016/07/fdic-was-hacked-by-china-and-cio-covered-it-up/>
- <http://dailysignal.com/2016/07/25/this-government-agencys-cover-up-may-have-hindered-us-cybersecurity/>
- <http://www.washingtontimes.com/news/2016/jul/13/fdic-let-down-its-cyber-defenses-despite-being-hac/>
- <http://www.reuters.com/article/us-cyber-fdic-china>



***WHAT CAN WE  
DO?***

*September 26, 2016*



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***WE NEED TO  
HAVE A  
COLLECTIVE  
RESPONSE!***



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# *Move on to detection*

- *Consider when additional resources added to prevention cease to provide sufficient return in the form of risk reduction*
- *Accept, at least in concept, that some breach will occur*
- *Consider the effect of impact reduction in overall risk*
- *Breach exposures and methods are continuously changing*





# *Move on to detection*

- *Average of 14 months to detect*
- *Sooner detection equals less exposure*
- *Detection systems have greatly improved in availability and usability*



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## *Technology Predictions*

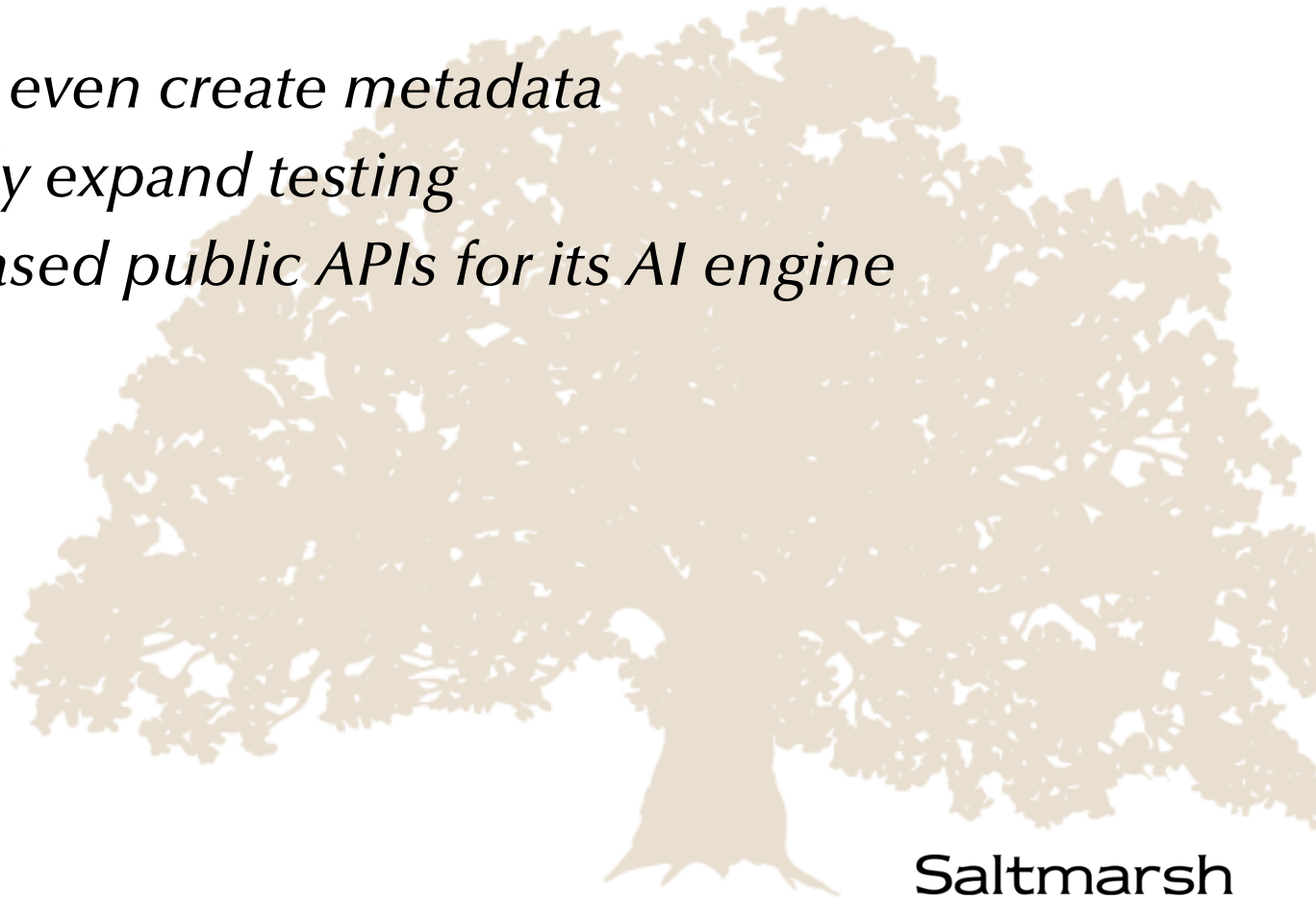
*Game Changers of 2017*

September 26, 2016

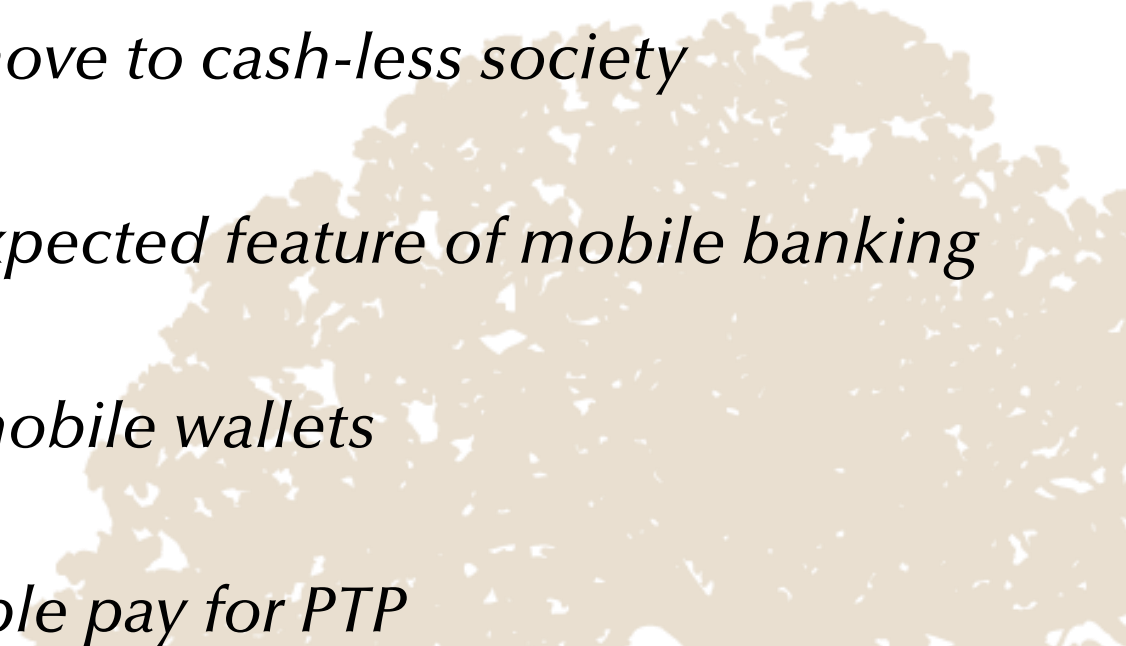
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# *Regulators will get artificial intelligence*

- *Leveraging advances in Natural Language Processing (NLP)*
- *Analyze and even create metadata*
- *Exponentially expand testing*
- *Google released public APIs for its AI engine*



# *Growth in PtoP*

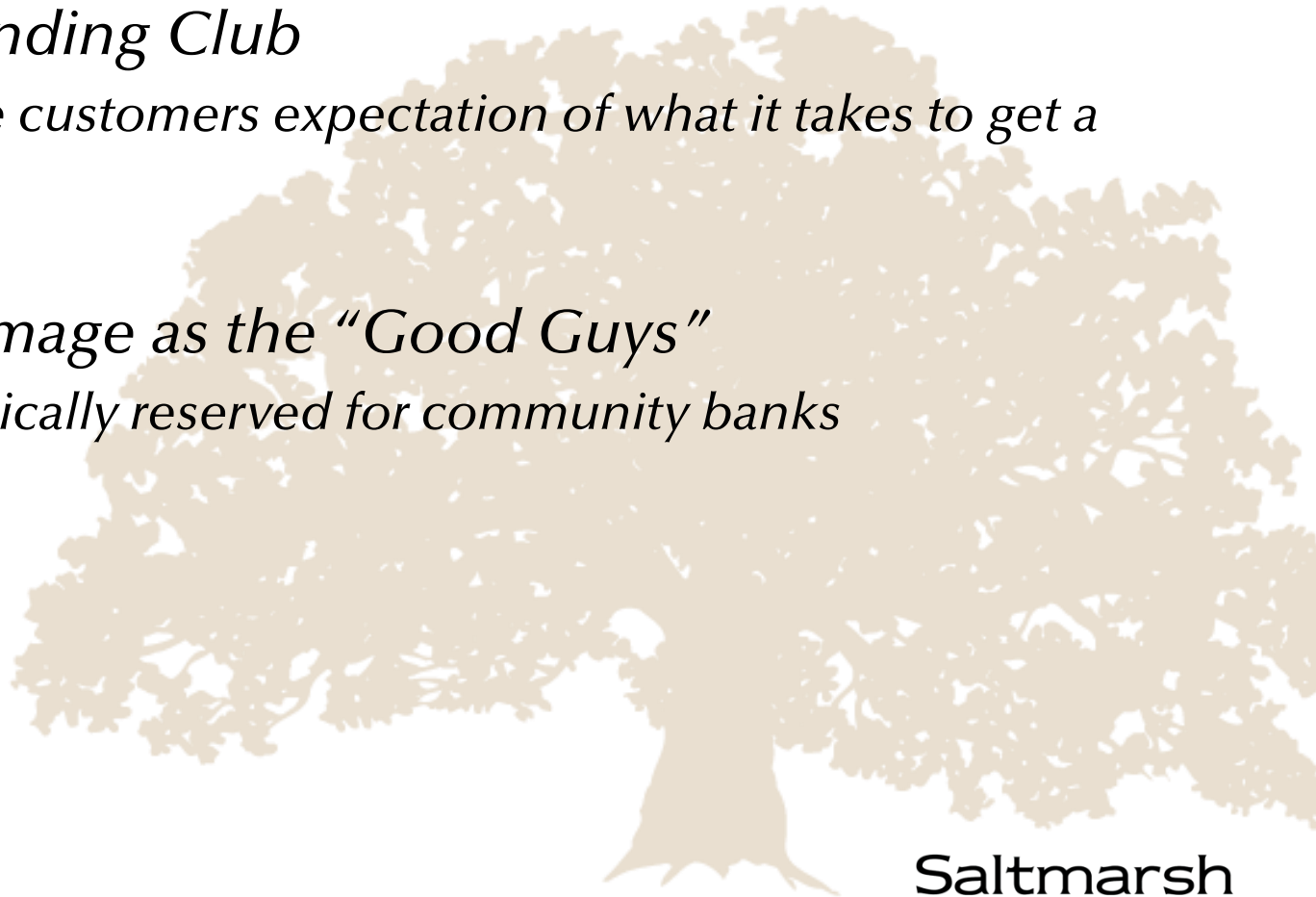
- *Peer-To-Peer payments are a hit with us millennials!*
  - *Part of the move to cash-less society*
  - *Will be an expected feature of mobile banking*
  - *Tie in with mobile wallets*
  - *NFC like Apple pay for PTP*
- 

# *2017 will be the year of the phone attack*

- *Account take over, Man-In-The-Middle, devices impersonation will happen from mobile devices*
- *Malware for smartphones will mature*
  - *Up to this point there has been little exploit*
- *Security products and services will respond*
- *Will ultimately improve the security of mobile devices*

# *Competition from P2P Lenders*

- *Prosper – Lending Club*
  - *Will change customers expectation of what it takes to get a loan*
- *Leveraging image as the “Good Guys”*
  - *A space typically reserved for community banks*



Morning Mix

# Bitcoin's not money, judge rules as she tosses money-laundering charge

By Jacob Bogage July 26 



A Bitcoin, virtual currency, coin is seen in an illustration picture taken at La Maison du Bitcoin in Paris in July 2014. (REUTERS/Benoit Tessier)

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# Bitcoin Is Real Money, Judge Rules in J.P. Morgan Hack

by Reuters    SEPTEMBER 20, 2016, 7:44 AM EDT



**Coin.mx was run as unlicensed bitcoin exchange, prosecutors say.**

Photograph by Getty Images

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# *Bitcoin*

- *Large organizations are taking notice and participating*
  - *More large retailers are accepting Bitcoin payments*
    - *Dell*
    - *Ebay*
    - *Amazon*
    - *Target*
    - *CVS*
    - *Victoria Secret*
    - *Tesla*
    - *Gyft*
- 

# Bank of America Files Patent for Bitcoin Wire Transfer System

September 22, 2015 Sarah Jenn News

92  
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30



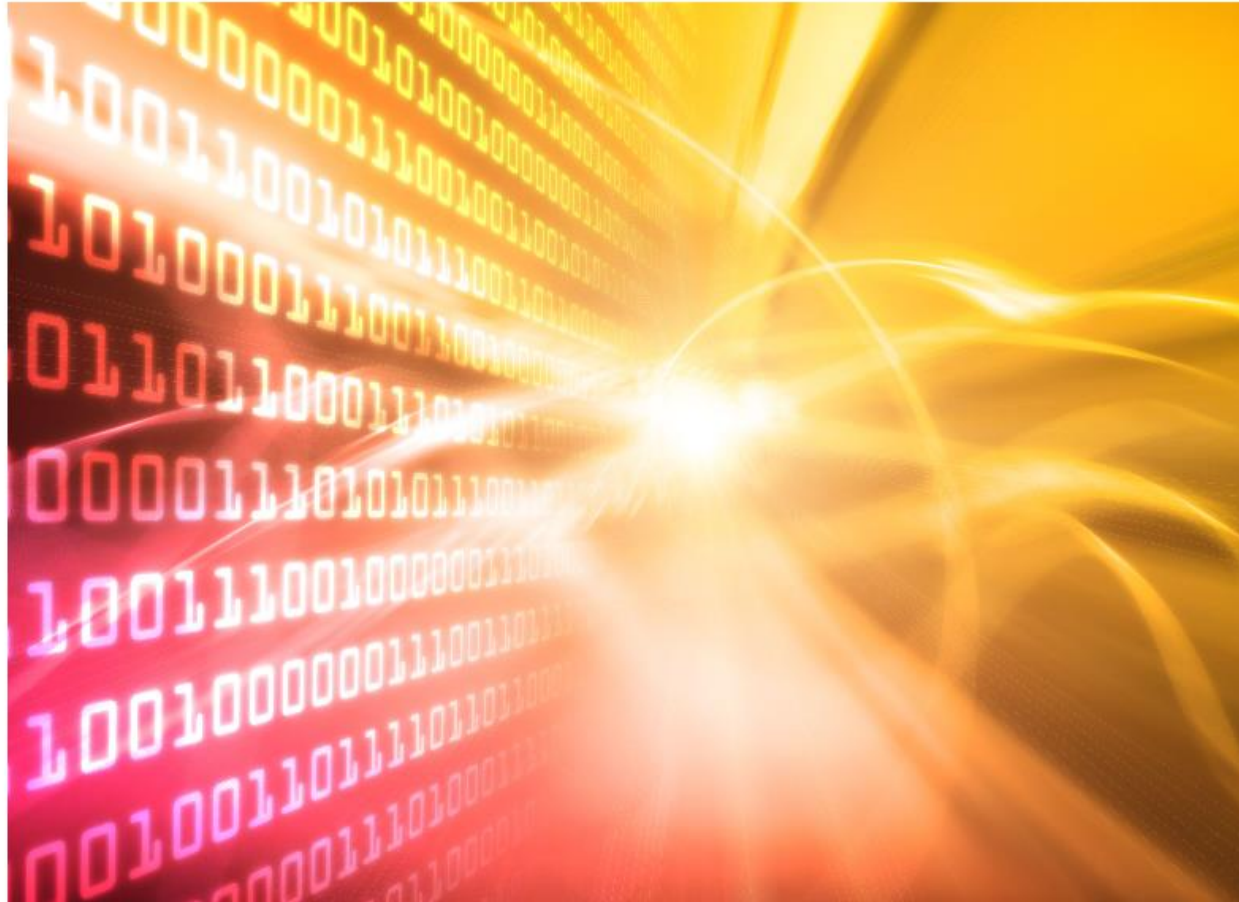
42



1



14



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## Citi Goes All In on Bitcoin

MARCH 31, 2015

BY JJ HORNBLASS

When Citi Ventures launched its accelerator with Plug and Play, the San Francisco build-an-accelerator outfit, last December, the Citigroup investment arm said it was doing so “to [accelerate] emerging technologies that have the potential to transform financial services experiences for Citi’s customers.”



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SINGLE PLATFORM IS A  
**BUZZWORD**

# Citibank Is Working On Its Own Digital Currency, Citicoin

Posted Jul 7, 2015 by [John Biggs \(@johnbiggs\)](#)

9,493  
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# Fed Official Outlines Bitcoin Risks for Community Banks

Pete Rizzo (@pete\_rizzo\_) | Published on July 23, 2015 at 21:20 BST

NEWS



The Federal Reserve Bank of San Francisco (FRBSF) has penned an informal advisory note to community banks highlighting the potential challenges of working with bitcoin industry firms and consumers.



Written by [FRBSF](#) director Wallace Young and published in Community Banking Connections, [the note](#) suggested blockchain-based digital currencies are "likely here to stay". As such, Young argued that community bank professionals should make themselves aware of the potential risks.

According to the FRBSF, these include the compliance risk, reputational risk, credit risk and operational risk of servicing both businesses that provide digital currency services and consumers who want to use such assets as collateral for other financial services.

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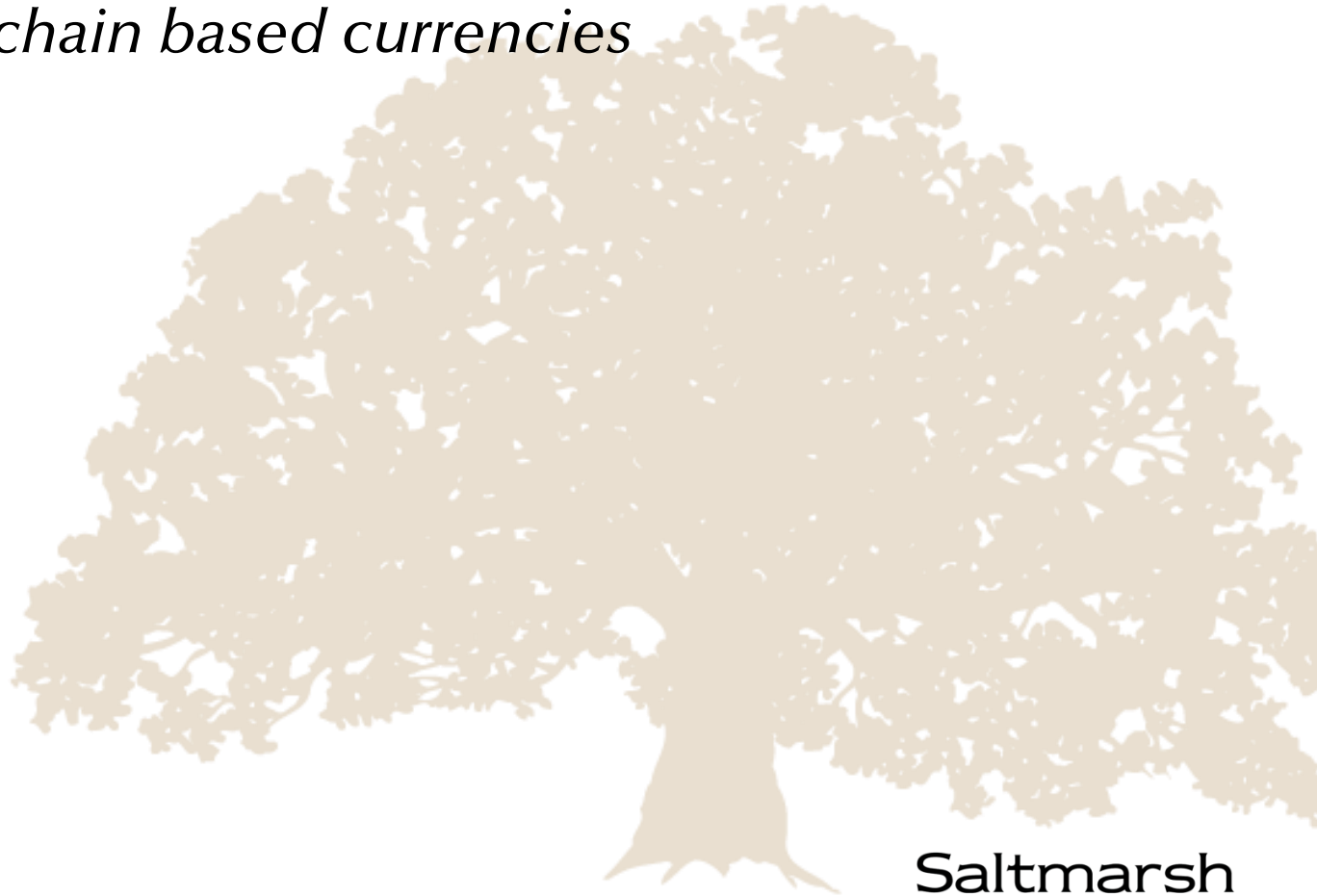


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# *Bitcoin*

- *Other Blockchain based currencies*
  - *Litecoin*
  - *Dogecoin*
  - *Peercoin*
  - *Darkcoin*



# ***THINK YOU HAVE HIGH IT BUDGET NOW?***

*You will spend even more next year!*







@saltmarshcpa



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# Keep the Conversation Going!

**#SaltmarshBankTalk**

Use before, during and after each session to share  
your questions, feedback and event photos!