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Presentation to the RIMS Palm Beach Chapter

# Blockchain: What Policyholders Need to Know

*Presented by:*

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# Agenda

- Understanding Blockchain
- Insurance Uses of Blockchain
- Impact on Policyholders
- In Conclusion . . . .

# Understanding Blockchain

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# What Is Blockchain?



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# Blockchain – Not Just Bitcoin



# Blockchain Framework

- “Blocks” (record of transactions) added in linear chronological order
- Ledger is shared because each node has full blockchain, each “block” is linked to all prior “blocks,” forming a “chain”
- Shared record cannot be falsified by single entity
- Node means any computer connected to blockchain and used to execute and verify transactions
- Blockchains can be open to the public (“permissionless”) or private (“permissioned”)

# Understanding Blockchain

- Blockchain as a book - Each block is a page
- Each page contains:
  - text (the story)
  - information about itself (page, chapter, title)
- Each block contains:
  - contents (information about the record)
  - metadata (technical information about the block)
- Multiple “authors” write simultaneously, each adding information that is automatically linked to prior blocks
  - Anthony Lewis, A Gentle Introduction to Blockchain

# Blockchain FAQ

Question	Answer
What is a blockchain?	A secure computer file
Public (permissionless) vs. private (permissioned) blockchain	In a public blockchain, anyone can read and write data (like bitcoin). In a private blockchain, only permissioned users can read and write data
What does blockchain replace?	Legacy database systems
How is blockchain an improvement?	Data can be tracked securely and efficiently without a centralized record keeper
Why should I trust another author?	On a public blockchain, author expended resources to “write.” On a private blockchain, authors vetted beforehand



# Why Blockchain Matters

**Gather and share data seamlessly  
between counter parties**

**Increase accuracy and speed of  
data sharing**

**Reduce transaction and  
management costs**

# Blockchain in Action - Walmart



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# Investment in Blockchain

Google



XL CATLIN



Willis  
Towers  
Watson



# Challenges to Adoption

- Technology – computer speed and data limits still lagging
- Operational issues caused by software and hardware inequalities
- Integration and system overhauls needed
- Exposure to other cyber risks through risks in computer coding (e.g., hacking of Bitcoins and other cryptocurrencies)
- High initial costs and high competition
- Regulatory and legal uncertainty
- Requires a cultural shift
- No standard system



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# Insurance Uses of Blockchain

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# Blockchain in Action - Maersk



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- Cargo scanned on and off ship, so contents known in real-time
- Ship location tracked at regular intervals, so premium rated for individual journeys
- Ship condition reported, so premium adjusted based on individual vessels and operators





- Consortium of insurers and reinsurers developed prototype property reinsurance policy
- Each organization has a private ledger for storing its own contract elements and data
- Organizations also participate in two shared ledgers:
  - Shared Master Data ledger contains public company information and common contract clauses
  - Shared Communication ledger (cryptographically secured) is used to agree on the state of the private organization ledgers
  - Only specifically designated counter-parties can see the content and destination of the communication on the Shared Communication ledger

# Companies using Blockchain to Revolutionize Insurance



Lemonade  
Insurance Review



oscar

**Root** Insurance

# Rule-Based Claims Processing Utilizing Oracles

- Claims triggered based on verifiable data, allowing faster claim payments
- Data provided by reliable source -- an “oracle”
- Current uses – flight insurance, travel insurance, parametric weather insurance, crop insurance based on weather data
- Future uses -- Internet of Things (IoT) source of oracles

# Diverse Blockchain Insurance Applications

- Lemonade
  - Uses blockchain-based smart contracts to pay claims
  - Charges a fixed fee for overhead – fee is minimal because claims management is largely automated



- InsurETH
  - Flight delay insurance product – first built in 2015
  - Pays claims through smart contract based on publicly available flight delay data

# Diverse Blockchain Insurance Applications



- Blockchain insurance company developing multiple products
  - Flight insurance (licensed),
  - Hurricane protection,
  - Crypto-wallet insurance
  - Collateral protection for crypto-backed loans
  - Crop insurance
  - Social insurance

# Diverse Blockchain Insurance Applications

## CLAIMSHARE

- ClaimShare app combats double payment on accident claims.
- State Farm and USAA use blockchain to streamline subrogation processes.
- Anthem uses an app to allow users to control access to medical information.
- Metlife is testing LifeChain for processing of life insurance claims.





# Simplifying Solutions to Common Issues

- Blockchains in development eliminate need for paper COIs through digital verification of AI status
- Blockchains can facilitate subrogation claims payments with mutual ledger that nets payment among members, eliminates manual processing, and reduces administrative costs
- “Self-issuing” policies could allow common events, such as adding a car to corporate fleet, to trigger automatic policy changes

# Underwriting Impact

- More accurate underwriting and pricing of risks
  - Store underwriting data on blockchain transaction ledger
  - Increase sharing of data or outsourcing of data analysis (building algorithms to predict losses)
  - Automatic data reporting by users/devices
  - Could apply to reinsurance, including prior loss information, shared bordereau, etc.
- Applications or renewals processed on blockchain
  - Avoid lost policy disputes

# Claims Impact

- Automate loss reporting
- Facilitate claims handling by storing immutable data in blockchains that can be verified and automatically executed
- Reduce claims fraud
  - False billings and false documents less likely if data decentralized and immutable

# Impact on Policyholders

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# How Does This Affect Me Now?

- Challenges have limited adoption, but expansion continues
- Potential impact on existing policies for companies exploring blockchain opportunities; could have implications for:
  - D&O coverage
  - Technology E&O coverage
  - Cyber coverage
  - Property / business interruption coverage

# Underwriting and Smart Contracts

- Benefits
  - Increased accuracy leads to more accurate pricing
  - Decreased time to binding and issuance
  - Increased options as bidding automated
- Risks
  - It's all in the code . . . .



Image via Pixabay



# Smart Contract Risks

- Trusting code?
  - “[I]f code is law, so are bugs in the code—and correcting them may itself mean a breach of contract”
- Created by humans capable of error
- On average, between 15 and 50 defects per 1,000 lines of software code



Image via Pixabay

# Data Control

- Questions to consider:
  - What type of data is shared?
  - In what format? Raw feed? Reports?
  - When?
- Consequences of data sharing
- Policyholder control of data essential

Image via Pixabay

# Claims Automation

- [illegible]

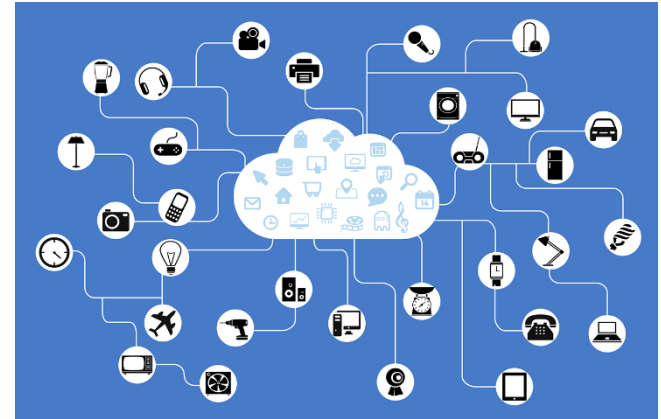


Image via Pixabay

# Additional Questions to Consider

- How long does it take to gather and transfer claims information?
- How much time and resources do you expend verifying underwriting and claims data?
- How much time does your team spend coordinating with counterparties?
- Does the proposed blockchain solution create the potential to reduce the time and effort expended on these tasks?
  - We don't know the answer to the last question yet – but current applications suggest substantial savings

**In Conclusion . . . .**

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# Summary

- Blockchain is a decentralized, secure ledger that eliminates or reduces need for trusted intermediary
- Many potential applications across multiple sectors
- Insurance industry implementing blockchain – primarily in personal lines and parametric insurance
- Policyholders and insurers should prepare for disruption in insurance markets, underwriting, claims handling, and policy administration
- Blockchain should ultimately reduce insurance premiums and expedite underwriting and claims



# Questions

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# Meet the Speaker



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Katherine Henry is Chair of Bradley's Policyholder Coverage Team. Her practice covers every type of property and casualty insurance policy available in the market today, including those potentially responsive to COVID-19 such as event cancellation, commercial property (including business interruption and contingent business interruption), cyber, commercial general liability, directors and officers, professional liability, errors and omissions, and others that may provide relief to policyholders. Katherine's practice ranges from insurance procurement and renewal, to claims submission and management, to mediation, arbitration, and litigation of insurance coverage disputes.

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- Legal developments
- Industry trends
- Coverage for COVID-19
- Insurance placement and renewals
- Practical risk management strategies
- Claims management and resolution

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