

# Trust-based application of blockchain technology in Fintech: Australian Case Study

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# Outline

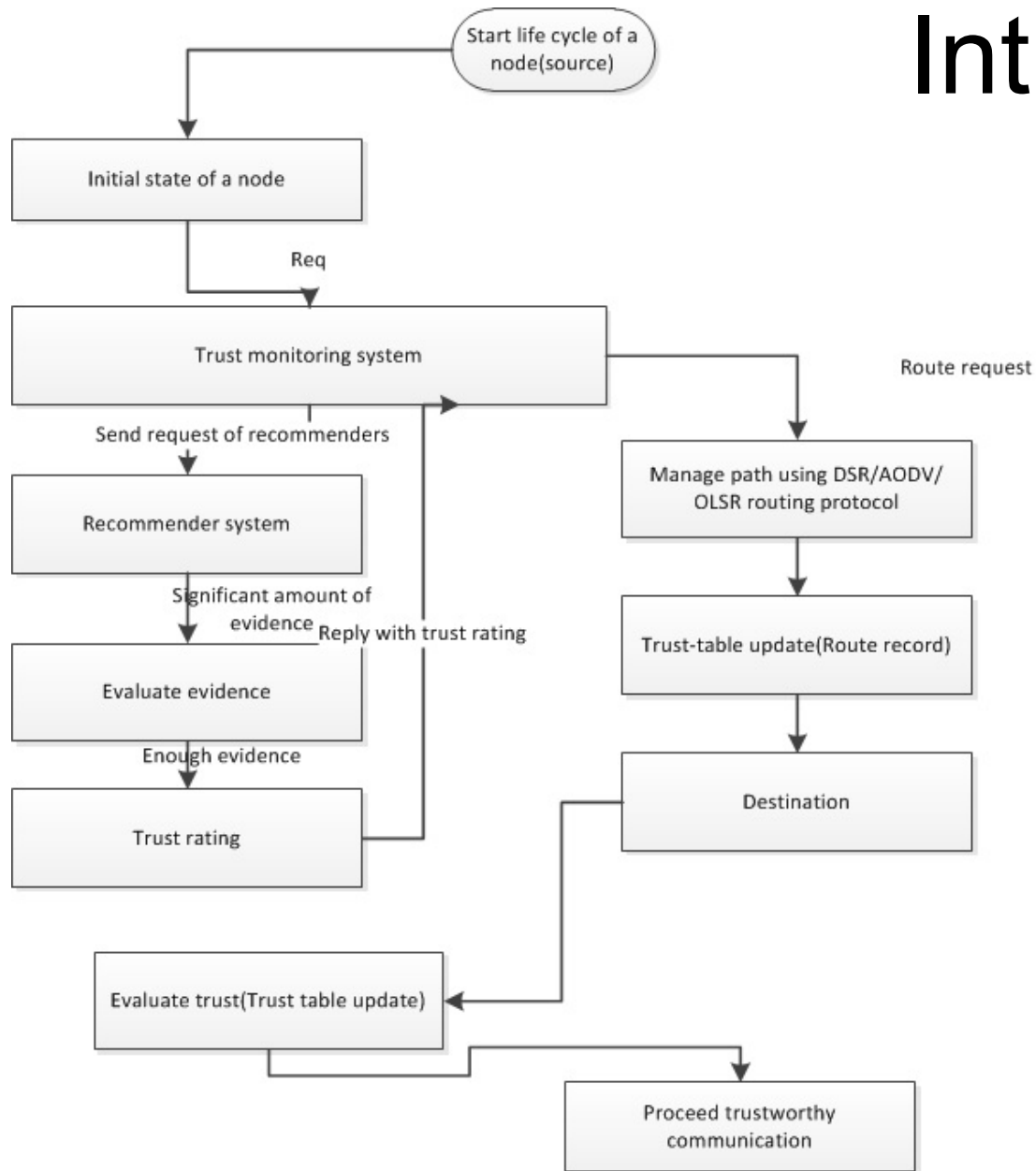
- Introduction
- Proposed Solution
- Conclusion and Future Directions

# Introduction

Major challenges in Australian finance industries-

- Introduction to Application Programming Interface (API) by 2018
- Big banks wealth divisions-put off consumer trust
- Oust the traditional "middle man" business model

# Introduction to Trust



$$Tn_{ij} = \alpha_{1n_i} T_s^{n_j} + \alpha_{2n_i} T^{n_j} o$$

$n_i T_s^{n_j}$ : Node  $n_i$ 's self evaluated trust on  $n_j$ ;  $n_i$  computes this by directly monitoring  $n_j$ .

$n_i T^{n_j} o$ : Weighted sum of other nodes' trust on  $n_j$  evaluated by  $n_i$ .

# An Australian Case



# Proposed Solution


- 'Trusted' Ledger Database

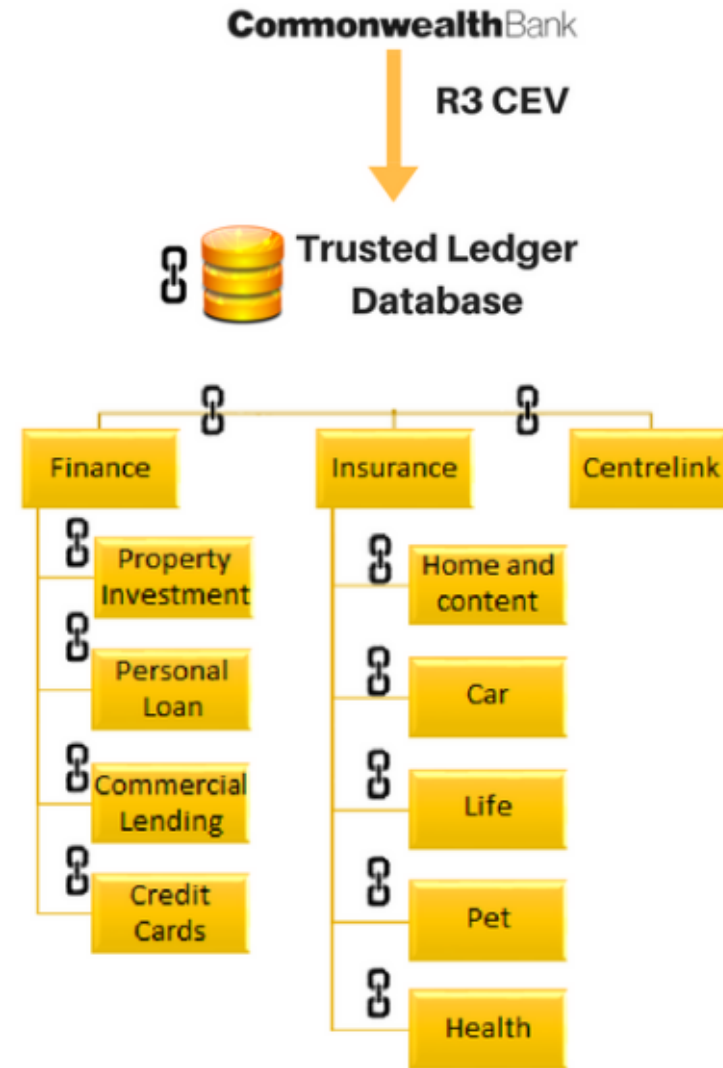


- Will reduce settlement counterparty risk
- Can almost instantly share matched trade information in the post-trade process

# An Australian Case Study



Here the chain,  represents trust-based ledger node which includes the requirement for a consensus transaction approval



# Proposed Solution



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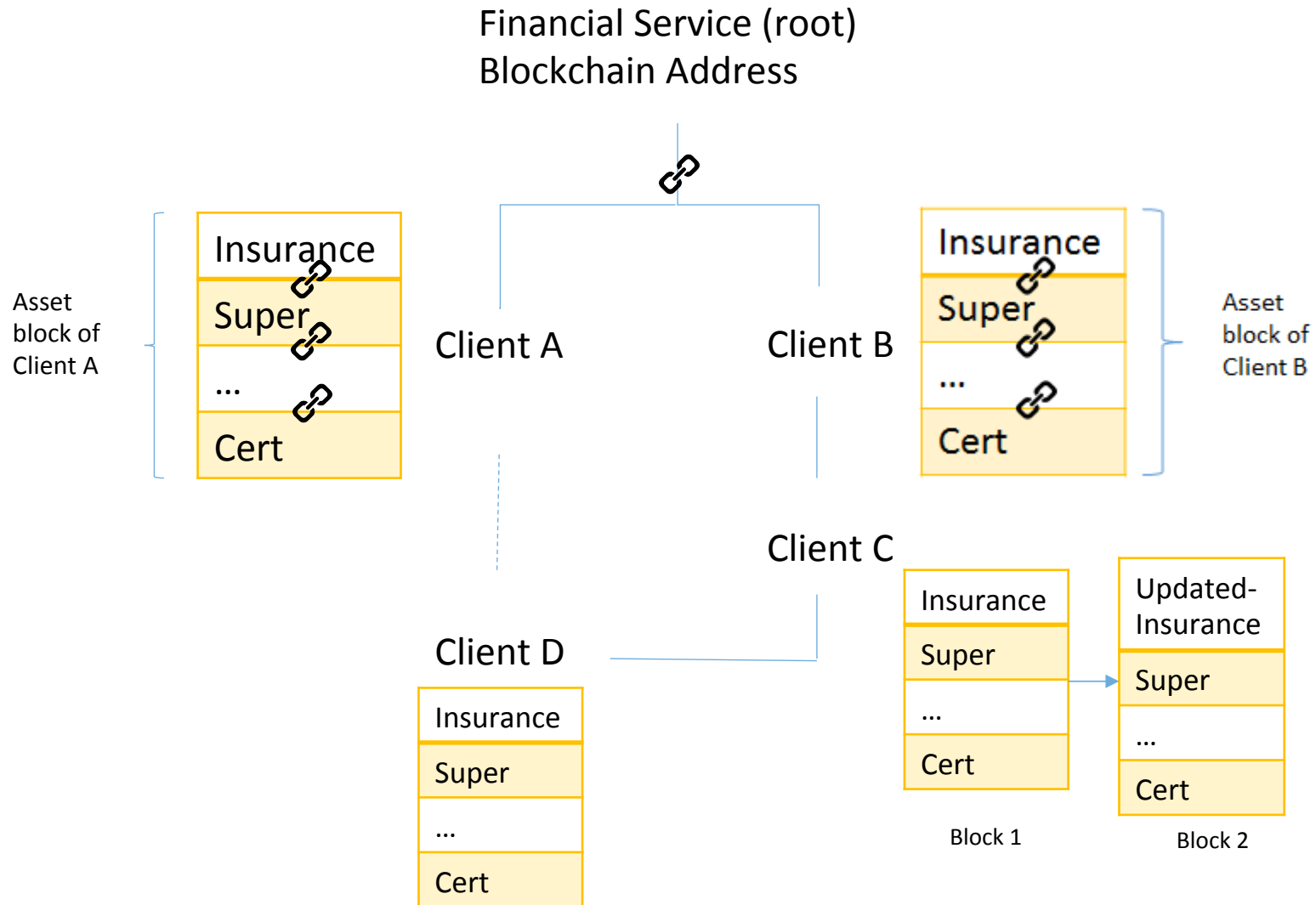


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# Proposed Model



# Proposed Solution

- Trust-based blockchain API system concept - to reduce the settlement latency amongst various assets.
- The bundled assets must trust each other and be identified. This enables instant settlement with close to zero-cost amongst various assets, hence enhancing scalability.
- The built-in security system of blockchain will retain the data privacy amongst trusted nodes of the assets.

# Conclusion

How to move forward with non- cryptocurrency distributed ledger start-ups focused on building tools and applications for financial institutions

# Thank you

Any questions?

# TRUST-BASED APPLICATIONS OF BLOCKCHAIN TECHNOLOGY IN FINTECH

*An in-depth look into how big banks can survive*

Dr Raihana Ferdous

**"Speak no bank", "hear no bank" and " see no bank" - this is one of the biggest current threats the big banks are facing with Bitcoin's rapid rise. At this moment, the big banks in Australia are going through some major challenges**

## THREE MAJOR CHALLENGES

### NEW GOVT RULE

According to Australian lower house parliamentary committee (24 Nov 2016) - major Australian banks should be forced to use Application Programming Interface (API) to facilitate the sharing of their customers' data by July 2018.

### LOYALTY OF CUSTOMERS

Customers' loyalty or trust turned off due to the big banks' wealth divisions. The trust deficit is significantly growing as the large group of customers sudden shift towards non-bank lenders.

### RISE OF CRYPTO- CURRENCIES

The underlying technology of bitcoin and other prominent cryptocurrencies is attracting a growing interest in financial sector. As blockchain technology undermines the traditional "middle man" business model, hence this is a big threat to the traditional banks.

## PROPOSED SOLUTION



### Blockchain API System

Creating trust-based blockchain API system for the loyal customers so that they could integrate their other financial portfolio. The goal is to have trusted private ledger which include assets within the financial organisations for each of the loyal customers of the bank. The proposed trust-based blockchain API can store information of physical assets, digital rights, policies, shareholding, insurances, intellectual properties and/or educational/health information. This will help banks reduce capital.