



# New Type of Lending

FinTech Applications Practice in China



# Banks Think About This...



**VIP Clients**



**Unhappy Clients**



**Digital Clients**

# FinTech is About This...

430 million  
Are unemployed



+400 million  
entrepreneurs

577 million  
older than 64



1.9 billion  
too young to work  
(age 0-15)

800 million  
work industrial jobs

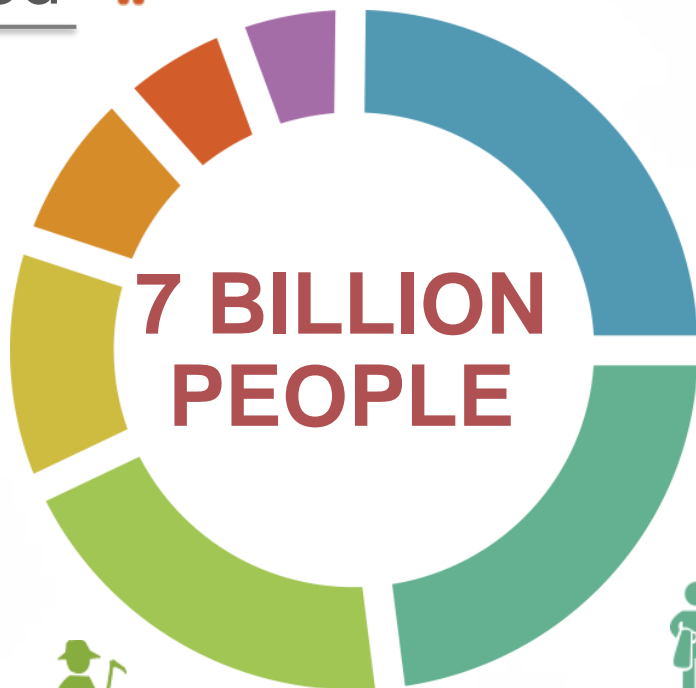


**7 BILLION  
PEOPLE**

1.4 billion  
work in agriculture



1.7 billion  
Work in services



# Structural Imbalances - Funds

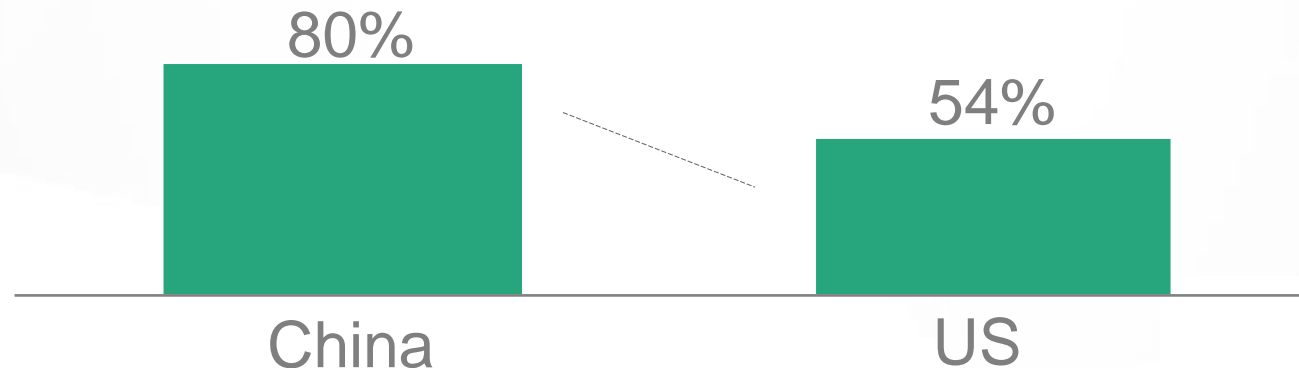
## Deposit vs. investment

### Too much deposit

- Deposit levels high due to cultural attitudes and few investment options
- New products pushing money into investments but still emerging

## Cash deposits-to-GDP

China vs. US, %, 2014

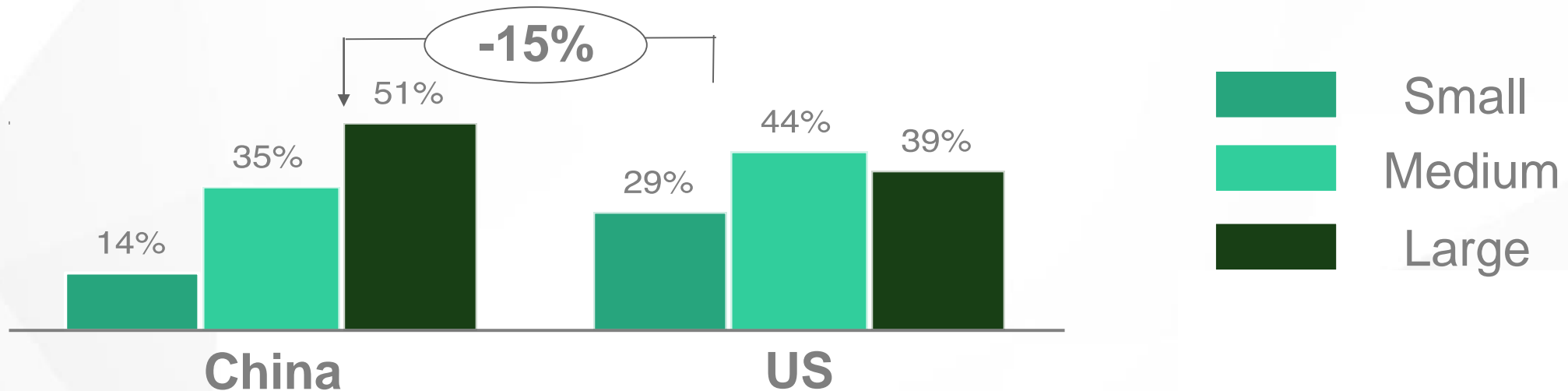


# Structural Imbalances – Asset (MSE Example)

## Large vs. Small enterprise (MSE) - Too little support for MSEs

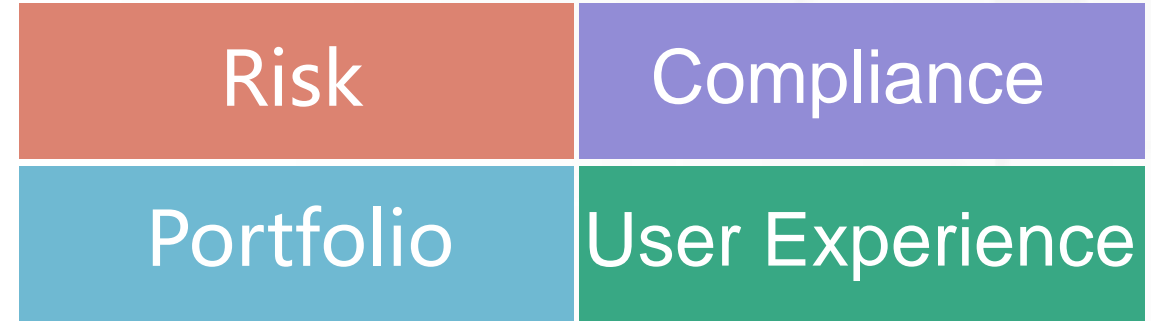
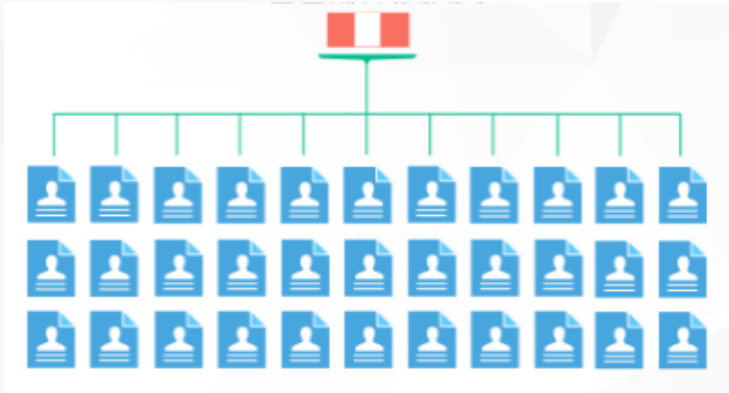
- MSEs are 90%+ of total Chinese firms ...
- ... represent 80% of total Chinese employment ...
- 60% of total GDP and 50% of total tax revenues

**% of companies w/ bank line of credit**  
China vs. US, 2014



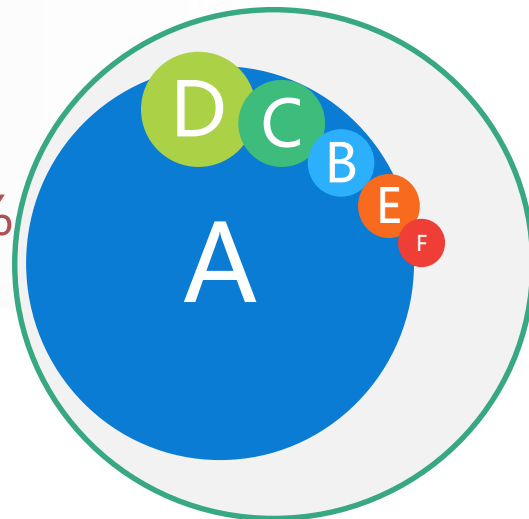
# Online Market Place

## Tech Driven One-Stop Solution



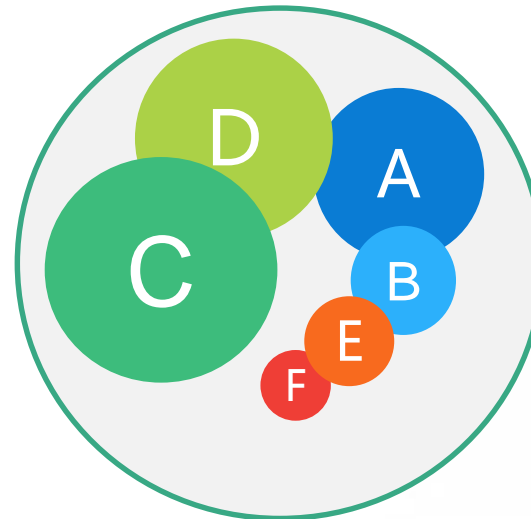
### Low Risk Low Return

Expected APR 7%



### High Risk High Return

Expected APR 9%



81%	2%	7%	8%	1%	1%
20%	6%	39%	32%	1%	0%
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

# Online Loan Business – Consumer Finance



## 种植治疗

按申请人资质，最佳可享受首付880元

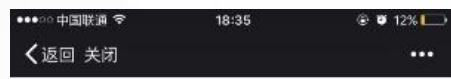
产品总价10,880元，其中包含：口腔检查，全景片，CT，洁牙，种植牙一颗+牙冠。

## 正畸治疗

固定首付14,200元+分期20,000元

产品总价34,200元，其中包含：正畸治疗，正畸初诊和数字化微笑设计\*1，正畸拔牙\*4，家庭美白\*1（数字化微笑设计，拔牙，美白任意三选一）。

开始资质认证



## 种植治疗

首付880元+分期10000元

产品总价10,880元，其中包含：口腔检查，全景片，CT，洁牙，种植牙一颗+牙冠。

## 正畸治疗

首付14200元+分期20000元

产品总价34,200元，其中包含：正畸治疗，正畸初诊和数字化微笑设计\*1，正畸拔牙\*4，家庭美白\*1（数字化微笑设计，拔牙，美白任意三选一）。



手机验证

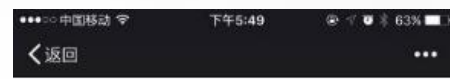
开始填写

信用卡验证

芝麻信用验证

借记卡绑定

提交审核



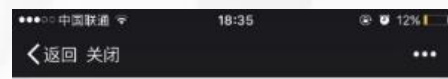
您曾于16年8月21日14时在上海市中化道达尔油品有限公司上海金桥加油站刷卡消费，请选择实际消费金额：

285.99

315.99

345.99

375.99



订单产品	正畸治疗*1
订单金额	34,200元
首付金额	14,200元
分期金额	20,000元

分期方式 3期 \* 6,767元 修改

我已阅读并同意

立即分期

# Online Loan Business – Big Data

“90% of the data in the world today has been created in the last two years alone”

**IBM Marketing Cloud**



# Traditional Method: Simple Logic from Strong Deterministic Features

Without using heuristic features from new data, a simple system's performance is severely limited

**Strong Deterministic Features  
From Traditional Data**



**Untapped Heuristic  
Features From New Data**

- Industry Data
- Internet Data
- Legal Records
- Credit Data
- Travel Records
- E-Commerce
- Phone Records
- Social Networks

**Suboptimal prediction precision**

**Massive volume of unused data • Manual model updates at large intervals**

# A Smart Solution to Unstructured Data

90% of all data is unstructured: incomplete, noisy, and inconsistent

## STRUCTURED

Stored in organized databases,  
easy to search

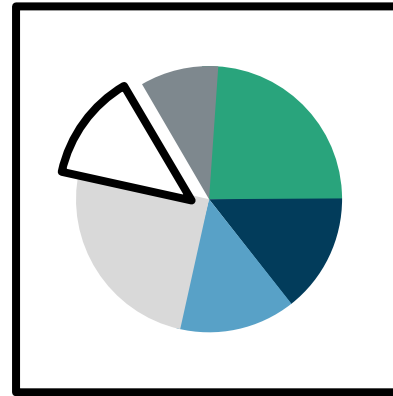


## VOLUME

The huge amount and growth of unstructured data can overtake traditional risk solutions

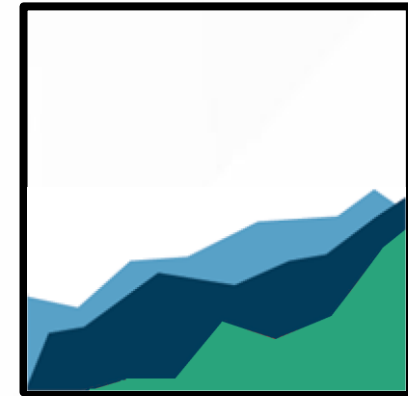
## UNSTRUCTURED

Email, video, text, conversations, clicks, website actions, social networks, professional networks



## VARIETY

Traditional risk management can't handle with the changeable nature of big data



## VELOCITY

Data is generated at an ongoing flow, making it harder to manage

# Online Loan Business – Data Infra



## Data Collection and Processing

### Data Gatherer

Collect, clean, and structure data

### Zeppelin

Unstructured data to relational tables



## Risk Control and Predictive Modeling

### Fraud Detection

First cut to weed out criminals

### Rule Engine

AI engine identifies most important data points

### Knowledge Graph

Search graph network for warning flags



## Risk and Price Setting

### Credit Scorecard

AI scorecard makes high-precision risk assessments

### Risk-Based Pricing

Pricing mechanism adaptable for wide range of products

# AI-Powered Rule Engine Assesses Risk

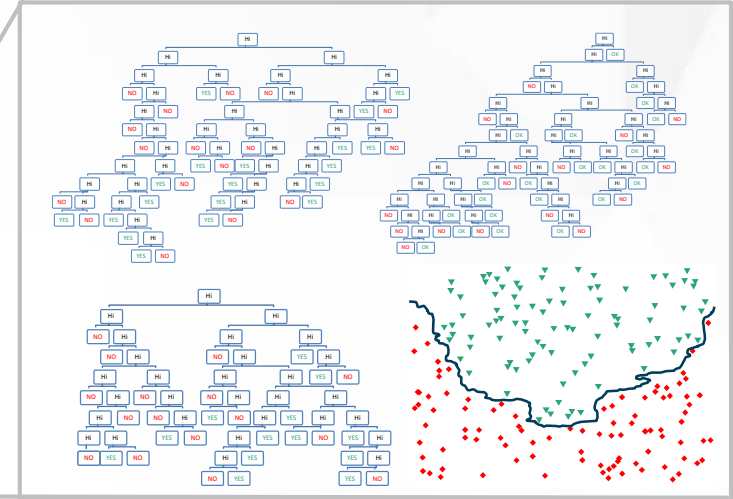
Decision trees built from n-dimensional features improve precision, automatically updating and improving themselves

## Input Data

n-dimensional  
preprocessed  
borrower data



**Rule Engine**  
Stored as decision trees  
300+ rules  
1,000+ customizable  
parameters



## Output Results

Risk assessment results

AI extracts rules and policies from data to provide insight on how precise predictions are made

# Knowledge Graph Searches for Warning Flags

Graphically store borrower information and scan for questionable patterns



Application	Name	Bank Card	Status
0000001	Zhang San	6222**5672	Originated
0000002	Li Si	6222**2131	Pending
0000003	Wang Wu	6232**2348	Rejected

Three different people apply for loans with the same bank card

One of these loans have already been originated

# Next: Deep Learning Enables Pattern and Feature Discovery at Speed

Deep learning applied to automatic feature extraction from raw data and pattern identification in networks

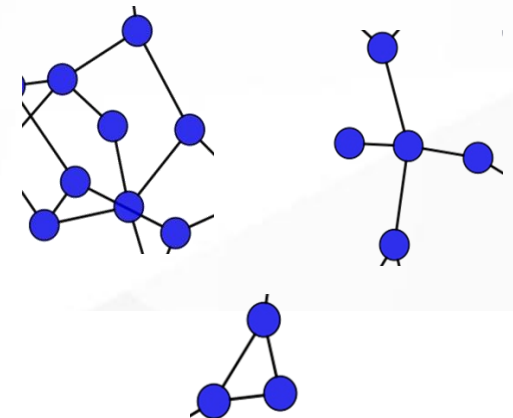


Manual Feature Engineering

feature\_0  
feature\_1  
feature\_2



Smart feature extraction identifies the most important elements from raw data



# Online Loan Business – Supply Chain Financing



The story starts from here



Medium size enterprise

2,000 Employees 

40 million SME's in China that need working capital continuously

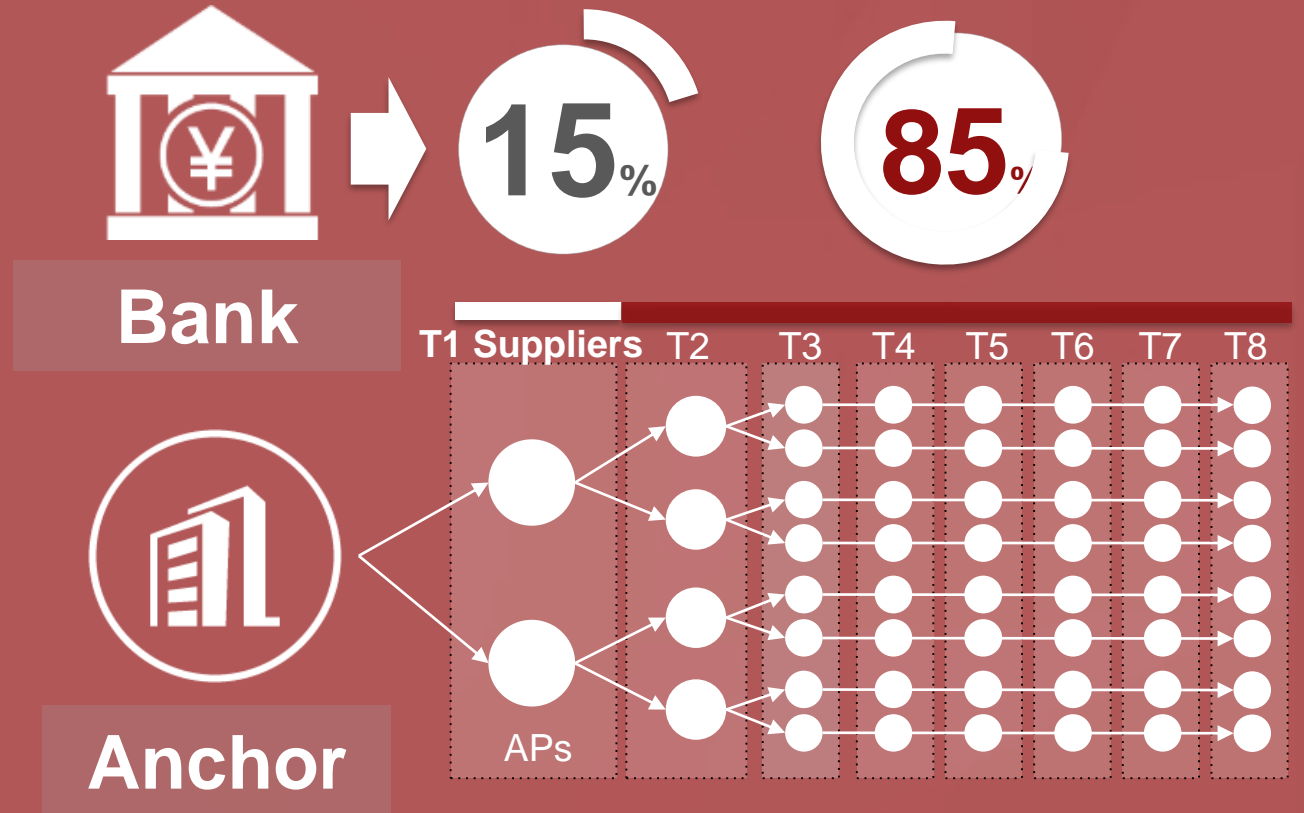
# The Problem in Supply Chains



Only tier one suppliers are well funded

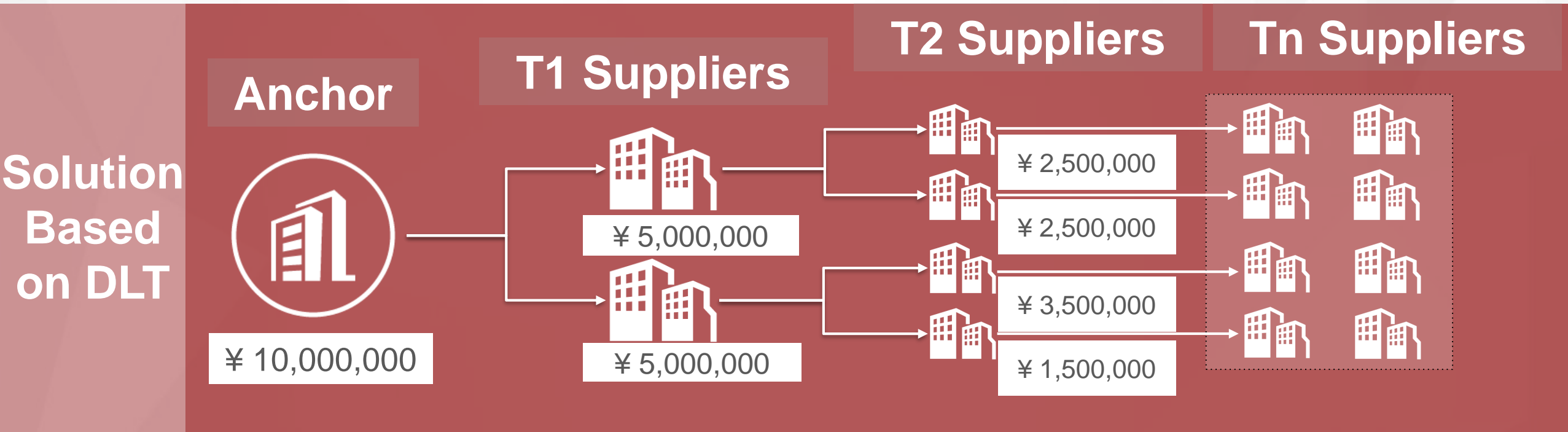


85% of the supply chain MSB are not well funded



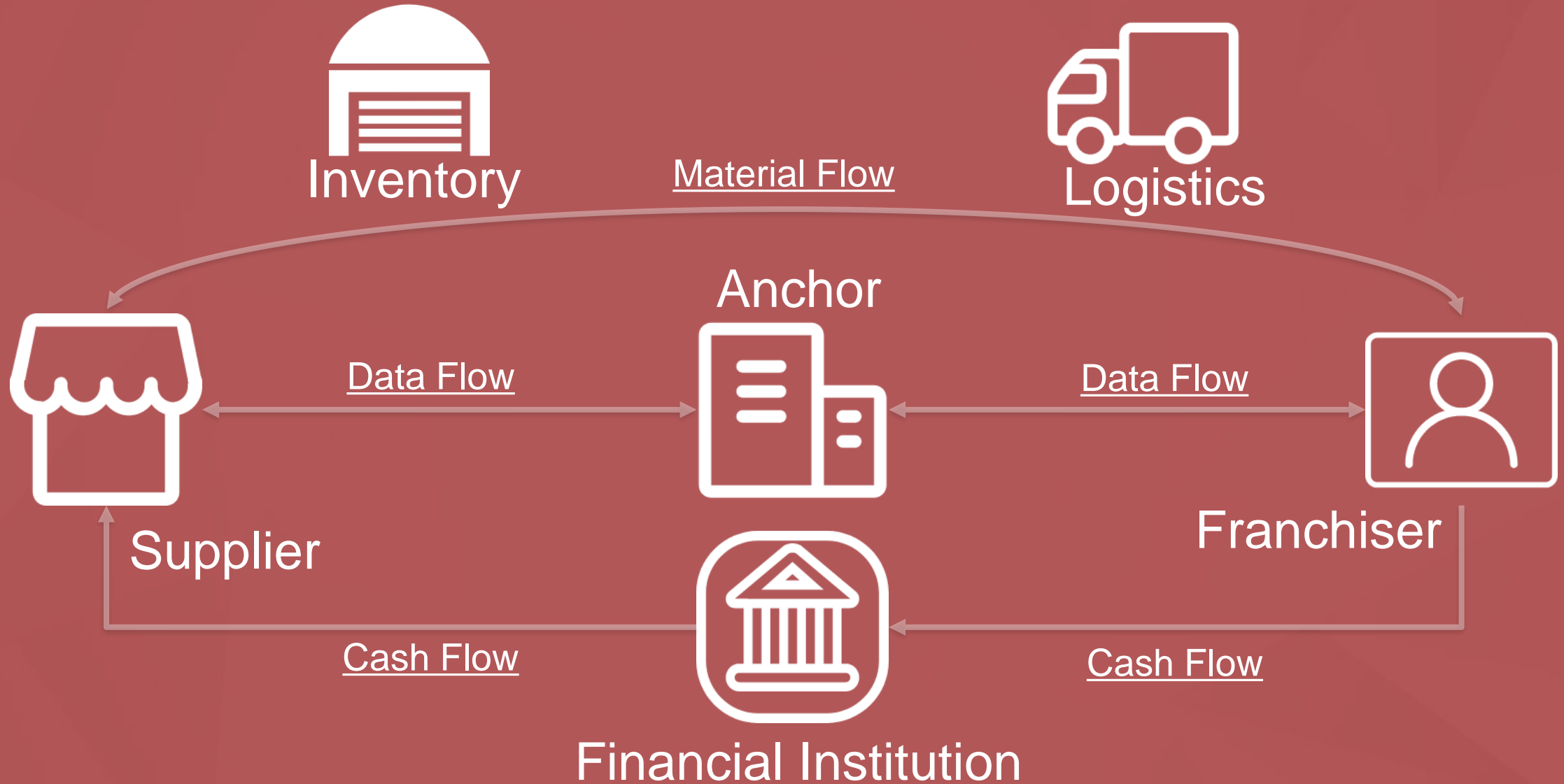


# Our Solution Based on DLT – Trusted AP



- A supplier can hold, pass down or financing anytime when he receives a tokenized AP.
- Trust AP is a blockchain based digital document that allows us to pass it around safely between different suppliers without the risk of being altered or faked.
- Trust AP will be registered with the local authorities every time it is tokenized.

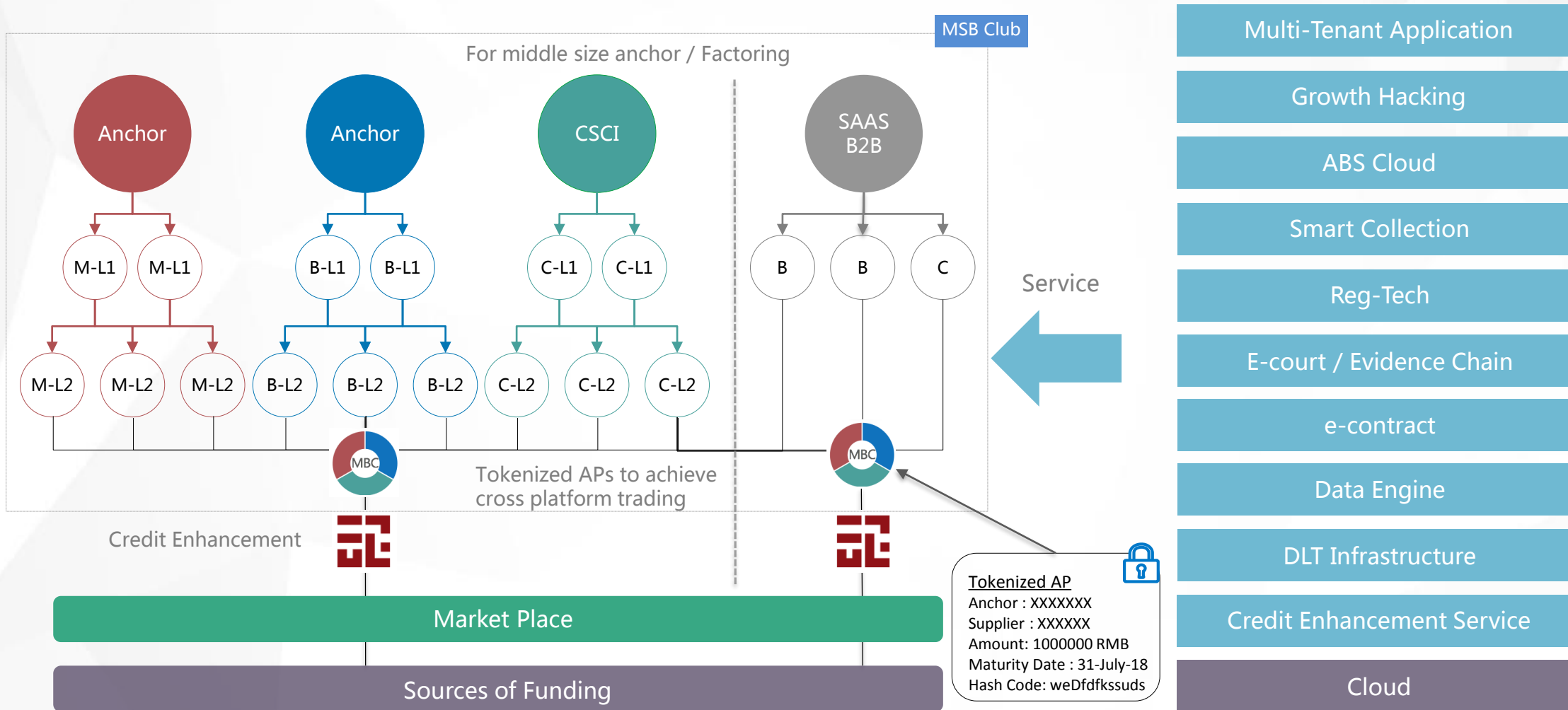
# The DLT Ecosystem for Supply Chain Financing



# FinTech Strategy in CSCI – MSB Financing

Vertical : MSB Asset Trading Market Place [Horizontal : Whole Industries+ Vertical : Industry]

Horizontal : FinTech Cloud





# THANK YOU

[www.chinacsci.com](http://www.chinacsci.com)

中证信用增进股份有限公司

China Securities Credit Investment Co., Ltd.

深圳市福田区深南大道2012号  
深圳证券交易所广场44楼

Shennan Road, Futian District, No. 2012  
44th Floor, Shenzhen Stock Exchange



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