McKinsey & Company

# Digital Business Building: Using Innovation in Building a Bank for the Future

Workshop document | Nov 4, 2019

# Key questions to address for our session

What is a digital bank and how is this different from a traditional bank?

What is the landscape of digital banking businesses today? What is the impact these new models are having on the market? And more importantly, why are these new models proliferating?

How have regulators responded toward this changing landscape? What are some of the key regulatory trends in this space?

What are the key considerations to building a digital bank? How does one approach building a new digital banking business?

What are some of the key experiences other players have had in building these new models? What does it take to become successful?

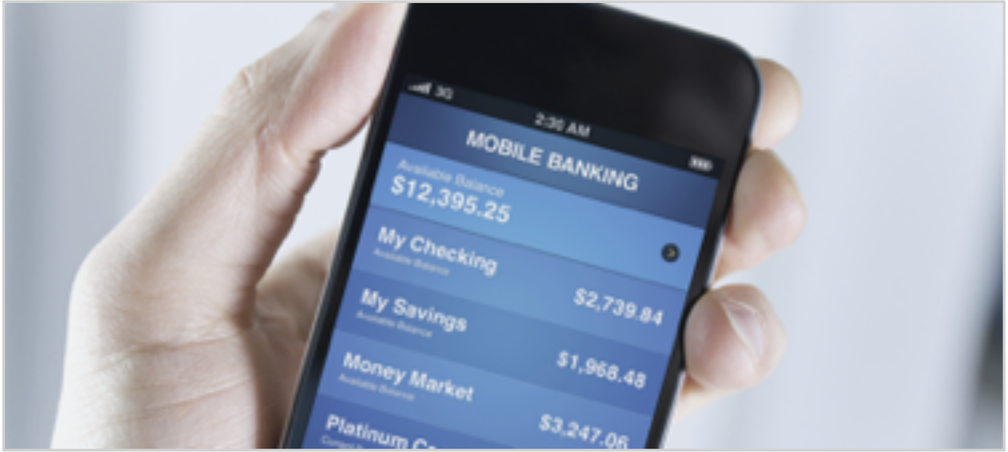
# Agenda for discussion

**Agenda item**

- Introduction to digital banks
- The six forces of disruption in the Asia Banking industry
- The trend towards open banking
- Lessons learnt from our experiences in digital banking builds

# Traditional bank vs digital bank

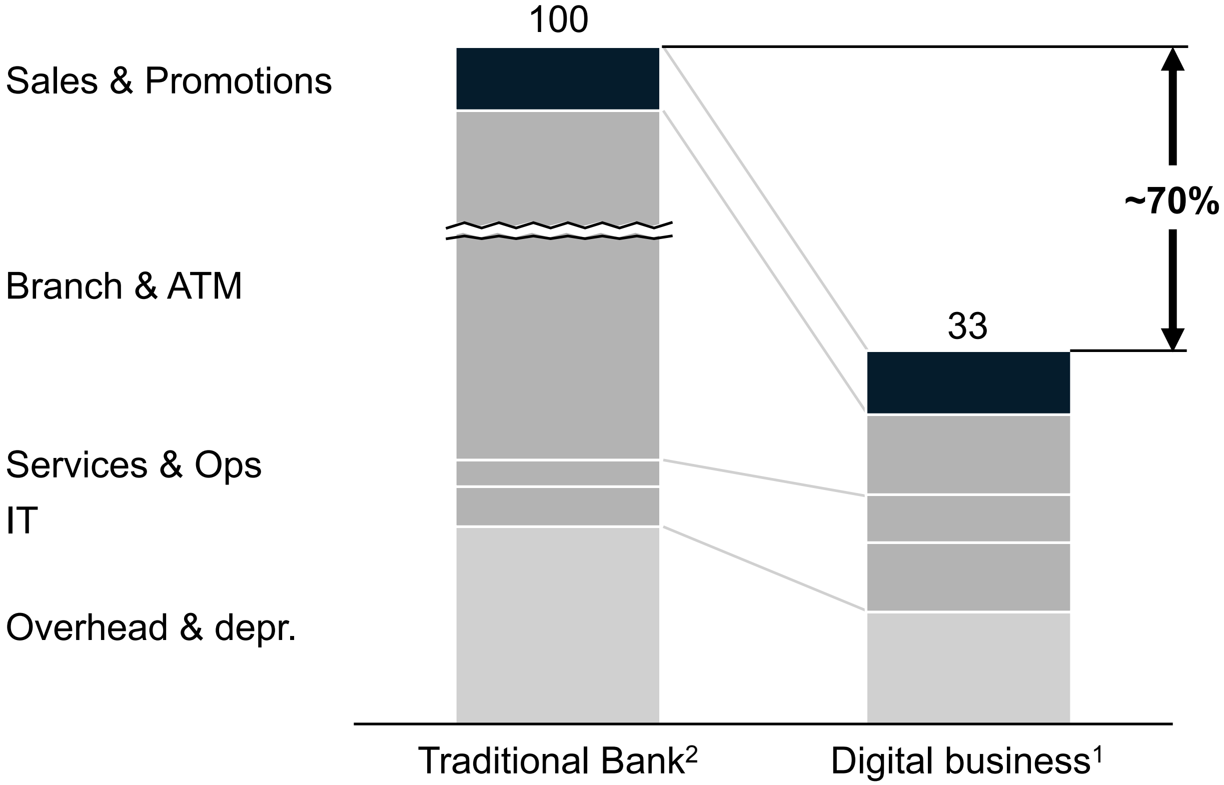

Traditional Bank




Digital Bank

# Digital banks typically have a much lower cost of operations

**Opex/Deposit balance**
Indexed




### Cost advantages in steady state

Digital bank can enjoy **up to 70% cost advantage** in steady state

Lower costs driven by **digitalization and self-directed** customer behavior

1. Year-5 projections at steady state operations (not growth mode); no transaction subsidies, minimum branch network and no out-of-branch RM.
2. Estimate of a comparable size retail bank serving same target segment (2 million customers)

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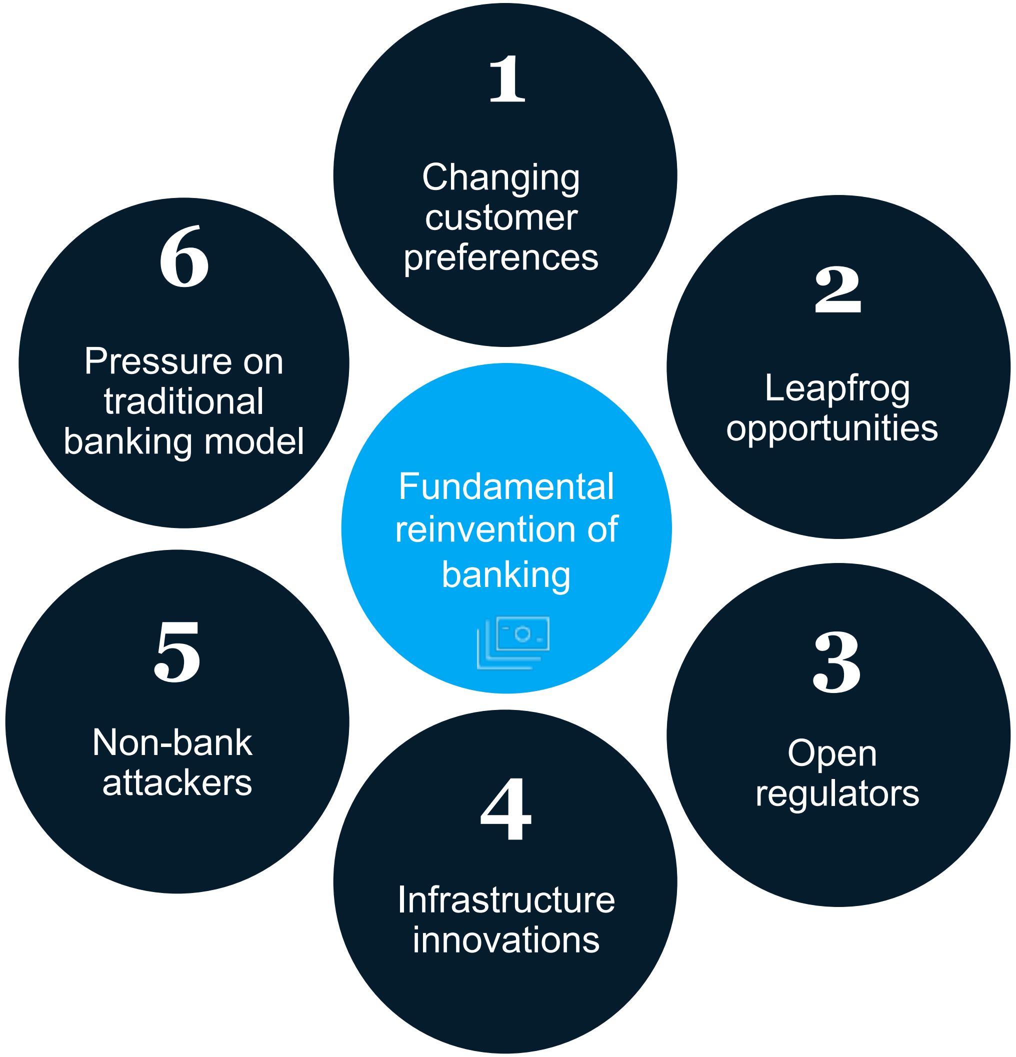
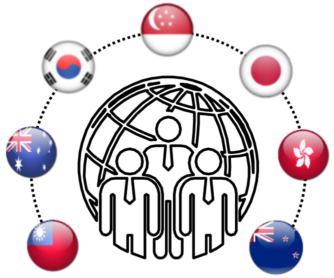
# There are six forces leading to a fundamental reinvention of banking



# 1: Consumers in Asia are increasingly open to digital banking

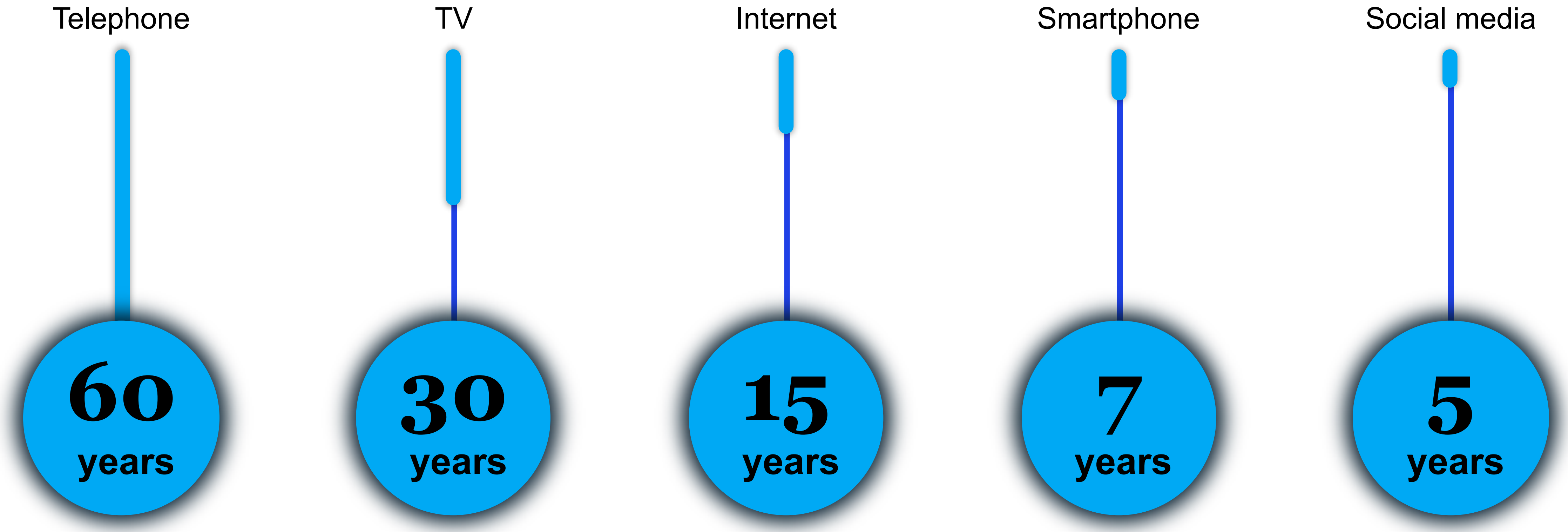
| | Customers who would consider opening an account with a branchless bank | Customers changing buying decision after digital consideration | Customers using non-bank payment solutions | Customers willing to share data to get customized offers |
|---|---|---|---|---|
|  **Developed Asia**[1] | 55-80% | 51% | 40% | 23% |
|  **Emerging Asia**[1] | 40-55% | 35% | 45% | 62% |

1. Developed Asia includes Singapore, Japan, Hong Kong, Taiwan, Australia, Korea and New Zealand. Emerging Asia includes China, India, Malaysia, Indonesia, Philippines, Vietnam, Thailand and Myanmar

Source: McKinsey Asia Personal Finance Survey (PFS)

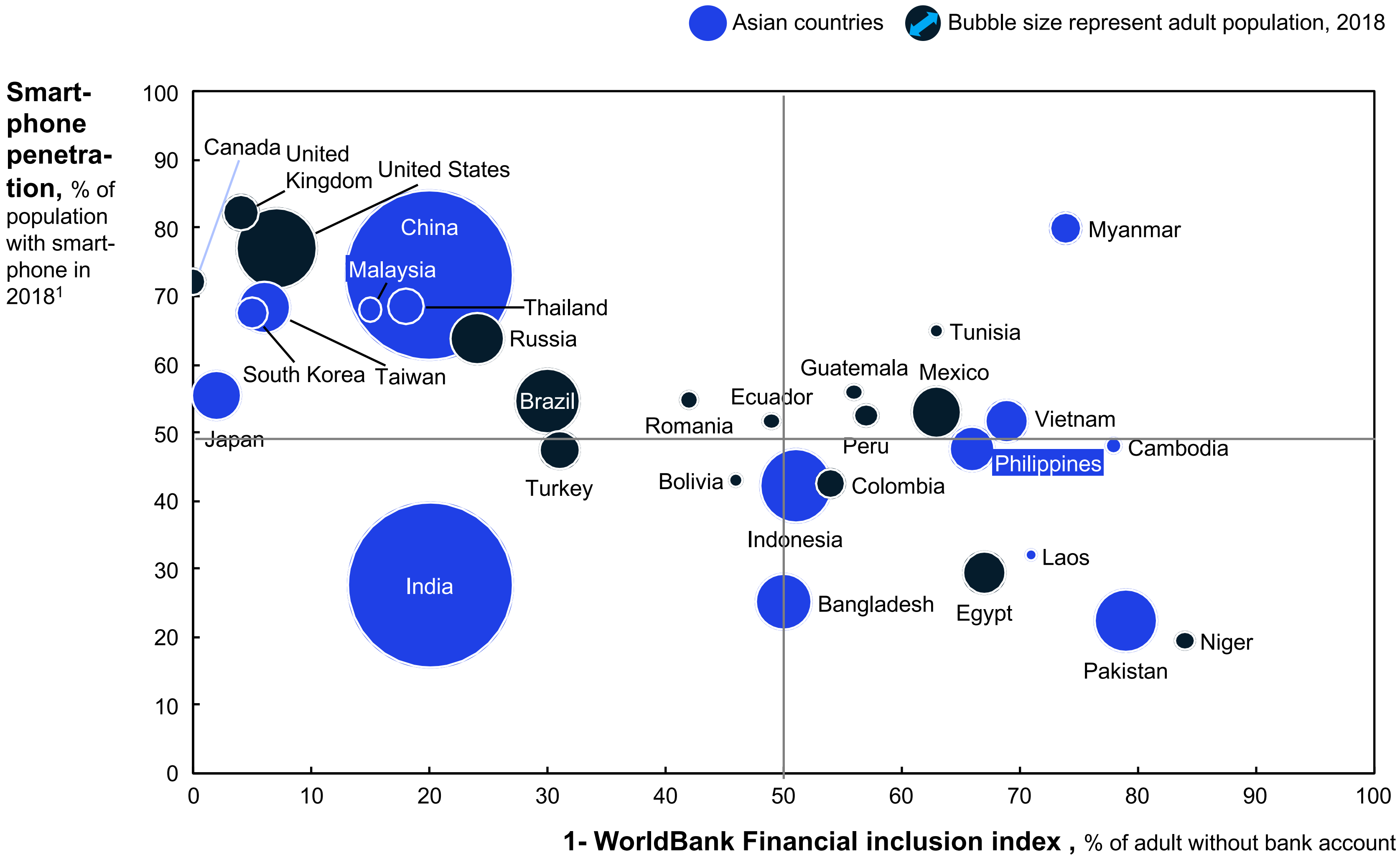
# 2: Pace of innovation and change is accelerating

## Approximate time to reach a 50% adoption rate




Source: Asymco

# 2: Low banking penetration and lack of legacy systems allow for opportunities to leapfrog




Rapid customer adoption of new technologies

Lower legacy barrier for banks

1. From press search and based on a model which takes into account a country's economic progression, demography, online population, and inequality

Source: World Bank; NewZoo report, Strategy Analytics, press search

# 3: Regulatory authorities are increasingly open to innovations in fintech

SELECT EXAMPLES

## Payment Banks

A **new license for payment banks** for companies with minimum track record of 5 years (supermarket chains, telecom companies, public sector companies, etc.)

Allows offering of limited financial serves, can act as an **agent for full-service banks**, and can distribute third party products (insurance, mutual funds)

## Digital Bank 3.0

**Digitization of 12 financial services**, including online applications for banking products, loans, and wealth-management services

**18-month regulatory sandbox** for fintech startups to experiment

## Fintech Regulatory Sandbox

Sandbox with relaxed legal and regulatory environment for FinTech companies to **experiment while containing consequences of failure**

Promote emergence of financial products or services may have uncertainty over whether the **innovation meets regulatory requirements**

## Virtual Banking

Special **licenses for banks operate purely online** and without a physical branch network

Allows **non-financial firms, and in particular technology companies**, to open a virtual bank, provided they have a strong parent to provide managerial or financial support

# 4: Innovations in infrastructure are underway

India is building a banking ecosystem that enables rapid innovation

## Consent layer

Personal data sharing to qualify and to score

## Cashless layer

Electronic payment, secure authenticated and pervasive, across P2P, B2B, etc.

## Paperless layer

E-sign, e-KYC, digital locker

## Presence-less layer

Unique, digital, secure biometric authentication for 1 billion people

Source: Nandan Nilekani at TiE LeapFrog "Disruption in Financial Services"; https://www.youtube.com/watch?v=aGM5TvAUF00

# 4: Wide-ranging impacts are already observed

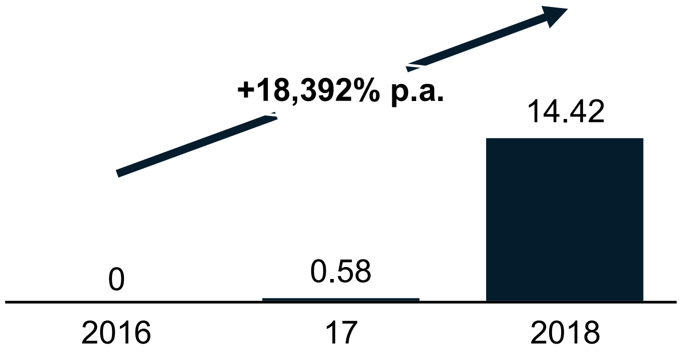
India has launched safe, interoperable payment settlement systems with wide-ranging impact

## UPI

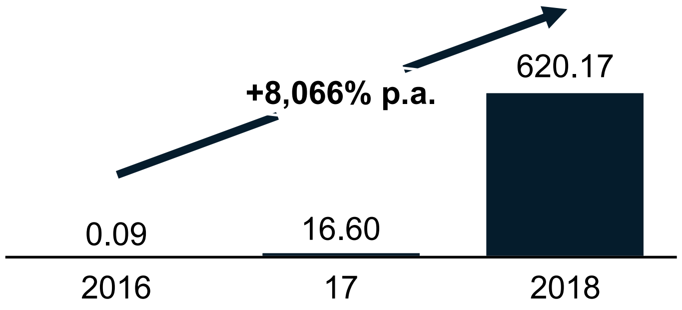
Combines **multiple bank accounts into a single mobile app** by merging several banking features

Allows **immediate money transfer** through mobile devices

**Single Click 2 Factor Authentication**




**Value of Transactions through UPI** (USD bn)




**Volume of Transactions through UPI** (mn)

## Aadhar Pay

Aadhar based authentication services have **digitized key parts of the banking value chain**

Merchant uses **smartphone and certified biometric scanner** (costing ~30 USD) to accept payments

| eKYC | eSign | DigiLocker |
|---|---|---|
| Eliminates physical verification | Digitally sign document with Aadhar | Store and share officials documents |
| 8Mn+ **per day** | 20Mn+ **in last 2 yrs** | 19Mn **uploaded** |

# 5: Non-bank digital attackers are challenging banks for market share

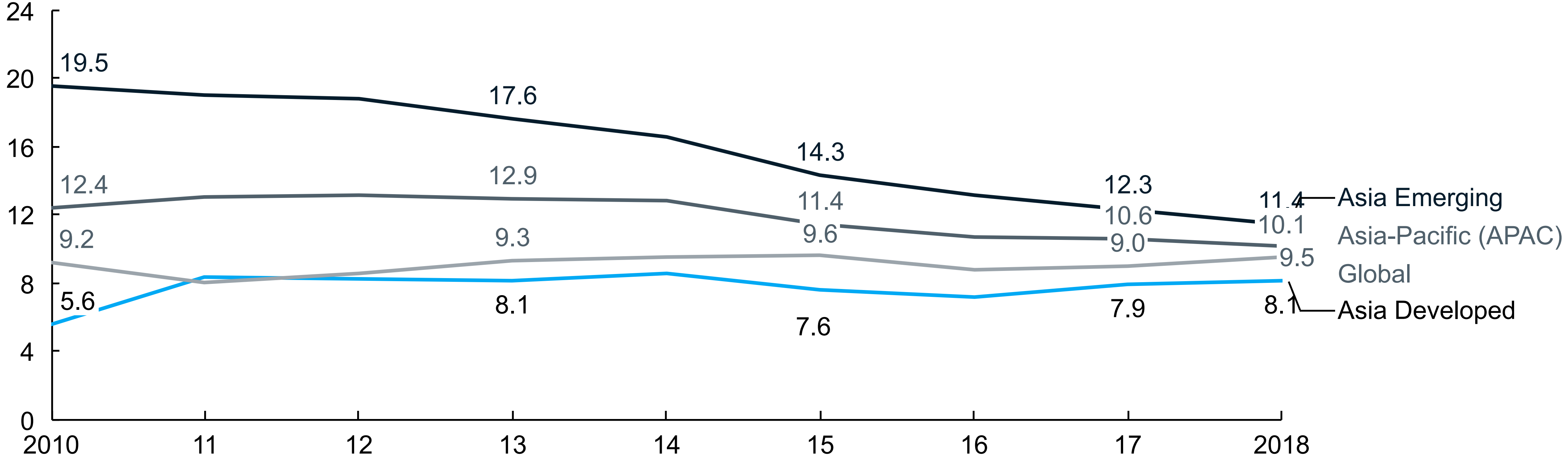
OUTSIDE-IN ASSESSMENT

| Attacker | Revenues ($ bn)[1] | Year launched | Number of customers (mn)[3] | Monthly GTV per active user ($) | Valuation ($ bn)[5] |
|---|---|---|---|---|---|
| WeChat Pay | 5.4[2] | 2013 | 800 | 170-200 | 400 (Tencent) |
| 蚂蚁金服 ANT FINANCIAL | 8.9[2] | 2014 | 650[4] | 250-300 | 150[6] |
| WeBank | 0.9[2] | 2015 | 60 | 180-200 | 20 |
| Grab | 1.0 | 2012 | 36 | ~30[4] | 14.9 |
| Paytm | 0.5 | 2010 | 120 | 15-18 | 13.5 |
| GO-JEK | 0.8[2] | 2010 | 20-25 | ~30[4] | 10 |

1. Latest figures as of 2018 unless otherwise noted 2. as of 2017 3. as of 4Q2018 unless otherwise noted
4. Estimates based on comparable ride-hailing company financials 5. as of 2Q2018 6. Latest figures as of Jan 2019 unless otherwise noted

# 6: Return on average equity of Asia-Pacific banking has been drifting down toward the global average

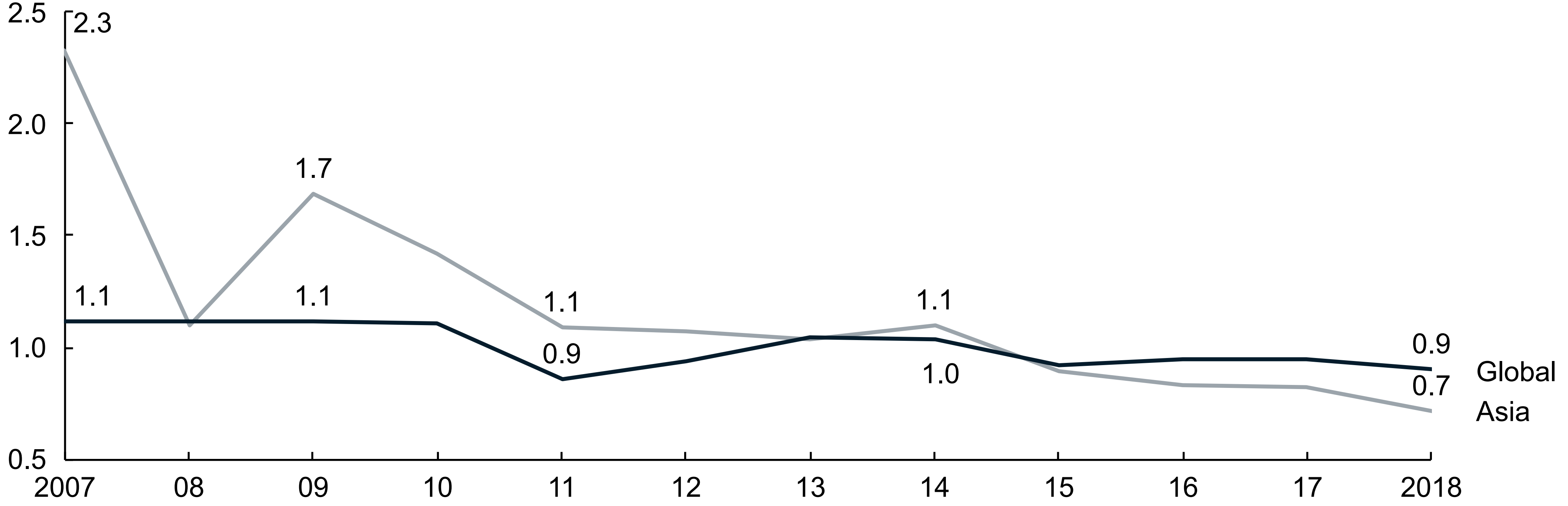
**Return on average equity,** 2010-2018, %




Source: SNL, McKinsey Global Banking Pools

# 6: Banks' price-to-book multiples have declined, reflecting investors' negative expectations

**Price-to-book multiples[1],** 2007-18



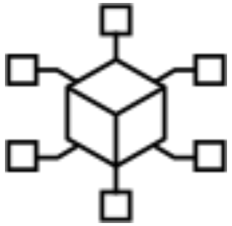

1 Based on a sample of 2,000 listed banks across markets
NOTE: Book value does not exclude goodwill as the data is available only for approximately 60 percent of covered banks

Source: SNL; McKinsey Global Banking Pools

# All these forces converge to drive a fundamental rethink of banking as we know today

Four pillars of rethinking and reinventing the banking model

1 **Partnerships**



2 **Technology**

3 **Data and analytics**

4 **Talent**

# Incumbents are building greenfield digital banks to survive and thrive in the post-digital disruption world

Reasons for incumbents to build greenfield digital banks

- **Enter a new market faster** to access new revenue opportunities
- Branch transactions and network ROI are **sharply deteriorating**
- Deliver **state-of-the-art digital functionality** to customers
- Build a **technology hedge** against legacy infrastructure
- Serve **new customer groups** through much lower cost
- **Experiment with new capabilities** such as analytics or AI
- **Defend against market challengers**, participating instead of conceding

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# Meanwhile, regulatory changes continue to lower barriers to entry, with adoption of open banking under way in 35 markets

## Economies which have adopted, or are adopting, open banking

| | Stage 1<br>Initial steps: Industry consultations, draft regulations | | | Stage 2<br>Transpose to national law | Stage 3<br>Grant licenses | |
|---|---|---|---|---|---|---|
| **Regulator led** | Malaysia<br>USA<br>Canada<br>Mexico | Italy<br>Spain<br>Netherlands<br>Norway | Belgium<br>India<br>Japan<br>Australia | Hong Kong SAR China | United Kingdom<br>Germany<br>France<br>Sweden | Finland<br>Ireland<br>Czech Republic<br>Denmark<br>Hungary |
| **Market led**[1] | Mainland China<br>Thailand<br>Singapore | Indonesia<br>South Korea<br>Switzerland | Turkey<br>Russia<br>Taiwan | Argentina<br>Brazil<br>South Africa | UAE | |

1. Markets in which banks and non-banks lead the move to open banking, with regulators playing a more consultative role

Source: Press search, Expert interviews

# Effective Virtual Banking needs to be enabled by effective digital-only onboarding of customers

| Element | Description |
| --- | --- |
| **E-KYC** | Banks can **digitally verify customer identification**, using camera or biometric inputs (both via smartphone), enabling **rapid scale-up** of digital offerings and **seamless user experience**<br><br>**Standards** should **be high but achievable** with current best-in-Asia technology without requiring physical touchpoint. Requires to find **balance** between **ensuring sufficient veracity to prevent misuse** and enabling banking players (both Virtual Banks and incumbents) to **launch products and operating models that rely on e-KYC**<br><br>**Product offerings could be restricted** to increase confidence (e.g. lower deposit, transaction limits) |
| **E-Consent** | Customers can **digitally authorize banks** to perform credit history checks with national credit bureau, facilitating **(near) real-time assessment** of applicant creditworthiness<br><br>Consent previously granted (offline with wet signature) should be **digitally renewable** and **transferrable between institutions** on customer request |
| **Digital signature** | Customers can **digitally sign applications** for new financial products like loans, **reducing effort/access threshold** for financial services |

**Without effective online-only onboarding mechanisms, virtual banks have traditionally had significant challenges to scale customer acquisition**

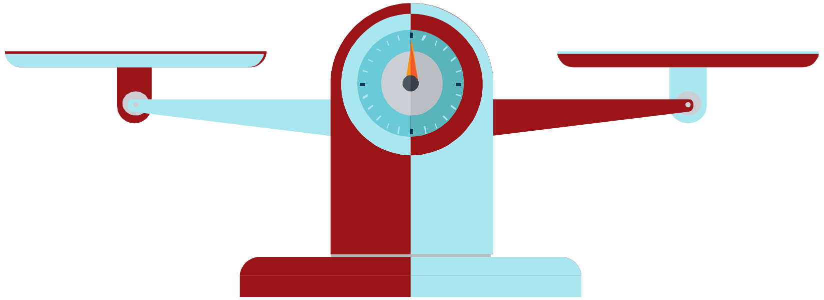
# In introducing virtual banking regulation, there is a clear need to balance competing objectives for regulators

## Encouraging financial innovation & inclusion

- **Driving more innovation across the industry**, as barriers to entry are lowered and differentiation across quality, product or segment increases
- **Improving access to financial services for consumers & small businesses** (e.g. financing)
- **Increasing competitiveness of the financial services sector**, as increased competition through new entrants drives customer focus & operational efficiencies

## Ensuring long-term financial sector sustainability

- **Protecting consumers and maintaining market integrity** by ensuring new entrants meet standards of financial prudence
- **Permitting meaningful profitability and long-term sustainability** of sector by allowing incumbents to earn sustainable returns on capital
- **Ensuring systemic stability** by actively managing the competitive impact of foreign entrants entering the Malaysian banking space



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# Three main archetypes of digital banking businesses are observed

NON-EXHAUSTIVE

| Archetype | Description | Typical economic logic | Bank examples |
|---|---|---|---|
| **A Simple everyday banking solutions** | Simple and user-friendly customer experience and design for average consumer. With access to core banking products | Focus on rapid customer acquisition at a lower cost structure than incumbents/traditional banks; simple products such as current/savings accounts, payments, cash loans | Jenius; digibank by DBS |
| **B Specialized product/ segment-focused plays** | Provision of 1-3 high value products where the company has an 'edge' | Focus on verticals or a specific target segment usually lending creating a better experience, lower open and lower risk costs | Richart by Taishin Bank; AXIS BANK; Aditya Birla Payments Bank |
| **C Ecosystem-linked plays** | Partnership-driven play with financial & non-financial products | Monetize a large ecosystem linked customer base with lower customer acquisition costs, better use of data | yono SBI; WeBank 微众银行 |

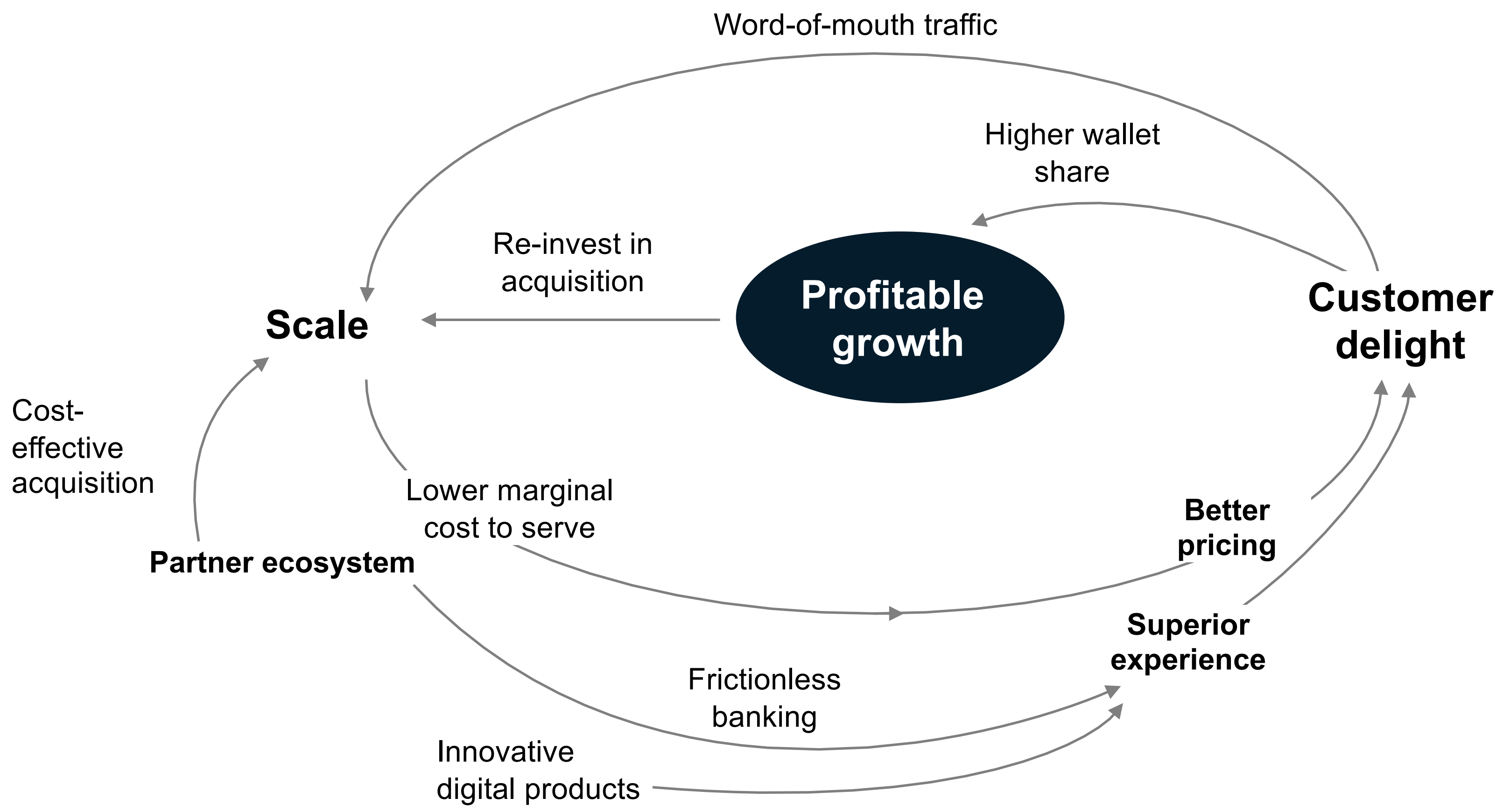
# Some key lessons learned

SELECT EXAMPLES

| | |
|---|---|
| **Minimum scale** for a successful digital attacker bank is **>300k customers**, given significant investments into digital platform, and relatively stable operating expenses | Richart, air bank |
| A **step change in convenience** and **attractive pricing** is a most of the time a necessary (but not always sufficient) precondition for success | N26, Tinkoff Bank, monzo |
| **Profit contribution** stems **primarily** from digital lending (Consumer & SME Finance); tough to make money on deposits (given need for high yield, and competitive moves) | Marcus: by Goldman Sachs, WeBank, new10 |
| **Initial customer acquisition** is **easy; driving continued engagement or earning primary bank status** requires building compelling transaction capabilities and strong marketing | ING, yono SBI, digibank, Paytm |
| Close linkage to an **ecosystem** is a major benefit, but only if **internal incentives, data sharing agreements** and **integration into use cases/customer journeys** are fully unlocked | Paytm, kakaoBank, 中国平安 PING AN, 蚂蚁金服 Ant Financial, WeBank |
| Building **strong innovation capabilities** (own key tech, data & analytics at the core) is essential to continuously deliver a strong proposition and stay ahead of new competitors | BankMobile, Moven, jenius, Arival, Paytm, Richart |
| Capital availability quickly becomes a challenge, given **RoE expectations** and shareholder structures – finding innovative models (e.g. loan syndication) becomes crucial to scale | kakaoBank, WeBank |

# Profitably growing a digital banking business requires setting up a 'virtuous cycle' of scale and customer delight

## Greenfield digital financial services business "flywheel"



# Launching a successful digital bank business depends significantly on scale and go-to-market strategy

Illustrative

## Launching the business

**IT Capex to build**

US$ 30[1] – 50 M

**Time to launch**

8 - 14 months

**Customer acquisition cost**

USD 50-150

**Share of IT spend in Capex**

70 - 80%

## Running the business

**Steady state ROE**

15–30%

**Accumulated losses before BE**

US$ 70 - 110M

**Break-even (BE)**

2–4 years

**Steady state C/I**

25–50%

**Build team size[1]**

30-100

**Run team size[1]**

50-150

1 Includes team members from vendors, design, technology, risk, compliance, risk, innovation. Actual #s could move up depending on the expansion of the product suite

Source: Interviews with teams that have launched greenfield digital businesses

# Building and launching a Virtual Bank takes 6 - 18 months depending on the business and choice of MVP[1]

| | | | | |
|---|---|---|---|---|
| **Key phases** | **Strategic design** | **MVP build** | **Full product build** | **Scale** |
| **Key milestones/ stage-gates** | Go/no-go decision | MVP launch | Scale-up decision | |
| **Timeline** | **4** weeks to **12** weeks | **12** weeks to **24** weeks | **24** weeks to **36** weeks | Ongoing ... |

1. Minimum viable product

# There are 7 elements in approaching to design and build a digital bank

# Thank you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