

A Work Project, presented as part of the requirements for the Award of a Master's degree in Finance from the Nova School of Business and Economics.

# How can Fintech serve the unbanked in Sub- Saharan Africa?

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Work project carried out under the supervision of: Professor Miguel Pita

05-01-2020

# Abstract – *How can Fintech serve the unbanked in Africa?*

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Sub-Saharan Africa (SSA) is the global leader in mobile-money innovation, adoption and usage. However, it is also one of the regions with the largest unbanked population, so there are still many people to serve.

Digital technologies may reduce this population by partnering with incumbent financial services, helping in achieving the World Bank's goal of full financial inclusion by 2020, by creating new digital products that truly solve the poorest populations' problems.

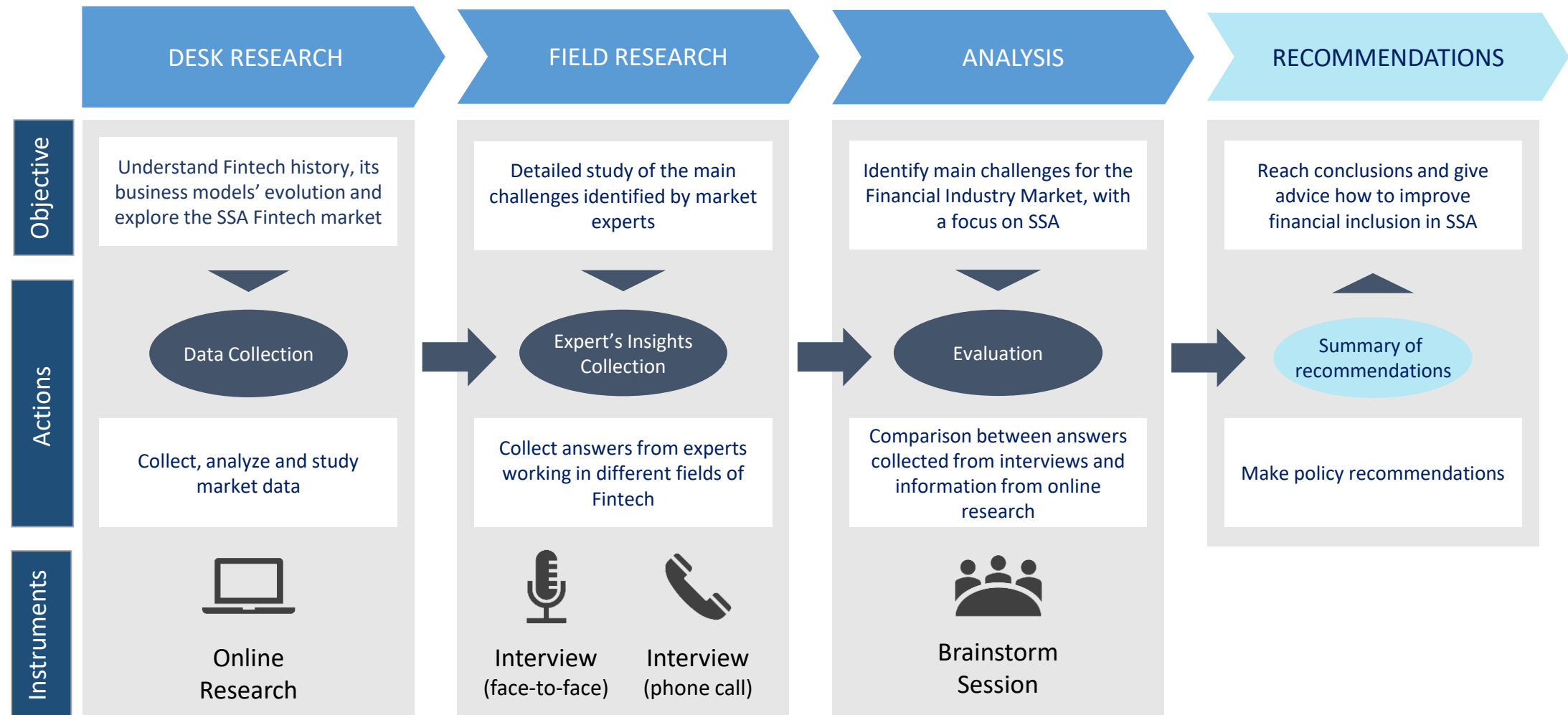
Fintech may leverage the widespread smartphone adoption to offer financial services in Sub-Saharan Africa.

However, governments must reduce barriers to improve financial inclusion through economic digitalization.

**Keywords:** history, partnerships, unbanked, inclusion

# How can fintech serve the unbanked in Sub-Saharan Africa?

## This was the methodology used to answer this question...



# How can fintech serve the unbanked in Sub-Saharan Africa?



How is the Fintech market developing and what do we expect for the future?

- The market gained traction *circa* 2005 and the United States of America (USA) are it's biggest geography
- It is expected to triple in size and we believe there will be a *survival of the fittest* phase, with players already financed and with positive cash-flows in the forefront



How is Fintech shaping the financial industry business models?

- Fintech complements banks' strengths by meeting new digital customer preferences
- Synergies between incumbents and new players can lower the cost to serve the unbanked



What are the opportunities for Fintech in Sub-Saharan Africa (SSA)?

- Sub-Saharan Africa is a land of opportunities for Fintech where it can have a positive impact in financial inclusion
- Only a restricted lot of countries in Sub-Saharan Africa have the required resources to make Fintechs thrive in the near future



How is Fintech creating value in SSA?

- Mobile network operators's (MNOs) large customer base allows them to lead the transition from informal finance to formal financial services
- Network effects accelerate financial inclusion: financial services finance technology and technology can deliver financial services faster



Challenges and Recommendations

- Countries would benefit if government focused on strengthening education, improving infrastructures, regulations and creating conditions for investment
- Fintechs would gain from focusing on customer-product fit and building partnerships, while improving country knowledge and decision making

Fintech can leverage the widespread smartphone adoption to offer financial services in Africa.  
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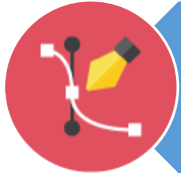


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# Executive Summary



## 1.1 & 1.2 Fintech definition and history

- There are several definitions of Fintech; However, all consider the merge between Finance and Technology
- Fintech precedes its own definition; Its had several development stages, each different impacts on modern finance
- Fintech 3.0 marks the beginning of a Fintech sector independent of financial institutions



## 1.3 & 1.4 Fintech market figures and Framework

- The USA represents the biggest fintech market, accompanied with the largest investment figure
- M&A points to some market consolidation while there has been a higher focus on VC
- Players in the Fintech space may be defined in 3 dimensions – by Business Function, Technology and Institution



## 1.5 & 1.6 Fintech market maturity stage and Regulation

- The market is projected to almost triple in size in 5 years, with growth being led by existing players. Also, investors are focusing on mature companies
- Operations-wise, fintechs show maturity, with positive EBITDA margins
- Fintech regulatory sandboxes are being used to promote innovation while improving regulations. There are different regulatory approaches towards Fintech



## 1.7 Future developments

- Some factors point towards a financial crisis which might hinder the fintech market through lack of financing
- Consequently, there is a main probable scenario, namely a “survival of the fittest” one

Keywords of module 1: history, market, growth, future

## 1.1 FINTECH DEFINITION

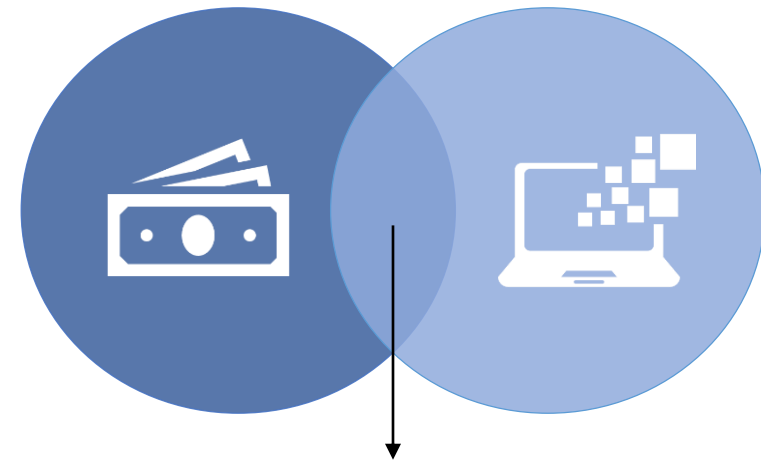
# There are several definitions of Fintech However, all consider the merge between Finance and Technology

*Computer programs and other technology used to support or enable banking and financial services.*<sup>1</sup>

The use of **technology to provide new and improved financial services**<sup>2</sup>.



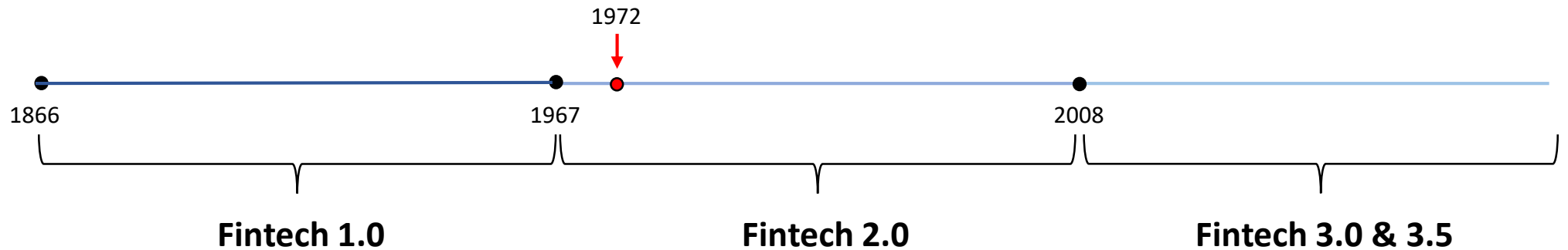
A new financial industry that applies **technology to improve financial activities**<sup>3</sup>.



**Financial technology, combining bank expertise with modern management science techniques and the computer**<sup>3</sup>.

## 1.2 FINTECH HISTORY (1/2)

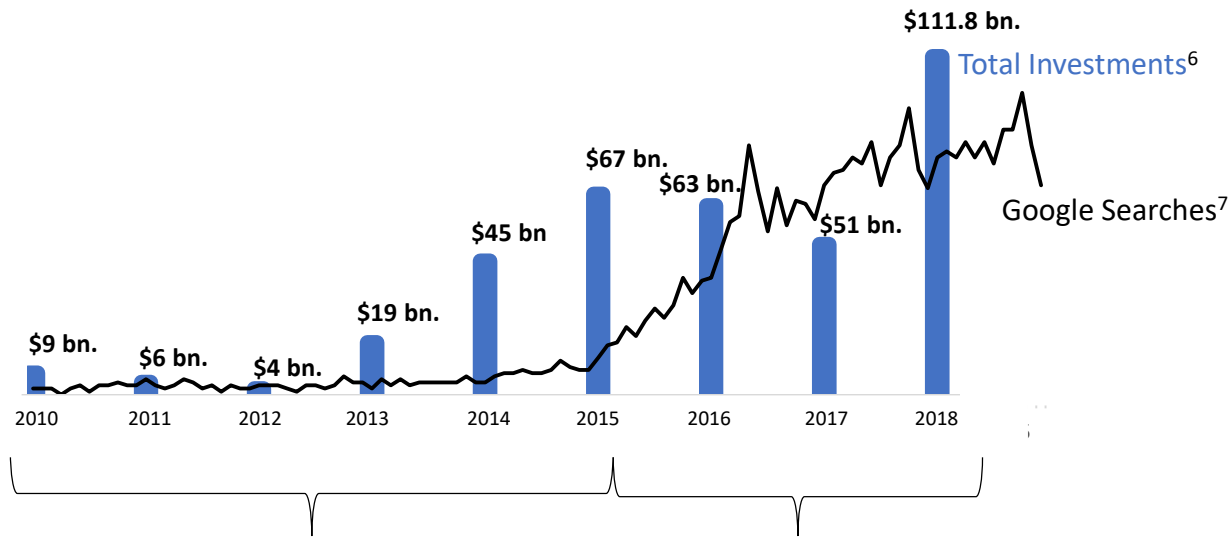
**Fintech precedes its own definition;  
It had several development stages, with different impacts on modern finance**



<b>Focus</b>	Creating the necessary <b>physical Infrastructures</b>	From <b>analog to digital</b> ; IT development	Emergence boom of <b>tech-based start-ups</b> competing with financial institutions
<b>Examples</b>	Transatlantic Cable; Telegraphs	ATM; Digital stock exchange; Online banking	Neobanks (Revolut, N26)
<b>Impact</b>	Global connectivity	Birth of Modern Banking and its branch business model	New competitive landscape (3.0); Focus on financial development (3.5)

# Fintech 3.0 marks the beginning of a Fintech sector independent of financial institutions

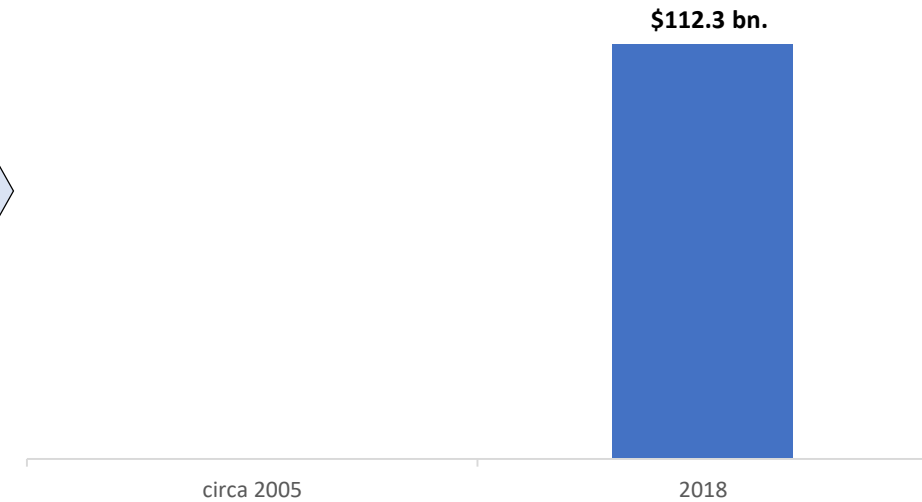
1. There was a massive growth both on the invested amount and consumer interest



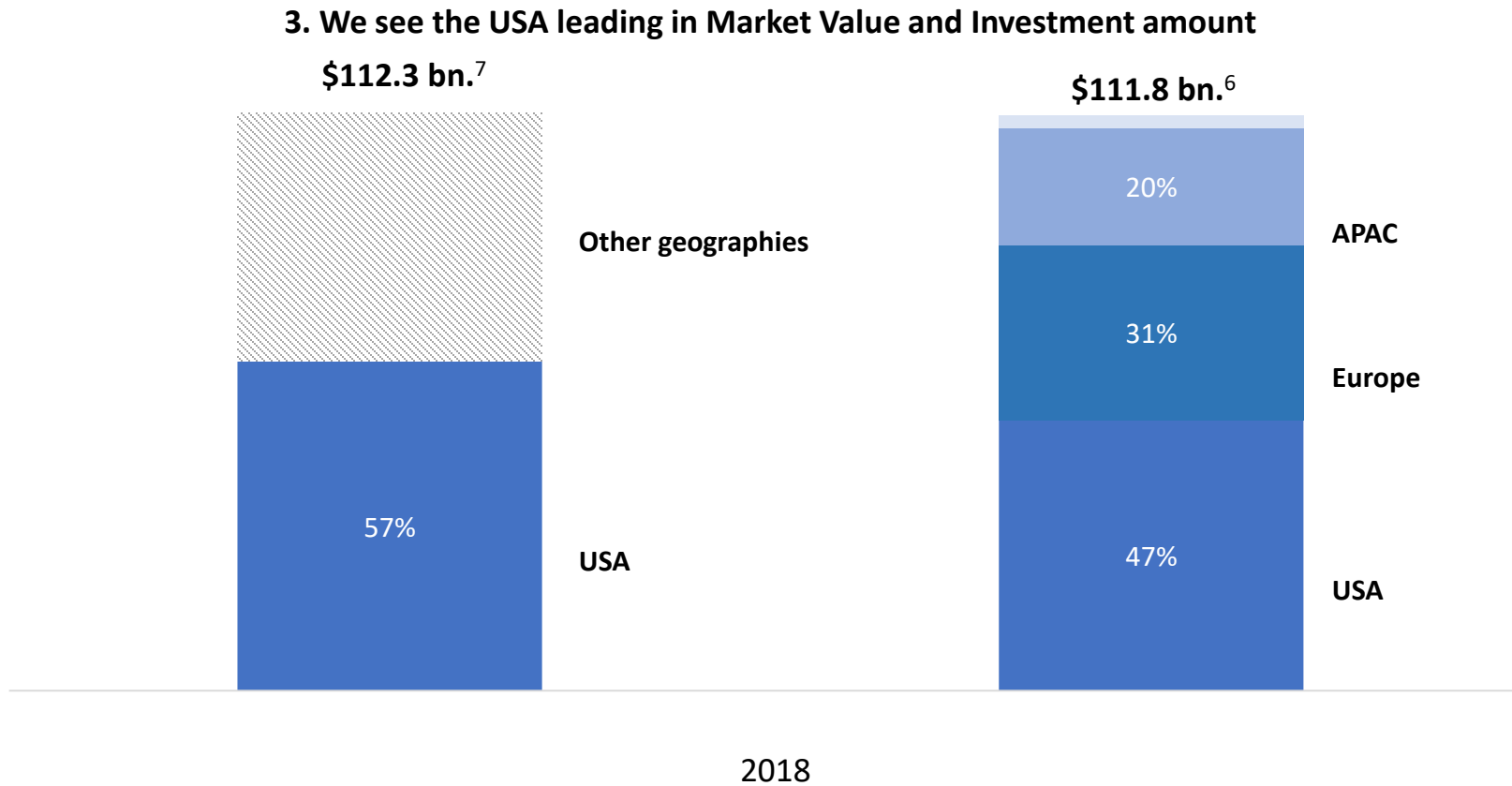
- CAGR: 49% for Investments
- CAGR: 58% for Google Searches

- CAGR: 19% for Investments
- CAGR: 22% for Google Searches

2. The Market started gaining traction in 2005 and is now worth \$112.3 bn.<sup>8</sup>

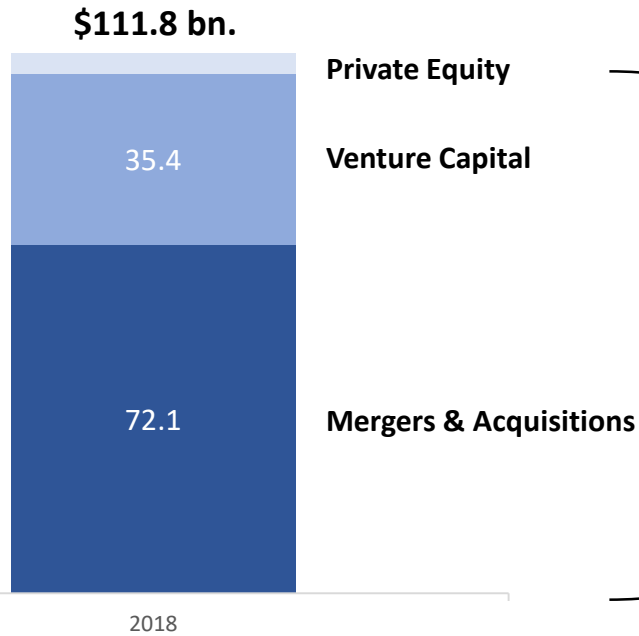


## The US represents the biggest fintech market, accompanied with the largest investment figure



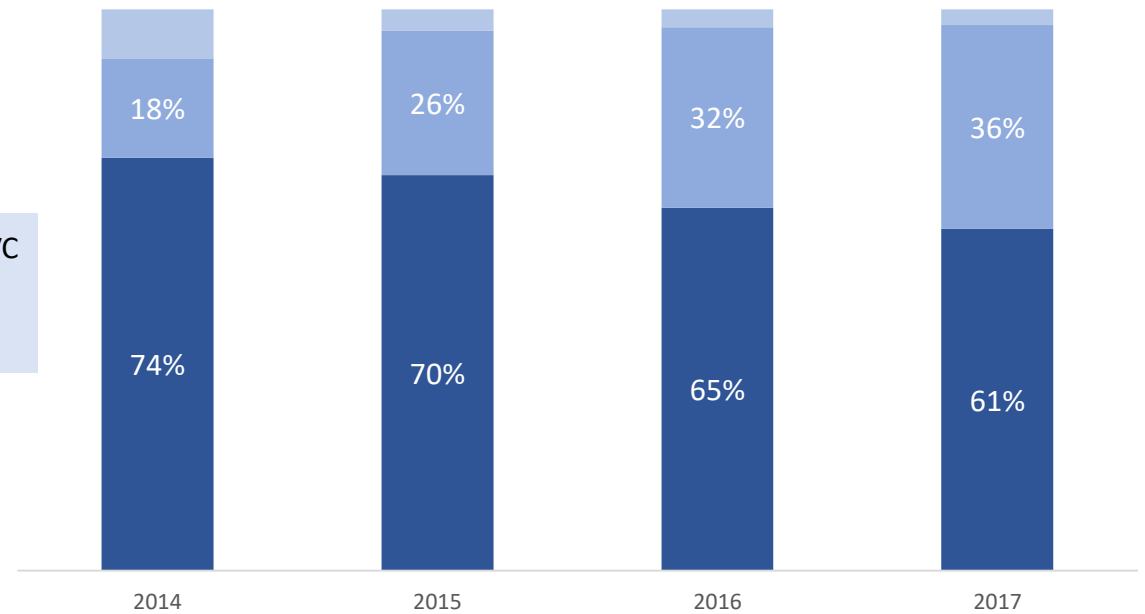
# M&A points to some market consolidation while there has been a higher focus on VC.

4. M&A and VC represent 96% of Investments made in 2018...

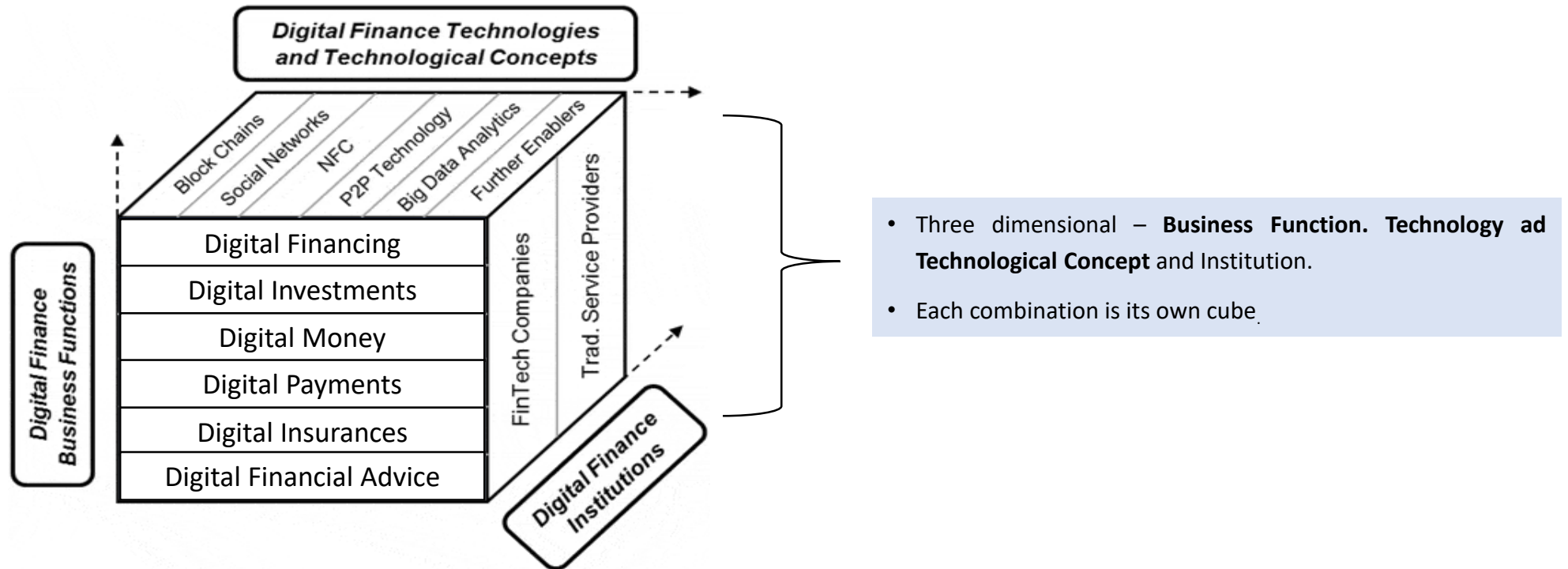


• M&A and VC represent 96.15%

5. ... and have represented 90+% for the last 5 years.



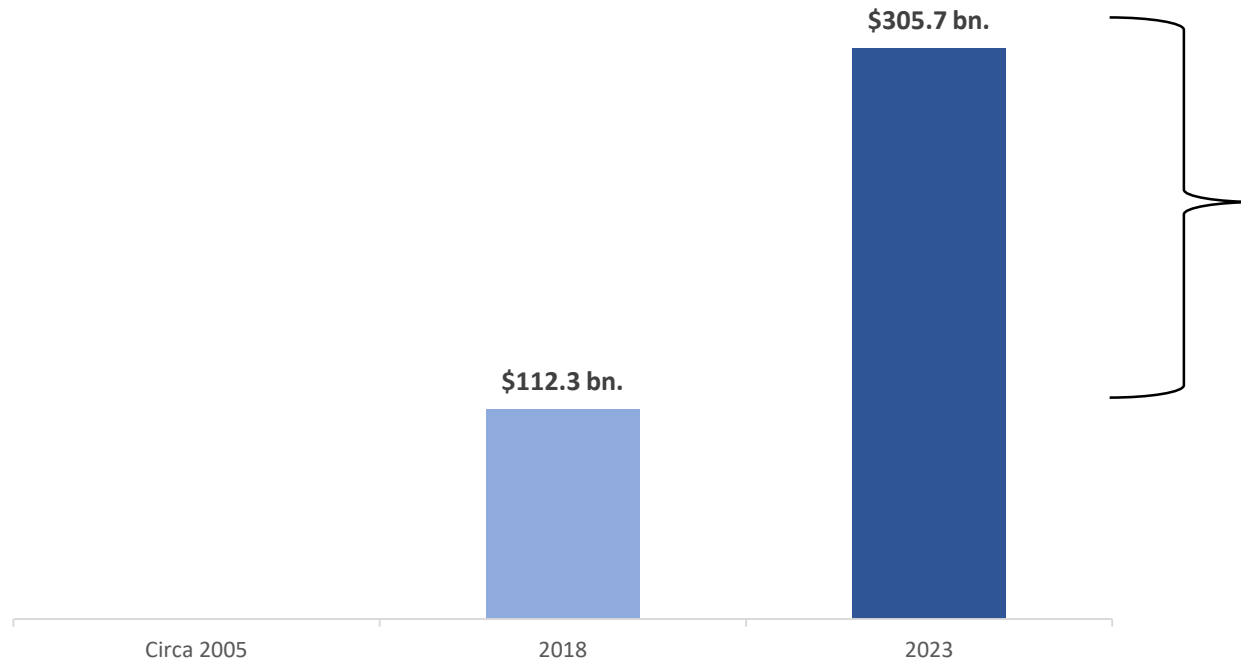
## Players in the Fintech space may be defined in 3 dimensions – by Business Function, Technology and Institution



## 1.5 FINTECH MARKET MATURITY STAGE (1/5)

The market is projected to almost triple in size in 5 years, with Digital Payments leading this growth.

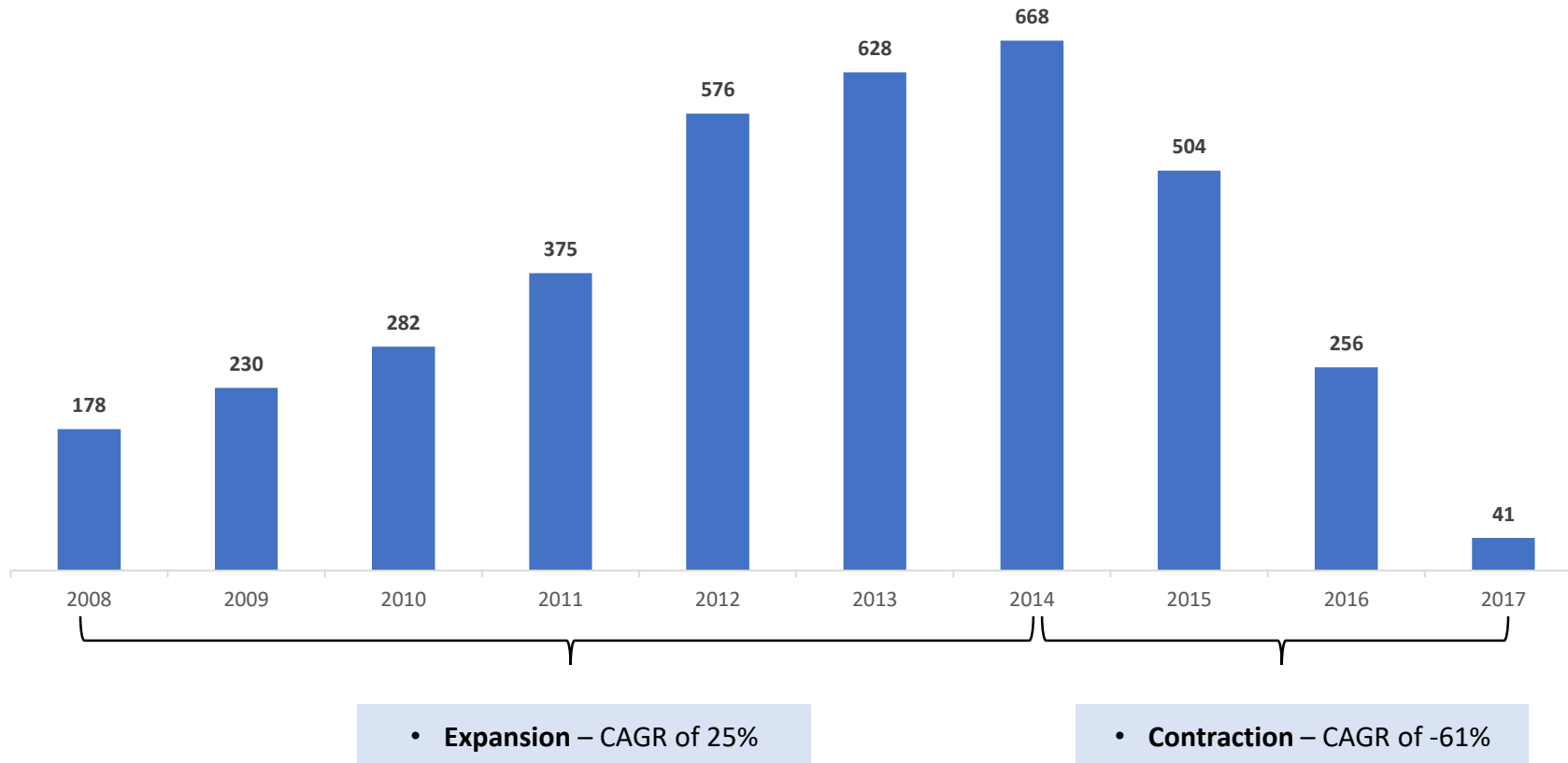
6. The Market is expected to almost triple in size, with a 22% CAGR from 2018 to 2023.



- Digital payments will lead this growth – 68% of market value by 2023.
- North America will lead, representing 26% of the market, but APAC will grow the most – a CAGR<sub>18-23</sub> of 43%.

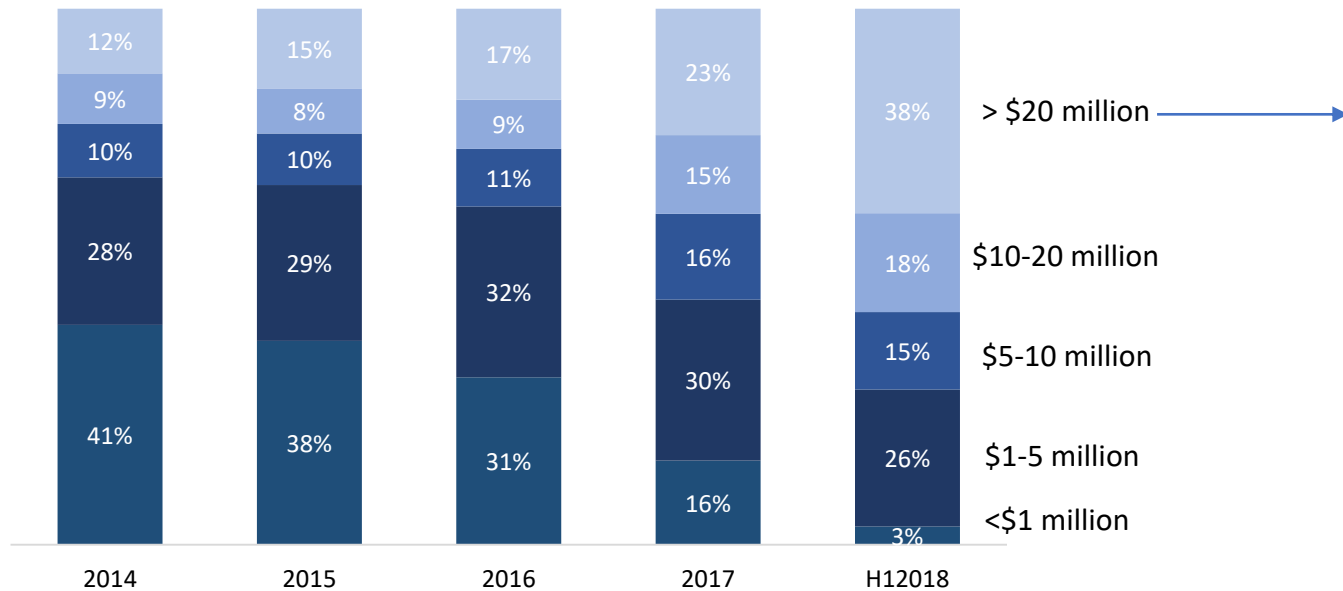
However, this growth is expected to be led by existing players...

7. Company creation is decreasing drastically since 2014

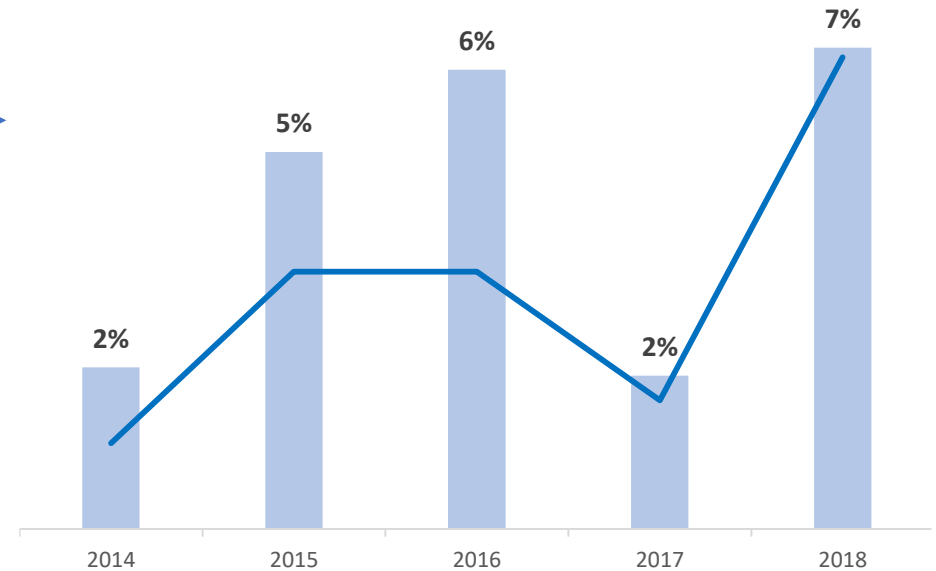


## ...with each player engaging more in M&A and thus having a bigger market value

8. Deal size has been steadily increasing, with most deals now being at \$10+ million<sup>11</sup>

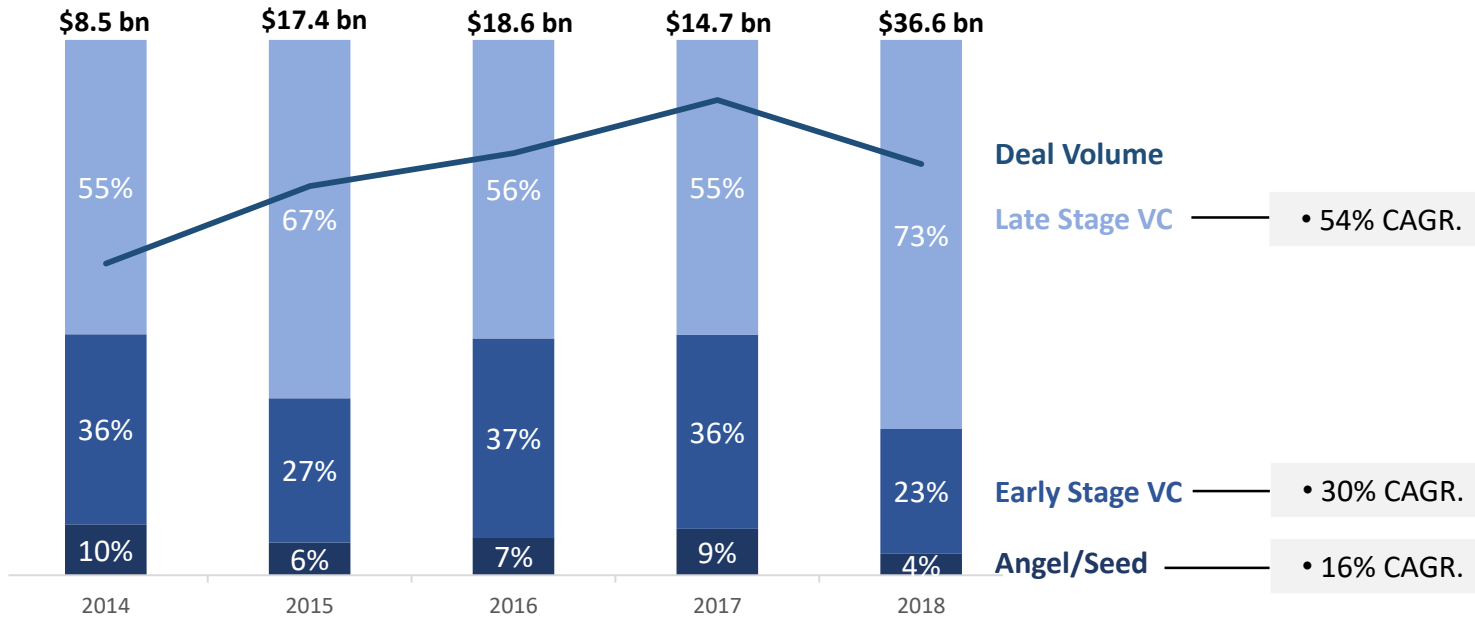


9. With mega-deals (\$1 bn.+ ) increasing in number and weight<sup>12</sup>

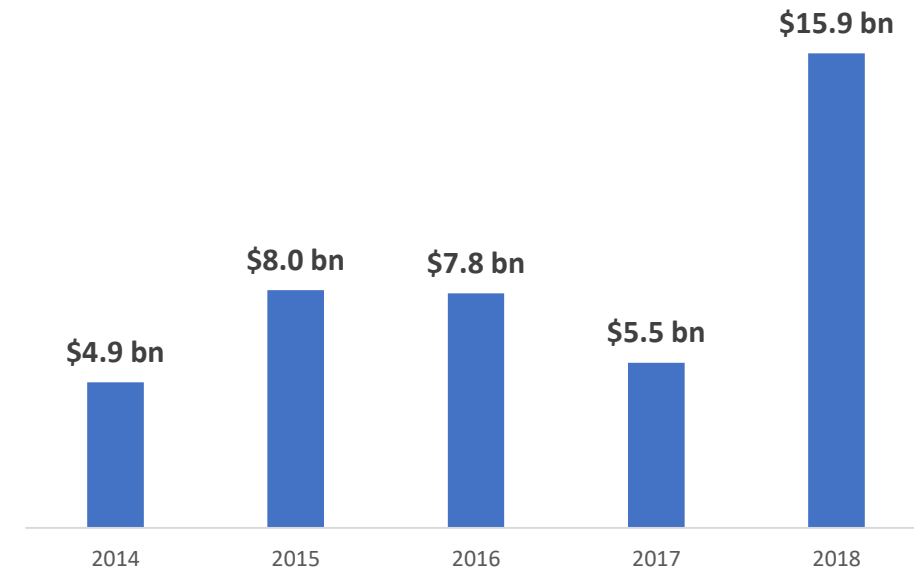


## Investor interest is focusing on mature companies, with better financials as opposed to backed by founders' profile.

10. Late Stage VC was the one which grew the most and gained weight, when compared to earlier VC



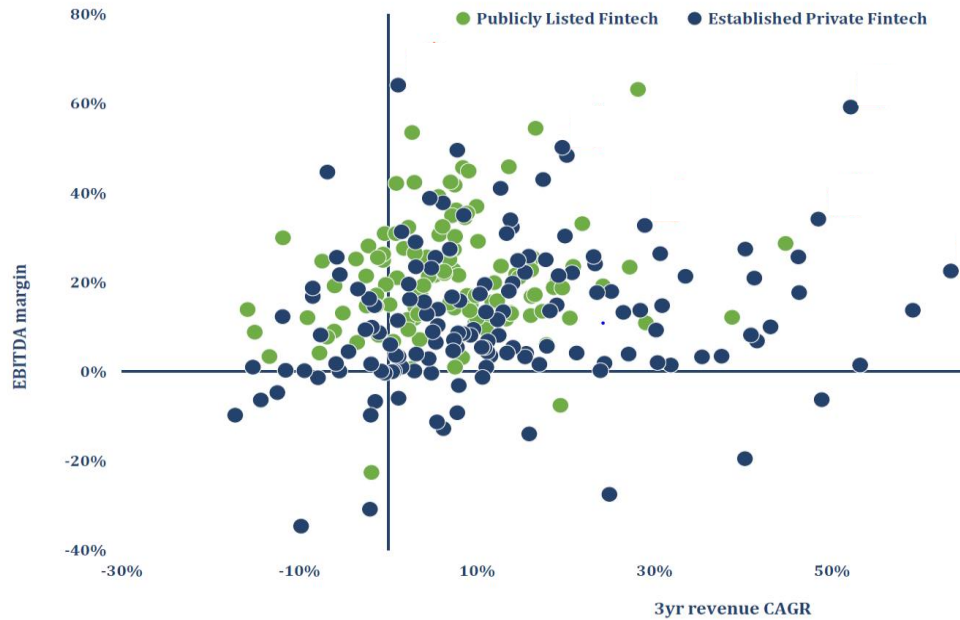
11. Average financing is increasing, even though total VC amount is increasing as well.



## 1.5 FINTECH MARKET MATURITY STAGE (5/5)

# Operations-wise, fintechs show maturity, with EBITDA margin being positive, on average

12.



- 8 to 14 years to become profitable<sup>14</sup>

13.

### Median EBITDA Margins



- 30% reporting a loss<sup>15</sup>

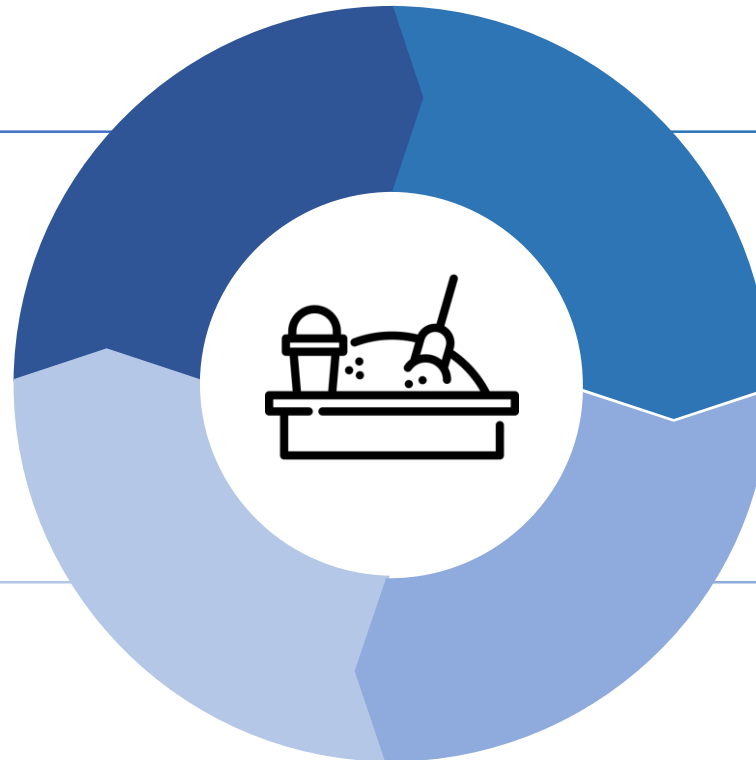
## Fintech regulatory sandboxes are being used in order to promote innovation while improving regulatory learning and measures to protect customers

### Definition<sup>16</sup>

- *A framework set up by a financial sector regulator to allow small-scale, live testing of innovations by private firms in a controlled environment (operating under a special exemption, allowance, or other limited, time-bound exception) under the regulator's supervision (CGAP, 2017).*

### Geographies<sup>17</sup>

- **Over 50 jurisdictions** have established or announced financial regulatory sandboxes.



### Potential Benefits<sup>17</sup>

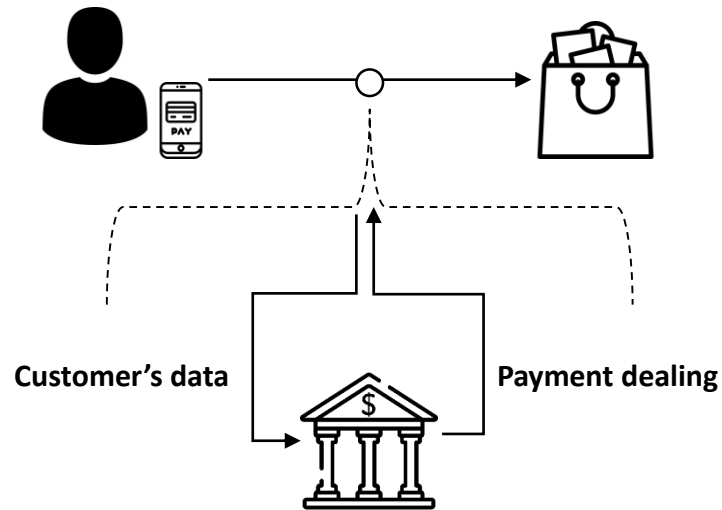
- Innovation **market message**
- **Boost to innovation and competition**
- **Regulatory learning**

### Potential Risks<sup>17</sup>

- **Unlevel playing field** versus incumbents in **Human Capital, Financial Capital and Innovation**

# EU regulation levels the the playing field and acknowledges new fintech market players.

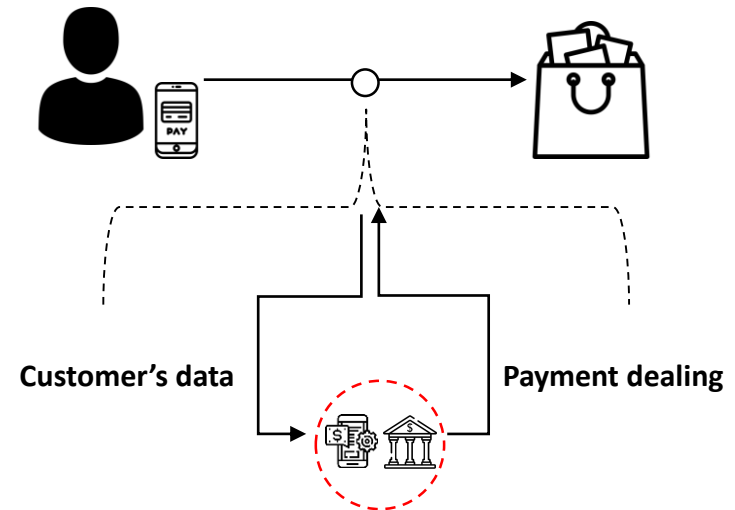
**Before:**



- As they are the ones who deal with payments, banks keep customer's data.
- **This allows for the existence of a costume touchpoint, having a detailed customer characterization and thus for future cross-selling.**

**After:**

The Payment Services Directive II



- Banks become mere account providers, with fintechs dealing with payments, but most importantly **with customer data.**
- **Customer touchpoint and cross-selling opportunities lost by banks and gained by fintechs!**

## Whilst China seems to strongly regulate fintechs, it also offers incentives for high-tech companies. The US have a *laissez-faire* approach, except for data.



There are **Sandboxes** at a state-level (eg: Arizona).



**No fintech-specific regulation** at state or federal level.



**Several federal laws** regulate how fintechs may **collect, use and transmit personal data** (Gramm-Leach-Bliley Act (GLBA), Electronic Communications Privacy Act (ECPA), among others).



There are **no Sandboxes**.



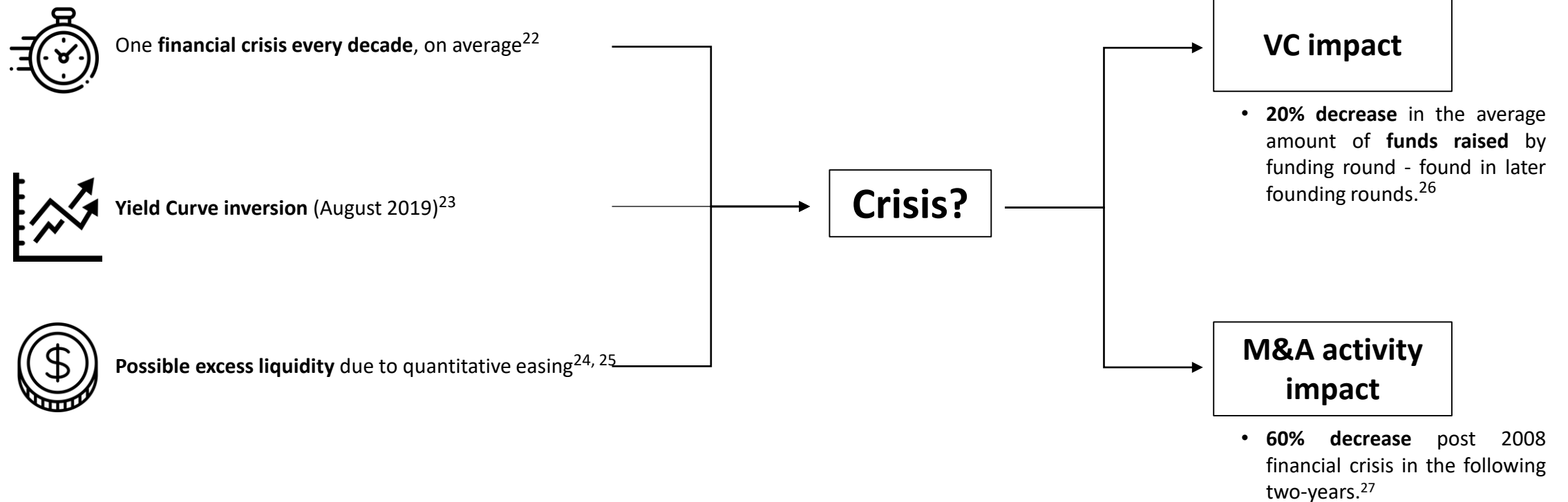
**Several fintech-specific measures and guidance** for different service offerings (eg: Administrative Measures for Payment Services Provided by Non-financial Institutions, among others). Also, **tax incentives and subsidies for high-tech companies** recognised by the PRC's government.



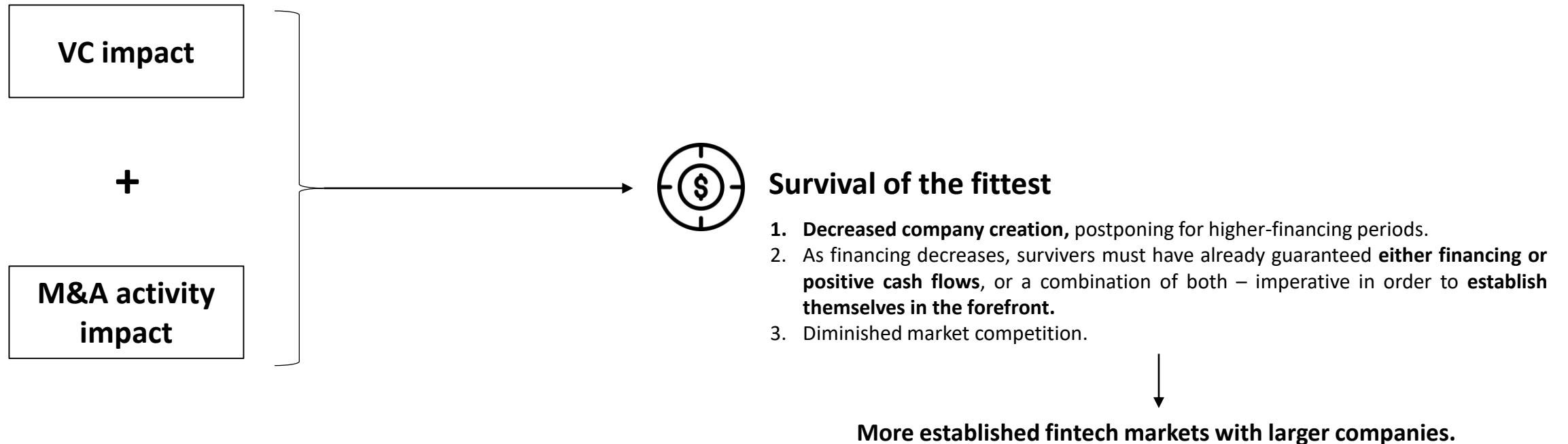
**Several laws** regulate how fintechs may **collect, use and transmit personal data** (General Part of the PRC Civil Law, Cyber Security Law, among others).

## 1.7 FUTURE DEVELOPMENTS (1/2)

# Some factors point towards a financial crisis which might hinder the fintech market through lack of financing.



In the event of a crisis, we believe that there will be a “survival of the fittest” outcome.



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# Challenges and Recommendations

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# Countries would benefit if government focused on strengthening education, improving infrastructures, regulations and creating conditions for investment

Governments	Challenges	Recommendations
	<ul style="list-style-type: none"> <li>• <u>Education</u>: Lack of <b>financial and digital literacy</b></li> <hr/> <li>• <u>Infrastructures</u>: <b>Limited internet access</b> and reliance on traditional USSD communication</li> <hr/> <li>• <u>Regulation</u>: <b>non-uniform, hindering digital economy</b>, with MNOs being subject to considerably more scrutiny than their competitors and some Fintech segments being highly unregulated</li> <hr/> <li>• <u>Investment</u>: Not enough <b>venture capital investment</b> and market dominance by few players</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Strengthen the financial education</b> of populations by facilitating the creation of education centers <i>"(...) include the masses and educate them by creating awareness regarding finance and how technology can make huge strides at addressing poverty"</i> Gareth Liddell, Head of Delivery of BNRy in South Africa</li> <hr/> <li>• Improve financial and technological infrastructures: incentivise service providers to deliver the <b>widest possible "internet broadband and mobile coverage"</b> and <b>reduction of smartphone's cost of acquisition</b></li> <hr/> <li>• The Government's approach should <b>promote the digital economy</b>, and thus create a <b>uniform and specific regulatory framework</b> for all fintech products <i>"(...) clarifying the regulatory framework regarding consumer protection and financial liability and facilitating the establishment of tech clusters."</i> João Gaspar Marques, Member of the Board of Advisors at the Africa Fintech Summit</li> <hr/> <li>• Governments should create and increase incentives to venture capital to foment competition and efficiency <i>"Providing tax benefits during the start-ups' first years (...) is also of paramount importance."</i> João Gaspar Marques, Member of the Board of Advisors at the Africa Fintech Summit</li> </ul>

## Fintechs would gain from focusing on customer-product fit, on building partnerships, while improving country knowledge and decision making

	Challenges	Recommendations
Companies	<ul style="list-style-type: none"> <li><b>Partnerships:</b> differences in the organizational structure between fintechs and traditional institutions</li> </ul>	<ul style="list-style-type: none"> <li><b>Focus on synergies</b> which might help banks reducing costs and fintechs gaining scale</li> </ul> <p><i>"(...) find partnerships with other companies that share your goals and can help you achieve them"</i> João Gaspar Marques, Member of the Board of Advisors at the Africa Fintech Summit</p>
	<ul style="list-style-type: none"> <li><b>Country knowledge:</b> lack of geography-specific knowledge regarding African countries</li> </ul>	<ul style="list-style-type: none"> <li><b>Hire country-specific experts</b></li> </ul>
	<ul style="list-style-type: none"> <li><b>Product:</b> Lack of costumer-product fit, lack of focus on costumers' demand and over-focusing on profits</li> </ul>	<ul style="list-style-type: none"> <li><b>Focus on the real necessities of costumers</b> while having the flexibility to change when customer demands shift</li> </ul> <p><i>"(...) be transparent and adaptable and mostly, listen to your user's feedback"</i> João Gaspar Marques, Member of the Board of Advisors at the Africa Fintech Summit</p>
	<ul style="list-style-type: none"> <li><b>Management decisions:</b> Sometimes decisions are made based on success stories in other countries, and not in the specific country</li> </ul>	<ul style="list-style-type: none"> <li>Country-specific study and focus, not considering Africa as one cultural identity but multicultural</li> </ul> <p><i>"business decisions need to be made within the context of the country the solution will apply to (...) the African market cannot be addressed with a cut and paste solution"</i> Gareth Liddell, Head of Delivery of BNY in South Africa</p>

## We may conclude Fintechs that partner with existing financial institutions have a higher chance of thriving

### Better Product suitability

*“Fintechs that partner with local financial institutions I believe have a **much greater chance of success**. I would recommend finding a country specific partner that can have some influence in terms of making the product suitable for their market and share insights into how the market adopts certain solutions.”*

Gareth Liddell, Head of Delivery of BNRV in South Africa

### Greater security and exposure

*“There is certainly a lot to benefit from building multi-level partnerships (...) a fintech start-up that is given enough operational freedom while securing financial backing from an established institution can benefit from greater security, exposure, and market outreach”*

João Gaspar Marques, Member of the Board of Advisors at the Africa Fintech Summit

### Reduce costs and improve quality

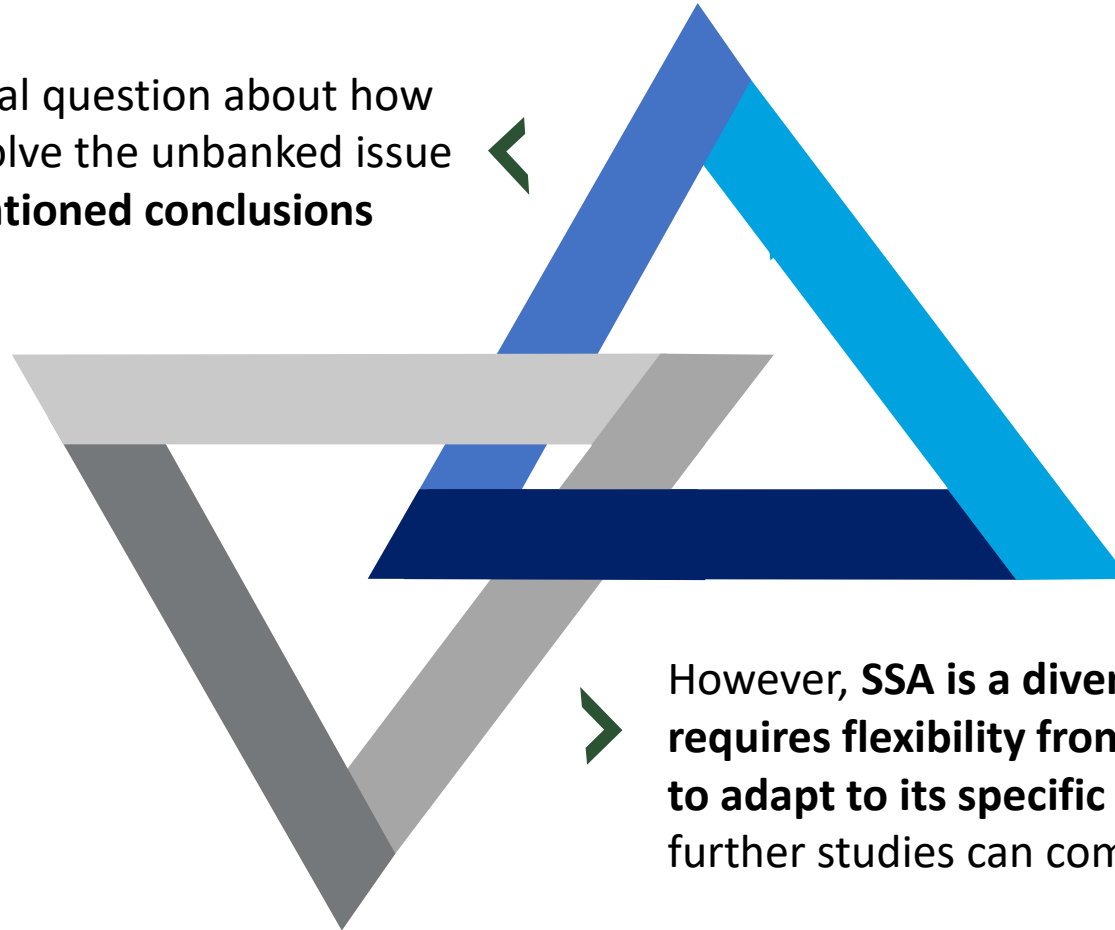
*“(...) some Financial institutions have the advantage of having a license that other Fintechs don't have, as well as experience. Yes I believe it would be an advantage and they will have a higher chance of thriving as they can also share costs/overheads to improve the quality of service and get more profits.”*

Ashley Chengeto Rusike, Head of Payment Relations of Mukuru in South Africa

## While our conclusions provide the foundations to government and companies' action plans, these should be tailored to meet country-level specific needs

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We answered our initial question about how Fintech may help to solve the unbanked issue through the **aforementioned conclusions**



However, **SSA is a diverse region that requires flexibility from Fintech companies to adapt to its specific and local needs**, thus further studies can complement this analysis

## References – *How is the Fintech market developing and what do we expect for the future?* module

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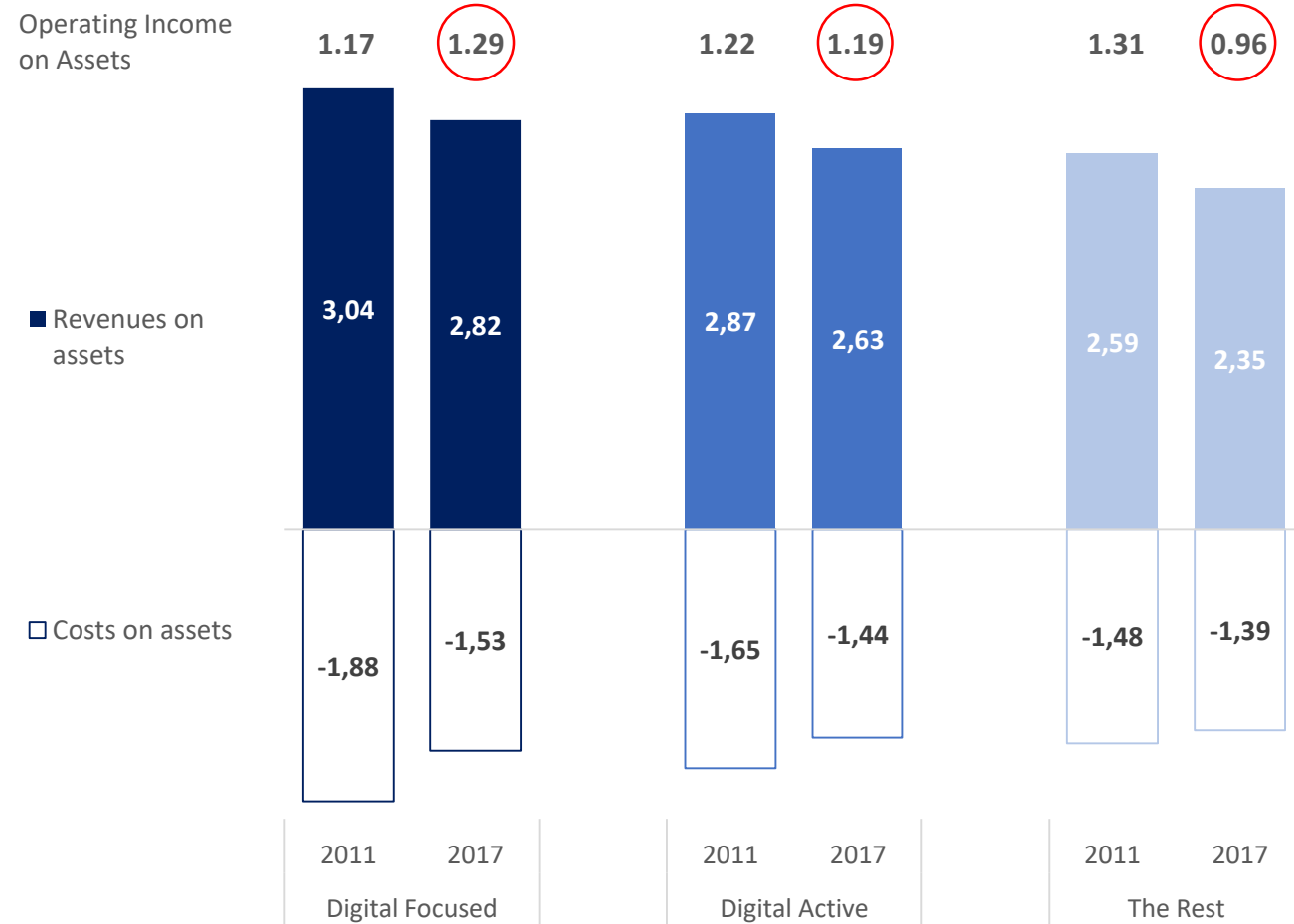
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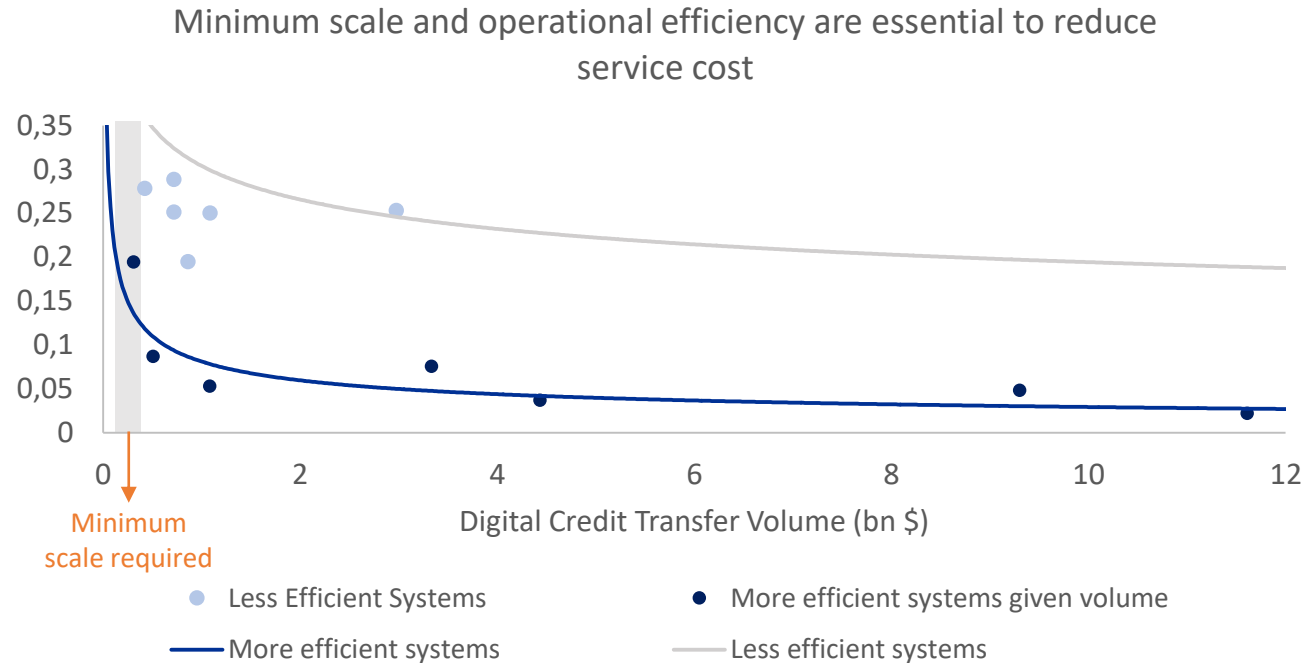
- <sup>17</sup> P. Buckley, Ross, Douglas W. Arner, Robin Veidt and Dirk A. Zetsche. 2019. “Building FinTech Ecosystems: Regulatory Sandboxes “
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# Digital banks have seen a very significant cost efficiency improvement



Using fintech platforms can lower banks' costs while protecting revenues, powering their move to digital

## Low cost structure together with scale is key



Credit transfer represents a balance transfer from one account to the other

Fintechs low cost structure needs scale to become profitable and thus can leverage incumbents' scale, whereas these can leverage fintech low cost structure to lower the cost to serve clients

## Questionnaire used in the interviews

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1. What internal factors related to companies will have the biggest impact on financial inclusion and financial performance of fintechs which are serving the unbanked and underbanked?
2. Do you believe that fintechs that partner with existing financial institutions have a higher chance of thriving? Why?
3. Which recommendations would you make to Fintech firms?
4. How does the market/environment affect the Fintech landscape in Sub Saharan Africa, and what other factors may have an impact?
5. Which recommendations you would give to governments to enhance the potential of Fintech?
6. And the most important question, do you think Fintech can reduce poverty? How?