

**2020 VIRTUAL GLOBAL DEVELOPMENT FINANCE CONFERENCE**  
**18-19 NOVEMBER 2020**  
**By Development Finance Centre & Chartered Institute of Development Finance**

**Program: DAY 1 – Wednesday 18 November 2020**

**09:00 Welcoming:** Prof Nicholas Biekpe – President: Africagrowth Institute & UCT Business School

**09:15 Keynote Speaker:** Mr Mohan Vivekanandan - Group Executive: Origination & Coverage, Development Bank of Southern Africa

**Topic:**

**09:45 Distinguished Speaker:** Dr Kupukile Mlambo – Deputy Governor, Reserve Bank of Zimbabwe

**Topic:**

**10:15 Questions**

**Panel Discussions**

**Theme: Role of Development Finance Institutions in financing Africa's growth**

**11:00 Moderator :** Mr Martin Inkumbi – Chief Executive Officer: Development Bank of Namibia

**Panellists:**

- Mr G Gondo – Executive Business Development : Africa, Riscura
- Mr Tshokolo Nchocho – Chief Executive Officer : Industrial Development Corporation
- TBC

**12:00 Questions**

**Theme: Financing for Development in the era of the 4<sup>th</sup> Industrial Revolution**

**12:30 Moderator:** Dr Sharron McPherson - Co-Founder, Centre for Disruptive Technologies

**Panellists:**

- Mr Lumkile Mondl, Senior Lecturer : University of Witwatersrand
- Mr Wasseem Carrim – Chief Executive Officer : National Youth Development Agency
- TBC

**13:30 Questions**

**LUNCH : 14:00 – 14:30**

**Theme: Impact of free trade agreement on Africa's development**

**14:30 Moderator:** Dr Fadel Ndiame - Deputy President, Alliance for a Green Revolution in Africa

**Panellists:**

- Prof Pajen Pillay – Chief Executive Officer: Garuda Capital
- Mr Tapiwa Cheuka – Trade Policy Officer: African Union
- Ms Karen Bosman - Strategic Research and Public Affairs Manager: Wesgro

**15:30 Questions**

**Theme: The growth of infrastructure finance in emerging economies; Benefits and challenges**

**16:00 Moderator:** Dr Lufeyo Banda - Infrastructure Finance and Regional Integration Expert,  
The African Development Bank Group

**Panellists:**

- Mr Thabo Thamane – Chief Executive Officer : The Citizen Entrepreneurial Development Agency
- Mr Vuyo Ntoi - Managing Director, African Infrastructure Investment Managers
- Mr Tshepo Ntsimane - General Manager: Infrastructure Finance: Development Bank of Southern Africa

**17:00 Questions**

**17:30 End**

**Program: DAY 2 – Thursday, 19 November 2020**

<p><b>Parallel 1 – Theme: Corporate Finance and Investment</b>  <b>Chairman: Dr Afeez Jaiyeola</b></p> <p><b>10:00</b> Vinay K Yadav and Mandira Sarma – Jawaharlal Nehru University; <i>“Does credit market intervention enhance economic outcome? Evidence from India’s priority sector lending policy”</i></p> <p><b>10:20</b> Panunya Phatrathumpakdee – Monash University; <i>“Lending relationships and microcredit interest rates: International evidence”</i></p> <p><b>10:40</b> Arvid Muzanenhamo, LJ Zogli and BI Dlamini Durban University of Technology; <i>“The challenges facing human resource management practitioners in fostering organisational competitiveness in a South African state-owned enterprise”</i></p> <p><b>11:00</b> Prof Wasseem Mina – United Arab Emirates University; <i>“Social protection expenditures and labor market flexibility”</i></p> <p><b>11:20</b> Kudakwashe Z Javangwe and Oliver Takawira - University of Johannesburg; <i>“An analysis of exchange rate movement, inflation targeting and stock market performance in South Africa”</i></p> <p><b>11:40-12:00 Break</b></p>	<p><b>Parallel 2 – Theme: Issues in Development Finance</b>  <b>Chairman: Prof Joseph Chisasa</b></p> <p><b>10:00</b> Prof Ralf Meyer and Adrian Werner – Bonn-Rhein-Sieg University; <i>“Assessing the effectiveness of microfinance institutions in Sub-Saharan Africa”</i></p> <p><b>10:20</b> Lindiwe Ngcobo, Prof Joseph Chisasa and MT MaseTshaba - University of South Africa; <i>“The role of stokvels in banking sector development in South Africa”</i></p> <p><b>10:40</b> Asebenzile Mkunzana and Prof Syden Mishi – Nelson Mandela University; <i>“The effects of economic growth on greenhouse gasses”</i></p> <p><b>11:00</b> Portia Machengo and Dr Peter Nkala – National University of Science and Technology; <i>“Employee perceptions on artificial intelligence adoption in the Zimbabwean banking sector: The case one Bank in Zimbabwe”</i></p> <p><b>11:20</b> Rudo Gutura and Prof Joseph Chisasa – University of South Africa; <i>“The impact of financial literacy on planning for retirement: evidence from informal sector workers of Randburg”</i></p> <p><b>11:40-12:00 Break</b></p>	<p><b>Parallel 3 - Theme: Financial and Development Economics</b>  <b>Chairman: Dr Latif Alhassan</b></p> <p><b>10:00</b> Dr Ktut S Mangani – University Kristen Indonesia <i>“Branchless banking in rural areas : Adverse selection and moral hazard behaviours?”</i></p> <p><b>10:20</b> Prof Danny Cassimon and Peter- Jan Engelen University of Antwerp and Utrecht University <i>“Using millions to go from billions to trillions?”</i></p> <p><b>10:40</b> Dr Afeez O Jaiyeola and Ireen Choga – North West University; <i>“Assessment of poverty dynamics in Northern Nigeria”</i></p> <p><b>11:00</b> Munyaradzi Duve and Prof Daniel P Schutte- Great Zimbabwe University and North-West University; <i>“Presumptive tax system characteristics: A review of the empirical literature”</i></p> <p><b>11:20</b> Precious Matiya and Dr Samson Mtisi – National University of Science and Technology; <i>“The effects of internal savings and lending schemes on rural livelihoods: The case of Mutoko ISAL Groups”</i></p> <p><b>11:40-12:00 Break</b></p>
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<p><b>Parallel 1 : Theme: Corporate Finance and Investment</b>  <b>Chairman: Dr Maryam Kriese</b></p> <p><b>12:00</b> Mthokozisi Luthuli – Durban University of Technology; <i>“Investigating the effectiveness of disbursing social security grants in South Africa: A case study of Mgungundlovu district in Kwazulu-Natal”</i></p> <p><b>12:20</b> Chricencia Murape and Prof RT Mpfu – University of South Africa; <i>“Valuation of private equity investments in Africa: A theoretical evaluative framework”</i></p> <p><b>12:40</b> Angela A. Alu, Prof. Joshua Y. Abor, Prof. Mohammed Amidu and Prof. Godfred A. Bopkin- University of Ghana Business School; <i>“Determinants of trade mis- invoicing in Ghana’s commodity Markets”</i></p> <p><b>13:00</b> Juliah R Kigomo, G Mwaniki and TA Senaji – Kenya Methodist University; <i>“Technology and growth of homeownership through mortgage financing in Kenya”</i></p> <p><b>13:20</b> Zewdie H Shikur – University of Johannesburg; <i>“The effect of credit supply on agricultural growth in selected African countries”</i></p> <p><b>13:40-14:00 Break</b></p>	<p><b>Parallel 2 – Theme: Issues in Development Finance</b>  <b>Chairman: Prof Heinz Klingelhöfer</b></p> <p><b>12:00</b> Miriam Katunze – Lignan University; <i>“Co-production and public service performance: The case of road maintenance in Uganda”</i></p> <p><b>12:20</b> Dr Emmanuel Sarpong-Kumankoma – University of Ghana Business School; <i>“Financial literacy and retirement planning in Ghana”</i></p> <p><b>12:40</b> Sbonelo G Ndlovu and S Heeralal – University of Zululand; <i>“The perceptions of customers towards private label brands in the grocery retail sector: A case of eThekweni Municipality”</i></p> <p><b>13:00</b> Zintle Sikhunyana and Prof Syden Mishi – University of Nelson Mandela; <i>“Fiscal consolidation and macroeconomic performance in South Africa”</i></p> <p><b>13:20</b> Isaac K Amoah-Ahinful and Clement Oteng – University of Cape Coast; <i>“The effect of district financial inclusion inequality on household poverty in Ghana”</i></p> <p><b>13:40-14:00 Break</b></p>	<p><b>Parallel 3 - Theme: Financial and Development Economics</b>  <b>Chairman: Prof Danny Cassimon</b></p> <p><b>12:00</b> Peter Babyenda and Dr Joweria Mayanja – University of Nairobi and Makerere University; <i>“Determinants of microfinance demand among women in Uganda: Evidence from Uganda national household survey 2016/2017”</i></p> <p><b>12:20</b> Queen Mabe – University of Johannesburg; <i>“The impact of capital structure on performance of major banks in Africa subject to the level of development”</i></p> <p><b>12:40</b> Collin Chikwira, Professor Balkaran Rishidaw and Professor Rawjee Veera Rarboo - Durban University of Technology; <i>“Economic growth and derivatives usage : Evidence from South Africa”</i></p> <p><b>13:00</b> Lindokuhle T Zungu, Prof Lorraine Greyling and Nkanyiso Mbata – University of Zululand; <i>“Economic growth and income inequality: A nonlinear econometrics analysis of SADC region, 1990-2015”</i></p> <p><b>13:20</b> Jeremiah Machingambi and Prof Richardson Shambare – University of the Western Cape; <i>“Towards developing a post Covid-19 operational sustainability model for microfinance institutions”</i></p> <p><b>13:40-14:00 Break</b></p>
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**Parallel 4 : Theme: Enterprise and Trade Finance**

**Chairman: Prof Ralf Meyer**

- 10:00** Dr Rashid Fwamba, Consolata Simiyu - Kibabii University; *“Periodic review control practices and financial performance of faith based facilities in Kakamega Country”*
- 10:20** Dr Hanna Kociemska, Wroclaw University;  
*“Philanthropic capitalism for both Islamic and conventional investors”*
- 10:40** Mamokgatla Seshoka and Prof Joseph Chisasa - University of South Africa;  
*“An empirical study to determine the probability of default in small-holder farmers in South Africa”*
- 11:00** Helper Zhou and Dr Victor Gumbo – Durban University of Technology and University of Botswana; *“Predicting manufacturing SMMEs growth using machine learning techniques”*
- 11:20** Btissam Benkerroum - African Development Bank; *“Assessing corporate governance in the private sector”*

**11:40-12:00 Break**

**Parallel 4 - Theme: Enterprise and Trade Finance**

**Chairman: Prof Wasseem Mina**

- 12:00** Dr Geoffrey Nuwagaba – Makerere University; *“Relationship between financing options and sustainable small business growth in Uganda”*
- 12:20** Eric K Tshiakambila and Prof Joseph Chisasa – University of South Africa;  
*“The impact of inflation, interest and exchange rate on agricultural output in South Africa?”*
- 12:40** Emmanuel O Marfo, Ellis K Akwaa-Sekyi and Kwame O Amoako;  
*“Women in entrepreneurship and regulatory constraints: Evidence from Sub-Saharan Africa”*

**Parallel 5 - Theme: Capital Markets, Money and Banking**

**Chairman: Dr Emmanuel Sarpong-Kumankoma**

- 10:00** Prof Charles OK Allen-Ile and Joshua Olabiyi - University of Western Cape;  
*“Multinational enterprises and capital flight from host African nations: An x-ray of the challenges of retaining trade revenues for continental development”*
- 10:20** Dr Harshana Kasseeah – University of Mauritius; *“The leverage puzzle: Evidence from small firms in Mauritius”*
- 10:40** Dr Olivier Niyitegeka and Prof Dev Tewari – Regent Business School and University of Zululand; *“Multi-timescale analysis for financial contagion in BRICS equity markets during financial crises”*
- 11:00** Dr Maryam Kriese, Emmanuel Abbey, Godfred MY Owusu and Haruna Isshaku –University of Professional Studies and University of Ghana; *“Financial resilience and access to financial services- are the financially included more resilient?”*
- 11:20** David Kariuki; *“Influence of capital structure on financial performance of insurance companies in Kenya”*

**11:40-12:00 Break**

**Parallel 5 - Theme: Capital Markets, Money and Banking**

**Chairman: Prof Gordon Dash**

- 12:00** Sheunesu Zhou – University of Zululand; *“Examining the sources of sovereign risk for South Africa: A time varying flexible least squares approach”*
- 12:20** Kagiso T Mangadi – University of Botswana; *“Analyzing Botswana’s bilateral exchange rate”*
- 12:40** Hamdeeya YA Mutala, Prof Joshua Abor, Mohammed Amidu and Dr Emmanuel A Sarpong-Kumankoma – University of Ghana Business School;  
*“The interactive effect of cross-border banking, bank risk and explicit deposit insurance”*

<p><b>13:00</b> Dr Jules S Pierre – University d Etatd Haiti; <i>“Legal framework and financial market development: Perspectives for Haiti”</i></p> <p><b>13:20</b> Prof Gordon Dash, Prof Nina Kajiji, D Vonella and B Wilcox – University of Rhode Island, The NKD-Group, Rifinitiv and University of Massachusetts; <i>“Mapping the impact of precious metals on municipal bond yield spillovers between the U.S. and South Africa during Covid-19”</i></p> <p><b>13:40 Close</b></p>	<p><b>13:00</b> Tatenda S Zingoni and Assoc. Prof Janine Mukuddem-Petersen – Graduate School of Business, University of Cape Town; <i>Implications of adopting a dual mandate for the South African Reserve Bank”</i></p> <p><b>13:20</b> Louisa Muparuri and Dr Victor Gumbo – University of Botswana; <i>“An analysis of the predictors of financial distress for listed corporates: The case of Zimbabwe”</i></p> <p><b>13:40</b> Chafi Bakari – Boston University School of Law; <i>”The financing and governance of megaprojects in the implementation of the African continental free trade area: Contribution to the Abidjan-Lagos corridor highway development project in ECOWAS region”</i></p> <p><b>14:00 Close</b></p>
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**14:10 Closing** : Prof Nicholas Biekpe - President: Africagrowth Institute & UCT Business School

# Certificate of Attendance

This is to certify that

**Dr. Ktut Silvanita Mangani**

presented at the

## **2020 GLOBAL DEVELOPMENT FINANCE VIRTUAL CONFERENCE**

**Title:** *"Branchless banking in rural areas: Adverse selection  
and moral hazard behaviour"*

from **18 November 2020** to **19 November 2020**



Prof. Nicholas Biekpe  
President  
Africagrowth Institute  
& CIDEF





# BRANCHLESS BANKING IN RURAL AREA: ADVERSE SELECTION AND MORAL HAZARD BEHAVIORS?

(A Case Study in Bogor District, West Java, Indonesia)

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2020 VIRTUAL GLOBAL DEVELOPMENT FINANCE CONFERENCE

18-19 NOVEMBER 2020



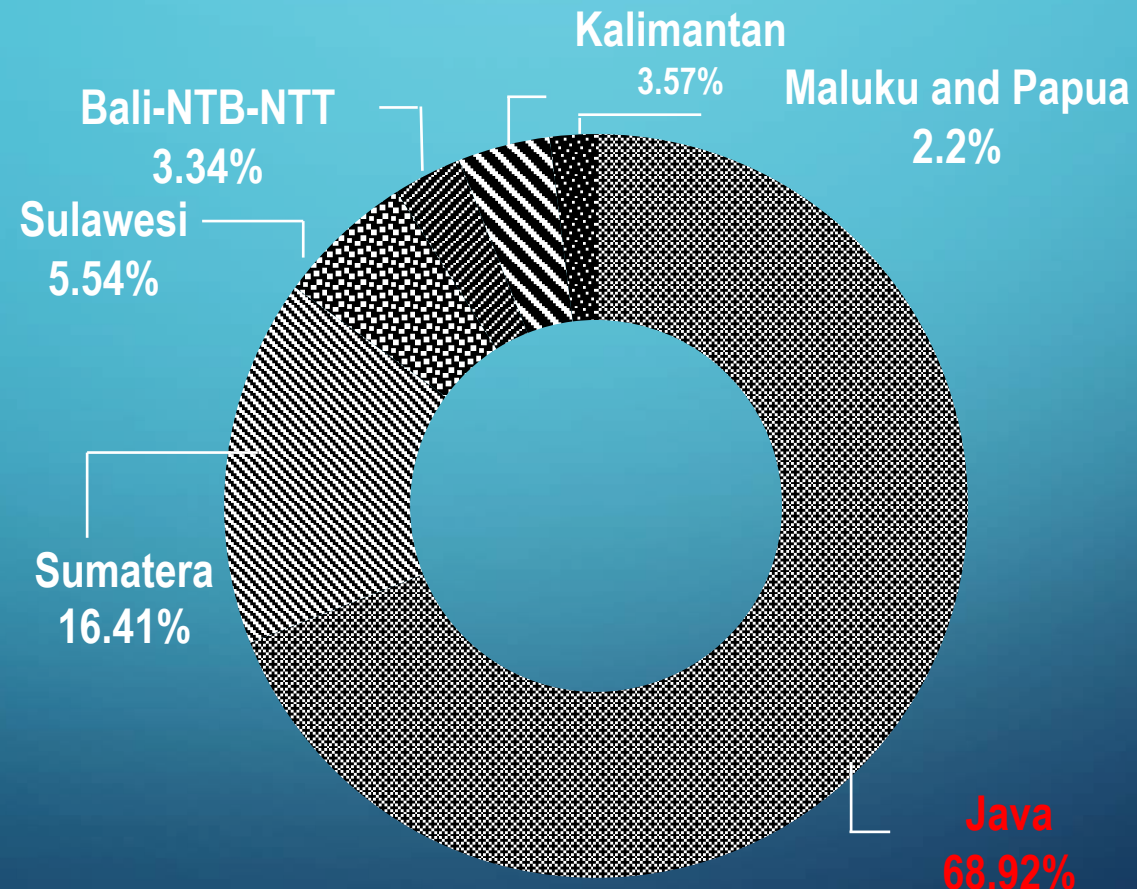
# INTRODUCTION

- **Branchless Banking: limited financial services provided by the bank institutions without having to come to the bank office (CGAP. 2010).**
  - **To serve 'unbanked' and 'underbanked' people, generally domiciled in remote/rural areas.**
  - **Using agents (local residents) - as an extension of the bank office to provide limited bank services.**

- Since 2012, Indonesia has established a **National Financial Inclusive Strategy** → one objective is to **promote financial access** through Branchless banking program.
- In year 2016, there are 160,489 of BB agents (1.12 million by June 2019).

Ind has 16,056 islands  
with 7 big islands (BPS,  
2019)

## Figure 1. Distribution Of BB Agents



Source: OJK, 2016

- **Bank delegates** its limited financial services through agents
- In task delegation, there exist **asymmetric information** → promotes **Adverse Selection** and **Moral Hazard** behaviors.
- This study tried to **explore agent's activities** and find those behaviors.

# LITERATURE REVIEW

According to Gailmard S. (2012):

- **Adverse Selection** behavior appears when **agent knows some information, but prefers to use it differently or hide it**  
→ appears before the contract.
- After the contract, the **agent knows more than the principal**, and potentially to **utilize its role to max. their benefit**, called **Moral Hazard**.

# METHODOLOGY

- **Qualitative method** → survey using **participant observation technique, depth interviews, documents studies**, and then apply the **triangulation** method.
- The objects were **BB agents and their activities**.
- Chosen purposively (those w/ high transactions) → from **13 sub-districts** out of 40 sub-districts in Bogor District.

# RESULTS

The image features a blue gradient background with white circuit board patterns in the corners. The word "RESULTS" is centered in a bold, white, sans-serif font.

## CHARACTERISTICS OF AGENTS (32 RESP.)

Characteristics	Average	Minimum	Maximum
Age (year)	39.8	27	49
Formal education (year)	12	9	18
Number of Male (%)	68.8	-	-
Number of Female (%)	31.2	-	-

Most of BB agents own a business as **seller of staple goods** in their house



# TRANSACTION ACTIVITIES

- Each agent equipped with **EDC (Electronic Data Capture)**
  - a. When customer want to **withdraw their savings**: they swipe their ATM card on EDC and **transfer the funds to agent's account** → then, **agent gives a cash** to the customer.
  - b. If the customer wants to **savings their cash**: **agent receives the cash** → then, **transfers the funds to customer's account** by swipes agent's card on EDC.

- c. If the customer wants to do **transfer** from their account → agent will **swipe the customer's card on EDC** and do transfer.
  - It does not change the cash and balance account of agent.
  
- d. If the customer want to do **transfer w/ cash** → agent receives the cash and then will **swipes agent's card on EDC** and do transfer.
  - The tariff is higher than the first one.
  
- ❖ **Agents must have sufficient funds, either cash or in savings balance in bank account.**

## TYPE OF TRANSACTION & OFFICIAL TARIFFS

Type of transaction	Tariff (Rp)*
Check savings balance in Bank 'X'	0
Check savings balance (other banks) → n/a	1,000
Electricity payment (pre/post-paid)	3,500
Transfer between Bank 'X' account	2,000
Transfer to other bank account ('Bersama')	2,500
Cash deposits	3,500
Cash withdrawals	3,500

1 USD = Rp14.209 per November 16, 2020)

A decorative graphic on the left side of the slide, consisting of a network of white lines and circles on a blue background, resembling a circuit board or a neural network structure. The lines are vertical and horizontal, with some diagonal connections, and the circles are small and white.

# ADVERSE SELECTION BEHAVIORS

- **BB agents knew they will get incentives:**
  - **Tariff payment** from the customers for each transaction.
  - **50% administrative fee refund** when use agent's card → **increases to 100% if reached the BEP transaction (200 tx/m)**
  - **Award** for good performance.
  - Other benefits, such as **prestige perceived as a bank's agent.**
- **HOWEVER, 56.25% agents did not meet the BEP Transaction** → they did not perform their duties properly.
- **Caused by problems in recruiting an agent** → **Adverse Selection** by

## a. 'Big Agents' (w/large business)

- The society in the rural area are '**small**' customers (have low income) → feel **uncomfortable** when conducting their small transactions with 'Big Agents'.
- 'Big Agent' does not entrusted the **EDC machine to his staff** (tx uses owner's fund) → the **BB transaction stops temporarily** when owner leaves the store.
- 'Big Agent' brings **EDC machine to another location** of his/her other businesses → violate the procedure.

## **b. Distance between Agent and Bank Office**

- **31.25% agents have distance less than one kilometer to the nearest bank office (12.5% are less than 100 meters).**
  - **Benefits agents because some customers move their transactions from the bank office to the agent due to long waiting time and parking fees.**
  - **Do not perform new customers as the program target.**

## c. Location of Agent Adjacent to “Mini-mart”

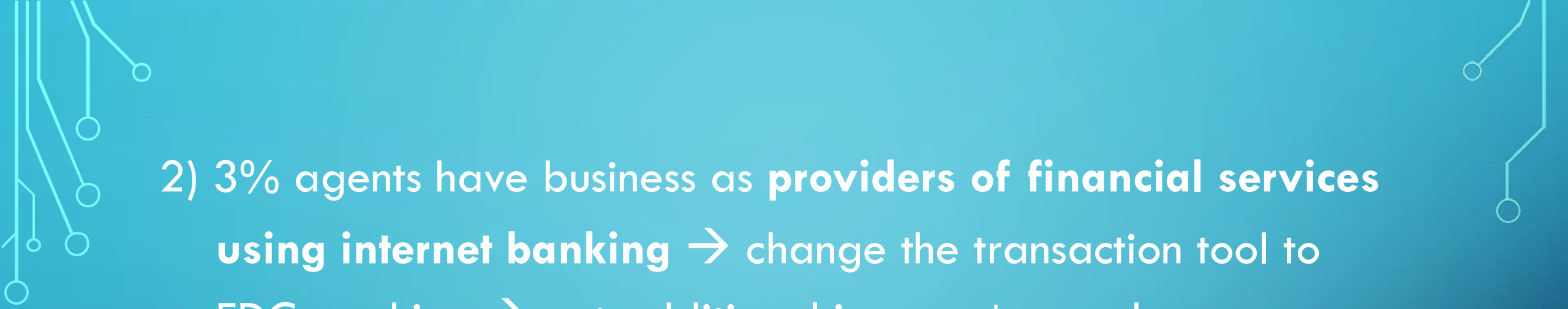
- "mini-mart" in rural areas provide **similar financial transaction services** (payment transactions).
- **Some BB agents could not compete:**
  - They depend only on a banner to attract customers
  - They said they need the training.



## d. Type of Agent's Business

1) 17% agents are **collectors of electricity payment** → move to make payments using his/her card on EDC machine on behalf of customers.

- Agents get additional income, in the form of the bank's administrative fee refund (100% refund when reach BEP).
- Consider as **Pseudo transactions** → **do not indicate the involvement of new customers as the program society target.**



2) 3% agents have business as **providers of financial services using internet banking** → change the transaction tool to EDC machine → get additional income + pseudo transactions.

3) 3% of agent's spouse have business as **informal lenders** → **provides legality to their profession.**



# MORAL HAZARD BEHAVIORS

- 43.75% agents reached BEP transactions → some of them practice and potentially conduct Moral Hazard behaviors.

## a. Mark-up

Type of transaction	Official tariff (Rp)	Bank adm. cost (Rp)	50% Bank cost refund (Rp)	Tariff charged (Rp)	Av. tariff charged (Rp)	Net Mark-up (Rp)	Net Mark-up (%)
Check balance Bank 'X'	0	0	0	2,000	2,000	2,000	100
Check balance other bank account	1,000	N/A	N/A	N/A	N/A	N/A	N/A
Electricity payment	3,500	2,500	1,250	3,50 –5,000	4,250	750	21.43
Transfer using customer's card							
- to Bank 'X' account	2,000	0	0	5,000–15,000	10,000	8,000	400
- to another bank account	2,500	0	0	7,500–15,000	11,250	8,750	350
Cash deposits	3,500	1,000	500	5,000–15,000	10,000	6,500	185.71
Cash withdrawals	3,500	0	0	5,000–15,000	10,000	6,500	185.71
Cash Transfer							
- to Bank 'X' account	3,500	1,000	500	5,000–15,000	10,000	6,500	185,71
- to another bank account	N/A <sup>*)</sup>	6,500	3,250	7,500–15,000	11,250	4,750	73.08
Average <sup>**)</sup>	<b>3,140</b>	2,700	1,350	<b>4,890–11,330</b>	<b>8,110</b>	4,970	<b>169.23</b>
	(A)	(B)	(C)	(D)	(E)	(F)	(G)

- **The magnitude received by the agent per transaction consists of :**

**(1) The portion from the customers: Rp 2,050 (29.20%)**  
→ (Off. Tariff, (A) minus Bank adm (C)).

**(2) The mark-up: Rp 4,970 (70.80%).**

- ❖ The customers considered the tariff charged by agent are low compared to transportation cost to the nearest bank office → **Agents drained up the consumer surplus.**

## **b. Prohibition To Use Customer Card**

- **Some agents do not accept money transfers using the customer's card → it does not change the cash or balance account of agent → customer pay low tariff.**
- **Propose to use agent's card or money (considered as loans) and charged the service as cash transfer → higher tariff.**

## c. Pseudo Transactions

- Agent gets 100% bank adm. refund when reach BEP, i.e. 200 transactions per month or 7 transactions per day.
- In order to meet the daily/monthly target → agents conduct ‘pseudo transaction’:
  - Do the cash deposits or transfers to **his/her family members by using agent’s card** or
  - They do it **between adjacent agents knew each other.**

# CONCLUSION

- Branchless Banking program has implemented in rural areas in Indonesia.
- There is an increasing number of transactions that shows the existence of the program's success.
- However, the characteristics and activities of agents show the existence of problems that arise due to asymmetric information.



- There exists Adverse Selection and Moral Hazard behaviors that **inflict immaterially and financial loss to the customers.**
- Those behaviors will result in the **disruption of the implementation of financial services program** for 'unbanked' and 'underbanked' people as the program's target in rural areas.

# THANK YOU TERIMA KASIH

