Lesson 2.1 Quiz: Financial Exclusion

Module 2: The Access Problem

Prof. Dr. Joerg Osterrieder

Digital Finance — BSc Course

Q1: Defining Financial Exclusion

Which of the following **best** defines financial exclusion?

A. The inability to access any digital technology
B. The inability to access basic financial services on affordable, appropriate terms
C. Having a bank account but not using it frequently
D. Choosing not to use formal financial services for personal reasons

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- (B) The inability to access basic financial services on affordable, appropriate terms
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Answer: (B) Financial exclusion is the inability to access basic financial services — savings, credit, insurance, payments — on terms that are affordable and appropriate. (D) describes voluntary exclusion, which is a separate category.

Q2: Voluntary vs. Involuntary Exclusion

A farmer in rural Nigeria wants to open a savings account but the nearest bank branch is 80 km away and requires a government-issued ID she does not possess. This is an example of:

A. Voluntary exclusion
B. Involuntary exclusion
C. Financial illiteracy
D. Adverse selection

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Answer: (B) The farmer *wants* access but is prevented by geography and documentation requirements. This is involuntary exclusion — the defining characteristic is willingness combined with inability.

Q3: Supply-Side Barrier Identification

Which of the following is a **supply-side** barrier to financial inclusion?

A. A customer does not trust banks due to past fraud
B. A bank determines that low-balance accounts are unprofitable to maintain
C. A customer cannot read the terms and conditions of a loan contract
D. A customer lives too far from any bank branch

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Answer: (B) Supply-side barriers are decisions by financial institutions to exclude customers. Unprofitable cost-to-serve is a rational supply-side decision. (A) and (C) are demand-side; (D) is structural.

Q4: Mobile Money Definition

What distinguishes **mobile money** from **mobile banking**?

A. Mobile money requires a smartphone; mobile banking works on feature phones
B. Mobile money does not require a traditional bank account; mobile banking does
C. Mobile money is only available in Africa; mobile banking is global
D. Mobile money uses blockchain; mobile banking uses traditional databases

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Answer: (B) Mobile money is a standalone system operated by MNOs or licensed entities — no bank account needed. Mobile banking is a digital channel for accessing an existing bank account. This distinction is the reason mobile money serves the unbanked.

Q5: Agent Banking Economics

An agent processes 200 mobile money transactions per day, earning 0.5% commission on each. If the average transaction is $15, what is the agent's daily income from commissions?

A. $1.50
B. $7.50
C. $15.00
D. $150.00

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Answer: (C) Commission per transaction = \$15 $\times$ 0.5% = \$0.075. Daily income = 200 $\times$ \$0.075 = \$15.00. This is meaningful income in developing economies where GDP per capita may be \$2–\$5/day.

Q6: Tiered KYC Application

A mobile money provider uses tiered KYC. Tier 1 requires only a phone number and name, with a $100 balance limit. A new customer registers at Tier 1 and tries to store $250. What happens?

- (A) The system rejects the deposit entirely
- (B) The system accepts $100 and returns $150
- (C) The system accepts $250 but flags the account for review
- (D) The customer is automatically upgraded to Tier 2

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Answer: (B) Under tiered KYC, the balance limit is a hard cap. The system accepts up to the limit and returns (or refuses) the excess. Upgrading to Tier 2 requires additional identity verification, which must be initiated by the customer.

Q7: Adverse Selection Spiral

A microfinance institution enters a new market where no borrowers have credit scores. To compensate for uncertainty, the institution charges all borrowers 40% APR. What is the likely adverse selection outcome?

- **A** All borrowers accept the rate, generating profit for the institution
- **B** Low-risk borrowers refuse the high rate, leaving only high-risk borrowers in the pool
- **C** High-risk borrowers refuse because they know they will default
- **D** The rate has no effect on the composition of borrowers

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Answer: (B) This is classic adverse selection. Low-risk borrowers (who know they would repay) refuse the 40% rate because it is too expensive relative to their risk. High-risk borrowers accept because any rate is attractive if they plan to default. The pool quality deteriorates.

Q8: KYC Cost Analysis

A bank's full KYC process costs $25 per customer. A low-balance savings account generates $3/year in revenue. How many years must the customer remain active for the bank to break even on KYC costs alone?

A. Less than 1 year
B. About 3 years
C. About 8 years
D. The bank never breaks even

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Answer: (C) Break-even = \$25 / \$3 per year = 8.3 years. This explains why banks rationally refuse low-balance accounts — the KYC cost alone exceeds years of revenue. Tiered KYC (at <\$1) changes this equation.

Q9: Digital Identity Use Case

India's Aadhaar system enabled 500 million new bank accounts. What is the **primary mechanism** by which Aadhaar achieved this?

A. Aadhaar provided free bank accounts to all citizens
B. Aadhaar enabled instant electronic KYC (e-KYC), reducing account opening cost and time
C. Aadhaar replaced the banking system with a government-run payment platform
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Answer: (B) Aadhaar's biometric database allows banks to verify identity electronically in seconds (e-KYC), reducing the cost of account opening from $5–$25 to near zero. The Jan Dhan Yojana program (D) incentivized banks, but Aadhaar provided the infrastructure.

Q10: Sandbox Application

A FinTech wants to offer micro-insurance via SMS to farmers. The regulator has no framework for SMS-based insurance. Under a regulatory sandbox, the FinTech would:

- A Operate without any regulatory oversight
- B Test the product with a limited number of customers under regulator supervision
- C Wait until the regulator writes new insurance laws
- D Apply for a full insurance license before testing

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Answer: (B) A regulatory sandbox allows testing with real customers under relaxed but supervised conditions. The regulator observes outcomes before writing permanent rules. This avoids both (A) unregulated operation and (C) years of regulatory delay.

Q11: M-Pesa Success Factor

Which factor was **most critical** to M-Pesa's rapid adoption in Kenya?

A. Kenya had advanced smartphone penetration in 2007
B. Safaricom's dominant market share created instant network effects
C. The Central Bank of Kenya mandated that all citizens use M-Pesa
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Answer: (B) Safaricom had 80%+ market share, meaning most potential recipients were already on the same network. M-Pesa worked on basic feature phones (not smartphones), was not mandated by the central bank, and is a payment/transfer system, not primarily a lending product.

Q12: Informal Finance Comparison

A farmer borrows $100 from a local moneylender at 10% per month. What is the approximate annual percentage rate (APR)?

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- B. 30%
- C. 120%
- D. 214% (compounded)

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Answer: (C) Simple APR $= 10\% \times 12$ months $= 120\%$. If compounded monthly, it is $(1.10)^{12} - 1 \approx 213.8\%$ (D). The question asks for approximate APR, making (C) the best answer, though (D) is the exact compounded figure. Either way, informal lending is extremely expensive.

Q13: Barrier Classification

A woman in rural Pakistan has a phone but cannot open a mobile money account because her husband refuses to share the household's single national ID card. This barrier is **best classified** as:

- (A) Supply-side: the provider refuses to serve her
- (B) Demand-side: social norms and documentation prevent engagement
- (C) Structural: the payment infrastructure is unavailable
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Answer: (B) This is a demand-side barrier rooted in social norms (male control of documentation) and lack of personal ID. The provider is willing; the infrastructure exists. The woman is not choosing exclusion — she is prevented by household power dynamics.

Q14: Breaking the Adverse Selection Cycle

A FinTech uses mobile phone usage data (call patterns, airtime purchases, app usage) to build credit scores for unbanked individuals. This approach addresses adverse selection by:

- A Eliminating the need for any risk assessment
- B Creating information where none existed, allowing the lender to distinguish risk levels
- C Guaranteeing that all borrowers will repay
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Answer: (B) The core of adverse selection is *information asymmetry* — the lender cannot tell good from bad risks. Alternative data creates a proxy credit score where traditional data (bank history) does not exist, breaking the "no data $\rightarrow$ no access $\rightarrow$ no data" cycle.

Q15: M-Pesa Replication Failure

M-Pesa succeeded in Kenya but struggled in Nigeria. Which **structural difference** best explains this?

- A Nigeria has lower mobile phone penetration than Kenya
- B Nigeria's Central Bank required a bank-led model, restricting MNO participation
- C Nigerian consumers prefer cash and distrust all digital systems
- D Kenya has more advanced technology infrastructure than Nigeria

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Answer: (B) Nigeria's Central Bank initially required mobile money to be bank-led (not MNO-led), limiting the ability of telecoms to build the agent networks and leverage their subscriber bases. This regulatory choice, not technology or consumer preference, was the primary structural difference.

Q16: Tiered KYC Risk Analysis

A regulator considers allowing Tier 1 accounts with a $500 daily limit and no ID verification beyond a phone number. A critic argues this creates money-laundering risk. Which response **best** addresses this concern?

- (A) The risk is zero because the amounts are too small
- (B) The risk exists but is proportionate: a $500 limit constrains laundering volume, while transaction monitoring can detect patterns
- (C) Full KYC should be required for all accounts regardless of balance
- (D) Money laundering only occurs through banks, not mobile money

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Answer: (B) The FATF risk-based approach acknowledges that risk is never zero but can be *proportionate*. Low limits constrain the scale of potential abuse, while automated transaction monitoring (velocity checks, pattern detection) provides a second layer of defense.

Q17: Gender Gap Root Cause

In Sub-Saharan Africa, the gender gap in mobile money account ownership is approximately 20%. Which combination of factors **most directly** explains this gap?

- A Women are less interested in financial services than men
- B Women are less likely to own phones and less likely to possess personal ID
- C Mobile money interfaces are too complex for women to use
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Answer: (B) The gender gap is driven by unequal access to enabling assets: phone ownership and identity documents. Women in low-income households are less likely to own a personal phone and less likely to hold government-issued ID. These are structural access barriers, not preference or ability differences.

Q18: Digital Credit Risk

Kenya experienced a digital lending crisis where over 2 million borrowers were listed as defaulters on the credit bureau. This outcome illustrates:

A. That digital lending always leads to over-indebtedness
B. That easy access to credit without adequate consumer protection can create debt traps
C. That credit bureaus should not be used in developing economies
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Answer: (B) The crisis illustrates a real risk of digital inclusion: frictionless credit access, combined with high interest rates, opaque terms, and aggressive collection, can trap borrowers. The lesson is not to avoid digital credit (A/D) but to pair it with consumer protection and transparent pricing.

Q19: Policy Trade-Off Evaluation

A government considers two policies to increase financial inclusion:

- **Policy A:** Mandate that all banks open free basic accounts for anyone with a national ID
- **Policy B:** License mobile network operators to offer e-money wallets with tiered KYC

Which policy is **more likely** to reach the unbanked, and why?

A. Policy A, because banks are more trustworthy than MNOs
B. Policy B, because it does not require a national ID at the lowest tier and leverages existing mobile infrastructure
C. Both are equally effective because they target the same population
D. Neither is effective without building more bank branches

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Answer: (B) Policy A still requires a national ID (which 850 million people lack) and bank infrastructure (which is absent in rural areas). Policy B uses tiered KYC (phone number only at Tier 1) and leverages mobile networks that already reach the unbanked. Policy B addresses more barriers simultaneously.

Q20: Regulatory Sandbox Evaluation

A regulator must decide whether to allow a FinTech to test biometric-only account opening (no paper ID) in a sandbox. The FinTech claims it will reach 500,000 previously excluded customers. The compliance department warns of AML risk. Which **evaluation framework** should the regulator apply?

- (A) Reject the proposal — biometric-only ID is too risky for any use case
- (B) Approve unconditionally — inclusion always outweighs compliance risk
- (C) Apply a risk-proportionate assessment: allow the test with balance limits, transaction monitoring, and a defined review period
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Answer: (C) The risk-proportionate approach (FATF guidance) is the correct framework. Reject outright (A) blocks innovation; approve unconditionally (B) ignores real risks; delay (D) perpetuates exclusion. The sandbox exists precisely to enable controlled testing with safeguards.