

Lesson 1.4: Platform Economics and Fintech Business Models Quiz

Digital Finance Course

Question 1

What is a network effect?

- A. A product becomes cheaper as more units are manufactured
- B. A product or service becomes more valuable as more people use it
- C. A company's network of suppliers grows over time
- D. The effect of internet bandwidth on application speed

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- B. A product or service becomes more valuable as more people use it
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Answer: B

A network effect occurs when the value of a product or service increases for existing users as more people adopt it—e.g., a payment app becomes more useful when more friends join.

Question 2

Which type of network effect describes a payment card network where more cardholders attract more merchants?

- A. Direct network effect
- B. Indirect network effect
- C. Cross-side (two-sided) network effect
- D. Supply-side economy of scale

Question 2

Which type of network effect describes a payment card network where more cardholders attract more merchants?

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- C. Cross-side (two-sided) network effect
- D. Supply-side economy of scale

Answer: C

Cross-side network effects occur in two-sided markets: cardholders value merchant acceptance, and merchants value cardholder volume. Each side benefits from growth on the other side.

Question 3

A P2P payment app becomes more useful as each of your friends joins. This is an example of:

- A. Cross-side network effect
- B. Indirect network effect
- C. Direct (same-side) network effect
- D. Economy of scope

Question 3

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- B. Indirect network effect
- C. Direct (same-side) network effect
- D. Economy of scope

Answer: C

Direct network effects occur when users on the same side of the market benefit from each other's participation—more friends on the app means more people you can pay.

Question 4

How does a platform business model differ from a pipeline business model?

- A. Platforms are always more profitable than pipelines
- B. Platforms facilitate interactions between producers and consumers; pipelines control end-to-end production
- C. Pipelines use technology while platforms do not
- D. Platforms require banking licenses while pipelines do not

Question 4

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Answer: B

Pipeline models control the linear value chain (produce → distribute). Platform models create value by enabling interactions between multiple participant groups without controlling production.

Question 5

A fintech spends \$500,000 on marketing in a quarter and acquires 10,000 new customers. What is its Customer Acquisition Cost (CAC)?

- A. \$5
- B. \$50
- C. \$500
- D. \$5,000

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Answer: B

$CAC = \$500,000 \div 10,000 = \50 per customer. This is the total acquisition spend divided by the number of customers acquired.

Question 6

A neobank has an Average Revenue Per User (ARPU) of \$8/month, gross margin of 60%, and average customer lifetime of 36 months. What is the Lifetime Value (LTV)?

- A. \$172.80
- B. \$288.00
- C. \$96.00
- D. \$480.00

Question 6

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Answer: A

$LTV = \$8 \times 0.60 \times 36 = \172.80 . LTV combines revenue per user, margin, and retention into a single measure of customer value.

Question 7

What LTV/CAC ratio is generally considered healthy for a fintech?

- A. Greater than 0.5×
- B. Greater than 1.0×
- C. Greater than 3.0×
- D. Greater than 10.0×

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Answer: C

An LTV/CAC ratio above 3.0× is the standard benchmark. Below 1.0× means losing money on every customer. Above 10.0× may indicate underinvestment in growth.

Question 8

What is contribution margin?

- A. Total revenue minus total expenses
- B. Revenue per user minus variable cost per user
- C. Gross profit divided by total assets
- D. Net income divided by number of customers

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Answer: B

Contribution margin is the amount each customer contributes toward covering fixed costs and generating profit, calculated as revenue per user minus variable cost per user.

Question 9

A fintech has ARPU of \$6/month and variable cost per user of \$8/month. Each new user added will:

- A. Contribute \$2/month toward fixed costs
- B. Generate \$6/month in pure profit
- C. Make losses worse by \$2/month
- D. Have no effect on profitability

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Answer: C

With negative contribution margin ($\$6 - \$8 = -\$2/\text{month}$), each additional customer increases losses. The company cannot “grow into profitability” without fixing unit economics first.

What is embedded finance?

- A. Financial services exclusively available through bank branches
- B. Financial services integrated directly into non-financial platforms and applications
- C. Hardware-based security for banking transactions
- D. Finance courses embedded in university curricula

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Answer: B

Embedded finance means financial services (payments, lending, insurance) are integrated into platforms where the user already is—e.g., checkout financing in e-commerce, insurance at ride booking.

Question 11

What is Banking-as-a-Service (BaaS)?

- A. A marketing term for online banking
- B. API-based infrastructure that lets non-banks offer banking products using a licensed bank's capabilities
- C. Banks outsourcing all operations to third parties
- D. A government program providing free banking

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Answer: B

BaaS providers offer banking infrastructure (accounts, payments, lending, compliance) via APIs, enabling any company to embed financial services without obtaining its own banking license.

Question 12

In the BaaS stack, which layer does the fintech/brand typically own?

- A. Banking license and regulatory capital
- B. Core banking system and ledger
- C. Compliance and KYC/AML
- D. Frontend, user experience, and branding

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Answer: D

In the BaaS model, the fintech owns the customer-facing layer (app, branding, UX), while the BaaS provider handles compliance, core banking, and the licensed bank provides the regulatory foundation.

Question 13

Why do most fintechs operate at a loss for years?

- A. Financial regulators require them to lose money initially
- B. They invest in network effects, user growth, and infrastructure before monetization
- C. They are legally prohibited from charging fees in the first five years
- D. Traditional banks subsidize fintech losses

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Answer: B

Fintechs invest heavily in user acquisition (subsidizing free accounts), building technology infrastructure, and achieving the network effects required for long-term viability—all before reaching scale for profitability.

Question 14

A marketplace lending platform earns a 3% origination fee and 0.75% annual servicing fee. On a \$10,000 loan with 3-year term, what is the platform's total fee revenue?

- A. \$300
- B. \$525
- C. \$375
- D. \$225

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- B. \$525
- C. \$375
- D. \$225

Answer: B

Origination: $\$10,000 \times 3\% = \300 . Servicing: $\$10,000 \times 0.75\% \times 3 = \225 . Total: $\$300 + \$225 = \$525$. (Simplified: ignoring principal amortization for the servicing fee.)

Question 15

What is the “chicken-and-egg” problem in two-sided platforms?

- A. Whether to hire engineers or marketers first
- B. Neither side will join unless the other side is already present
- C. Whether to launch in domestic or international markets first
- D. Whether to build mobile or web application first

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Answer: B

In two-sided markets (e.g., payment networks), consumers will not join without merchants, and merchants will not join without consumers. Platforms solve this by subsidizing one side initially.

Question 16

What is a super-app?

- A. An application with superior download speed
- B. A single mobile application serving as a platform for multiple services including payments, shopping, and messaging
- C. An app that works across all operating systems
- D. An app exclusively for premium banking customers

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Answer: B

A super-app bundles multiple services (payments, e-commerce, messaging, transport, financial services) into one application, becoming the user's primary digital interface.

Question 17

Winner-take-most dynamics are weaker in financial services compared to social media because:

- A. Financial services have no network effects
- B. Users commonly multi-home (use multiple banks/apps) and regulation prevents monopolies
- C. Financial services companies are always non-profit
- D. Banks do not use technology platforms

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- C. Financial services companies are always non-profit
- D. Banks do not use technology platforms

Answer: B

Unlike social media (where you want all friends on one platform), consumers routinely hold accounts at multiple banks and use multiple payment apps. Regulators also actively prevent monopolistic concentration in financial services.

Question 18

A fintech has 1 million users, 8% premium conversion at \$12/month, and all free users generate \$1.50/month in interchange. What is total monthly revenue?

- A. \$2,340,000
- B. \$1,500,000
- C. \$960,000
- D. \$2,100,000

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- B. \$1,500,000
- C. \$960,000
- D. \$2,100,000

Answer: A

Premium: $80,000 \times \$12 = \$960,000$. Free users also generate interchange: $920,000 \times \$1.50 = \$1,380,000$. Total: $\$960,000 + \$1,380,000 = \$2,340,000$.

Question 19

Which path to profitability typically offers the highest margins for a neobank?

- A. Interchange fee revenue from card transactions
- B. Cross-selling into consumer lending
- C. Foreign exchange commissions
- D. ATM withdrawal surcharges

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Answer: B

Lending generates Net Interest Margins (NIM) of 3–8%, far exceeding interchange (0.2–0.3% in EU-regulated markets) or FX margins. This is why many neobanks pivot to lending as they mature.

Question 20

A fintech with CAC of \$40 and monthly contribution margin of \$3 per user. How many months to break even on a single customer?

- A. 3.3 months
- B. 8.0 months
- C. 13.3 months
- D. 40.0 months

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- A. 3.3 months
- B. 8.0 months
- C. 13.3 months
- D. 40.0 months

Answer: C

Breakeven months = $\text{CAC} \div \text{Monthly Contribution Margin} = \$40 \div \$3 = 13.3$ months. If average customer lifetime is shorter than 13.3 months, the fintech loses money on that customer.