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Network costs: what really makes a difference?

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Speakers

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Key Takeaways

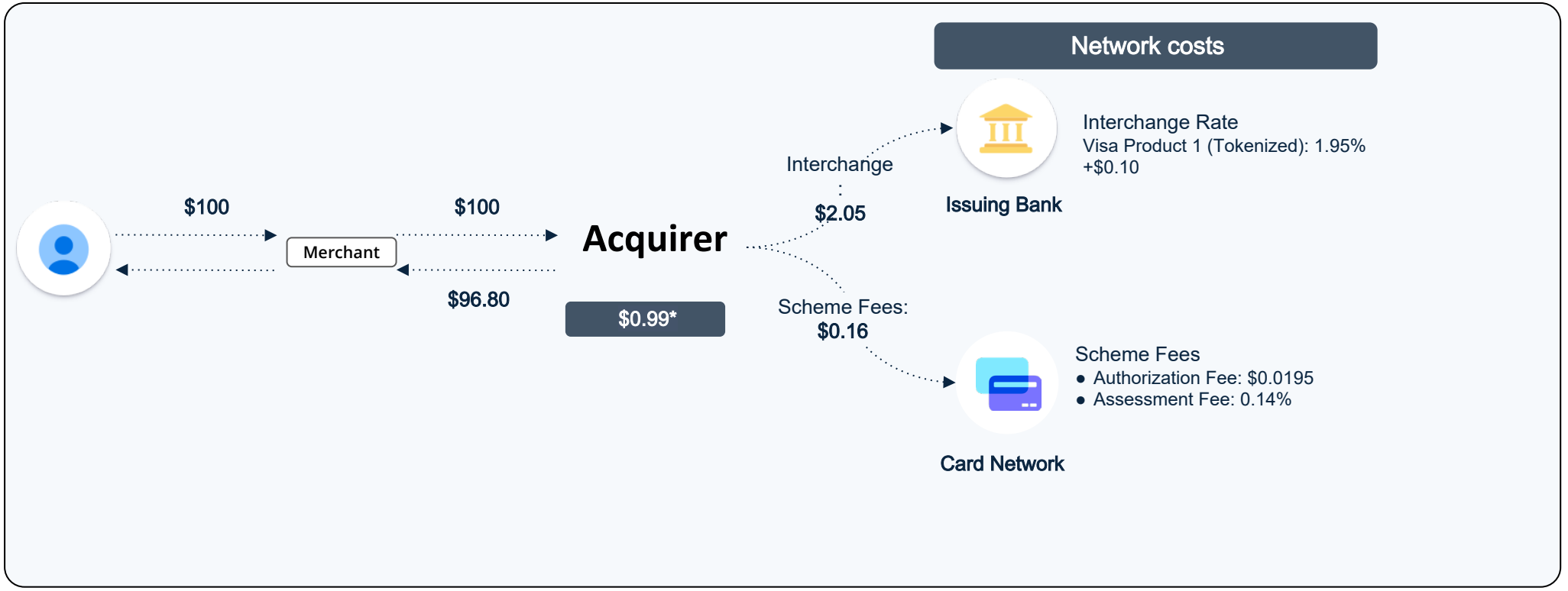
1. Exploring complexity of card network costs through key cost factors
2. Find what can be controlled for, and what you should focus on
3. Learn how to monitor and predict costs to better set your own prices

How does is impact your business?

- What are my effective costs rates?
- What are my effective costs rates changing month over month?
  - Is something wrong?
  - Am I getting cheapest costs rates?
  - What is the cheapest cost rate to begin with?
- Why are cost rates different from transaction to transaction?
- What is my margin overall? Why does it change?
- How do I set my pricing in a market?

Comprehensively understanding Network costs are a critical for all this.

How do card transactions work?



Assumes a $100 consumer card transaction, paying a 2.9%+30c price for a successful transaction

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Interchange is the largest portion of costs

- In US, interchange is **~85% of total costs.**
- AU interchange is only about **65% of total costs.**
- International transaction tend to have more scheme fees share compared to domestic.

The complexity in rate calculation is due to unclear rules of many input variables

60+

Input variables that determine network fees per transaction

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Transaction Attributes

1. CARD TYPE
2. MERCHANT COUNTRY
3. CARD BRAND
4. CARD FUNDING TYPE
5. MERCHANT CATEGORY CODE (MCC)
6. TRANSACTION SIZE
7. TRANSACTION TYPE
8. CHANNEL: CARD PRESENT / ONLINE
9. CARDHOLDER COUNTRY
10. LEVEL 2 DATA
11. LEVEL 3 DATA
12. PROCESSING CONDITION CODE
13. MARKET SPECIFIC DATA INDICATOR
14. ZIP CODE PASSED
15. REGULATED TRANSACTION INDICATOR
16. ANNUAL CARDHOLDER SPEND
17. REIMBURSEMENT ATTRIBUTE
18. REQUESTED PAYMENT SERVICE
19. AUTHORIZATION CHARACTERISTIC INDICATOR
20. TRANSACTION CODE QUALIFIER
21. CARD ACCEPTOR ID
22. MERCHANT LOCATION
23. 501(C)3 STATUS
24. NUMBER OF REVERSALS
25. TIPPING BEHAVIOR
26. URL/CUSTOMER SERVICE PHONE NUMBER

Geography is the biggest factor

- US effective cost rates are **30 bps** higher than CA
- GB effective cost rates are **~130 bps** lower than US
- SG and US costs are comparable

Cross Border vs Domestic

- Cross Border(CB) transactions are **85 bps higher** than domestic.
  - Most of this comes from extra scheme fees, not interchange
- Increase is not uniform across countries.
- AU CB transactions costs **~280 bps more** than domestic.
- Low AOV CB transactions are specially bad as a lot of CB fees are fixed

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Card Networks matter as well

- Visa and MC are **within 10 bps** of each other globally.
  - But in the US, Visa is **~30 bps** cheaper.
- Amex is about **100 bps** higher globally.
- Local cost networks are significantly cheaper.

Unfortunately, there are still *many* more factors

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Let’s deep dive on Visa US

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Deep Dive: Visa US

Goal

- Why did my costs change?
- Explain cost rate change.

Underlying Expectation: Costs should not change.

Insight: Costs should not change for similar transactions.

Deep Dive: Visa US

Defining Similarity

- About 60 different factors that impact Visa US costs
- All transactions will have same set of values for these 60 factors are similar.
- Each of these factors can take one of predefined categorical values. Credit or Debit. Card Present or not. MCC etc.

Deep Dive: Visa US

For similar transactions

1. It is reasonable to expect cost rate to be same across transactions.
2. It is reasonable to expect cost rate to be stable week over week.

How would we measure this?

1. Monitor the cheapest 1% of transactions vs the costliest 1%
2. Track fixed vs variable rate changes

Lets see how it shows up in data.

Deep Dive: Visa US

Example case: Unregulated Debit, MCC 5812, Acquiring in USD, Card Not Present, Not recurring, Tokenized

week	normalized_10	normalized_100	overall_bps	variable_bps	avg_fixed	one_by_99_variable	one_by_99_fixed
2025-01-06	356.78	195.92	236.2	178.04	17.87	0.99	0.96
2025-01-13	356.78	195.91	236.14	178.04	17.87	0.99	0.96
2025-01-20	356.78	195.92	235.59	178.04	17.87	0.99	0.96
2025-01-27	356.78	195.91	235.58	178.04	17.87	0.99	0.96
2025-02-03	356.77	195.91	235.81	178.04	17.87	0.99	0.96
2025-02-10	356.75	195.9	234.05	178.03	17.87	0.99	0.96
2025-02-17	356.76	195.9	233.87	178.03	17.87	0.99	0.96
2025-02-24	356.76	195.91	233.71	178.04	17.87	0.99	0.96
2025-03-03	356.76	195.91	233.67	178.04	17.87	0.99	0.96
2025-03-10	356.76	195.91	234.07	178.03	17.87	0.99	0.96
2025-03-17	356.77	195.91	234	178.04	17.87	0.99	0.96
2025-03-24	356.76	195.91	233.94	178.04	17.87	0.99	0.96

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How can you replicate this in your own data?

- Start with a smaller set of variables and keep adjusting until you find stability.
  - For example, start with 5 variables, and see how close "one_by_99" gets to 1
  - Keep adding more variables until you get it closer to 1

Lower network costs by controlling what you can

- Process locally to avoid cross border transactions
- Settle in presentment currency to avoid FX
- Increase transaction size
- Use Network Tokens
- Use card present
- Practice good transaction processing hygiene: include zip code and L2/L3 data
- Close open auths in timely manner

Learnings from Instacart

David Beck
Payments Partnerships, Instacart

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Key Takeaways

1. Overall effective costs can fluctuate
2. Find segments of transactions where cost rates remain stable, and monitor those
3. Optimize your costs by fine tuning your processing
4. Consider pricing your own product in line with underlying costs

Thank you

- Vivek Yadav - Costs Experience EM, Stripe
- David Beck - Payments Partnerships Lead, Instacart

- Don’t forget to submit your session evaluation!

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