

Financial Supermarkets? Cross-Selling in Retail Banking

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Discussion by Xu Lu

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What I learned from the paper

- Convincing evidence that financial products are not chosen independently.
- Clever distinction between sorting, consideration, and utility complementarity.
- Important quantitative implication: banks price the relationship, not individual products.

Many fascinating empirical facts! I wish I was the empirical discussant! :)

One slide summary

Two products: $k = D$ (deposit account), $k = C$ (credit card), with banks indexed by j .

Consumer i has state $x_i = (d_i, c_i)$. When consumer i gets an opportunity to reconsider the deposit account, **they do not simultaneously reoptimize the entire portfolio.**

If the credit card is currently at Chase, utility from choosing bank j for deposits is $u_{ij}^D = v_{ij}^D + \alpha_D r_j^D + \chi_i^D 1\{j = \text{Chase}\} + \kappa_i^D 1\{j = d_i\} + \varepsilon_{ij}^D$.

The model allows correlated preferences across products: $\text{Corr}(v_{ij}^D, v_{ij}^C) > 0$. Example:

	No Chase credit card	Chase credit card
Likes Chase	High deposit choice	Even higher
Doesn't like Chase	Low deposit choice	Higher if $\chi > 0$

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Walmart experiment: separate sorting v. complementarity. But what is the source of complementarity?

1. Capital One becomes more likely to enter the consideration set.
2. Consumers directly value consolidating both products at one bank.

Survey: distinguishes consideration complementarity from utility complementarity.

In the model: complementarity is a location preference

Put their model in stripped-down form:

$$u_{ij}^D = v_{ij}^D + \alpha r_j + \underbrace{\chi_i 1\{C_i = j\}}_{\text{same-bank utility}} + \dots$$

$\chi > 0$ means: once my card is at Chase, I prefer my deposit account at Chase.

A natural next step: unpacking the economics inside χ

Payment convenience? Reduced cognitive cost? Relationship pricing?

Complementarity can mean different things

Form of complementarity

Location complementarity Lulu puts money at Citi and shops at Costco

Quantity complementarity Lulu optimally holds more money at Citi

Duration complementarity His money stays at Citi longer

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Quantity complementarity	Lulu optimally holds more money at Citi
Duration complementarity	His money stays at Citi longer

How the paper connects to the two other margins:

- ▶ On quantity: the model allows consumers choose which bank to hold the deposit relationship, but do not choose the amount of deposits.
- ▶ On duration: the model endogenously generates duration / stickiness of deposits, but the calibration is a targeted fit (needs evidence this complementarity causes duration).

Quantity and duration determine deposit franchise value for banks

Lu-Wu '26:

$$\text{Deposit Franchise Value} = \frac{\text{Deposit Spread} \times \text{Deposit Size}}{\text{Deposit Run-off} + \text{Discount Rate}}$$

How does the location complementarity enter?

- ▶ Deposit size: model shows more relationship
- ▶ Duration: model implies less run off

This decomposition is worth more thoughts beneath the paper's estimated utility complementarity, **especially if the different margins can change the sign of predictions**

Complementing relationship, substituting quantity

Cross-holding does not by itself tell us whether it creates larger quantity/demand.

A card C_i can be a utility complement to account D_i while being a substitute for transaction balances: $u_{ij}^D = U = u(c_j) + v(m_i, s) + \chi_i 1\{C_i = j\}$.

- ▶ Suppose households $\max_{m_i} W - x_i m_i + v(m_i, s)$. FOC: $v_m(m, s) = x$.
- ▶ $\frac{\partial m}{\partial s} = -\frac{v_{ms}}{v_{mm}}$, and $v_{mm} < 0 \rightarrow$ What is the sign of v_{ms} ? i.e., are financial service and money balances are quantity complements or quantity substitutes?

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 - **Quantity substitution** (e.g., Akerlof-Milbourne '80, Lu-Song-Zeng '26):
credit access / payment convenience $\uparrow \rightarrow$ transactional balance $\downarrow$.
 - **Quantity complementarity**:
better financial service at i makes money at i “better” so I leave more there.

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 - **Aggregate quantity substitution** (e.g., Akerlof-Milbourne '80, Lu-Song-Zeng '26):
credit access / payment convenience $\uparrow \rightarrow$ transactional balance $\downarrow$.
 - **Bank-level quantity complementarity**:
better financial service at i makes money at i “better” so Lulu leave more there.

Credit cards complement a bank while substitute in aggregate

$$D_i = \underbrace{\theta_i}_{\text{share of deposit in bank } i} \times \underbrace{M}_{\text{how much deposit Lulu needs in total}}$$
$$\frac{\partial D_i}{\partial s_i} = \underbrace{M \frac{\partial \theta_i}{\partial s_i}}_{\text{Cao-Wang: location complementarity}} + \underbrace{\theta_i \frac{\partial M}{\partial s_i}}_{\text{Lu-Song-Zeng: quantity substitution}}$$

- ▶ Cross-selling may raise one bank's deposits by reallocating balances even while credit/payment technology reduces aggregate transaction balances.
- ▶ Beyond the paper: can competition for relationships generate an arms race that ultimately shrink the "market power"?

The application: regulation propagates across products

The paper has a beautiful counterintuitive result: lower interchange revenue → lower rewards → weaker card relationship → stronger competition for deposits → higher deposit rates.

Modeled issuers lose enormous transactor-card share (roughly 70–90% for many banks!).

Curious about underneath:

- ▶ How much comes from complementarity itself?
- ▶ How much comes from where displaced consumers go?
- ▶ Would the same mechanism operate under a marketwide shock to all issuers?

Merger: ownership & integration

There are two things changing:

Common ownership: joint pricing of two existing franchises.

Consumer integration: previously separate products now generate consolidation utility.

Before the merger: complementarity comes from holding products at the same bank

Citi card + Citi deposit	:	$+\chi$
Regional card + Regional deposit	:	$+\chi$
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Does ownership automatically create consumer/demand side complementarity across brands?

Great paper: the banking relationship is an important unit of analysis

- ▶ **Important empirical contribution:** compelling evidence that consumers choose financial products jointly, and that cross-product complementarity is economically large.
- ▶ **Important theoretical result:** banks compete over *relationships*, not isolated products — informing how we think about franchise value, pricing, and market power.
- ▶ **One direction I'd love to see pushed further: economic content of complementarity.** Location, quantity, or duration complementarity? Distinguishing these margins may make the paper even more useful for thinking about regulation, mergers, and bank franchise value.

I learned a lot from the paper, good luck!