

Innovation and competition in Internet and mobile banking: an industrial organization perspective

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Outline of the presentation

- 1 Introduction
- 2 Literature
- 3 Entry costs and barriers to entry in retail banking
- 4 Entrants strategies
- 5 Banks reactions to entry threats
- 6 Conclusion

Introduction

- Numerous innovations in retail banking offered by banks and entrants.
- Concerns for regulation and policy-makers.

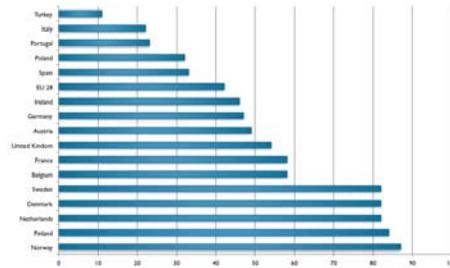


Figure : Taken from the presentation at the Conference on Emerging Challenges in Retail Finance and Consumer Policy by Luca Cassina.

→ Our purpose in this paper: industrial organization analysis of the market.

Introduction

- E-commerce diffusion in Europe (Eurobarometer, 2013)



- Usage of mobile phone in the USA (Consumers and Mobile Financial Service report of the FED, 2014)



Introduction

- Evolutions of entrants in France [A]

	2010	2011	2012	2013	09/2014
Établissements de paiement (EP)	4	16	21	26	48
Agréments délivrés par l'ACPR	3	12	17	19	39
Succursales d'EP relevant du libre établissement	1	4	4	7	9
<i>Agents de services de paiement mandatés par des EP français</i>	8	49	164	462	1185 (8 EP)
Établissements de monnaie électronique (EME)	-	-	-	3	5
Agréments délivrés par l'ACPR	-	-	-	3	4
Succursales d'EME relevant du libre établissement	-	-	-	-	1

Introduction

■ Evolutions of entrants in France [B]

	2010	2011	2012	2013	30/09/2014
Passeport européen en libre établissement					
Agents exerçant en France d'établissements de paiement de l'E.E.E.	-	2978	5310	6485	6996 (11 EP)
Distributeurs exerçant en France d'établissements de monnaie électronique de l'E.E.E.	-	15	17	28	72 (8 EME)
Passeport européen en libre prestation de service					
LPS d'établissements de paiement de l'E.E.E. en France	43	118	160	230	262
LPS d'établissements de monnaie électronique de l'E.E.E. en France	-	-	27	42	80
Entreprises exemptées d'agrément					
En qualité d'établissement de paiement	1	2	10	13	19
En qualité d'établissement de monnaie électronique	2	3	6	8	8

Introduction

We assume that banks only offer two services:

A those related to **deposits**.

B those related to **loans**.

■ Table.1: Examples of innovations in Internet and mobile banking

	Types of services	Examples of innovation	Examples of entrants
Deposits	Store monetary value	Stored-value card	Starbucks, Apple
	Savings	Personal finance tools apps	PayPal
	Withdrawal	Mobile technologies	CommBank
	Payments	Touch ID, NFC, Bluetooth	ApplePay, Alipay, Forex
Loans	Account information	Mobile technologies	Gemalto, mFoundry
	Intermediation	Online platform	Lending Club, Prosper

Literature

- Frame and White (2009) review the literature on the impact of financial innovation on commercial banking.
- Berger (2003) examines the effect of technological changes on the productivity and the profitability of the banking industry.
- Other articles focused on specific services that emerged on the market, in developed and developing countries (Shy (2012); Crowe, Rysman and Stavins (2010); Jack, Suri and Townsend (2010)).

Our contribution:

- Our paper focuses specifically on the most recent innovations in Internet and mobile banking.
- It offers a general perspective on the issue of competition and innovation in Internet and mobile banking.

Entry costs and barriers to entry in retail banking

A Regulatory barriers

Banks

Transformation activity of banks implies exposure to several risks:

Liquidity risk, interest rate risk, credit risk, operational risk, systemic risk,...

Examples of regulatory measures:

- Mandatory insurance of deposits.
- Imposition of high franchise values to banks.
- Solvency regulations.

Entry costs and barriers to entry in retail banking

Non-Banks

New categories of licenses to facilitate the entry of non-banks. For example:

Europe Payment Service Directive (2007 and 2011)) with the creation of Payment Service Providers (PSPs) and Electronic Money Institutions (EMIs).

USA FinCEN and Financial Act Task Force with the creation of Money Service Business (MSBs)

Regulatory measures to avoid insolvency:

- Ongoing and minimum capital requirements.
- Restrictions on investment in risky assets, and in the case of eM requirement to hold liquid assets in a bank account.
- No permission to be involved in transformation activity.
- Sometimes, daily/ monthly/ annual transaction limits.

Entry costs and barriers to entry in retail banking

B/ Structural barriers

- Cost functions of banks are characterized by **economies of scale** and **scope** between lending and deposit activities.
- Presence of **switching costs**:
 - Fixed technical costs of switching banks.
 - Existence of long-term relationships between banks and customers on the loan market.
- **Network effects** (e.g., in payment systems).

Entry costs and barriers to entry in retail banking

C/ Strategic barriers to entry

Strategies that could be used by banks to deter entry:

- Investment in ATMs and network capacities.
- Bundling products to offer lower prices.
- Increase minimum security standards.
- Investment in reputation.
- Denial of access to facilities shared by a club.

BUT

- Overinvestment in ATMs may not be a credible threat nowadays.
- Does deterring entry increase banks' profits ?
- Entry deterrence is more difficult in an oligopolistic industry.
- In markets with switching costs, firms tend to behave as less aggressive "fat cats".

Entrants strategies

A/ Start-up companies

1 **Vertical integration**→ the start-up relies on the infrastructure offered by banks to:

- offer complementary products to the existing customer base.
- decide to serve a niche-market.

Examples:

Mobile payment services (Level-up) and personal financial tools (Simple).

Is there a need to regulate the terms of access?

B/ Platforms and large retailers

- They already rely on a large physical distribution network.
- Main strategy: to **bundle** the core product to the payment transaction.

■ Internet and mobile payments

- Increase consumer loyalty and market share.
- E.g., Google with Google Wallet, Apple with ApplePay.

■ Brick and mortar retailers

- Price discrimination.
- Bypass of platform's fees.
- E.g., Starbucks, Wal-Mart.



Entrants strategies

C/ Entry as banks

→ Which degree of differentiation?

Horizontal

- Example: METRO Bank
- Compete on the same level of quality.
- BUT adverse selection of new customers.

Vertical

- Example: Fidor Bank.
- Compete by offering a better technology.
- Possible justifications:
 - Reputation.
 - Network effects.

What is the right timing at which a firm should acquire a bank license?

Banks' reactions to entry threats

A/ The role of switching costs

→ "Harvesting vs. investing dilemma" (e.g. Bank of America).

- 1 What is the right balance between the profits earned on the installed base and the profits earned on new customers?
- 2 Do larger banks with higher installed base innovate more than small banks?
- 3 Should banks innovate by themselves or should they outsource innovation?

Banks' reactions to entry threats

B/ Compatibility and cooperation decisions

→ Trade off between competition and network effects.

- On compatibility decisions.
- On cooperation decisions:
 - between banks (e.g., Paylib in France).
 - between banks and entrants (See table).

B/ Compatibility and cooperation decisions

■ Examples of joint ventures between banks and entrants:

Bank	Entrant	Type of agreement	Partners activity	Date
MC	Data Cash Group	Acquisition to increase e-commerce penetration	Payment service Provider for e-commerce merchants	2010
Visa	Cybersource	Acquisition to provide new services to merchants related to back-office processing	Gateway company. Creation of an open software platform for developers using Authorize.Net	2010
AmEx	Revolution Money	Acquisition	Platform to exchange e-money	2010
MC	iZettle	Participation	Mobile payment company	2011
MC	Paybox	Participation	e-commerce market as virtual electronic payment terminal	2012

Banks' reactions to entry threats

C/ The impact of risk on banks' strategies

A Risks associated to transformation activity.

- Innovations offered by entrants have an impact on banks' liquidity risk.

B Risks occurring at the transaction level.

- Incentives to invest in security standards.

63% of innovative payment services are subject to operational security standards and data integrity.

Conclusion

- We have surveyed the issues related to innovation and competition.
- Future research on the impact of innovation on competition in retail banking is essential from a policy perspective.
- The creation of the **Payment System Regulator** in the UK in 2013 to oversee competitiveness in the UK payment industry shows the importance of these issues.



Thank you for your attention