Cloud-enabled Innovations for Financial Services

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Cloud-enabled Innovations

In the context of cloud-enabled innovations for financial services the intersection of cloud, Big Data, mobile, Business Intelligence and Analytics (BI&A), and platform innovations drive business model, product, service and business process innovations in financial institutions.

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Cloud computing ontology

Cloud computing

- Standards
- Cloud programming platforms
- Integration
- Components
- Payment

- Modes
  - Public clouds
  - Private clouds
  - Hybrid clouds
  - Community clouds

- Types of delivery models
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)

- Ownership and management
- Locality
- Stakeholders
- Features

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E-Finance service ontology

Example

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Cloud-enabled Innovations

- Multi-sided Platforms
- Cloud computing
- Business Intelligence
- Big Data
- Analytics
- Mobile

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Cloud-enabled Innovation Taxonomy for Financial Services

Cloud-enabled Innovations for Financial Services

- Business models innovations
- Product Innovations
- Service Innovations
- Business Processes Innovations

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Cloud-enabled Innovations for Financial Services

Business models innovations

Innovative Platform strategy
- Manage and establish multi-sided relations
- Manage and establish multi-sided rules
- Manage and establish price-settings
- Manage mobilization
- Manage monetization
- Manage market design
- Manage bundling
- Manage development

Product Innovations

Non-cash payments technology
- Mobile payments
- E-money
- E-wallets
- etc.

Voice Recognition and Avatars
- ATM with spoken commands
- ATM with video avatar personnel support
- etc.

Service Innovations

Electronic banking

Non-cash payments

Mobile banking

Digital Banking

etc.

Business Processes Innovations

Innovation in Strategy
- Internet and mobile as the primary channels
- Interactive marketing as the primary revenue triggers

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Cloud-enabled Innovations for Financial Services

Business Models Innovations

Product Innovations

Service Innovations

Innovations in Integration of Bank Front and Back Offices
- Real time campaigns’ impact on revenue
- Real time products’ impact on revenue
- Real time services’ impact on revenue

Innovations in Real-Time Dashboards
- Real time products’ impact on revenue
- Real time services’ impact on revenue

Innovations in Integrated Contact and Content Management
- Integrated support of all digital channels
- Integrated support of a call centre
- Integrated support content
- Big Data CRM analytics

Innovations in Marketing Offers and Segmentation
- Individualised customer’s offers
- Marketing split into Brand Marketing (the current team)
- Marketing split into Brand Marketing (customer dynamics team)

Credit Risk Management Innovation
- Automate credit risk assessment

Branch Automation Innovations
- Transformation of the branch into a sales and service centre
- Cheques and physical credit cards are being phased out

Straight-Thru Processing (STP) Innovations
- General insurance applications instantly without human intervention
- Loan and credit card applications instantly without human intervention
- Big Data insurance analytics

Distributed Banking Innovations
- Branches’ consolidation into megastores (educate, inform and sell)
- Targeted service banking anywhere customers are
- Mini-branches and bank-shops
- Pure on-line banks

Social Media Innovations
- Customer advocates listening to everything customers say about brand online
  (in social networks, forums, blogs, wikis, etc.)
- Big Data social analytics
- Big Data data mining

Predictive Marketing Innovations
- Cloud location-based and point-of-impact marketing offers in real time to customers wherever they are
- Big Data driven Predictive models for detailed customer analytics

Innovations in Customer Analytics and Customer Data-Mart
- Big data channel analytics (will drive innovation product and service development plus marketing)

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Electronic banking services (e-banking services) have spread quickly in recent years. There are several branches that come from e-banking. They cover the sectors of e-banking, e-payment and many other activities. Both banks and customers (individuals, companies or government) benefit from the use of alternative channels and e-banking services. These services offer consumers a great deal of convenience, saving time when managing financial matters, and also lower costs, reducing service charges.

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What exactly is e-Banking?

The definition that is used as the basis in this study is: the provision of banking services and markets through electronic channels.
Multi-sided market

Terms two-sided market, multi-sided market, and platform-based market are used sometime interchangeably.
We shall use such definition (Evans et al, 2008; Hagiu, and Wright, 2011):

**a multi-sided market exists, when at any point in time there are**

- two or more distinct groups of customers;
- the value obtained by one kind of customers increases with the number of the other kind of customers; and
- an intermediary is necessary for internalizing the externalities created by one group for the other group.

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Types of intermediaries in MSP markets

- Exchanges;
- Advertiser-supported media;
- Transaction systems;
- Software platforms;
- Financial services and products.

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Multi-sided platform (MSP):
an *organization* that creates value primarily by enabling *direct interactions* between two (or more) distinct types of *affiliated* customers.

*Andrei Hagiu, Julian Wright, 2011*
Difference between input suppliers, MSP’s and re-sellers caption (Hagiu, and Wright, 2011).
Multi-sided Financial Platform (henceforth, MFP) is a financial or not financial organization that creates value primarily by enabling direct interactions between two (or more) distinct types of affiliated customers that are using finance products and/or services.
Multi-sided Banking Platform Framework

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Platform Two-Sided Network Effects

Platform Components
(Hardware, software, services)

Rules
(Standards, protocols, policies, contracts)

User A
Same side network effects

Cross side network effects

User B
Same side network effects

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The role of MFP intermediaries

- Minimize transaction costs through matchmaking and audience making.
- Minimize costs through the elimination of duplication.
- Permit value-creating exchanges that would not take place otherwise.
- Enforce innovation.
Debit and credit card payment schemes which cater to cardholders and merchants (American Express, Visa, MasterCard),

Financial intermediations, insurance, securities,

Online and mobile banks, auctions, shops,

Social services (crowdsourcing and crowdfunding),

e-Payment services (PayPal etc.) in their current forms.
VISA = JOINTLY SPONSORED SHARED PLATFORM
MFP’s distinctive management challenges

- Business model design
- Winner-take-all dynamics
- Monetization
- Market Design
- Regulation and Government Policy
- Network Effects
- Platform Mobilization
  - Attracting Users: Intermediaries
  - Attracting Users: Advertising and Promotions
- Implementation
• MFP reduce search and transaction costs and give companies vastly broader access to markets than they could achieve on their own.

• Over the past 10 years, we’ve also seen how powerful owners of MFP like American Express, Visa, MasterCard and many others extract most of the value from platforms, because companies that played with them didn’t adequately understand their motives and operating strategies.
Advantages of Platform-driven Financial innovations

- Driving co-created value through Global networks (Prahalad, and Krishnan, 2008).
- Building dynamic capabilities for open innovation (Kutvonen et al., 2010; Lichtenthaler, 2011).
- Innovation risk diversification (Hoffman and Schlosser, 2001; Mention and Asikainen, 2012).
- Improvement of innovation process (van de Vrande et al., 2009)
- Shortening time-to-market (Rigby and Zook, 2002).
- Accelerating internal innovation (Chesbrough et al., 2006).
Advantages of Platform-driven Financial innovations

- Access to partners’ networks (Mention and Asikainen, 2012).
- Guarantee of technological leadership by focusing solely on a firm’s core competences (Koruna, 2004; Lichtenthaler, 2007).
- Regulation and Government Policy.
- Broad protection for harmful user submissions (Coles, and Edelman, 2012).
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Motivators for Financial Institutions to implement MFP

- Attainment of competitive advantage,
- Tracking of technological developments and
- Lower transaction costs.

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Disadvantages of Platform-driven Financial Innovations

• Risk of leaking internal resources to competitors in case of revealing (Laursen and Salter, 2006).
• Risk of enveloping of the business platform (Coles, and Edelman, 2012).
• Risk of excessive use from impeding transactions (Coles, and Edelman, 2012).
• Risks of participation (Coles, and Edelman, 2012).
Governance of the MFP innovations

Has been the domain of two main actors: government and industry. The making of MFPs regulations occurred in a top down process through a combination of

- **direct government regulation** (legislation, government regulatory agencies and licenses),
- **co-regulation** (industry based codes of practice monitored by government agencies) and
- **self-regulation** (industry endorsed codes of practice).

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Governance of the MFP innovations

- In above framework MFP sides have only a capacity for direct input through complaints mechanisms or through the judicial system.
- Predominantly, MFPs’ consumers, the receiving end of the one-to-many model, with little need to interact with banks, regulators, or each other. But this model is becoming increasingly problematic.
- In the contemporary P2P MFP environment, users are increasingly producing their own content, using a wide array of crowd funding MFP applied to e-Banking. Instead of venture capital, institutions, or direct philanthropy, an interest community is called on to support the project in a distributed, generative fashion.

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Governance of the MFP innovations

• This rapid expansion in the production and distribution of content, we argue, requires us to think critically about the focus, scope and purpose of crowd funding MSBP regulation, and in particular, the governance of what we might call the ‘crowd funding’ space: spaces that allow for everyday practices of participation and community engagement (Jenkins, 2007).

• These channels of communication link organized groups and social MFP networks. It has been difficult for regulators to account for these shifts.

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MFP management strategies

MSFP Strategies

- General
- Strategies for Sustenance
- Strategies for Evolution
- Strategies for Innovation

Innovate and make platform attractive
Reinvigorate business model and develop trust
Acquire and absorb strategic companies
Increase multi-homing cost and create stickiness
Plan, implement, direct, and control organization’s innovation activities
Monitor and Learn

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MFP management strategies

Strategies for MSFP Innovation

- Innovate and make platform attractive
- Reinvigorate business model and develop trust
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Envisioning and leading overall platform and ecosystem evolution

Empowering and stimulating economic value creation activities of autonomous third party companies to enhance the platform’s overall value proposition

Encouraging goal congruence of autonomous partners

Evaluating information about the overall system evolution as well as about emerging opportunities and threats within the ecosystem

Ensuring strategic coherence and appropriability of returns by maintaining control over platform and ecosystem evolution

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MFP management strategies: Reinvigorate business model and develop trust

Freemium strategy (Free + Premium)
“Pay as you go” model
Indirect sales through partners or ISVs
Encourage upselling/bundling by using active data mining techniques to recommend solutions to customers
Increase partner margin as volume increases
Absorb the applications that are of high value to platform owners

Absorb the applications that are involved at multiple places in the platform
MFP management strategies: Increase multi-homing cost and create stickiness

Create stickiness

Proprietary user interfaces and APIs

Bundling applications and increasing dependency

Getting/building exclusivity

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• Book chapter

• Papers

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Thank you!

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