WORLD ECONOMIC FORUM

Balancing Financial Stability, Innovation, and Economic Growth

Peterson Institute for International Economics | Spring Meeting on Fintech Disruption and Financial Stability

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Prepared in collaboration with

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Balancing Financial Stability, Innovation, and Economic Growth
Context

In an effort to better understand the implications of the Fourth Industrial Revolution, the World Economic Forum has prioritized review of transformation in the financial system and has launched a new initiative: Balancing Financial Stability, Innovation, and Economic Growth (FSIEG)

Led in partnership with Oliver Wyman, FSIEG aims to bring together practitioners and policymakers in an effort to better understand the competitive, human capital, and regulatory dynamics that will exist in the financial sector in the future

Over the past 9 months, the Steering Committee, Working Group, and Project Team of FSIEG have worked on identifying the key drivers of change and based on these drivers, how the industry is likely to evolve over the coming years. Through the course of this work, they have identified the major benefits that these changes can bring to the Financial Services system, if appropriatedly enabled, and the key risks associated with these changes, which must be managed properly

Summary of key findings to date on WEF Balancing Financial Stability, Innovation, and Economic Growth initiative

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1 **Tremendous further innovation-driven change is coming in Financial Services**

2 **Joint, concerted action is needed to enable the system to reap the benefits of innovation**

3 **There are challenges in managing some risks introduced by this wave of innovation**

4 **The FS system would benefit from certain 'tools' to achieve both greater enablement and risk management**

1 Tremendous further innovation-driven change is coming in Financial Services

Key findings

- Change is likely where needs are unmet or the incumbent models are inefficient, or have unsustainably high profit margins. They key drivers of change identified in our work are:
  - **Unmet needs**
  - **Inefficient cost structures**
  - **High capital usage**
  - **High returns**
- By looking at the key drivers of disruption across the system, we can anticipate where more change is likely to come
- These changes will affect the 'triumvirate' of public, private incumbent and private fintech communities

Modular Financial Services Value Chain

Example: Retail banking

A Client relationship

B Products & services

C Financial resource management

Change is likely where needs are unmet or the incumbent models are inefficient, or have unsustainably high profit margins

Drivers of change

Drivers[1]	Explanation	Real change already seen		Potential measures
Unmet needs	• Customer needs not well met • New products meet unrecognized need	LendingClub Receivables Exchange Square	• Customer-driven product design prevalent in lending and payments	• Net promoter scores
Inefficient cost structures	• High-cost, inflexible legacy systems • New innovation allows lower cost delivery	Vanguard ripple direct line	• Lower cost delivery models leverage new technologies in asset management and insurance	• Profitability
High capital usage	• Lower capital models • Lower return expectations of new entrants	PROSPER Quicken Loans LendingClub zopa	• Marketplace lending less capital intensive than more traditional balance sheet lending models	• Return on Equity
High returns	• Pricing of some segments cross-subsidizes others • Bundling allows high margins	TransferWise WorldFirst	• Embedded FX in payments drew innovative companies due to high returns	• Revenue

1. While regulatory pressures do cause change, they open up the underlying drivers listed above

By looking at the key drivers of disruption across the system, we can anticipate where more change is likely to come

Anticipated areas of change to come

		A Client relationship	B Provision of products & services	C Financial resource management	D Infrastructure, IT & operations
Retail and small business	Account services	Point of sale. Young Professionals, Low Risk underserved		Deposits/ retail savings	
	Money services		SME		
	Lending		Monolines e.g. personal loan, mortgages	SME lending	
	Payments		FX linked to payments		Distributed ledger, IoT, Robotics
Wholesale Banking	Fixed Income – Macro	Smart liquidity searching, robo		Next wave market electronification	Infrastructure sourcing in wholesale banking
	Fixed Income Micro				
	Equities				Robotic and AI solutions for process re-engineering
	Corporate Banking	Correspondent banking	FX linked to payments	Financing of trade flows	Distributed ledger, IoT, Robotics
Wealth & Asset Mgmt	Asset Management		Traditional asset mgmt		
	Wealth Management	Advisory relationship mgmt, robo			
Insurance	P&C	Data-driven sub-segmentation	Low-risk segments	Alt capital in re-insurance	Personal lines
	Life				
	Health				

Main driver of disruption
- Unmet needs
- Inefficient cost structures
- High capital usage
- High returns

These changes will affect the ‘triumvirate’ of public, private incumbent and private fintech communities

Impact on key actors

Private fintech

- There is likely to be a split outcome for fintechs:
  - A small number of large competitors take a new and very material role in the industry
  - Most smaller firms sit into a modular structure in co-operation with incumbents

Private incumbent

- In many of the areas of most change outlined above, there will be margin compression and market share loss in addition to that already seen since the global financial crisis
- Incumbents need to radically transform their business models to respond to these challenges, improving customer service to retain their customers, and most importantly dramatically improving cost and capital efficiency
- At the same time, incumbents hold many advantages around customer franchises, marketing and distribution channels

Public

- The public sector must be open to innovation while protecting the system

2 Joint, concerted action is needed to enable the system to reap the benefits of innovation

Key findings

- We have simplified the many benefits of these changes that are anticipated into four overarching areas:
  - Improved, more accessible and cheaper customer service
  - Better risk management
  - Improved efficiency for incumbent industry participants
  - New value creators
- All industry participants, in particular policymakers and regulators, will need to approach the changes in the industry with an ethos of enablement, as there are significant benefits which will not be achieved without more collective effort to enable change

Areas where more enablement is needed to reap benefits

Benefit		Enablement required
	**Improved, more accessible and cheaper financial services**	• Access to capital for smaller and mid-sized corporates • Extension of payment services to wider population segments to promote inclusion • Creating a tiered structure that will foster new FinLife services to be delivered to customers
	**Better risk management**	• Improved industry-wide data on risk positions
	**Improved efficiency for incumbents**	• Creation of industry utilities and outsourcing solutions
	**New value creators**	• Extension and international standardisation of sand-box approaches

These changes can bring enormous benefits to the Financial Services system

Key benefits from innovation

Improved, more accessible and cheaper customer service

- Consumers of financial services can benefit from better and cheaper services; more customers can have more access
- The delivery of financial services will become more focused on supporting better living standard outcomes (education, health, accommodation, lifestyle)
- Customers will be able to shift from buying financial services to managing their financial health more effectively through their lifetimes

Better risk management

- The financial services system is responsible for the effective management of financial and non-financial risk associated with the provision of financial services
- Innovation can allow these risks to be better monitored and understood, and better distributed to the points in the system willing and incentivised to hold these risks
- e.g. Better and faster analysis of large amounts of data allows better MIS and early warning systems such as on conduct

Improved efficiency for incumbent industry participants

- Firstly there are huge opportunities for incumbents to improve service, generate more customer loyalty, reposition at the heart of helping the customer achieve their objectives, and finally re-develop the customer delight and trust that has deserted the industry in the last decade
- Secondly new tools to manage data and digitally redesign process offer the route to very significant reductions in costs and therefore improvements in efficiency and returns

New value creators

- New companies offering new services that create real equity value for the economy including jobs, tax and so on
- Most of the equity value and employment in Financial Services created in the last 10 years has come from nonregulated entities

However more concerted action will be needed to enable the benefits of innovation

Areas where more enablement is needed to reap benefits

Improved, more accessible and cheaper financial services

Access to capital for smaller and mid-sized corporates:

- SMEs are not yet seeing the benefits of the revolution in data provision and accessibility in credit markets, and this is where it is most needed
- Further push is required here from the public side to create incentives for more open data sharing, increasing transparency in these market

Extension of payment services to wider population segments to promote inclusion:

- Increased coordination between regulators and innovators, the removal of regulatory inconsistencies, and the advancement of risk-based KYC/AML account tiering and international payments standards would all support this extension

Creating a tiered structure that will foster new 'FinLife' services to be delivered to customers:

- This must be done without introducing greater risks through, for example, industry conduct or limited transparency in advise algorithms

Better risk management

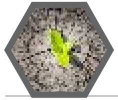
Improved industry-wide data on risk positions:

- Here progress is underway but the data repositories so far have been a disappointment, and in the private sector is proving slow to develop industry data utilities for use in areas such as FRTB[1]
- Further involvement of the public sector here would be valuable

Improved efficiency for incumbents

Creation of industry utilities and outsourcing solutions:

- Subject to good control this is an area that needs more enablement support
- There are areas where regulators could help, or areas where facilitation is required for the industry to collaborate more effectively



New value creators

Extension and international standardisation of sand-box approaches:

- This is intended to promote the emergence of successful new businesses and business models

1 Fundamental Review of Trading Book

3 There are challenges in managing some risks introduced by this wave of innovation

Key findings

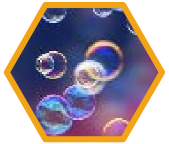
- Discipline is needed on risks we understand reasonably well, but are subject to a mix of structural and cyclical change – largely financial risks (including new forms of credit, maturity transformation, volatility in financial markets), and conduct risks
- There is need for increased focus on and deeper understanding of new sources of new risks in the system – largely driven by the introduction of new technology, and including how critical infrastructure evolves, cyber risks, and new sources of interconnectedness
- The system currently lacks a common understanding on how to assess the materiality of and treat risks

Key risks identified during FSIEG work

Key Well-known sources of risk New sources of operational risk

Discipline is needed on risks we understand reasonably well, but are subject to a mix of structural and cyclical change

Well known sources of risk



Credit bubbles

- Discipline is required to **manage credit bubbles** which appear. Often when these bubbles of credit appear people claim that they are new business models which do not create credit bubbles
- It is key to recognize which are **truly new models** as opposed to new delivery mechanisms for old models

Maturity transformation

- Responsibility for maturity transformation is **shifting from banks to other actors within the system** (e.g. through marketplace lending with alt-beta funds, other non banks, and even with individuals)
- We need to be clearer on where this is shifting and ensure the **risk management expertise and awareness** follows the shifts

Financial market volatility

- Market electronification is an evolving area of technological innovation that has been monitored by the industry for some time. The main risk identified here in terms of innovation is the extent to which **electronic trading and agency trading models** are reducing the margins and returns for capital / balance sheet provision by financial market intermediaries
- High frequency trading, dark pools and the use of alternative trading platforms prompted debate around **appropriate use of algorithms** and the actual vs perceived level of **liquidity in capital markets**

Industry conduct

- Anyone providing a financial service to a customer, who may not need to be regulated from a macroprudential perspective, does need to be **subject to conduct oversight**
- However, currently not all financial services companies who ‘touch’ clients are **under the umbrella of conduct authorities**, and in fact in some jurisdictions there are no conduct authorities

There is need for increased focus on and deeper understanding of new sources of operational risk

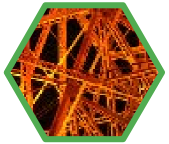
New sources of operational risk

Evolution of critical infrastructure

- Ensuring that the **critical infrastructure required to support the financial services system** evolves in a robust manner in line with advances both in the technology available to build it, and in the requirements from it for the provision of financial services, is an important lens to consider for risk management at a system level

Cyber risk to data

- Data security, particularly **cyber risk**, has become a top priority for the financial services industry
- As businesses increase reliance on technology and continue to amass larger stores of data, it becomes increasingly important (and difficult) to ensure **resilient systems are in place to safeguard information**
- **Risk with data-sharing** is also becoming a more frequent concern for the public and private sectors



Interconnected infrastructure

- As banks continue to face increasing cost pressures, they are looking to o**utsource more of their post-trade processing** to a variety of service providers
- This leads to concerns around the costs and complexity of harmonizing and integrating data after it has been fragmented, as well as potential for activities to be pushed **outside of the FS regulatory perimeter**

4 The FS system would benefit from certain ‘tools’ to achieve both greater enablement and risk management

Required tools identified during work to date on FSIEG

Industry Innovation Council

- A public/private incumbent/fintech body to support change on an ongoing basis
- This body could manage this dialogue on a more continuous and structural basis

Better repository of information on emerging new innovation and its impact

- Better continuous data on what fintechs are out there and what they are doing so the industry could better understand it and watch it evolve
- This could be extended to benchmarking data on what techniques various actors in the system are using to drive innovative change to their service offerings or business models

Improved assessment tools for the risks introduced by innovation

- The public sector needs to develop and share best practices in terms of risk assessment of innovation driven systemic risks, particularly in the area of materiality assessment

Example provided on next slides

More standardised regulatory treatment framework for new competitors

- Both fintechs and incumbents need to better understand ex ante how they will be treated from a regulatory perspective depending on the kinds of activities and risks they introduced, and there should be more international alignment on this

Example provided on next slides

Improved assessment tools for the risks introduced by innovation

The risk taxonomy provides a comprehensive list of risk types to aid in the systemic risk identification process

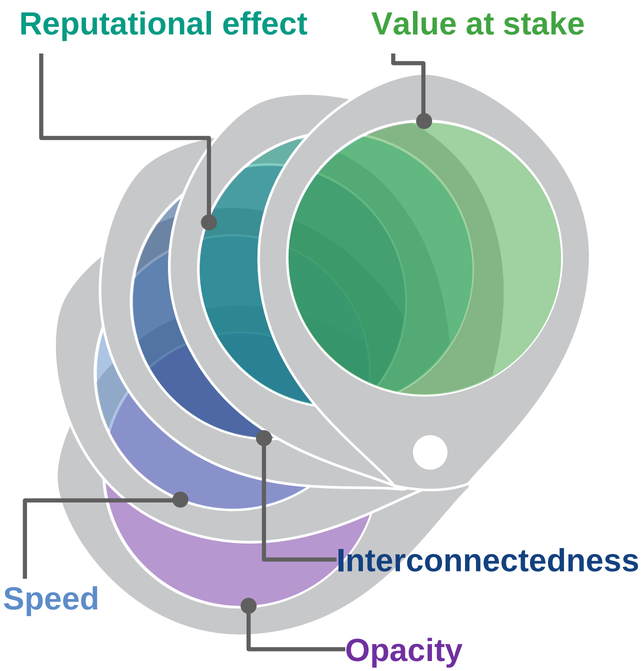
Detailed systemic risk taxonomy

Liquidity Risk	Conduct Risk	Market Risk	Credit Risk	Insurance Risk	Operational Risk
Funding/ Maturity Concentration Risk	Customers, Products and Business Practices	Interest Rate Risk	Consumer Credit Risk	Underwriting Risk – Attrition	Vendor Risk (3rd and 4th Party)
Overseas Funding	Compliance & Regulatory Risk	Investment Portfolio Risk	Counterparty Credit Risk	Underwriting Risk – Catastrophe	Cyber Risk
Market Liquidity Risk	AML Risk	FX/Hedging Risk	Concentration Risk	Reserving	Fraud Risk
					Employment Practices & Workplace Safety

Risks identified refer to systemic risk, defined by the FSB as "The risk of disruption to the flow of financial services that is (i) caused by the impairment of all or parts of the financial system; and (ii) has the potential to have serious negative consequences for the real economy"

Improved assessment tools for the risks introduced by innovation

Overlaying materiality lenses allows users to identify which risks will have a greater impact to financial stability



Materiality lenses

Definition	Ease of measurement
Value at stake • The direct financial impact if the risk event occurs, considering the current environment and existing state of controls	Sophistication of modelling techniques varies by risk type and industry segment
Reputational effect • The degree to which the risky activity will affect consumer and business confidence	Can be proxied by change in market capitalization above direct financial impact
Interconnectedness • The degree to which the risky activity is connected with other parts of the Financial Services system	Direct financial interconnectedness more easily measurable than indirect
Speed • Rate at which risk is likely to materialize	Difficult to assess
Opacity • The degree to which it is possible for regulators or operators to understand the implications of the risky activity	Difficult to assess

More standardised regulatory treatment framework for new competitors

Illustrative options available to regulators

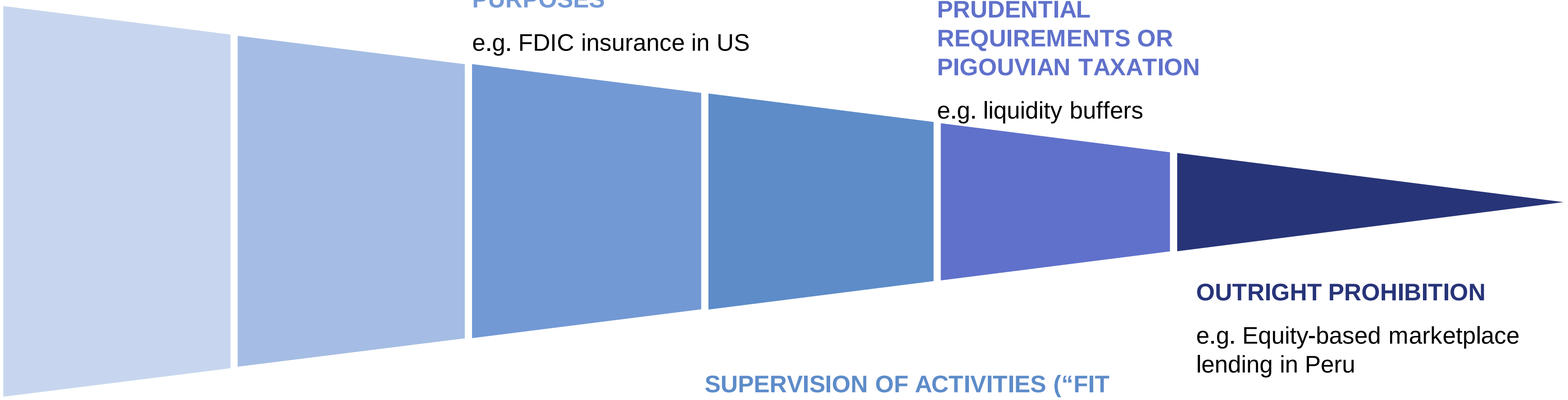
NO MEASURES REQUIRED FOR SYSTEMIC PURPOSES

INVESTOR/CONSUMER PROTECTION FOR SYSTEMIC PURPOSES

e.g. FDIC insurance in US

PRUDENTIAL REQUIREMENTS OR PIGOUVIAN TAXATION

e.g. liquidity buffers



OUTRIGHT PROHIBITION

e.g. Equity-based marketplace lending in Peru

SUPERVISION OF ACTIVITIES (“FIT PERSON”, GOVERNANCE, PRE-APPROVALS)

e.g. as proposed by Omarova in ‘License to Deal: Mandatory Approval of Complex Financial Products’

DISCLOSURE OF ACTIVITIES AND FINANCIAL STATUS TO SUPERVISORS

e.g. CCAR in US

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