

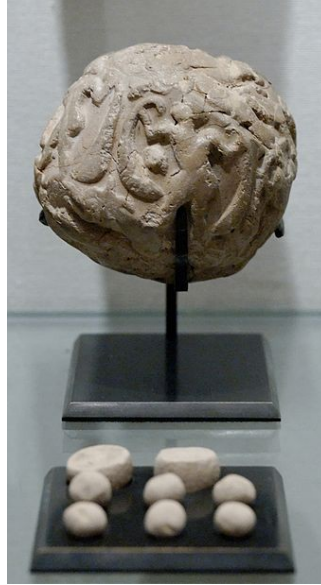
International Perspective on FinTech Regulation

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October 30, 2019



**Best available technology has always been used for money:
to validate and record balances...**



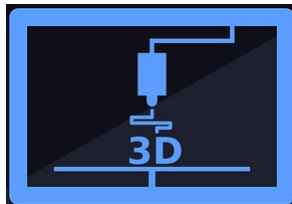
...provide safekeeping,...



...and facilitate transfers



Technology is transforming every industry



Always available

Where you want it

Buy only what you want

Contextualization

Asset-light business

On-demand delivery

Tailored product

Banking has lagged

NEW HOURS EFFECTIVE SEPTEMBER 1, 2017

MAIN BANK

LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm
Sat: Closed

DRIVE UP HOURS

Mon-Fri: 7:30am - 6:00pm
Sat: 9:00am - 1:00pm

HAMBURG

LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm
Sat: Closed

DRIVE UP HOURS

Mon-Fri: 8:00am - 6:00pm
Sat: 9:00am - 1:00pm

NORTH CROSSETT

LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm
Sat: Closed

DRIVE UP HOURS

Mon-Fri: 8:00am - 6:00pm
Sat: Closed

FOUNTAIN HILL

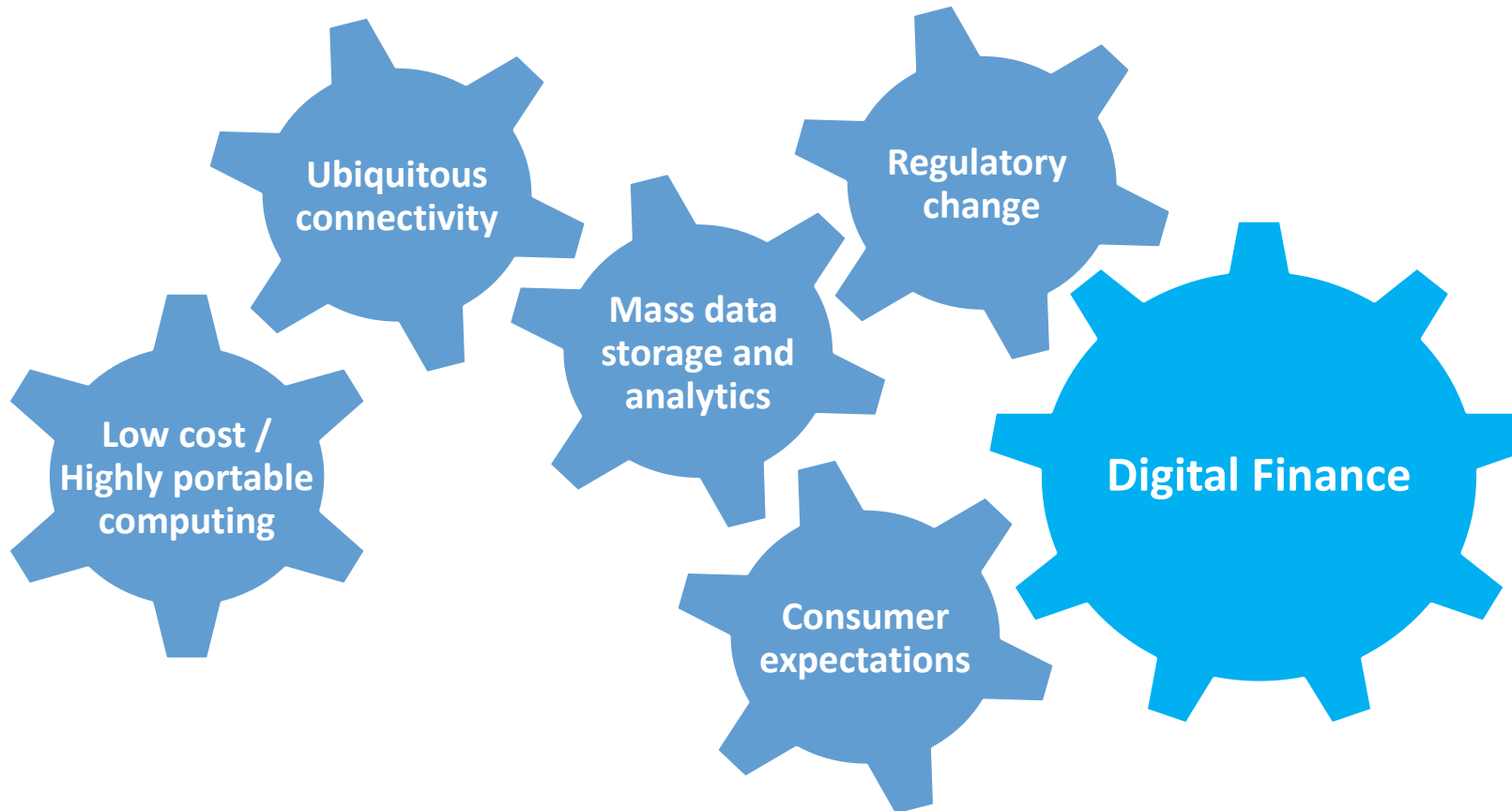
DRIVE UP HOURS

Mon: 10:00am - 1:00pm
Tue: Closed
Wed: 10:00am - 1:00pm
Thu: 10:00am - 1:00pm
Fri: 9:00am - 4:00pm
Sat: Closed

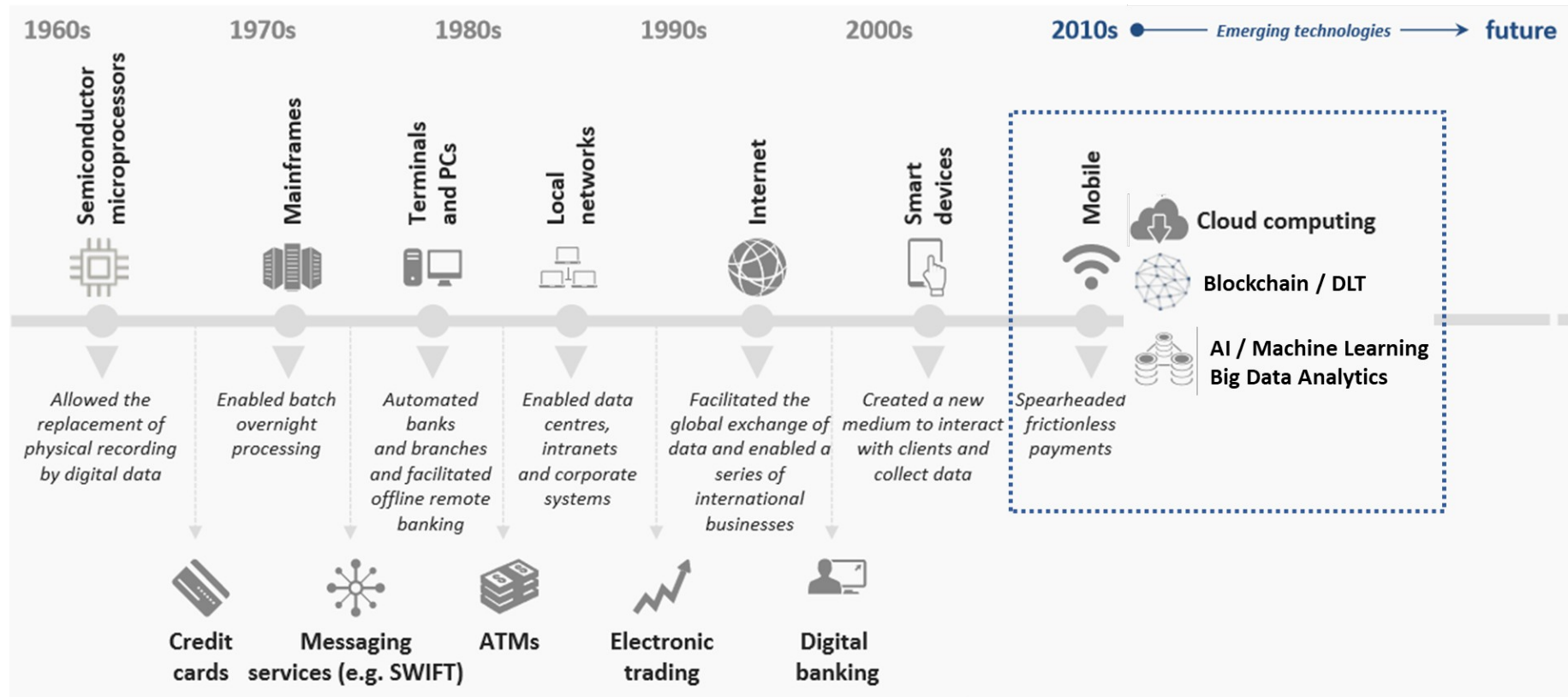


LOCALLY
GROUNDED

Drivers of digital transformation in financial services



The pace of technology adoption in financial services is accelerating

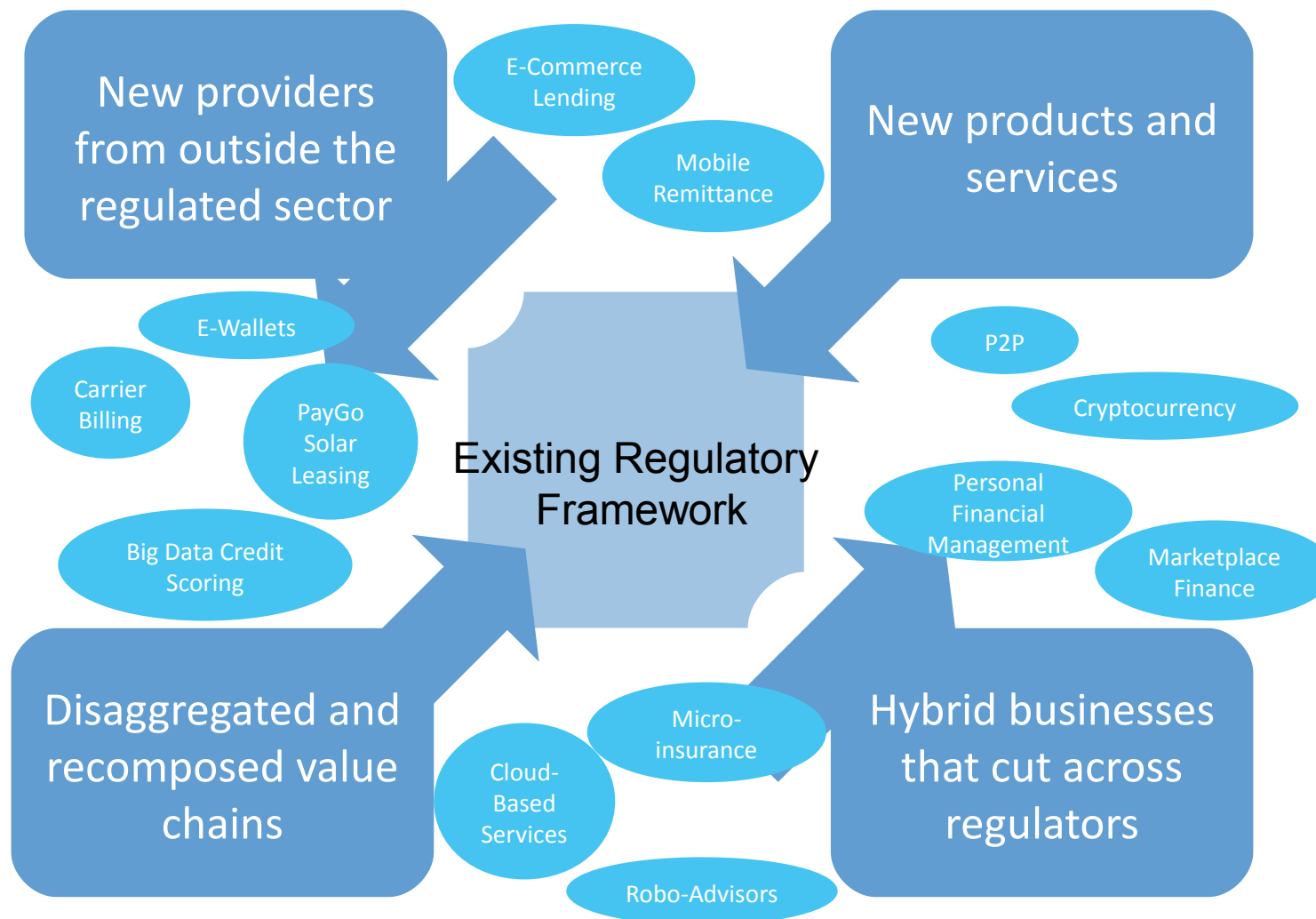


New technology and approaches across the value chain are transforming the industry

User Needs	Traditional Model	Gaps ²	Technological Innovations ³				Fintech Solutions
			AI/ML	Data/ Cloud Platforms	DLT/ Crypto	Mobile	
Pay	Cash/ATM Check Wire/MTO's Debit/Credit Cards Centralised Settlement	Speed Cost Transparency Access Security	L	H	H	H	Virtual currencies Remittances Mobile payments Mobile PoS P2P payments B2B transactions DLT-based settlement
Save	Bank deposits Mutual funds Bonds Equities		L	H	H	L	Virtual currencies Mobile market funds Blockchain bonds
Borrow	Bank loan Bonds Mortgages Trade credit		H	H	H	L	Credit modeling Platform lending Crowd-funding Blockchain bonds Auto-underwriting
Manage Risks	Brokerage underwriting Structured products Trading regulatory Compliance KYC Insurance		H	L	H	L	Regtech, Smart contracts Suptech Crypto-asset exchanges eKYC, Digital ID
Get Advice	Financial planner Investment advisor		H	M	L	M	Robo-advising Automated wealth management

Source: World Bank and IMF (2019). Fintech: The Experience So Far.

Business models are reconfiguring in ways that challenge existing regulatory approaches



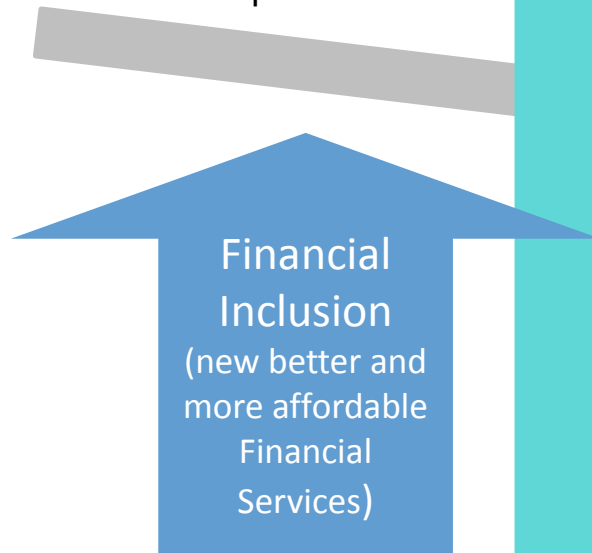
FinTech presents benefits and risks with respect to achieving regulatory objectives

Regulatory Objectives (I – SIP Framework)	Key Benefits	Key Risks
Financial Inclusion	<ul style="list-style-type: none"> • Lower costs and more efficient than traditional and/or informal systems • Access to credit via alternative data sources for unbanked and underbanked • Simple, more reliable, and significantly faster than informal methods 	<ul style="list-style-type: none"> • Micro-segmentation of risk through use of Big Data analytics may lead to financial exclusion • High borrowing rates on digital loans, which make it difficult to fully repay • Gender bias and/or income inequality from the use of AI, ML and Big Data analytics
Financial Stability	<ul style="list-style-type: none"> • Increased diversification of deposit base and loan portfolios can reduce concentration among systemic financial institutions • Improved data quality and risk data aggregation can increase systemic resilience 	<ul style="list-style-type: none"> • Increased financial interconnectedness may result in expedited adverse financial shocks • Increased operational risks, such as cyber risks, may increase systemic risk
Financial Integrity	<ul style="list-style-type: none"> • Promote traceability of transactions, supporting CFT • Facilitate easier verification for KYC process, thereby reducing compliance costs • Regulators' use of technology to support financial integrity 	<ul style="list-style-type: none"> • Virtual currencies may facilitate anonymous funding sources or payments rendering AML/CFT checks to be difficult • Decentralized nature of blockchain/DLT may render AML/CFT enforcement unclear if operating outside of country
Consumer Protection	<ul style="list-style-type: none"> • Increased transparency, more and better information to consumers, reducing information asymmetries • Comparison of financial products and services more quickly and easily 	<ul style="list-style-type: none"> • Limited transparency of fees and charges, which can mislead consumers • Over-indebtedness due to lack of visibility of multiple digital loans of each borrower, push loan tactics • Lack of data protection, leading to misuse of customer data

Regulators must balance the risks and benefits of financial innovation

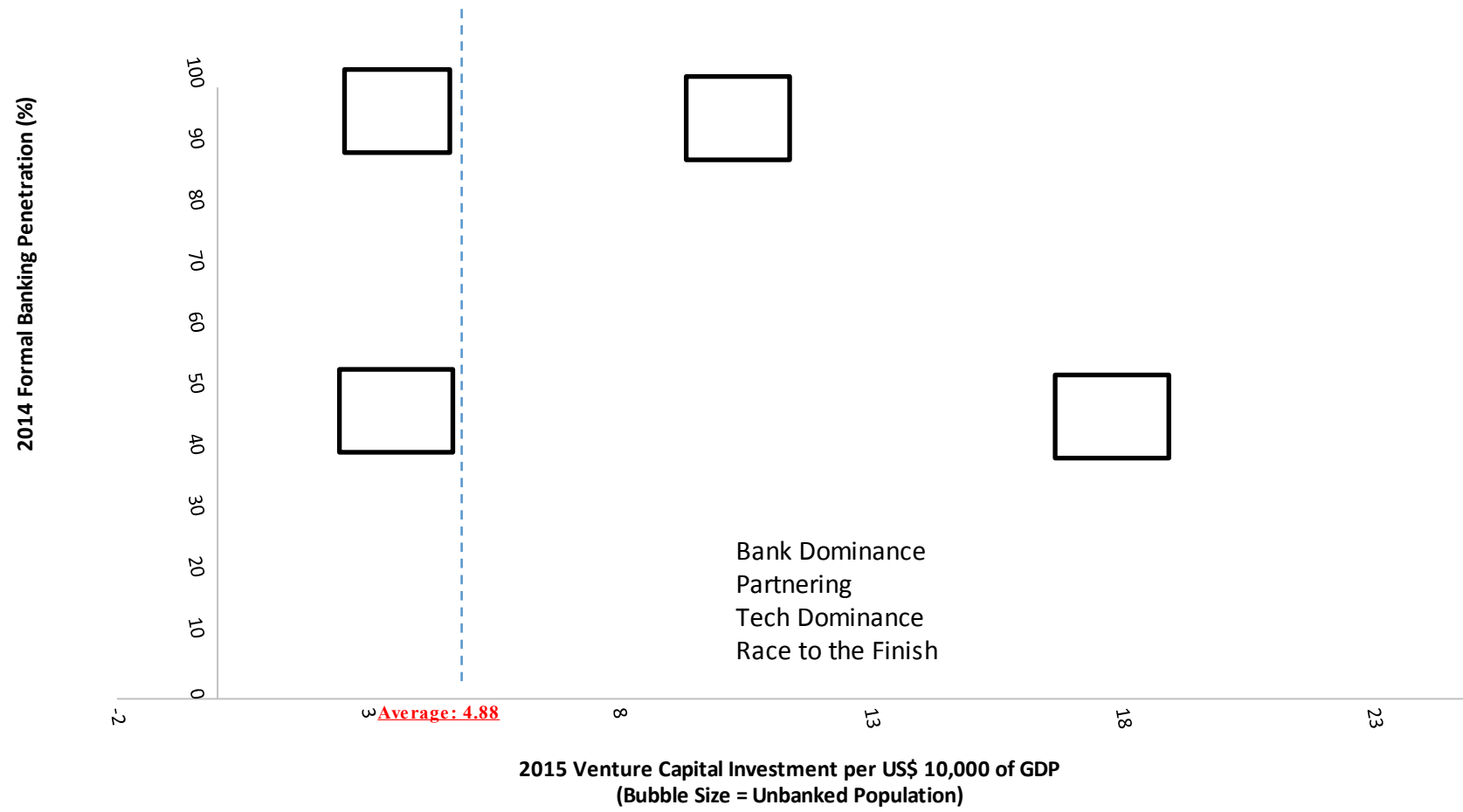
Leveraging the digital opportunity does not come without challenges

- Potential Risks to **financial stability, integrity, privacy & consumer protection**
- **Internationalisation** of actors in the financial sector w/o requisite **regulatory coordination**
- **Competitive dynamics** leading to market concentration / monopolistic behaviors

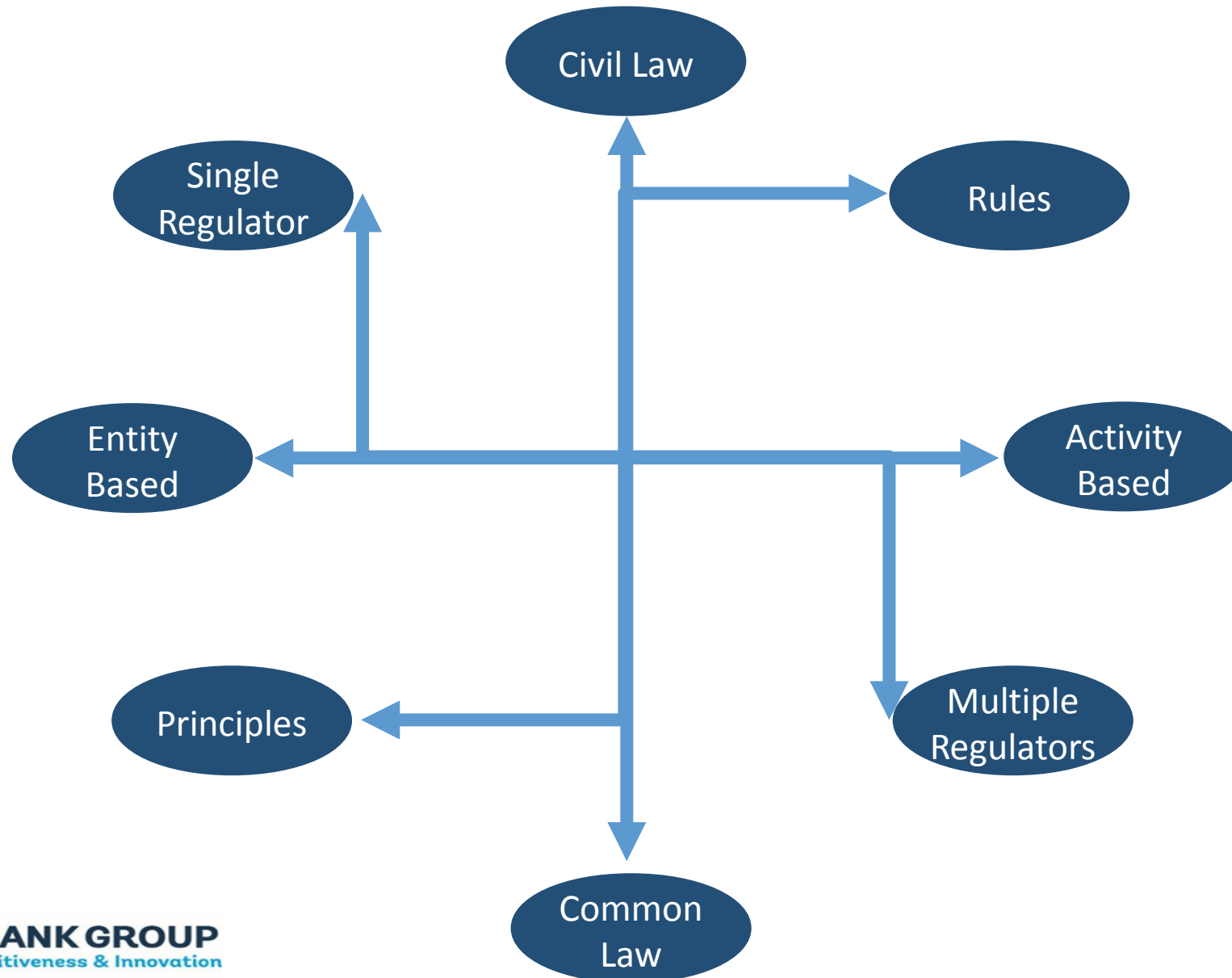


- Shift towards **dynamic efficiency** in the financial sector
- Improved **variety, customization, and convenience** of offerings
- Enhanced **economies of scale** that **lower the marginal cost** of serving the bottom of the pyramid
- **Support digital “real sector” economy to accelerate inclusion:** new business models and channel, new data sources and techniques expand overall demand for formal sector finance.

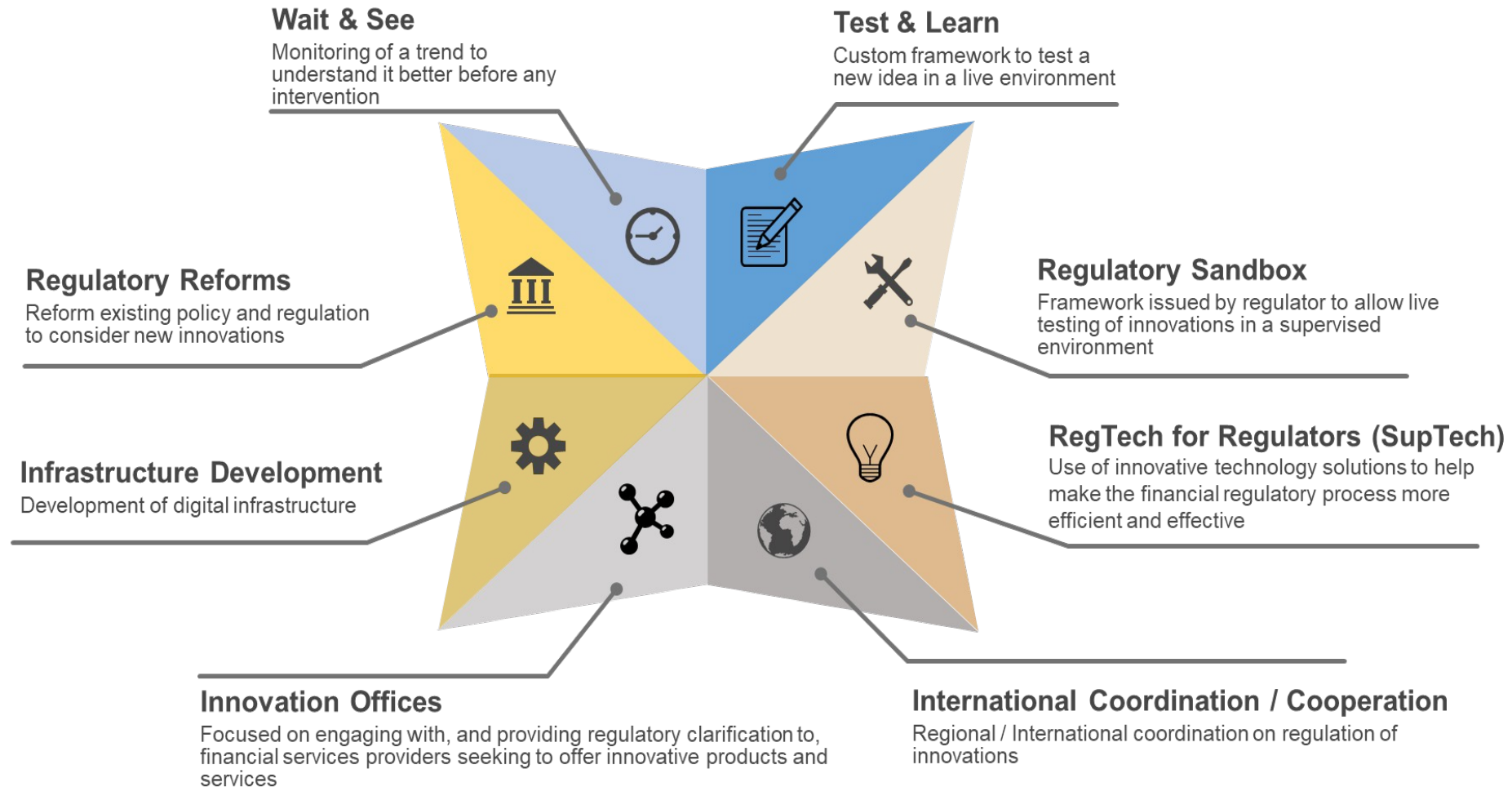
Choices depend on market conditions...



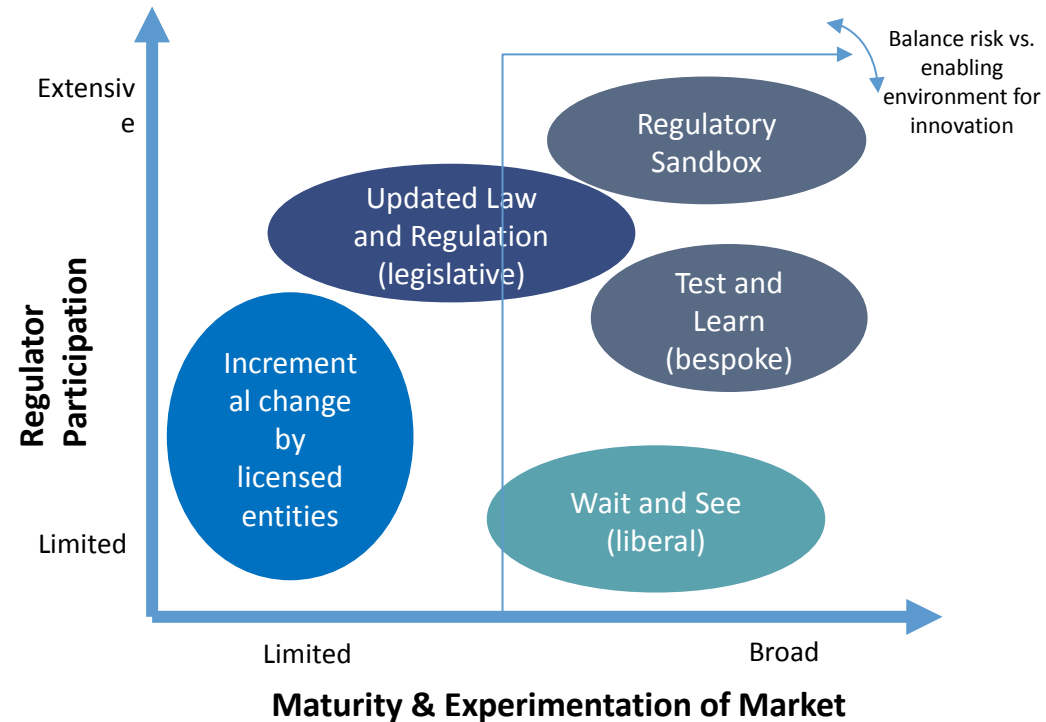
...and existing regulatory frameworks



Regulatory tools & frameworks to enable innovation



Framework for Choosing Regulatory Tools



Wait-and-See: Monitoring a Trend to understand it better before any intervention

Test-and-learn: Custom framework to test a new idea in a live environment

Regulatory Sandbox: live, time-bound testing of innovations under a regulator's oversight.

Regulatory Reform: Reform Existing policy and regulation to allow for new licensing of innovations

Comprehensive FinTech law – Mexico

Overview

- Enacted into law in March 2018, the FinTech Law aims to make financial products and services more accessible to the public at large through technology
- It is the **first regulation in Latin America** that attempts to cover **all sectors related to FinTech** under one initiative
- Meets the regulator's public policy objectives: **consumer protection, competition, financial integrity and financial safety and stability**
- Initial legislation which **provides overarching principles**; secondary regulations will be drafted

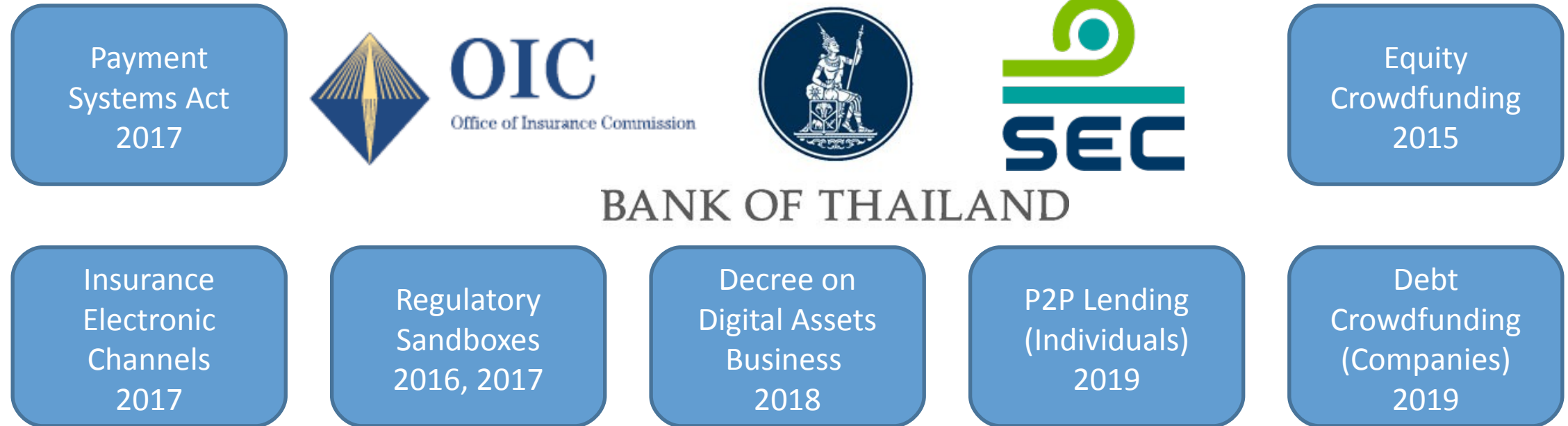


Key Aspects

1. **Regulation of Financial Technology Institutions and their Activities**
 - Crowdfunding
 - Electronic Payment Funds Institutions
 - Innovative Companies – all others
2. **Regulation of Virtual Assets (crypto-assets)**
3. **Open banking APIs**
 - Financial institutions to **share their customers' data** with 3rd parties (and FinTechs) in a secure, standardized manner
 - Covers **all financial products and financial institutions**

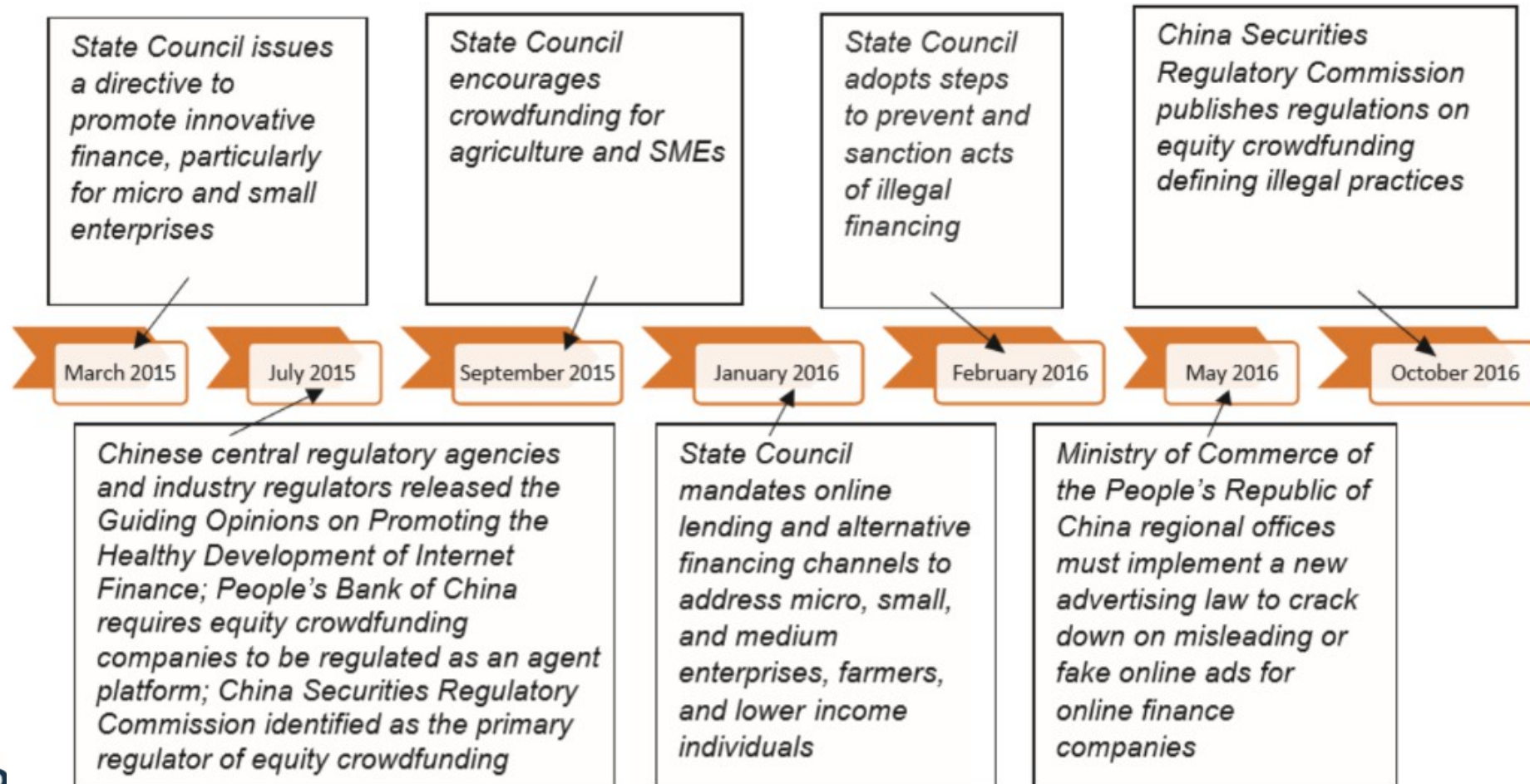
Product-Specific Laws and Regulations – Thailand

Selected laws, regulations, and notifications 2016-2019



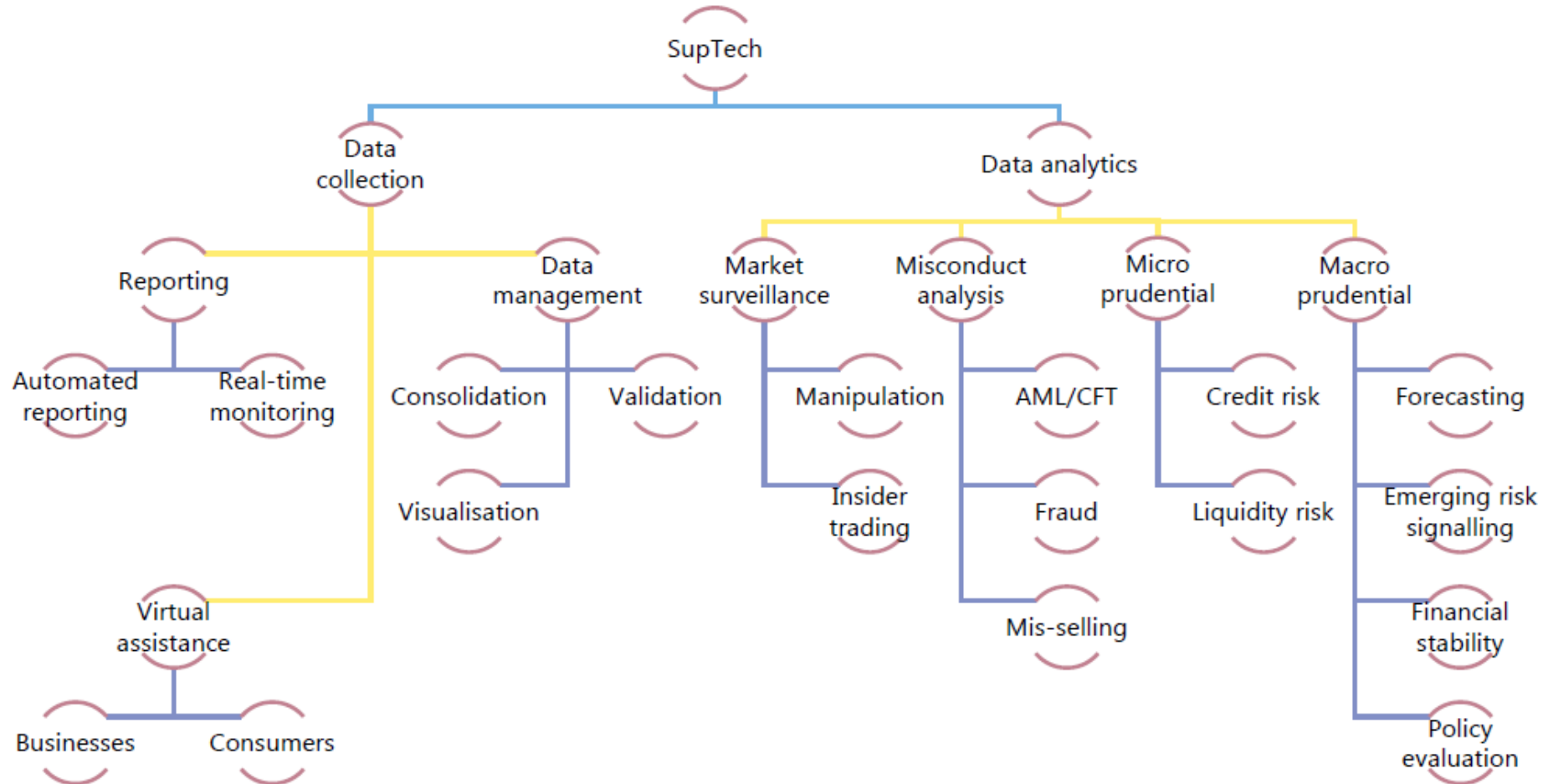
Wait and see approach – China

P2P lending in China – Policy interventions



SupTech

Areas of financial supervision in which SupTech is being used



Developing a regulatory strategy

Challenges

- New entrants providing financial services but don't fit an entity-based regulatory structure
- New products don't clearly map to rules/regulators
- Regulated institutions seeking to adopt new technologies that regulations don't cover or supervisors are not equipped to assess and monitor

Goals

- Ensure financial stability and integrity
- Encourage and accommodate innovation (for efficiency, inclusion)
- Protect Consumers
- Foster competition

Emerging Regulatory Principles

1. No one size fits all; depends on existing framework, market conditions, resources
2. Apply existing regulations where relevant: not everything that looks new is fundamentally new
3. Principles based approach, applied at the granular activity level
4. Activity based, entity neutral: level playing field for incumbents and entrants to adopt innovations
5. Tech neutral: As long as it meets standards for security, privacy, robustness, we shouldn't care what specific technology is used underneath
6. Controlled experimentation in regulation alongside new technology/new business models
7. Upgrade supervisory capacity, including through use of technology
8. Enhance coordination and cooperation across regulators domestically and internationally