BANK FOR INTERNATIONAL SETTLEMENTS

Big tech in finance and new challenges for public policy

Keynote address by Agustín Carstens

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FT Banking Summit

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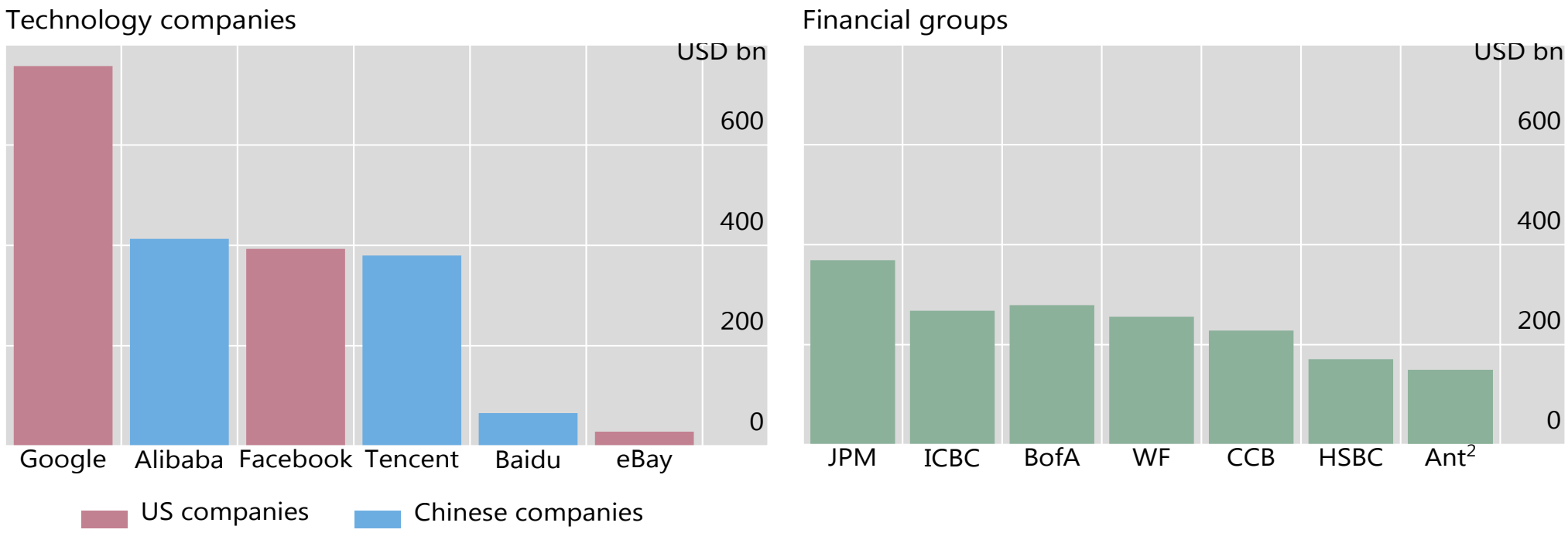
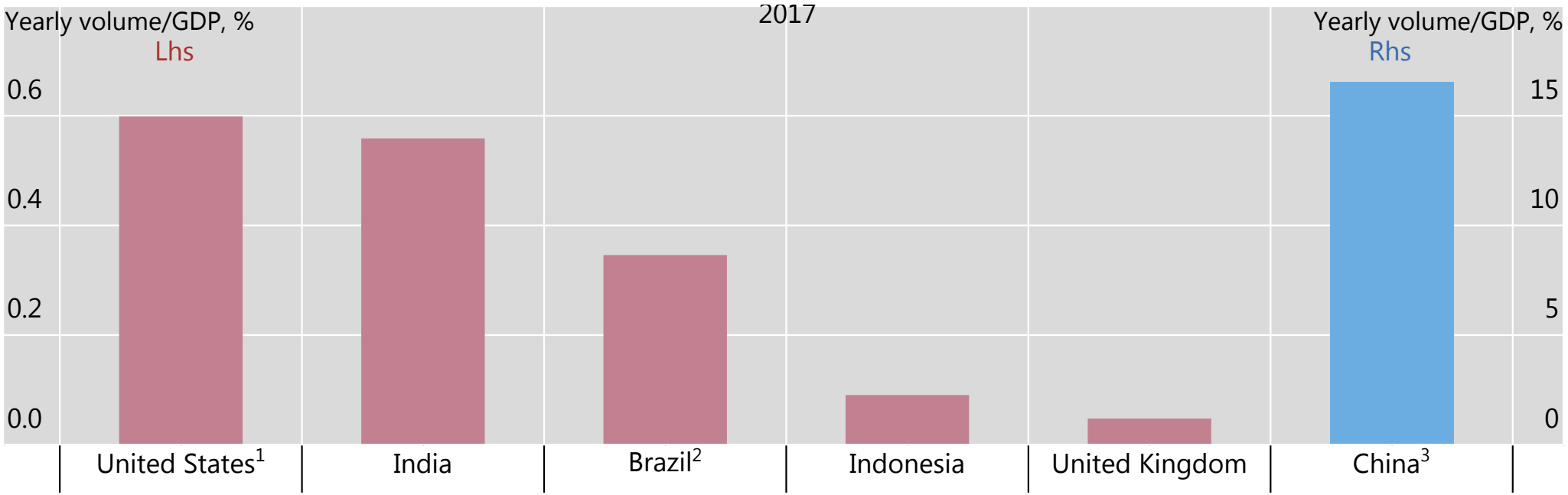
Market capitalisation of major financial groups and big tech firms[1]



Ant = Ant Financial; BofA = Bank of America; CCB = China Construction Bank; ICBC = Industrial and Commercial Bank of China; JPM = JPMorgan Chase; WF = Wells Fargo.

[1] Stock market capitalisation, 29 November 2018. [2] The estimated value of Ant Financial was derived from the amount raised in the company's recent funding rounds times the stakes sold.
Sources: Thomson Reuters Eikon; company reports.

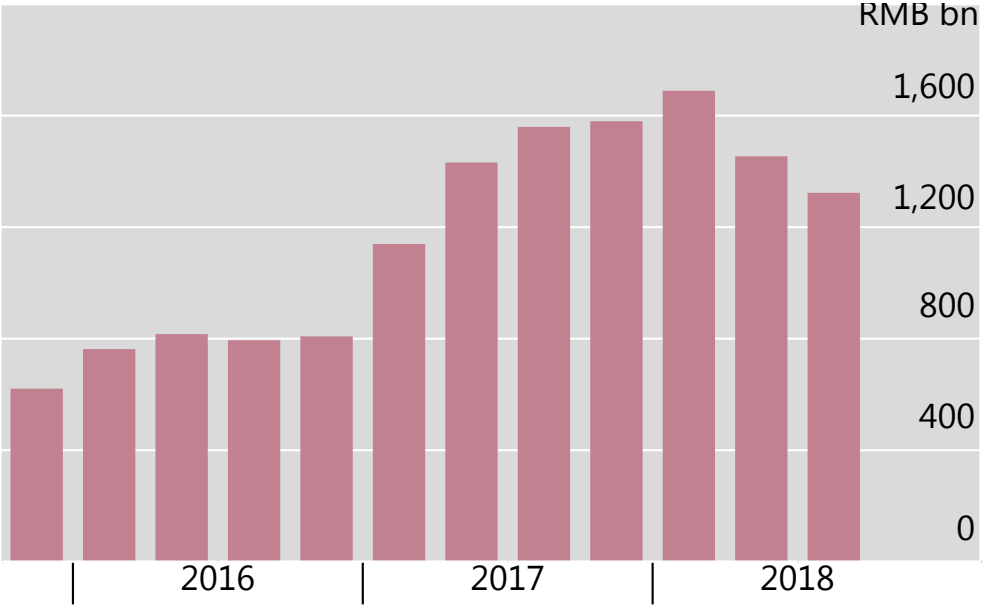
Big tech mobile payment services around the world



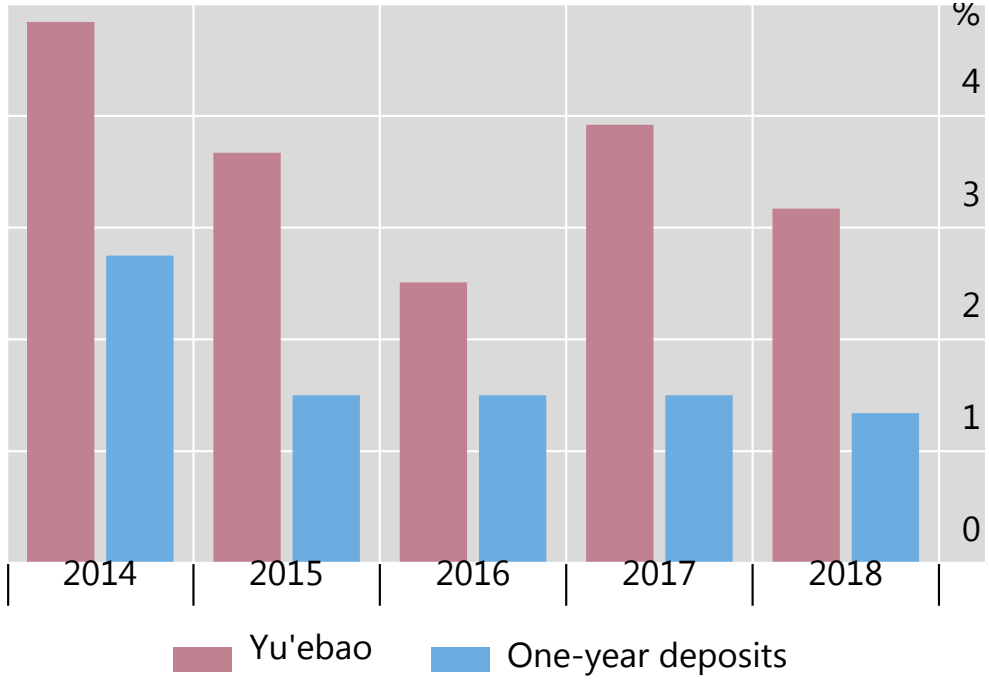
[1] 2016 data. [2] Estimated based on the public data for Mercado Libre. [3] Only mobile payment for consumption data used.
Sources: Forrester Research; GlobalData; iResearch; Mercado Libre; Nikkei; Worldpay. See Frost, Gambacorta Huang and Shin (2018).

Big tech money market mutual funds

Size of Ant Financial's MMF, Yu'ebao

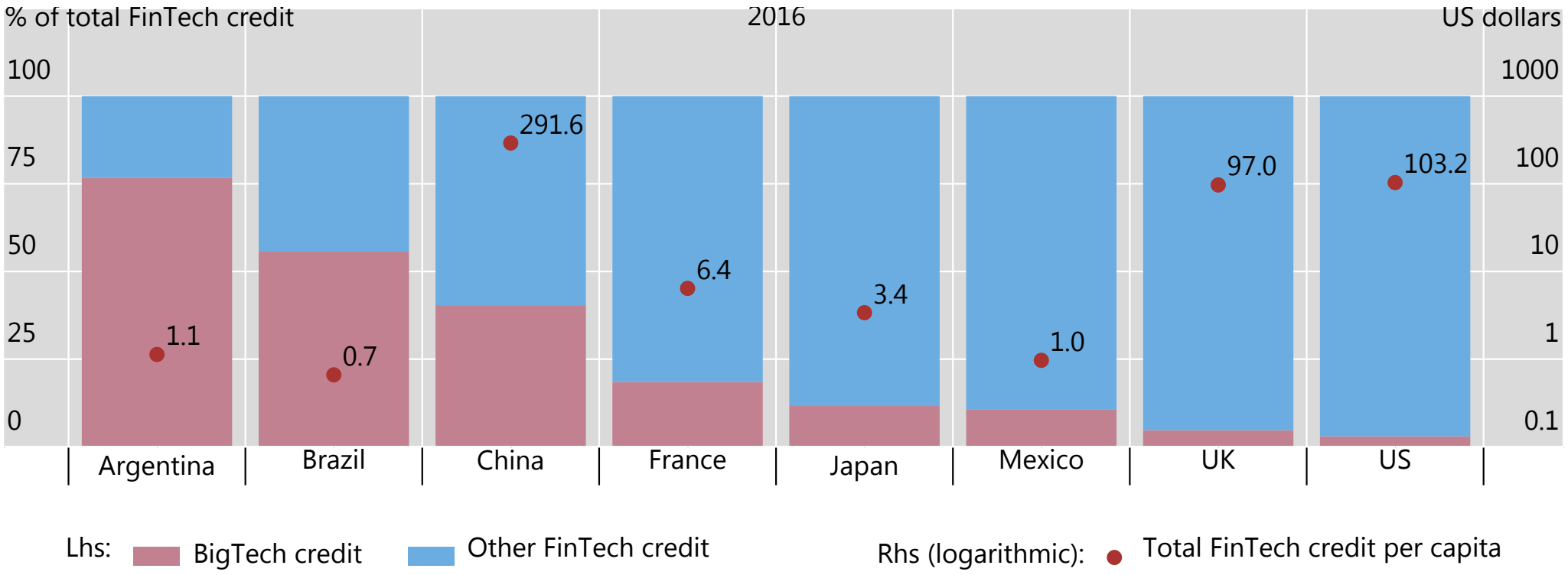


Returns of Yu'ebao and deposit rate



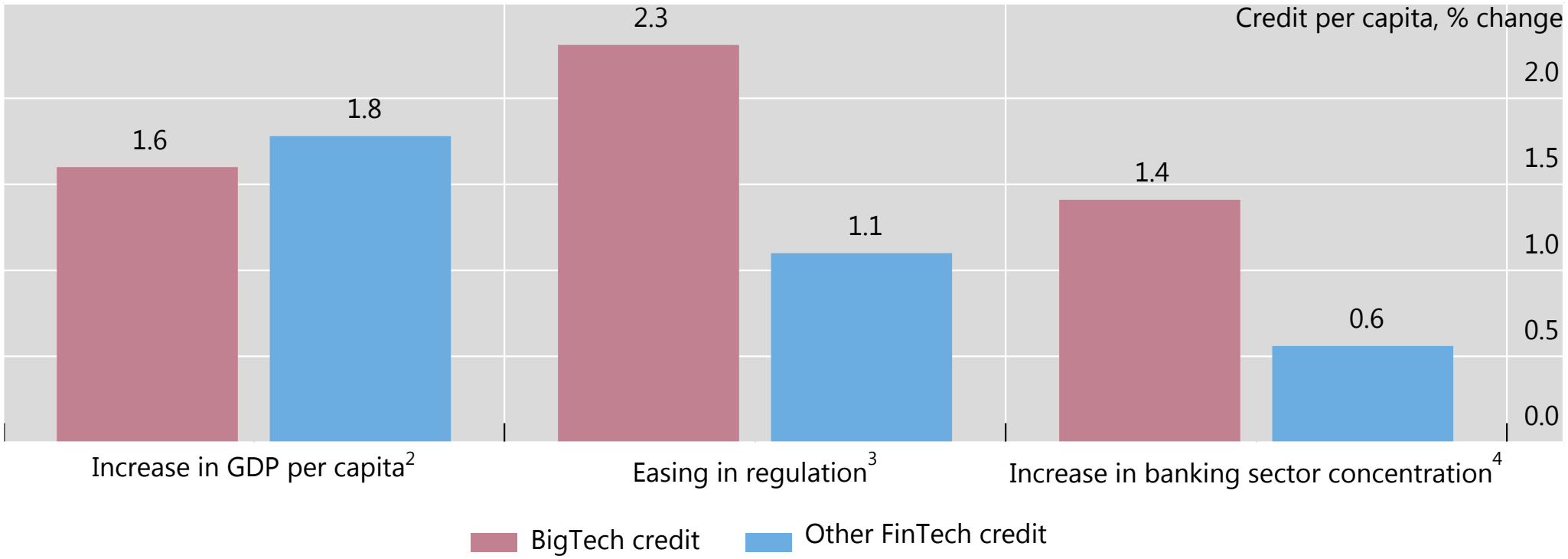
Sources: Thomson Reuters Eikon; Wind.

Big tech and other fintech credit



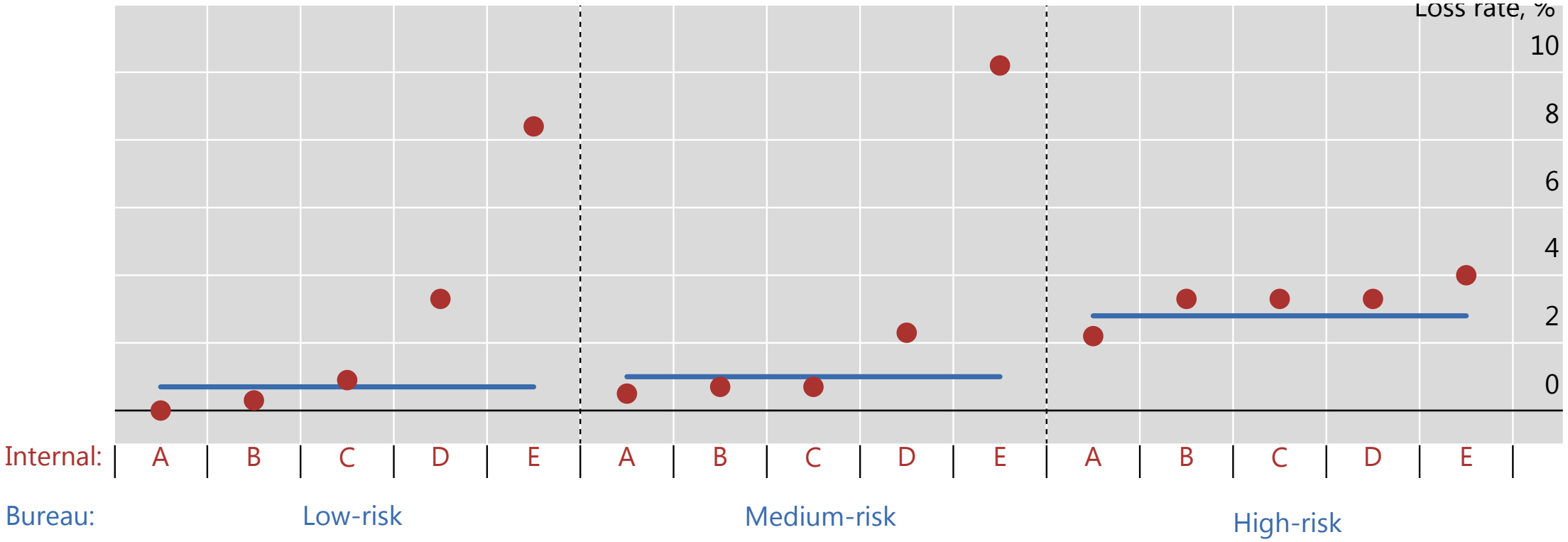
Sources: Cambridge Centre for Alternative Finance and research partners; BIS calculations. Data for WeBank are taken from the public balance sheet. See Frost, Gambacorta Huang and Shin (2018).

Impact on big tech and other fintech credit per capita[1]



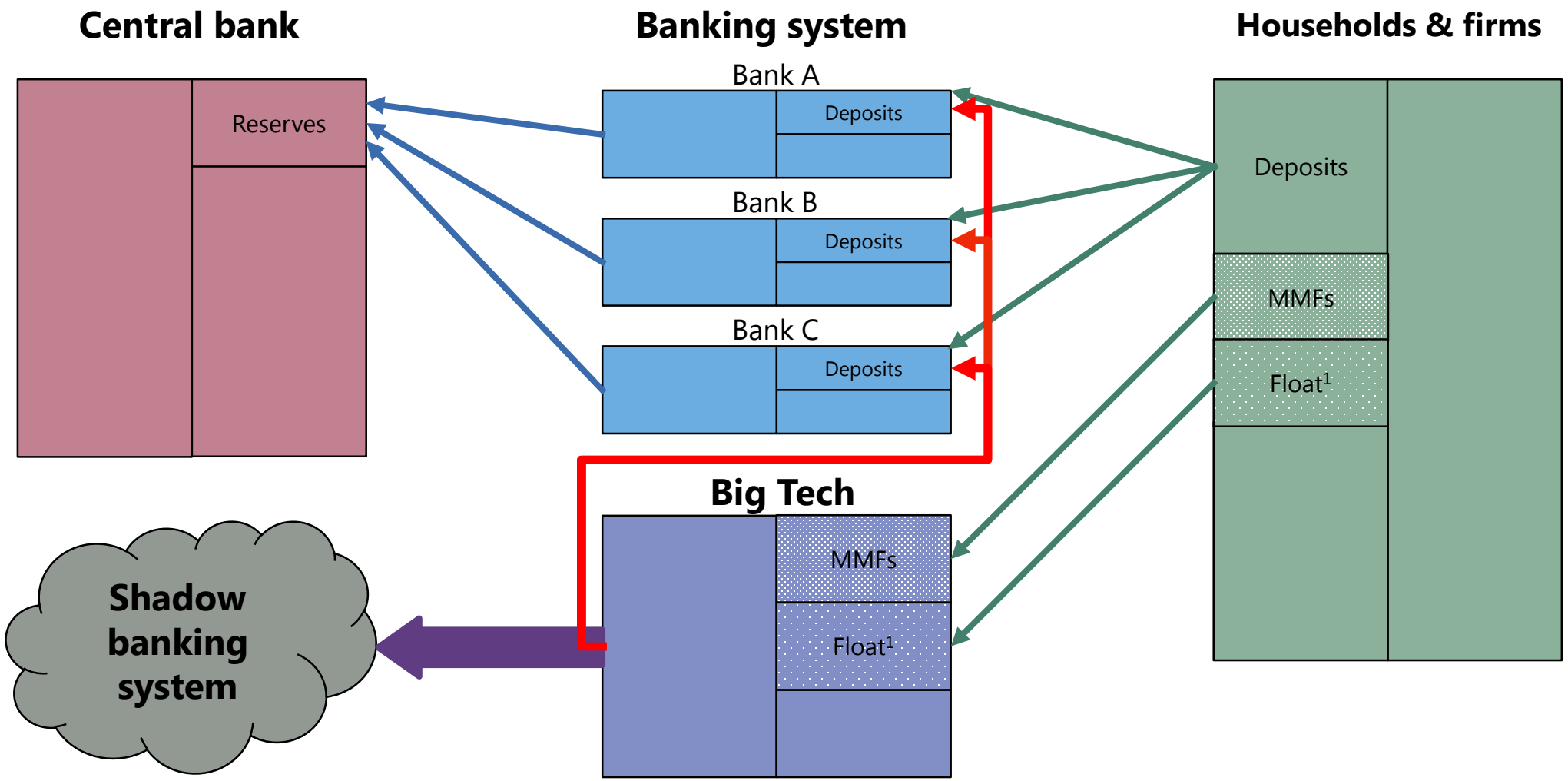
[1] Effect on total fintech credit per capita of a one standard deviation change in selected variables. [2] Nominal GDP in USD over total population. Given the non-linearity of the relationship, the effect is calculated at the average GDP per capita level. [3] Regulatory stringency is constructed as an index based on the World Bank's Bank Regulation and Supervision Survey. The index takes a value between 0 (least stringent) and 1 (most stringent) based on 18 questions about bank capital requirements, the legal powers of supervisory agencies, etc. The graph shows the effects of a one-standard deviation decrease in the index. [4] One standard deviation increase in the banking Sector Lerner index (an indicator of bank market power). Source: Frost, Gambacorta, Huang and Shin (2018).

Internal ratings of Mercado Libre vs credit bureau in Argentina



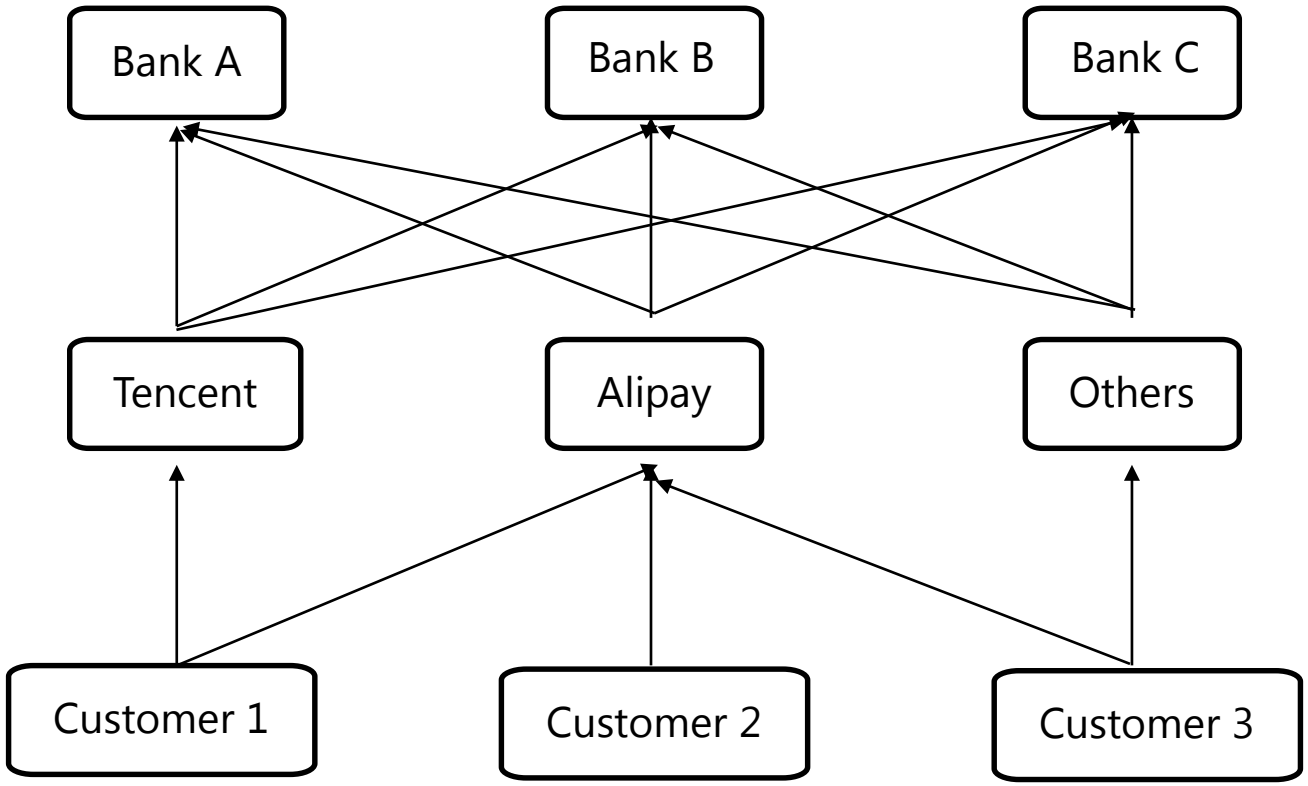
The graph shows the loss rate, ie the volume of loans more than 30 days past due relative to the origination volume. In its use to date, the internal rating of Mercado Libre is better able to predict such losses. Mercado Libre segments the originations into five different risk groups (A to E) versus three clusters from the credit bureau score (low-, medium- and high-risk). For each bureau rating, the expected loss rate based on the internal rating is strictly monotonous. By contrast, given a certain internal rating (see C, D and E), the expected loss rate derived from it is not strictly correlated with the credit bureau risk. Source: Frost, Gambacorta Huang and Shin (2018); calculations on Mercado Libre data.

BigTech in China

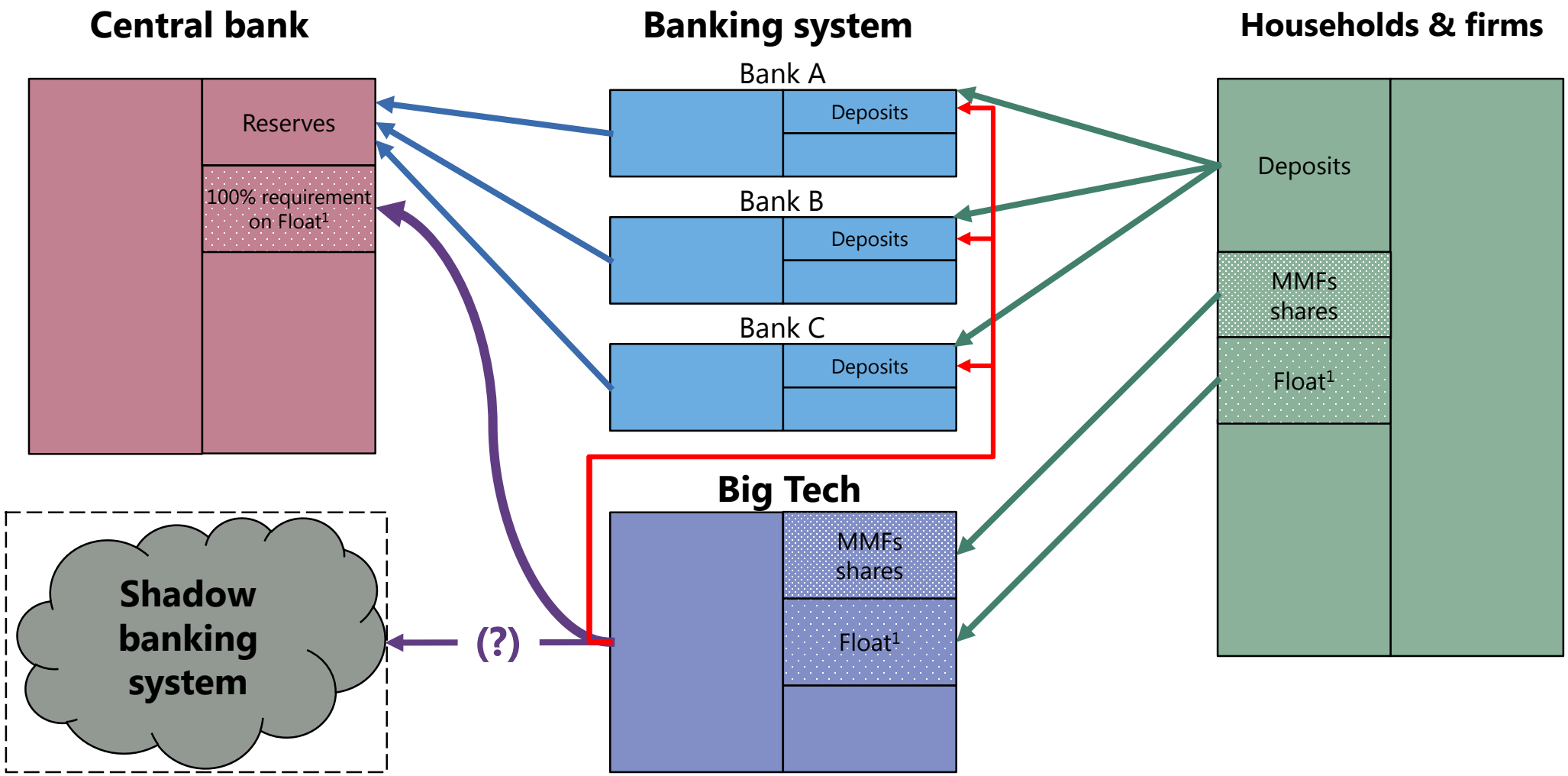


Note: The graph shows the functioning of big tech in finance in a stylised way. For simplicity, it excludes bank subsidiaries of big tech firms. It also does not consider other asset management products as fixed-term assets. [1] The balance of e-money, or physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash in) or sell (cash out) electronic money.

One-tier system



Introduction of the 100% reserve requirement on float in China



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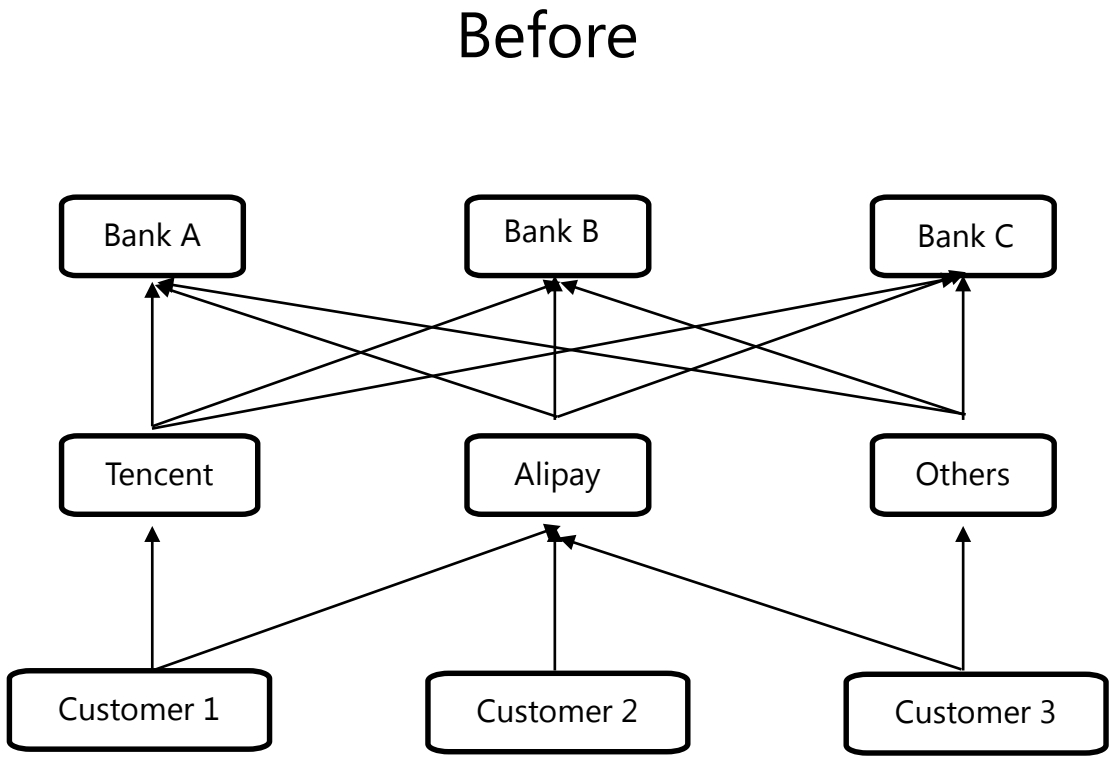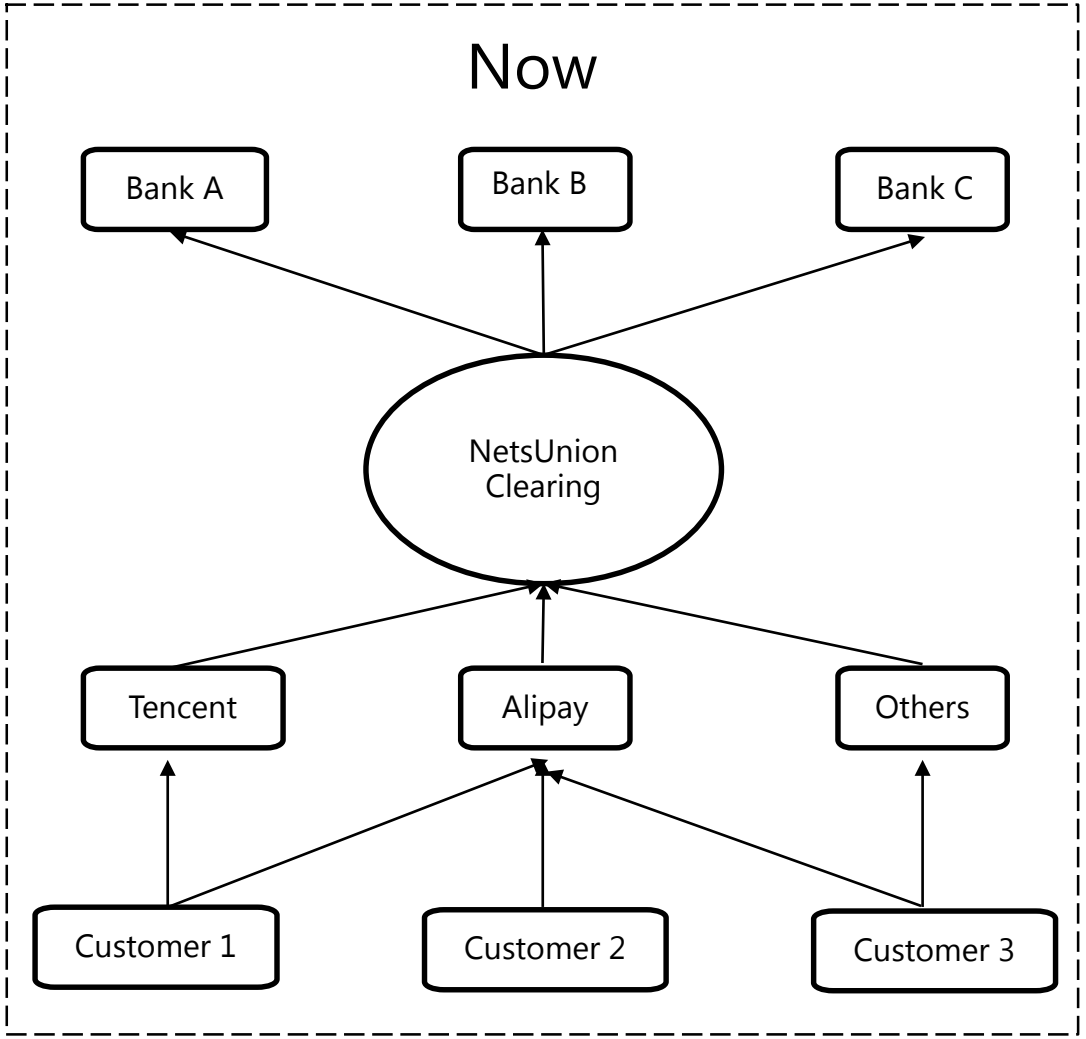
Introduction of central clearing requirement in China: Two-tier system