A New Narrative on Bank Leverage: Suggestive Evidence from France, Indonesia and Japan

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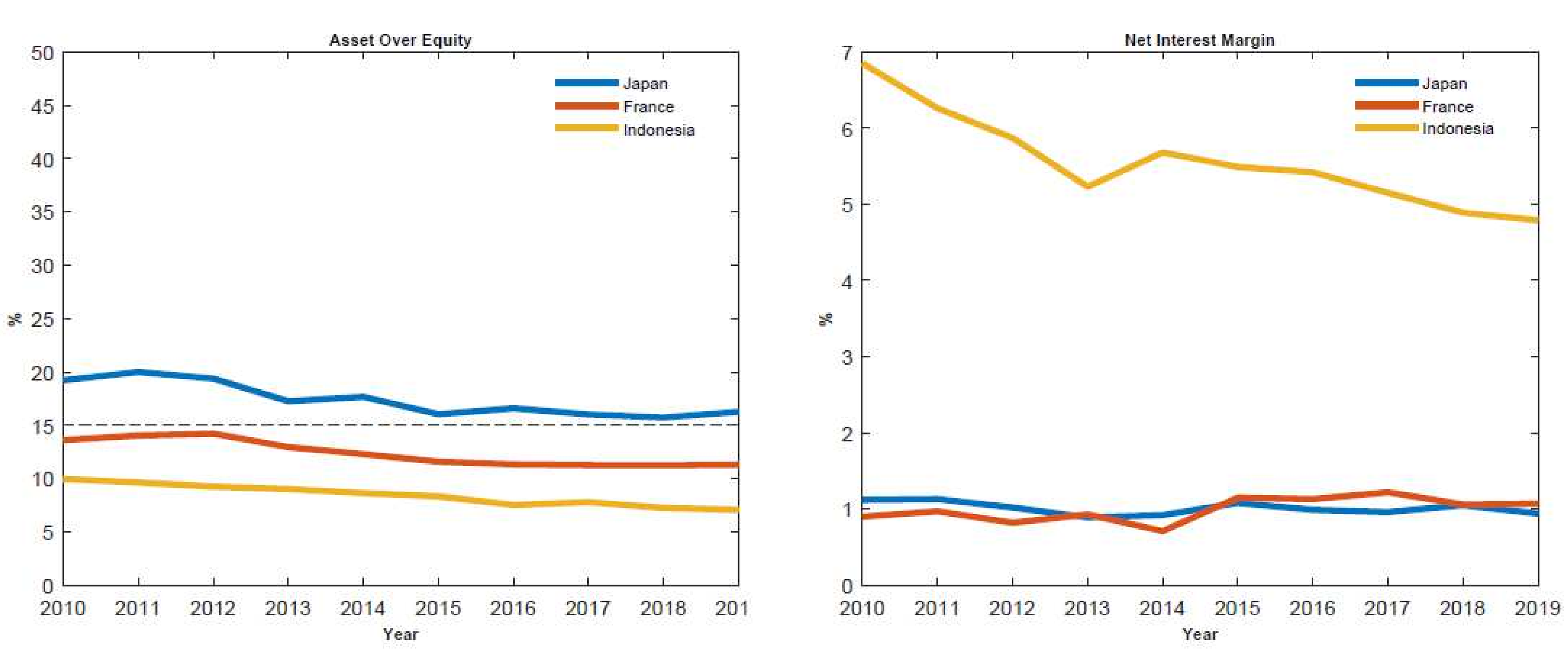
- Why is the leverage of Indonesian banks lower compared to that of Japanese and French banks?
- Why has the leverage of Indonesian, French, and Japanese banks shown a declining trend from 2010 to 2019?

Two Observations on French, Japanese and Indonesian Banks

Observation 1. Leverage declined among banks in Japan, Indonesia, and France from 2010 to 2019, while net interest margins remained stagnant. Figure 2 illustrates the extreme case of Indonesian banks, which consistently maintained the highest lending-deposit spread and the largest equity cushion from 2010 to 2019, yet experienced a decline in their net interest margin over the same period.

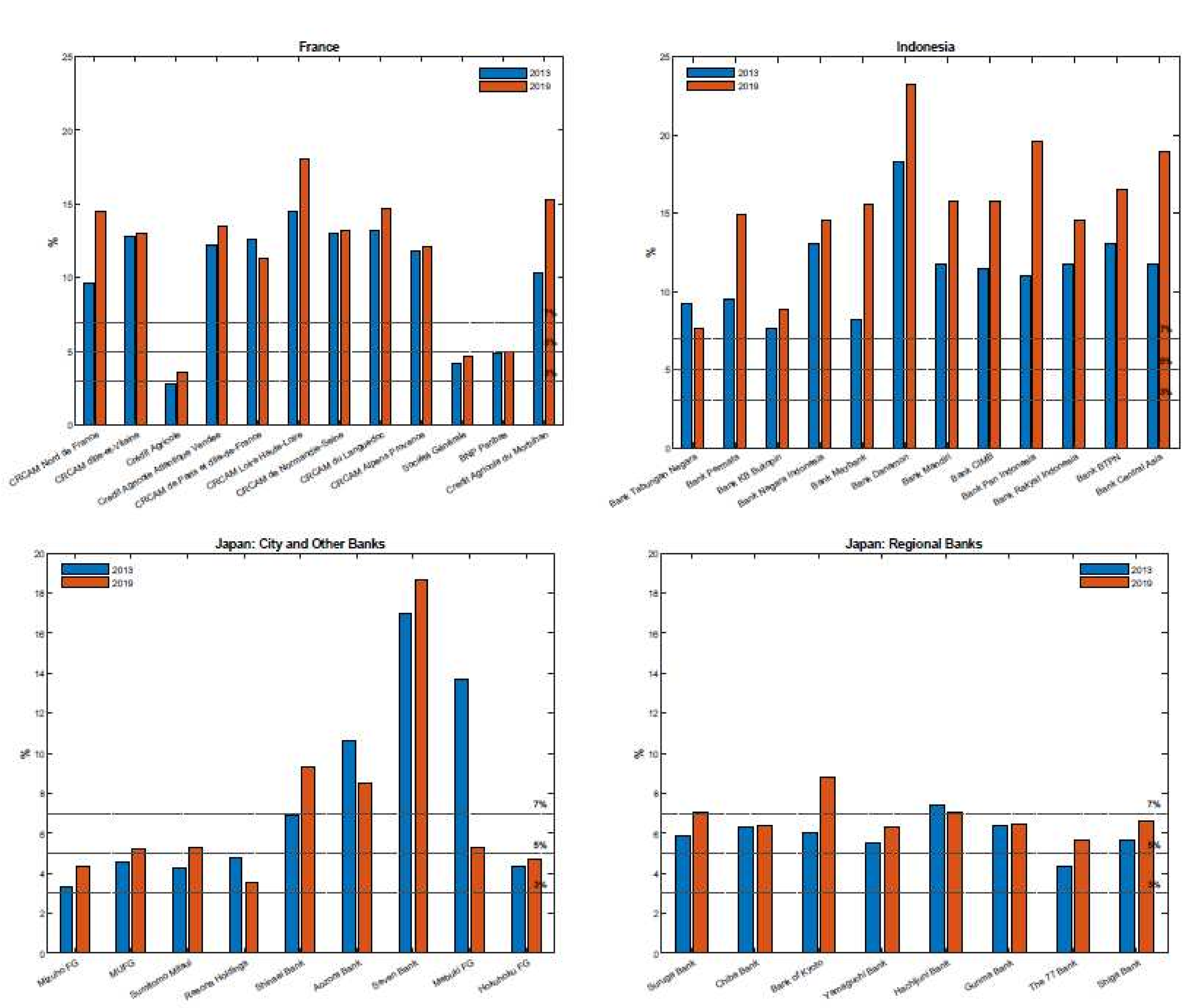
Figure 1: Average Leverage Across Banks and Net Interest Margin from 2010-2019



Source: NIM are obtained from FRED, average of leverage is calculated across banks in the sample (see Appendix) using data from their their annual financial report.

Observation 2. Banks are increasing their equity cushion while their Return on Equity (ROE) are either declining or stagnant. Figure 3 shows a decline in the ROE of all Indonesian banks and most Japanese banks in the sample. In France, regional cooperative banks experienced a decline in ROE, while larger French banks recorded modest growth or stagnation in their ROE.

Figure 2: Banks' Equity Cushion in 2013 and in 2019



French Banks

French banks aim for a constant ROE while maintaining leverage despite low interest rat spreads and asset yields. In this environment, increasing ROE may not be optimal, as net incom is unlikely to grow for both the three major banks and regional cooperative banks. For the big banks a rise in Return on Assets (ROA) further suppresses their ROE, as shown in Table 1.

Table 1: Growth of Retained Earnings, Net Income, Assets, Liability and Equity of French Banks from 2013 to 2019 (in multiples)

	Retained Earnings	Net Income	Asset	Equity	Liability
Crédit Agricole S.A	1.93	1.93	1.15	1.49	1.14
BNP Paribas	1.33	1.69	1.20	1.23	1.20
Société Générale	1.36	1.49	1.10	1.25	1.09
CRCAM Nord de France	1.49	1.49	0.95	1.44	0.91
Credit Agricole du Morbihan	1.40	1.34	1.10	1.64	1.04
CRCAM Alpens Provence	0.85	0.85	1.33	1.37	1.33
Credit Agricole Atlantique Vendee	0.89	0.89	1.34	1.49	1.32
CRCAM de Normandie-Seine	0.73	0.73	1.48	1.50	1.47
CRCAM d'Ille-et-Vilaine	0.89	0.89	1.45	1.48	1.45
CRCAM du Languedoc	1.82	1.18	1.35	1.51	1.33
CRCAM Loire Haute-Loire	1.04	1.04	1.24	1.55	1.18
CRCAM de Paris et d'Ile-de-France	1.11	1.11	1.65	1.50	1.68

Indonesian Banks

Indonesian banks prioritize saving, favoring lower leverage. Table 2 shows that this larg savings does not necessarily translate to an equitable growth in assets and significant growth i net income over the long run.

Table 2: Growth of Retained Earnings, Net Income, Assets, Equity and Liability of Indonesian Banks from 2013 to 2019 (in multiples)

	Retained Earnings	Net Income	Asset	Equity	Liability
Bank Central Asia	2.73	2.00	1.85	2.73	1.72
Bank Mandiri	2.64	1.51	1.80	2.34	1.72
Bank Negara Indonesia	3.73	1.70	2.19	2.57	2.13
Bank Rakyat Indonesia	2.98	1.61	2.26	2.61	2.21
Bank Danamon	1.70	1.01	1.05	1.44	0.97
Bank Maybank	2.49	1.19	1.20	2.15	1.11
Bank CIMB	1.78	0.85	1.25	1.68	1.20
Bank Pan Indonesia	2.19	1.47	1.29	2.23	1.16
Bank Permata	0.24	0.87	0.97	1.70	0.91
Bank BTPN	2.14	1.21	2.61	3.02	2.51
Bank Tabungan Negara	0.23	0.13	2.38	2.06	2.41
Bank Bukopin	3.49	0.23	1.44	1.43	1.44

Japanese Banks

With larger excess deposits, Japanese banks naturally have higher leverage than Frencl and Indonesian banks, requiring further deleveraging to appeal to investors. Table 2 show that Japanese banks retain net income to reduce leverage, prioritizing stability even as profitabilit declines.

Table 3: Growth of Retained Earnings, Net Income, Assets, Equity and Liability of Japanese Banks from 2013 to 2019 (in multiples)

	Retained Earnings	Net Income	Asset	Equity	Liability
Mebuki Financial Group	9.23	3.01	8.54	3.29	9.38
MUFG	7.81	0.82	1.35	1.53	1.34
Shinsei Bank	3.23	1.02	1.06	1.44	1.04
Mizuho Financial Group	2.16	0.17	1.13	1.48	1.13
Sumitomo Mitsui Financial Group	2.13	0.92	1.37	1.70	1.37
Seven Bank	1.95	0.68	1.41	1.54	1.38
Hokuhoku Financial Group	1.57	1.35	1.20	1.30	1.20
Chiba Bank	1.55	1.14	1.32	1.32	1.32
Shiga Bank	1.52	2.65	1.31	1.53	1.30
Yamaguchi Bank	1.47	0.85	1.10	1.27	1.10
Bank of Kyoto	1.38	1.80	1.27	1.86	1.23
Gunma Bank	1.38	1.13	1.19	1.20	1.19
Hachijuni Bank	1.33	1.02	1.44	1.37	1.45
Aozora Bank	1.31	0.89	1.05	0.84	1.07
The 77 Bank	1.30	1.42	1.04	1.37	1.03
Resona Holdings	1.23	0.64	1.37	1.02	1.39
Suruga Bank	1.08	-4.57	0.91	1.09	0.90

Contribution and Future Directions

- Banks' equity is not sticky: as opposed to "leverage begets leverage" (Admati, DeMarzo, Hellwig and Pfleiderer (2010, 2013),Admati, DeMarzo, Hellwig, and Pfleiderer (2012) and Admati, De Marzo, Hellwig, and Pfleiderer (2018)) the narrative points to "equity begets equity" instead.
- ROE targeting might not be the ultimate objective of these banks, in contrast to what has bee assumed so far in Pennacchi and Santos (2021) and Begenau, et al. (2021).