

Appendix

Table 1: ISO Country Codes

Country	ISO Code
United Arab Emirates	ARE
Argentina	ARG
Australia	AUS
Austria	AUT
Belgium	BEL
Brazil	BRA
Canada	CAD
Switzerland	CHE
China	CHN
Colombia	COL
Germany	DEU
Denmark	DNK
Egypt	EGY
Spain	ESP
Euro Area	EUR
France	FRA
United Kingdom	GBR
Hong Kong	HKG
Indonesia	IDN
India	IND
Ireland	IRL
Israel	ISR
Italy	ITA
Japan	JPN
Korea	KOR
Mexico	MEX
Malaysia	MYS
Netherlands	NLD
New Zealand	NZL
Philippines	PHL
Poland	POL
Portugal	PRT
Romania	ROU
Russia	RUS
Saudi Arabia	SAU
Singapore	SGP
Sweden	SWE
Thailand	THA
Turkey	TUR
Taiwan	TWN
United States	USA
Vietnam	VNM

South Africa	ZAF
--------------	-----

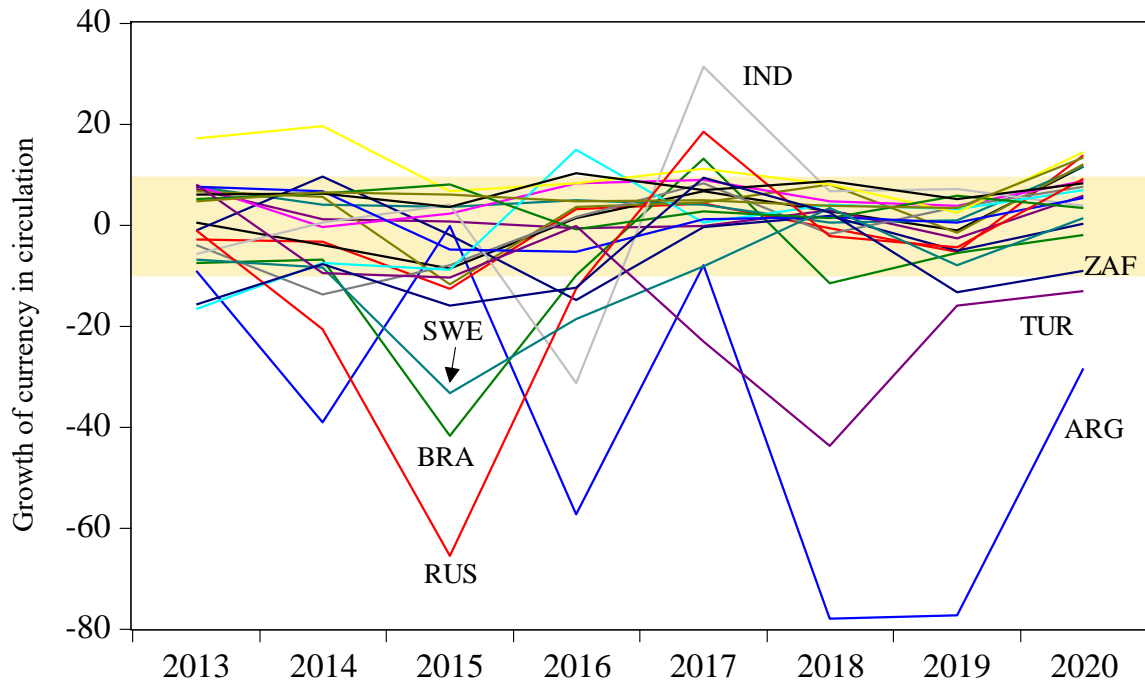
Source: www.iso.org/obp/ui/#search.

Table 2: Currencies and Their Abbreviations

Currency	Abbreviation
Argentine peso	ARS
Australian dollar	AUD
Brazilian real	BRL
Canadian dollar	CAN
Swiss franc	CHF
Chinese renminbi	CNY
Euro	EUR
British pound	GBP
Hong Kong dollar	HKD
Indonesian rupiah	IDR
Indian rupee	INR
Japanese yen	JPY
South Korean won	KRW
Mexican peso	MXN
Russian ruble	RUR
Saudi riyal	SAR
Swedish krona	SEK
Singapore dollar	SGD
Turkish lira	TRY
US dollar	USD
South African rand	ZAR

Source: www.eurochange.co.uk/travel-money/world-currency-abbreviations-symbols-and-codes-travel-money.

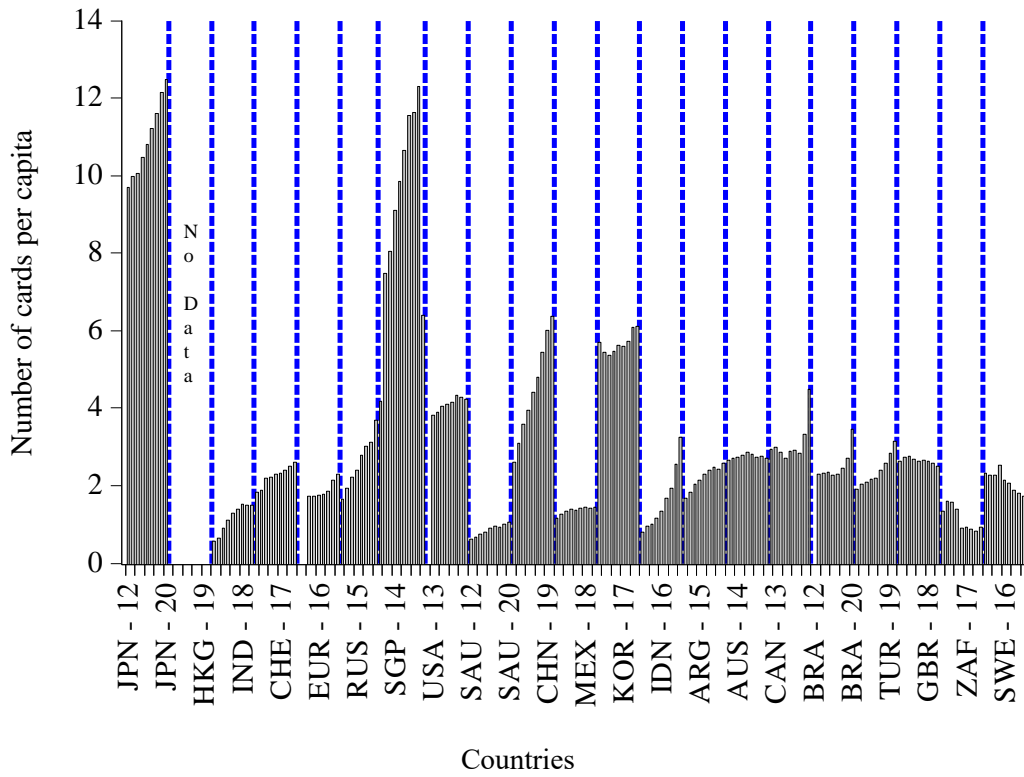
Figure 1: Growth of Currency in Circulation in Real Terms (% per Annum), 2013–2020



Sources: <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b>;
www.oecd.org/sdd/oecdmaineconomicindicatorsmei.htm.

Note: Range in shaded area is +/-10 percent. Currency in circulation is deflated by the Consumer Price Index.

Figure 2: Number of Cards (Credit, Debit, Cash) per Capita, 2012–2020



Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 3: Number of ATM Cards per Capita, 2012–2020

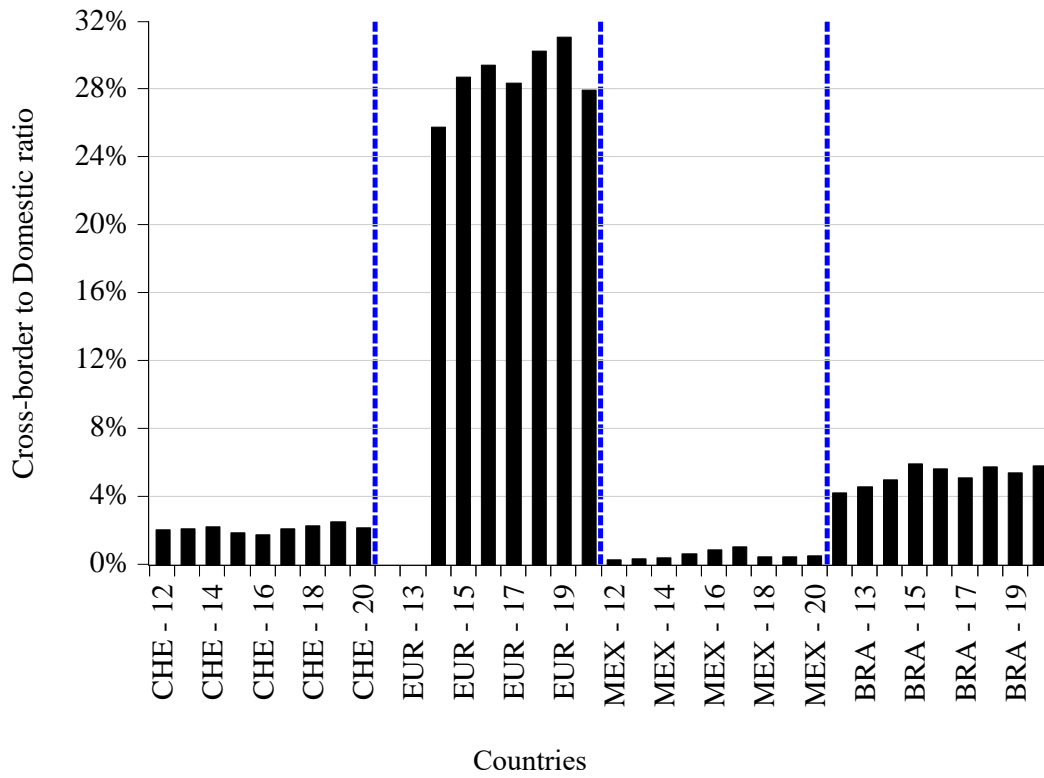


Sources: www.bis.org/statistics/payment_stats.htm?m=1036;

<https://databank.worldbank.org/source/world-development-indicators>.

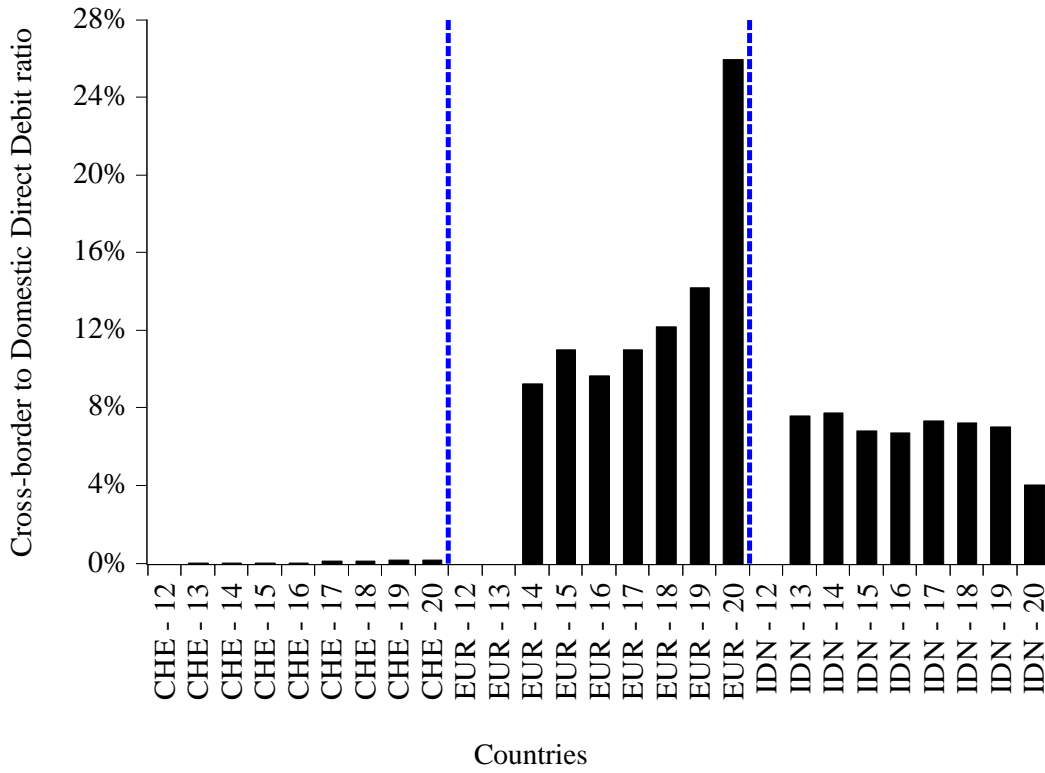
Note: Persistent declines in AUS, BEL, BRA, CAN, CHE, FRA, GBR, IDN, JPN, KOR, NLD, SAU, SGP and SWE; early signs of decline in ARG, CHN, DEU, ESP, ITA and ZAF; rising numbers in IND, MEX, RUS and TUR.

Figure 4: Ratio of Cross-Border to Domestic Credit Transfer



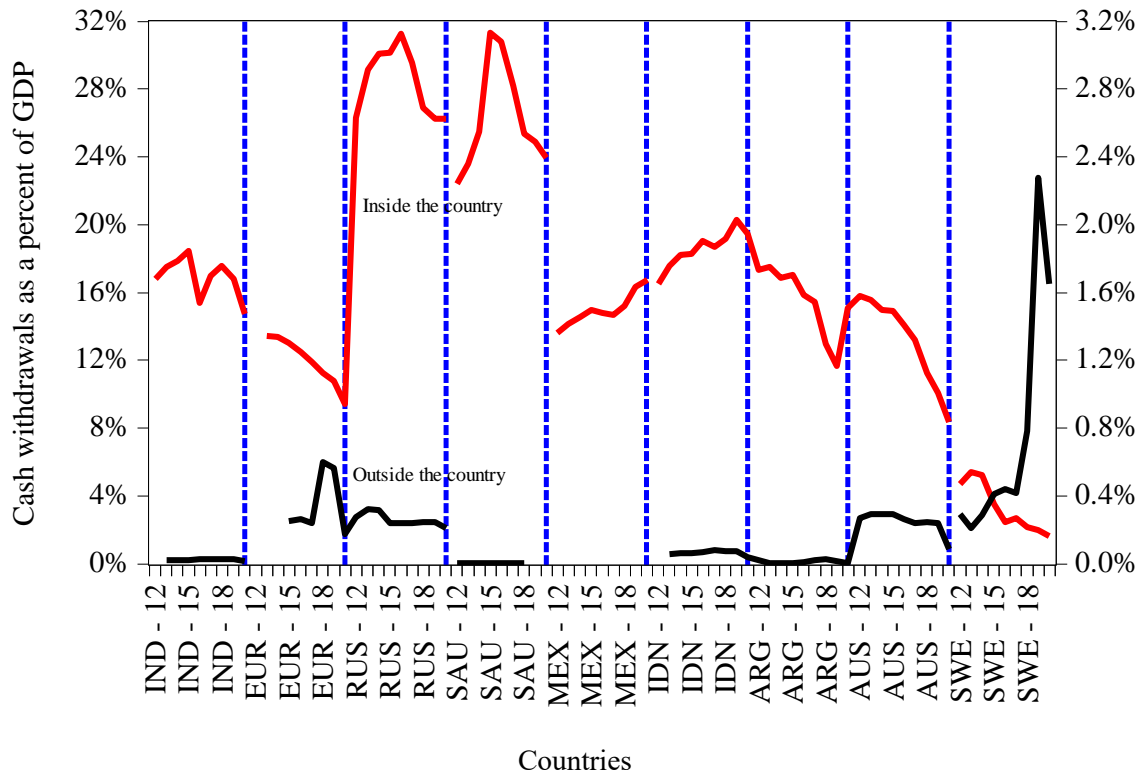
Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 5: Ratio of Cross-Border to Domestic Direct Debit



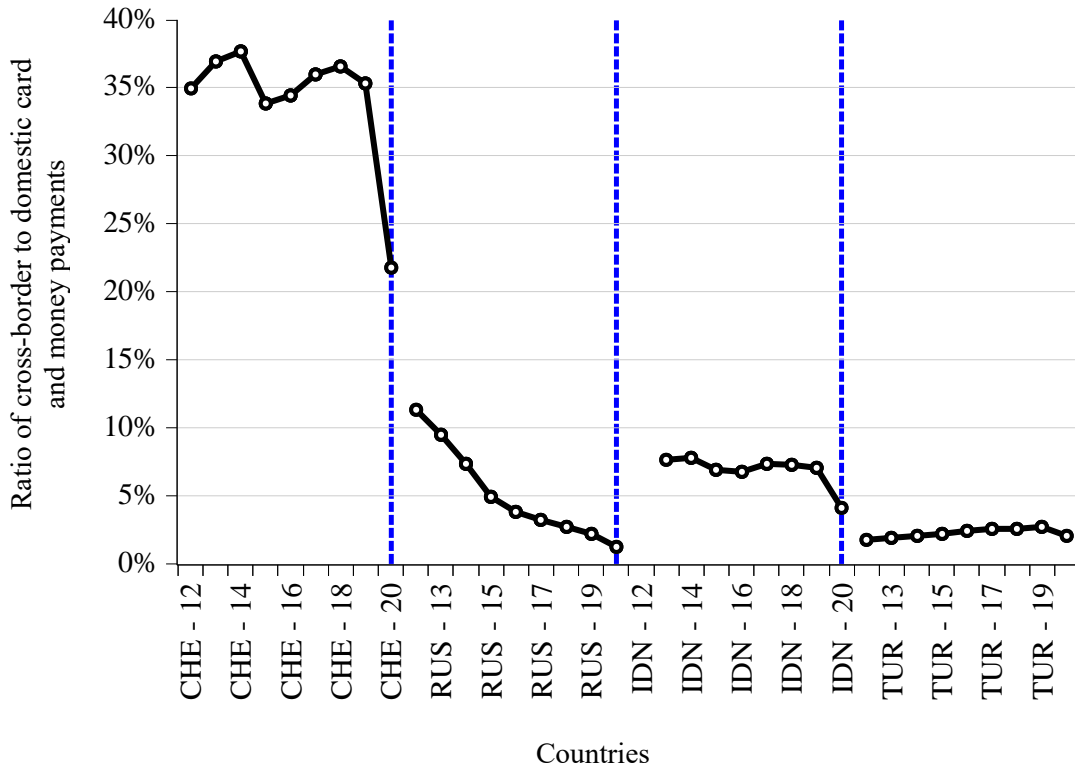
Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 6: Cash Withdrawals as a Percent of GDP



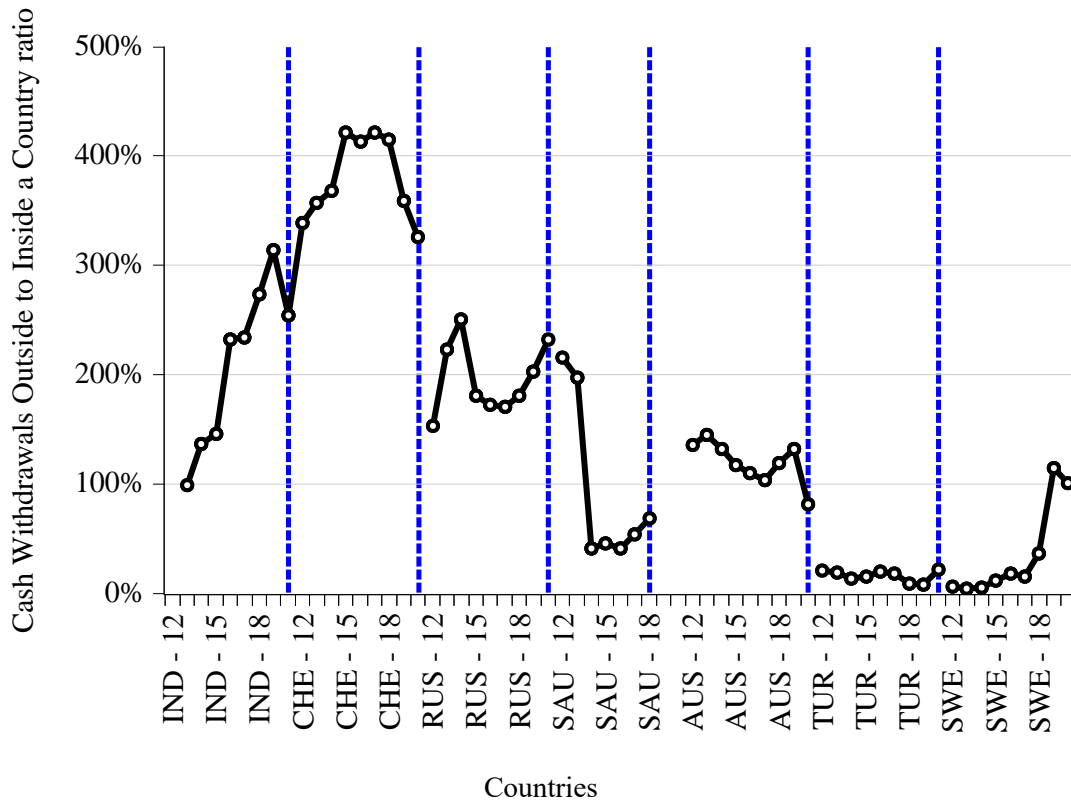
Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 7: Ratio of Cross-Border to Domestic Card and Money Payments



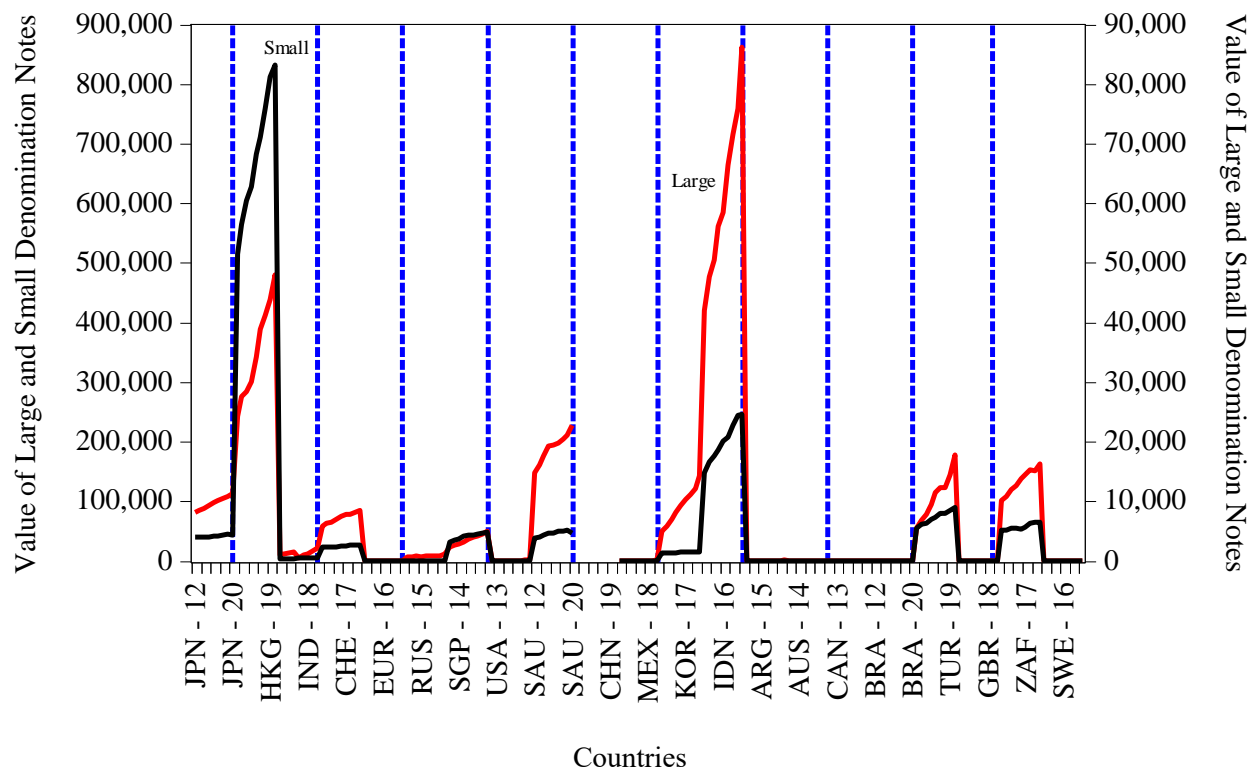
Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 8: Ratio of Cash Withdrawals from Outside to Inside a Country



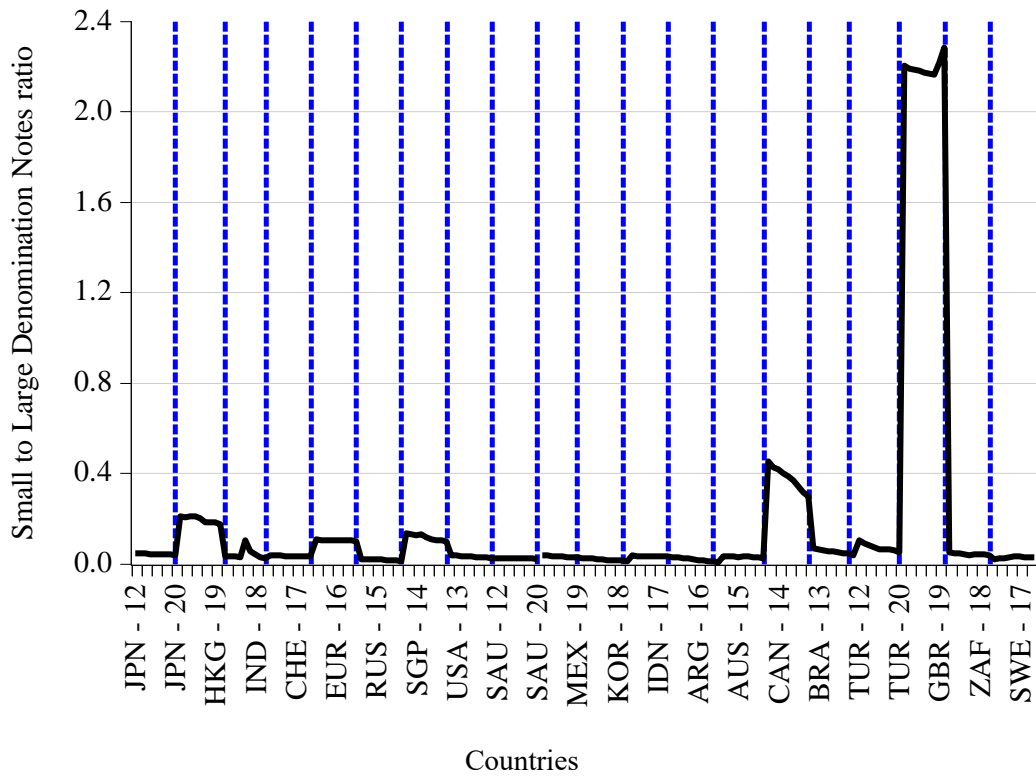
Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 9: Value of Large- and Small-Denomination Notes



Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Figure 10: Ratio of Value of Small- to Large-Denomination Notes



Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Table 3: Small- and Large-Denomination Notes

Economy	Currency	Large Denominations	Small Denominations
Argentina	ARS	1,000; 500; 200; 100; 50	20, 10, 5, 2
Australia	AUD	100; 20	10, 5
Brazil	BRL	100; 50; 20	10, 5, 2, 1
Canada	CAD	1,000; 100; 50	20, 10, 5
Switzerland	CHF	1,000; 500; 200; 100; 50	20, 10
China	CNY	100; 50; 20	10, 5, 2, 1, 0.5, 0.2, 0.1
Euro Area	EUR	500*; 200; 100; 50	20, 10, 5
United Kingdom	GBR	50; 20	10, 5
Hong Kong	HKD	1,000; 500; 150	100; 50; 20; 10
Indonesia	IDR	100,000; 50,000; 20,000; 10,000	5,000; 2,000; 1,000
India	INR	1,000; 500; 100; 50	20; 10; 5; 2; 1
Japan	JPY	10,000; 5,000; 2,000	1,000
Korea	KRW	50,000; 10,000; 5,000	1,000
Mexico	MXN	1,000; 500; 200; 100	50, 20, 10
Russia	RUR	5,000; 1,000; 500	50; 10; 5
Saudi Arabia	SAR	500; 200; 100; 50	20; 10; 5; 1
Sweden	SEK	1,000; 500; 200; 100; 50	20; 10; 5
Singapore	SGD	10,000; 1,000; 500; 100; 50	20; 10; 5; 2; 1
Turkey	TRY	200; 100; 50	20; 10; 5
United States	USD	100; 50; 20	10; 5; 1
South Africa	ZAR	200; 100; 50	20; 10

Source: www.bis.org/statistics/payment_stats.htm?m=1036.

Note: Author's definition.

Table 4: Economic and Institutional Determinants of the Demand for Notes in Circulation

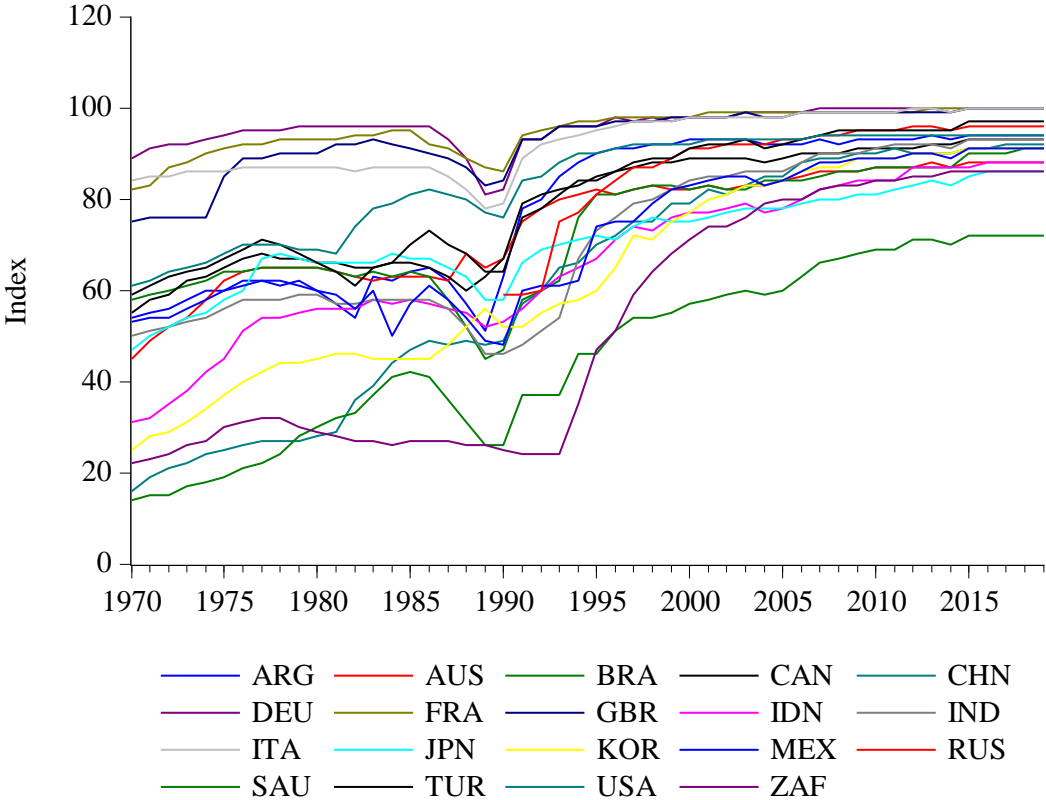
Growth in Real Notes Held

Variable	Mean	Median	Right Tail	Left Tail
Per capita cards	0.46 (0.41)	0.35 (0.26)	0.81 (0.30)*	0.12 (0.88)
Contract intensive	-61.04 (20.38)*	-43.36 (13.08)*	-28.61 (17.40)+	-80.76 (33.73)**
Financial globalization	-0.20 (0.08)**	-0.16 (0.08)**	-0.14 (0.05)*	-0.20 (0.14)
Debt-to-GDP ratio	-0.03 (0.02)	-0.03 (0.02)+	-0.06 (0.02)*	0.01 (0.05)
Inflation	-0.81 (0.14)*	-0.72 (0.17)*	-0.47 (0.23)**	-1.44 (0.84)+
Central bank resilience	2.90 (1.08)**	3.13 (1.32)**	1.68 (1.18)	2.76 (2.72)
Excess number of crises	-1.80 (1.40)	0.18 (1.89)	-4.96 (1.18)	1.21 (6.23)
EMEs	-5.35 (2.91)+	-5.39 (2.48)**	0.23 (3.04)	-2.74 (2.72)
Constant	74.33 (19.65)*	55.22 (13.85)	45.41 (16.46)*	26.95 (3.39)*
Cross-sections	18	18	18	18
Observations	104	104	104	121
\bar{R}^2	0.24	0.09	0.18	0.24
F/LR	5.03 (0.00)	29.35 (0.00)	35.22 (0.00)	49.57 (0.00)
Fixed effects	No	No	No	No

Sources: Data is obtained from the figures above and from Hartwell and Siklos (2022) cited in the main text.

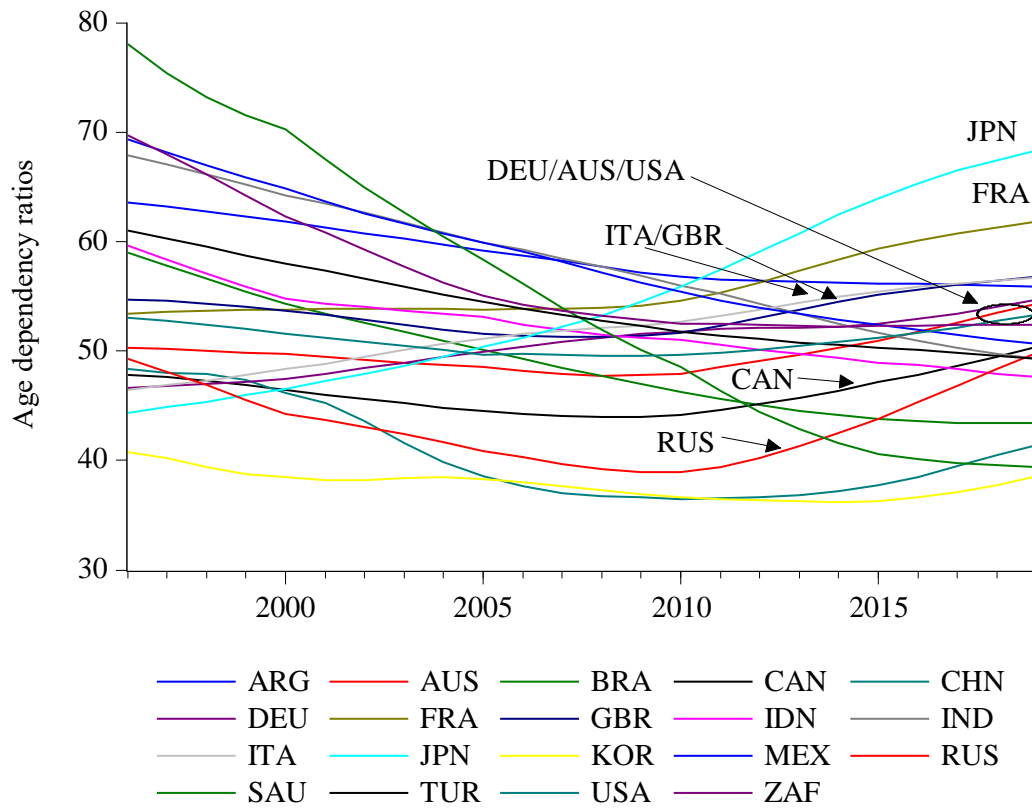
Notes: Mean estimates rely on ordinary least squares. Median, right (highest 10% of values) and left tail (lowest 10% of values) estimated using quantile regressions. EMEs = emerging market economies. * indicates significance at the 1% (** 5%; +10%) level of significance.

Figure 11: Political Globalization, 1970–2019



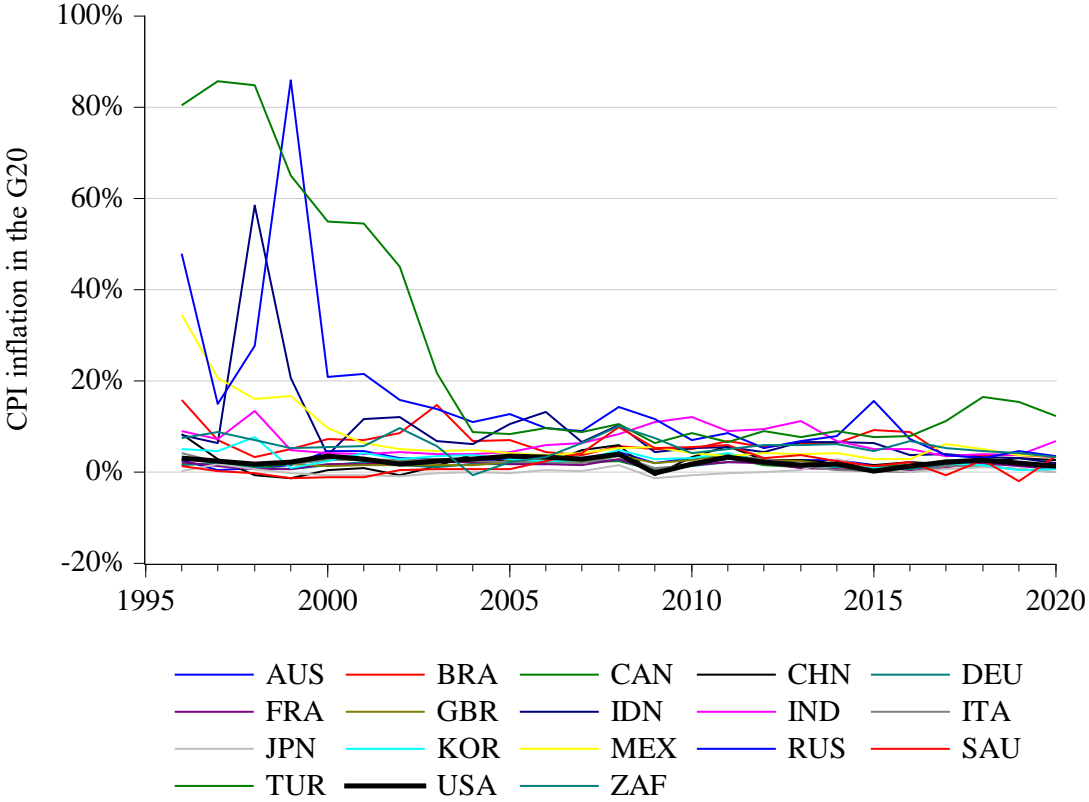
Source: <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html>.

Figure 12: Age Dependency Ratios, 1996–2020



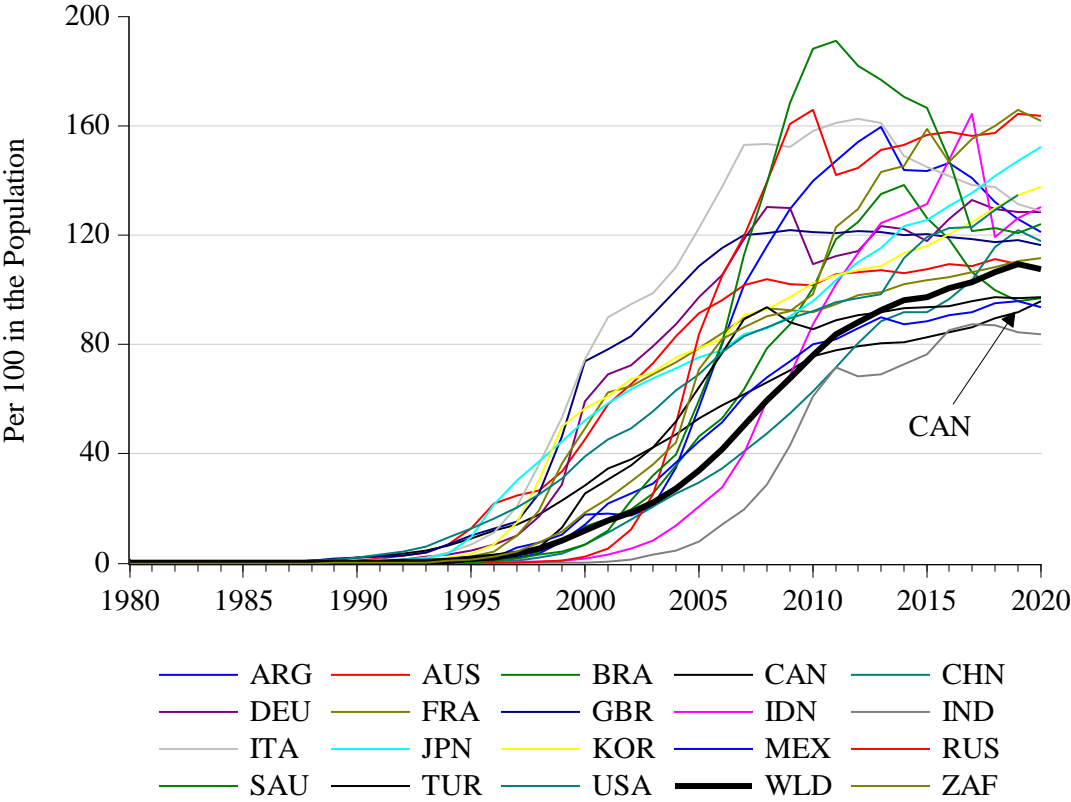
Source: <https://databank.worldbank.org/source/world-development-indicators>.

Figure 13: CPI Inflation in the G20, 1995–2020



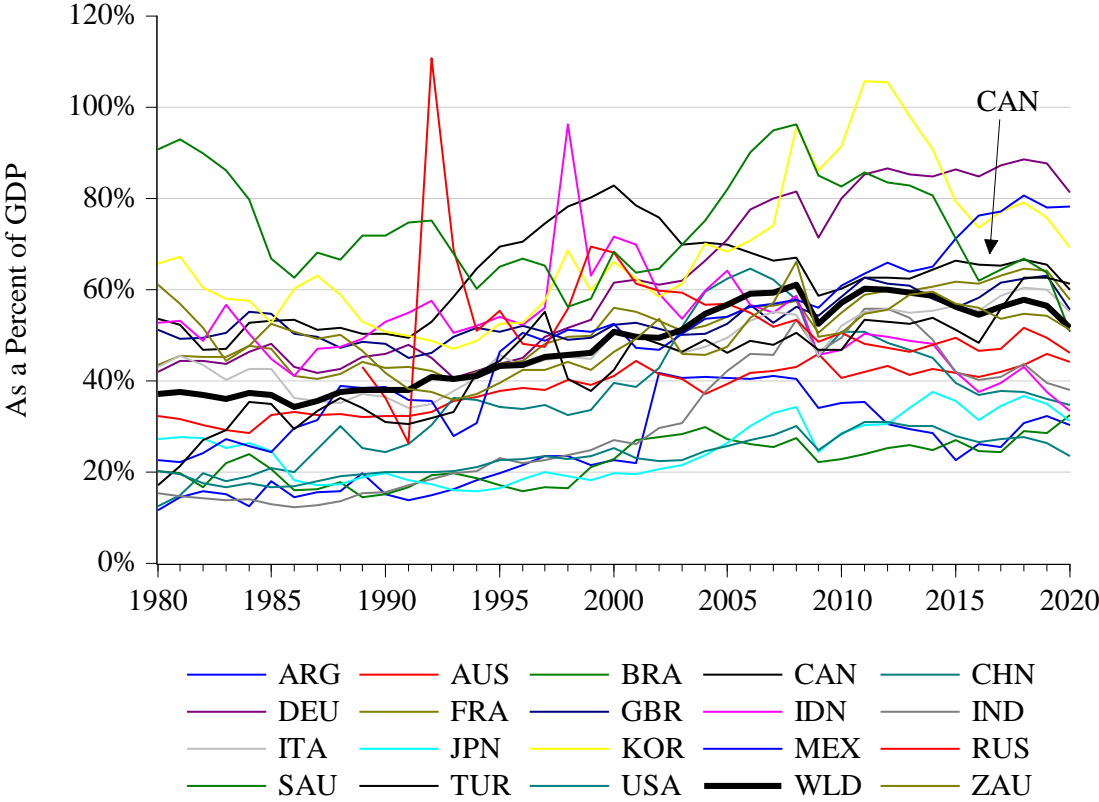
Source: <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b>.

Figure 14: Cellphone Penetrations since the 1980s



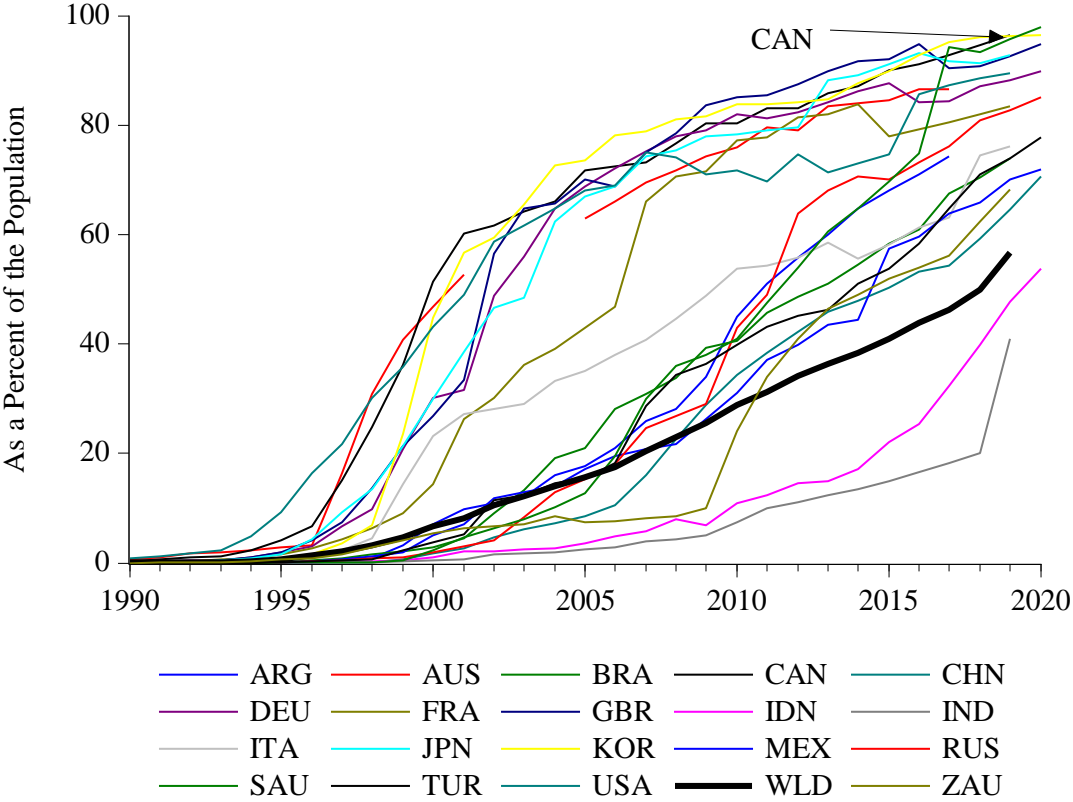
Source: <https://databank.worldbank.org/source/world-development-indicators>.
 Note: WLD = world.

Figure 15: Trade Openness (Trade as a Percent of GDP)



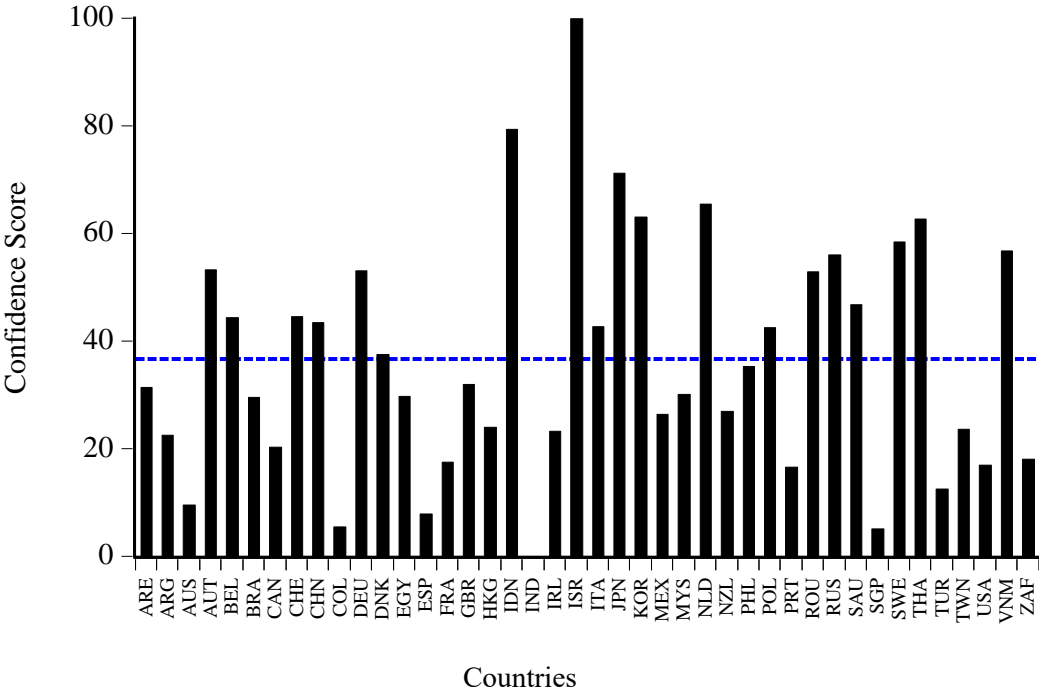
Source: See Hartwell and Siklos (2022) in the main text.

Figure 16: Internet Usage as a Percent of the Total Population



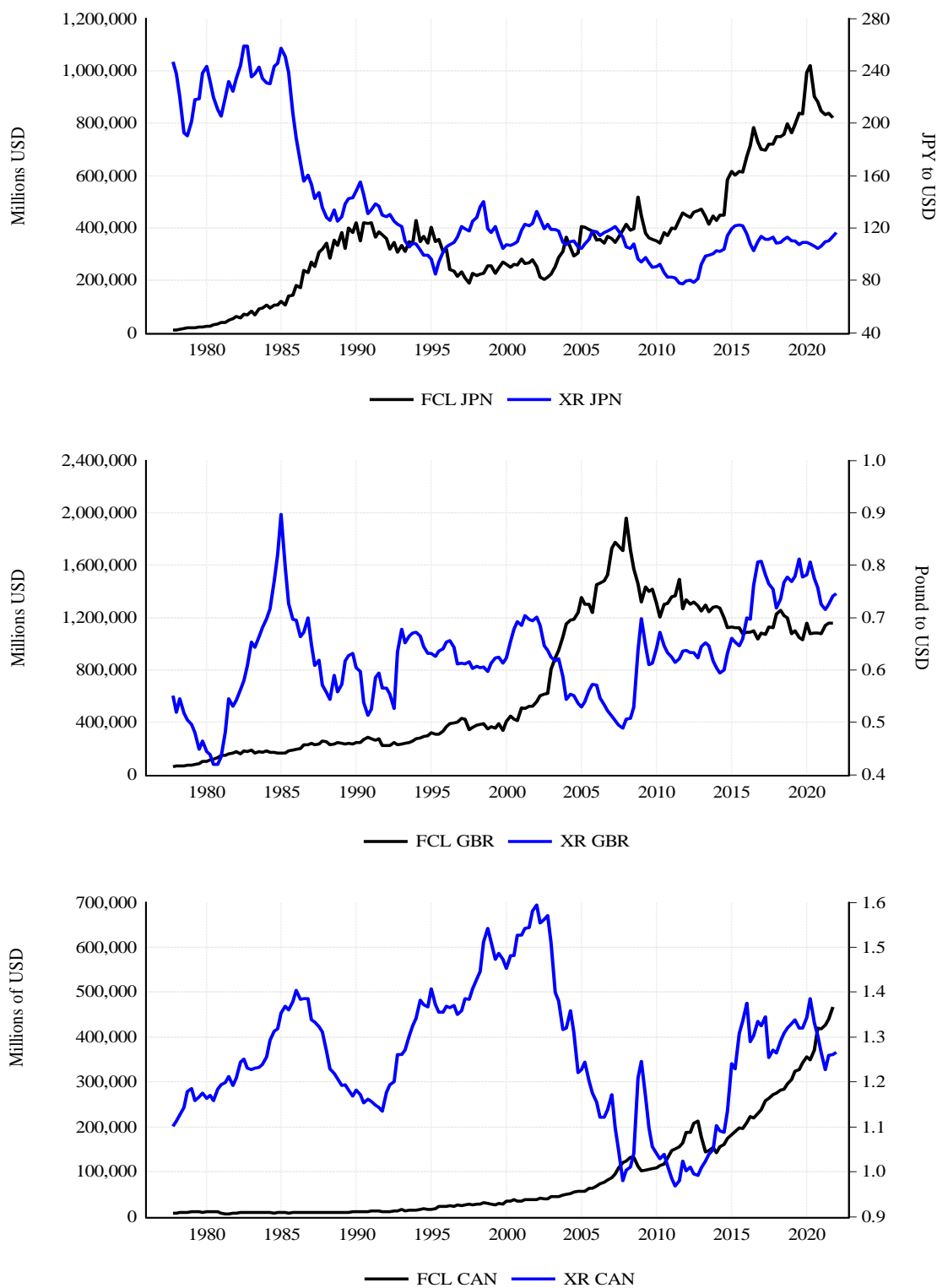
Source: <https://databank.worldbank.org/source/world-development-indicators>.

Figure 17: Digital Trust (Confidence in Guarantors, 2019)



Source: See Chakravorti et al. (2020) in the main text.

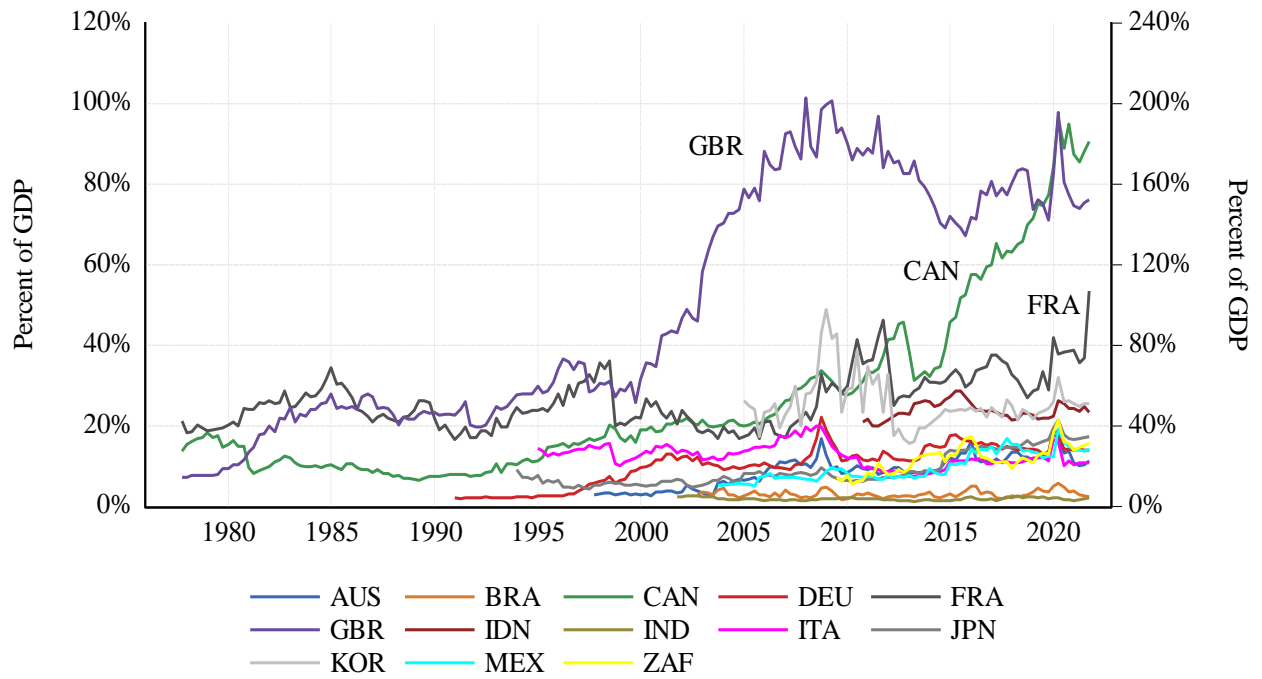
Figure 18: Banks' Foreign Currency Liabilities and the Exchange Rate



Data sources: <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b>; www.bis.org/statistics/consstats.htm?m=2070.

Notes: FCL = foreign currency liabilities; JPY = Japanese yen; XR = exchange rate.

Figure 19: Banks' Foreign Currency Liabilities as a Percent of GDP



Data sources: <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b>;
www.bis.org/statistics/consstats.htm?m=2070.

Table 5: Seigniorage from the Issuance of Currency (Selected Simple Estimates)

Economy	Currency	Seigniorage (%GDP)
Argentina	ARG	ND
Australia	AUD	9.85
Brazil	BRL	21.51
Canada	CAD	6.71
China	CNY	23.76
Euro Area	EUR	12.79
United Kingdom	GBP	29.89
Indonesia	IDR	22.77
India	INR	5.55
Japan	JPY	2.64
Korea	KRW	8.38
Mexico	MXN	23.54
Russia	RUR	ND
Saudi Arabia	SAR	ND
Turkey	TRY	39.40
United States	USD	14.45
South Africa	ZAR	14.90

Data sources: <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b>;
www.oecd.org/sdd/oecdmaineconomicindicator/mei.htm.

Notes: Author's calculations are based on inflation times the share of currency in circulation to nominal GDP. For India, the M1 measure of money supply is used instead. ND means insufficient or no data was available.