NINETY-FOURTH INTERNATIONAL ATLANTIC ECONOMIC CONFERENCE

How the flows change when interest rates are normalized:
Risk to economic and financial stability

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How the flows change when interest rates are normalized: *Risk to economic and financial stability*

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Motivation

- Major Central banks increasing interest rates
- Research on capital flows and risks find that monetary policy stance in major economies has significant effects on capital flows and financial stability
- Interest rate normalization in major economies plays a role in multiple financial crisis in EMEs
  - Asian Financial Crisis, Mexican Banking (peso) crisis …

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Why are major CB tightening

- Running inflation …
  - Rates too low during Covid?
  - Supply chain issues
  - Geopolitical situation
- Have to go back to the 80s for inflation in this range…

- … lessons from EME economic crisis in the 80s and combine that with recent literature on systemic risk and liability flows.

Road map

- Capital flows and systemic risk, recent literature
- Banking Crisis in the 80s
- Systemic risk now…

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Capital flows and systemic risk

What have we learned

- **Goldfajn and Valdes (1995)** show how changes in international interest rates and capital inflows are amplified by the intermediating role of banks and how such swings may also …
  - *… produce an exaggerated business cycle that ends in bank runs and financial and currency crashes*

- **Calvo (1998)** shows with a simple theoretical model how liability inflows cause non-tradable goods to increase in price relative to tradable.
  - Reversal of liability flows brings about financial and balance of payments crises through the decline in the price of non-tradable good

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What have we learned:
Capital inflow bonanza (Caballero)

- New
  - Looks at *extreme episodes*, bonanza.
  - Looks at different components of inflows
- Surges of both portfolio and other inflows increase systemic risk … not FDI
- Mechanism is both through ***increased leverage and asset price increases.***

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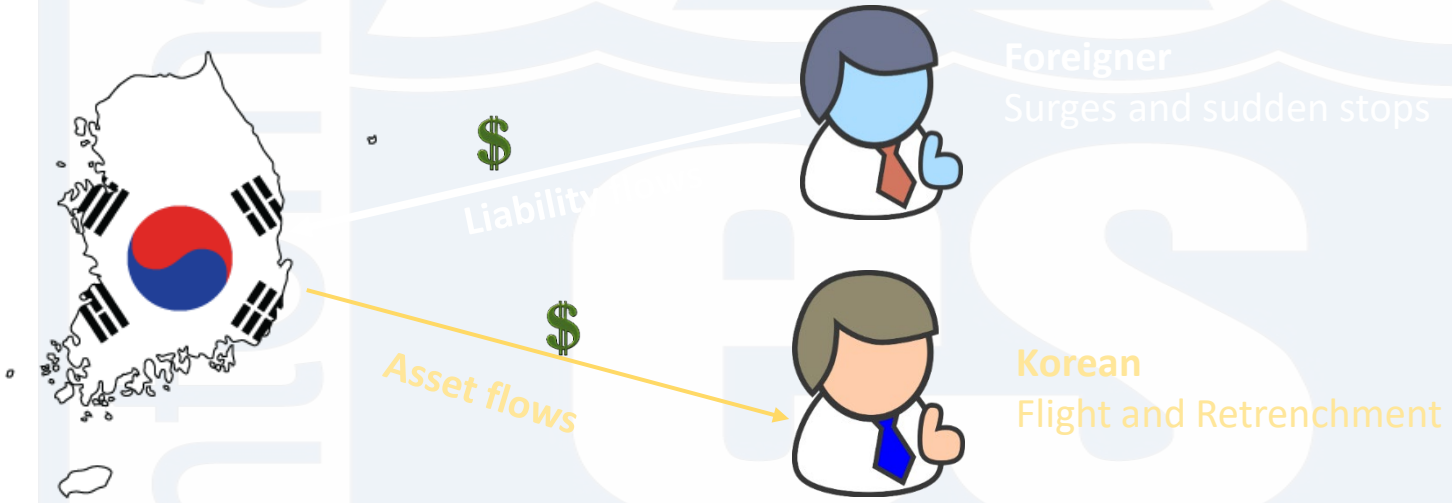
What have we learned:
Liability v.s. asset flows (Forbes and Warnock)

- New. Foreign and domestic investors can be motivated by ***different factors*** and ***respond differently*** to various policies and shocks.
- Higher probability of a sudden stop if the inflow is “foreign”



Net inflow = Liability flows – asset flows

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What have we learned:
Push v.s. pull

- Global factors matter more
- Domestic factors may be increasing in importance
- Liability flows that fund household credit – through financial intermediation – is the main driver behind the negative relationship between leverage and financial and economic cycles (Lukas Diebold and Björn Richter 2021)
  - Foreign funded household leverage growth is an indicator for negative GDP growth 3-4 years hence – stronger if demand driven.

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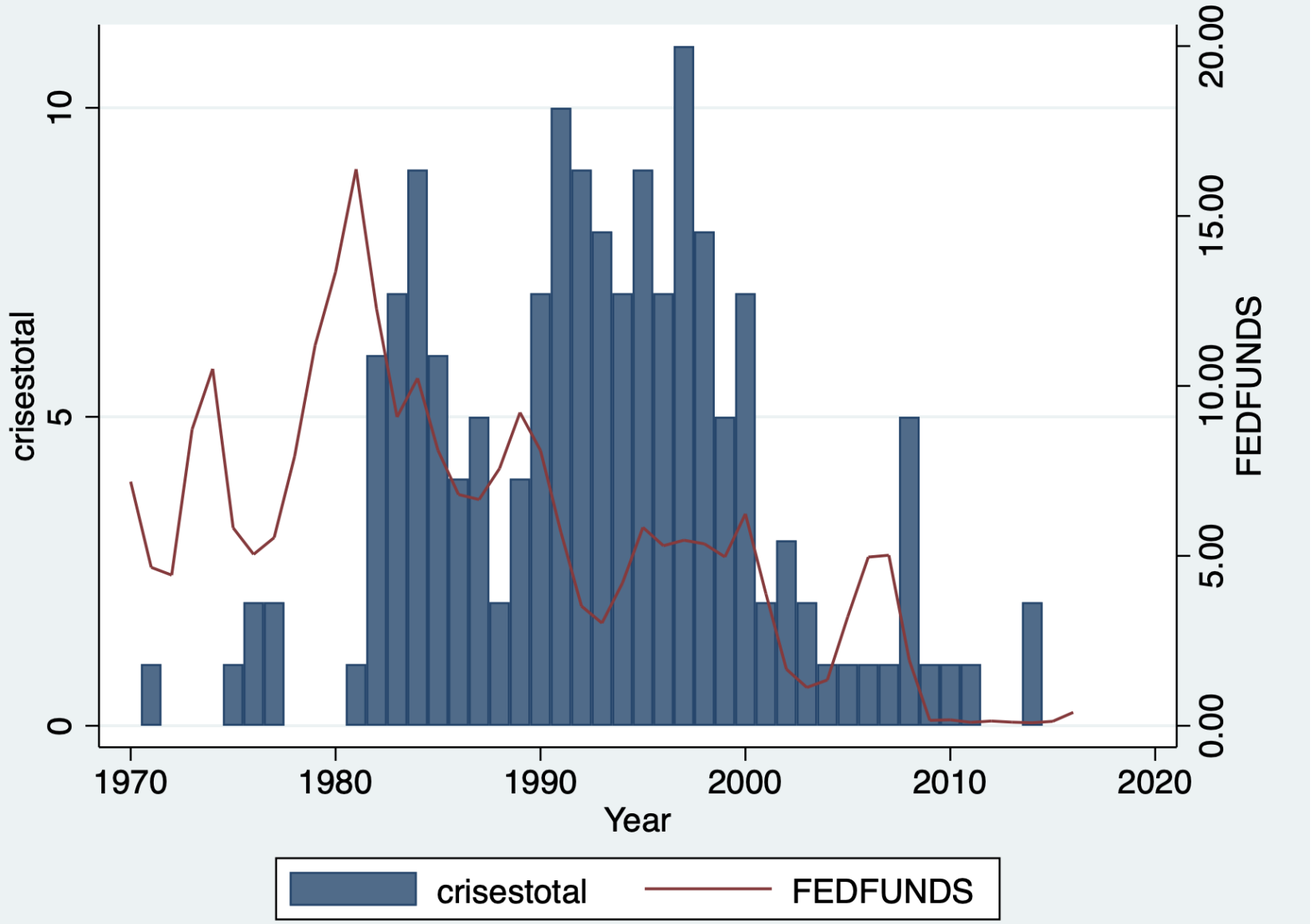
Economic and financial crisis in the 80s

Fed funds rate & banking crisis



Reference: FRED and Luc Laeven and Fabian Valencia (2018)

Country	Start	End	Output loss [1/]	Fiscal Costs [2/] (% of GDP)	Increase in public debt [3/]	Liquidity support [4/]	Peak NPLs [5/]
Argentina	1980	1982 6/	58.2	55.1	33.1	62.2	9.0
Chile	1981	1985 7/	8.6	42.9	87.9	52.7	35.6
Colombia	1982	1982	47.0	5.0	16.6	7.7	4.1
Ghana	1982	1983	45.3	6.0	15.5	0.1	35.0
Israel	1983	1986	42.7	30.0	…	…	…
Kenya	1985	1985	23.7	…	11.0	1.9	…
Mexico	1981	1985 7/	26.6	…	22.6	2.6	…
Morocco	1980	1984 7/	21.9	…	35.6	8.6	…
Peru	1983	1983 6/	55.2	…	14.3	9.7	…
Philippines	1983	1986	91.7	3.0	44.8	1.5	19.0
Thailand	1983	1983	24.8	0.7	15.7	2.0	…
Turkey	1982	1984	35.0	2.5	12.3	29.3	…
Uruguay	1981	1985 7/	38.1	31.2	83.3	18.5	…
Average			**39.9**	**19.6**	**32.7**	**16.4**	**20.5**

1/ In percent of GDP. Output losses are computed as the cumulative sum of the differences between actual and trend real GDP over the period [T, T+3], expressed in percent of trend real GDP, with T denoting the starting year of the crisis. The trend is computed by applying an HP filter (λ=100) to the GDP series over [T-20, T-1]. No output losses are reported for crises in transition economies that took place during the period of transition to market economies.
2/ Fiscal costs refer to outlays directly related to the restructuring of the financial sector.
3/ In percent of GDP. For episodes starting in 2007 and later, the increase in public debt is measured as the change in debt projections, over [T-1, T+3], relative to the pre-crisis debt projections, where T is the starting year of the crisis.
4/ Liquidity is measured as the ratio of central bank claims on deposit money banks (line 12 in IFS) and liquidity support from the Treasury to total deposits and liabilities to non-residents. Total deposits are computed as the sum of demand deposits (line 24), other deposits (line 25), and liabilities to non-residents (line 26).
5/ In percent of total loans.
6/ Credit data missing. For these countries, end dates are based on GDP growth only.
7/ We truncate the duration of crises at 5 years, starting with the first crisis year.
Source: WEO, IFS, IMF Staff reports, IMF Financial Soundness Indicators, Laeven and Valencia (2013), and authors' calculation.

Mexico

- The main shock was the decline in oil prices, which fell over half 1981-1986. …
- … the increase in world interest rates to over 15%, made debt repayment impossible (Oks and van Wijnbergen 1994).
- Very early realization that ***foreign debt*** was the destabilizing factor … "the foreign debt will have to grow at a substantial lower rate than in the recent past." (Ortiz and Serra-Puche 1984)

Table 1
The foreign public debt and nominal interest rates.[a]

Year	Stock D_t (millions of dollars)	Growth rate $(D_t - D_{t-1}/D_{t-1})$	Nominal implicit interest rates, annual average (%)
1960	3.25	6.0	1.15
1961	3.44	6.2	1.23
1962	3.55	3.2	1.81
1963	3.74	6.8	1.77
1964	4.13	9.0	1.81
1965	4.18	1.5	2.23
1966	4.42	5.7	2.84
1967	4.96	12.2	2.99
1968	5.33	7.5	3.74
1969	5.81	9.0	3.81
1970	6.25	7.6	4.64
1971	6.66	6.6	4.60
1972	6.82	2.4	4.71
1973	8.44	23.8	5.24
1974	11.37	34.7	6.21
1975	15.70	38.1	6.57
1976	20.84	32.7	6.33
1977	23.83	14.3	6.47
1978	26.42	10.9	7.66
1979	29.76	12.6	9.71
1980	33.87	13.8	11.68
1981	52.16	54.0	10.50
1982	58.14	11.4	14.45
1983	63.41	9.1	13.08

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Chile

- Economic reform in the 70s to bring increase growth and bring down inflation.
  - Liberalization of the financial system among them eliminating interest rates controls, credit allocation controls, reserve requirements were lowered and banks privatized.
- Credit grew rapidly and ***foreign borrowing increased significantly.***
  - Foreign liabilities went up from 14.4% of total in 1978 to 35.8% of total in 1982.
  - Peso overvaluation current account deficit
- **High international interest rates,** a world recession, lower copper prices, and an …
- … abrupt cut of voluntary foreign credit to Latin America pushed Chile into a costly economic crisis
  - Amplified by among other connected lending which ranged from 12 to 45% of the total loans portfolio.
  - Financial institution liquidation, deposit losses, external debt restructuring
  - Output loss 8.6%

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Lessons learned ?

- During the next capital inflow influx in the 90s the Chilean authorities introduced RRs on capital inflows
  - ***20 percent of the credit*** had to be deposited in a non interest-bearing account at the central bank and at the end of the holding period (that ranged between 90 days and one year, depending on the term of the credit), the RR was reimbursed in the same currency in which the deposit was made

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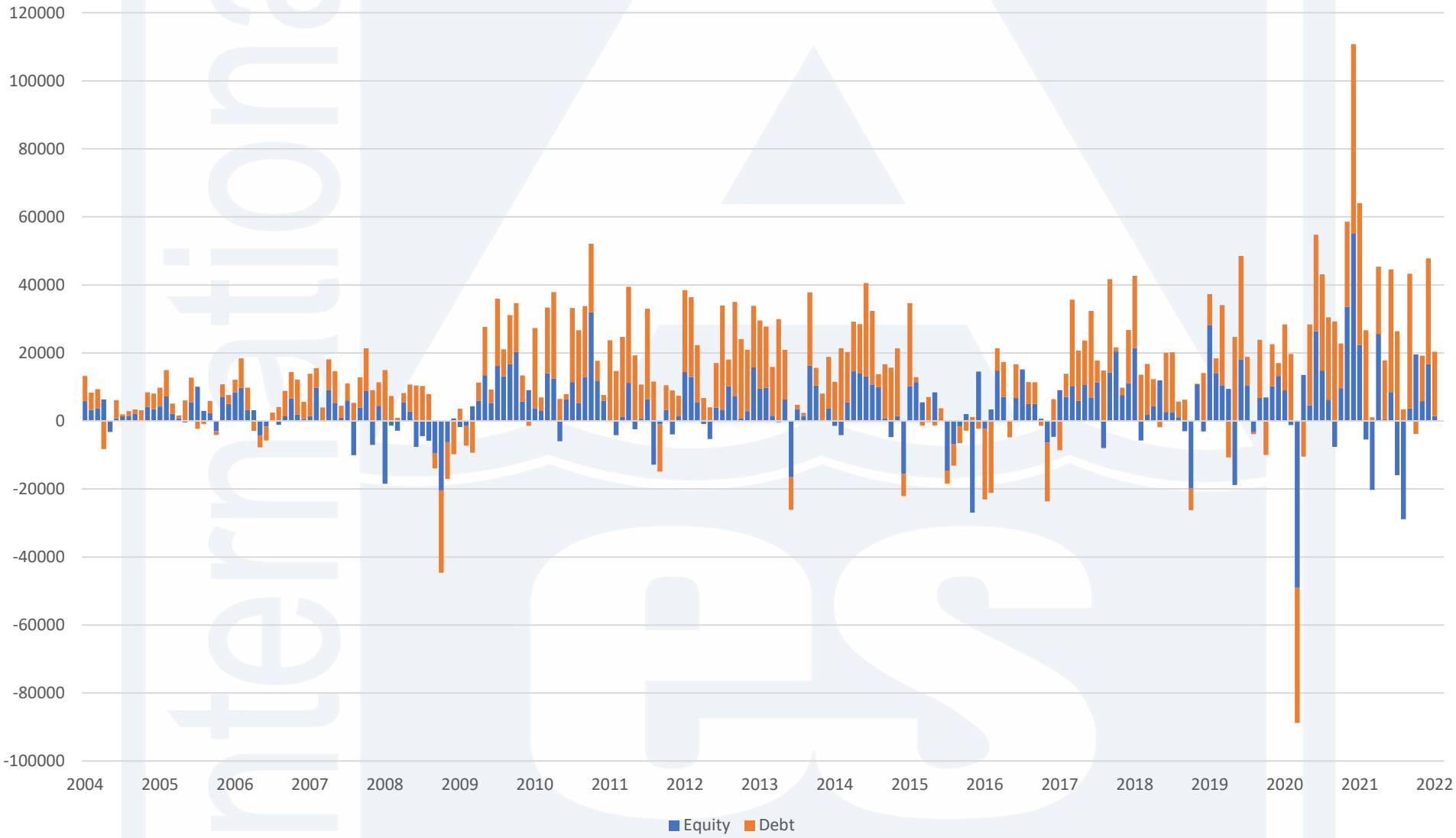
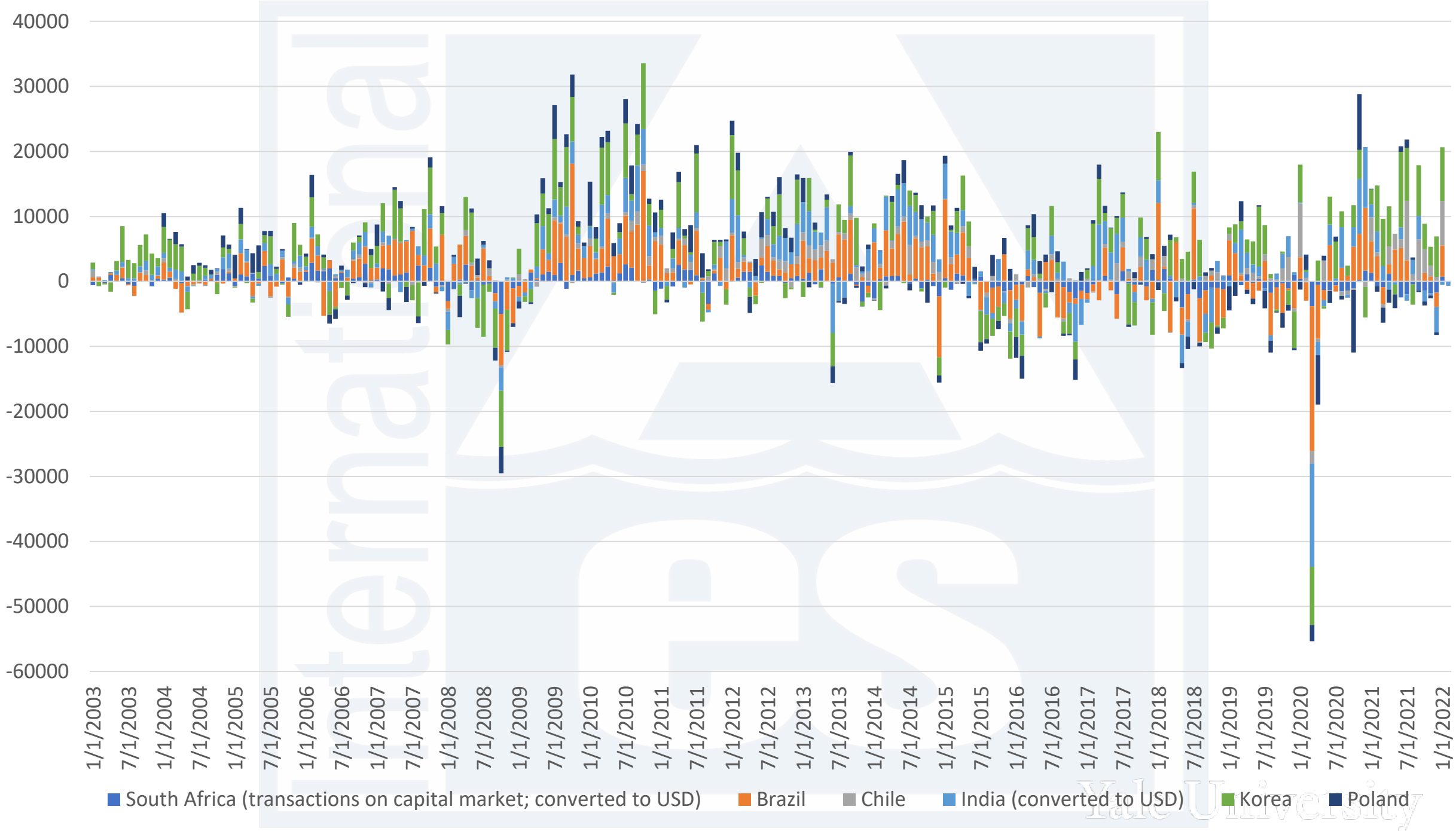
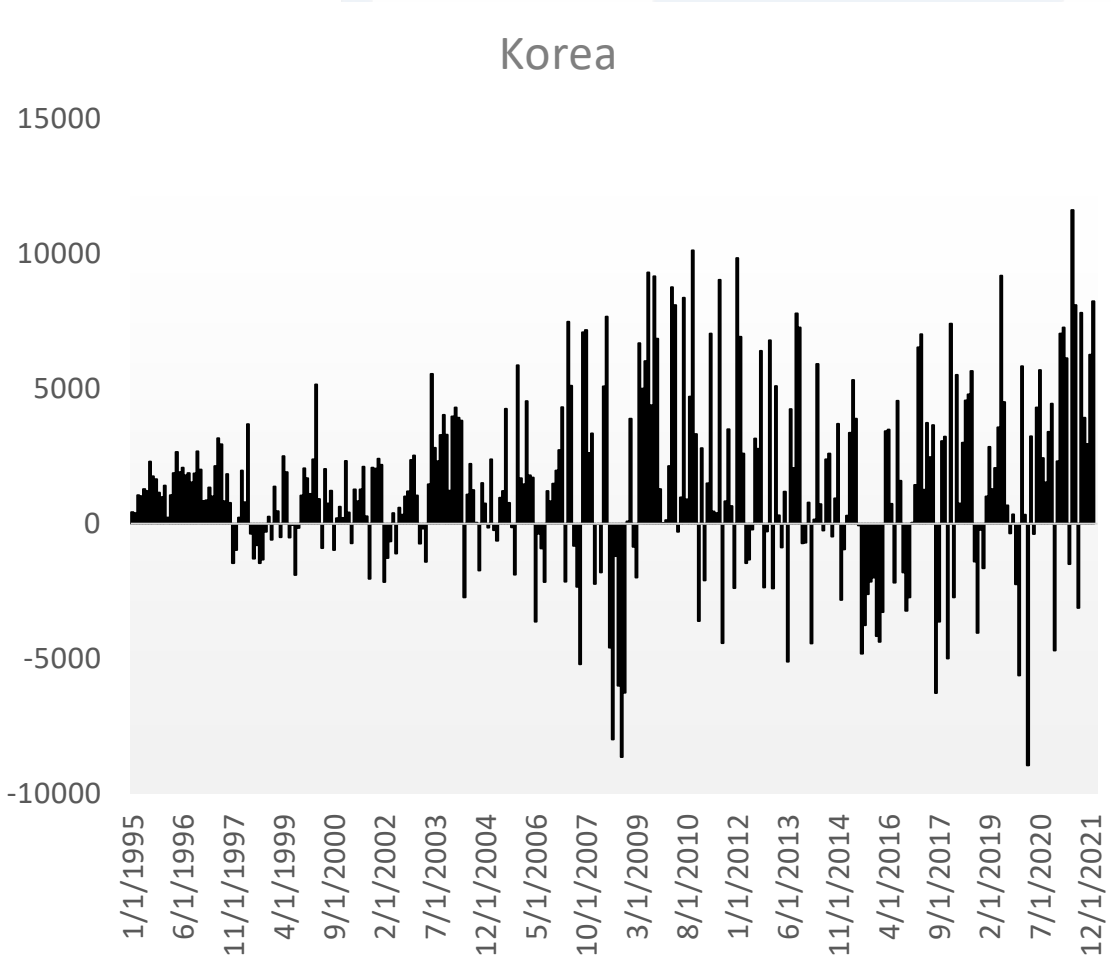
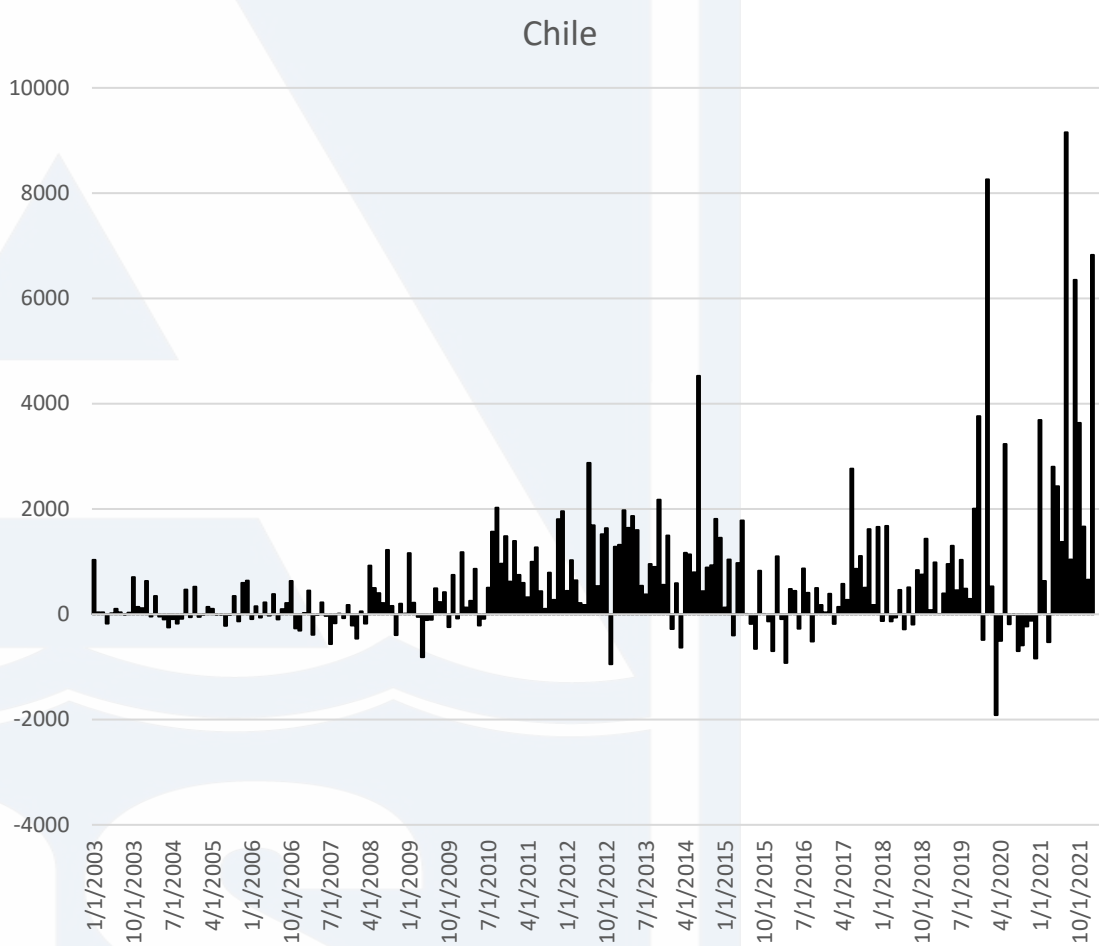
Systemic risk in EME now

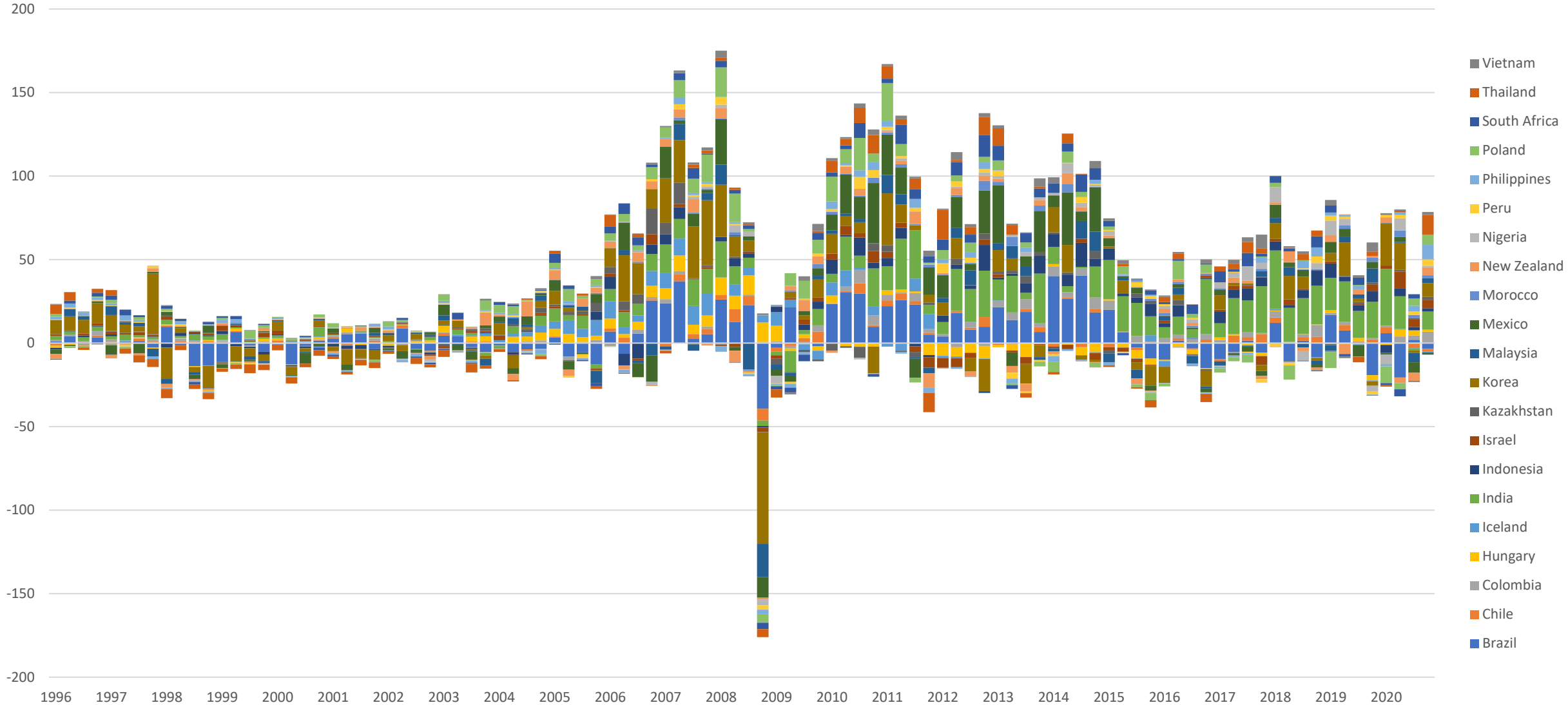








Debt and equity flows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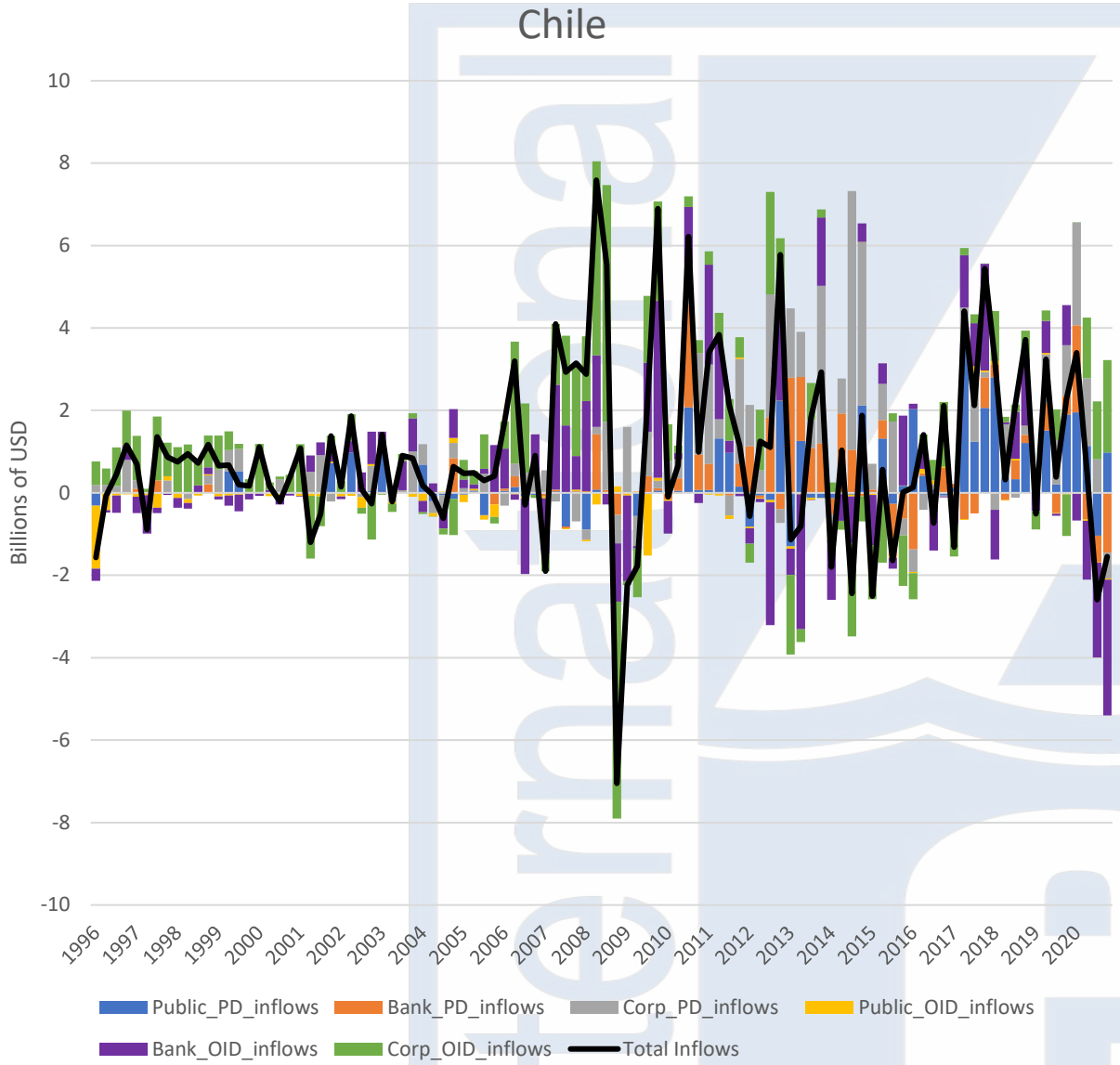
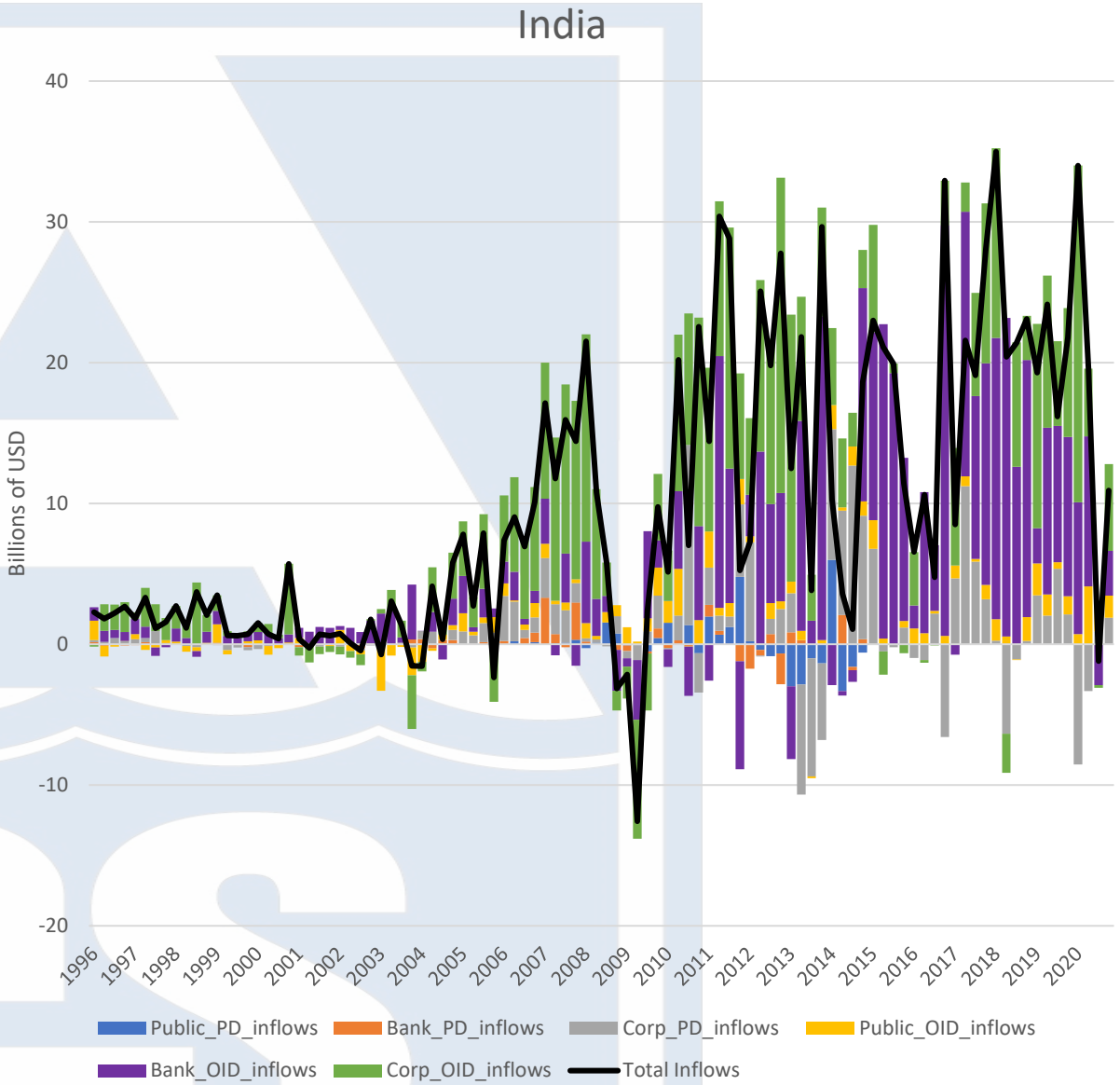


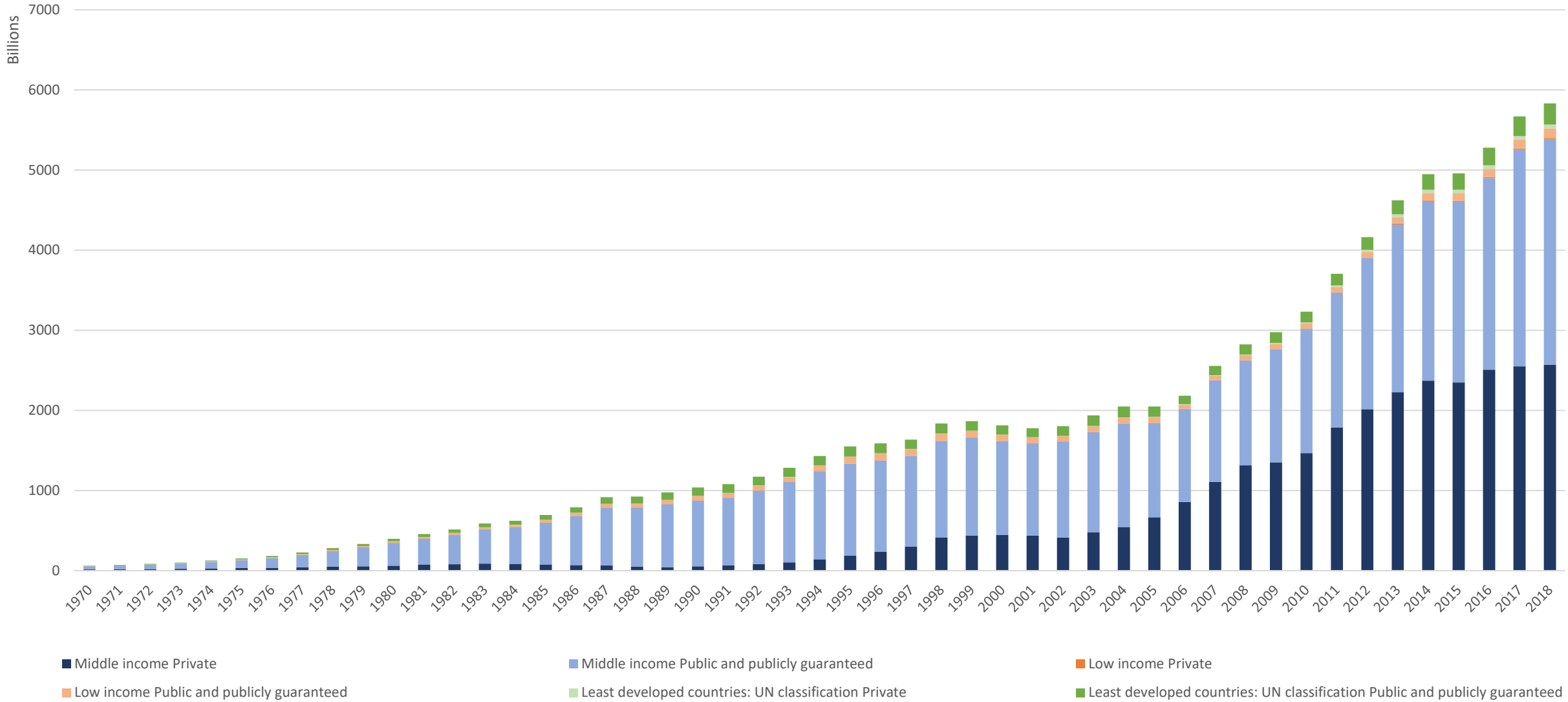


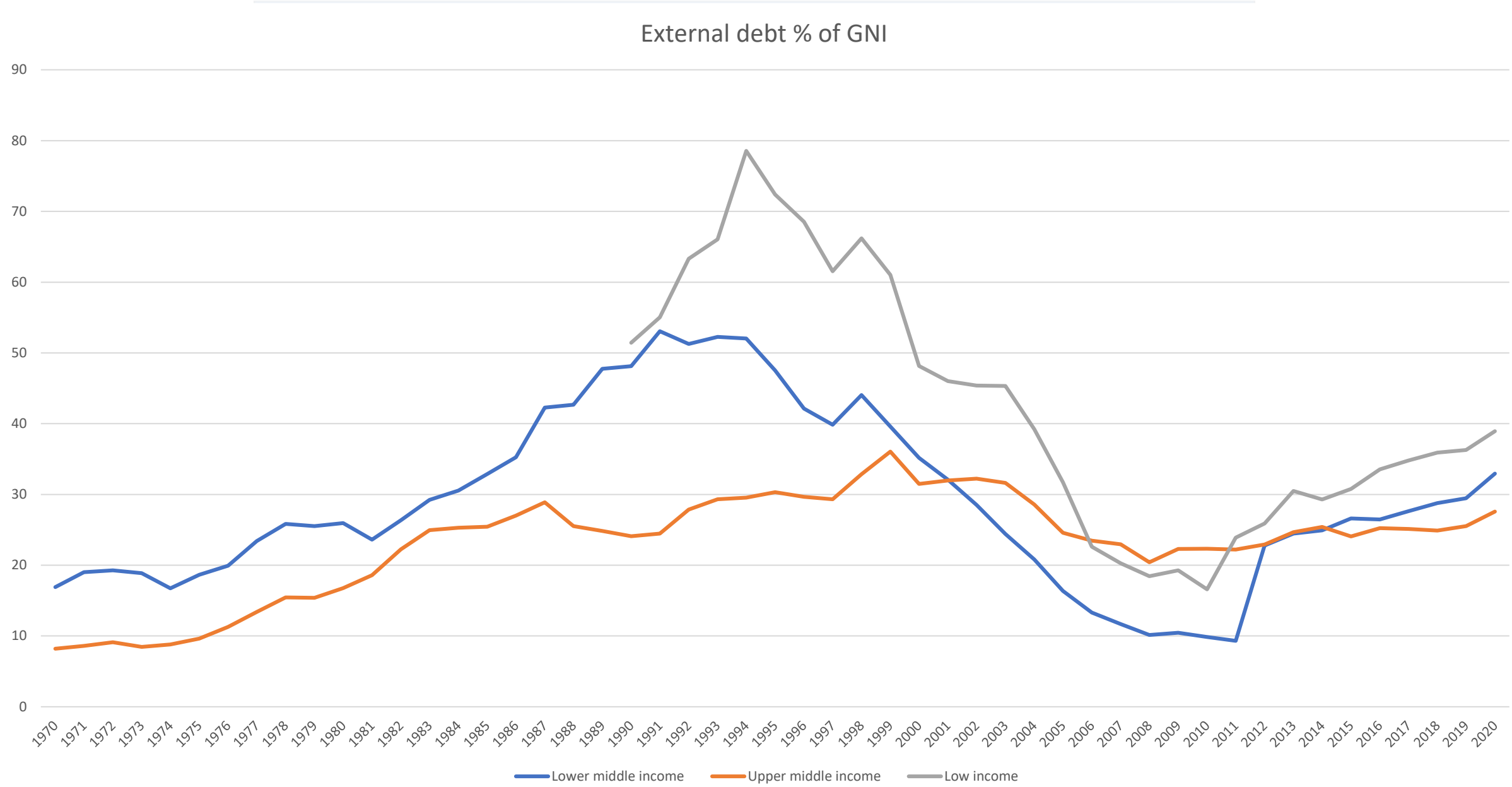
Liability flows only ...

What about external debt levels

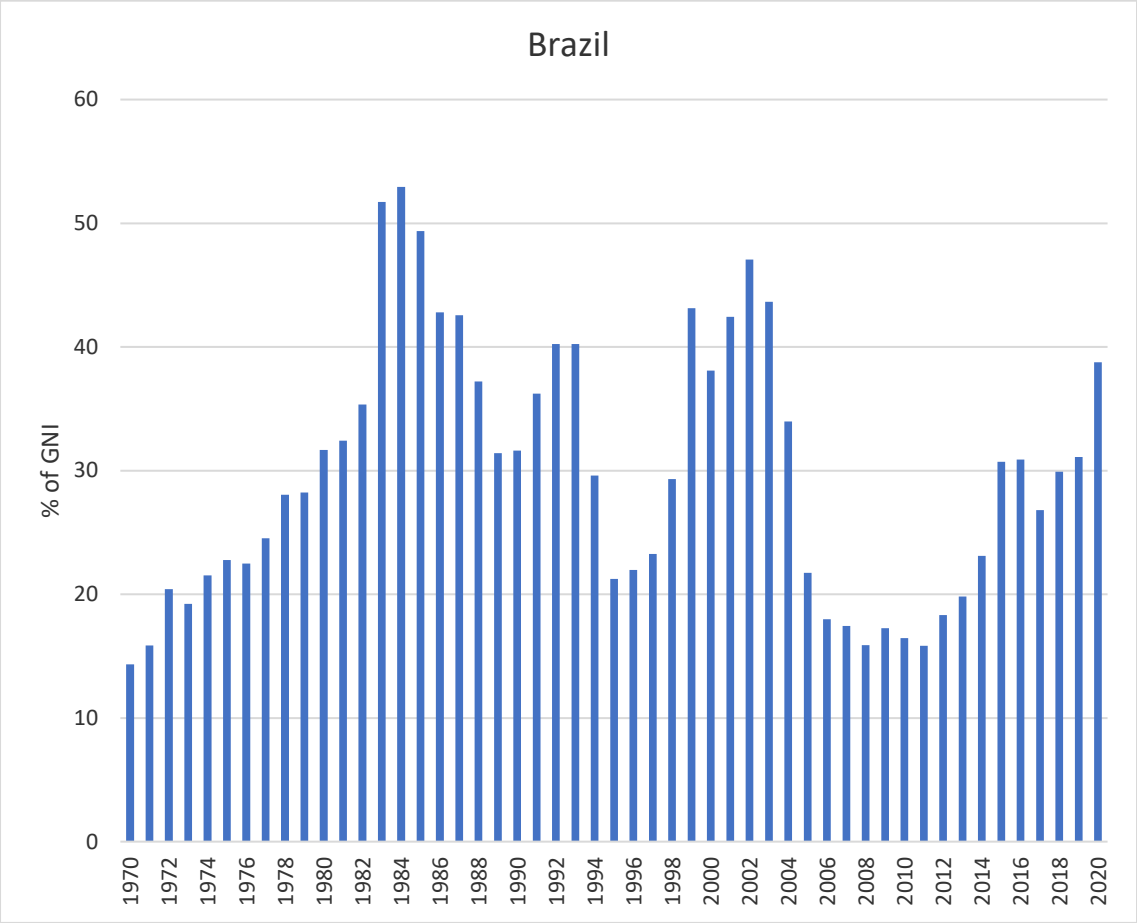
External Debt by borrowers

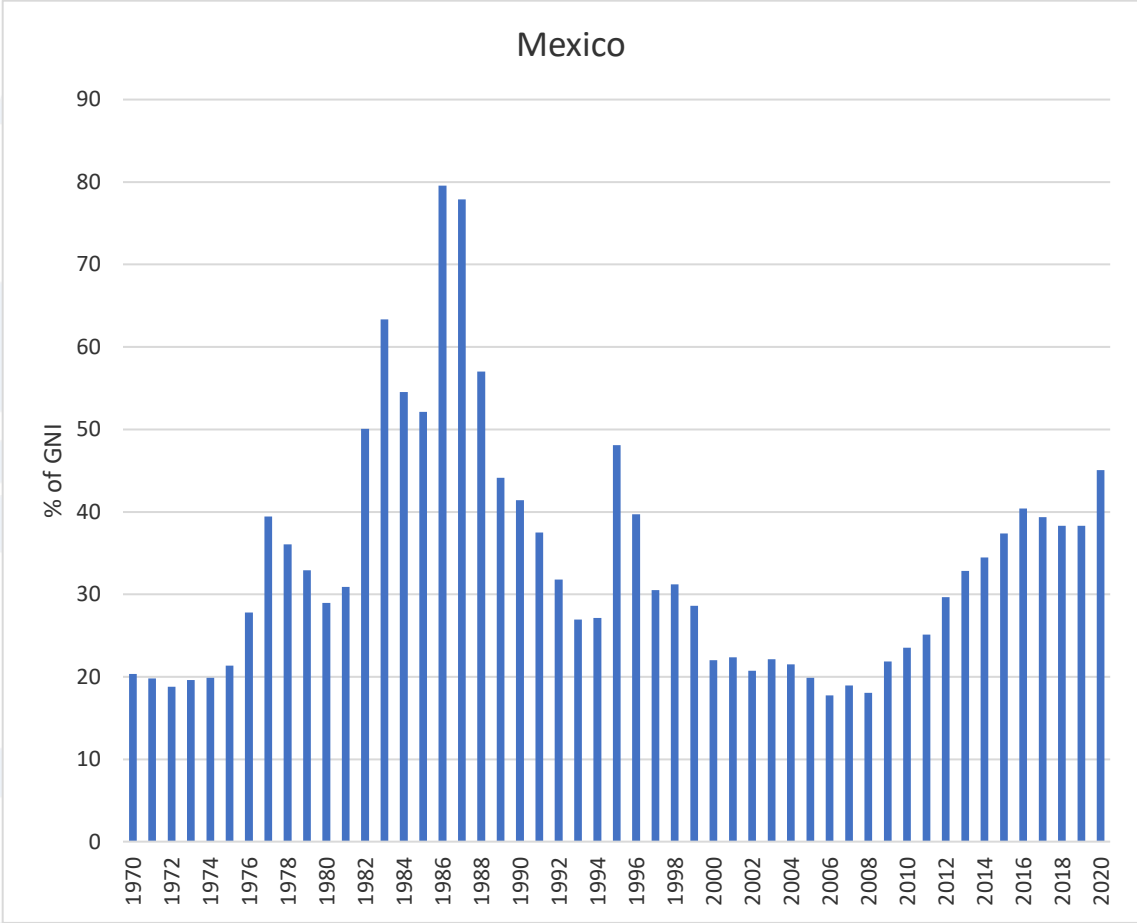
Current $

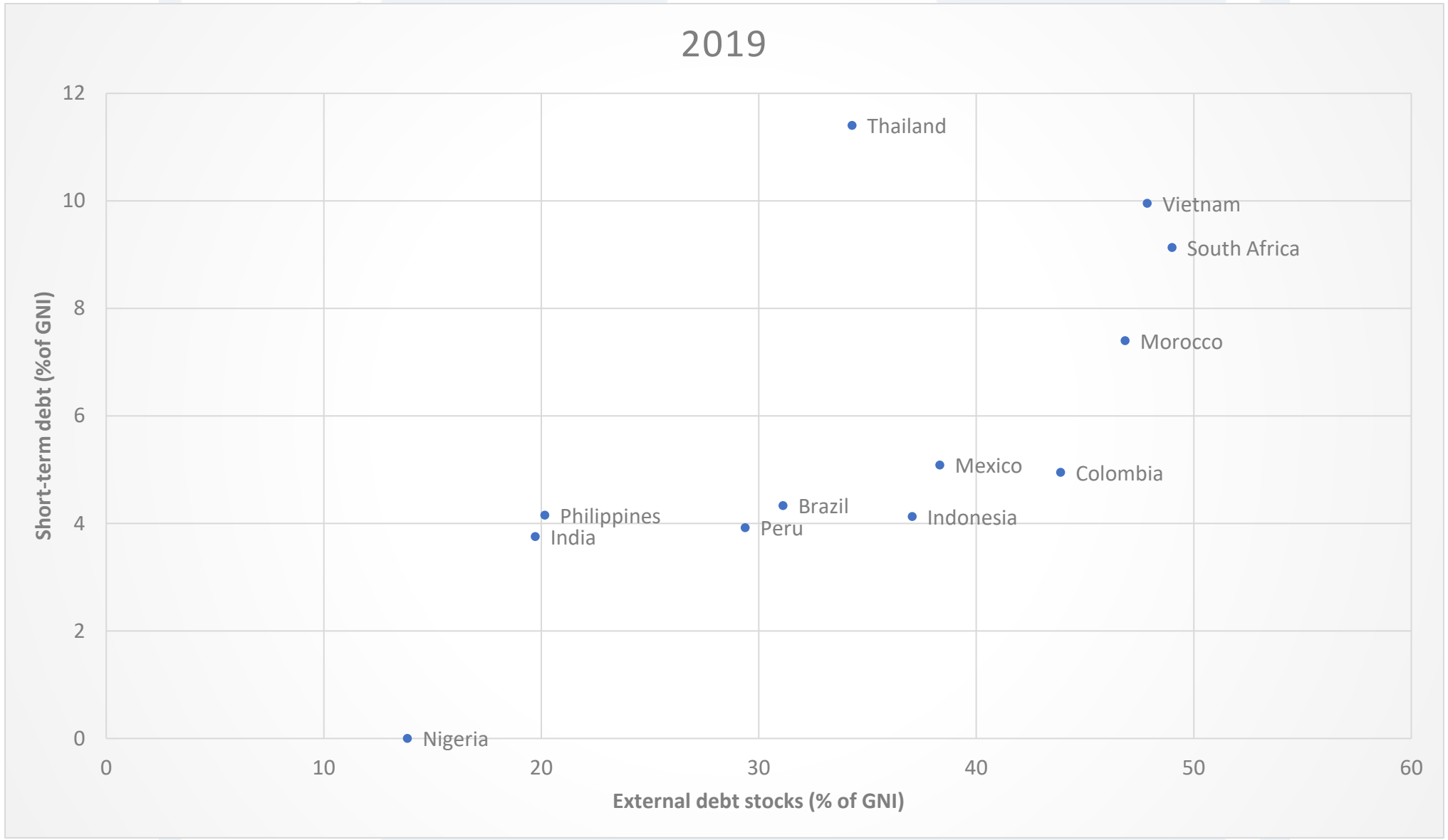




External debt as % GNI



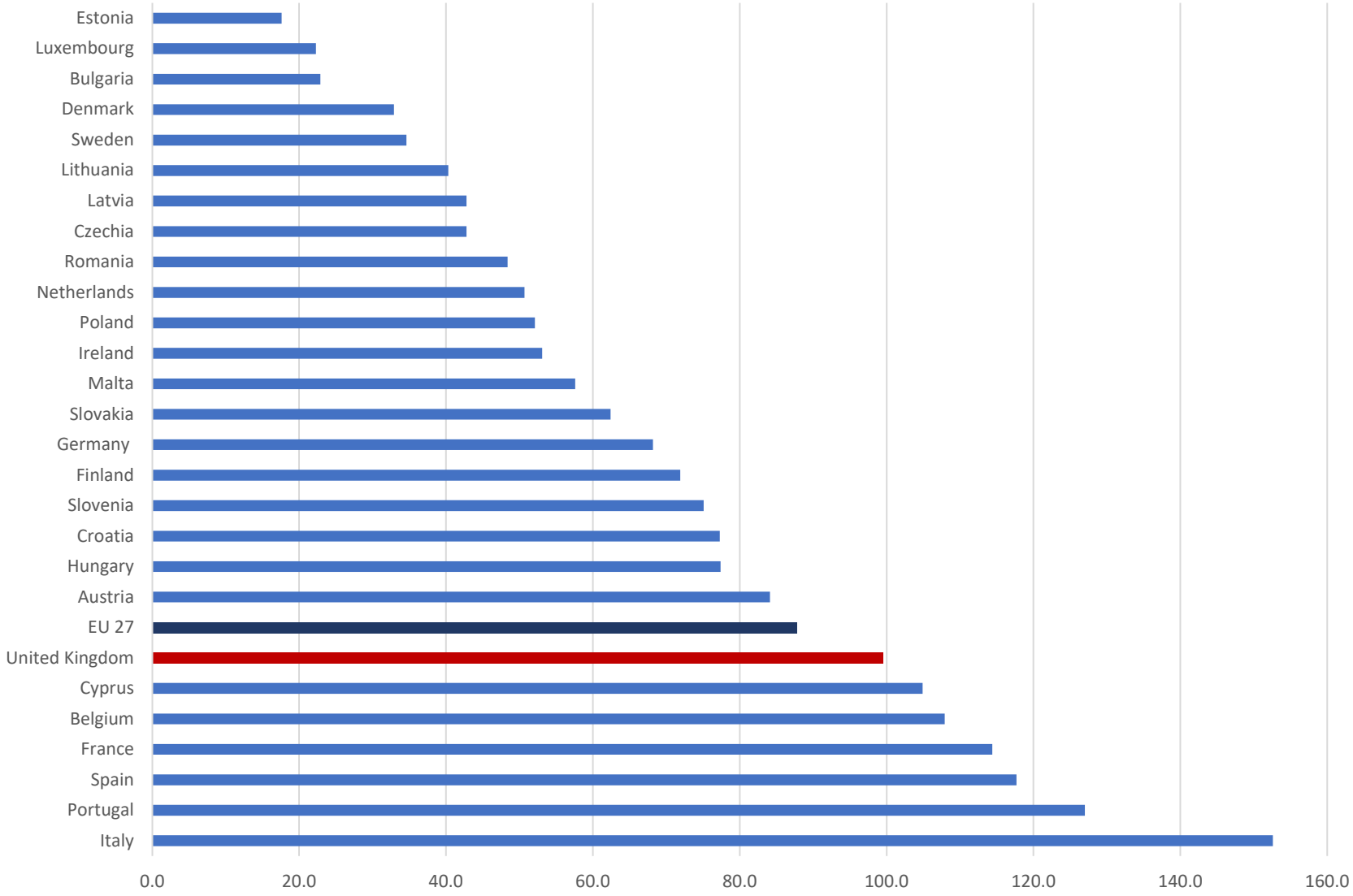


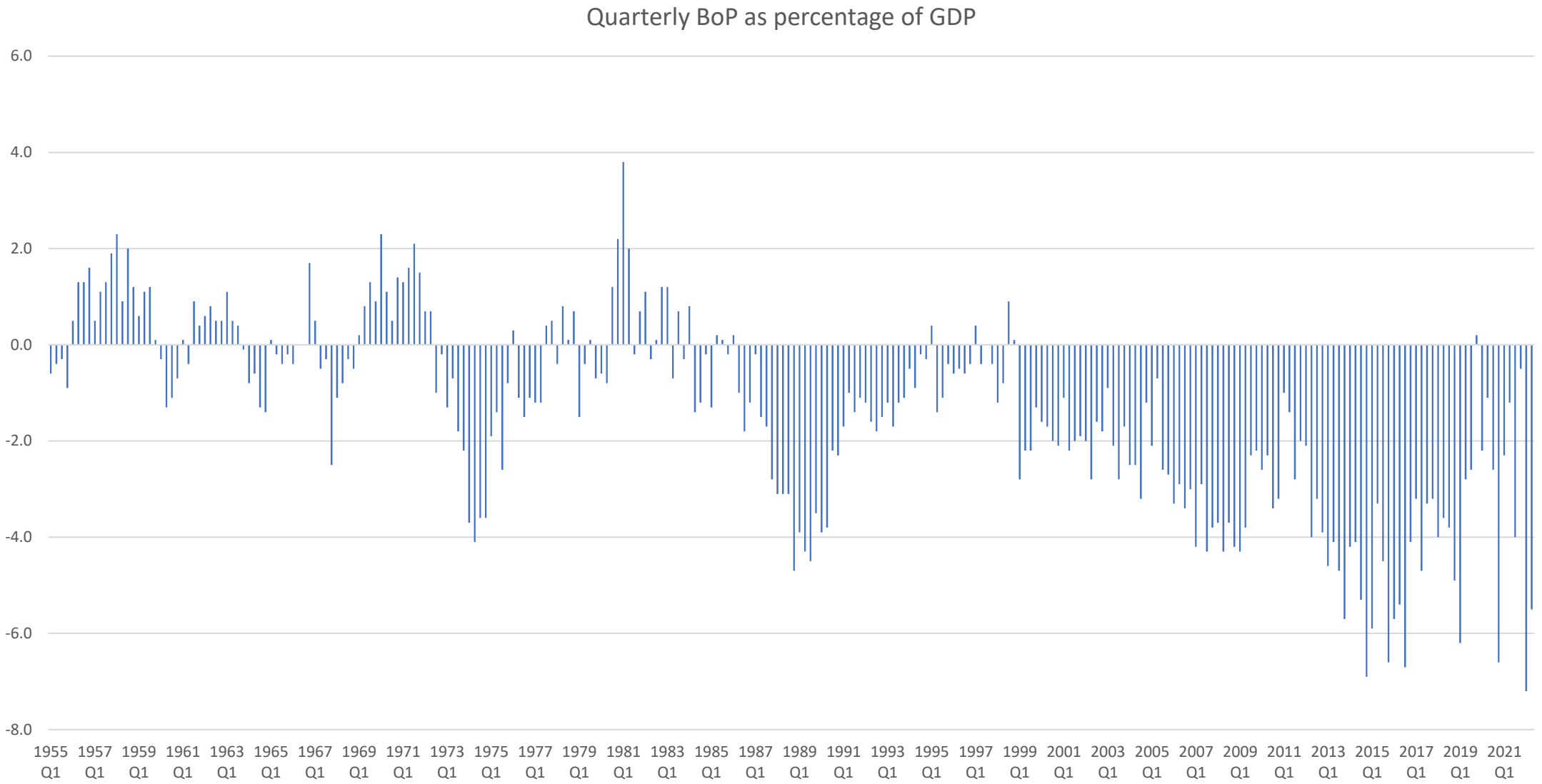


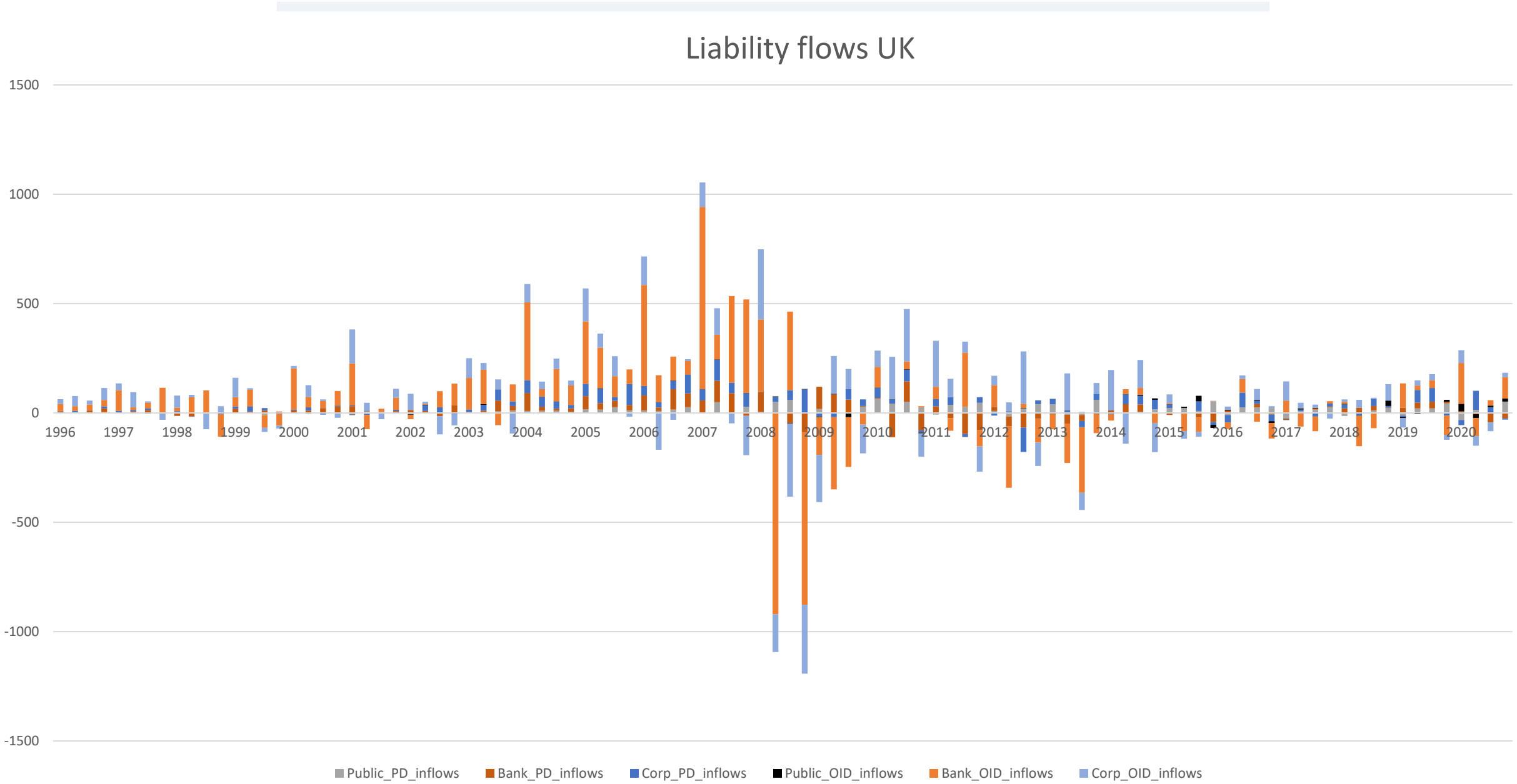
UK

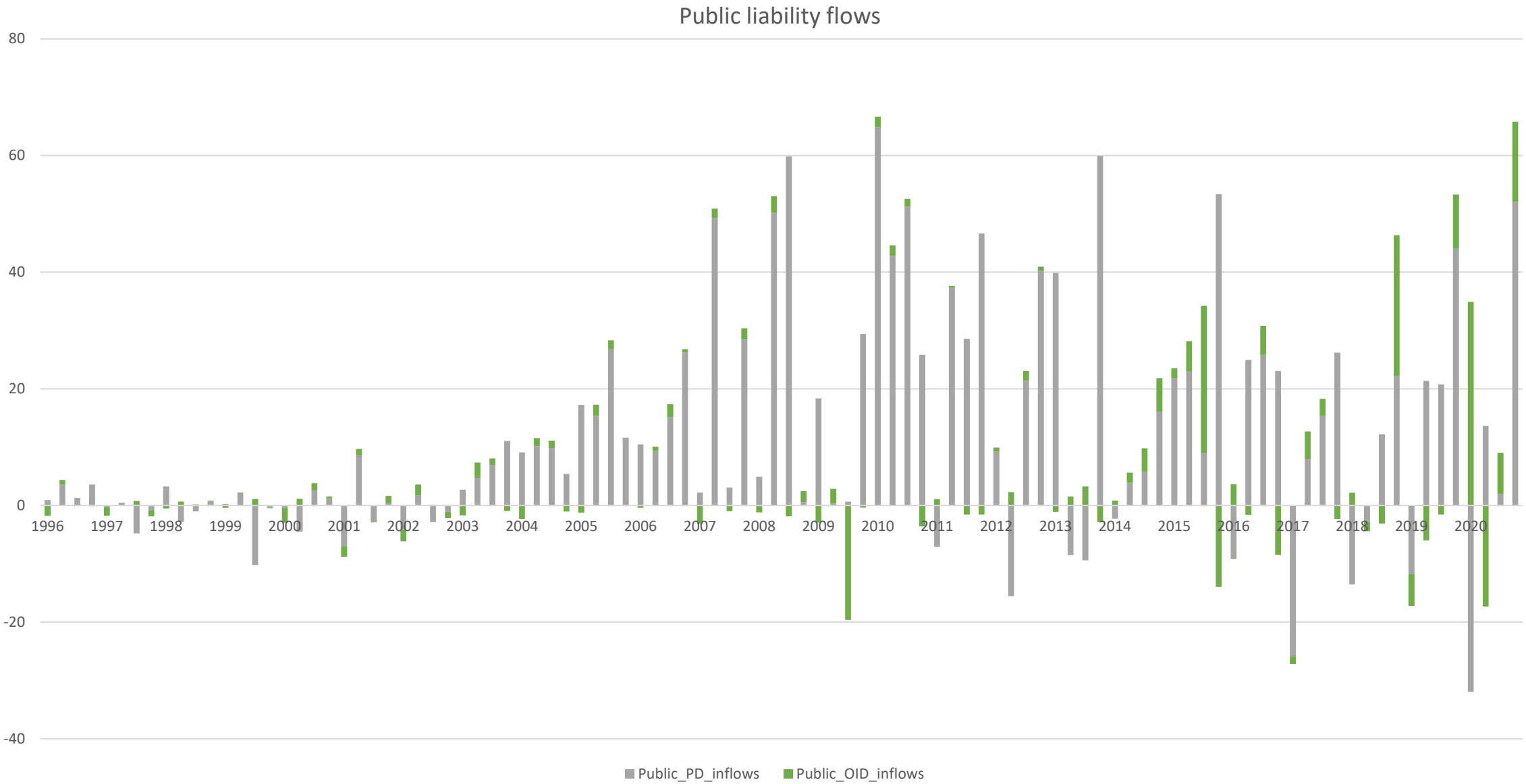
Government debt as percentage of GDP

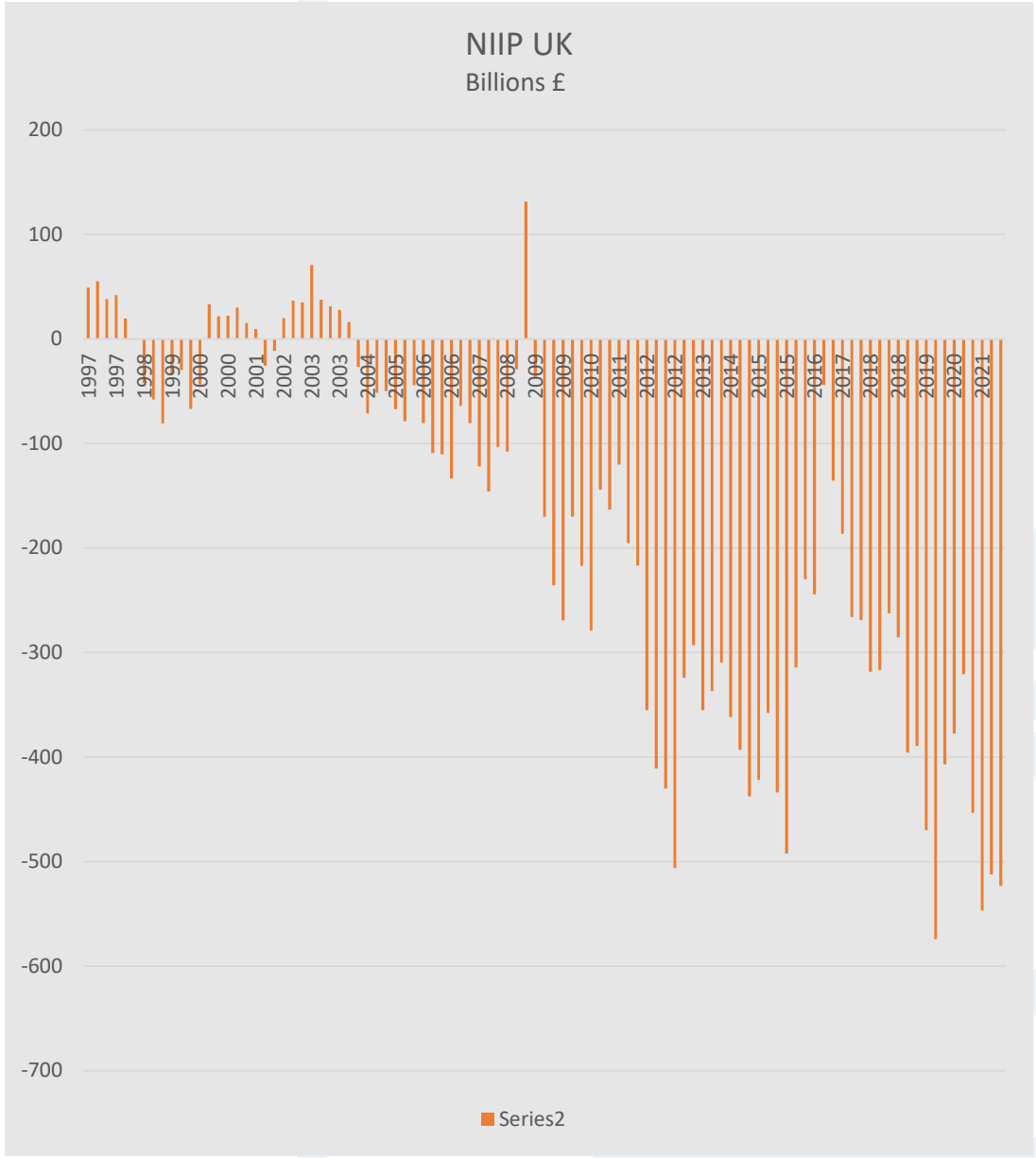
First Quarter 2022

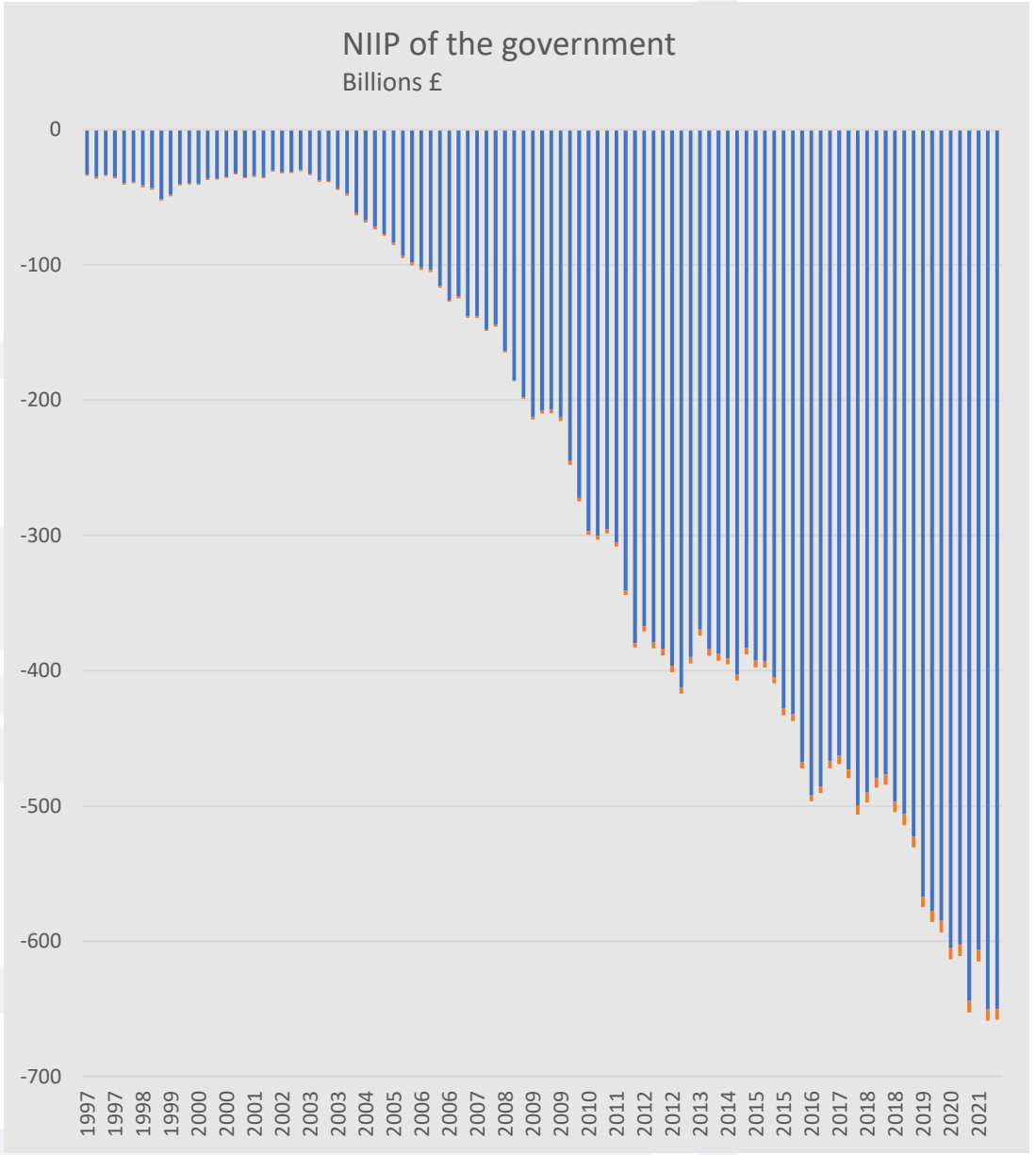


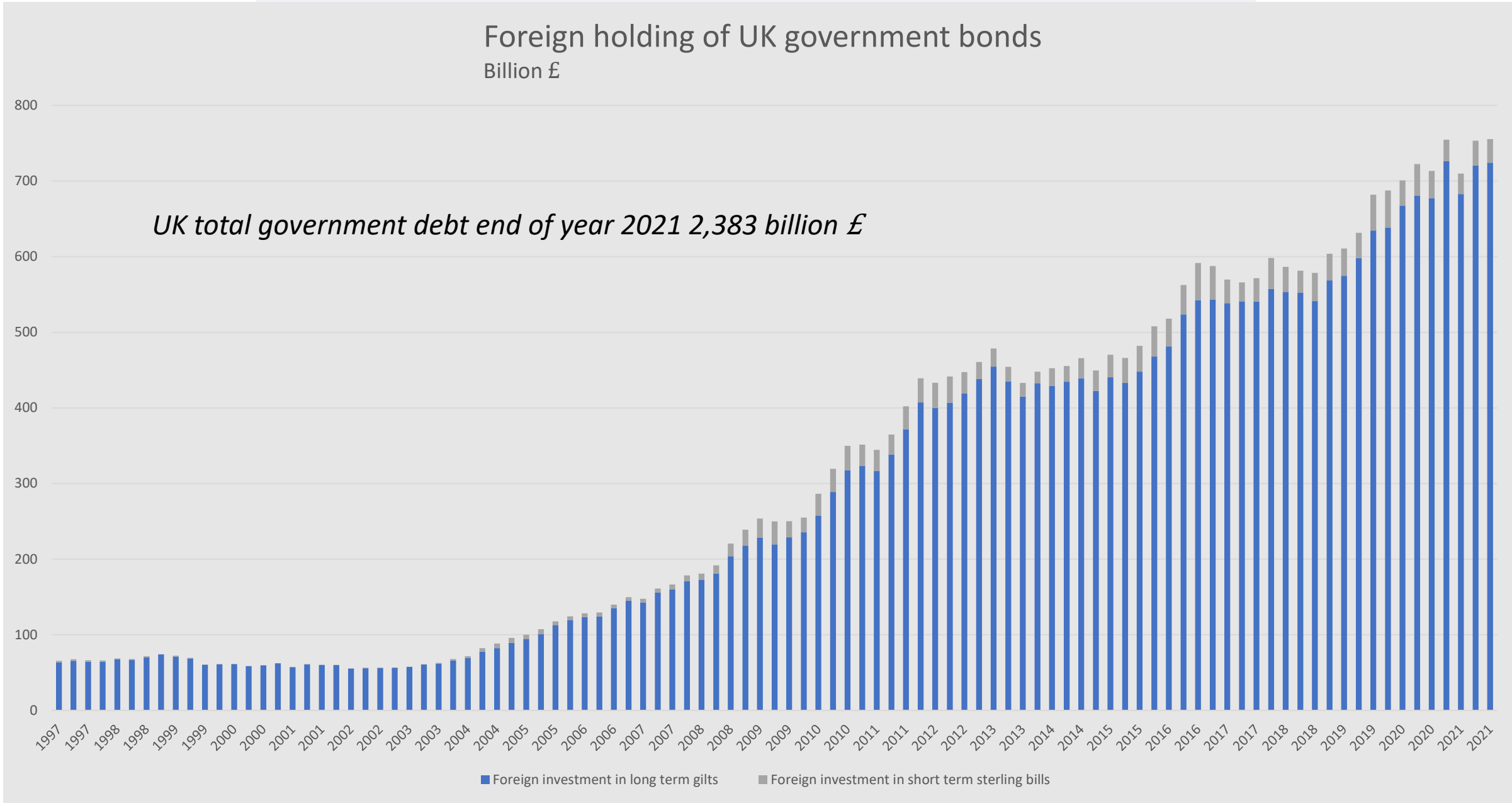












Thank you.