Thailand's Exchange Rate Policy:
lessons from the past

Bhanupong

Lecture 22

Chapter 7: Exchange rate policy

Big Stash

Thai reserves have reached an unprecedented level

Source: Bloomberg

Capital inflow controls: 2006

Course Syllabus
Lecture 22

- **Exchange rate policy, capital controls, and the baht appreciation**
- To what extent export growth depends on weak currency?
- Intervention in the foreign exchange markets is ineffective because the dollar and short-term capital flow into asset markets dictate the baht external value.
- What were the consequences of capital control imposed in 2006?

Key words

1. The real exchange rate
2. The Dutch Disease
3. The Monetary Approach to B/P
4. Implications of a flexible exchange rate regime
5. Fear of appreciation
6. Currency manipulators

1. Two Definitions of the Real Exchange Rate (RER):

The first definition: **RER**

Nominal Exchange Rate (ER)

Real Exchange Rate (RER)

$$ER = \frac{B}{\$}$$

$$RER = \frac{B / P^T}{\$ / P^U}$$

$$RER = e\left(\frac{P^U}{P^T}\right)$$

The real exchange rate (e*) depends on the nominal rate and the price ratio between the US and Thailand's price levels

Real exchange rate (e*) is the Nominal Exchange Rate (e) adjusted by price ratio between foreign price and domestic (P*/P): e* = e(P*/P)

Gain in competitiveness
Thailand's inflation must be lower than the U.S.

Depreciation

If $\Delta P_T < \Delta P_{US}$

RER

When nominal exchange rate (e) is fixed

If $\Delta P_T > \Delta P_{US}$

Appreciation

Loss of competitiveness
If Thailand inflation is higher than the U.S.

Effective Exchange Rates: A weighted average of bilateral exchange rates between the baht and other currencies

Nominal and Real Effective Exchange rates:

NEER vs REER

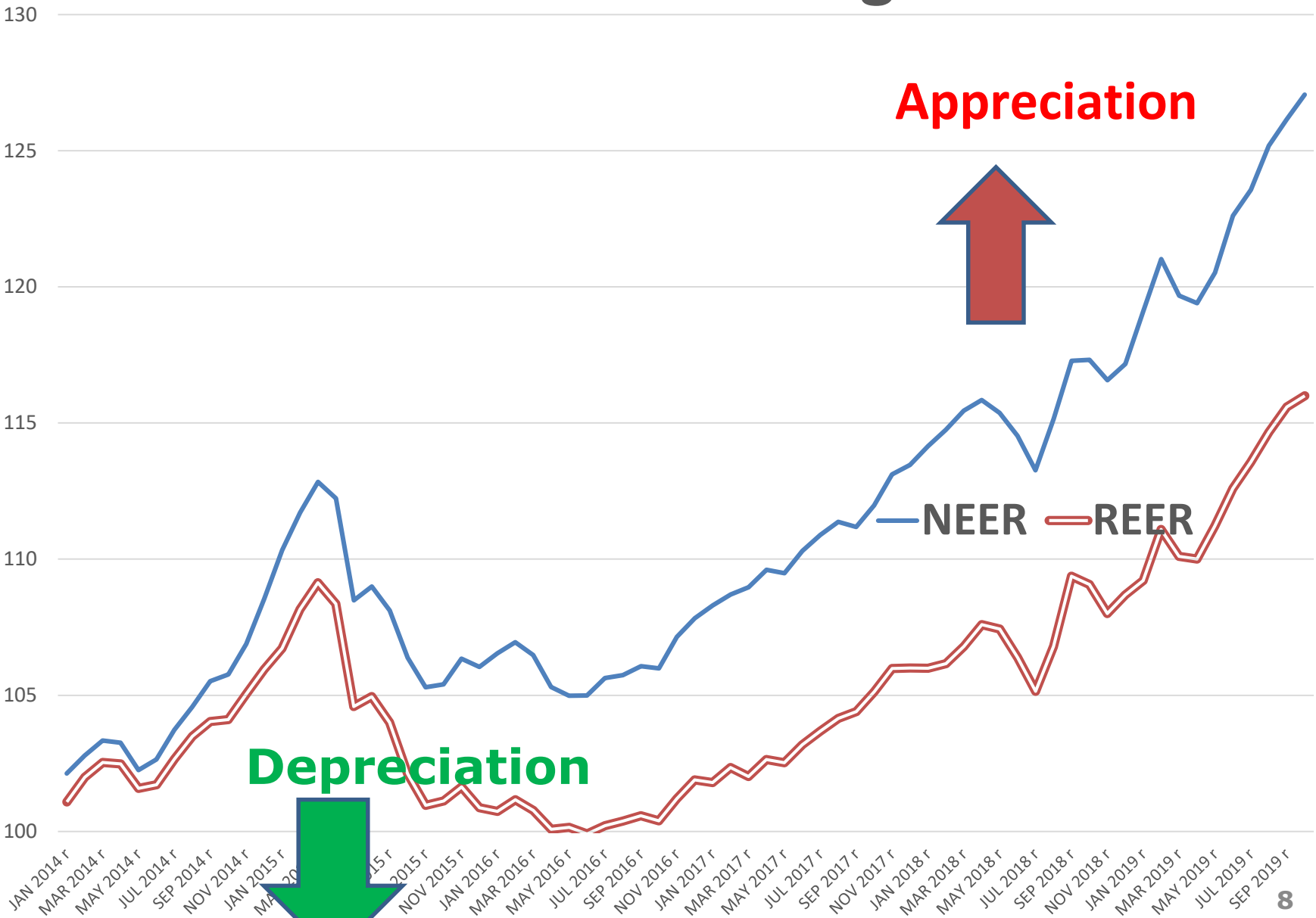
$$EER = \theta_1(B/\$) + \theta_2(B/Y) + \theta_3(B/Euro) + \theta_4(B/S) + ..$$

$$REER = \theta_1(B/\$)(\frac{P^U}{P^T}) + \theta_2(B/Y)(\frac{P^Y}{P^T}) + \theta_3(B/Euro)(\frac{P^{EU}}{P^T})$$

$$+\theta_4(B/S)(\frac{P^S}{P^T}) + \ldots$$

$+\theta_8$RMB

Baht effective exchange rates

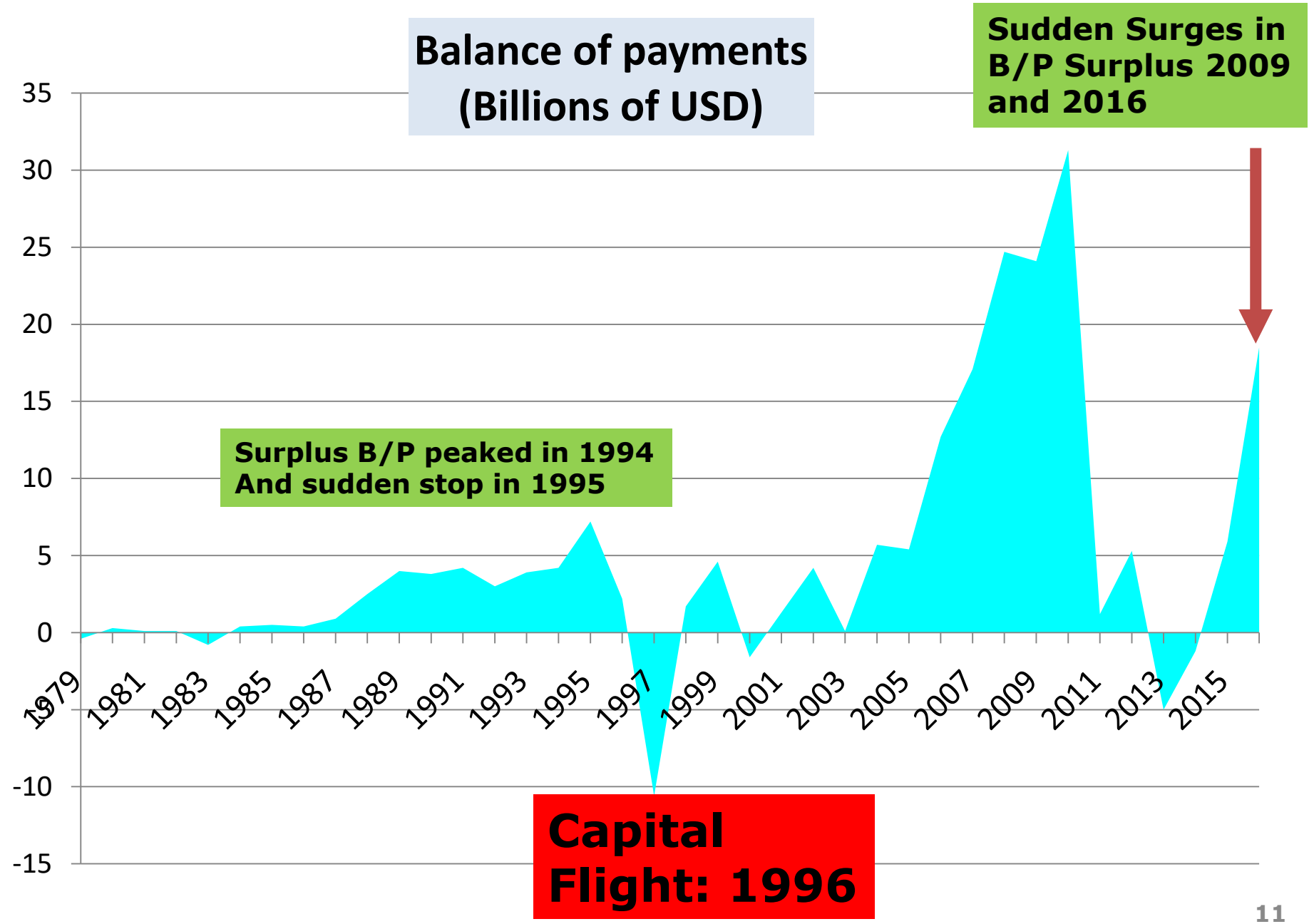


The fixed exchange rate system
Before the 1997 crisis

- **Volatility** in exchange rates creates risks and uncertainties in trade and investment.
- The fixed rate may have promoted trade and investment in the short run because a fixed exchange rate regime creates an illusion of a zero-exchange rate risk.
- Premature relaxation of capital controls encouraged over-borrowing in foreign currencies due to the absence of exchange rate risks.
- Currency and maturity mismatching of Thai commercial banks widened exposure to external shocks.

Capital inflows before the 1997 crisis

- *A surge in capital inflows into Thailand began in the late 1980s and continued unabated until 1996.*
- *The flows brought high economic growth and a surplus balance of payments and current account deficit.*
- *Why deficit current account?*


Balance of payments
(Billions of USD)
Sudden Surges in B/P Surplus 2009 and 2016
Surplus B/P peaked in 1994
And sudden stop in 1995
Capital Flight: 1996
35
30
25
20
15
10
5
0
-10
-15
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015

Causes of rapid capital inflows: push and pull factors

- A declining in world interest rates *widened the interest rate differentials*, inducing excessive foreign borrowings (push factor)
- Domestic financial liberalization increased the ***sensitivity*** of capital flows to interest rate differential.
- How do we measure that sensitivity?
- The measures are undertaken to establish Thailand as a regional financial sector induced short-term capital flows through offshore borrowings by the nonbank private sector.
- Recall push factors vs. pull factors.

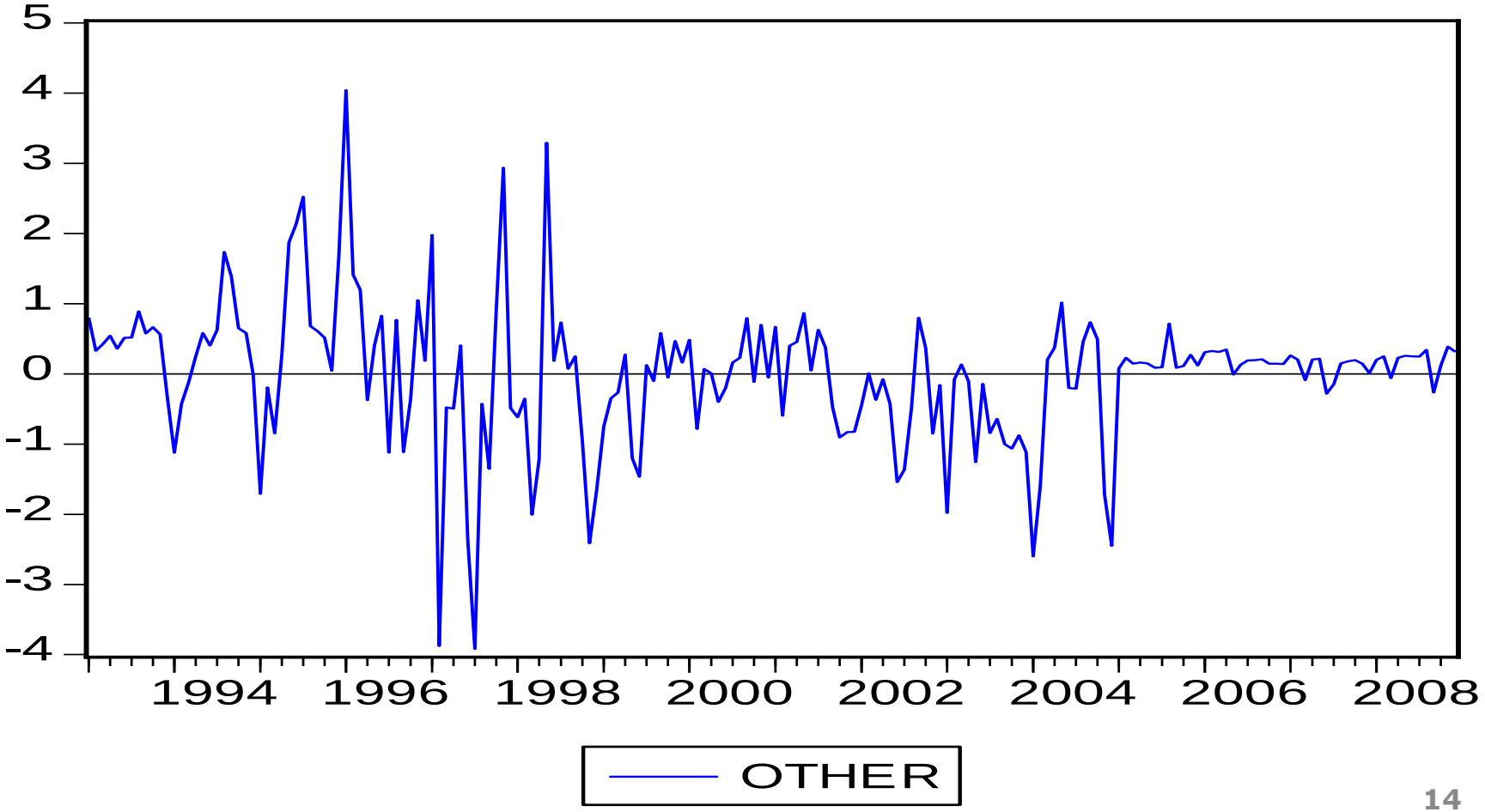
Determinants of capital inflows: The fundamental equation

$$K_f = \alpha + \beta(r - r_f) + \delta\,(\Delta Y / Y)$$
$$- \phi(Risk) - \eta(\Delta e / e)^E + \varepsilon$$

The important role of exchange rate expectations: Capital flight can be stopped when there is no further anticipation of devaluation

Maintaining high interest rates does not guarantee the absence of capital flights. ***Why?***

Speculative capital flows (OTHER) died off after a realistic exchange rate was established in the aftermath of the AFC



2. Dutch disease

Adverse consequences of capital inflows

- The surge in capital flows led to the so-called "Dutch disease" which results in the appreciation of the real exchange rate and a consequent reduction in external competitiveness.
- In the Dutch disease, the current account deficit ***worsens*** since the price of non-traded goods rises faster than that of traded goods:
- The *second definition* of the real exchange rate (e*):

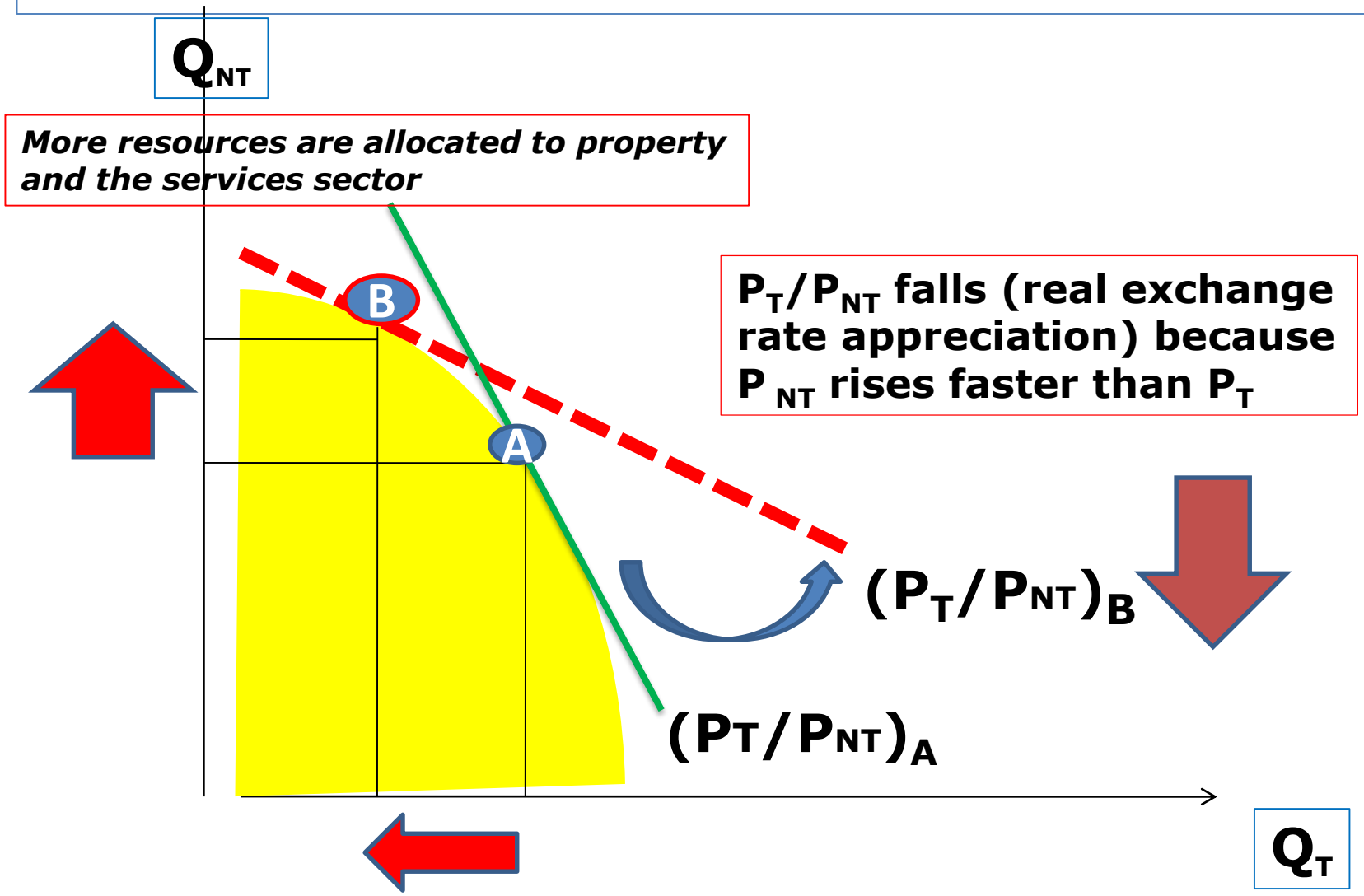
$$e^* = (P_T/P_{NT})$$

Explain why the appreciation of the real exchange rate is taking place simultaneously with the surplus current account.

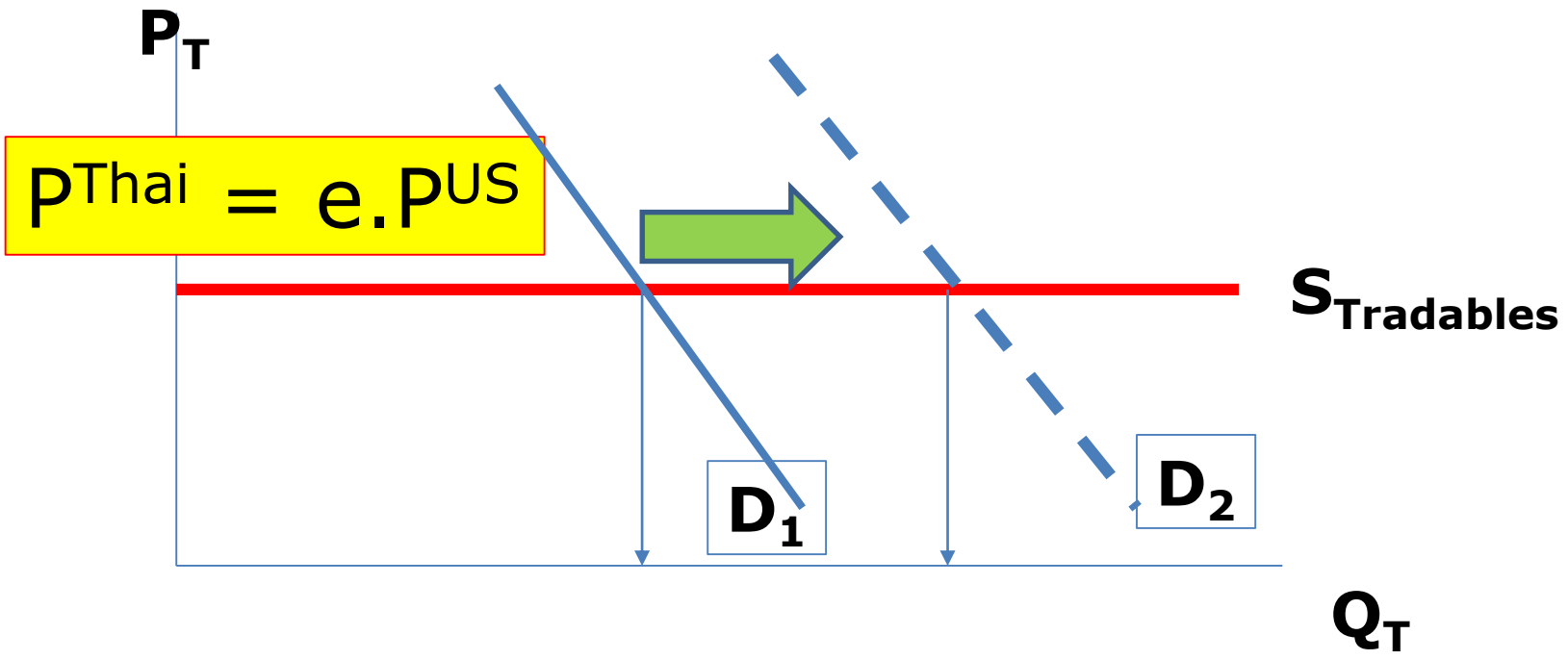
Dutch disease and the erosion of competitiveness:

Real exchange rate (P_T/P_{NT})appreciation

Resources were transferred to the non-traded sector

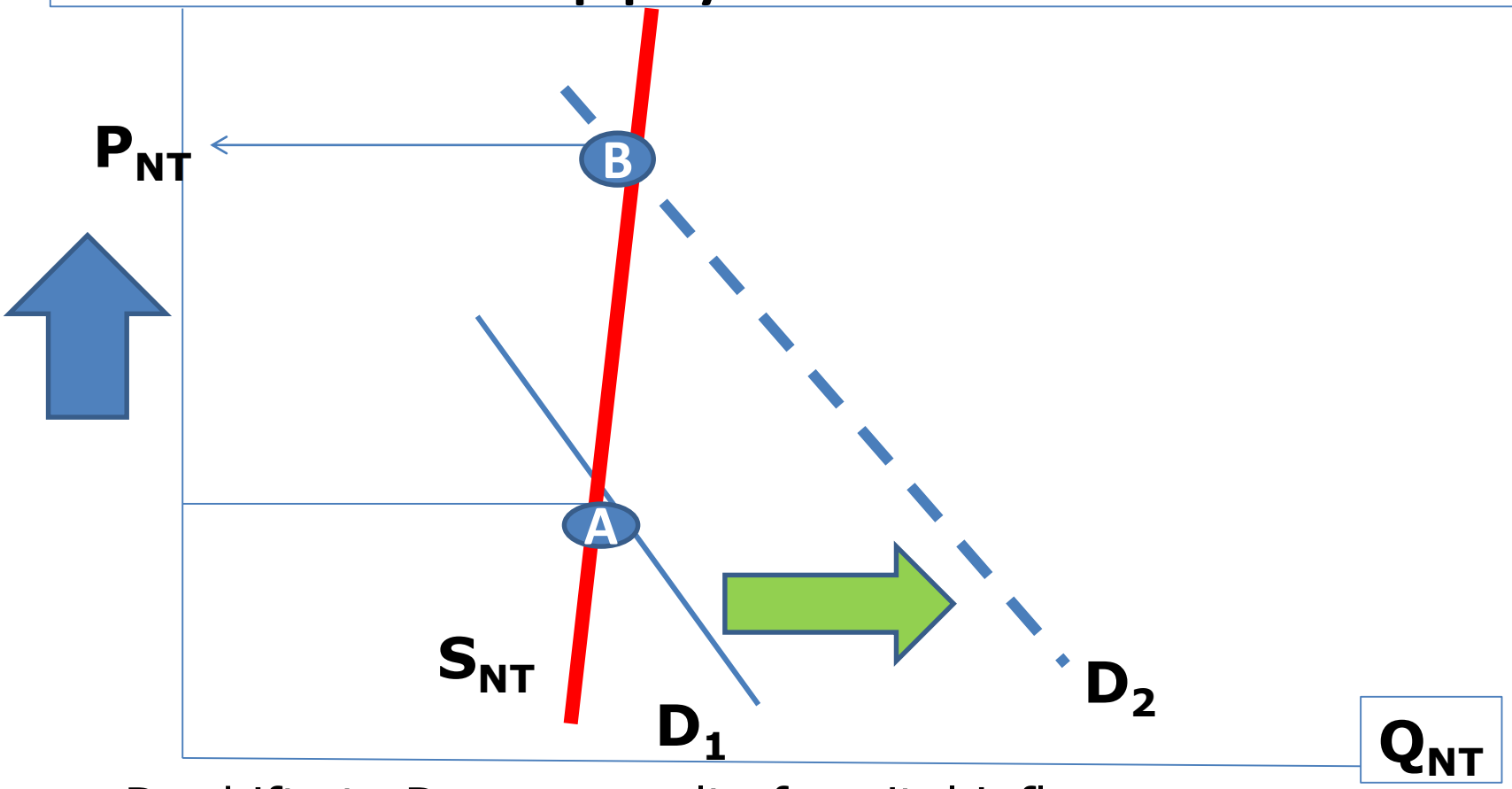


In the traded sector, where the **Law of One Price** rules: supply is infinitely elastic, because its price is determined in the world markets (USA and China)



D shifts outward as a result of capital inflows
P_T remains unchanged

In the non-traded sector, where its supply is inelastic



D_1 shifts to D_2 as a result of capital inflows
P_{NT} increases: Hence, (P_T/P_{NT}) rises
Real exchange rate (e*) appreciates: loss of International competitiveness

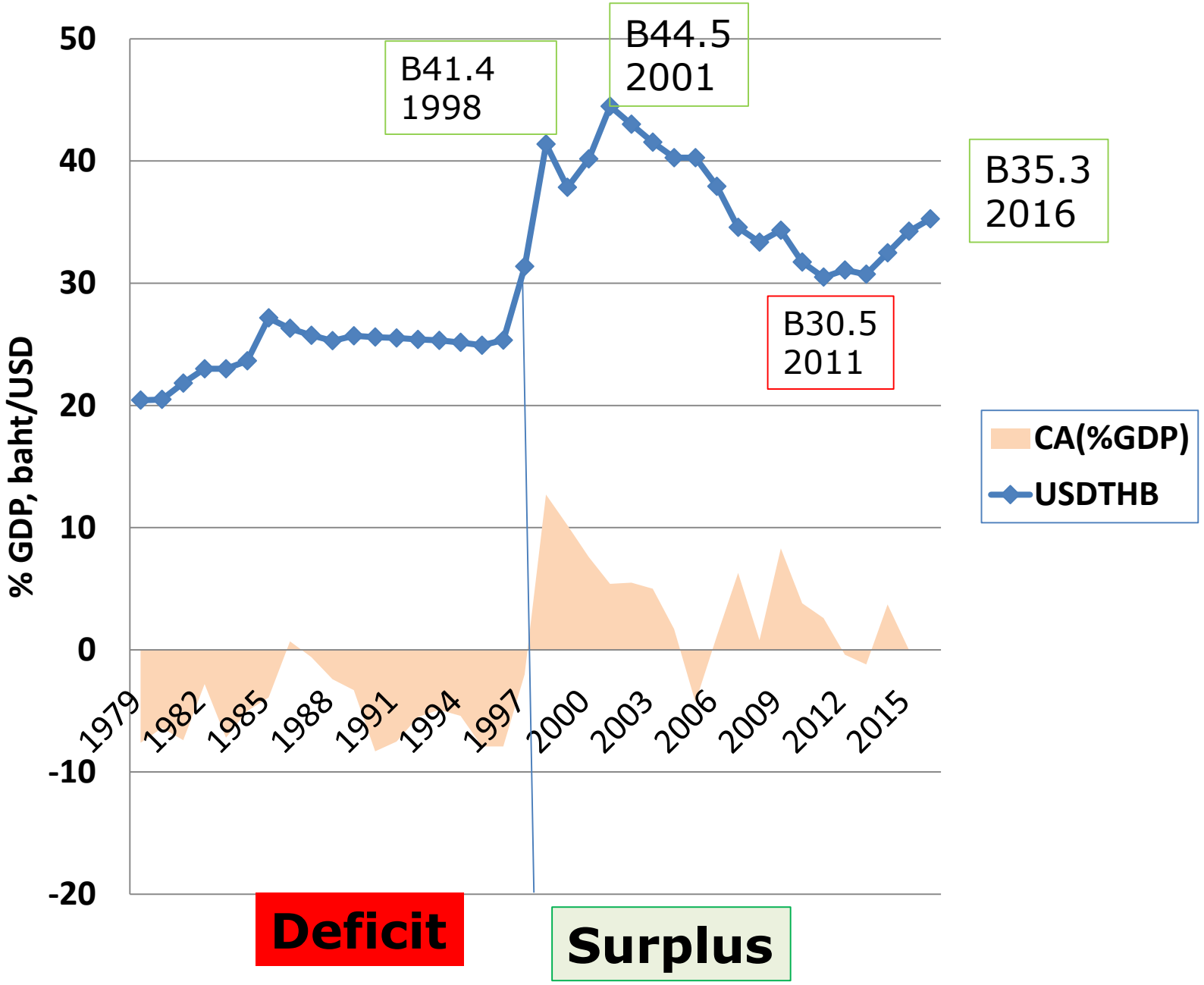
Muang Thong Thani Condominiums: two decades later

Economic crisis in 1997/98

The reckoning day: July 2, 1997

- With the baht succumbing to speculative attacks, BoT decided to float it on July 2, 1997.
- Without a nominal anchor and given the lack of **political credibility**, the value of the baht fell by 56% through to January 1998.
- The deficit became surplus by income and substitution effects via expenditure switching and output contraction.

USDTHB and the Current Account Balance



The Central Bank's Balance Sheet

NFA + DC = H

NFA = H - DC

DC = CoG + CoF
= Domestic Credit of the central bank

H (Currency + Commercial Bank reserves)

3. The monetary approach to the balance of payments

Focus on the central bank's Net Foreign Assets

NFA + CoG+ CoF = H (Currency + Bank reserves)

NFA + DC = H

Domestic credit (**DC**) of the central bank consists of the monetary authority's claims on the public sector (government debt: CoG) and loans to the private sector (banks: CoF)).

H is high-powered money (*commercial bank reserves deposited at the central bank and currency*)

$$\Delta NFA = \Delta H - \Delta DC$$

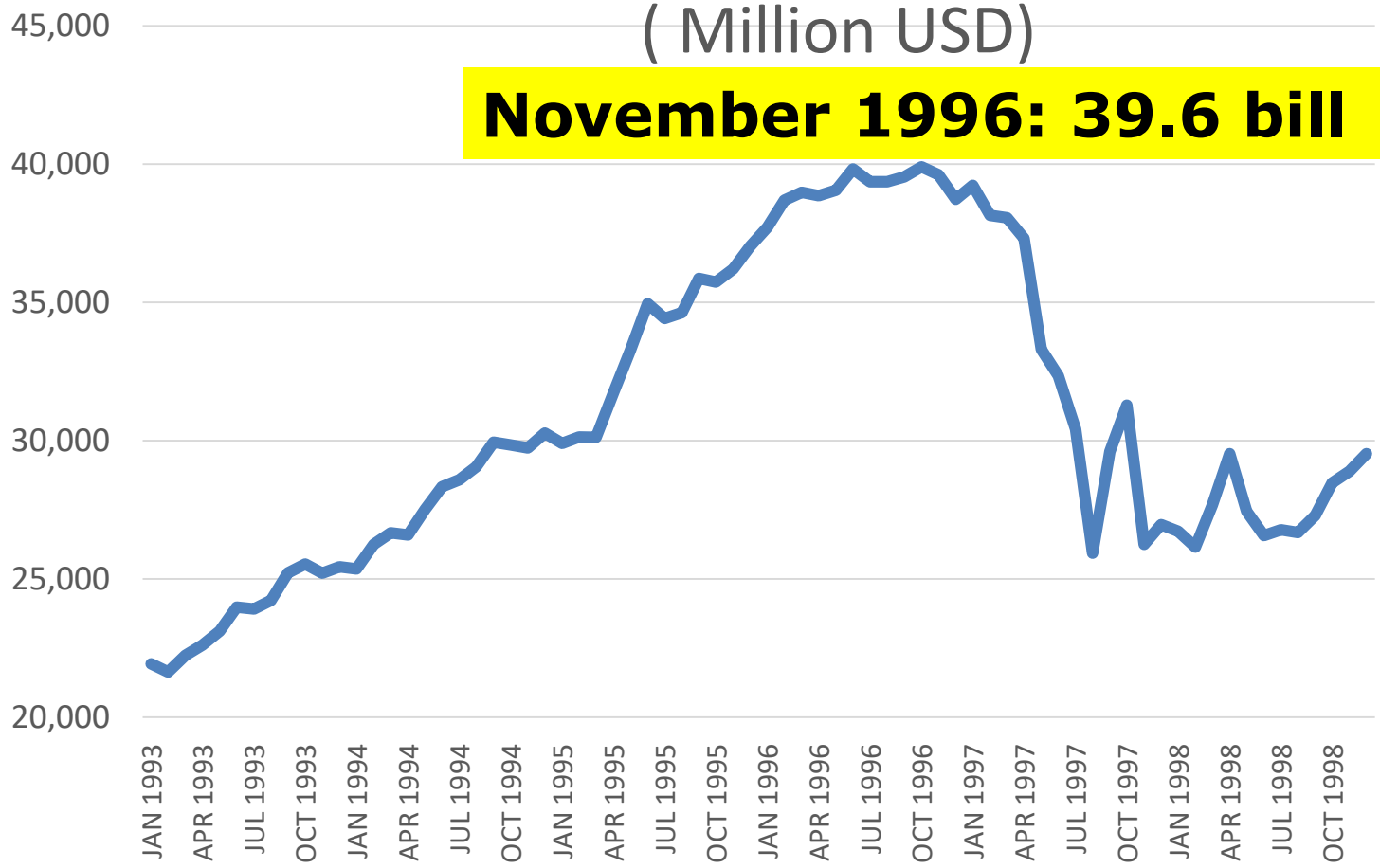
NFA = H – DC

- Δ NFA is the change in Net Foreign Assets (NFA), which is the change in the balance of payments
- To reduce the balance of payments deficit, or the make ΔNFA>0, domestic credit (**DC**) extended by the central bank must be curtailed.
- Fiscal austerity must be initiated and maintained so that the claim on government by the central bank is reduced (ΔDC <0).

International reserves

(Million USD)

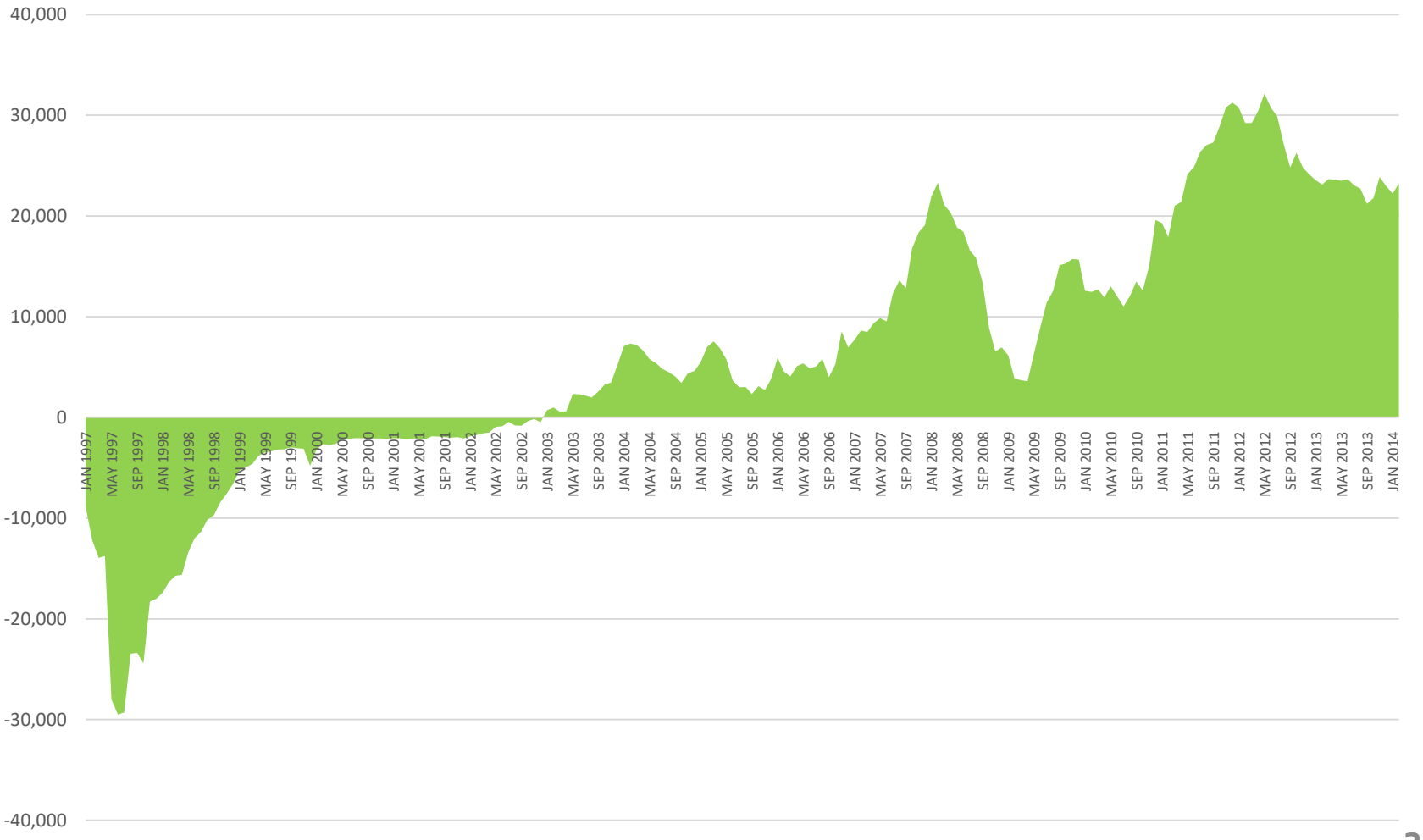
November 1996: 39.6 bill



Net Forward Positions

Negative: selling dollar forward to prevent baht depreciation

Positive: buying dollar forward to prevent baht appreciation



The monetary approach to the balance of payments:

How to raise the international reserves when the country is experiencing BP deficit

- $\Delta H > 0$ if the central bank increases the required reserve ratio of commercial banks to raise high-powered money (commercial bank required reserves are the central bank's liabilities)
- Fiscal consolidation and reserve ratio hikes are essential contractionary policy to curtail imports.

The IMF's policy prescriptions to countries applied for conditional loans

- IMF prescribed the maximum level of **domestic credit expansion** as a condition, in addition to **currency devaluation and fiscal austerity**, for troubled countries to be eligible for obtaining financial assistance from the IMF (e.g. Argentina and Turkey in 2018)

The IMF prescriptions

Turkey's lira crossed 8.3 per USD for the first time ever, amid concerns about inflationary pressures, depleting foreign exchange reserves and geopolitical tensions.

The lack of policy credibility

During the 1997/98 financial crisis

- Policy credibility is essential for any country that adopts a floating exchange rate regime.
- There were frequent turnovers of the minister of finance and the governor of the Bank of Thailand.
- The lack of institutional independence was evident during the period of economic turmoil.

Lessons (un)learned

- Thailand faces the reality that the era of cheap foreign capital, zero foreign exchange risks, reckless investment, and spectacular growth is gone.
- A new era of economic rationalism would begin with investment efficiency and a sustainable growth path--albeit much less impressive.
- Have we learned anything from the 1998 crisis?

Central Bank Independence correlates with the country's economic performance

- A correlation exists between ***central bank independence and price stability.***
- The Nukul Commision Report viewed that political intervention at the BoT had weakened the ability of the BoT's crisis management.
- Institution independence and policy instrument independence are required to create effectiveness of monetary policy.
- The central bank must earn credibility to make monetary policy credibility.
- Should the BoT be independent of the control of the government?

Lessons from the currency crisis

- Thailand should have allowed the baht to appreciate during the boom years and satisfied with low growth in the early 1990s.
- Even if appreciating currency discourages exports, it is better to live with slow growth rather than unsustainable growth and subsequent financial crisis.
- Currency appreciation can coexist with high growth. Strong baht make possible importation of high-quality capital growth.

Further Lessons from the currency crisis

- Since capital flows are many times larger than international trade flows, when a country relies too heavily on short-term foreign debt to finance a current account deficit, it is impossible for the central bank to defend a fixed exchange rate for very long—let alone to inflict wounds on currency speculators.
- Thailand also learned that accountability and transparency should be well established so that the central bank is not tempted to engage in behavior that is akin to gambling to get out of a crisis.
- ***If we keep on repeating the same mistake, the lesson is yet to be learned***.

4. Implication of the flexible exchange regime

- Some *instability* in foreign exchange rates is a natural consequence of the adoption of a flexible exchange rate regime.
- When Thailand floated the baht from its previous untenable fixed rate, the baht-dollar exchange rate experienced *overshooting*.
- Various factors contributed to this phenomenon, including speculative bubbles, price stickiness, the rapid strengthening of the dollar against the yen, political instability, and the *lack of policy credibility*.

What is the appropriate level of the baht exchange rate?

- It is exceedingly difficult to determine appropriate exchange rates by using the concept of PPP or the current account balance.
- The cost of intervention in foreign exchange markets could be too high to warrant the action.
- **Intervention** should not be employed to change the direction of exchange rate movements.
- There is some room for the creation of an orderly and **gradual movement** of the exchange rate to reduce the amplitude of the swings.
- However, the Bank of Thailand cannot lean against the wind of sudden changes the value of the dollar.

Benefits of a flexible exchange rate

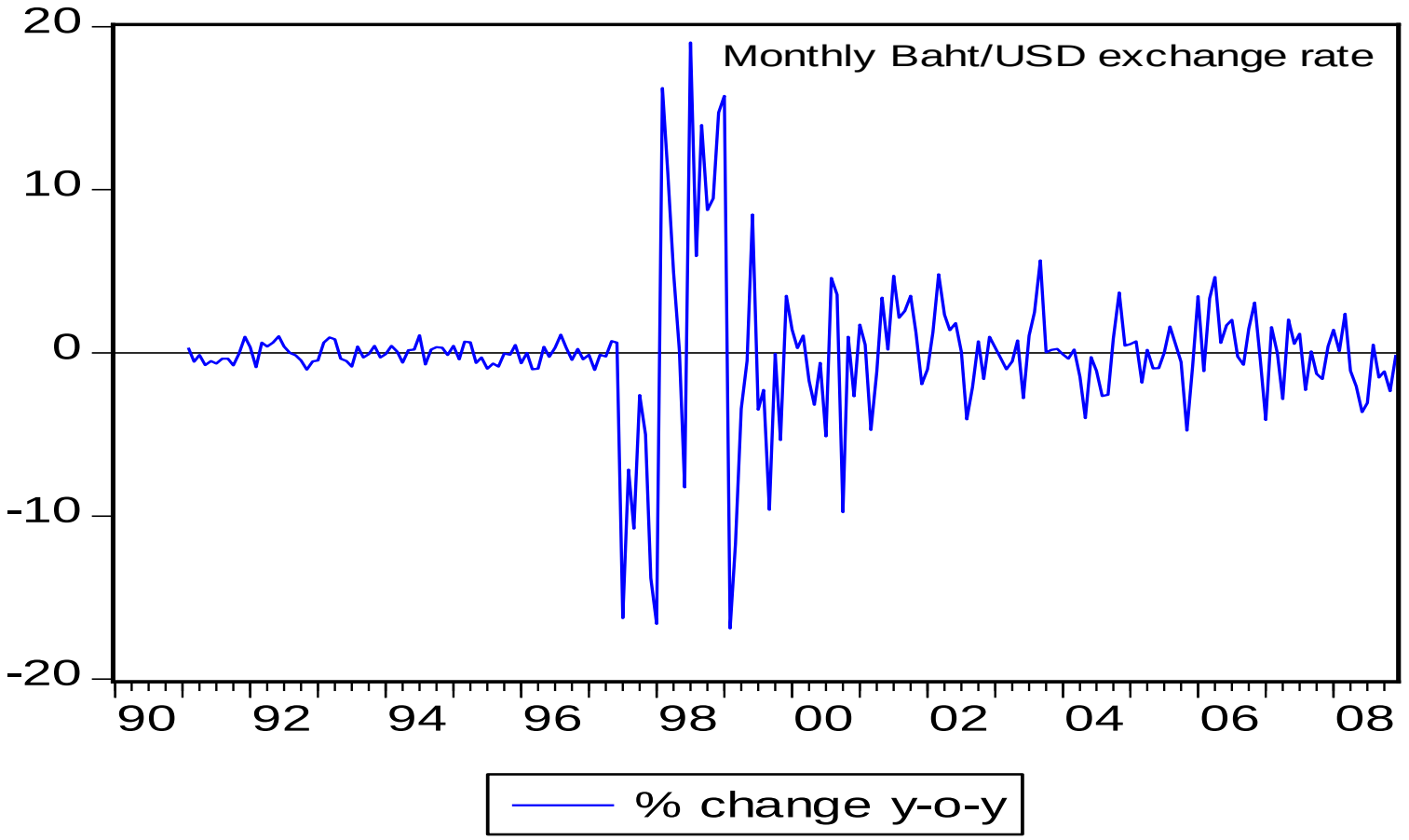
- Flexible exchange rates can *impose discipline* on the government.
- Exchange rate movements trace *the anticipated successes or failures* of the government's economic management.
- ***The baht was very strong in 2019, but it did not suggest the strength of the economy.***
- *Capital flight* can be **eliminated** only by the establishment of **sound macroeconomic fundamentals**.
- The rampant hyperinflation in Venezuela was 8,900% in April 2018. Capital flight galore.
- Definition of hyperinflation: 50% per month

More benefits of a flexible exchange rate regime

insulation from external shocks

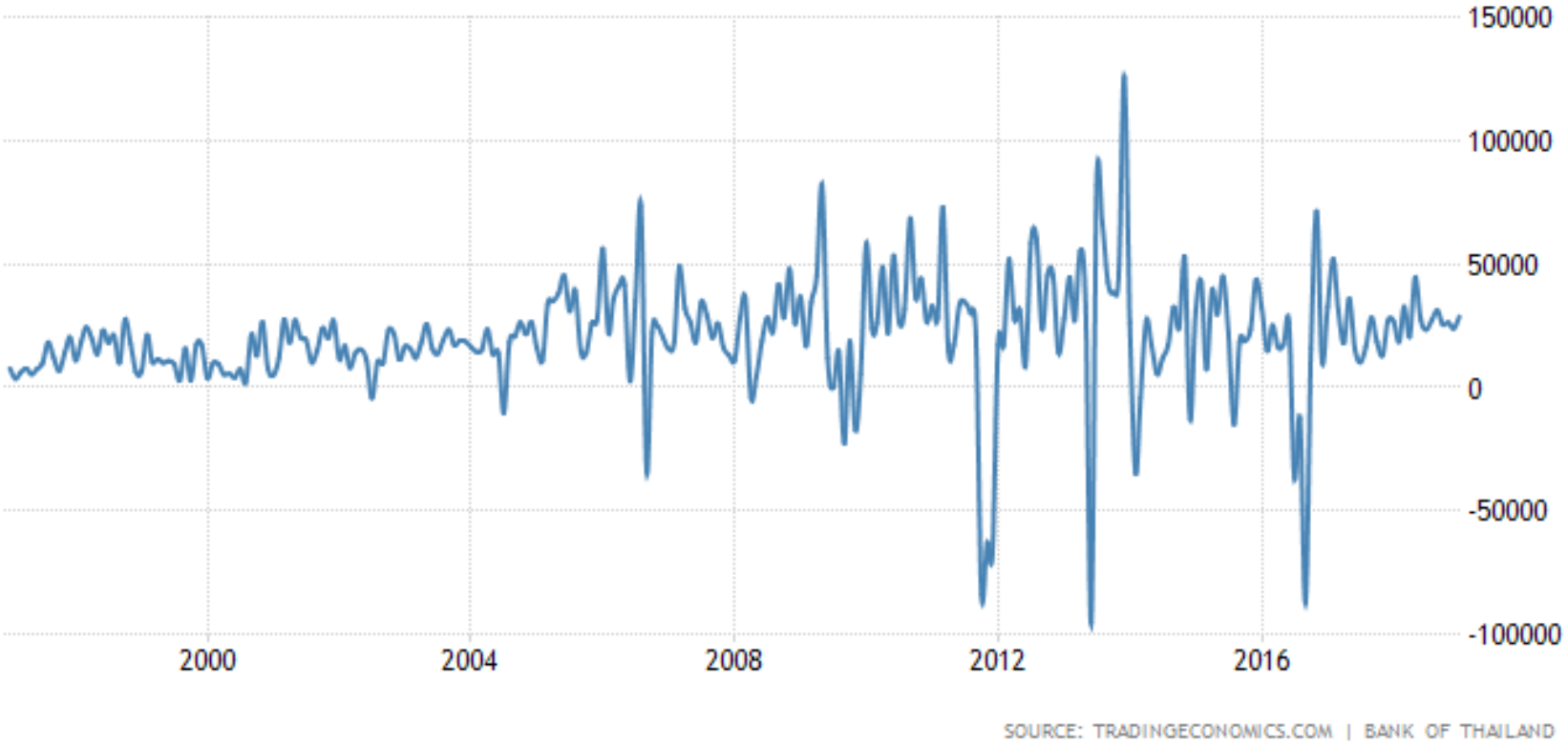
- The flexible exchange rate is expected to ***insulate*** the economy from shocks originating in the goods markets.
- However, it is asking too much to expect the flexible exchange rate to cushion ***instability originating from money markets*** hit by a ***crisis of confidence*** in the financial system.
- When imports are highly responsive to changes in absorption and when capital flows do not respond significantly to changes in international rate differentials, both **fiscal and monetary policy can play an important stabilizing role.**

Flexible exchange rate: Some wiggle room



More volatility in net FDI

Can you explain why?



Currency and banking crises are related

- It is equally possible that currency appreciation can stimulate growth despite its negative impact on net exports.
- The crucial factor is the *impact of the currency changes on bank credit.*
- A country can experience currency appreciation and economic growth as long as domestic credit increases at a normal phase.

Should the baht be kept undervalued?

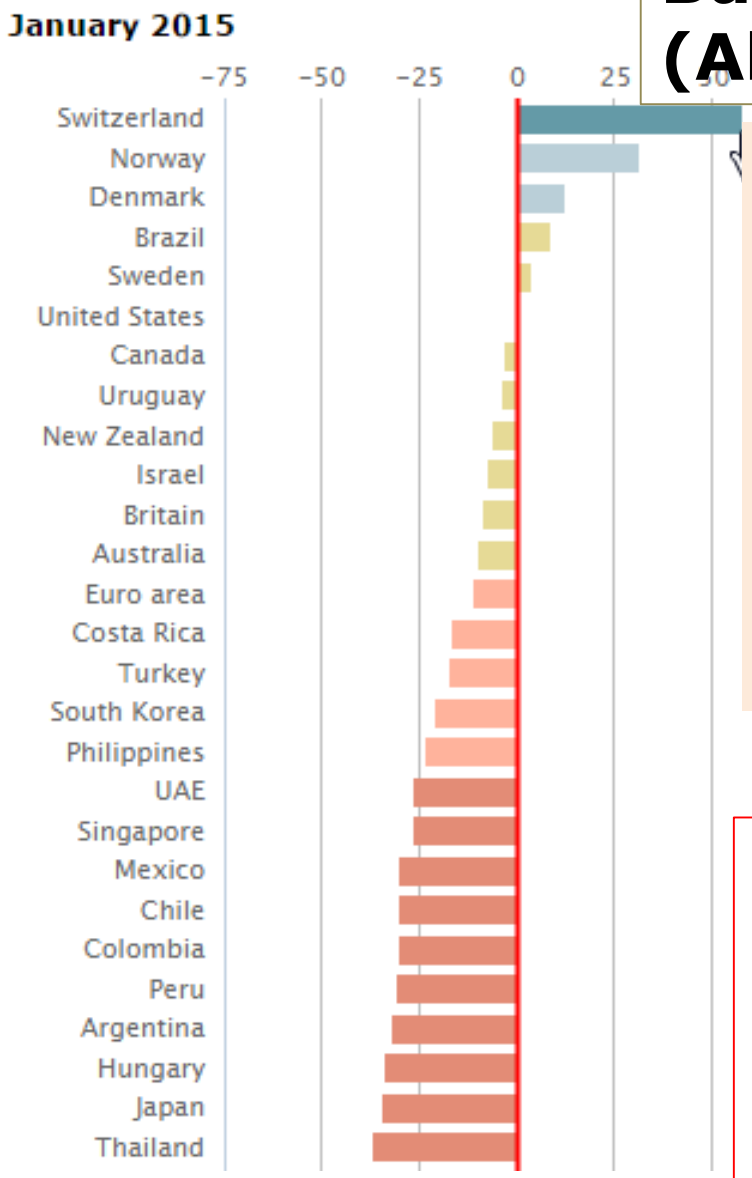
How can we tell if the exchange rate is at the optimal level?

- It is a myth to assume a close link between currency depreciation and international competitiveness.
- Variations in Thailand's export growth can be explained very well by the fluctuation of world income.
- The strength of the US, China, and Japanese economies is closely related to Thailand's export performance.
- Can we come up with the ***canary in the coal mine*** to tell if our exchange rate is at the dangerous level?
- The Big Mac Index: ***Burgernomics***

Burgernomics

- THE Big Mac index was invented by *The Economist* in 1986 as a lighthearted guide to whether currencies are at their “correct” level.
- It is based on the theory of purchasing-power parity (PPP), the notion that in the long run exchange rates should move towards the rate that would equalize the prices of an identical basket of goods and services (in this case, a burger) in any two countries.
- Burgernomics was never intended as a precise gauge of currency misalignment, merely a tool to make exchange-rate theory more digestible.

Based on the law of one price (Absolute PPP)



$P^T = e^*. P^{USA}$

$e^* = (P^T/P^{USA})$

$e^* = (B99/\$4.79) = 20.7$

$e = 30.0$ (actual rate)

The actual baht is undervalued by

$(e^*-e)/e = 31\%$

Implied exchange rate from the Big Mac PPP: 20.7

Big Mac Price in USA: $4.79
Price in Thailand: 99 baht
Actual exchange rate: 30 baht/$
The baht is undervalued by 31%

The baht is undervalued by 28.6 % in July 2020

			Price of big mac	
South Korea	1200.95	788.09	$ 3,75	-34.38
Czech Republic	23.41	15.59	$ 3,80	-33.43
Brazil	5.34	3.66	$ 3,91	-31.46
United Arab Emirates	3.67	2.58	$ 4,02	-29.67
Costa Rica	581.83	411.56	$ 4,04	-29.26
Thailand	31.39	22.42	$ 4,08	-28.58
Singapore	1.39	1.03	$ 4,25	-25.54
Britain	0.79	0.59	$ 4,28	-25.09
Uruguay	43.68	33.10	$ 4,33	-24.21
New Zealand	1.52	1.16	$ 4,35	-23.85
Australia	1.43	1.15	$ 4,58	-19.82
Denmark	6.55	5.25	$ 4,58	-19.78
Euro area	0.88	0.74	$ 4,79	-16.18
Israel	3.44	2.98	$ 4,95	-13.37
Canada	1.36	1.20	$ 5,08	-11.09
Norway	9.37	9.11	$ 5,55	-2.82
United States	1	1	$ 5,71	0
Sweden	9.14	9.21	$ 5,76	0.80
Lebanon	1512	1576.18	$ 5,95	4.25
Switzerland	0.94	1.14	$ 6,91	20.94

Actual exchange rate

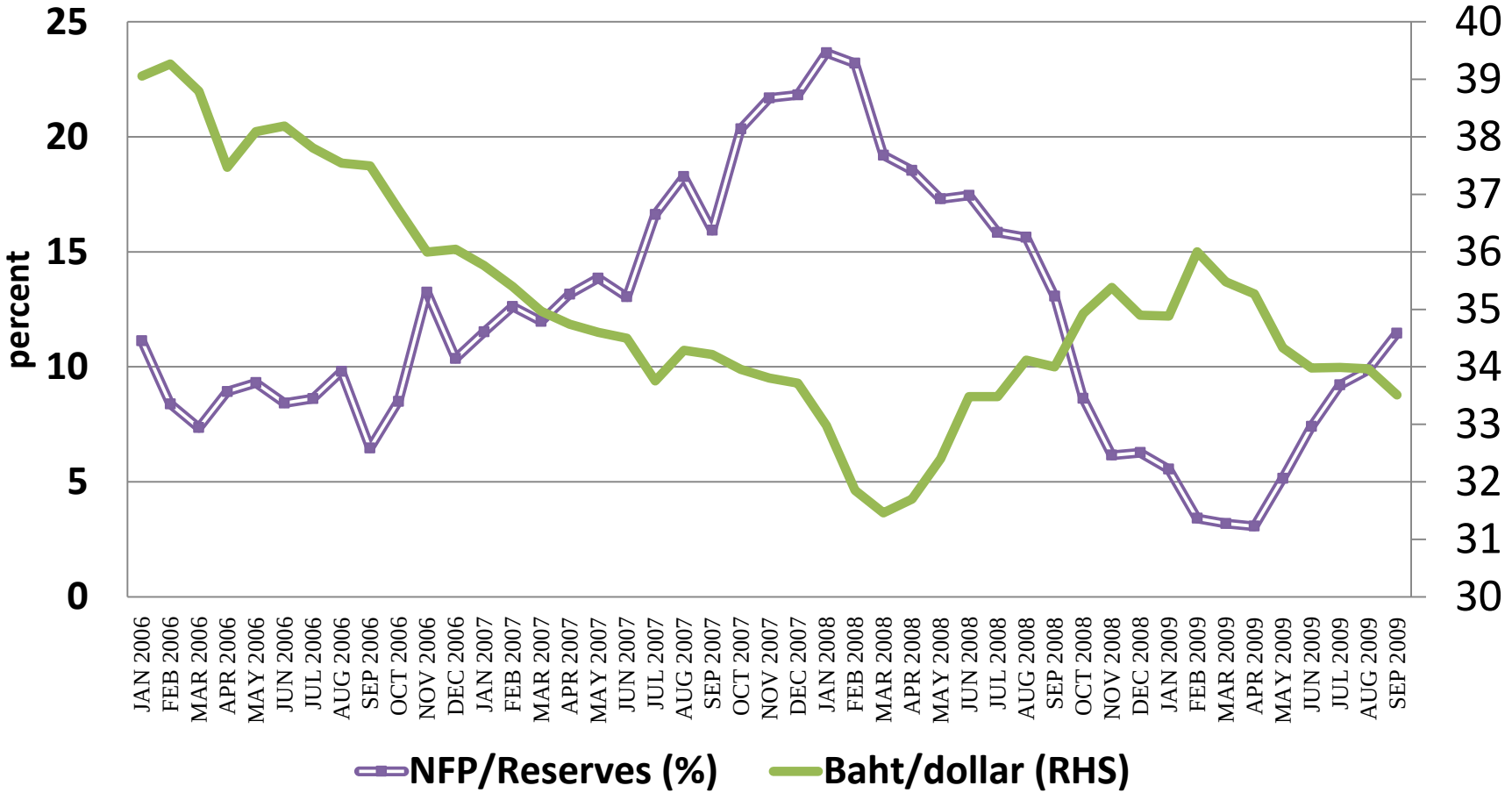
The exchange rate imply by the big mac index

5. **Fear of Appreciation**

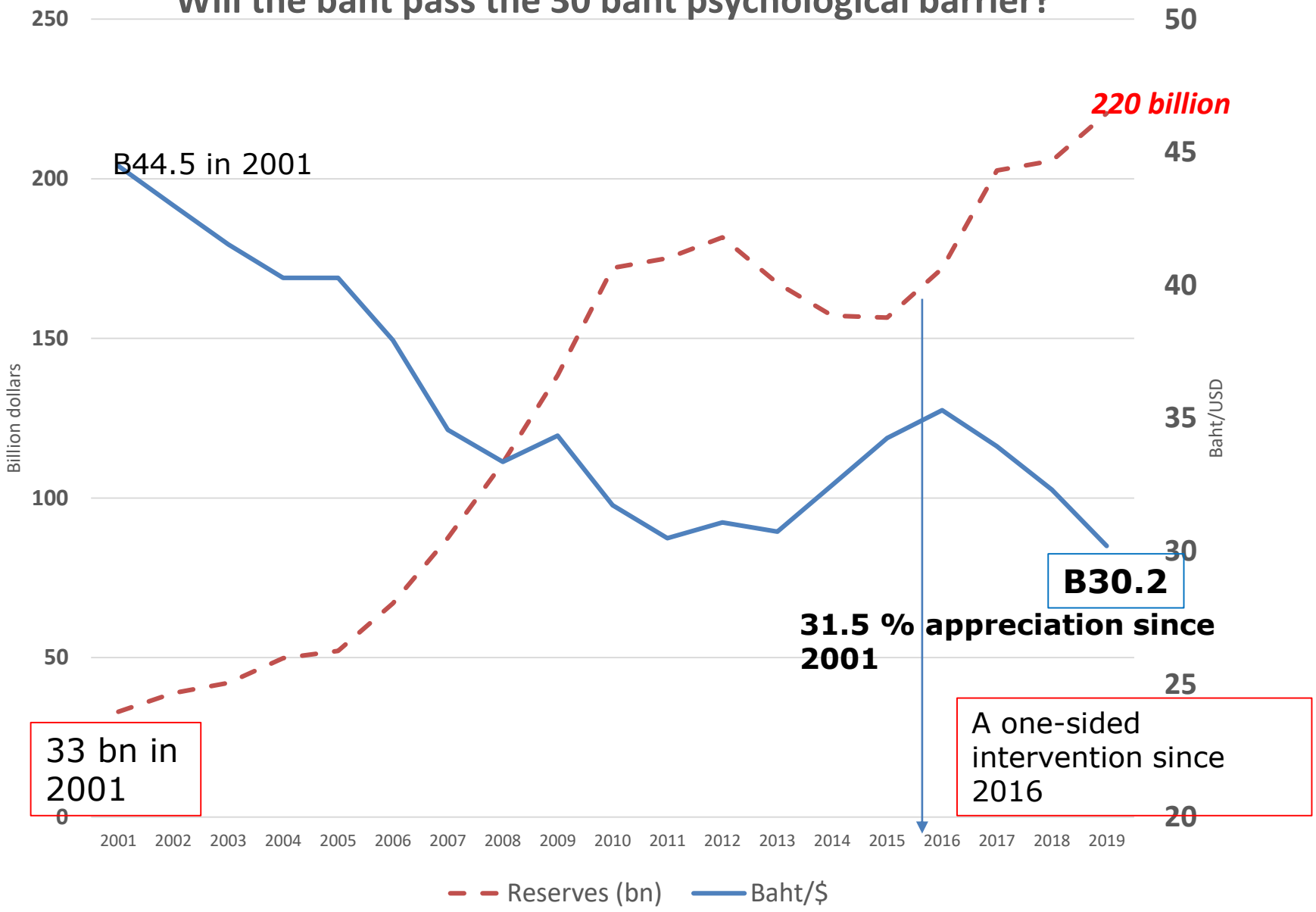
Determinants of the baht-dollar exchange rate

- When the dollar appreciates against major currencies, baht depreciation is a natural consequence.
- The baht move in the opposite direction to the USD.
- Inflation differentials, interest rates, and output growth matter.
- Should the Bank of Thailand lower the interest rate to prevent baht appreciation?

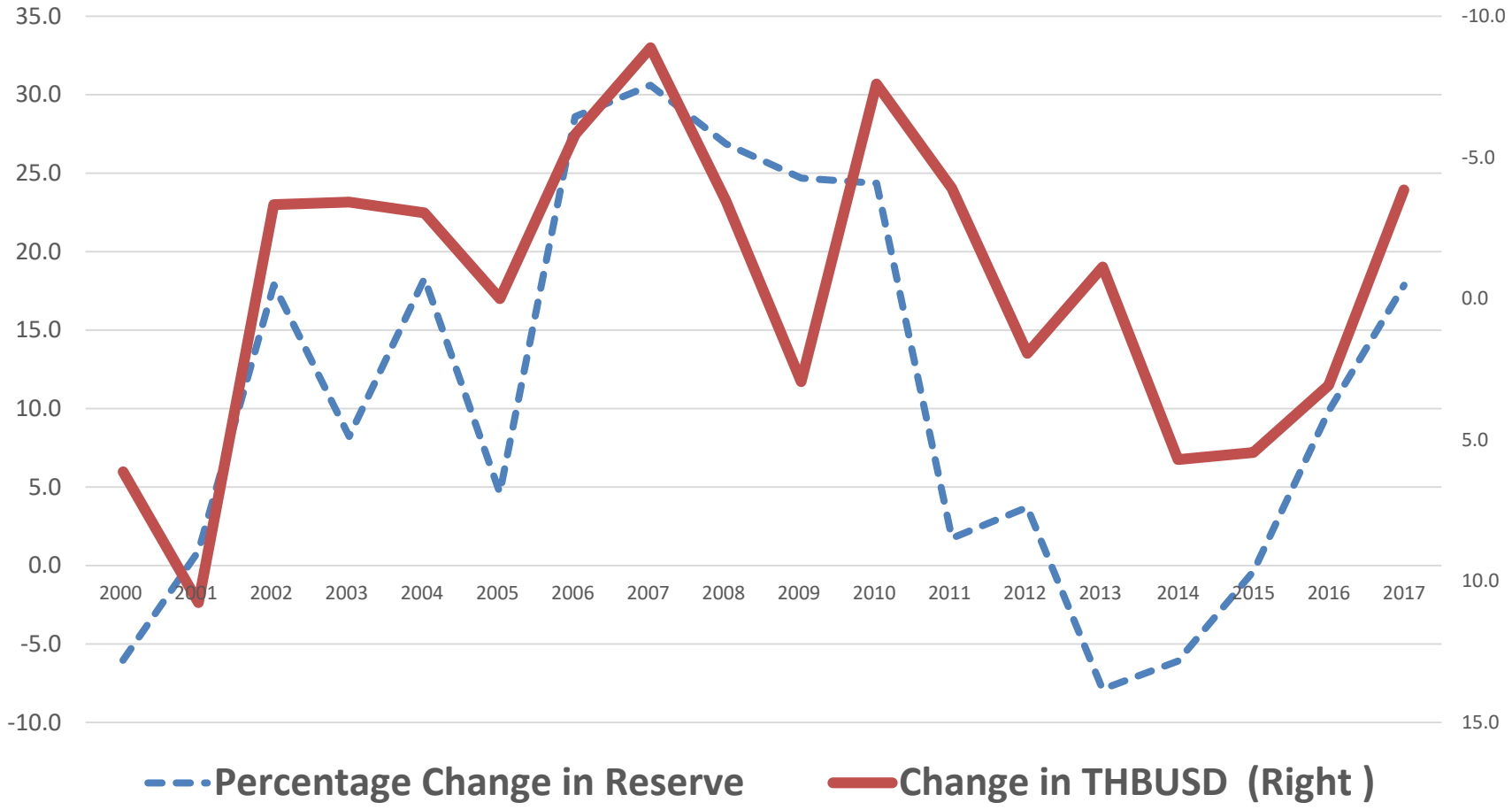
Net Forward Position: NFP
Buying the dollar forward (selling the baht forward) to prevent baht appreciation



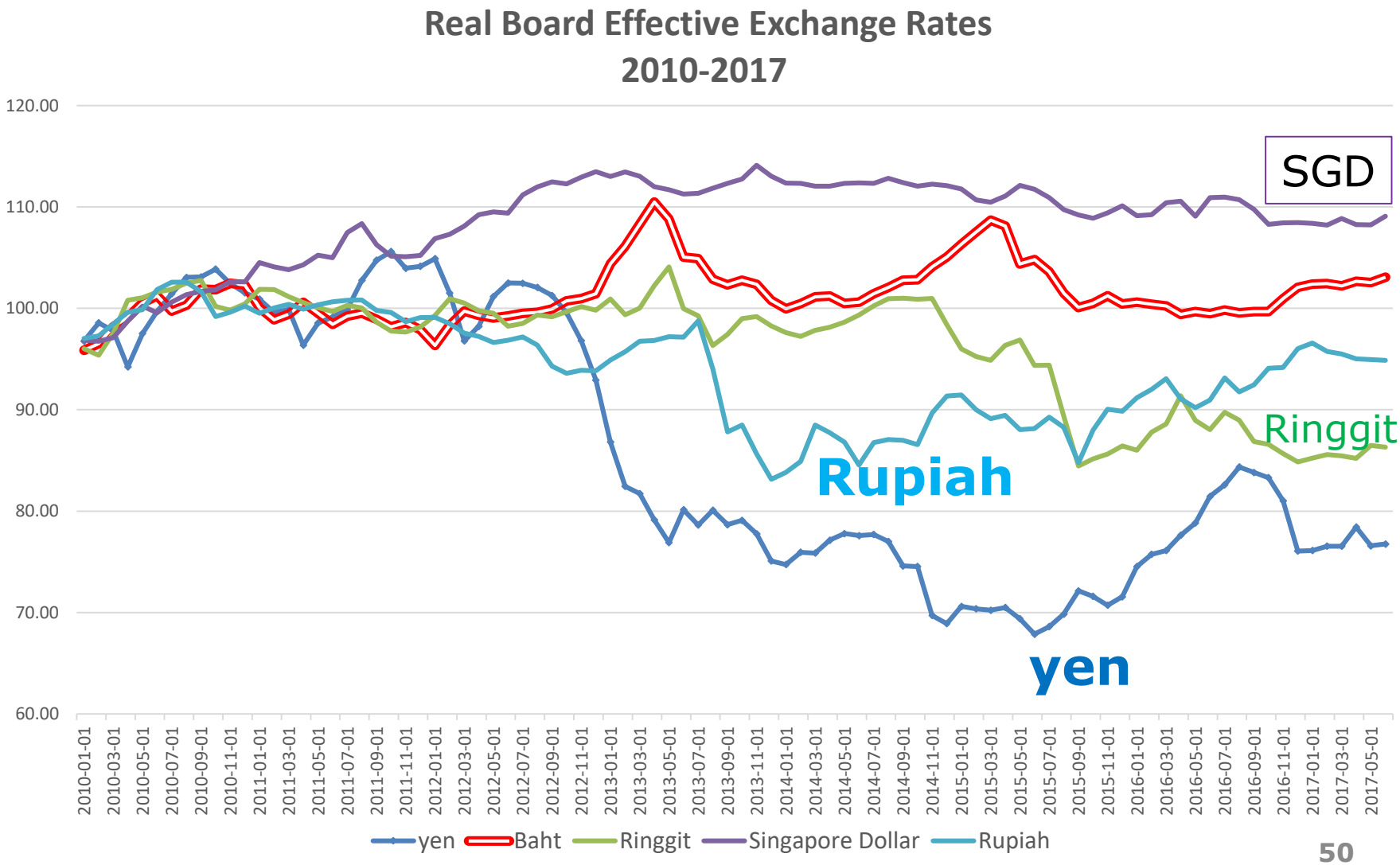
Will the baht pass the 30 baht psychological barrier?



The BoT buys more dollars when the baht appreciates



Fear of floating: Keep it steady



31.15 baht on 1st November 2020

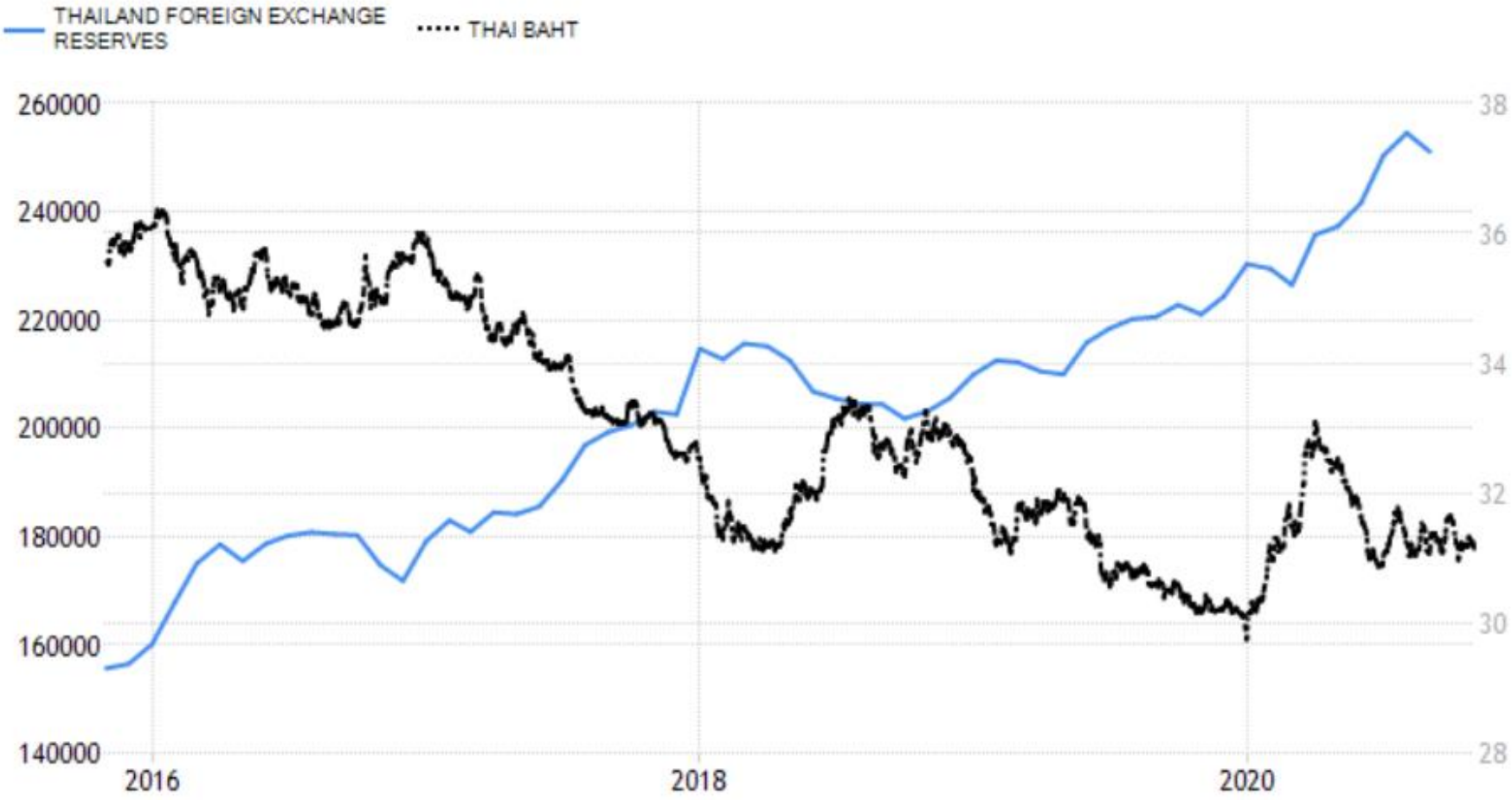
Strong baht battering rice shipments

As Thailand's Baht Surges, Rice Farmers Feel the Pain

- India's rice exports jump by nearly 42% this year to record highs of 14 million tons, from 9.9 million in 2019.
- Vietnam exported around 6.5 million tons of rice in 2020.
- Thai rice exports this year declines to five million ton, the lowest in 20 years.
- Thailand's benchmark 5% broken rice price is now quoted at US$520 (16,000 baht) per ton, while rice from Vietnam and India stands at $440-450 and $360 per ton, respectively.

Thailand allocates little to rice R&D, only 200 million baht, compared to 3 billion baht (US$100 million) spent by Vietnam.

- Thailand's average yield of rice production now seems to be the lowest among its competitors.
- Vietnam's yield is at 934kg per rai, Indonesia (765kg per rai), India (643kg per rai), China (1,128kg per rai) and the United States (1,363kg per rai). It is even lower than neighbouring countries: Myanmar (461kg per rai), Laos (518kg per rai), Cambodia (462kg per rai) and Malaysia (642kg per rai).


THAILAND FOREIGN EXCHANGE RESERVES
THAI BAHT
260000
240000
220000
200000
180000
160000
140000
38
36
34
32
30
28
2016
2018
2020

6. Currency manipulation: on the watch list of Uncle Sam

- Asia is bracing for the latest US Treasury report on foreign currency manipulators, coming in the middle of a trade war that shows no sign of ending.
- The twice-yearly report is due in coming weeks and will likely see the return of *Singapore, Malaysia and Vietnam* on the watchlist.
- The three Southeast Asian nations were cited in the May report for the first time, and the Treasury says it keeps newcomers on the list for at least two straight reports. **China** -- which was formally labelled a currency manipulator in August -- *Japan and South Korea* were the other Asian economies cited at the time.

Definition of currency manipulators

A country makes it on the watchlist if it meets two of three criteria:

(1) A trade surplus with the United States of at least $20 billion;

(2) A current-account surplus of a minimum of 2% of gross domestic product; and

(3) persistent, one-sided intervention in the currency equivalent to 2% of GDP in six months of a year.

Thailand is uncomfortably close to being placed on the monitoring list

- Thailand, which successfully dodged the watchlist in May's report, could find itself in the crosshairs this time as its trade surplus with the US in the 12 months through August nears $20 billion and its current account surplus remains above the 2% threshold.
- So Thailand is highly qualified!

Conclusion

- Appropriate policy responses to external shocks must include: Realistic exchange rates and positive real interest rates.
- Avoid price distortions caused by price controls.
- Intervention can be done in case of market failure: utilizing public spending to restore confidence
- Transparency to establish confidence and cooperation between the private and public sector.

Concluding remarks

- Until recently, Thailand's exchange rate policy has *exhibited consistent market intervention*.
- Output recovery depends on consumption rebound which requires consumer confidence.
- Export growth, an important growth driver in Thailand, is mainly determined by conditions in the world market rather than the bath weakness.
- What does the lesson from the 1997 currency crisis tell us about Thailand 's exchange rate policy in 2019?

Key words

1. The real (effective) exchange rate
2. The Dutch Disease
3. The Monetary Approach to B/P
4. Fear of appreciation
5. Currency manipulators