Oktober 2023

#3-1

PICTURING LIQUIDITY

Quick Flow of Funds:
Our bank-centric visualization of the macro-economy
(Part 1 – Introduction and historical review, 2011-19)

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Image credit: Max LaRochelle (*Unsplash*)

Executive Summary

- This report introduces our new **"quick flow of funds" (Q-FoF)** deck, which we will use in subsequent reports as a way to discuss about banking data while neatly tying it up with macro developments across multiple domains – trade, investment, as well as fiscal and monetary policies.
- We define **net sectoral bank balance (NSBB)** as the amount of bank deposit a sector holds minus the outstanding amount of loan and bond financing it obtains from banks. **Net bank balance (NBB)** is the aggregate of NSBB for all domestic sectors.
- NBB has periodically declined over the years, interspersed by periods of stability. The declines were strongly associated with Rupiah depreciation and current account deficit, and signifies periods when Indonesia arguably grows at higher-than-sustainable rates.
- Our Q-FoF showcase for 2011-19 revealed some interesting insights that may run counter to common narratives about the period:
  - The Rupiah ("taper tantrum") crisis of 2013 was not the product of a consumption binge per se, but rather a rush by businesses to capitalize on the supposed consumer exuberance just as it was losing steam amid a decline in commodity prices.
  - Fuel price and interest rate hikes were not sufficient to right the ship on the CA deficit in 2013 – it took fiscal contraction in 2014 to do so.
  - Tax amnesty and asset revaluation in 2016-17 were not just "nice to have" – they were crucial in getting *Jokowinomics* off the ground after an abortive initial approach that relied more on fiscal expansion.
  - The boom that accompanied *Jokowinomics* fizzled out in mid-2019 despite continued strong CAPEX by SOE, as BI's response to the trade war crisis in mid-2018 belatedly forced the private sector to conserve liquidity.

Table of Contents

This report is the first of two reports explaining and showcasing our brand new **Quick Flow of Funds** visualization deck.

Part 1

SEEING LIKE A BANK

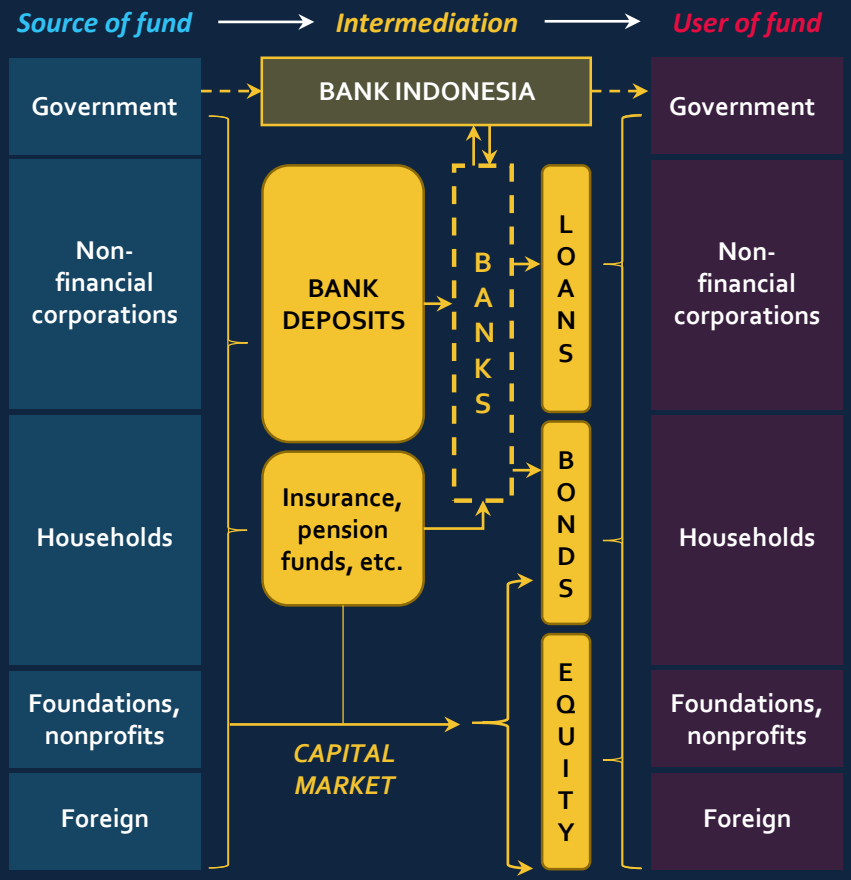
Quick Flow of Funds, Net Bank Balance,
and how they relate to key macroeconomic indicators

Quick Flow of Funds: What and why?

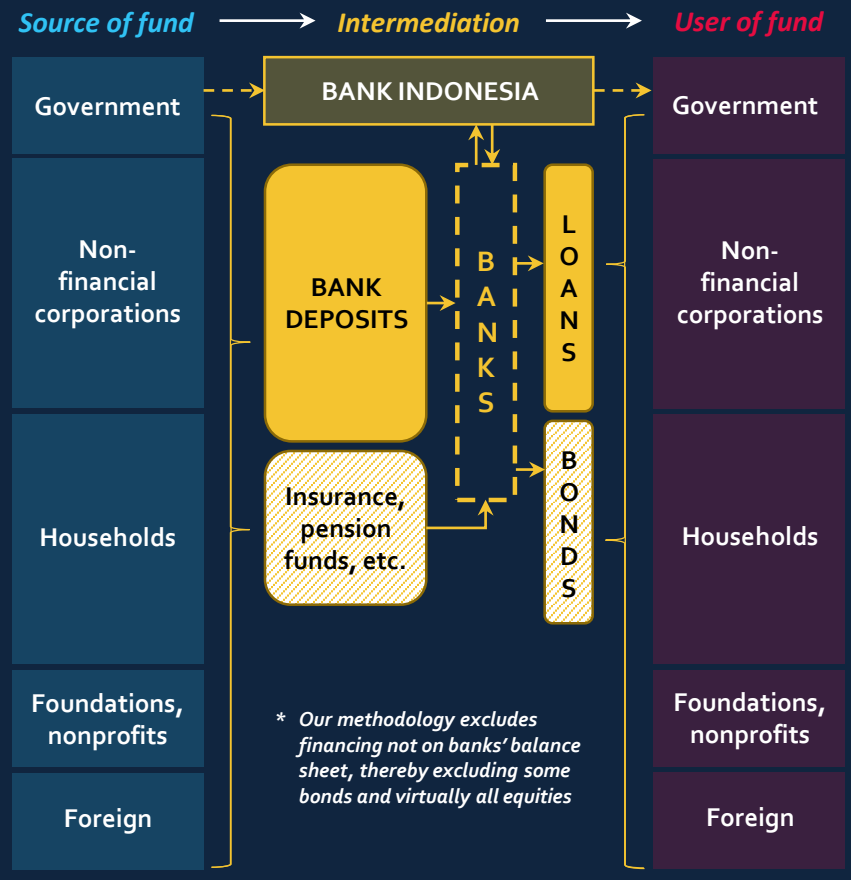
- Here at ***Collideascope***, we do not like to show macro data in the usual, dull and tired ways. At a minimum, we like to present them in bright, interesting charts that excites your visual cortex. And at a maximum, we want to demonstrate new patterns or even new ways to look at the data. As such, this 3rd edition (*albeit divided in two parts*) may just be our most "maximalist" yet.
- The inspiration behind this is the **"flow of funds" (FoF)** dataset, which tracks how excess savings in one part of the economy are channeled into investment in another. Some sectors, households in particular, tend to spend less than they earn, i.e. they are **net savers**. These savings, whether in banks or in the capital market, are then used to finance sectors that spend more than they earn (**net borrowers**).
- This should be important enough to know, but in practice FoF is not as widely known or used as other macro datasets such as the national account (GDP) or balance of payments (BoP). The main exceptions are some economists in the **Post-Keynesian** tradition like Wynne Godley, or more recently Richard Koo with his works on balance sheet recessions.
- One issue hindering FoF usage is its timeliness. In the US, the Fed releases FoF data ten weeks after the end of each quarter. For Indonesia, it takes even longer, as the data is only updated once a year – and even then, past data can be revised quite drastically one year later.
- As such, the only way to get a timelier picture on Indonesia's FoF – which we will dub **"quick flow of funds" (Q-FoF)** – is by using related datasets that are updated more frequently. Fortunately, some of the relevant data – the breakdown of bank deposits and loans by sector and instrument – can be found within BI's monthly statistical bulletin, known by its acronym **SEKI (*Statistik Ekonomi dan Keuangan Indonesia*)**.
- Upon this, we then layer additional data – debt securities ownership, BI's balance sheet – to paint as complete a picture as we can on the flow of funds through the banking system. Note that our data covers just the banking system *(pg. 6, right)* rather than the entire financial system[1] *(pg. 6, left)*. As such, we call our headline indicator **Net Bank Balance (NBB)**, where the full FoF would show the more comprehensive **Net Financial Balance (NFB)**.

[1] Unfortunately, the breakdown in the ownership of bonds and equities outside of banks are either incomplete or subdivided in ways that are incompatible with the sectoral classification in SEKI or in the original FoF statistics from BPS.

Flow of Funds ➤ Net Financial Balance



"Quick" Flow of Funds ➤ Net Bank Balance



* *Our methodology excludes financing not on banks' balance sheet, thereby excluding some bonds and virtually all equities*

Included in the dataset

Partially in the dataset

Connections, constraints, liquidity

- Q-FoF is, to be sure, a "quick and dirty" workaround, yet it is still a powerful tool to visualize and analyze the economy, in much the same way as the full FoF. Indeed, its **bank-centric** nature may not be too much of a problem for a financial system that is still quite bank-centric (rather than **market-centric**) as Indonesia's.
- Generally speaking, Q-FoF's explanatory power lies in the way it reveals connections, constraints, and liquidity:
  - Connections: Banks' position at the heart of the payment and credit system means that it connects sectors that would otherwise have little to do with each other – say, fisheries and real estate – in their capacities as savers or borrowers.

    Q-FoF does not quite break things down to the industry level – the data sources are not detailed enough for that – but it does show which areas in the economy are the main growth drivers (i.e. the net borrowers), and which play a more "passive" role of funding that growth.

    This is something that we will see time and again in this report and its follow-up, e.g. in how extra household savings from tax amnesty helped kickstart the ***Jokowinomics*** boom, which was mainly powered by SOEs and private corporations *(pg. 24-25)*.
  - Constraints: Problem arises when the domestic economy does not generate enough savings to fulfill the demand for credit. In that case, we would have to rely on foreign savings in the form of capital inflows. Naturally, we will see that NBB is a good – and timelier – proxy of the **current account balance** *(pg. 12)*.

    But prolonged CA deficit can be risky from a macro standpoint. Accordingly, there is a certain "speed limit" to credit and GDP growth, above which they may be less sustainable – which we can also estimate from our NBB *(pg. 15)*.
  - Liquidity: The bank-centric nature of Q-FoF might actually be a plus when discussing risks, as we are dealing with only deposits on the asset side – whereas the full FoF would include other, less liquid forms of assets.

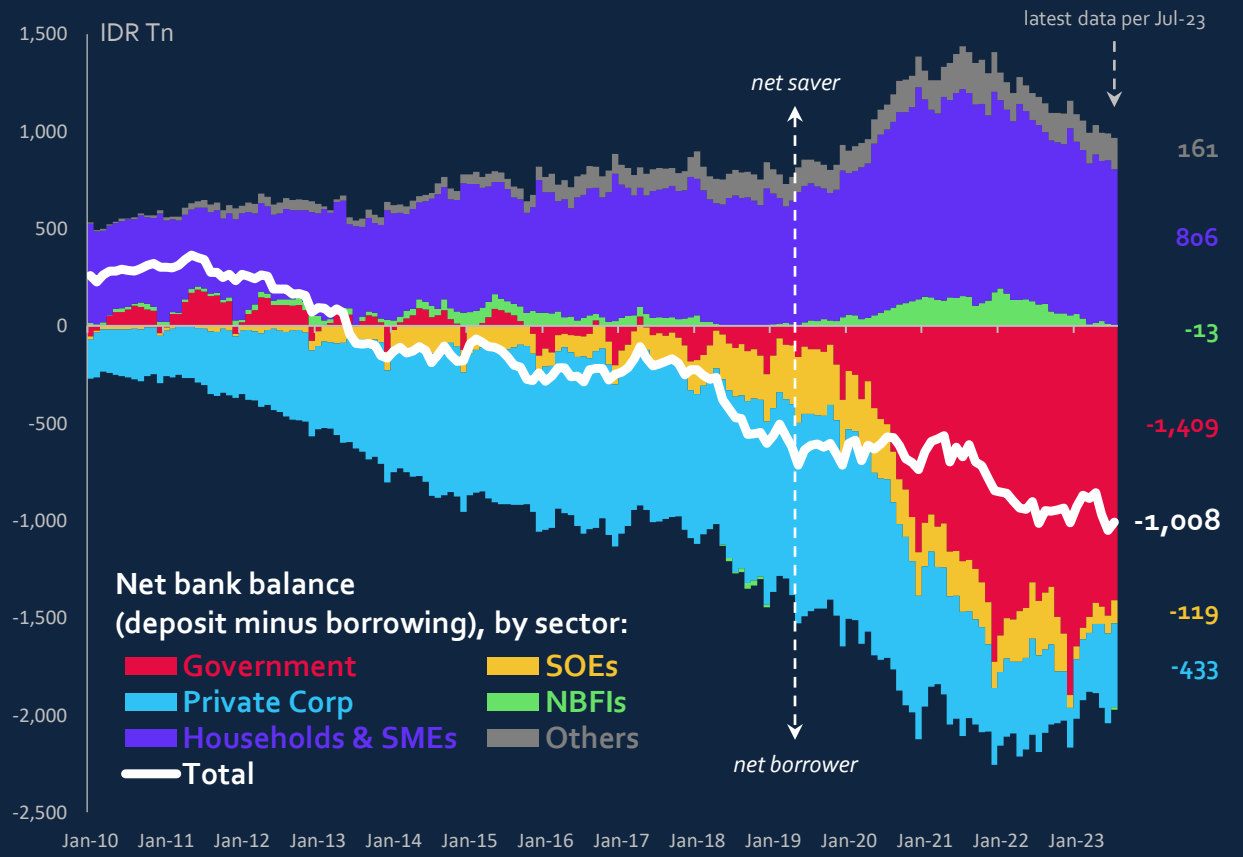
    NBB, as such, is superior to the **balance of payments (BoP)** or the CA balance in predicting the risk of currency depreciation *(pg. 14)*. It is also responsive to shifts in **monetary and fiscal policies**, in ways that might only be visible in the conventional macro indicators after a certain time lag.

Historical analysis, drilldown, and follow-ups

- In the future, we are planning to release this Q-FoF deck – with analysis of course – as part of our regular lineup of macro reports. This initial report thus serves as an introduction and reference for those subsequent reports.
- The rest of this report will be a showcase of Q-FoF visualizations and our interpretations thereof, with sprinklings of other data for support and context. The game plan is as follows:
  - The rest of this ***Part 1*** will show in more visual terms the ebbs and flows of NBB, and how it relates to other macro indicators like CA balance, exchange rate, and GDP growth.
  - ***Part 2*** begins our historical review by diving into the data from 2011 to mid-2015 – which told a classic story arc of a boom, followed by a crisis, followed by adjustments. Using Q-FoF as our fulcrum, we tie together disparate "subplots" about trade, investment, and policies into one interconnected story.
  - ***Part 3*** is about *Jokowinomics*, from its initial teething issues to its fizzling out in mid-2019. Here we will go into more depth by "drilling down" according to instrument and currency, to show more clearly how each sector responded to the changing circumstances.
- There is more to come in edition #3-2, which will deal with recent trends and also break things down according to provinces. As it is, we hope that this edition would be a suitable enough "teaser", and an interesting way to look at the macro-economy through the banks' lenses.

Net bank balance (NBB) has declined over the years

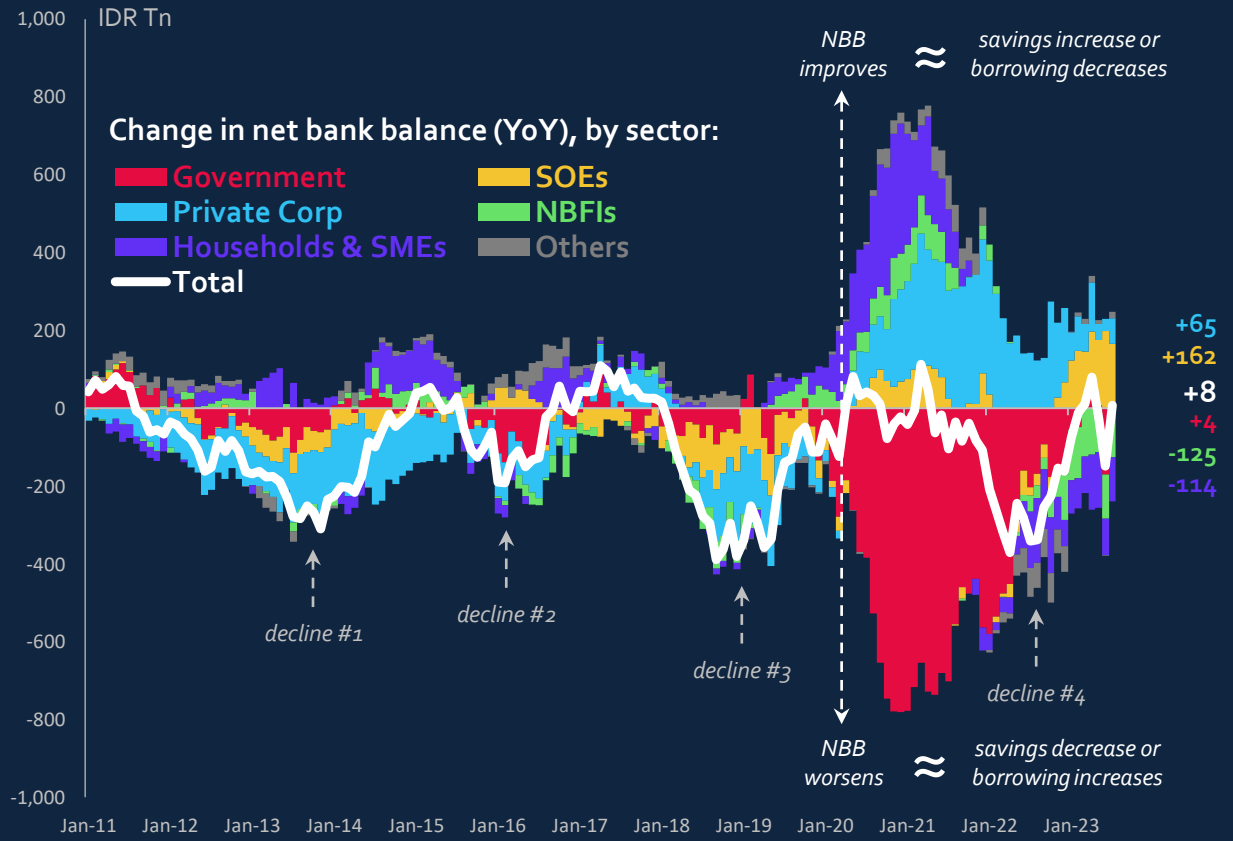
- The **net sectoral bank balance (NSBB)** is, in essence, the amount of bank deposit that a sector holds minus the outstanding amount of financing that it obtains from the banks and BI, in the form of both loans and bonds.
- **Net bank balance (NBB)**, then, is simply the aggregate of NSBB for all domestic sectors.
- **Households** *(which in SEKI data is mixed up with SMEs)* are the major net savers in our economy, while the **government**, **SOEs**, and **private non-financial corporations** are net borrowers.
- The two "minor" sectors here are **non-bank financial institutions (NBFIs)** like insurance or pension funds, as well as **"others"** which include nonprofits and cooperatives. These, for the most part, will not be our focus.
- As we can see, the NBB has worsened over the years, as borrowing expanded far more rapidly compared to deposit.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Punctuated disequilibrium: Decline interrupted by stability

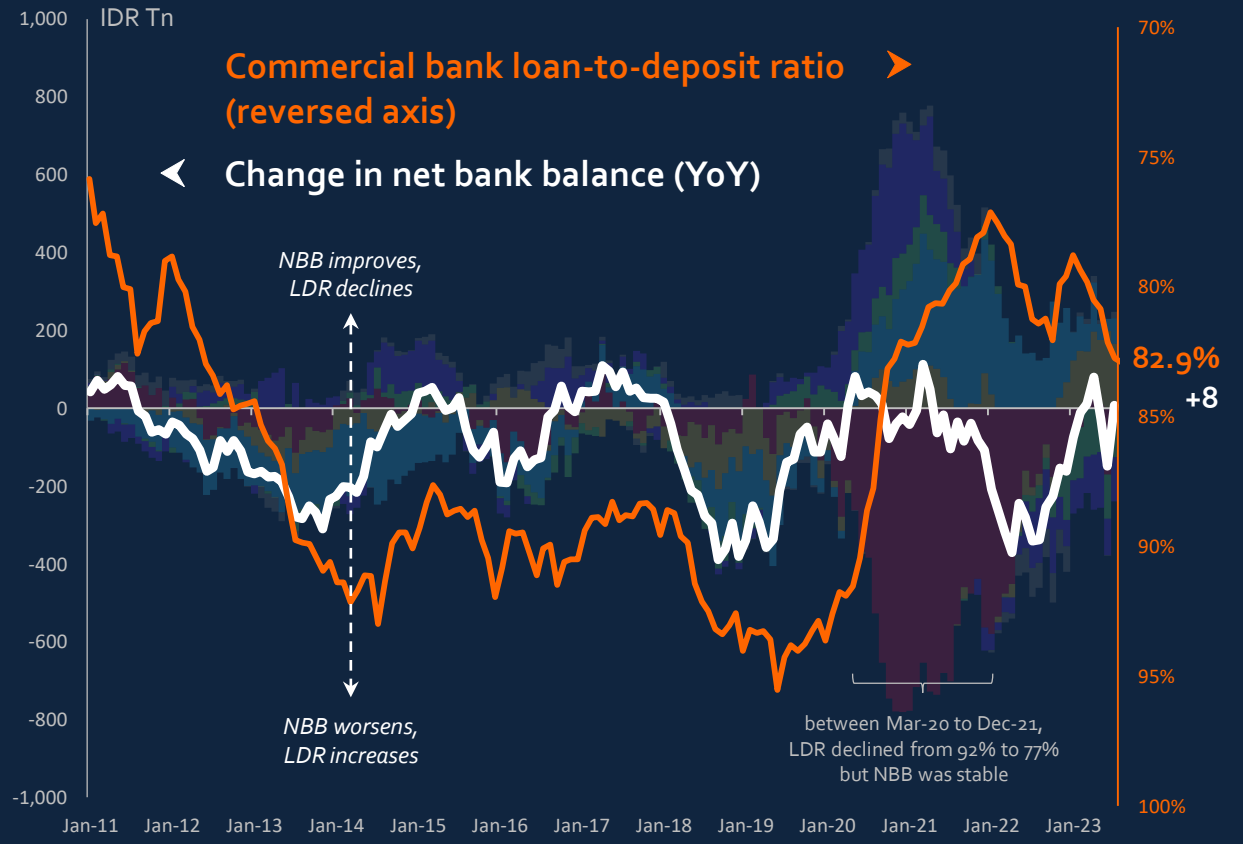
- The deterioration, however, was not a slow and gradual process – rather, it happened in spurts and stops.
- This is why, from this point on, we will talk more about the rate of **change in NBB (or NSBB)** rather than their actual levels.
- Since 2011, we could identify four distinct episodes of **NBB decline** in the Indonesian economy: 2012-14, mid-2015 to mid-2016, 2018-19, and late 2021 to late 2022.
- Each episode had its own distinct dynamics – often with a different composition of net borrowers and different logic driving them. This is something we will look more closely into in ***Parts 2*** and ***3***.
- But first, we shall discuss how NBB relates to the more conventional macro indicators.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Loan-to-deposit ratio, but flipped and augmented

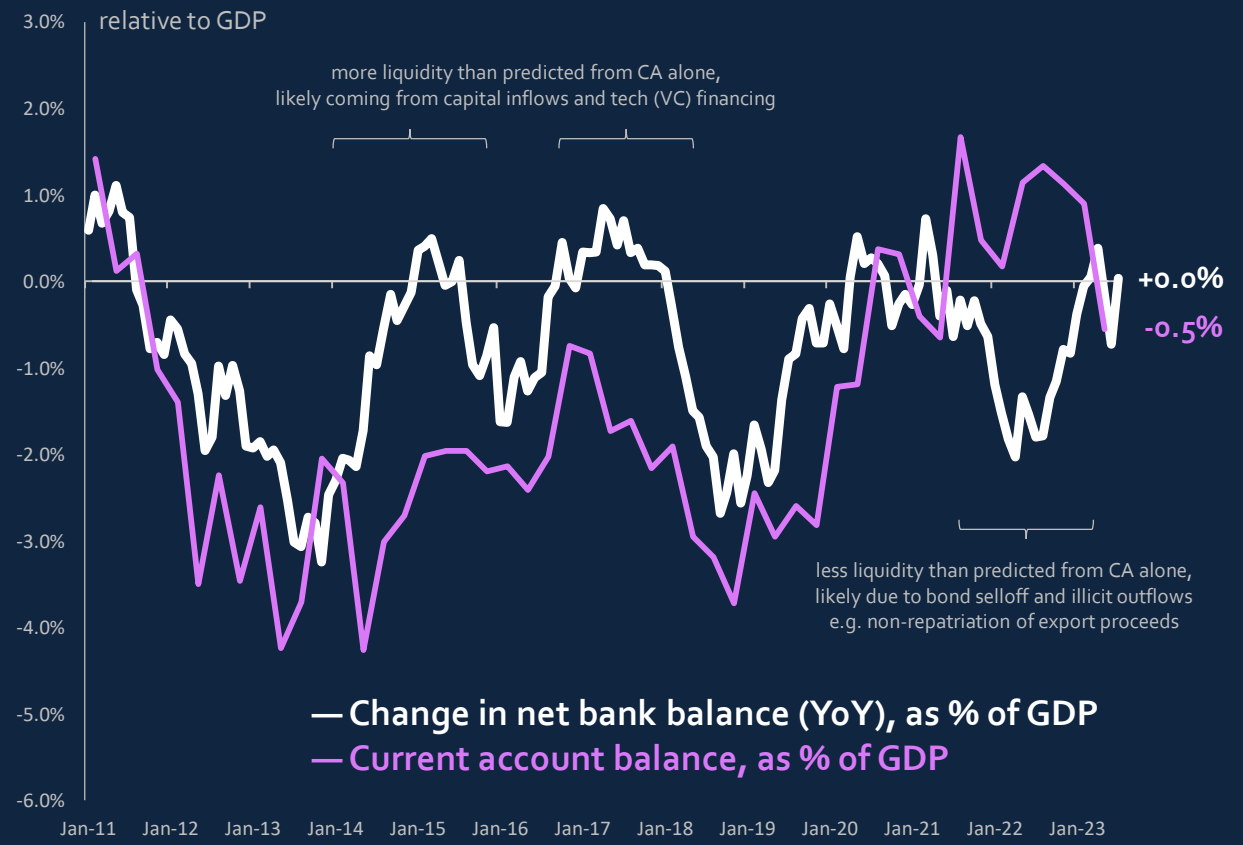
- First, the obvious one. The change in NBB is naturally a mirror image of **loan-to-deposit ratio (LDR)**. When bank loans are growing faster than deposits, LDR would rise while NBB falls, and vice versa.
- But of course, Q-FoF covers more than just loans and deposits – it incorporates banks' bond ownership and also BI data.
- So when LDR fell during the pandemic, NBB actually remained flat – the decline in outstanding loans being offset by the massive issuance of government bonds.



Source: *Bank Indonesia, Ministry of Finance, OJK, calculations by BCA Economist*

NBB is a broader proxy of the current account …

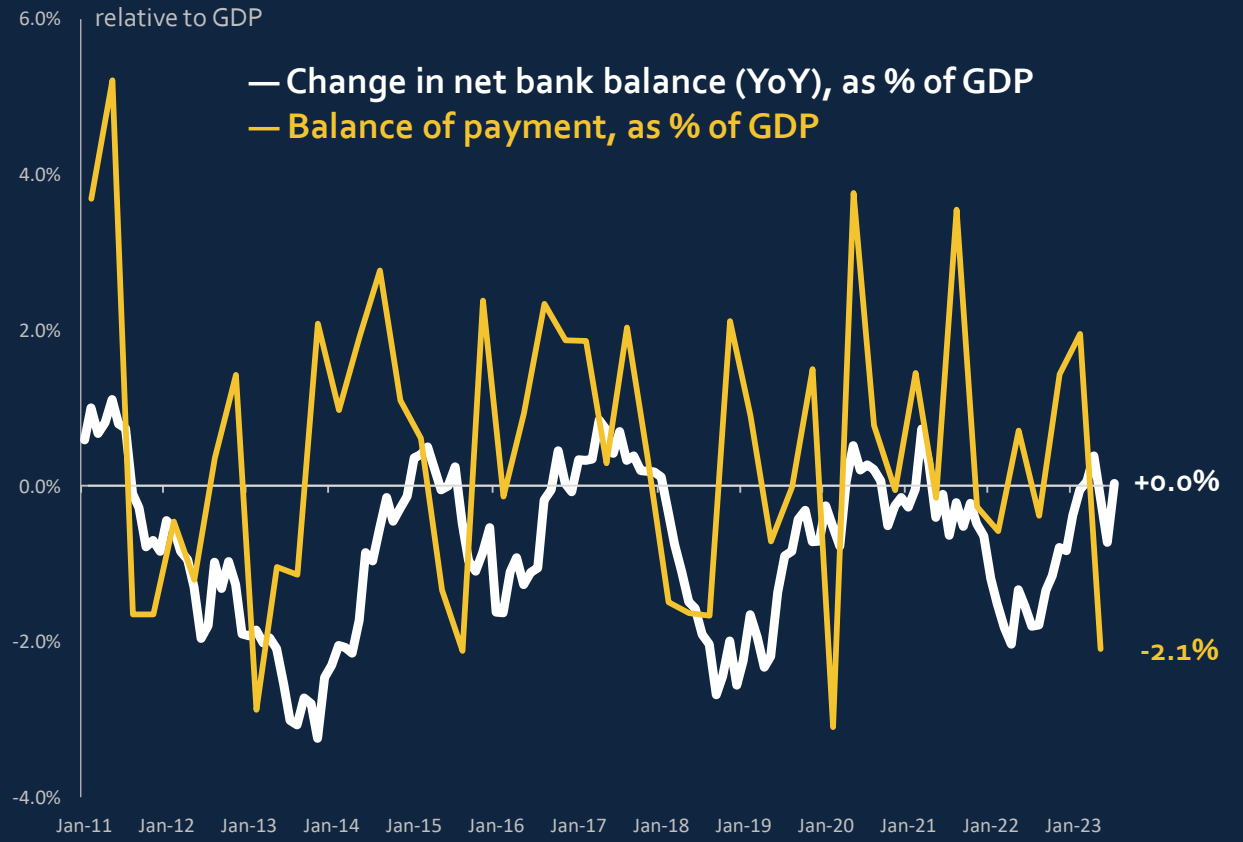
- The deposit-borrowing dichotomy that NBB is based on makes it a good proxy of **saving-investment (S-I) gap**, which by definition is equal to the **current account (CA) balance**. As such, periods of CA deficit tend to also coincide with NBB decline.
- But as with LDR, the relationship with CA is not a precise one. There is often a distinct gap between CA and NBB, which seems to reflect capital inflows or outflows.
- We treat this gap not as a bug, but as extra layer of information. For instance, in 2022, we can see that NBB declined in spite of a sizable CA surplus.
- This gap – which was as big as 3.0% of the GDP (IDR 150 Tn) in Q3-22 – was probably connected to rising Fed rates, which led to a selloff of Indonesian bonds and prompted Indonesian exporters to park their proceeds abroad during a commodity boom.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

… but is narrower than the balance of payments

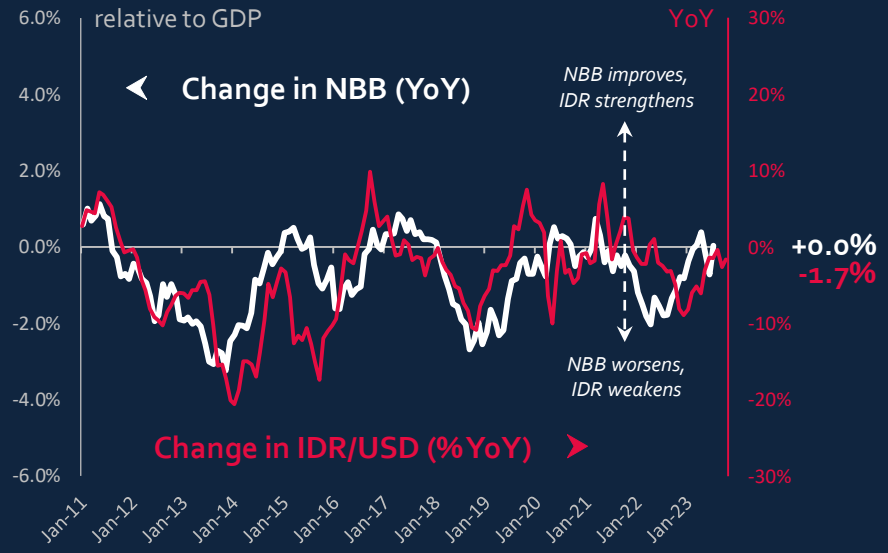
- But if NBB is CA balance plus capital flows, would it not be identical to the **balance of payments (BoP)**? Not really – NBB is in fact nearly always lower than the BoP.
- Capital inflows can translate to higher NBB if it either displaces financing by domestic banks, or if it is transformed on the asset side into bank deposits.
- But these are not always the case. Foreign financing can actually induce more domestic borrowing (joint financing), and it could also be used to acquire less liquid assets.
- So if CA and BoP are measures of **financing gap** (the latter after taking into account net foreign flows), NBB could be understood as a measure of **liquidity gap**.
- And as "liquidity kills you quick" – as Perry Mehrling puts it – it might also be a better indicator of risk …



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

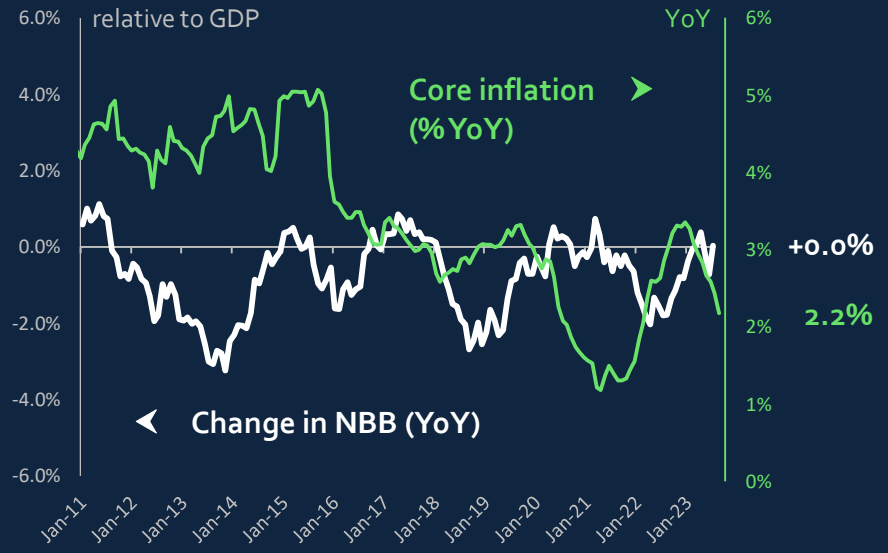
NBB is a strong predictor of Rupiah depreciation

NBB decline correlates with a weakening Rupiah …



Source: *BI, MoF, Bloomberg, calculations by BCA Economist*

… and more loosely with an uptick of core inflation

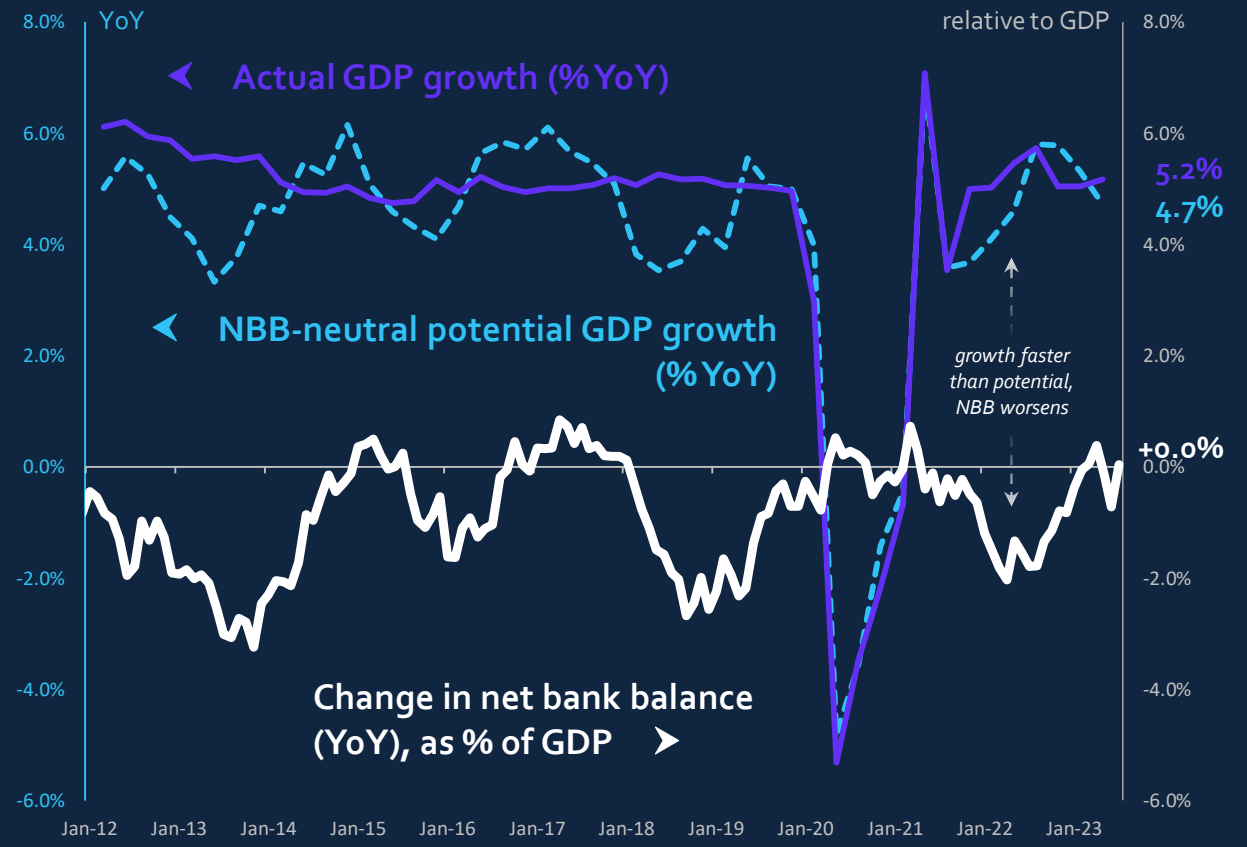


Source: *BI, MoF, BPS, calculations by BCA Economist*

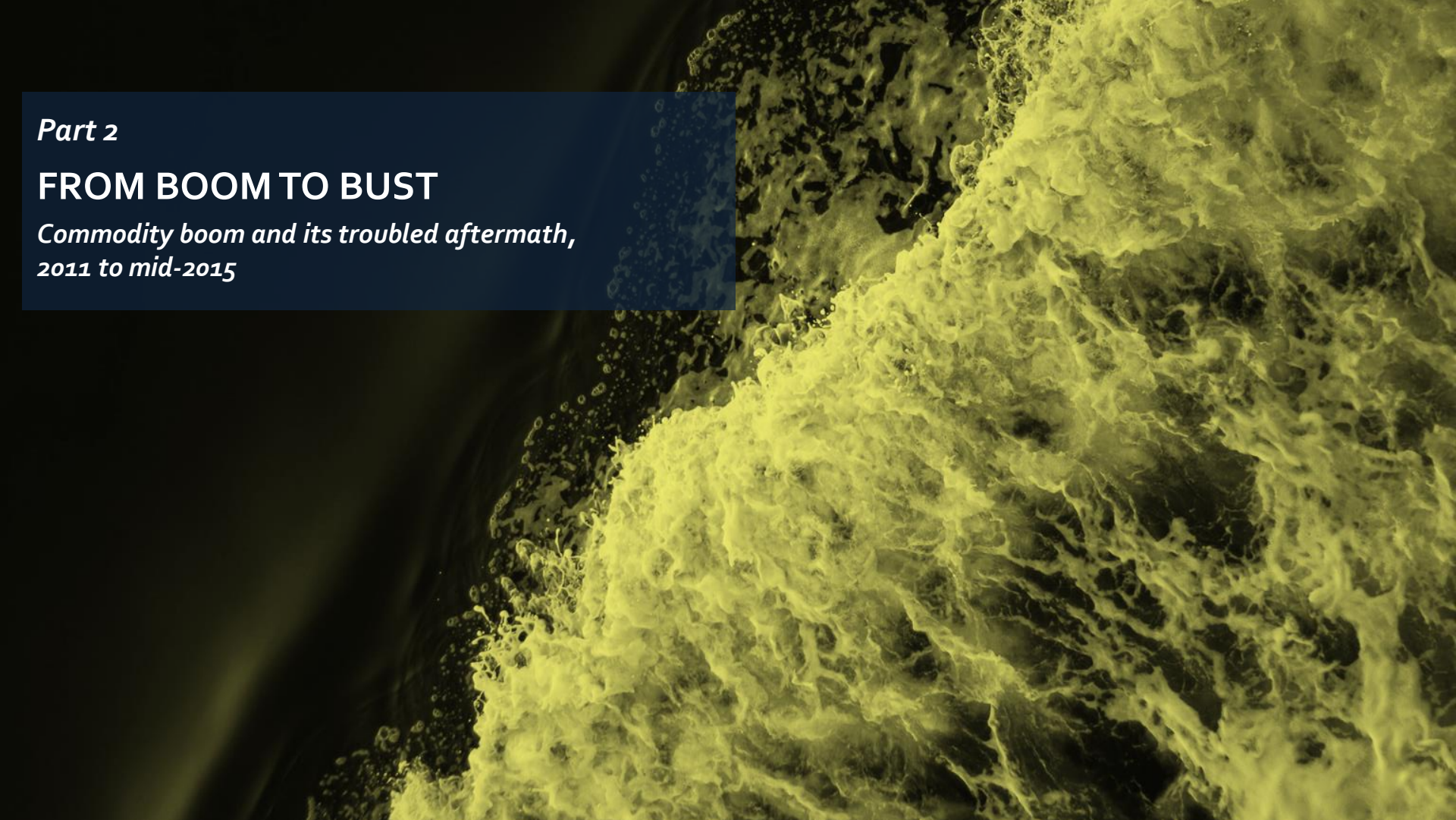
- As it turns out, NBB is a much better predictor of the exchange rate (R^2 = 25% in bivariate regression) than either CA (R^2 = 13%) or BoP (R^2 = 9%). This explains why the Rupiah slipped in 2022 despite surpluses in these other, more conventional measures.
- NBB is also associated, albeit more loosely, with **core inflation**. This is related in particular to the borrowing side of the ledger, as bank lending is the primary mode of money creation in the economy.

We are growing slightly above our potentials

- Rupiah depreciation can itself neutralize CA deficit, either by making imports more expensive or by forcing BI to raise rates. Such "homeostatic" process eventually serves to limit GDP growth beyond a certain point.
- But how high is that point? Here we try to simulate Indonesia's growth if NBB has to stay neutral. This is similar to the concept of **potential growth**, except our goal is not a neutral (non-accelerating) inflation rate.
- Although our **NBB-neutral potential growth** does fluctuate, its long-run average outside of the pandemic is actually quite consistent – hovering around 4.89% YoY.
- We might say, then, that our faster actual growth rate (averaging 5.23% in the same frame) had been achieved at the cost of a weaker Rupiah. In the following parts, we will see how, in practice, our policymakers and our society negotiate this tradeoff.



Source: *Bank Indonesia, Ministry of Finance, BPS, calculations by BCA Economist*



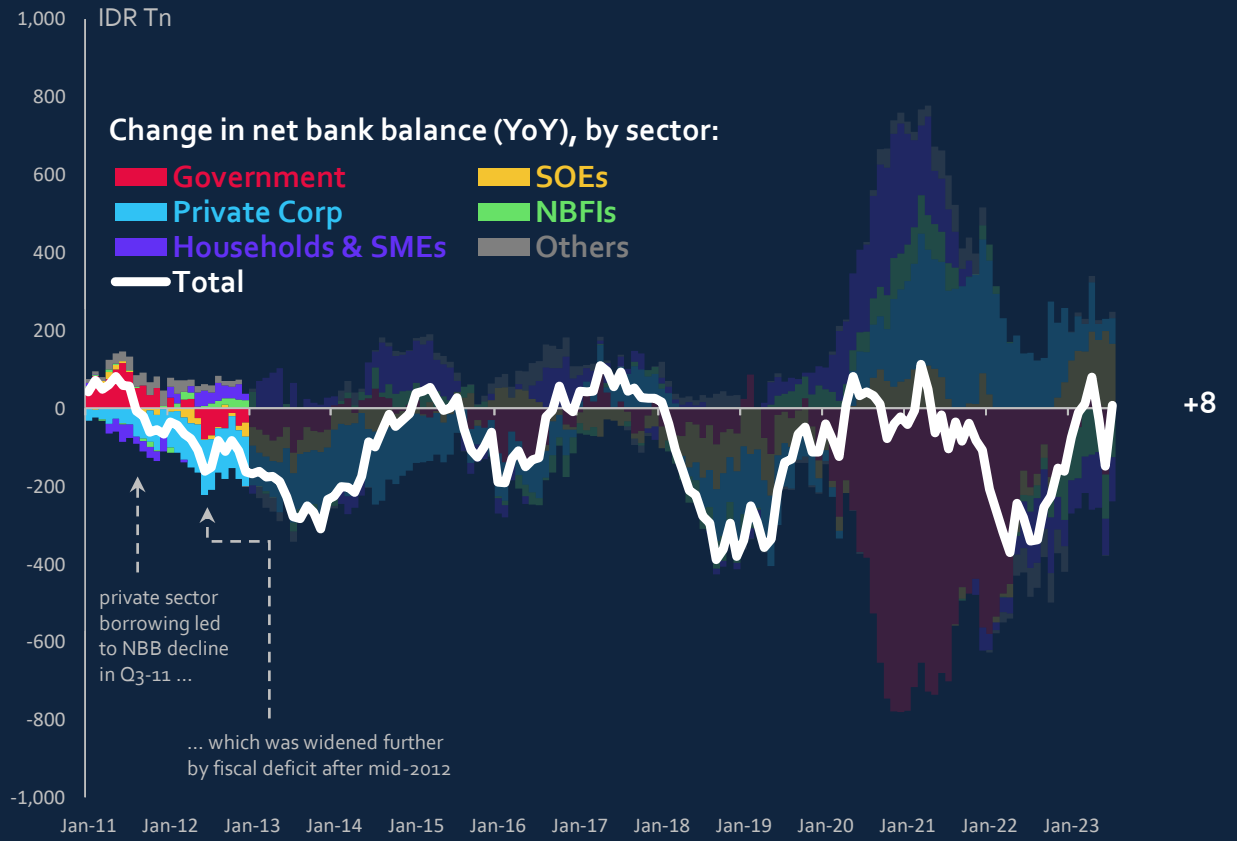
Part 2

FROM BOOM TO BUST

Commodity boom and its troubled aftermath, 2011 to mid-2015

2011-12: Welcome to the party

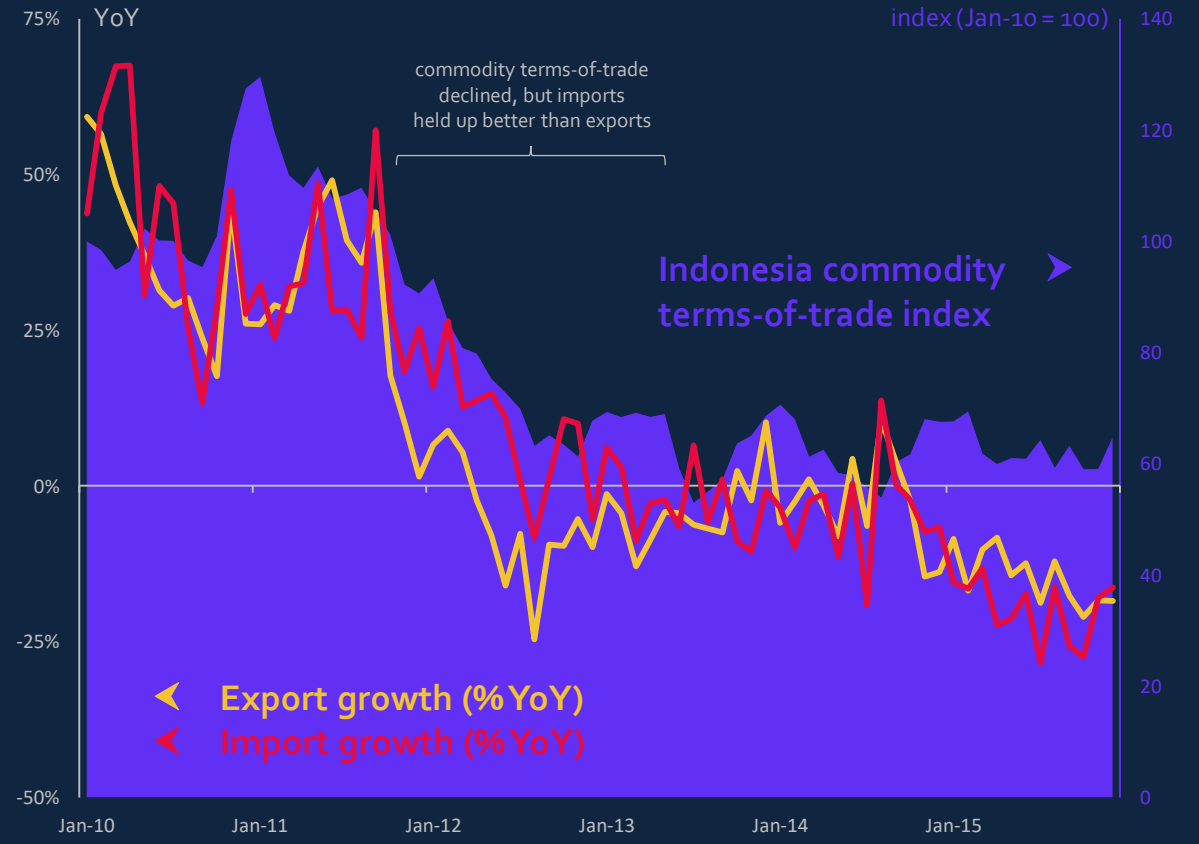
- Our Q-FoF data began in 2011, in the midst of a commodity boom which should have generated additional savings – and thus CA surplus – for Indonesia. But the surplus was fleeting, and quickly turned into a deficit.
- The turning point was in late 2011, at first with only the private sector showing NSBB deficit. But over the course of 2012, SOEs and the government would also shift from being net savers to net borrowers.
- This period is often characterized as a kind of "consumption binge" fueled by commodities, which later had to be curbed through **fuel price** and **interest rate hikes** in 2013.
- But in fact, households' NSBB was already on its way up in 2012 (*pg. 22*) – suggesting that consumption was already beginning to lose momentum even then.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Businesses chasing consumers' tail

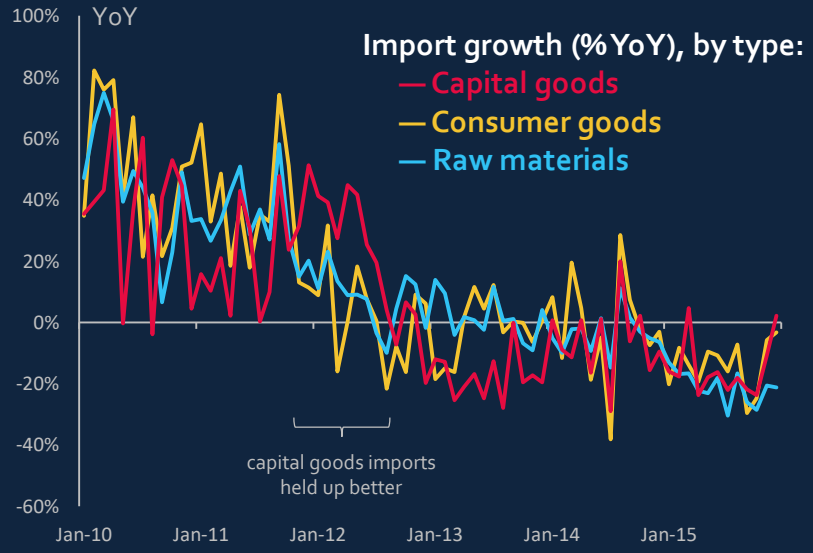
- The actual story was much more complex. Exports began to fall late in 2011 alongside commodity prices. But imports declined far less slowly, causing the CA deficit.
- As it turned out (*pg. 19*), what kept imports high at the time were capital – rather than consumer – goods. Investment loans were also growing faster than other loan types.
- So rather than overconsumption leading to a lack of savings, the primary reason for the NBB decline seemed to be poorly-allocated (or **mal-**) **investment**.
- Specifically, there was a borrowing spree by non-tradable, consumer-oriented industries (*pg. 21*), happening right at the tail end of the consumption boom.
- The government's deficit, driven by larger **energy subsidies** – i.e. the decision to forgo fuel price hike in 2012 – could be seen as a last-ditch effort to prolong this boom.



Source: *BPS, Bloomberg, calculations by BCA Economist*

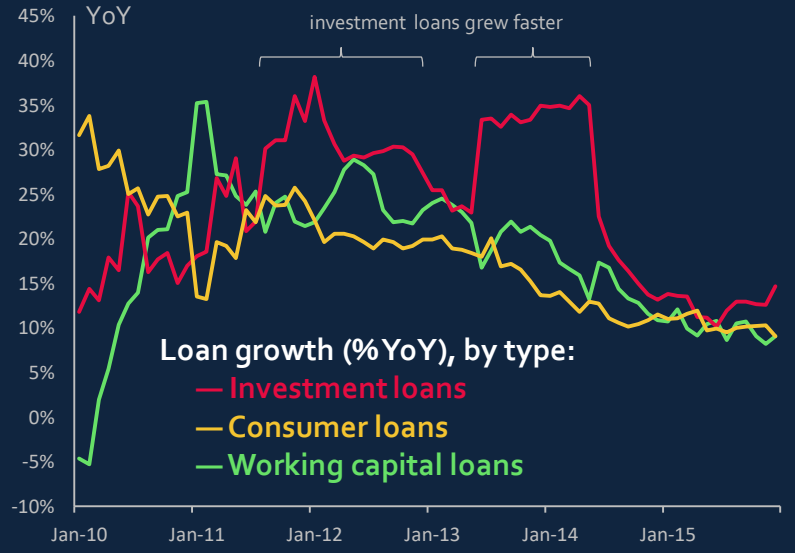
Investment and imports intertwined

Capital goods imports were the main cause of CA deficit …



Source: *BPS*, *BCA Economist*

… which paralleled the robust growth of investment loans

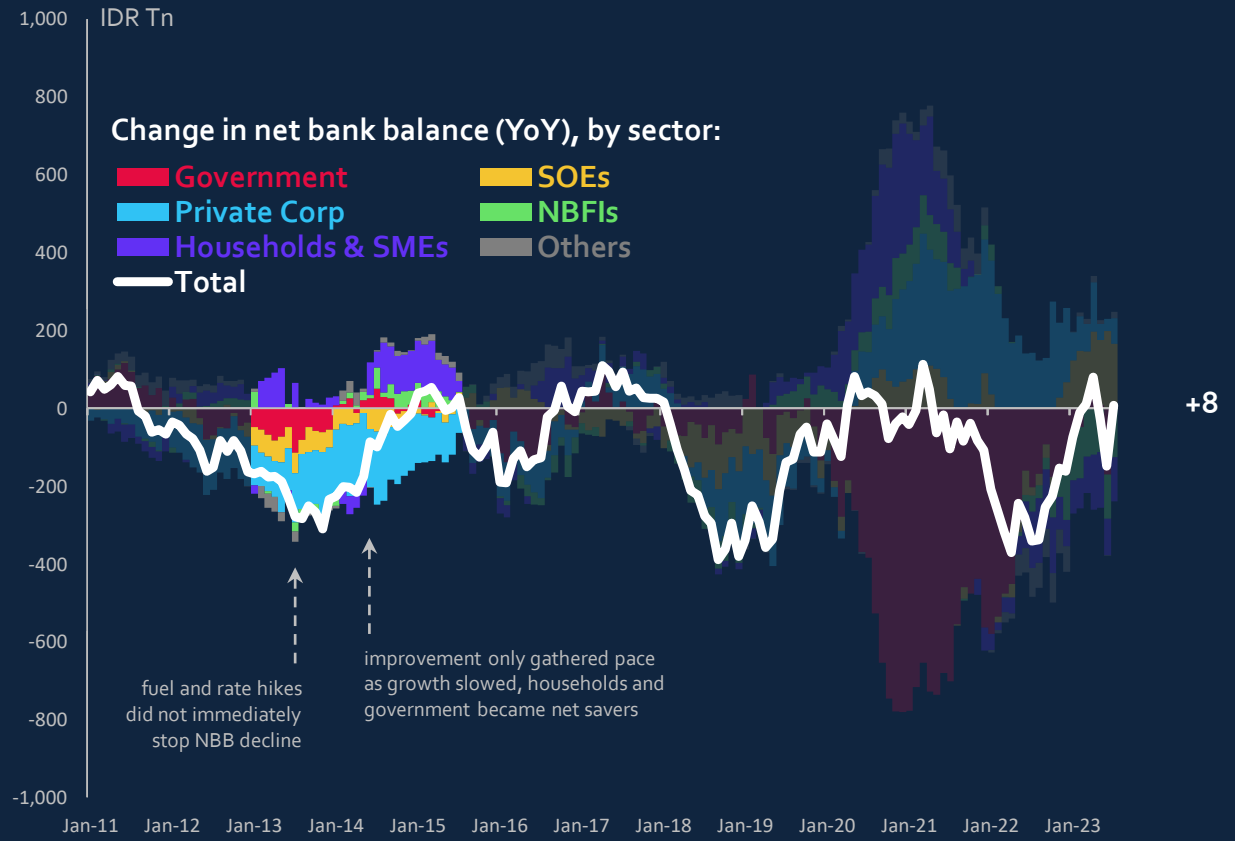


Source: *OJK*, *BCA Economist*

- Things look even starker when we realize that much of these investments were not just reliant on imported capital goods, but the kind of consumption they promoted relied on imported products as well. This was, of course, the brave new era of smartphones and of massive increase in motor vehicles – supported by, among others, low cost green car (LCGC) regulations in 2013.
- The proliferation of optimistic narratives about a growing middle-class was also a major part of this consumption-driven investment boom.

2013-15: The long hangover

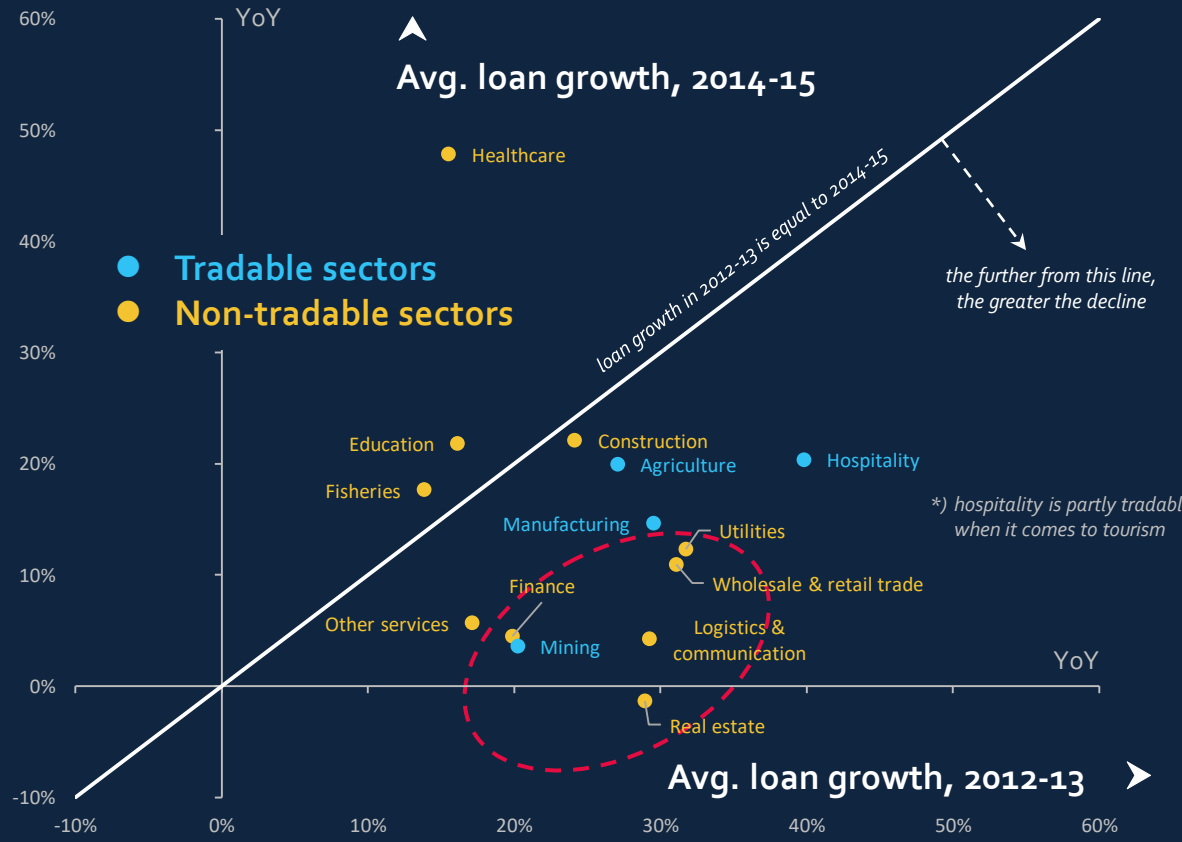
- The adjustment, when it hit, was protracted and painful. The initial trigger was the Fed's "taper" announcement in May-13, leading to a sharp Rupiah depreciation.
- From then on, the authorities embarked on an austere course aimed explicitly at curbing demand and CA deficit. But this did not succeed immediately.
- The private sector continued to borrow and invest robustly, while households responded to the Jun-13 hike not by tightening their belts – but rather by saving less in order to maintain their lifestyle.
- The real turnaround had to wait until mid-2014, when GDP growth finally fell below 5%. This was part of a global (and probably China-driven) slowdown, but policies were still a crucial part of the story.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Pruning off investment overgrowth

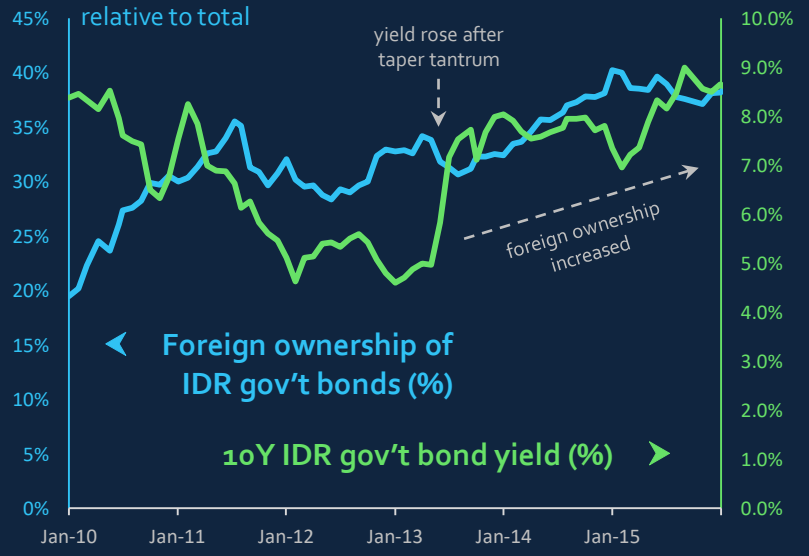
- As Milton Friedman famously put it, monetary policy has a "long and variable lag". In *pg. 31*, we will see that this delay is partly explained by the gap between **nominal and real rates**.
- The delay is clearly evident in our case, with BI's rate hike cycle in 2013 showing its full impact on NBB only in 2014-15. It does so by "pruning off" private borrowing in a way that supports our mal-investment thesis.
- Sectors that saw the greatest fall in loan growth were mostly those that had made a bet on domestic consumption – real estate, telecom, retail, and consumer finance.
- Tradable sectors saw less dramatic drop-off except for mining, which was most greatly affected by the decline in global commodity prices.



Source: *OJK, calculations by BCA Economist*

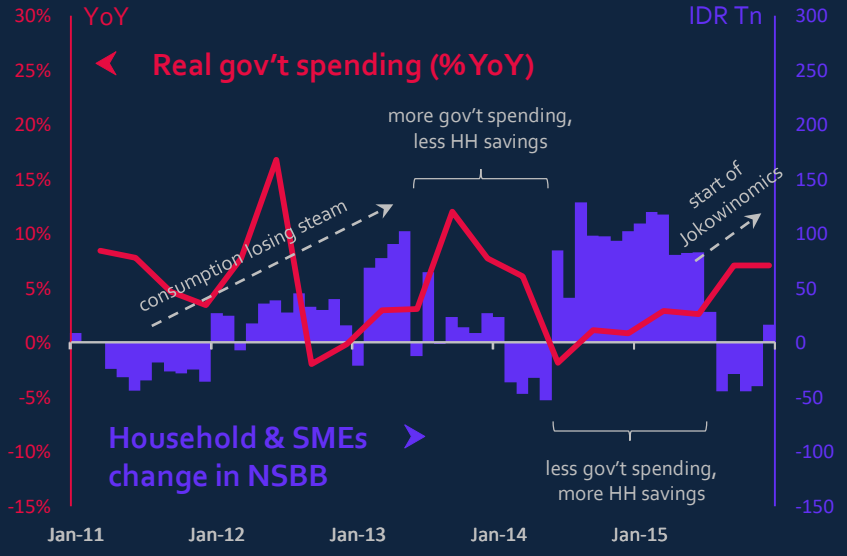
Restoring inflows, restraining spending

Higher bond yields induced foreign capital to flow in …



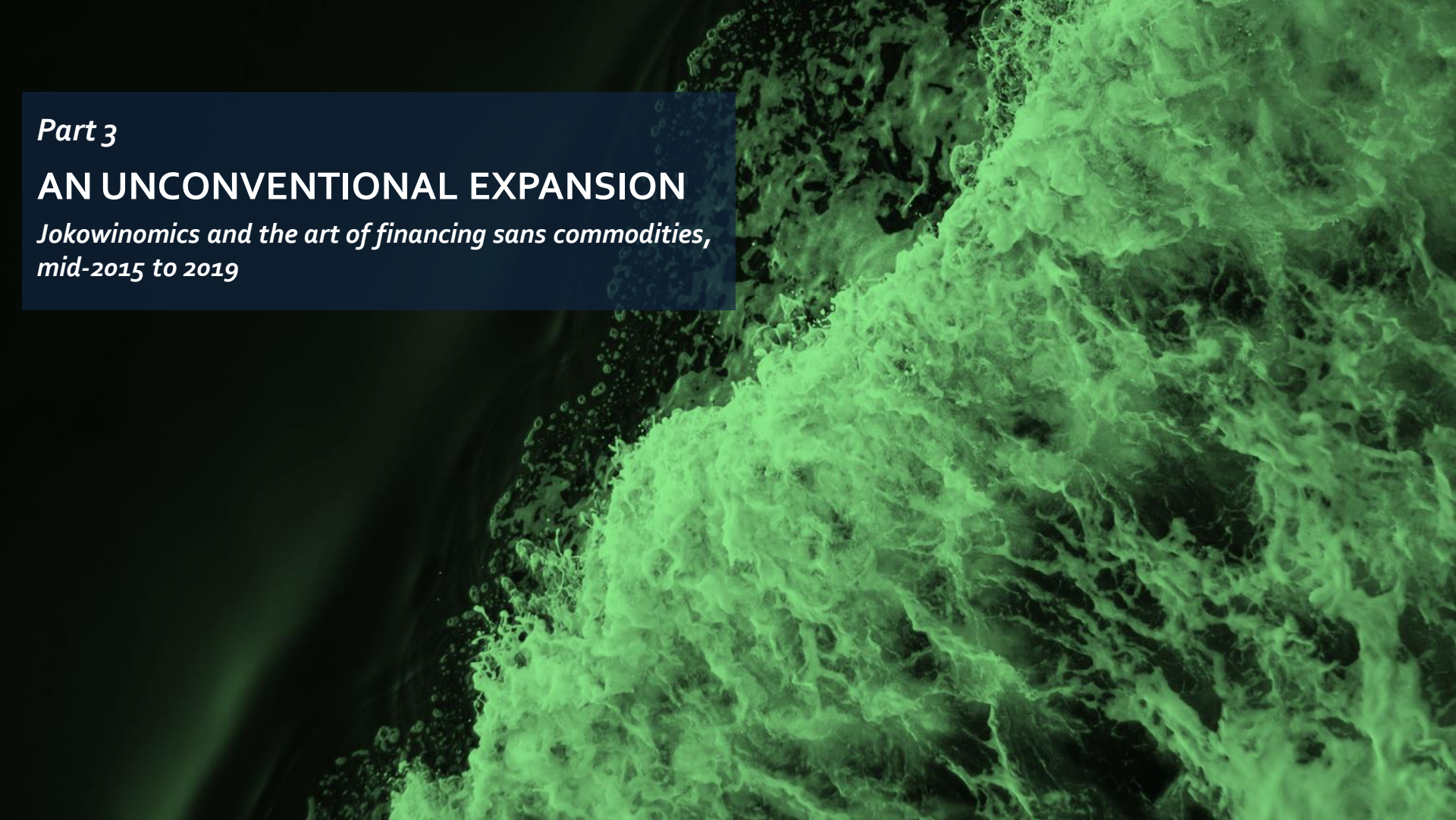
Source: *MoF, Bloomberg, BCA Economist*

… but it took fiscal restraint to force up household savings



Source: *BI, MoF, BPS, calculations by BCA Economist*

- Higher rates also drew in foreign money into the bond market, which narrowed the government's liquidity gap. Until mid-2014, however, this did not improve NBB as the government actually spent more (partly on social spending) in the aftermath of the fuel hike.
- It was only when fiscal spending was cut that households were forced to also reduce their spending and save more. Such **"forced savings"** explained the situation faced by the then-incoming Jokowi admin: healthier fiscal and CA deficits, but much weaker growth.



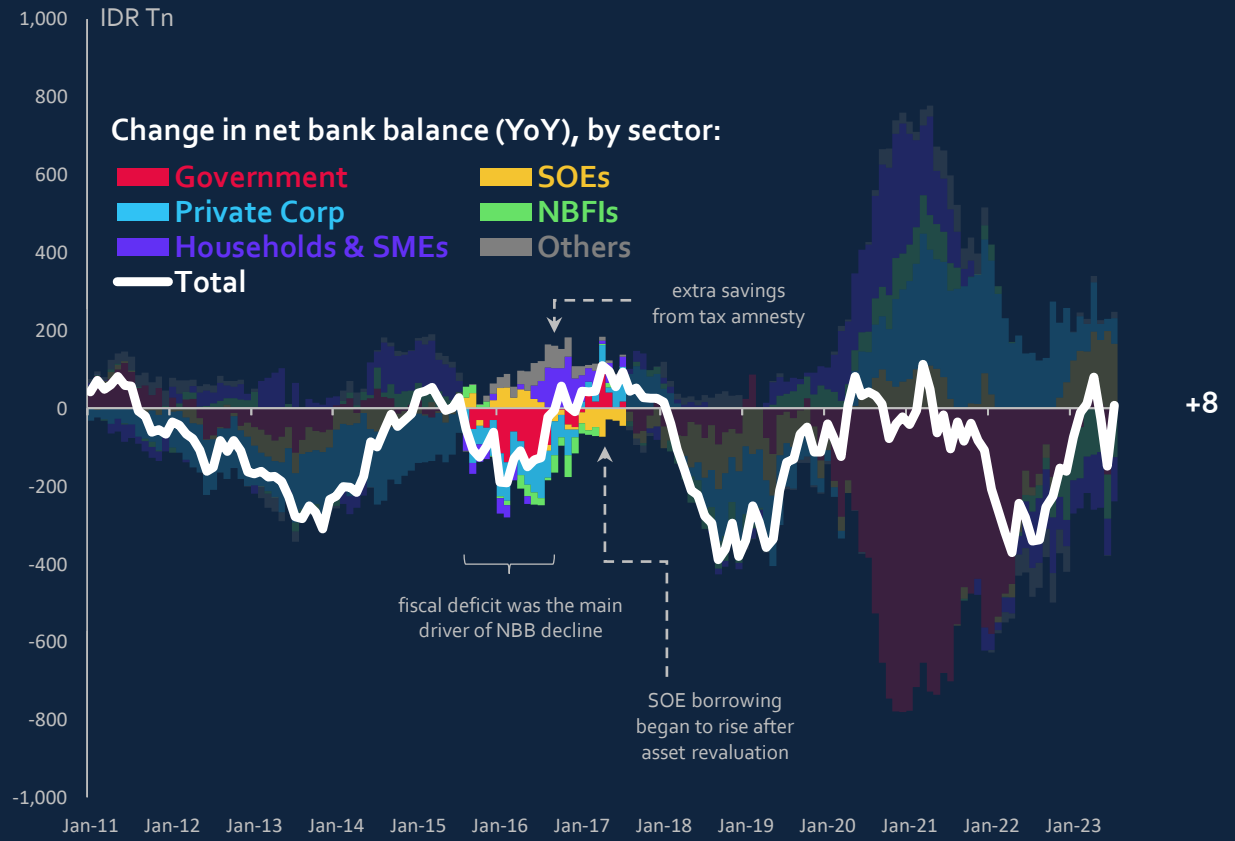
Part 3

AN UNCONVENTIONAL EXPANSION

Jokowinomics and the art of financing sans commodities, mid-2015 to 2019

2015-17: One cul-de-sac, two shortcuts

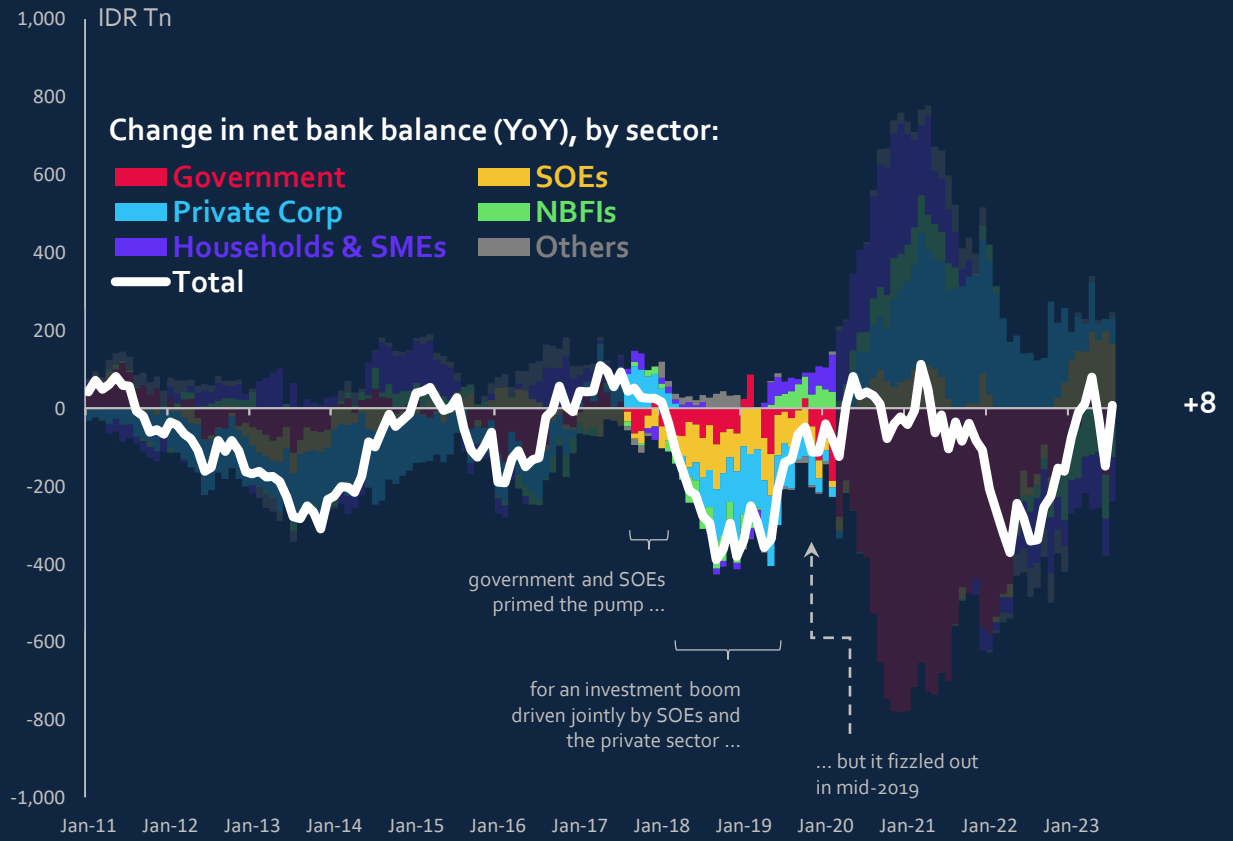
- Nowadays, Pres. Jokowi's term is associated with ***Jokowinomics***, a vast program of infra-structure buildout. At the start of his term, however, he had to face the harsh reality of trying to finance CAPEX without the bonus savings from commodity exports.
- The first couple of years, then, were about finding alternate sources of financing. The initial choice was to use the government's own budget – particularly the **fiscal space** freed up by cutting energy subsidies.
- But the limits of this strategy soon became clear (*pg. 26*), and by 2016 the admin had to come up with two new stratagems: **tax amnesty** (*pg. 27*) and **asset revaluation** (*pg. 28*).
- These two schemes finally enabled a large expansion in financing, which set up the big construction boom ahead.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

2017-19: Firing on all cylinders

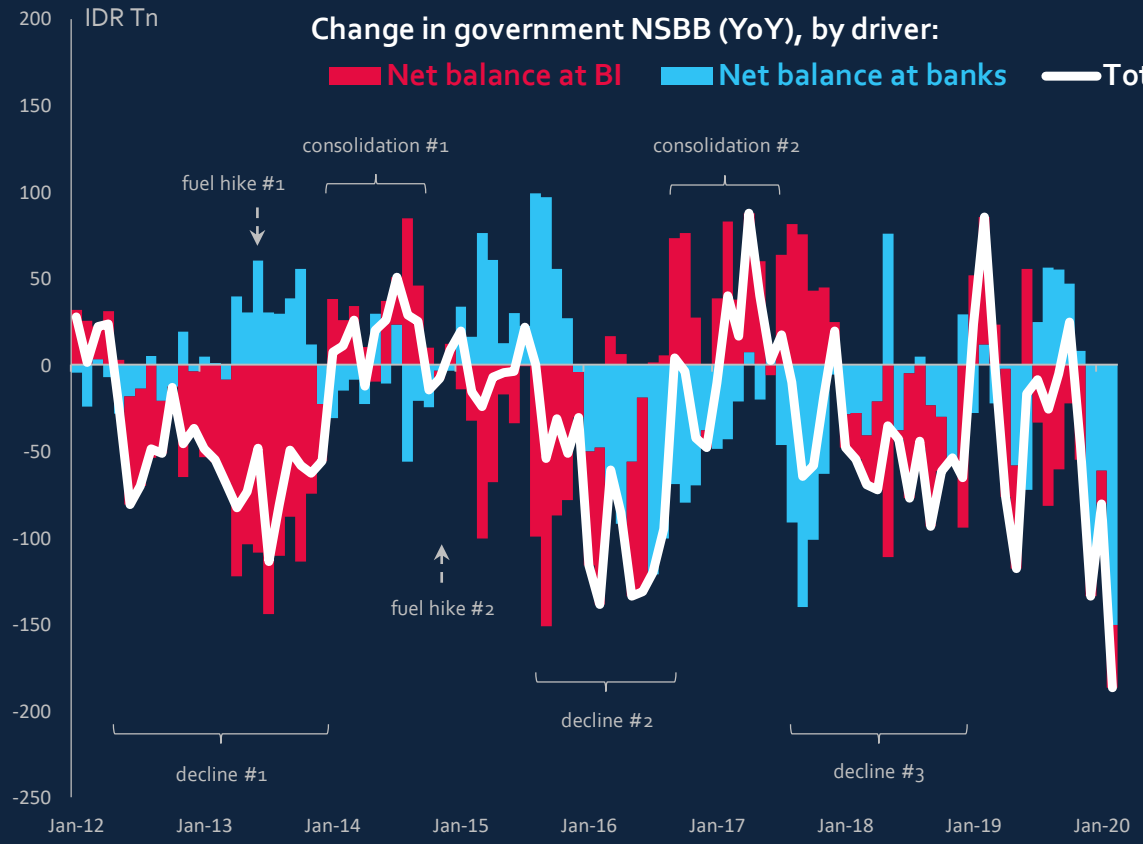
- The period between H1-17 and H1-19 was "peak *Jokowinomics*" – and a near-textbook case of investment **"crowding-in"**.
- The government injected some capital into SOEs, allowing them to take more leverage to finance their projects. In turn, these projects whetted the private sector's appetite to invest, especially in areas like real estate or power plants.
- All these took a while to start, but by 2018 things were rolling. Not even the trade war shock later in the year – which forced BI to defend the Rupiah by raising rates – could stop the NBB decline …
- … at least for a while. By mid-2019, the long lag of monetary policy had caught up to the private sector (*pg. 29*). The boom, as such, was already on its way out before Covid-19 even reached our shores.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Government: Soft and hard limits

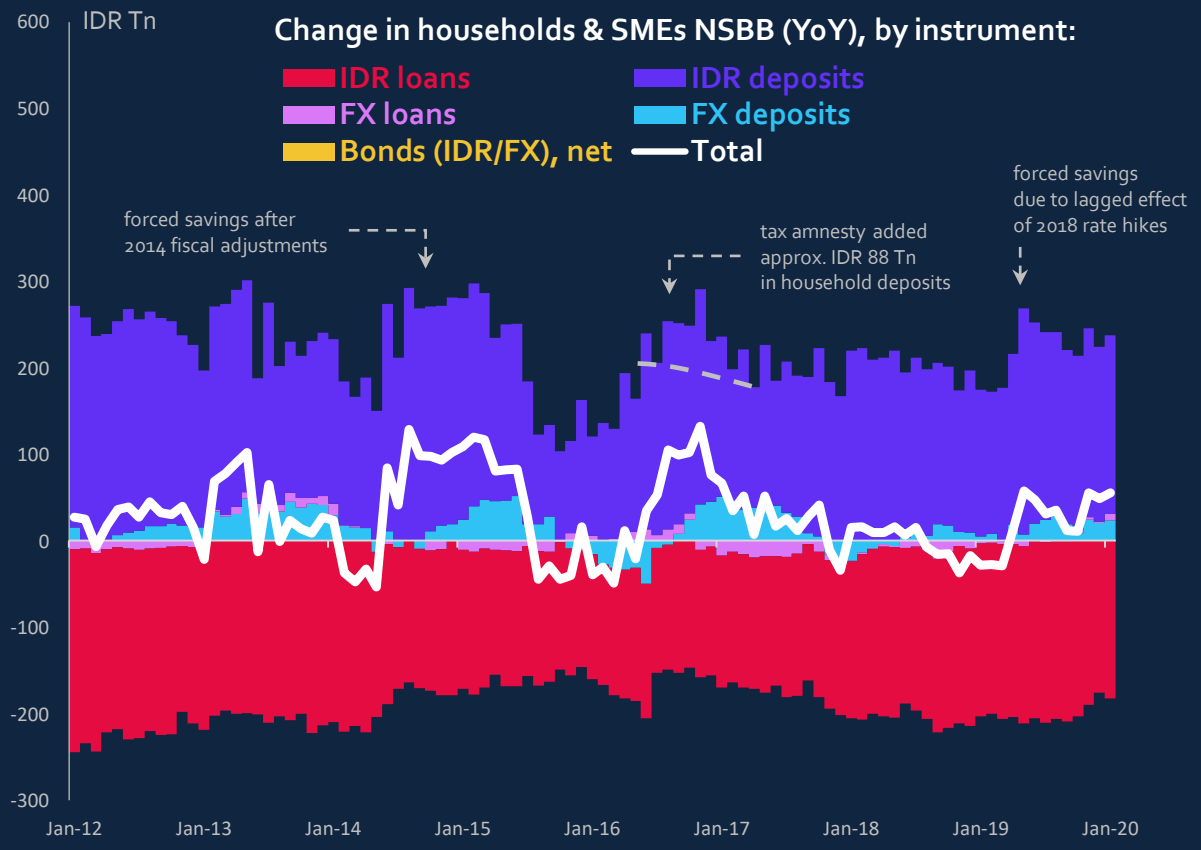
- We now proceed to "drill down" the Q-FoF data for each sector. For the government, our main distinction is whether the liquidity gap is covered by **outside money** (BI) or by reallocating **inside money** (banks). This will be important after 2020, but for now our concern is simply on the overall NSBB.
- We can see clear cycles between deficit and consolidation during 2012-17, which show a distinct limit to fiscal expansion.
- The "soft" limit – CA/NBB deficit caused by fiscal expansion – seemed to be the issue in 2012-13 (*pg. 22*). But the more urgent issue in 2016 was the "hard" limit set by law – that the fiscal deficit has to stay under 3% of the GDP.
- As it turned out, the amount saved by cutting fuel subsidies was not enough to cover for the rise in other spending *and* the drop in revenue post-commodity boom.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Households: Forced savings by other means

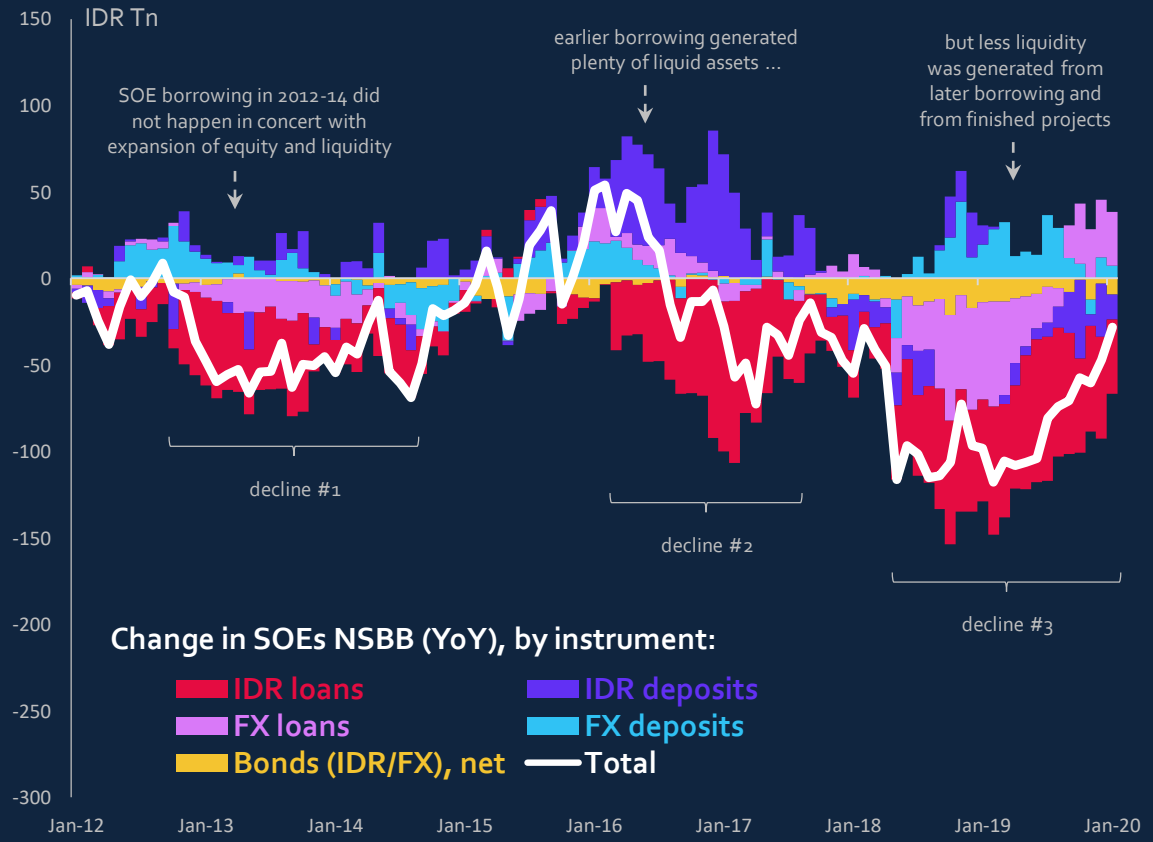
- Concerns about breaching this limit led to a 180º in fiscal policy and a cabinet reshuffle in mid-2016. This new-look cabinet was also the one that implemented tax amnesty.
- We can see from our instrument-drilldown of household NSBB that tax amnesty was effectively a form of forced savings – and one that primarily affected the top earners rather than the middle or lower classes.
- We can, in fact, estimate the impact of tax amnesty from the deposit growth anomaly during this period. Our calculations – IDR 88 Tn for households and 60 Tn for corporates (*pg. 29*) – was very close to the reported amount of asset repatriations (146 Tn).
- But tax amnesty is not something that can be done too often. It is still far more likely, then, that forced savings occur as a result of negative shocks: austerity, rate hikes, or – as we will see later – a pandemic.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

SOEs: The great balance sheet expansion

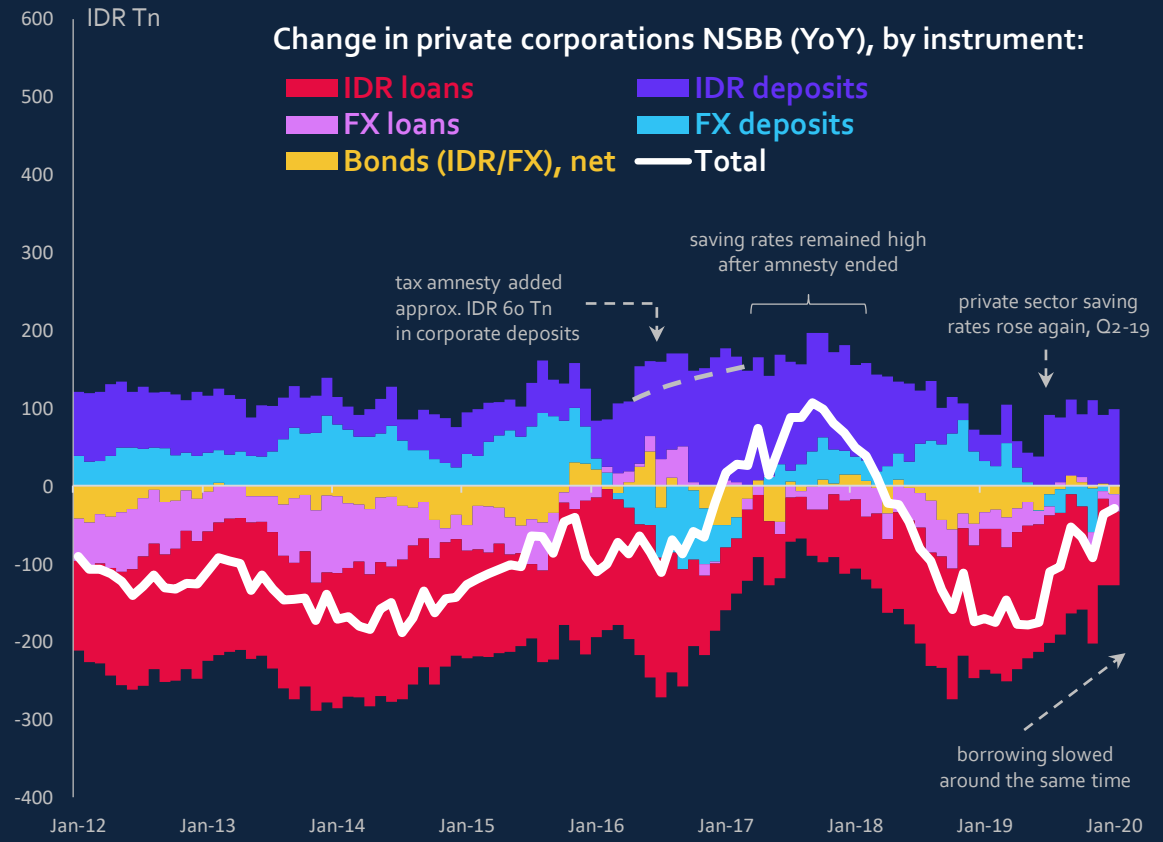
- Another big move around this time – often overlooked but just as important – was the revaluation of SOE assets.
- Since SOEs hold large amounts of dormant fixed assets such as land, this move greatly expanded their equity – which was further bolstered by capital injection from the government. The SOEs then leveraged these for more borrowing, which in 2016 resulted in an influx of cash/deposits.
- As the projects progressed, however, these liquid assets would have been displaced by fixed assets and receivables – leading to a growing liquidity gap.
- By 2018-19, then, SOEs had become a large contributor to NBB decline. And as we shall see, their liquidity gap was more persistent than that of the private sector (*pg. 30*).



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

Private corporates: Shorter window, weaker deposit

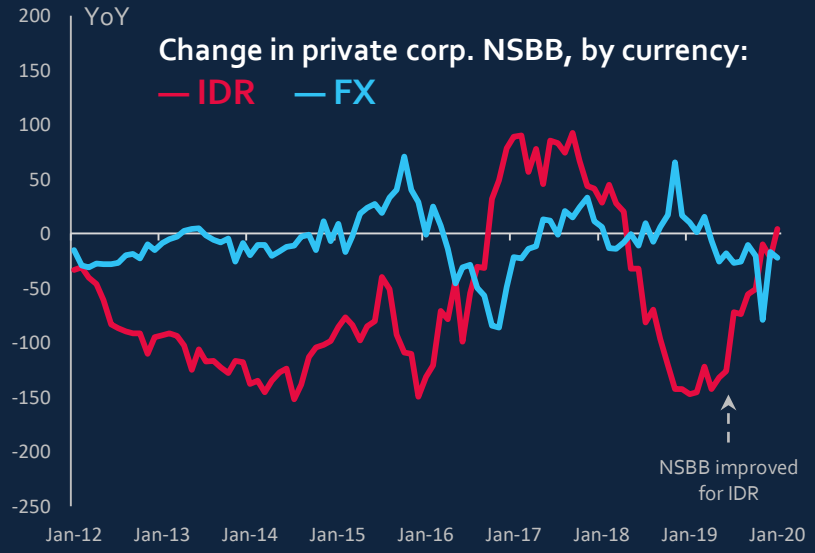
- Compared to SOEs, the liquidity gap for the private sector was wider – but it was also happening over a briefer period.
- Indeed, private corporations were still net savers for almost a year after the amnesty had ended in Mar-17. This might be due to belated repatriation flows, or perhaps some lingering adverse effects towards business sentiment from this program.
- So the borrowing boom started late, and it was also not as large as the one in 2012-14. Instead, it was deposits that grew far more slowly in 2018-19, which may reflect weak revenue growth – including in many of the most expansive sectors at the time (*pg. 32*).
- All these, then, brings us to the question as to why the boom – and the attendant NBB decline – seems to be fading by mid-2019.



Source: *Bank Indonesia, Ministry of Finance, calculations by BCA Economist*

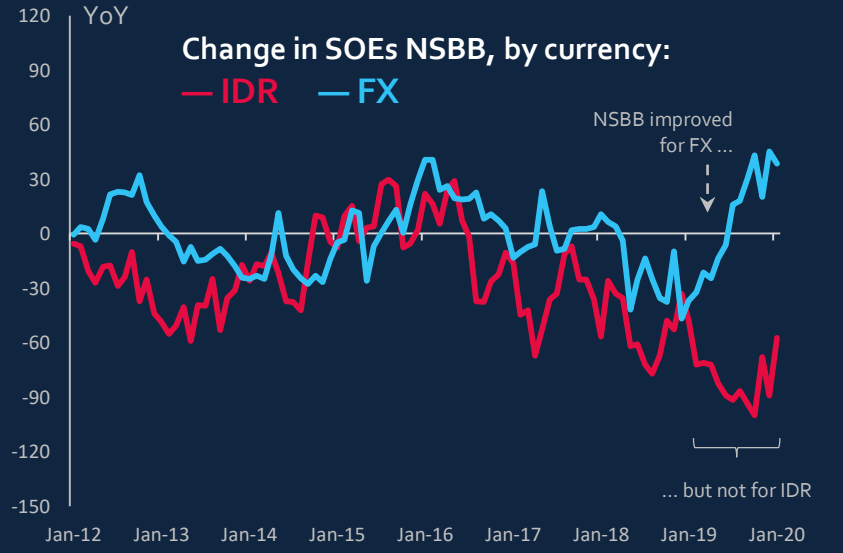
Why did it end early? #1 – Private vs. state-owned

Private sector NSBB self-corrected before the pandemic …



Source: *BI, MoF, calculations by BCA Economist*

… but SOEs' did not, except for foreign currencies

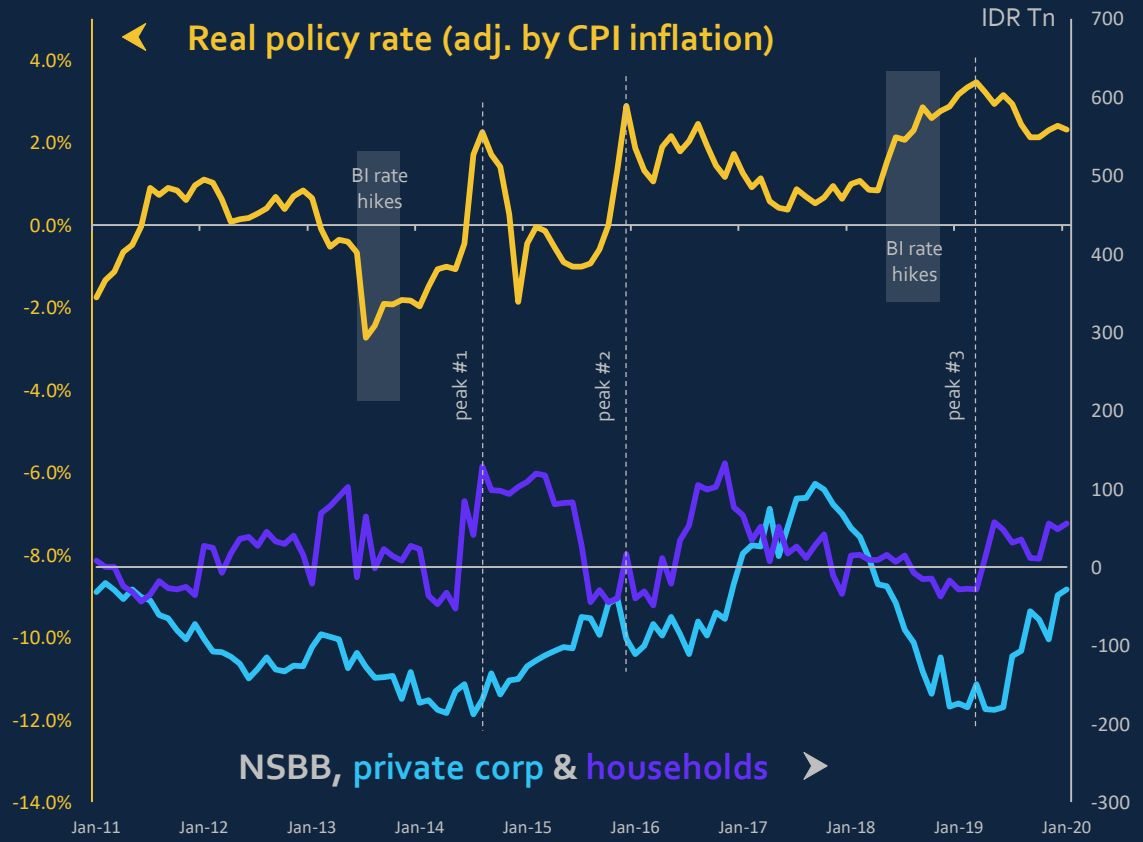


Source: *BI, MoF, calculations by BCA Economist*

- A key distinction here is between the public sector (government and SOEs) and the private sector (corporations and households). The latter showed sharp improvement in their NSBB by mid-2019, indicative of a more conservative stance.
- The former, however, was a different story. Although SOEs did respond to the 2018 currency volatility by issuing FX debt while conserving FX liquidity, in IDR terms the liquidity gap persisted right up to the early 2020. The boom might have faded, but *Jokowinomics* marched on.

Why did it end early? #2 – Real rates matter

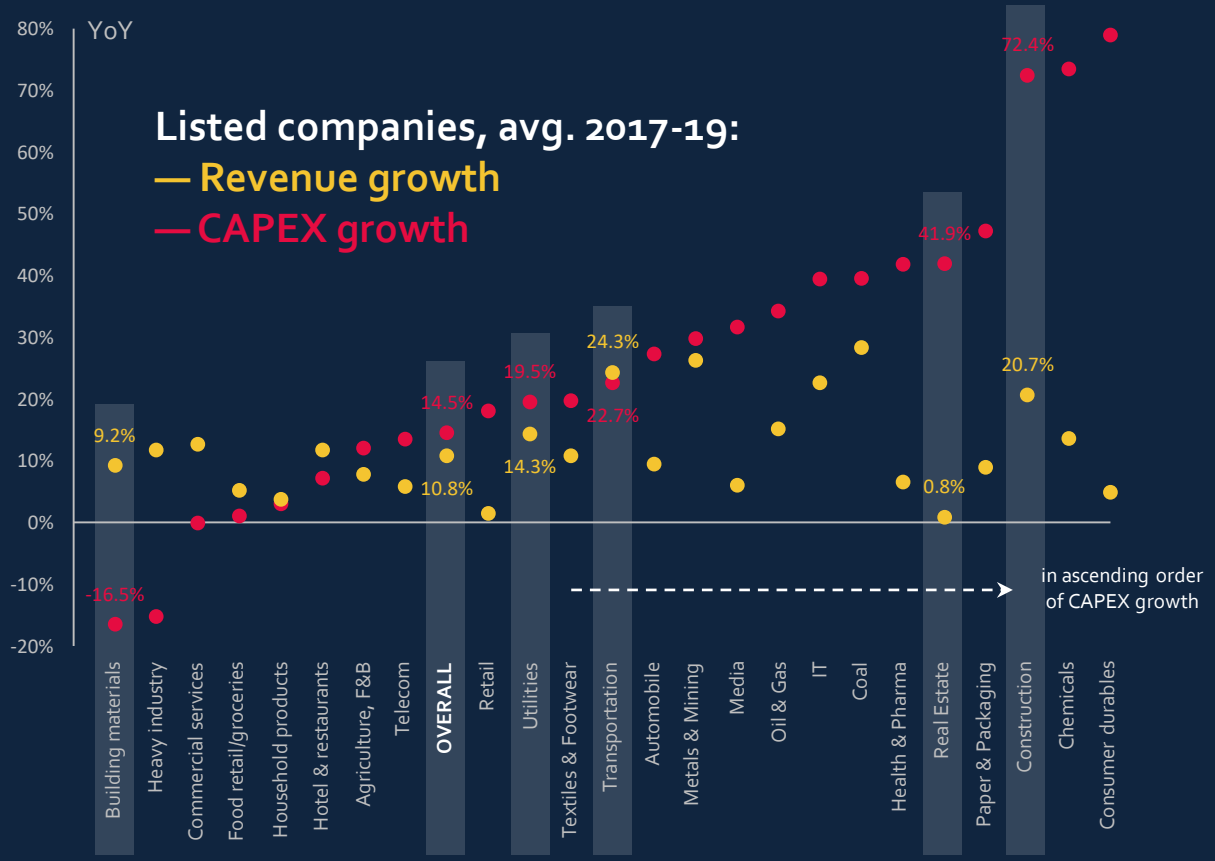
- The private sector's gearshift from gung ho to cautious can be seen as belated response to monetary policy (long lag and all that).
- The key to understanding this lag, it seems, is to focus on real rates instead of nominal. Both the adjustments in 2014 and in 2019 were preceded by BI rate hikes, but it was not until *real* rates had peaked that we saw clear improvement in private liquidity.
- *Note that we use the backward-looking CPI inflation here, since Indonesia lacks suitable data on inflation expectations.*
- But the logic is clear: rate hikes can induce the private sector to conserve liquidity, but only if they were not offset by the growth in money stock, most notably from government spending (*pg. 22*).



Source: *Bank Indonesia, Ministry of Finance, BPS, calculations by BCA Economist*

Why did it end early? #3 – Mal-investment, part deux

- The urge to scale back on spending might have also been driven, in part, by a surfeit of not-so-productive investment during the boom.
- It is worth noting, however, that the mal-investment was not necessarily caused nor related to *Jokowinomics*. Indeed, some key sectors in the infrastructure buildout, such as utilities and transportation, saw perfectly healthy revenue growth.
- Meanwhile, many unconnected industries – e.g. chemicals or consumer durables – saw weak revenue growth despite large CAPEX during this period.
- Where the Venn diagram intersected was in real estate and construction – and interestingly, CAPEX in both remained strong until the end of 2019. In hindsight, investments here might have thus **"crowded out"** CAPEX in other industries.



Source: *Bloomberg, calculations by BCA Economist*

Projections of macroeconomic indicators

	2018	2019	2020	2021	2022	2023E
GDP growth (% YoY)	5.2	5.0	-2.1	3.7	**5.3**	**5.1**
GDP per capita (USD)	3927	4175	3912	4350	**4784**	**5285**
CPI inflation (% YoY)	3.1	2.7	1.7	1.9	**5.5**	**2.6**
BI 7-day Repo Rate (%)	6.00	5.00	3.75	3.50	**5.50**	**5.75**
10Y government debt yield (%)	7.98	7.04	5.86	6.36	**6.92**	**6.72**
USD/IDR exchange rate	14,390	13,866	14,050	14,262	**15,568**	**15,535**
Trade balance (USD Billion)	-8.5	-3.2	+21.7	+35.3	**+54.5**	**+32.8**
Current account balance (% of GDP)	-3.0	-2.7	-0.4	+0.3	**+1.0**	**-0.7**

Source : *BPS, Bloomberg, BCA Economist calculations*

Notes:
- BI 7-day Repo Rate, 10Y yield, and USD/IDR exchange rate all refers to end of year position
- 10Y yield and USD/IDR exchange rate projections refer to fundamental values; actual market values may vary depending on current sentiment and technical factors

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