Macro Note

Indonesia: Domestic NDF – Opportunities And Challenges

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- DNDF is a step forward to deepen the domestic financial (FX) market, but challenges remain in terms of the actual implementation of DNDF and the current structure of the current account balance that is in deficit.

- After JISDOR in 2014, the DNDF policy could be seen as a natural move to continue anchoring the rupiah stability by re-shoring the non-deliverable forward transactions. We think the key to the success of DNDF also lies in the clarity of the rules of the game and consistent clear communication to all the market players.

- Once DNDF gains more traction, we believe that such instrument will complement the existing FX market instruments to facilitate alternative hedging facilities and hopefully reduce spillover from externally-driven volatility.

Quick Summary
Bank Indonesia (BI) introduced a new foreign exchange (FX) instrument on 28 September 20181 coined domestic non-deliverable forward (DNDF), which is a rupiah-settled and onshore-fixed non-deliverable forward FX instrument. While such move to deepen the domestic financial (FX) market is a step forward, challenges remain in terms of the actual implementation of DNDF and the current structure of the current account balance that is in deficit, i.e. structural USD demand remains much higher than supply. However, we highlight some opportunities associated with the introduction of DNDF if this instrument could bring about less volatility and more stability in the IDR spot market through instilling more credibility in the onshore fixing. Besides, DNDF would not affect Indonesia’s FX reserves position as it will be IDR-settled, rather than USD-settled. The key is on the clarity of the rules of the game and consistent clear communication to all the market players.

The Global And Asian NDF Market
Increased sophistication in the financial market and somewhat reflecting global financial deepening, there is a noticeable surge in the derivatives transaction notably that involves foreign exchange and local currency swaps as well as offshore over-the-counter (OTC) forward that does not involve delivery of the underlying local currencies, i.e. instrument better known as the non-deliverable forward (NDF). Basically, NDF is a cash-settled, short-term forward contract on a thinly traded or non-convertible foreign currency, where the profit or loss at the time of the settlement date is calculated by taking the difference between the prevailing market exchange rate and the agreed upon exchange rate for an agreed upon notional amount of funds2. The key feature of NDF instrument is that it has a fixing date and a settlement date. The fixing date is the date at which the difference between the prevailing market exchange rate and the agreed upon exchange rate is calculated. The settlement date is the date by which the payment of the difference is due to the party receiving payment. NDFs are commonly quoted for time periods of one month up to one year, and are normally quoted and settled in U.S. dollars. They have become a popular instrument for corporations seeking to hedge exposure to foreign currencies that are not internationally traded.

1 PBI No. 20/10/PBI/2018
2 As described formally by Bloomberg, who provides platform for such prices of NDF rates.
BIS studies in 2013 and 2016 suggest that for the Asian markets, the influence of NDF market actions is somewhat a reflection of news flows after the close of Asian market trading hours and to reflect more of global market news and developments of which only can be reflected in Asian hours on the next day. In the estimation results based on their 2013 study, it suggests that both domestic markets and NDFs incorporate global factors. In our assessment, the NDF market is an “outsider” view that might provide an added factor in the price discovery of the value home currency vis-à-vis the US dollar. However, as we reckon that most NDF transaction is predominantly used by portfolio investors, the role of NDF for hedging purposes may become diluted and sometimes turn more into speculative positioning. This is especially so given the large foreign shareholding of our regional sovereign bonds such as in Malaysia and Indonesia.

**IDR NDF And Rationale For IDR DNDF**

NDF market for the rupiah was “born” after the 1997/98 Asian financial crisis (AFC), albeit without support of financial authorities. Unlike Malaysia post-AFC, Indonesia did not impose strict capital control but not long after, Bank Indonesia’s (BI) paradigm changed and then viewed that the lack of such controls made the rupiah vulnerable to speculators. In response, BI imposed new rules in January 2001\(^3\) banning the transfer of rupiah to non-Indonesian residents\(^4\). Before that, deliverable rupiah forwards were actively traded offshore, mostly in Singapore, and non-residents enjoyed easy access to rupiah funding. The prohibition effectively limited the offshore deliverability of the rupiah and dried up trading in offshore deliverable rupiah forwards. However, demand for hedging of investments into Indonesia remains significant. To meet the offshore hedging or speculative demand, an offshore market in rupiah NDFs gradually developed over the following months. Turnover in the rupiah NDF market seems to have increased substantially from the first months of NDF trading in 2001, with increased non-resident investment in local currency bonds, equities and other assets. The investor base mainly comprises multinational corporations, portfolio investors, hedge funds and proprietary foreign exchange accounts of commercial and investment banks.

Even during the global financial crisis that started in 2008 where downward pressures on emerging market currencies including IDR were very strong, Indonesia did not impose specific regulations on NDF but issued series of regulations that inherently prohibit speculating or trading products with underlying assets of Indonesian Rupiah-denomination. However, it seemed that BI has a special interest or attention towards the offshore market, in the likes of NDF. This is evident from a 2012 study conducted by BI on the offshore and onshore IDR market and whether there is spillover in any direction. Cadarajat and Lubis (2012)\(^5\) found evidence of one-directional spillover from NDF to both onshore spot and forward rupiah markets. On the volatility, the same research paper found that the spillover is only significant from NDF market to spot market for the entire period. However, in the time of crises, there is interdependence between volatility in offshore NDF and onshore spot rate changes, while information transmission is only valid from NDF to forward rate changes, not the other way around. In simpler language, it is the offshore or external market that has affected the local spot market disproportionately.

Consequently, the undesirable impacts from the offshore FX rate fixing that is used to settle the NDF contracts (again, sometimes used not for real hedging purposes but for speculation) has resulted in BI’s decision in 2014 to move the rupiah exchange rate daily fixing to the onshore market with due cooperation from its key offshore center, Singapore. The Association of Banks in Singapore (ABS) announced that it and the Singapore Foreign Exchange Markets Committee (SFEMC) will no longer publish IDR reference rate after 27 Mar 2014. After 27 Mar, the onshore Jakarta Interbank Spot Dollar Rate (JISDOR) was used for existing and new contracts instead. JISDOR is published by Bank Indonesia (BI) and is calculated as a weighted average of all USD/IDR transactions in the interbank onshore market. In contrast, the offshore NDF fixing was mainly determined by a weighted average of 1-month NDF trades done by then Singapore-based brokers with no actual reference to the onshore spot at all. Thus, the DNDF policy could be seen as a natural move to continue anchoring the rupiah stability by re-shoring the non-deliverable forward transactions.

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4 See, for example, earlier studies done by Goeltom (2002) and Watanabe et al (2002).
**IDR DNDF: Opportunities And Challenges**

We use simple observation (Figure 1 below) based on market data to first understand the extent of global spillover that is reflected by the movement in the offshore IDR NDF into the volatility of the IDR spot market (represented by 1-month historical volatility). In doing so, we introduce a simple concept known as forward premium gap. We used this as an indicator to proxy the offshore “stress” and how it transmits into the domestic onshore FX rates (IDR in this case). The forward premium gap is calculated as the difference between the offshore NDF rates and the onshore forward rates as a percentage of spot price. The basic premise is that if there is a strong spillover case, a higher IDR forward premium gap will result in higher realized volatility in the onshore IDR market.

Figure 1 suggests that in 2010 to 2017, the increase in the forward premium gap always lead to higher volatility of the onshore rupiah exchange rate in the first three major crises: European debt crisis – 2011/12, US Fed taper tantrum – mid 2013, and the one-time CNY parity adjustment by the PBOC in August 2015. Meanwhile the most recent event risk (Donald Trump’s election victory in November 2016), has seen almost very little spillover from the offshore market, as shown by the spike in the forward gap premium but not resulting into spikes of onshore IDR historical volatility. It seems that the move by the Indonesian monetary authority to anchor the fixing reference rate in the onshore market in 2014 and to allow more currency flexibility seemed to have resulted in less volatility in the onshore rupiah market. In fact, forward premium gap for IDR has relatively and persistently been milder since the anchoring of the domestic fixing via JISDOR. In a similar vein, this could be the yardstick to what needs to be achieved from the introduction of DNDF in order to instill more stability for the onshore IDR. This is mainly because NDF volatility is larger than the onshore spot/forward counterpart during time of stress and risks of spilling over to the domestic market too excessively. This could be due to offshore investors imposing higher risk premium towards EM currencies and their financial assets.

Hence, once DNDF gained more traction, we believe that such instrument will complement the existing FX market instruments to facilitate alternative hedging facilities that cater not only for onshore corporates but also to non-residents (both portfolio and real money investors). More importantly, this will also shift the hedging demand using offshore NDF into using DNDF that might anchor expectation better. Furthermore, by using DNDF, the need of BI to conduct official intervention and consequently drained FX reserves will be much reduced. Eventually, DNDF will also further deepen the domestic FX market and eventually lessen the external volatility from spilling over excessively towards the local FX market.
Nevertheless, prior to the DNDF being effective in the middle of next month, perhaps it is also noteworthy to broadly highlight a few challenges that could come into our way. First, Indonesia’s external position is currently facing some headwinds. Figure 2 shows that as CAD deteriorates, net FDI (as % of GDP) has also diminished, thus significantly resulting into much tighter USD liquidity in Indonesia. In other words, the turning of basic balance (CAD + Net FDI) back into negative territory would suggests that the sustained demand of USD amidst tighter supply of dollar liquidity may create more one way trade for the IDR DNDF. This would be even more so in light of further tightening of the global financial conditions as US Fed continues its rate hiking cycle and other major central banks such as the ECB is wrapping up its asset purchase program and started with forward guidance of a interest rate hike. Secondly, as a hedging tool, it is yet to be established how attractive the pricing of DNDF is as compared to other alternatives, including the usual onshore FX forward and others. This will also determine whether DNDF will eventually serve a specific type of investors, i.e. non-residents, or could really cater for broader financial market players in the local market. Thirdly, although in our understanding that DNDF positions will not be accounted for in the combined net open positions of onshore counterparty banks, documentation requirements for potential users may be “more restrictive” as compared to the offshore-based NDF. Although this is understood as the aim to have a more domestic-based anchor in determining the expectations of the IDR and to reduce as much as possible room for speculation, offshore users may delay using DNDF as their hedging tools vis-à-vis the usual NDF. Hence, we think the key to successful goal of DNDF also lies in the clarity of the rules of the game and consistent and clear communication to all the market players. This is important because a successful implementation of DNDF as a progressive step towards deepening the domestic financial markets by allowing nonresidents to participate in the domestic hedging activities, i.e. allowing them to participate in the onshore hedging markets, may significantly reduce spillover risks (BIS 2013 and 2016). Another positive development is also to acknowledge the increasing number of policy mix being introduced to safeguard the currency market and the domestic financial markets in general, which should help to cushion volatility spillovers from the offshore NDF markets.

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