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WEEKLY REVIEW SERIES

Understanding The Dynamics of Low Yield Environment Case Study : Indonesia

Indonesia Macro Data Forecast

Macro Indicators	2020	2021F
Real GDP (%YoY)	-2.07	3.76
Average Inflation (%YoY)	2.04	1.87
BI-7 DRR (%)	3.75	3.5
Budget Deficit (%GDP)	6.09	5.73
USD/IDR	14,500	14,400
10 Year Indo GB (%)	5.89	6.46
JCI	5,979	6,320
EPS Growth (%)	-30	20

Source : BI, MoF, BPS, MNCS Estimate

Global & Domestic Key Rates

Rates (%)	Dec-20	Sep-21*
BI-7 DRR	3.75	3.50
Lending Facility	4.50	4.25
Deposit Facility	3.00	2.75
10 Year Indo GB	5.89	6.14
FFR	0.25	0.25
ECB Rate	0.00	0.00
BoE Rate	0.10	0.10
BoJ Rate	-0.10	-0.10

Source : Bloomberg, BI as of Sep 17, 2021

The Driving Forces of Historically Low Yields in Indonesia

The 10 year Indo GB yields has declined to below its long term average. In this report we tried to understand the driving force behind this phenomenon.

Here we lied a fundamental approach to understand why low yields of Indo GB is justified by employing a regression analysis considering multiple factors such U.S. treasury yield, 5 year CDS, USD/IDR, foreign ownership on government securities, policy rate and inflation.

Even with the historically low yields, Indo GB still offers attractive valuation in terms of real yield. Central bank's intervention through expansionary monetary policy and government debt monetization, as well as banks risk averse behavior drove government bond yields to decline despite a recorded a net foreign outflow since market turmoil in March-April last year.

In addition, lower local currency denominated government bond in 2021 was also attributable to lower rupiah volatility. Despite widening fiscal deficit and rising indebtedness, yields of rupiah denominated government bonds are stably below its 10 year average.

Our econometric model has shown that rupiah denominated government bonds positively responded to U.S. treasury, 5 year CDS, USD/IDR, foreign ownership, policy rate and inflation shocks based on Impulse Response Function (IRF). However long term declines in this fixed income assets can be briefly justified by a lower risk premium and benign and manageable inflationary pressure as Variance Decomposition (VD) showed. These two factors contribution gradually increase as time as time goes on to the yield.

Corporate Bonds Market Behavior During Low Yields of Government Bond

We observed that the downtrend in government bond yield also became a positive catalyst for corporate bond primarily with AAA rating. Spread of AAA-rated corporate bonds to government bonds for 3 & 5 year maturity declined to nearly low of pre-pandemic level. Meanwhile for other ratings, the behavior differ despite spread on 3 & 5 year maturity corporate bonds narrowed across ratings.

Demystifying Stock and Government Bond Correlation

We also tried to quantify the relationship between stocks and government bond in terms of its correlation to understand how these two asset class behave and to assess whether government bond could be an alternative investment during uncertain time (safer asset).

Based on our quantitative method, stocks and government bonds have a long term positive correlation. However the correlation was considered low and the trend is declining. We also observed a negative correlation between these two assets at some point if we take a look more closely on a more high frequency data such as monthly and weekly basis. This results showed that Indo government bond could be a safer asset over stocks particularly in time of market turbulence.

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The Driving Forces of Historically Low Yields in Indonesia

Indo GB yields movement over the last decade

After suffering an economic recession due to 2008 GFC, the benchmark for long term rupiah denominated government bond (10 year Indo GB) experienced a downtrend. The average yield for 10 year Indo GB in 2008 was at 12.6%. Yields continued to decline to the lowest level 4 years after the crisis to 5.9% in 2012. This was largely driven by quantitative easing (QE) taken by the Fed which triggered EM countries capital inflows including Indonesia. The portion of foreign ownership in tradable government securities increased significantly driving yield to further drop yet also entailing another risk.

Since the announcement of tapering by the Fed in 2013, Indonesia suffered a large outflows which triggered an uptrend in the GB yields and depreciating rupiah against USD besides widening CAD.

The 10 year Indo GB yield peaked in 2015 with the average of 8.3%. After that, yield declined to below 7% in 2017 before rising again on the back of aggressive U.S. monetary tightening.

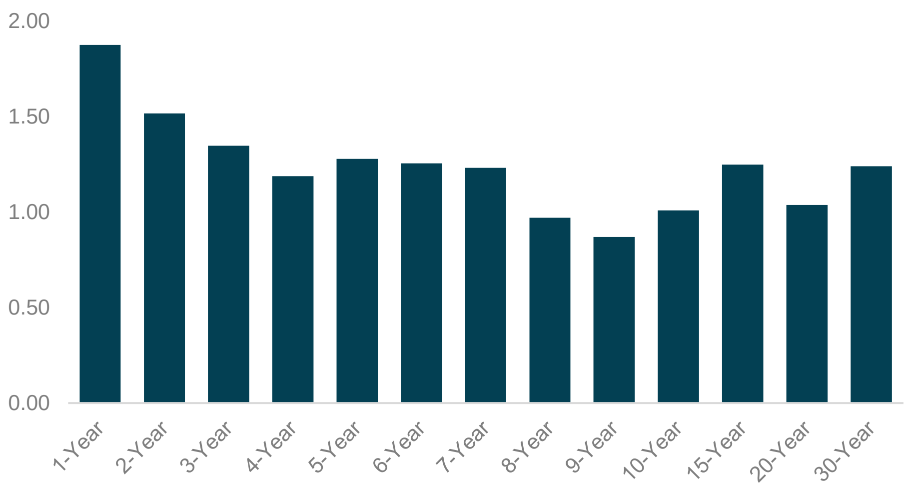
As the financial market become more integrated, a global shock can induce a similar response to the market with a faster and greater magnitude across asset class, including the government bond.

In the last decade, the Indo GB yields have declined. The short term bond yields declined more than the longer ones indicating the term premium

This was proven by the Covid-19 induced market turmoil last year. The benchmark Indo GB yield was up above 8%, yet with the fast response from policy maker in this case the Fed through another round of QE, U.S. treasury yields downed and was followed by yields in DM & EM countries.

However, still, the Indo GB yields tended to drop in the last decade. A shorter maturity (< 5 years) of Indo GB yields dropped more than the longer ones (> 10 years) as can be seen in Exhibit 3. This phenomenon might indicate the term premium which reflected a higher risks for investors, thus need to be compensated with the higher yields

Exhibit 3. Yield Drops across Indo GB in percentage points (pp)

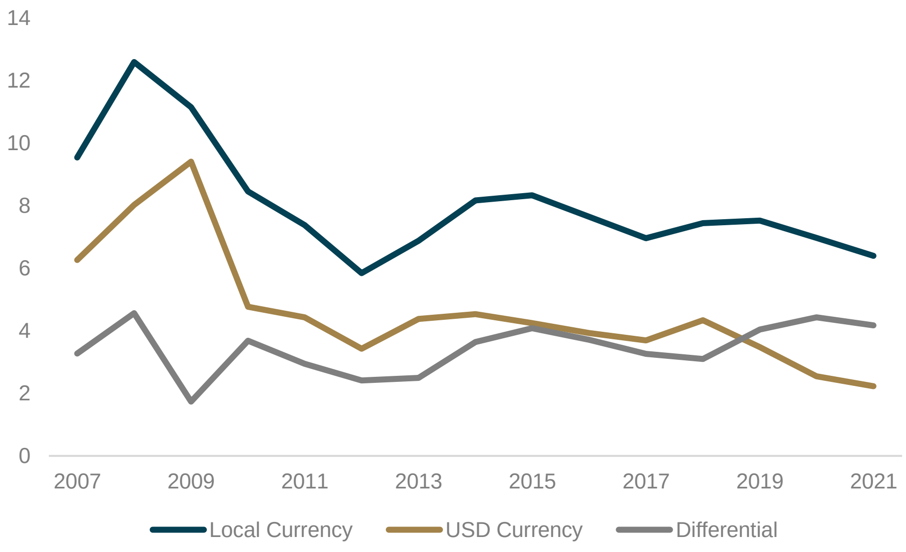


Source : Bloomberg, MNCS

USD denominated GB yields dropped more than local currency yields and was attributable risk associated with currency volatility and depreciation

Interestingly, the yields decline in long term for local currency denominated and USD denominated GB also differed. In the case of long term USD denominated GB yields declined more than the rupiah denominated one. In the last 10 years the average long term Indo GB yield dropped only 0.98 percentage point while for USD denominated bond lowered by 2.21 percentage points (Exhibit 4).

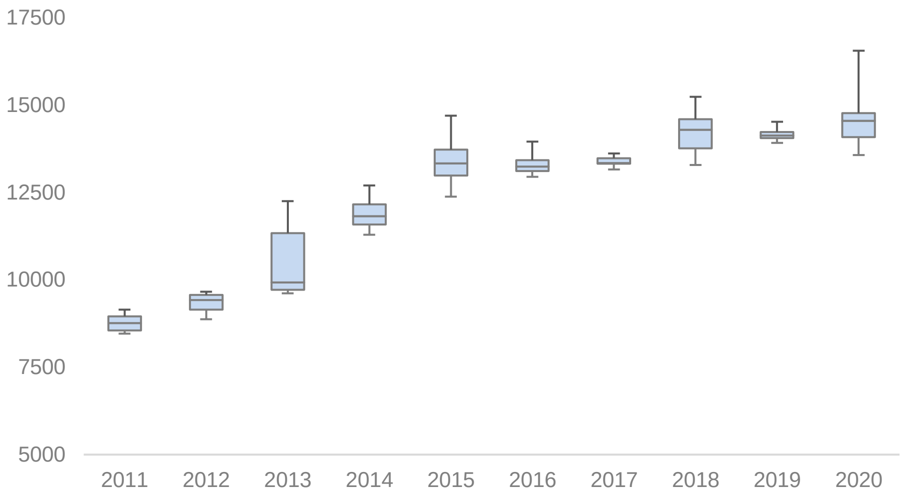
Exhibit 4. Indo GB Yield Movement based on Currency Denomination in percentage point (pp)



Source : Bloomberg, MNCS

One factor affecting the yield differential between local currency vs USD denominated long term Indo GB was rupiah movement and volatility (Exhibit 5). Rupiah was considered as soft currency with high volatility and tend to depreciate over time, hence reducing returns and posing higher risk for foreign investors that hold large portion of Indo GB (~30-40%).

Exhibit 5. Boxplot of USD/IDR Movement since 2011



Source : Bloomberg, MNCS

The Indo GB yield movements were affected by domestic and external factors with 5-year CDS and inflation contribution rising based on our econometric model

Our Quantitative Approach to Understand Long Term Indo GB Yield Drops

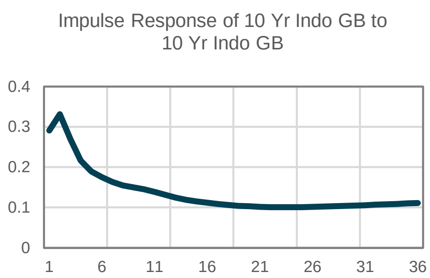
In the last decade QE has played a major role in propping up asset prices across the board. Also, analysts agreed that the Fed's QE policy helped depress U.S. treasury yield supporting the government bond price to appreciate. As we already mentioned earlier in this report, the asset class interaction was also largely influenced by a more integrated and connected financial markets globally, therefore U.S. treasury movement as a risk free rate will not only cause change in U.S. assets valuation but also other countries.

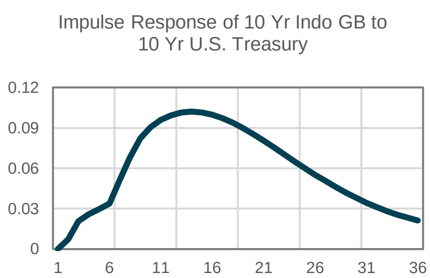
Historically U.S. treasury and Indo GB yield moved in the same direction with high degree of positive correlation (R=0.62). We are interested in further exploring the interaction between both asset but also including other factors such as 5-year CDS, USD/IDR, foreign ownership, policy rate and inflation to see which determinant contribute the most on Indo GB yield movement.

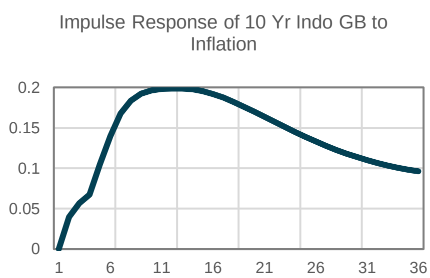
In this chapter we employed an econometric modeling through applying Vector Error Correction Model (VECM) due to the nature of data which saw a cointegration after performing Johansen Cointegration Test. We used a monthly data of those above mentioned variables and analyzed the results with Impulse Response Function (IRF) to see the response of Indo GB yield to a shock in each variable and Variance Decomposition (VD) to understand which contribute the most to the Indo GB yield movement over a 36 periods.

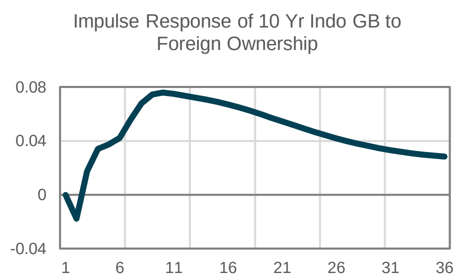
Given the shock in each variable, the response of Indo GB yield was positive although we see some fluctuations (Exhibit 6). In the early period of shock to U.S. treasury and inflation, the response was positive. This positive response increase over time yet waning after the 10th period. For USD/IDR and foreign ownership variables, the response was negative at the first time before flipping out to a positive territory and decreasing later. Meanwhile for 5 year CDS the response was already positive since the first time of shock, then increasing and flattening after 16 periods of time. Overall the largest positive response was seen in the shock of Indo GB itself, inflation and 5 year CDS indicating that these factors were the major determinants for long term domestic GB yield movement.

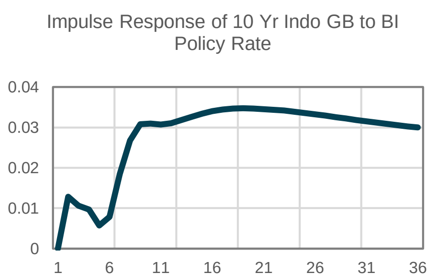
Exhibit 6. Impulse Response Function

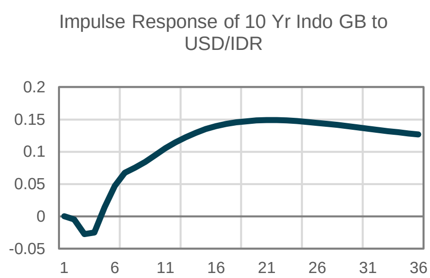


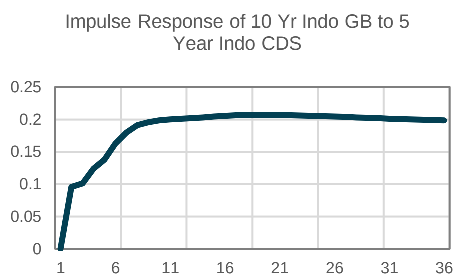








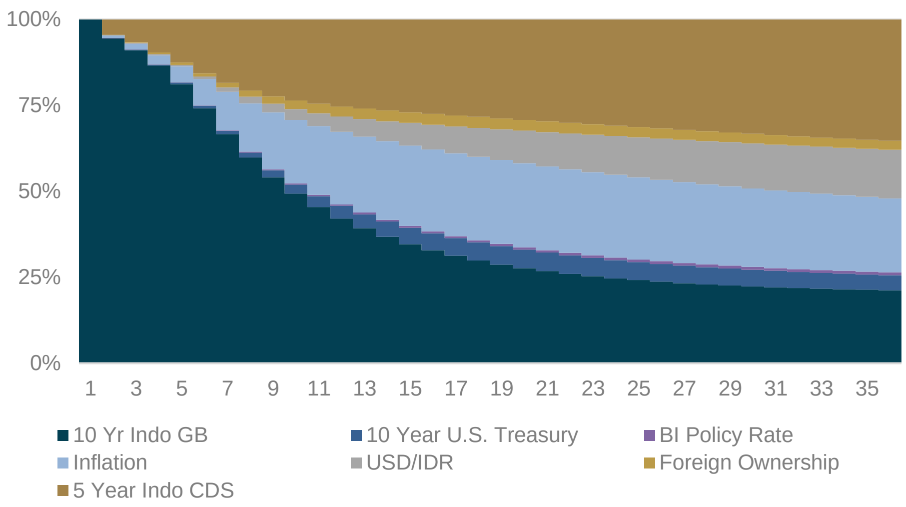




Source : Bloomberg, MNCS

Based on VD analysis, the larger contribution of Indo GB variance over 36 period was firstly the Indo GB itself. However the contribution tend to decline as time goes on. Meanwhile inflation and 5 year CDS contribution increased over time (Exhibit 7).

Exhibit 7. Variance Decomposition

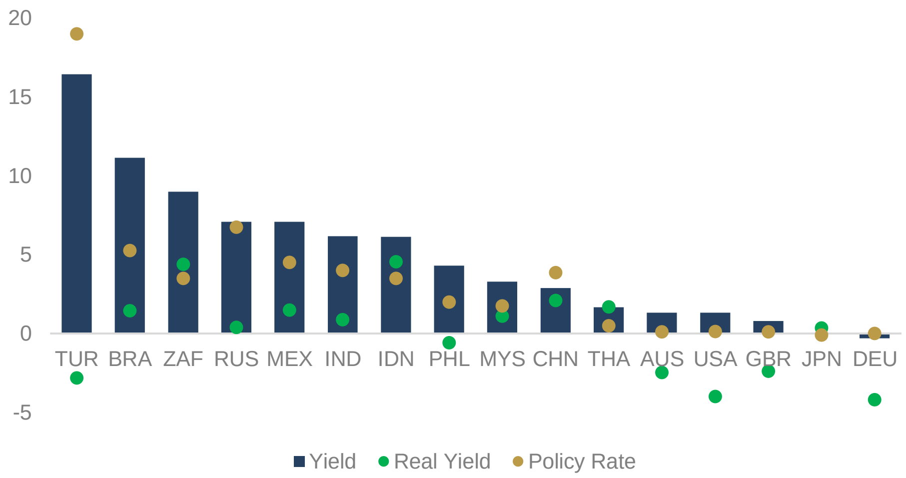


Source : Bloomberg, MNCS

Benign inflationary pressure and lower risk premium justified lower yields for Indo GB as it reflected a return and risk side of investment thesis

These two factors reflected the risk and return side. Inflation affect real yields obtained by investors while 5 year CDS indicate risk holding this government securities. Therefore benign inflationary pressure (<2% central bank target) and low risk premium (5 year CDS < 70 bps) justified recent low yields of Indo GB., let alone up until now Indonesia offer one of the highest real yield compared to DM & EM countries (Exhibit 8).

Exhibit 8. Real Yields of Local Currency Denominated Government Bond Across DM & EM Countries

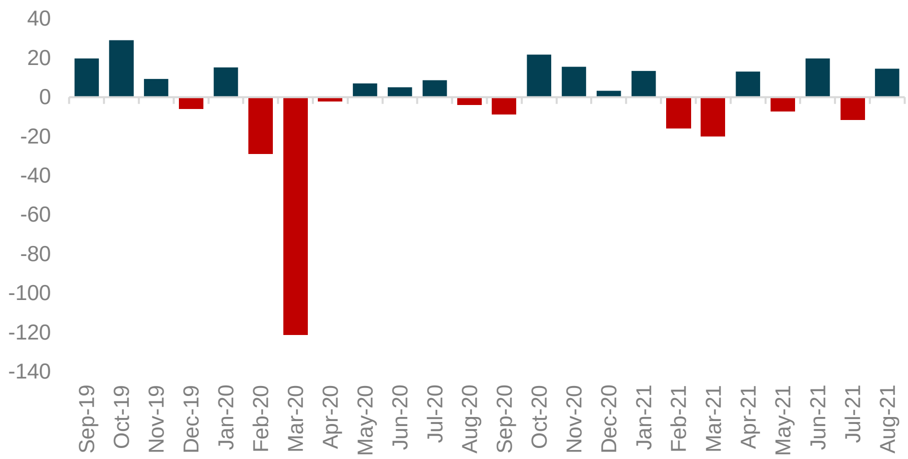


Source : Bloomberg, Trading Economics, MNCS as of Sep 17, 2021

A more stable with low volatility of rupiah supported yields to keep at low level, reducing currency associated risk for foreign investors

In 2021, domestic government bond market saw a net inflow of IDR6.56tn, yet since market turbulence in March-20, Indonesia still recorded a net outflows of more than IDR65tn (Exhibit 9). This year, large outflows happened in 1Q21 with the cumulative net outflows of more than IDR20tn when U.S. treasury yields moved up on the back of strong recovery and rising inflation. The 10 year Indo GB yield saw an increase since Jan-21 and peaked in March-21 at 6.72% on monthly average basis before stabilizing and decreased again since August-21 driven by a clearer Fed's guidance.

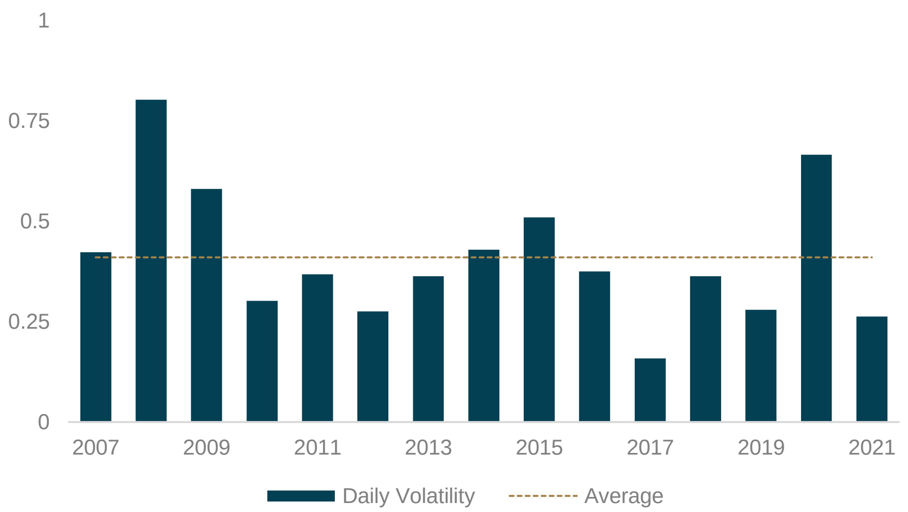
Exhibit 9. Foreign Flows to Government Securities (IDR Tn)



Source : DMO

Besides declining U.S. treasury yield and 5 year CDS, the stability of rupiah also play a role to keep yields low. Unlike in 2013 when the Fed's tapering issue emerged, in 2021 rupiah is stably trading within its fundamental with low volatility below its long term average of annual volatility (Exhibit 10).

Exhibit 10. Rupiah Volatility as Indicated By its Annual STD (%)



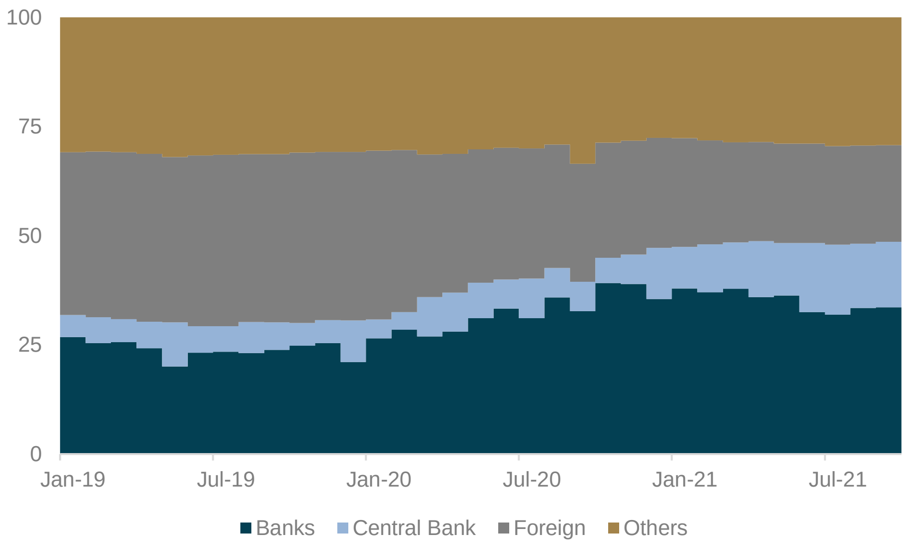
Source : Bloomberg, MNCS

High appetite in primary & secondary market particularly from banks and central bank intervention also helped boost Indo GB price

The recent low yields also can be justified by the action taken by domestic policy maker in this case is central bank and market participants primarily banks. When foreign ownership in tradable government securities dropped from more than 30% to 22%, BI took an intervention by buying the government bond from primary and secondary market. The domestic central bank holding of tradable government securities increased to a more than 10% averagely this year. The burden sharing scheme between monetary authority and fiscal authority also reduce the bond supply risk amid widening budget deficit.

Meanwhile banks with ample liquidity as indicated by lowering LDR and rising third party fund trying to reduce their exposure to credit market during social restriction to keep pocketing yields while reducing the risks through buying the government bond. These two entities now hold 48.6% from the total of tradable Indo GB (Exhibit 11).

Exhibit 11. Share of Tradable Government Securities by Investors (%)



Source : DMO

Investors high appetite in government bond as a safer asset also can be seen in the primary market activities. The incoming bids value of August-21 government securities auction reported to reach above IDR350tn. In 2020, the average incoming bids value was at IDR54.5tn/auction. This value increased to IDR57.52tn/auction in 2021.

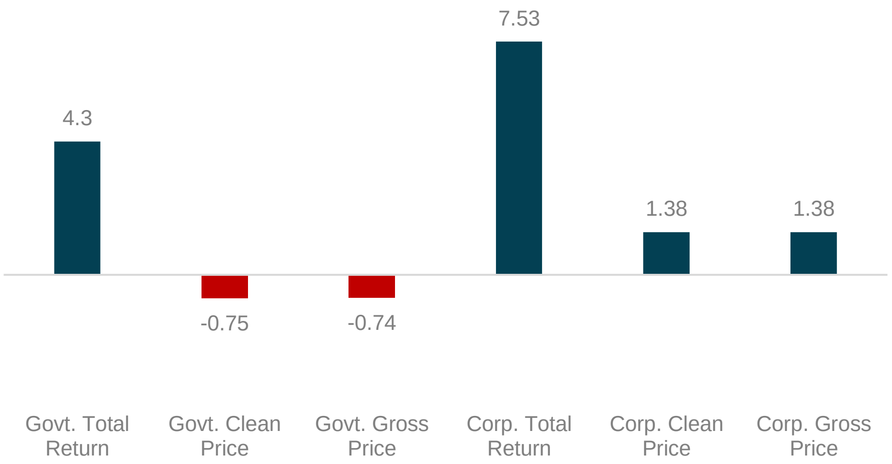
All in all, the low yields in domestic government bond market amid large budget deficit and indebtedness is quite reasonable after we carefully examining all interacting factors including macro-economic indicators and market behavior.

Corporate Bond Market Behavior During Low Yields of Government Bond

The declines in Indo GB yields also trigger corporate bond price to appreciate. We assume that lowering corporate bond yields was partly due to lower risk sentiment. We observed that corporate bonds performance outperformed the government bond since year to date (Exhibit 12). On an annual basis both of the assets moved in the same direction and gave a positive return for investors (Exhibit 13).

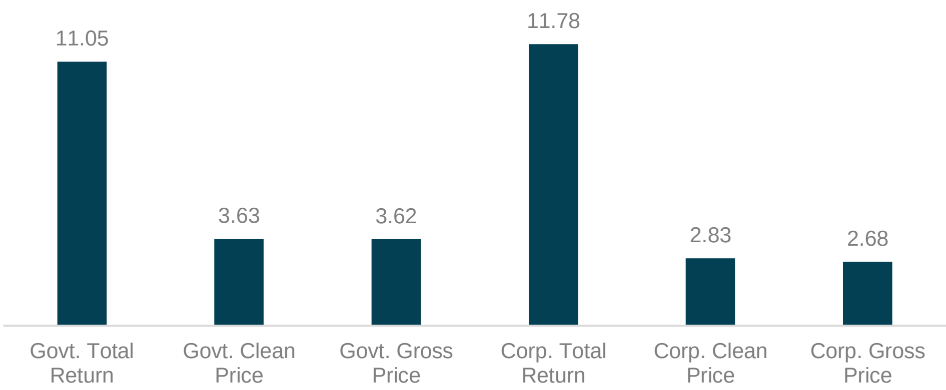
Low yields of Indo GB became a positive catalyst for corporate bonds with AAA-rated corporate bond to be the most impacted

Exhibit 12. Year to Date Performance of Corp vs Govt Bond (%)



Source : IBPA

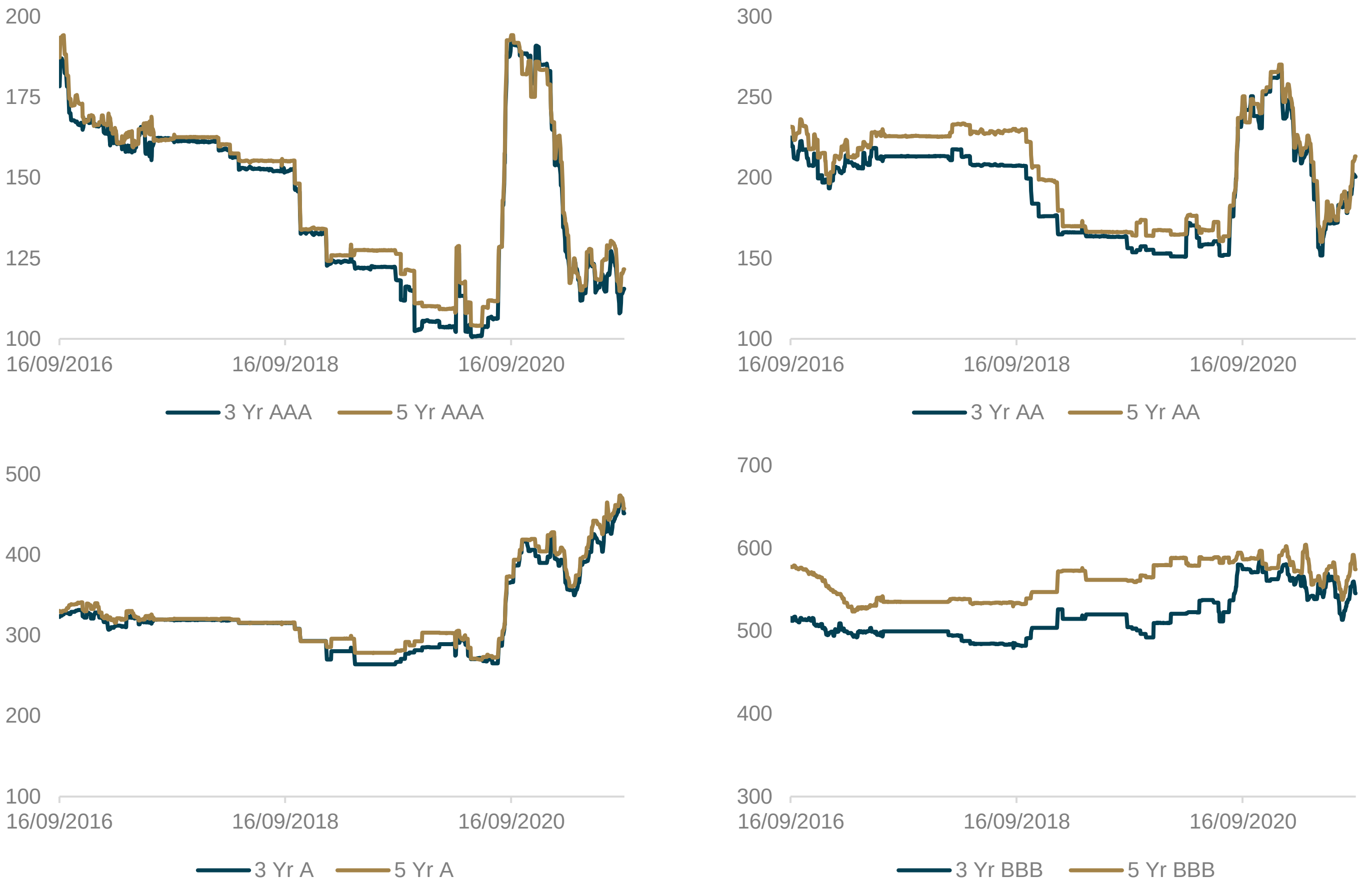
Exhibit 13. Year over Year Performance of Corp vs Govt Bond (%)



Source : IBPA

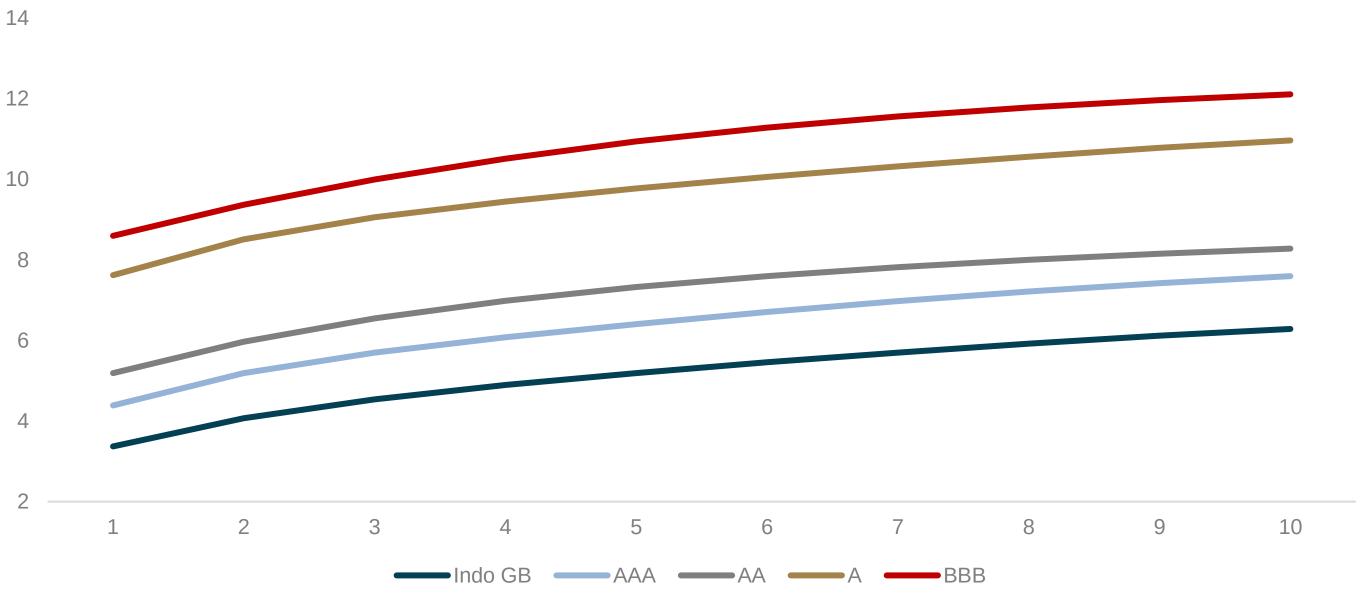
Spread across tenure narrowed as indicated by 3-5 year spread. However spread across ratings differ significantly. Spread of 3&5 year AAA-rated corporate bond dropped more than 70 bps since Covid-19 pandemic peak. Spread of 3&5 year AA-rated corporate bond saw a declined yet gradually rising recently. Spread of 3&5 year A-rated corporate bonds widened even after improving Covid-19 pandemic development. Spread of 3&5 year BBB-rated corporate bonds tend to stay flat since last year (Exhibit 14 & 15). We believe that lowering risk sentiment was largely applicable to AAA-rated corporate bond.

Exhibit 14. 3 & 5 Year Corporate Bond Spread Across Ratings in bps



Source : Bloomberg, IBPA

Exhibit 15. Yield Curve of Indo Government and Corporate Bond (%)



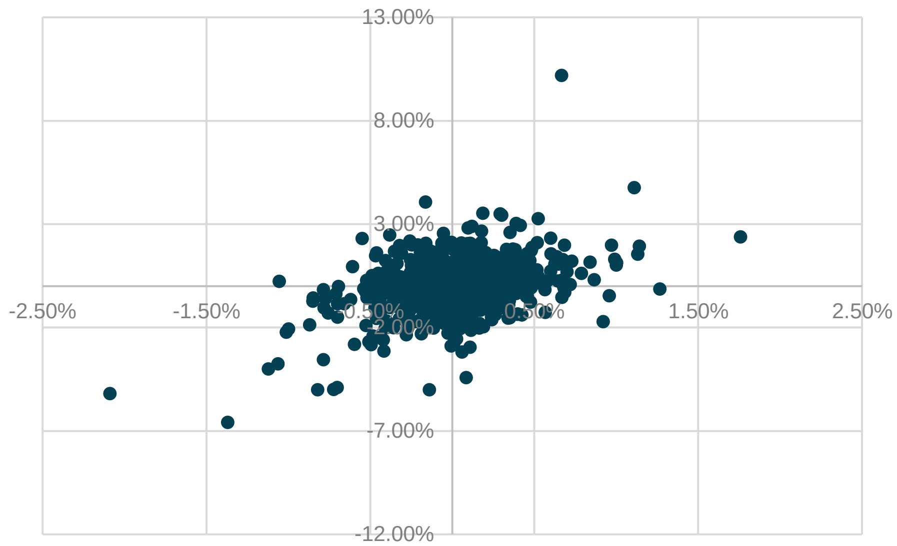
Source : IBPA

Demystifying Stock-Government Bond Correlation

Here in this report we also explored further the stock and government bond relationship in terms of correlation. We used daily JCI as a proxy for Indonesia stock market and Indo Government Bond Index by IBPA as a proxy for bond for 5 year period. If we calculate the daily return of each index, the correlation value was positive but having a low degree (R=0.38). The scatterplots below in Exhibit 16 depicted the correlation between two variables assessed in this report.

Historically Indo stocks and government bond have a weak positive correlation. However correlation between two assets tend to decline overtime

Exhibit 16. Scatterplots Correlation of Stock & Government Bond



Source : Bloomberg, MNCS

Based on our quantitative method, stocks and government bonds have a long term positive correlation. However the correlation was considered low and the trend is declining if we took a monthly rolling correlation. We also observed a negative correlation between these two assets at some point if we employed a more high frequency data such as weekly basis. This results showed that Indo government bond could be an alternative safer asset over stocks particularly in time of market turbulence such as in Covid-19 pandemic (Exhibit 17).

Exhibit 17. Monthly Rolling Correlation Stock & Govt Bond Returns

Source : Bloomberg, MNCS

MNC Research Industry Ratings Guidance

OVERWEIGHT: Stock's total return is estimated to be above the average total return of our industry coverage universe over next 6-12 months

NEUTRAL: Stock's total return is estimated to be in line with the average total return of our industry coverage universe over next 6-12 months

UNDERWEIGHT: Stock's total return is estimated to be below the average total return of our industry coverage universe over next 6-12 months

MNC Research Investment Ratings Guidance

BUY : Share price may exceed 10% over the next 12 months

HOLD : Share price may fall within the range of +/- 10% of the next 12 months

SELL : Share price may fall by more than 10% over the next 12 months

Not Rated : Stock is not within regular research coverage

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