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INDONESIA

SELECTED ISSUES

December 27, 2016

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CAPITAL INFLOWS TO INDONESIA SINCE THE GLOBAL FINANCIAL CRISIS[1]

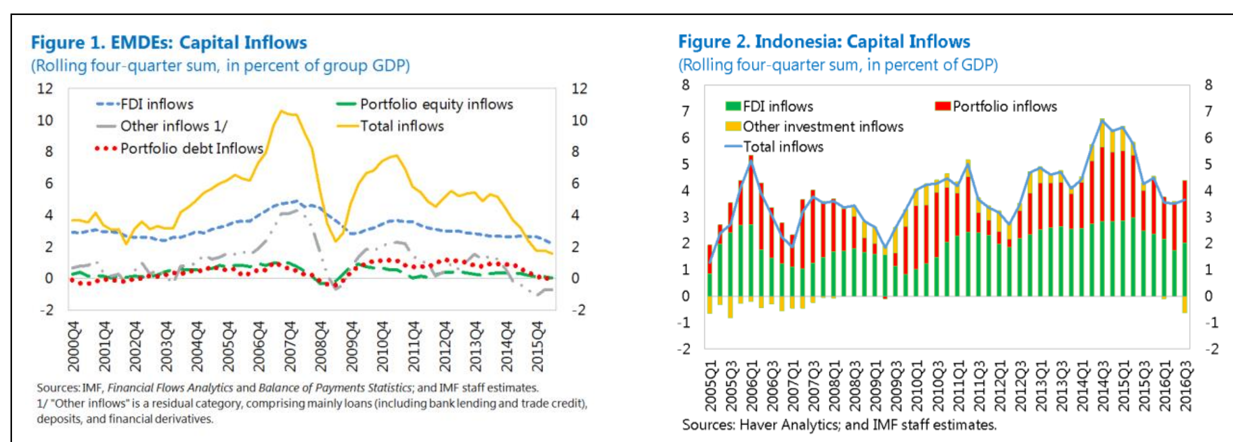
The landscape of capital inflows to Indonesia has changed in both the volume and composition since the global financial crisis (GFC). As nonresidents are purchasing Indonesian assets, Indonesia's external liabilities and debt positions have changed as well. While capital inflows have helped to finance Indonesia's current account and fiscal deficits since late 2011 when the commodity super-cycle was over, they have also brought challenges due to their volatile nature and tendency to come in waves, in particular, portfolio inflows.

A. Introduction

1. This paper analyzes developments in capital inflows to Indonesia since the GFC. Throughout the paper, capital inflows are defined as net acquisition of domestic assets by nonresidents. The paper discusses the recent trend of capital inflows to Indonesia, new features of Indonesia's external positions, and main drivers for capital inflows.

B. Developments of Capital Inflows

2. Capital inflows to Indonesia have increased since the GFC. Their average volume increased from 3¼ percent of GDP in 2005–09 to 4½ percent of GDP in 2010:Q1–2016:Q3. From the global perspective, driven by the liquidity released from the systemic economies' unconventional monetary policies, a global search for yields has led to large capital inflows to emerging and developing economies (EMDEs), especially portfolio inflows (Sahay and others, 2014). Indonesia was not an exception. While many EMDEs experienced a steady decline in capital inflows during 2013–16, capital inflows to Indonesia increased and reached a peak in late 2014, and then started to decline but remained at relatively high levels in 2015:Q1–2016:Q3 (Figures 1 and 2).



[1] Prepared by Yinqiu Lu.

3. The increase in capital inflows has helped to finance Indonesia's current account and fiscal deficits (Figure 3). After the commodity super-cycle fizzled out in 2011, Indonesia's current account has remained in deficit since 2012, in parallel with a widening fiscal deficit. Against this backdrop, increasing capital inflows enabled Indonesia to finance a current account deficit and issue additional government securities to meet the budget's needs.

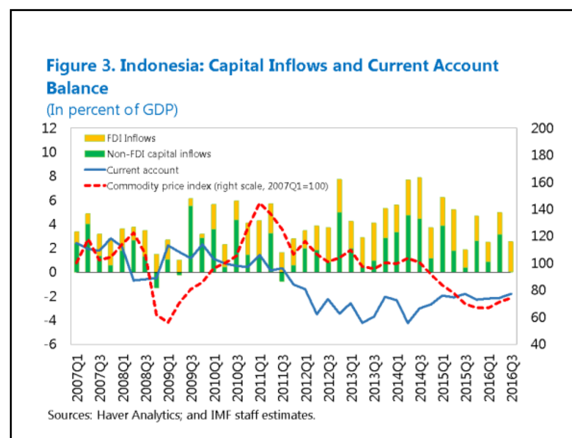


Figure 3. Indonesia: Capital Inflows and Current Account Balance
(In percent of GDP)
Sources: Haver Analytics; and IMF staff estimates.

4. FDI and portfolio inflows dominated capital inflows to Indonesia. They accounted for 52 percent and 40 percent of total cumulative inflows in 2010:Q1–2016:Q3, respectively, and these ratios have broadly remained stable since 2005. Other investment inflows became positive (in four quarter rolling terms) since early 2008 largely due to a pickup of cross-border bank lending to the private sector. However, the recent external deleveraging of the private sector has led to a reversal of other investment inflows.

5. The volume of portfolio inflows was influenced by global market sentiment. Due to Indonesia's close integration with global capital markets, portfolio inflows have followed a clear risk-on and risk-off pattern (Figure 4). Since portfolio inflows resumed after the GFC, their main reversals corresponded to changes in global sentiment: the euro area sovereign debt crisis in late 2011 and the EM volatility transmitted from the reform of China's exchange rate policy in the second half of 2015 (renminbi reform). Portfolio inflows declined sharply during the 2013 taper tantrum as well.

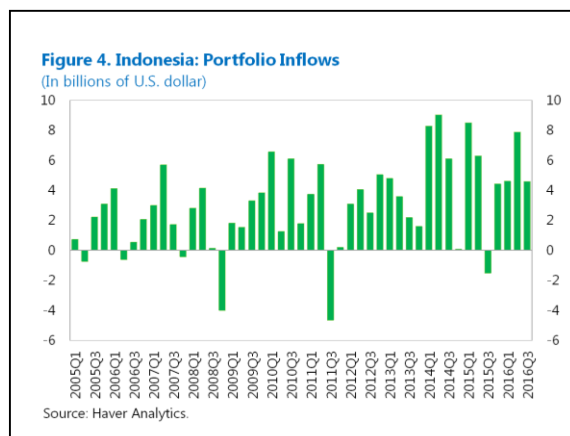


Figure 4. Indonesia: Portfolio Inflows
(In billions of U.S. dollar)
Source: Haver Analytics.

6. Government bonds have been the most popular financial instruments for foreign investors (Figure 5). Inflows to government bonds, accounting for 83 percent of total cumulative portfolio inflows, averaged at 1.5 percent of GDP in 2010:Q1–2016:Q3. Global fixed-income investors are attracted by Indonesia's high government bond yields, relatively high economic growth, and the statutory fiscal deficit limit of 3 percent of GDP, which caps gross fiscal financing requirements

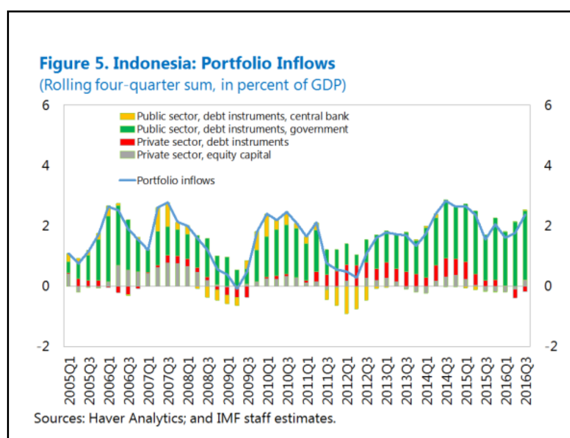
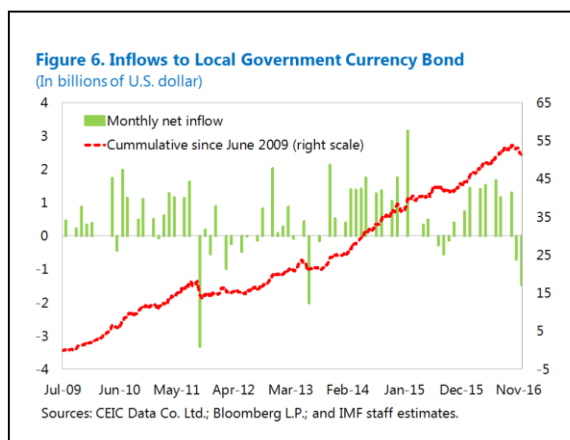


Figure 5. Indonesia: Portfolio Inflows
(Rolling four-quarter sum, in percent of GDP)
Sources: Haver Analytics; and IMF staff estimates.

(Miyajima and Toh, 2017). Corporate bonds are the second most popular instrument; however, foreign purchase of corporate bonds has recently declined, following a similar declining trend in cross-border bank lending. Inflows to central bank bills (SBIs) were influenced by Bank Indonesia's (BI) capital flow management measures. After BI extended the minimum holding period of SBIs to 6 months in May 2011 from one month (imposed in July 2010), foreign investors sold off SBIs.[2] Inflows to equity, relatively small in volume, had been volatile.

7. Local currency (LCY) government bonds have attracted more inflows than those denominated in hard currency. It is estimated that 60 percent of the inflows to government bonds went to rupiah-denominated government bonds in 2010:Q1–2016:Q3. Despite some episodes of outflows—such as during the euro area sovereign debt crisis, the taper tantrum, and the 2015 renminbi reform—total cumulative inflows reached US$52 billion during this period, a major source for financing the budget deficit (Figure 6).

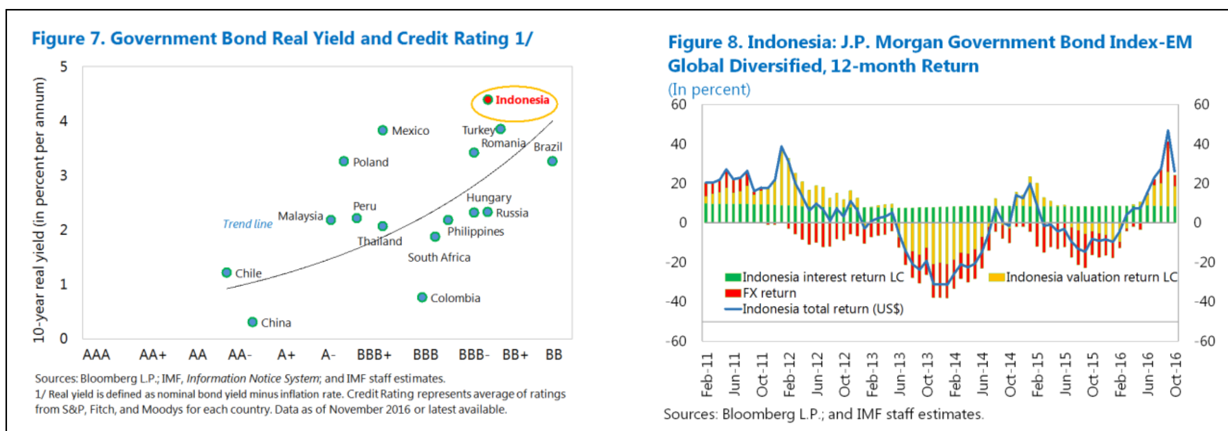
Figure 6. Inflows to Local Government Currency Bond
(In billions of U.S. dollar)



Sources: CEIC Data Co. Ltd.; Bloomberg L.P.; and IMF staff estimates.

8. Inflows to LCY government bonds were strong in the first three quarters of 2016, before experiencing volatility. They reached about US$9.5 billion in January–September 2016, reflecting favorable global financial environment, attractive bond yields, and some speculative inflows related to the tax amnesty program. Inflation-adjusted yield of Indonesia LCY government bonds was high compared with other countries (Figure 7), and total annual returns of bonds reached 40 percent in U.S. dollar term at end-September 2016—a combination of high yields, positive valuation (inversely related to the bond yields), and the appreciation of the rupiah against the U.S. dollar (Figure 8). However, the returns from exchange rate movements have been volatile and often correlated with the return from valuation, attesting to the role of foreign investors in influencing the bond yields. Then inflows reversed in October 2016 as foreign investors likely took profits, with the reversal accelerating following the U.S. election. It is estimated that the amount of capital reversal from LCY government bonds reached US$2.2 billion in October 1–November 30, 2016 with the yield of 10-year bonds up by 100 basis points. Since then, capital inflows have gradually resumed, accompanied by the decline of bond yields.

[2] The minimum holding period was reduced to one month in September 2013 and later to one week in September 2015.



9. The correlations among key types of capital inflows seem to be low based on quarterly balance of payments data (Table 1). Low positive correlations point to small likelihood of foreign investors' herding behavior during shocks; while low negative correlations mean less chance for one type of inflows to compensate for a decline in another type of inflows. The negative one correlation between FDI debt inflows and debt outflows reflects the recurrent short-term intra-company trade credit, which would be recorded as debt inflows and debt outflows in the same quarter. The correlation between FDI and private sector bond inflows is relatively high, as they are likely to be driven by the same underlying factors, such as the outlook of economic activity or commodity prices. The correlation between public bond inflows and public other investment inflows was almost zero, pointing to limited substitution between these two types of government borrowing.

Table 1. Indonesia: Correlation Coefficients for Items in the Financial Account
(2010:Q1-2016:Q3)

	FDI	FDI equity	FDI debt inflows	FDI debt outflows	Portfolio	Equity	Bond	Bond (private)	Bond (public)	OI	OI (private)	OI (public)
FDI												
FDI equity												
FDI debt inflows		0.6										
FDI debt outflows		-0.7	-1.0									
Portfolio	0.2	0.2	0.1	-0.1								
Equity	0.0	-0.2	-0.1	0.2								
Bond	0.3	0.3	0.2	-0.2		0.2						
Private sector	0.3	0.1	0.3	-0.2		0.1						
Public sector	0.1	0.2	0.1	-0.1		0.2		-0.1				
Other investment	0.0	0.2	0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2			
Private sector	0.1	0.3	0.3	-0.3	-0.2	-0.2	-0.2	0.1	-0.2			
Public sector	-0.1	0.0	-0.1	0.1	-0.1	-0.1	-0.1	-0.3	0.0		0.0	

10. However, high-frequency data point to a high correlation between equity and LCY government bond inflows, especially during the episodes of shocks. During the taper tantrum and 2015 renminbi reform, both equity and bond inflows to Indonesia declined or reversed, as foreign investors reduced their exposures to EMs (Figures 9 and 10).

Figure 9. Indonesia: Equity and Local Currency Government Bond Inflows, 2013 Taper Tantrum
(In billions of U.S. dollar, cumulative since 1/1/2013)

Sources: Bloomberg Data LP.; and IMF staff estimates.

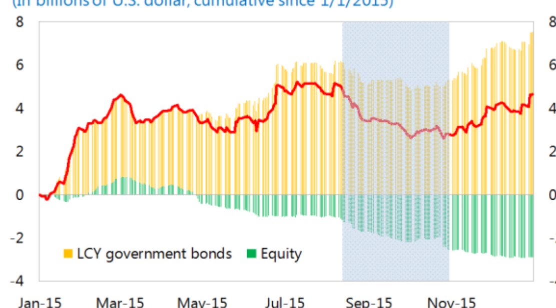


Figure 10. Indonesia: Equity and Local Currency Government Bond Inflows, 2015 Renminbi Reform
(In billions of U.S. dollar, cumulative since 1/1/2015)

Sources: Bloomberg Data LP.; and IMF staff estimates.

C. Developments of Foreign Liabilities and External Debt

11. Capital inflows to Indonesia since the GFC led to an increase in external liabilities, *albeit* from a low level (Figure 11). Indonesia's foreign liabilities rose from 55 percent of GDP in 2009 to 67 percent of GDP at end-2015. Consistent with the dynamics of capital inflows, increases in FDI and portfolio liabilities were the main drivers for the overall increase in foreign liabilities, and their total share in foreign liabilities increased by 9 percentage points over 2010–15.

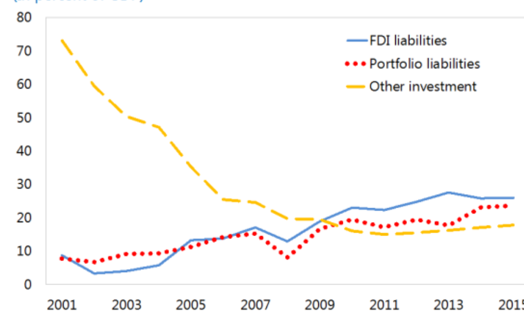


Figure 11. Indonesia: Foreign Liabilities by Type
(In percent of GDP)

Sources: Haver Analytics; IMF; and IMF staff estimates.

12. The investor base for Indonesia has shifted towards investors from Europe and the United States (Figures 12–15). Within a larger pie of portfolio claims, investors from the United States and European financial centers (such as Luxembourg, Netherlands, Ireland, and United Kingdom) have seen their shares increased. Such increase was observed in both portfolio equity and debt claims, as global investors were diversifying their portfolio investment into EMs. Accordingly, the share of Singaporean portfolio investors has declined. Nevertheless, Singapore investors still dominated short-term portfolio debt claims with a share of 65 percent.

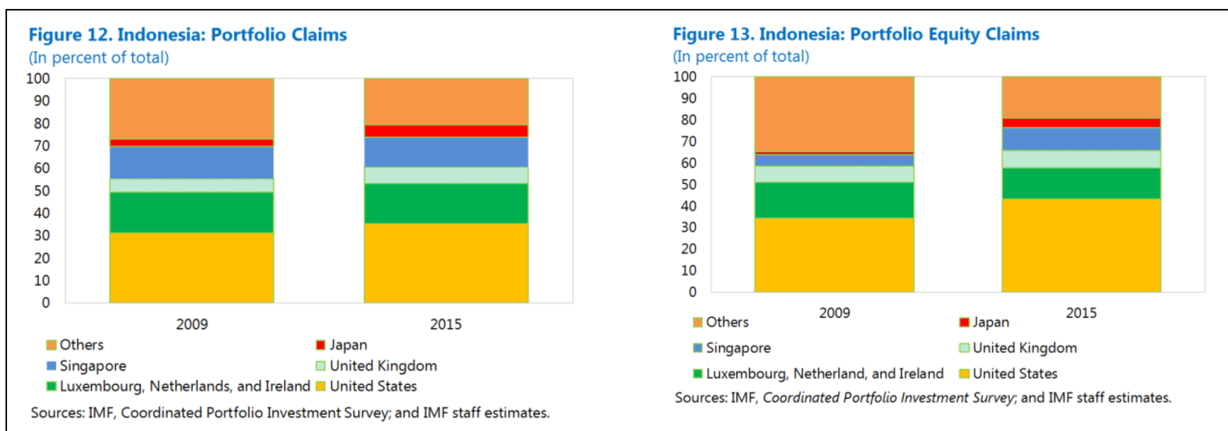


Figure 12. Indonesia: Portfolio Claims
(In percent of total)
Sources: IMF, Coordinated Portfolio Investment Survey; and IMF staff estimates.

Figure 13. Indonesia: Portfolio Equity Claims
(In percent of total)
Sources: IMF, *Coordinated Portfolio Investment Survey*; and IMF staff estimates.

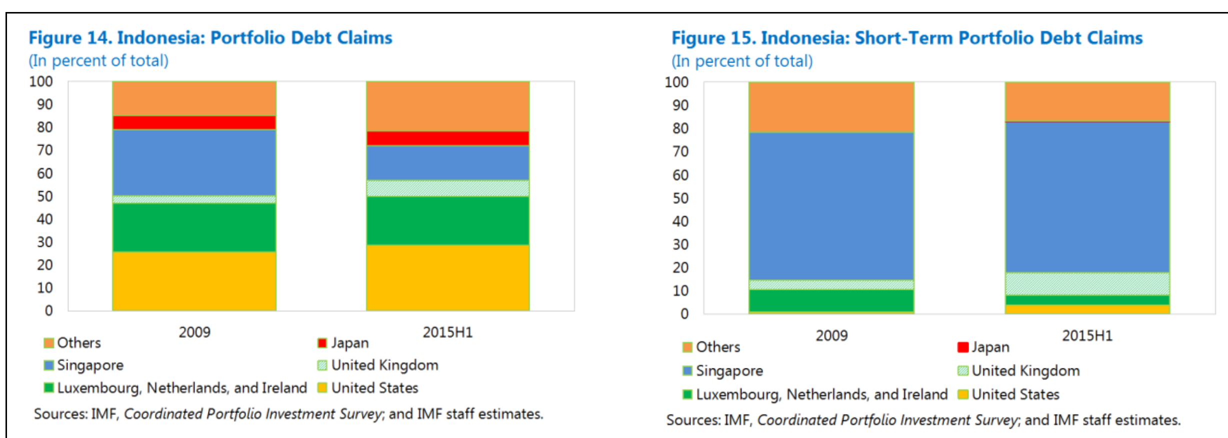


Figure 14. Indonesia: Portfolio Debt Claims
(In percent of total)
Sources: IMF, *Coordinated Portfolio Investment Survey*; and IMF staff estimates.

Figure 15. Indonesia: Short-Term Portfolio Debt Claims
(In percent of total)
Sources: IMF, *Coordinated Portfolio Investment Survey*; and IMF staff estimates.

13. Despite some recent increase, Indonesia's external debt remains low. Compared to the definition of external liabilities, external debt excludes equity FDI and equity portfolio investment. External debt to GDP ratio increased from 29¾ percent at end-2009 to 35¾ percent at end-September 2016. The share of public debt decreased from 57½ percent to 50 percent over the same period, as about 60 percent of the increase in external debt was due to private sector borrowing. Within the private sector, the external debt of nonfinancial corporate sector stood at 6 percent of GDP.

14. Parent and affiliated company debt constitute a large share of private debt (Figure 16). At end-September 2016, one third of private sector external debt was from either parent or affiliated companies (US$50 billion, 5.5 percent of GDP) with debt from parent companies accounting for 78 percent of such debt. The share of intra-company loans in external debt was highest among nonfinancial corporate (two-thirds). This large share of intra-company loans reduces the rollover risk.

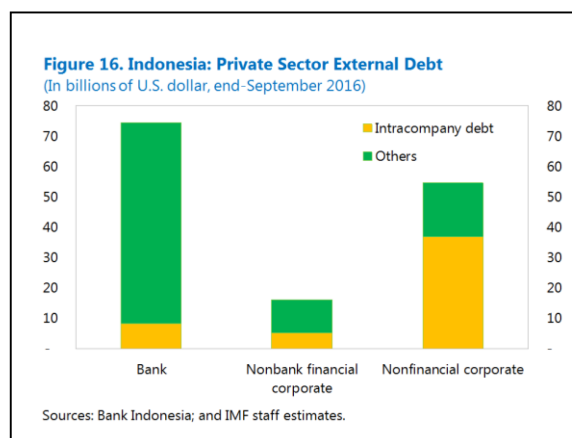


Figure 16. Indonesia: Private Sector External Debt
(In billions of U.S. dollar, end-September 2016)
Sources: Bank Indonesia; and IMF staff estimates.

15. An increasing share of external debt is denominated in rupiah. About 18 percent of Indonesia's external debt was denominated in rupiah at end-September 2016, up from 10 percent at end-2009. This increase in share, in line with the developments in portfolio inflows, reflected an increasing share of foreign holding of LCY government bonds: a five-fold increase in the nominal value of foreign holdings and a doubling of the foreign share from end-2009 to end-2015 (Figure 17). As a result, the share of rupiah-denominated public debt doubled from 16¼ percent at end-2009 to 32¾ percent at end-September 2016. Foreign ownership as a share of foreign reserves is relatively high compared with peers (Figure 18).

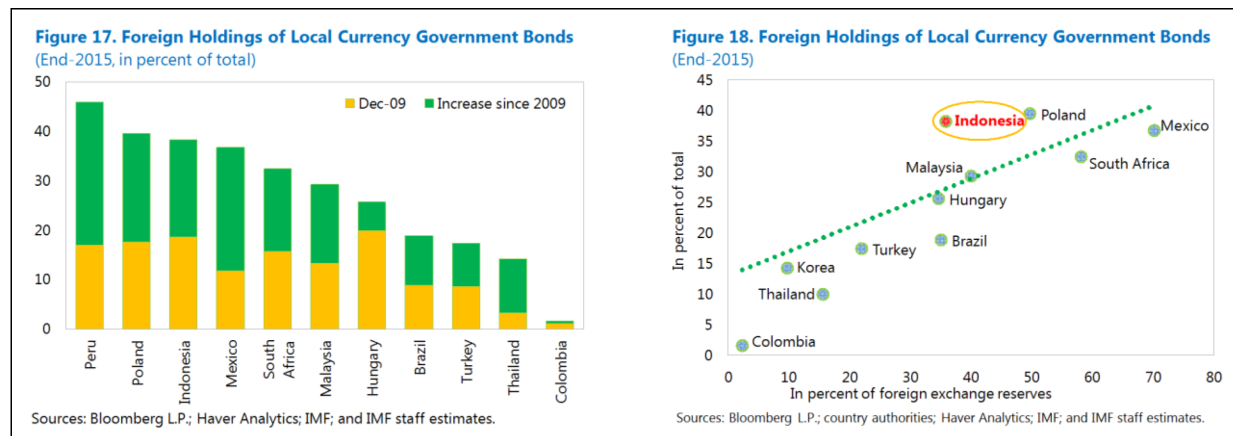


Figure 17. Foreign Holdings of Local Currency Government Bonds
(End-2015, in percent of total)
Sources: Bloomberg L.P.; Haver Analytics; IMF; and IMF staff estimates.

Figure 18. Foreign Holdings of Local Currency Government Bonds
(End-2015)
Sources: Bloomberg L.P.; country authorities; Haver Analytics; IMF; and IMF staff estimates.

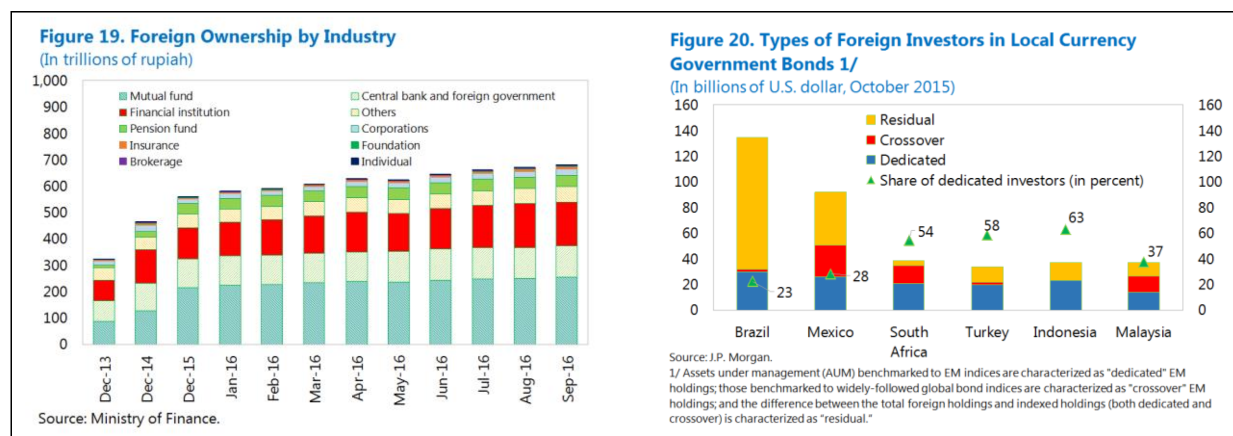


Figure 19. Foreign Ownership by Industry
(In trillions of rupiah)
Source: Ministry of Finance.

Figure 20. Types of Foreign Investors in Local Currency Government Bonds 1/
(In billions of U.S. dollar, October 2015)
Source: J.P. Morgan.
1/ Assets under management (AUM) benchmarked to EM indices are characterized as "dedicated" EM holdings; those benchmarked to widely-followed global bond indices are characterized as "crossover" EM holdings; and the difference between the total foreign holdings and indexed holdings (both dedicated and crossover) is characterized as "residual."

16. About half of the holders of LCY government bonds are central banks, foreign governments, and mutual funds (Figure 19). Central banks and foreign governments found the EM LCY government bonds attractive after the taper tantrum, as they provide a diversification of investment while reducing the cost of carry of FX reserve holdings (Standard Chartered, 2013). A relatively high share of foreign investors are benchmark-driven EM funds (Figure 20).

17. Besides purchasing and holding LCY government bonds, foreigners also use derivatives to gain similar exposure. Total return swaps (TRS) and credit linked notes (CLN) backed by the LCY government bonds are the two popular instruments, which are normally contracted between global investment banks and foreign investors, who get cash flows from the underlying bonds without holding the cash bonds. When local subsidiaries of global investment banks sell TRSs and CLNs to foreign investors, the total foreign exposure to LCY bonds could be larger than the official reporting of foreign holdings as local subsidiaries are considered residents. Despite declining from its 2010 peak, the volume of annual CLN issuance averaged at US$1.2 billion in 2011–15, roughly 15 percent of the increase in foreign holding of cash bonds (Figure 21).[3]

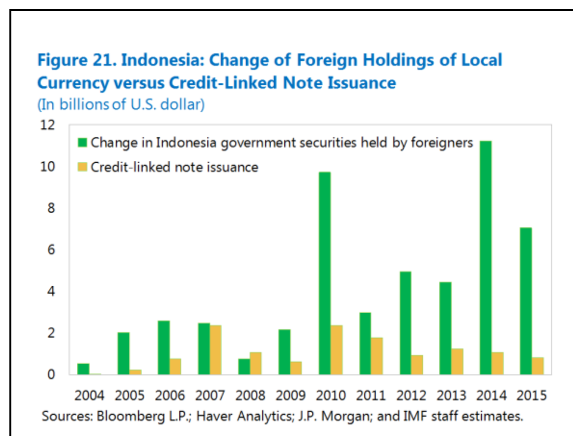


Figure 21. Indonesia: Change of Foreign Holdings of Local Currency versus Credit-Linked Note Issuance
(In billions of U.S. dollar)

Sources: Bloomberg L.P.; Haver Analytics; J.P. Morgan; and IMF staff estimates.

D. Drivers for Capital Inflows to Indonesia

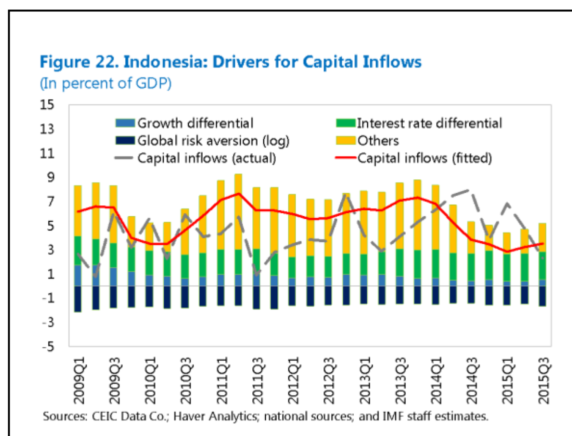
18. There is a rich literature on the drivers for capital flows. The typical analysis adopts the "push versus pull" framework (for example, Fratzscher, 2011 and Cerutti and others, 2015). Push factors refer to the external supply factors, such as the supply of global liquidity and global risk aversion. Pull factors refer to domestic demand side factors that attract capital inflows, such as macroeconomic fundamentals, institutional framework, and policies. The IMF has devoted a *World Economic Outlook* chapter (IMF, 2016a) to exploring the drivers of the recent slowdown in net capital flows to emerging market economies, which finds that much of the decline in inflows can be explained by the narrowing growth prospects between emerging market and advanced economies. IMF (2016b) points out that both push and full factors remain important for capital flows, suggesting that source and recipient country policies play a role. Other recent work on capital flows includes Ghosh and others (2012), Nier and others (2014), Chung and others (2014), and Sahay and others (2014).

[3] Information about the volume of TRSs is difficult to gather. There is no information about the volume of CLNs that have been issued by local subsidiaries of global investment banks.

Panel Analysis

19. This analysis on the drivers for capital inflows to Indonesia is based on a panel analysis of 34 countries[4] with country fixed effects (Hannan, 2017 and Table 2). The time period is 2009–15 and quarterly data are used to capture the drivers for capital flows after the GFC. Coefficients from the panel analysis are applied to Indonesia-specific factors and global factors to derive the portion of capital inflows that can be explained by each factor.

Figure 22. Indonesia: Drivers for Capital Inflows
(In percent of GDP)



Sources: CEIC Data Co.; Haver Analytics; national sources; and IMF staff estimates.

Table 2. Capital Inflows 1/
(Share of GDP)

	2009:Q3-2015:Q4						
Variables	Total	Private	FDI	Portfolio	Portfolio Debt	Portfolio Equity	Other
Growth differential	0.21 *	0.32 **	0.07	0.06 *	0.07 *	0.01	0.07
	(0.12)	(0.12)	(0.05)	(0.03)	(0.04)	(0.01)	(0.09)
Interest rate differential	0.31 *	-0.14	0.10	0.04	0.05	0.02	0.22 *
	(0.16)	(0.16)	(0.09)	(0.05)	(0.06)	(0.01)	(0.12)
Trade openness	-0.01	0.05	0.06 *	-0.03	-0.03 **	-0.01 *	-0.02
	(0.05)	(0.05)	(0.03)	(0.02)	(0.02)	(0.00)	(0.04)
Reserves	0.06 **	0.07 **	0.03 *	0.04 **	0.04 **	0.00 **	-0.00
	(0.02)	(0.03)	(0.01)	(0.01)	(0.02)	(0.00)	(0.03)
ER regime	0.26	-0.24	-0.03	-0.29	-0.27	-0.09	0.61
	(0.45)	(0.37)	(0.11)	(0.32)	(0.30)	(0.05)	(0.42)
Institutional quality	-8.85 ***	-6.90 *	-2.41	-1.79	-1.58	-0.30	-4.69 *
	(2.68)	(3.37)	(1.80)	(2.08)	(2.32)	(0.32)	(2.66)
Income per capita	0.00 **	0.00 ***	0.00 *	-0.00	0.00	-0.00	0.00 **
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Capital account openness	-2.17	-1.95	-1.35	0.38	1.54	-0.14	-1.34
	(2.38)	(2.74)	(1.00)	(2.27)	(1.59)	(0.22)	(1.46)
Financial development	-19.12	-27.60	-10.31	1.30	6.91	-2.55	-6.89
	(24.24)	(25.69)	(21.68)	(9.40)	(8.79)	(1.75)	(9.56)
Global risk aversion (log)	-0.56	-3.02	1.96 **	-2.41 **	-1.94 **	-0.35	0.08
	(2.72)	(2.23)	(0.81)	(1.17)	(0.80)	(0.26)	(1.44)
Commodity prices (growth)	-0.04	-0.00	-0.02 **	0.01	0.01	-0.00	-0.03
	(0.04)	(0.02)	(0.01)	(0.01)	(0.01)	(0.00)	(0.02)
Global liquidity (growth)	0.10	0.07	0.08 *	0.08	0.06	-0.00	-0.06
	(0.13)	(0.11)	(0.04)	(0.07)	(0.06)	(0.01)	(0.07)
U.S. corporate spread	0.04	0.95	-0.94	0.85	0.26	0.26	0.08
	(1.18)	(1.02)	(0.65)	(0.69)	(0.57)	(0.16)	(1.05)
U.S. yield gap	2.07	0.85	-0.32	-0.15	-0.52	0.24	2.22
	(2.43)	(1.67)	(0.50)	(0.96)	(0.71)	(0.23)	(1.46)
Constant	-4.52	5.10	-4.78	5.32	1.80	1.43 *	-6.87
	(14.72)	(12.75)	(9.28)	(4.94)	(4.83)	(0.78)	(7.12)
Observations	809	809	809	809	758	739	787
Number of groups	34	34	34	34	33	33	34
Country fixed effects	YES	YES	YES	YES	YES	YES	YES

Source: Hannan (2017).

1/ Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

[4] Albania, Brazil, Bulgaria, Chile, China, Colombia, Costa Rica, Croatia, Ecuador, Egypt, El Salvador, FYR Macedonia, Guatemala, Hungary, India, Indonesia, Jordan, Kazakhstan, Latvia, Lithuania, Malaysia, Mexico, Paraguay, Peru, Philippines, Poland, Russia, Saudi Arabia, South Africa, Sri Lanka, Thailand, Turkey, Ukraine, and Uruguay.

20. The analysis shows that cyclical factors are significant for capital inflows to Indonesia (Figure 22). Growth and interest differences between Indonesia and the United States seem to account for an important portion of capital inflows.

21. Global risk aversion is also important. More global risk aversion leads to low inflows, in particular for some components, such as portfolio debt inflows. However, the estimation does not seem to be able to capture the large fluctuations in capital inflows, for instance the reversal related to the taper tantrum, which is likely partly due to large temporary shifts in market expectations regarding the course of monetary policy in the United States, which are difficult to control for a regression using quarterly data (IMF, 2016a).

GARCH Model

22. The availability of daily data on capital inflows allows us to analyze the impact of high-frequency market sentiment on capital inflows to Indonesia. We apply a GARCH model to analyze the main drivers for capital inflows to LCY government bonds, one of the key type of capital inflows to Indonesia. The GARCH framework, a standard tool for modeling volatility in financial economics, allows one to estimate the impact of regressors on the mean and volatility of the dependent variable. The sample data consists of daily observations covering the period of January 1, 2010 to October 31, 2016.

23. The empirical model of the capital inflows to Indonesia is

$$c_t = \sum_{i=1}^{n} \phi_i c_{t-i} + \beta_m X_t^m + \varepsilon_t,$$

with

$$\sigma_t^2 = \varpi + \sum_{j=1}^{q} \gamma_j \left(\sigma_{t-j}^2 \right) + \sum_{i-1}^{p} \alpha_i \left(\varepsilon_{t-i}^2 \right).$$

The first equation is the mean equation, in which c_t represents the capital inflows to LCY government bonds; ϕ_i is the autoregressive term incorporating the persistence of the capital inflows; $\beta_m X_t^m$ reflects the impact of exogenous factors on the capital inflows; ε_t is the error term. In the second equation—conditional variance equation—σ_t is the standard deviation, γ_j is the GARCH term, and α_i is the ARCH effects.

24. Variables most relevant for foreign investors' returns are chosen as the explanatory variables. The first is the expected movement of the rupiah against the U.S. dollar. The change of

the 3-month NDF rate is used to represent this expectation.[5] The hypothesis is that a more appreciated forward exchange rate would persuade foreign investors to purchase more bonds. The second one is the difference between the five-year government bond yield and interbank market rate, i.e., 3-month JIBOR rate.[6] While this is a driver mostly for local investors (mainly banks), indirectly it could also influence foreigner investors, since a larger difference would support the positive price dynamics from local investors. The third one is the VIX indicator, which could capture the impact of global financial conditions and hence the perceived risks of exposure to Indonesian risk.[7] Higher market volatility should dent foreign interest in LYC bonds. To reduce the endogeneity of capital inflows, lags of the explanatory variables are used with the lags in both the mean and variance equations chosen based on their significance. A dummy for the bond auction dates has been introduced to the model to control for the inflows related to auctions, however it does not turn out to be statistically significant.

25. The estimation results have confirmed the main hypothesis (Table 3). An expectation of the appreciation of the rupiah is associated with more foreign purchase of bonds; a wider spread of the bond yield over the interbank market rate would encourage more foreign participation; and an increase in global risk aversion is associated with a decline in foreigner investors' exposure to Indonesian risk. Foreign capital inflows have strong persistence; as inflows usually generate positive, though diminishing, momentum in the next two days.

Table 3. Estimated GARCH Parameters

	Coefficient	Standard Error	z-Statistic	p value
Mean equation				
Variable				
C	105.6	25.44	4.15	0.00
Inflows(-1)	0.2	0.03	8.08	0.00
Inflows(-2)	0.1	0.02	4.29	0.00
NDF3M(-2)-NDF3M(-5)	-0.3	0.02	-15.79	0.00
YIELD5Y(-2)-JIBOR3M(-2)	3.2	1.90	1.69	0.09
LOG(VIX(-2))	-29.5	8.69	-3.39	0.00
Variance equation				
C_var	314.0	79.79	3.94	0.00
RESID(-1)^2	0.0	0.01	8.77	0.00
GARCH(-1)	0.4	0.01	37.50	0.00
GARCH(-2)	-0.4	0.01	-35.40	0.00
GARCH(-3)	0.9	0.01	71.92	0.00
R-squared	0.188			
Adjusted R-squared	0.185			

E. Conclusion

26. Capital inflows have benefited Indonesia. They allowed Indonesia to finance current account and budget deficits. At one-half of total capital inflows in Indonesia, FDI flows have acted as a long-term stable source of capital as well as a source of new technology and management practices. Portfolio inflows, in particular inflows to LCY government bonds, have enabled the government to borrow externally in domestic currency at a reasonable rate. Other investment flows

[5] The onshore forward exchange rates have been tried as well, but they have a weaker forecast power despite the expected sign of correlation coefficient. As the NDF captures covered interest rate parity, neither the yield difference between Indonesia and United States nor the Fed funds rate/Fed funds futures turns out to be statistically significant.

[6] The time deposit rates do not turn out to be statistically significant.

[7] The five-year CDS of Indonesia has been tried as well, but as the CDS and VIX have high correlation, the one with more predictive power is chosen, which is the VIX.

complemented the domestic banking system in supplying the private sector with credit for trade or longer-term investment.

27. In the meantime, capital inflows have also transmitted global risks to Indonesia. Capital inflows tend to come in waves and could transmit global shocks to the domestic markets. Since the GFC, Indonesia has witnessed several episodes of reversal or sharp declines of capital inflows. During these episodes, exchange, equity, and bond markets came under pressure.

28. Indonesia's resilience to external shocks has improved. The improved policy framework, such as the subsidy reform and a more flexible exchange rate policy, allowed the authorities to manage the risks from marked changes in capital inflows (Warjiyo, 2014). The current account deficit has adjusted to the commodity down-cycle with Indonesia's external position broadly consistent with medium-term fundamentals and desirable policy settings (IMF, 2016c). The current low inflation environment provided room for adjusting macroeconomic policies if needed. Reserves are adequate to prevent disorderly market conditions.

29. Given the volatile nature of capital inflows, more could be done to further enhance resilience. Structural reforms to attract more FDI inflows would be welcome, as they are less volatile compared with other types of capital inflows. The recently partially liberalized FDI regime is a welcome step in the right direction. More domestic savings, including public sector saving, would help to reduce the reliance on foreign capital. This would require strengthening revenue collection in the post commodity-boom area. In addition, a deep domestic capital market would help to accommodate the surges and sudden stops in capital inflows, as the narrow investor base and low market liquidity make the government bond market susceptible to heightened market volatility (Miyajima and Toh, 2017).

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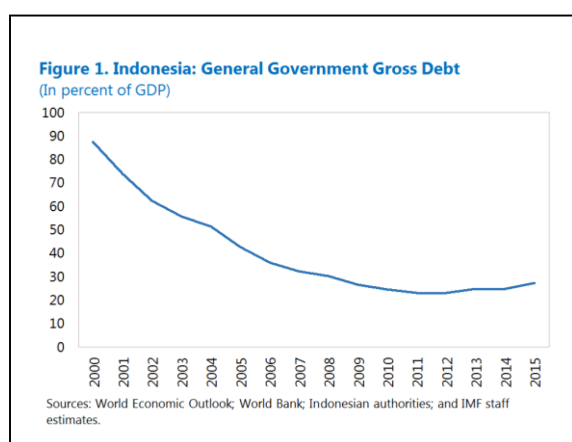
DEEPENING THE GROWTH-ENHANCING FISCAL STRATEGY[1]

This paper applies the analytical framework developed in an IMF cross-country study on fiscal policy and long-term growth to the case of Indonesia.[2] The general theme is one of structural fiscal reforms that expand and improve the efficiency of public expenditures, financed by additional revenue mobilization, leading to productivity gains and faster and more inclusive growth.

A. Macroeconomic Stability as a Prerequisite for Sustained Growth: Keep the Prudent Fiscal Rule While Building Buffers

1. Indonesia's fiscal rule remains an important policy anchor. The fiscal rule limits the general government deficit to no more than 3 percent of GDP and debt to no more than 60 percent of GDP (Figure 1). Driven by the strong fiscal discipline and fast economic growth, Indonesia's general government debt has been successfully curbed from about 90 percent of GDP in 2000 to below 30 percent in 2015. Though rigid, the rule also supports external market funding for Indonesia while its domestic investor base develops, and promotes macro stability, a pre-requisite for sustained growth.[3]

Figure 1. Indonesia: General Government Gross Debt
(In percent of GDP)



Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

2. Although there is modest fiscal space in the near term, a countercyclical buffer within the rule is desired in the medium term. Indonesia's low debt and deficit levels, small gross financing needs, and other macro indicators suggest modest fiscal space in the near term. This supports a slightly larger fiscal deficit of about 2¾ percent of GDP in 2016. However, in the medium term, aiming for a deficit target of 2¼ percent of GDP would provide a countercyclical buffer of ¾ percent of GDP under the fiscal rule, and boost the economy's resilience to shocks.

3. Deepening the authorities' growth-enhancing fiscal strategy would require structural fiscal reforms to promote higher medium- and long-term growth. This strategy will increase revenue and expenditure each by about 3 percentage points of GDP over the medium term, with the

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[2] International Monetary Fund, 2015, *Fiscal Policy and Long-Term Growth*.

[3] Unlike the European fiscal rules, there is no escape clause in the 3 percent deficit rule in Indonesia. As over half of the government debt is held by nonresidents, the fiscal rules play a key role in enhancing international investors' confidence.

budget composition more effective in promoting sustainable growth. Revenue mobilization is slightly greater than expenditure expansion, to generate the countercyclical buffer.

B. How Can Fiscal Structural Reforms Promote Growth: Improve Efficiency and Expand Growth-Enhancing Expenditures

4. For Indonesia, the most effective fiscal policy to promote growth is to increase spending with higher efficiency on infrastructure, health, and education. IMF (2015a) provides a menu of structural fiscal policy options to promote medium- to long-term growth: encourage labor supply, enhance investment in physical capital, support human capital development, increase total factor productivity and promote technological progress. For emerging economies, the most relevant policies would be to protect and increase the public capital stock, provide more efficient public infrastructure, provide access to education for disadvantaged groups, and expand access to basic healthcare (Table 1). In the context of Indonesia, this would mean an expansion of public expenditure on infrastructure, health, and education, while improving efficiency in those areas.

Table 1. Menu of Options: Structural Fiscal Policies for Medium- to Long-Term Growth 1/

Structural Fiscal Policies	Advanced Economies	Emerging Economies	Low-Income Economies
Policies to encourage labor supply			
Reduce labor taxes, especially at low income levels	XXX	XX	X
Redesign unemployment benefits, including by tightening eligibility and shortening duration	XXX	XX	X
Provide in-work benefits and tax credits	XXX	XX	X
Increase use of active labor market programs (ALMPs)	XXX	XX	X
Stimulate labor force participation of:			
Women, including through individual taxation	XXX	XX	X
Older workers, by restricting early retirement and providing tax incentives	XXX	XX	X
Low-skilled workers, through targeted ALMPs and use of in-work benefits	XXX	XX	X
Policies to enhance investment in physical capital			
Design a system that taxes excess returns on capital	XXX	XX	X
Provide well-designed tax incentives that reduce the cost of capital	XXX	XX	XX
Protect or increase the public capital stock	XXX	XXX	XXX
Enhance the productivity of public investment by strengthening the investment process	XX	XX	XXX
Policies to support human capital development			
Provide access to education for disadvantaged groups by:			
Spending more at lower levels	XXX	XXX	XXX
Increasing cost-recovery for tertiary education	XXX	XX	XXX
Conditioning cash transfers on school enrollment	XX	XXX	XXX
Expand access to basic healthcare by:			
Reducing user charges for low-income households	XXX	XXX	XXX
Addressing supply-side barriers in less developed areas	X	XXX	XXX
Conditioning cash transfers on preventive health visits	X	XXX	XXX
Policies to increase total factor productivity and promote technological progress			
Grant tax credits or deductions for R&D	XXX	XX	X
Increase public R&D spending	XXX	XX	X
Provide more efficient public infrastructure	XXX	XXX	XXX

Source: IMF 2015a.

1/ "xxx" denotes highly relevant policy; "xx" denotes moderately relevant policy; and "x" denotes less relevant policy.

5. Indonesia has room to increase efficiency and spending in these key growth-enhancing expenditure areas compared with peers. Constrained by its revenue mobilization capacity, Indonesia's spending in these areas is generally low compared to peers. As described below, there is also room to improve the efficiency of spending.

Infrastructure

6. Indonesia's infrastructure spending is low compared to peers. Total infrastructure spending was 2.5 percent of GDP in 2015, compared to the EM Asia average of 5.1 percent of GDP. Indonesia's access to infrastructure is particularly low in electricity, road transportation, and health facilities (Figures 2 and 3).

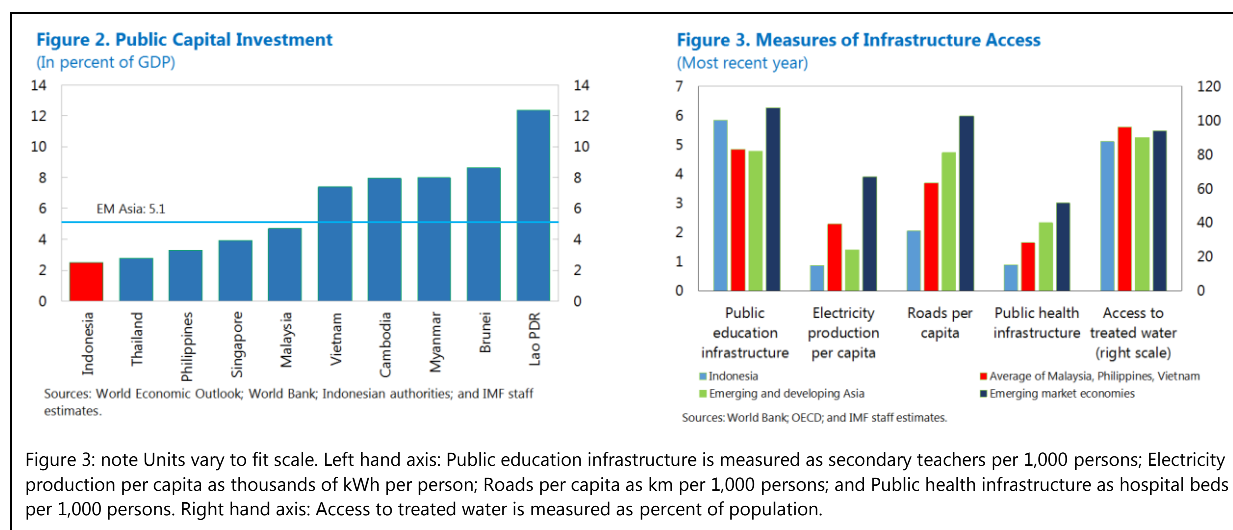


Figure 2. Public Capital Investment
(In percent of GDP)

Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

Figure 3. Measures of Infrastructure Access
(Most recent year)

Sources: World Bank; OECD; and IMF staff estimates.

Figure 3: note Units vary to fit scale. Left hand axis: Public education infrastructure is measured as secondary teachers per 1,000 persons; Electricity production per capita as thousands of kWh per person; Roads per capita as km per 1,000 persons; and Public health infrastructure as hospital beds per 1,000 persons. Right hand axis: Access to treated water is measured as percent of population.

7. Infrastructure development is highly decentralized and suffers from limited implementation capacity and relatively low efficiency. Of the government's US$480 billion infrastructure investment plan for 2015−19, only about 30 percent will be executed through the central government. Starting in 2017, 20 percent of the central government transfers to regions via general allocation fund (DAU) and revenue sharing will be earmarked to infrastructure. The non-central-government channels—state-owned enterprise (SOEs), public private partnerships (PPPs), and sub-national government (SNG)—seem to involve more risk and entail less capacity to develop, plan and implement investment projects efficiently. Based on IMF (2015b), an indicator for physical access to infrastructure shows relatively low efficiency in Indonesia's public investment. The resulting efficiency gap between Indonesia and the most efficient countries with comparable levels of public capital stock per capita is 56 percent, much wider than the average gap of emerging market economies (41 percent), emerging and developing Asia (50 percent), and all countries (41 percent) (Figures 4 and 5).

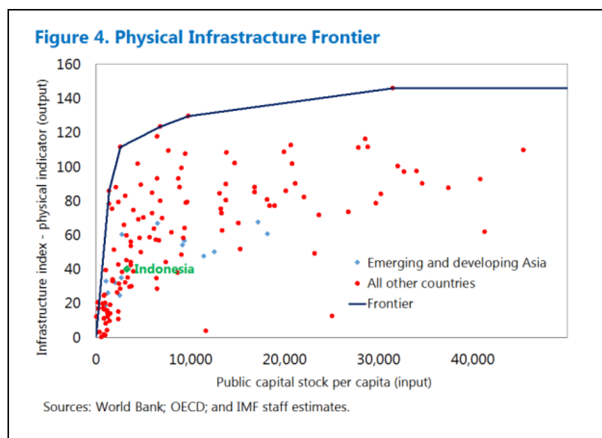


Figure 4. Physical Infrastructure Frontier

Sources: World Bank; OECD; and IMF staff estimates.

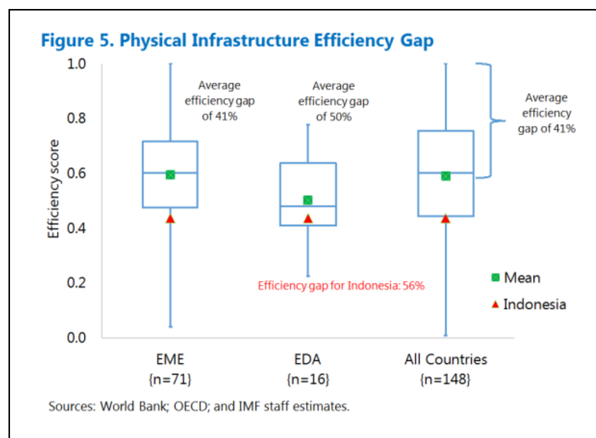


Figure 5. Physical Infrastructure Efficiency Gap

Sources: World Bank; OECD; and IMF staff estimates.

8. The expansion of infrastructure spending should be accompanied with improved public financial management (PFM). Scaling-up of public investment often goes hand in hand with a decrease in investment efficiency and an increase of integrity issues. Therefore, better management is required to improve efficiency. The government could consider the following reforms: (i) streamline the annual budget process; (ii) develop a multi-year pipeline of high-quality projects by investing in project development; (iii) encourage use of multi-year contracting and carry-overs, both at the central and local levels of government; (iv) improve timeliness and content of information flow to SNGs on special purpose grants (DAK) and line ministry's own investment plans; (v) develop a wide-ranging capacity building plan in the PFM area for SNGs, jointly by Ministry of Finance (MOF) and Ministry of Home Affairs (MOHA); and (vi) simplify and reduce the reporting burden of SNGs. More importantly, there are currently five central agencies with some mandates on public investment: MOF, MOHA, the National Development Planning Agency (BAPPENAS), the Committee for Accelerated Infrastructure Delivery (KPPIP), and the Evaluation and Monitoring Team for State and Regional Budgets Realization (TEPRA). These central agencies need to coordinate more closely and develop a Single Window monitoring system of line ministry and SNG public investments. At a later stage, PPP and SOE project monitoring could be integrated with the above reforms.

Health

9. There is a need to expand insurance coverage and health facilities. Health spending is low in Indonesia compared to peers (Figure 6). The authorities have made a commitment to expand the coverage of public health insurance to 100 percent by 2019. At present, about 60 percent of the population is covered, and the bottom one third of the population (the poorest 92 million) are included with waivers of health insurance premium. Essentially, the government is subsidizing the premium for the poor. Many of the uncovered

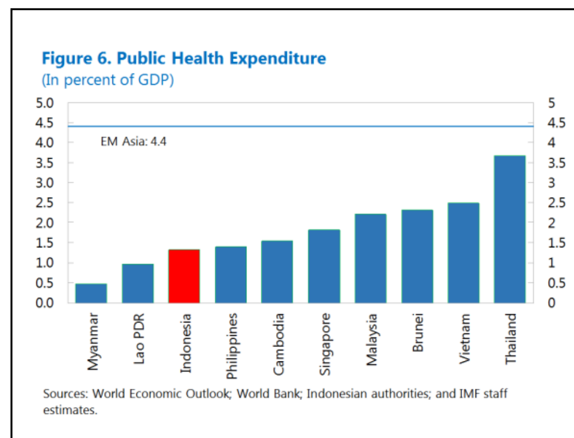


Figure 6. Public Health Expenditure
(In percent of GDP)

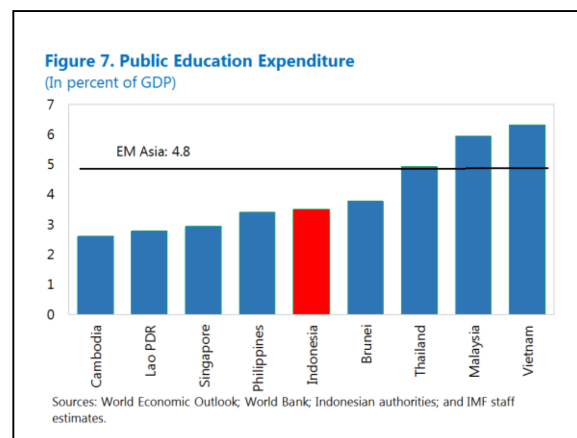
Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

40 percent of the population are self-employed middle-income individuals, who have reportedly purchased private health insurance. Indonesia also has room to increase public spending on health infrastructure and open up the health sector to the private sector and foreign investors. Although the central government is legally required to allocate at least 5 percent of its budget expenditure on health, the rule mostly ensures that health spending in percent of GDP remain broadly constant. Based on the experience of Thailand when implementing universal health coverage, it is expected that the share of public spending in total health care spending would then rise from 40 percent now to 60 percent over the medium term. In the event, the ratio of public health spending to GDP would reach 2.1 percent of GDP in 2021—0.6 percentage points of GDP above the baseline.

Education

10. There is room to improve spending efficiency in education. Although Indonesia's public education spending is lower than the average level in EM Asia (Figure 7), the near-term priority should be to improve spending efficiency. Similar to health, the central government is legally required to allocate at least 20 percent of its budget expenditure on education. However, without strong links to educational outcomes, much of the annual increases are spent on teachers' compensation, especially those through the certification programs. Therefore, the teachers' compensation system could be reviewed to identify inefficiencies, while the link between compensation and outcome could be strengthened. As the efficiency issue is addressed, education spending could be further expanded from general primary and secondary education to other areas, such as early childhood, vocational, and tertiary education.

Figure 7. Public Education Expenditure
(In percent of GDP)



Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

11. International experience suggests that preserving and increasing expenditure in these key areas are an integral part of a successful reform strategy for resource-revenue dependent economies. For example, one successful factor for Malaysia to unlock its long-term growth potential as part of its fiscal adjustment in the early 1980s was to maintain health and education expenditure at a steady level of 1.5 percent and 5 percent of GDP, respectively, which bolstered human capital to support the successful transition to a manufacturing-based economy during the same period. These are still well above Indonesia's 2015 spending levels for health and education (1.3 percent and 3.5 percent of GDP, respectively). Similarly, when Chile implemented its massive fiscal consolidation in the late 1970s, it actually increased public spending on primary and secondary education, as well as primary health care.

C. Fiscal Space for Pro-Growth Reforms: Adopt a Growth-Friendly Revenue Strategy

12. Relatively low capacity in revenue mobilization has constrained the government's ability to expand growth-enhancing expenditure priories (Figures 8 and 9). General government revenue has trailed behind peers, with the gap widening after 2008. Although the sharp decline in oil-and-gas revenue accounted for the majority of the shortfall, non-oil revenue in percent of GDP remains weak around its 2004 level. As a result, Indonesia's public expenditures in the above growth-enhancing areas are below their peers.

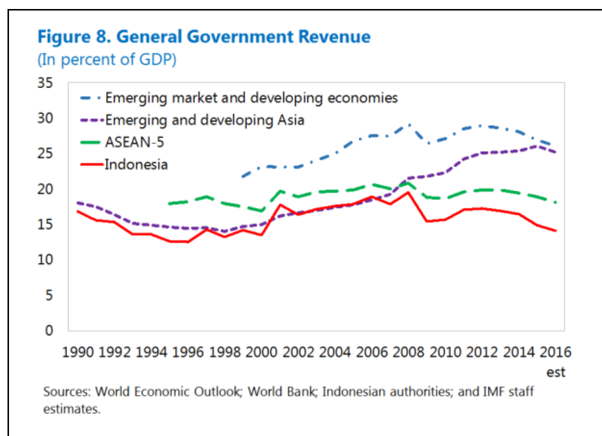


Figure 8. General Government Revenue
(In percent of GDP)

Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

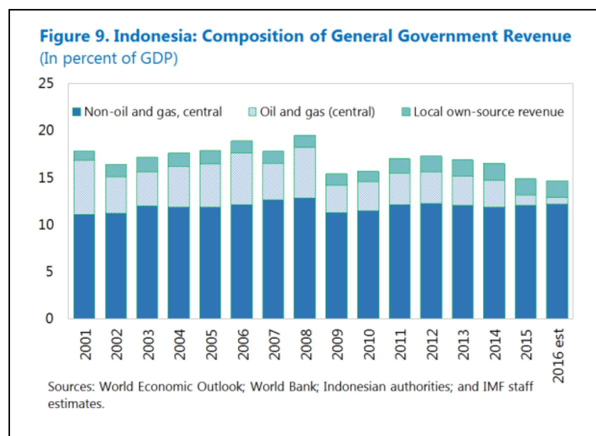


Figure 9. Indonesia: Composition of General Government Revenue
(In percent of GDP)

Sources: World Economic Outlook; World Bank; Indonesian authorities; and IMF staff estimates.

13. Low tax productivity also points to substantial scope for mobilizing non-oil revenues (Figures 10 and 11). Indonesia's C-efficiency ratio is about 0.6, which means the authorities only collect 60 percent of total VAT revenue compared to the benchmark that taxes all consumptions at a uniform rate of 10 percent. In addition, CIT productivity defined as the ratio between CIT revenue in percent of GDP and the top CIT rate is low. Many factors could explain such low tax productivity, including numerous lower-rate regimes, exemptions, and weakness in tax administration. Therefore, Indonesia has significant potential to mobilize major non-oil tax revenue through streamlining exemptions, removing differentiated tax rates, and improving tax administration.

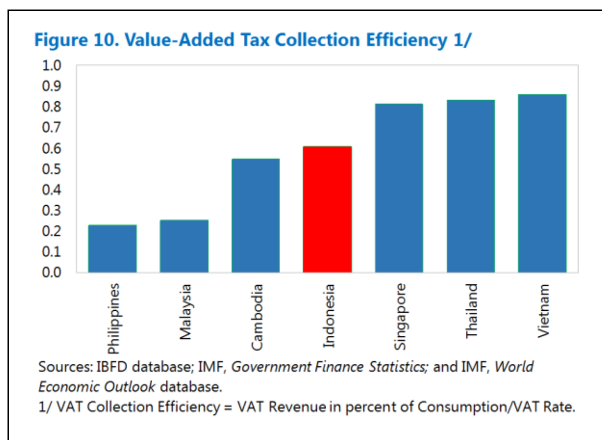


Figure 10. Value-Added Tax Collection Efficiency 1/

Sources: IBFD database; IMF, *Government Finance Statistics;* and IMF, *World Economic Outlook* database.
1/ VAT Collection Efficiency = VAT Revenue in percent of Consumption/VAT Rate.

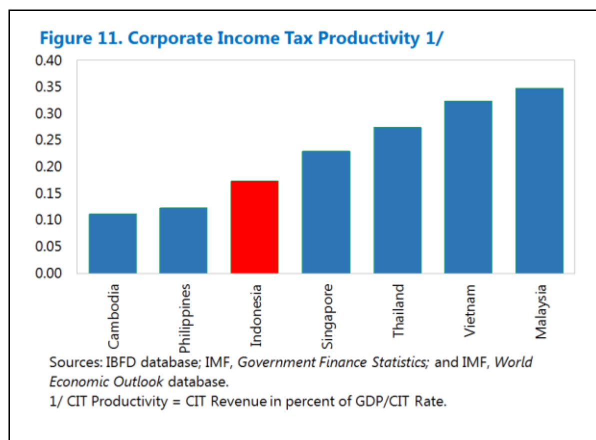


Figure 11. Corporate Income Tax Productivity 1/

Sources: IBFD database; IMF, *Government Finance Statistics;* and IMF, *World Economic Outlook* database.
1/ CIT Productivity = CIT Revenue in percent of GDP/CIT Rate.

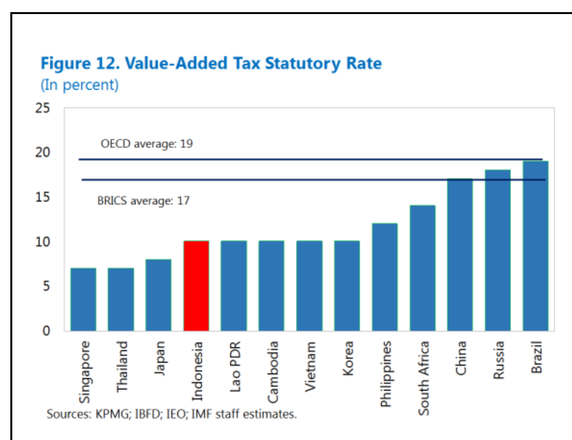
Tax Policy Reform

14. Tax policy reform should be predicated on increasing revenue from the most "growth-friendly" taxes. The most growth-friendly tax is property tax, followed by indirect taxes, labor income tax, and corporate income tax (IMF, 2015a). This is also consistent with how "mobile" the tax base is: property tax has the least mobile tax base, therefore raising property tax revenue has the least negative impact on growth. In contrast, CIT has the most mobile tax base, which is at the core of international taxation issues. However, property tax is administratively challenging and therefore not a good source of short-term revenue gains. Therefore, indirect taxes that are both growth-friendly and easy to administer, especially VAT and excise taxes (including environmental tax), would be the most suitable tax instruments to raise significant revenue in the near to medium term.

Value-Added Tax

15. The VAT rate could be gradually increased with base-broadening to raise revenue. The present statutory VAT rate of 10 percent is low compared to major emerging economies and the OECD, although it is in line with regional practices (Figure 12). At the same time, there are many exemptions on intermediate inputs, which result in cascading effects.[4] These exemptions distort the Indonesian market and, due to the cascading effect, result in somewhat higher VAT revenue. For example, VAT exemptions of some services (such as hotel, restaurant, and transportation) mean that these service providers can pass along the VAT on their inputs to their customers through higher prices. If the products are then used by business customers in further production, the VAT is charged on the output but credits could not be claimed for the earlier VAT paid on inputs. Revenue losses from VAT exemption of final consumption are about 0.8 percent of GDP, while cascading tax collected on intermediary consumption is about 0.9 percent of GDP. Therefore, to raise revenue, any VAT rate increase should be accompanied by the removal of exemptions on both intermediate and final consumptions. For example, increasing the VAT rate in stages to 15 percent (maximum allowed in the current legislation) while removing exemptions, could increase VAT revenue by at least 1.8 percentage points of GDP in the near to medium term.

Figure 12. Value-Added Tax Statutory Rate
(In percent)



Sources: KPMG; IBFD; IEO; IMF staff estimates.

16. There is room to improve VAT administration. Indonesia has a complex VAT return, requiring itemization of transactions that can amount to millions between taxpayers each month,

[4] Cascading refers to a situation where tax is applied on taxes, thereby exacerbating the economic distortions caused by the tax. This arises when tax is charged on inputs into VAT-exempt goods and services. No refund could be collected for the tax paid on the inputs used in their production. A portion of the tax paid on inputs—the magnitude of which will depend on factors such as the relative elasticities of demand and supply and the ratio of taxed to untaxed inputs—is then passed on to consumers through higher prices. When an exempted item is used as an input into production, the input tax "sticks," with tax applied on top of the tax.

compared to the dozens of aggregated items required in other countries. Moreover, the refund procedure is excessively long. Regular taxpayers (instead of fast-track taxpayers) are audited prior to receiving a refund payment. Refund requests from about 2,000 bonded zones and 600 bonded warehouses—that are effectively zero rated—have risen significantly. As a result, refunds to regular taxpayers can suffer long delays.

Excise Tax

17. Excise reforms could generate additional revenue of about 1 percent of GDP in the near term.

- **The vehicle tax could be rebased on CO2 emissions**. The current ad valorem Sales Tax on Luxury Goods (STLG) on motor vehicles is inefficient, as the producers could easily understate the value. It could be replaced with a more efficient excise tax on motor vehicles based on CO2 emissions, which could generate additional revenue up to 1 percentage point of GDP.

- **Tobacco excise could be streamlined and increased**. Although Indonesia has the highest prevalence of smokers among ASEAN, the tax burden is below the regional average (Figure 13). An increase in the tax rate, while simplifying the present 13 tiers of specific rates, will be able to boost the revenue in the near term. The authorities already have plans to increase tobacco excises and streamline the tiers.

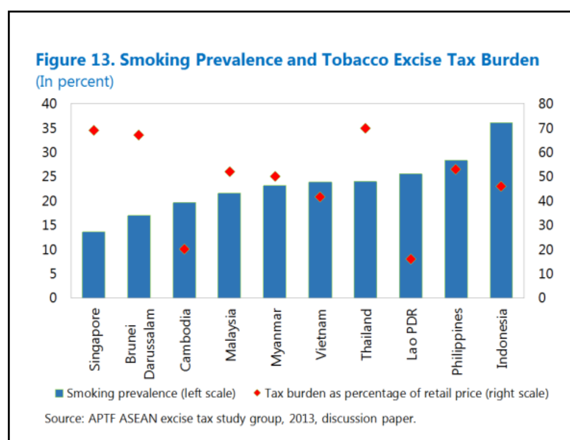


Figure 13. Smoking Prevalence and Tobacco Excise Tax Burden
(In percent)

Source: APTF ASEAN excise tax study group, 2013, discussion paper.

- **Environmental (fuel) taxes could be introduced**. Currently, retail prices for gasoline and diesel in Indonesia are low compared to other ASEAN countries, which suggests that there is room for raising taxes to compensate for their negative externalities (Figures 14 and 15). In the near term, an environmental tax of Rp 1,000/liter for gasoline and Rp 500/liter for diesel would generate an estimated 0.3 percent of GDP of new revenue. This action would also support Indonesia's Paris Agreement pledge to lower greenhouse gases by 29 percent below "business-as-usual" levels by 2030.

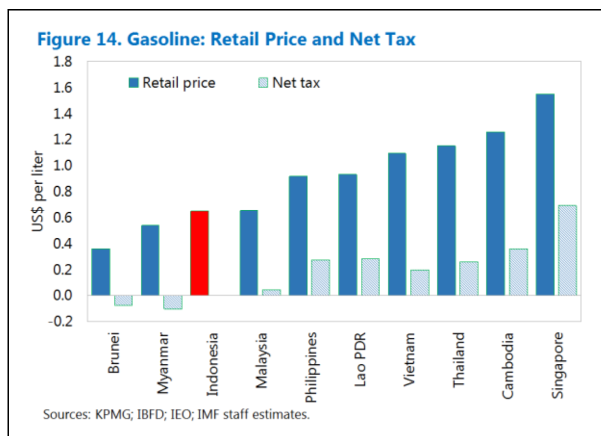


Figure 14. Gasoline: Retail Price and Net Tax

Sources: KPMG; IBFD; IEO; IMF staff estimates.

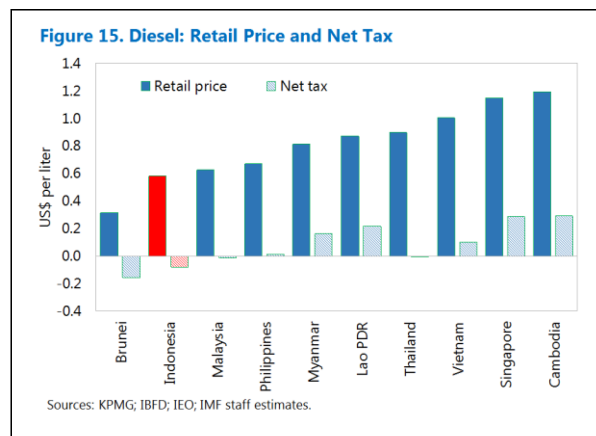


Figure 15. Diesel: Retail Price and Net Tax

Sources: KPMG; IBFD; IEO; IMF staff estimates.

Corporate Income Tax

18. There is room to simplify the current CIT regime. At 25 percent, the current statutory CIT rate is generally in line with the OECD and major emerging economies (Figure 16). Therefore, a significant reduction of the statutory rate is not advisable, as large countries like Indonesia have little to gain but more to lose from a much lower rate. Though excessive borrowing from related parties (tax-base erosion) may be a concern, addressing the issue through reduced corporate tax rates is unlikely to be effective. Other approaches, such as tightening thin capitalization rules could be considered. On the other hand, there are numerous low-rate CIT regimes: a 1 percent tax on gross revenue for small and medium enterprises (SMEs) below an annual turnover of Rp 4.8 billion; a rate reduction of 50 percent up to their taxable income corresponding to gross turnover of Rp 4.8 billion for medium-sized enterprises up to an annual turnover of Rp 50 billion; and a reduced rate of 20 percent for publicly listed companies. Therefore, there is room to consolidate all the regimes for companies above the SME threshold of Rp 4.8 billion, and apply a single and modestly lower CIT rate in a revenue-neutral manner.

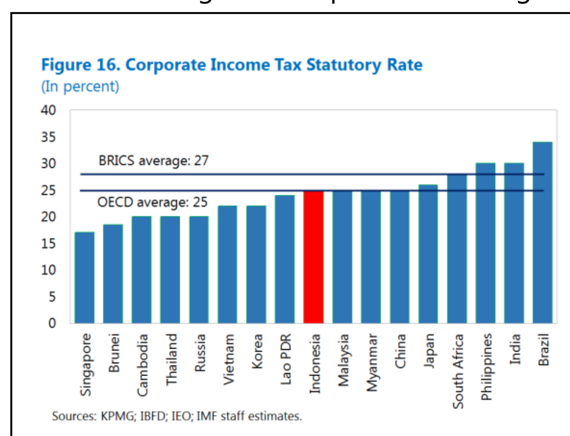


Figure 16. Corporate Income Tax Statutory Rate
(In percent)

Sources: KPMG; IBFD; IEO; IMF staff estimates.

19. The international taxation aspect of the CIT could be strengthened through anti-avoidance measures and the G20/OECD BEPS project. Anti-tax avoidance regulations could be strengthened, such as those on permanent establishment, transfer pricing, thin capitalization, and controlled foreign corporations. As a G-20 country, Indonesia has agreed to implement the G20/OECD BEPS project. Implementation of the BEPS project outcomes will need to be carefully thought through in order to adapt them to Indonesia's own capacity and circumstances.

Property Tax

20. Property tax could be gradually increased while the administration capacity is enhanced. Recurrent property tax in the form of "land and building tax" has been decentralized. The central government sets the maximum rate that municipalities are allowed to adopt, with the current rates ranges between 0.1–0.3 percent of the assessed value. Total revenue was only about 0.6 percent of GDP in recent years, compared to the worldwide average of 1 percent of GDP. Therefore, there is potential to increase such revenue by about 0.2 percentage points of GDP in the medium term, by increasing the maximum rate set by the central government. Also, as capacity to register and assess property values is strengthened over the medium term, additional property tax could gradually replace the distortive central-government transaction tax and local government stamp duties, which are 2.5 percent and 5 percent of the property transaction values, respectively.

Personal Income Tax

21. The base of the top PIT rate could be broadened. The PIT rate structure in Indonesia is comparable to regional peers. The top PIT rate is 30 percent for income over 15 times GDP per capita. The threshold seems a bit high compared to OECD (3.8), Singapore (4.9) and Malaysia (3.1). Given that raising PIT rate is less growth-friendly, one potential revenue-neutral improvement is to lower the threshold of the top rate by about half to 7 times GDP per capita while lowering the top rate slightly, which will broaden the tax base for the top 3 percent of the income distribution.

Revenue Administration Reform

22. Three critical components of growth-friendly revenue administration reform could be pursued: (1) improve tax collection efficiency; (2) strengthen the business environment; and (3) strengthen the institution of tax administration.

23. Improve tax collection efficiency. The following four reforms could be considered.

- **Strategies to boost compliance for a few major taxes**. For each tax, the strategy could divide the taxpayers into segments and for each segment: (1) identify and rank the main compliance risks that the segment poses for a particular tax; (2) develop treatments for mitigating the compliance risks; and (3) provide a set of performance criteria and indicators for measuring the impacts of its treatments. In the short-term, the strategies could be developed for the VAT and employer withholding of personal income tax, focusing on large taxpayers and top-end of medium taxpayers in major centers.

- **Extended audit coverage through more specific-issue audits based on risk**. By focusing on a limited number of issues, specific-issue audits could be completed much faster than traditional comprehensive audits, thereby allowing greater coverage of the taxpayer population. Numerical target could be adopted; for example, specific-issue audits could comprise at least 50 percent of all audits conducted in one year.

- **External information for data matching and pilot for risk-based case selection**. Rather than obtaining extensive information from multiple sources, the data matching project could identify two or three high priorities for exchange of information targeting the highest risk areas. For example, priority may be given to receiving data on payments of investment income to individuals from financial institutions, real property purchases from property registers, and automobile registrations from the motor vehicle department. This information would then be used to pilot more targeted case selection.

- **Moving the *Extensification* program towards a targeted campaign**. The program could focus on a few high risk sectors in the informal economy and on increasing registration and filing of registrants with significant tax potential. Project-based approaches—which target compliance activities on those sectors and individuals that pose the highest risk to tax collection—have succeeded in improving compliance in the informal economy in some countries.

24. Strengthen the business environment. The following reforms could be considered.

- **Priority regulations to remove ambiguities and inconsistencies with the tax laws**. There are reports of many instances where the tax laws and regulations are unclear and inconsistent, causing uncertainty for taxpayers on the tax treatment of their investments. Removing ambiguities in the tax laws and ensuring that the laws are applied in a consistent manner could significantly improve the investment environment and support growth. Therefore, a comprehensive review of tax legislation and regulations could be conducted to remove ambiguities and inconsistencies.

- **Expanded number of taxpayers eligible to receive VAT refunds without a prior audit**. As mentioned above, taxpayers have to wait a considerable time in many cases before receiving VAT refunds for excess input credits, which increases the financial cost of tax compliance. Under current practices, only a very small number of taxpayers are entitled to a refund without a prior audit. The Directorate General of Taxes (DGT) could revisit the criteria for 'golden' and 'low risk' taxpayers so that more taxpayers could receive a refund without an audit.

- **In priority areas, guidance on audit techniques and technical issues, and implementation of a process for ensuring consistent application**. There are reports of frequent inconsistent interpretations of the law and application of audit techniques by auditors, which could create uncertainty and increase compliance costs. Addressing these problems would require the DGT to issue enhanced guidance on the application of the tax laws and audit techniques. As part of this effort, an up-skilling program could be introduced, focused initially on auditors and making it mandatory for auditors to follow the published guidance.

Strengthen the Institution of Tax Administration

25. Strengthening DGT through incremental reforms in the near term is one of the priority areas. An effective management and ministerial performance agreements could be considered to

ensure that tax administration reforms support Indonesia's growth efforts. Consideration could be given to making the Director General subject to a performance agreement that includes a small set of performance measures based on tax administration results and taxpayer satisfaction. The performance measures should not include (or give undue weight to) a revenue collection target. The authorities' efforts to improve social trust is well placed and should be an integral part of the reform efforts—establishing a consultative forum with business representatives to discuss areas of concern in the tax administration may further expand these efforts. Other key actions could include putting in place a strong reform-management team, establishing a comprehensive tax revenue strategy comprising actions in the short- and medium-term on both tax policy and administration, and exploring avenues to grant the DGT additional management and administrative flexibility to facilitate its modernization.

26. The authorities should be cautious on the reform toward a semi-autonomous revenue agency (SARA). Although the revenue administration reform bill submitted to the parliament envisions a SARA down the road, there is no "one-size fits all" arrangement for tax administration. Tax administration may be part of the Ministry of Finance, partially autonomous, or fully autonomous—and the institutional setup tends to reflect characteristics of individual countries. In today's context, the risks of establishing SARA appear to outweigh its potential benefits. A structural institutional change will necessarily lead to considerable transition costs as staff is separated from their original workplace and new systems are put in place. These, in turn, could be significant and can overwhelm other reform efforts to improve tax administration and tax policy—at a time when revenues are already significantly below the level needed to support the authorities' growth-enhancing spending priorities.

D. Growth and Equity: Have a Balanced Mixture of Revenue and Expenditure Reforms

27. The above mixture of revenue and expenditure reforms will ensure a balanced approach to promote growth while maintaining or improving equity. On the revenue side, although raising property tax could be highly progressive, the reliance on increasing indirect taxes (VAT and excise) for revenue mobilization tends to be regressive, as increasing the more progressive PIT could have a negative impact on growth. However, much of the regressivity from the revenue side could be offset by the strong equity-enhancing expenditure policy. Increasing expenditure on public health and education will provide more equitable access for the poor, which promotes both growth and equity.

28. A better targeted and more efficient social assistance policy will also enhance equity. Indonesia has an array of social assistance programs lacking coverage and adequacy, and a large share of poor and vulnerable households are not receiving all the benefits they are eligible for. The authorities have already stated their intention to replace general price subsides, including energy subsidies, with more targeted cash transfers. An integrated database for social assistance (PBDT) has been developed, which covers the bottom 45 percent of the income distribution. This is a right step forward, which will enable the authorities to reduce and consolidate various social assistance programs into better-targeted and more efficient programs in the next few years. In the medium

term, once the administrative capacity has been well developed, the authorities could also consider the introduction of a means-tested Guaranteed Minimum Income program.

E. Prioritization and Implementation of the Strategy

29. The above reform strategy could be implemented in stages. The above measures and their fiscal impacts are summarized in Table 2, which are expected to increase potential growth to 6 percent by 2021.[5] Clearly, not all the reforms could be taken at the same time. In the near term, the priorities could be improving the quality of spending, raising revenues through higher excises (tobacco excise, environmental tax on fuel products, etc.), starting the phased move to a risk-based tax administration regime, and preparing to upgrade the key tax laws. At the core of the fiscal strategy is the revenue strategy which will enable growth-enhancing expenditure policy. Therefore, the design of the revenue strategy could be started right away, which will set the stage for the expansion of expenditure gradually over the medium term.

Table 2. Indonesia: Menu of Policy Options in Growth-Enhancing Fiscal Strategy

(In percent of GDP)

Policy Options	Estimated Fiscal Impact by 2021	Details of the Policy
Total revenue policy 1/	3.0	
Value-added tax	1.8	Increase rate from 10 percent to 15 percent while removing exemptions.
Excise taxes	1.0	Increase vehicle and tobacco excise rates and impose environmental tax on fuel.
Personal income tax	0.0	Remove exemptions and lower top rate in a revenue-neutral manner.
Corporate income tax	0.0	Remove exemptions and lower statutory rate in a revenue-neutral manner.
Property tax	0.2	Increase rate and gradually replace transaction tax with recurrent property tax.
Total expenditure policy 2/	2.7	
Health	0.6	Implement universal health coverage while improving efficiency.
Education	0.8	Increase education expenditure toward EM average (4.8 percent of GDP) while improving efficiency.
Social Assistance	0.1	Consolidate poorly-targeted programs.
Infrastructure	1.3	Increase investment expenditure toward 5 percent of GDP while improving efficiency.
Other expenditure	-0.1	Cut nonpriority expenditure.

1/ Positive sign means more revenue.
2/ Positive sign means more expenditure.

[5] The medium-term growth forecast is based on the global integrated monetary and fiscal model (GIMF) in Anderson and others (2013). This forecast is also similar to the experience with other emerging economies which have implemented growth-friendly fiscal reforms analyzed in IMF (2015a).

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INTERNATIONAL TAX REFORM IN INDONESIA[1]

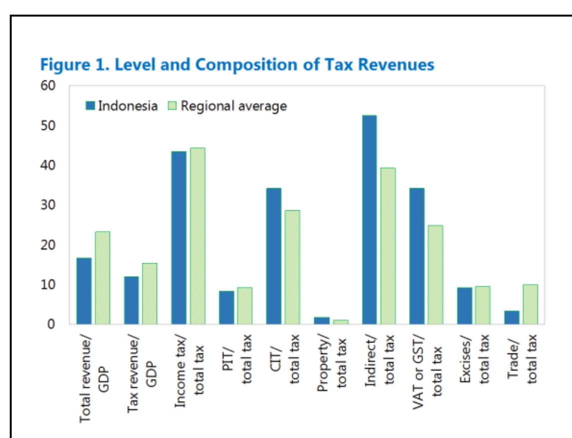
International tax systems have become increasingly vulnerable to mobile capital, which seeks the highest after-tax rate of return and deploys tax planning techniques. Like many other countries, Indonesia has to protect itself against tax base erosion and profit shifting, and needs to strike a balance between offering a tax system that is attractive to investment and raises revenues to support priority spending in infrastructure and social sectors.

A. Introduction

1. The review of international aspects of taxation in Indonesia is timely for a number of reasons. Indonesia is conducting a major tax amnesty aimed particularly at registering and repatriating offshore assets, and improving relations between the tax office and taxpayers. As a G-20 country and ASEAN member, Indonesia is involved in multiple international tax initiatives, most notably the Organization for Economic Co-operation and Development (OECD) base erosion and profit shifting (BEPS) project. Finally, Indonesia is planning a general reform of its principal tax laws, the income and value added taxes (VAT). Indonesia's international tax reform is therefore approached in the context of its general tax reform and international commitments.

2. Indonesia raises less tax revenue in terms of GDP than average for the Asia/Pacific region (Figure 1): 12 percent vs. a regional average of 15.4 percent. Though comparison of Indonesia's revenue structure and performance to those of other developing economies in the region is not prescriptive, it may nonetheless help inform the goals and potentials of its reform efforts. The general tax reform should thus aim to enhance revenues, as intended. Like many developing countries, Indonesia relies heavily on corporate income tax (CIT) and VAT revenues, each of which accounts for more than one third of tax revenues. Nonetheless, because Indonesia's tax revenue/GDP ratio is below average, its CIT revenues are slightly below the regional average in terms of GDP: 4.1 percent vs. 4.4 percent, respectively. Thus, CIT revenues still have room for development.

Figure 1. Level and Composition of Tax Revenues



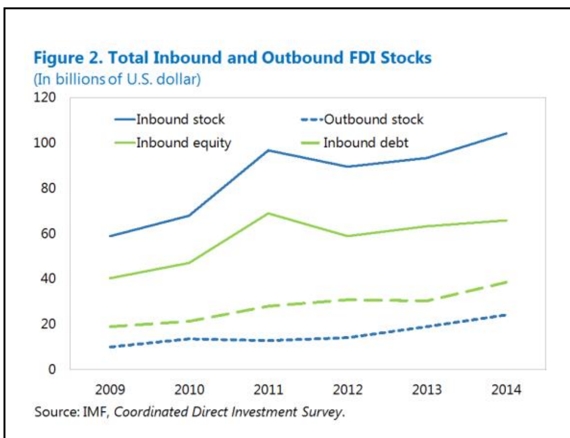
3. The following section will evaluate the structure of Indonesia's foreign direct investment (FDI) to gauge its implications for international tax reform. Section C on the domestic tax law will then discuss CIT reform in greater detail, while Section D will discuss the current structure and reform of Indonesia's network of tax treaties. Section E will evaluate priority

[1] Prepared by Thornton Matheson, Narine Nersesyan (both FAD), and Michael Kobetsky (Consultant, FAD).

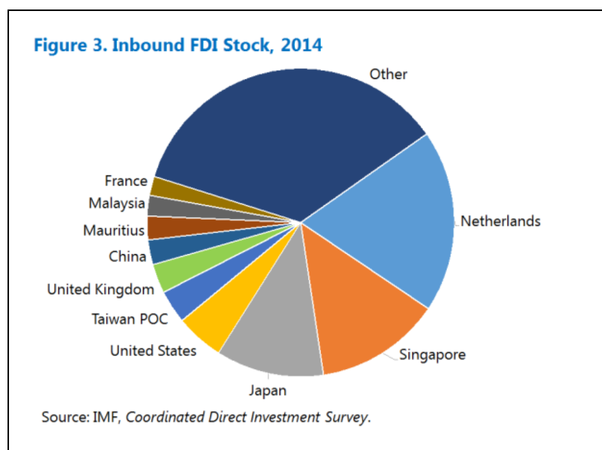
action items for the OECD BEPS project. Finally, Section F focuses on exchange of information commitments and challenges.

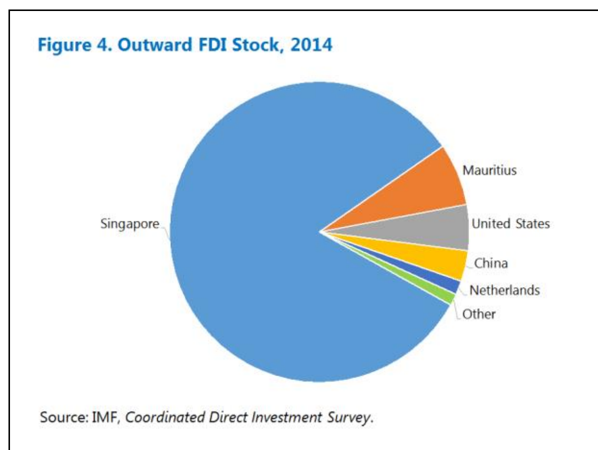
B. FDI Structure

4. Since the international tax regime applies to cross-border investments, its reform should consider their structure. This section analyzes the current structure of Indonesia's cross-border FDI to highlight issues that the ongoing reform should consider. The first issue is that Indonesia is by a large margin a net capital importer (Figure 2). Its inbound FDI stock is roughly five times as large as its outbound stock. The international tax regime should therefore seek to protect source-based tax revenues. The second issue of note is that, although the majority of inbound investment is financed with equity, a growing share is financed with debt. The tax regime should therefore also seek to curb excessive interest deductions as a means of base erosion.



5. Another salient feature of Indonesia's FDI structure is that a large share of both its inbound and outbound stocks is associated with low-tax jurisdictions with large treaty networks such as Singapore, Mauritius, and the Netherlands. The IMF CDIS data in Figures 3 and 4 reflect only the immediate country of origin or destination. Regarding *inbound* investment, it is thus likely that some of the investment flowing from low-tax jurisdictions in fact originated elsewhere. Regarding outbound investment, it is likely that some of the FDI flowing to these jurisdictions may ultimately be invested elsewhere. In particular, anecdotal evidence suggest that outbound capital located in Singapore is reinvested in Indonesia through a practice known as "round-tripping."





6. There are numerous reasons why a cross-border investor might channel inbound or outbound investment through a third jurisdiction, including legal and financial amenities and risks, but a major motive for such practices worldwide is tax avoidance. This is frequently facilitated by making use of "conduit" countries' large tax treaty networks, which often feature zero or very low cross-border withholding tax rates. The prominence of low-tax jurisdictions in Indonesia's FDI structure thus has several policy implications. Going forward, caution is advisable in concluding tax treaties with low-tax jurisdictions as such treaties facilitate shifting of a country's tax base. In some cases, renegotiations could be tried, as Indonesia did with the Mauritius treaty in 2014. Also, Indonesia's basic model tax treaty might include provisions that would limit treaty benefits to third countries. Finally, Indonesia is building the legal and administrative infrastructure to facilitate cross-border exchange of taxpayer information—a positive approach. These matters will be discussed in greater detail in the following sections.

C. Domestic Law

7. Corporate tax rates across the globe have been under downward pressure in recent decades due to fierce competition for foreign investment. Indonesia's 25 percent CIT rate is currently marginally above the regional average of 22.8 percent (Figure 5). Consideration is being given to cutting its CIT rate, which could further weaken revenues with uncertain benefits. Indonesia is a country with strong fundamentals—macro stability, large young labor force and consumer market, abundant natural resources—which will tend to attract FDI even without a below-average tax rate.

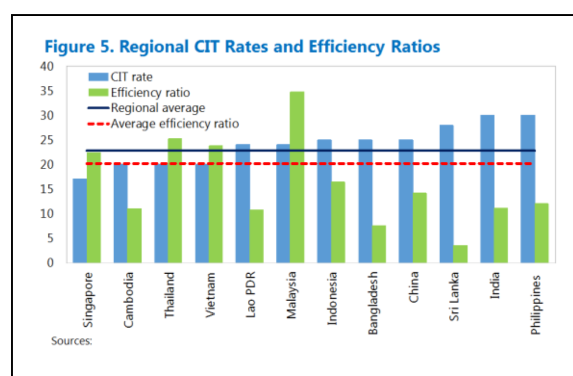


Figure 5. Regional CIT Rates and Efficiency Ratios

8. Lowering the CIT rate without sacrificing revenues would be possible by broadening the CIT base. Indonesia's CIT efficiency, as measured by the ratio of CIT revenues to the product of GDP and the corporate tax rate, is below average for the region (Figure 5), indicating that its corporate tax base is relatively narrow. Indonesia offers several types of tax incentives and allowances, including:

- Tax holidays for pioneer industries;
- Investment allowance;
- Special economic zones and integrated economic development zones;
- Reduced CIT rates for publicly listed companies and medium-sized companies; and
- Final gross receipts taxes for certain sectors, e.g., construction and real estate.

9. Tax incentives are of uncertain value since there is no data available on cost-benefit analyses nor estimates of tax expenditures. As part of the tax reform planned for 2017, the government may consider systematically reviewing existing tax incentives to determine which of them provide a net benefit to the economy. Good international practice includes evaluations of

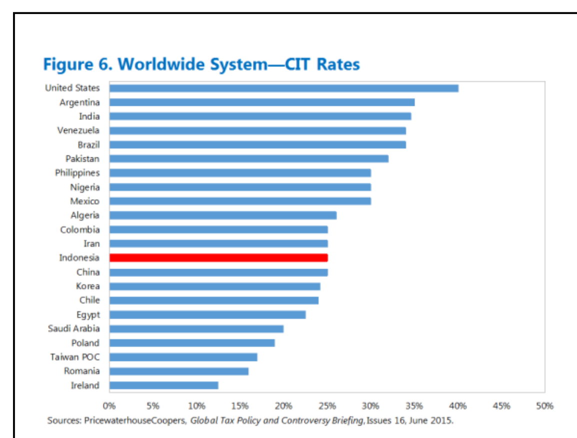
revenue cost of any remaining tax incentives, with the estimates published as part of the annual budget. This improves the transparency of the tax code.

10. Indonesia operates a "worldwide" tax system, in which its resident taxpayers are subject to income tax on both domestic and foreign-source income. For the latter, they receive a foreign tax credit (FTC) for income taxes paid abroad. However, in line with the recent trend among developed countries, the government is considering switching to a "territorial" system that would exempt foreign earnings from domestic taxation. Several considerations apply to this decision.

11. One argument often given for territoriality is that it simplifies administration. Best practice is that territoriality exempts only participating dividends received by resident corporations. Portfolio dividends and all foreign income received by individuals normally continue to be taxed on a worldwide basis in order to discourage buildup of passive investment offshore and to ensure fairness and progressivity. Also, income other than dividends, including interest and royalties, which are deductible in the source jurisdiction, should always be taxed on a worldwide basis. This does limit the simplification benefits from adopting territoriality, since FTCs must still be tracked for income other than participating dividends.

12. Another argument frequently given for territoriality is that, unlike worldwide systems, it creates no disincentive to repatriate foreign earnings and thus reduces incentives for avoidance, for example, by holding assets offshore. U.S. MNEs' large buildup of more than US$2 trillion in un-repatriated earnings exemplifies this potential shortcoming of worldwide systems. However, the disincentive for repatriation depends critically on the domestic/foreign CIT rate differential. The U.S. system discourages earnings repatriation not simply because it is worldwide but also because the U.S. CIT rate is among the world's highest (Figure 6). Therefore, FTCs do not fully shelter foreign earnings from U.S. tax upon repatriation. It is noteworthy that Ireland—which is considered by some to be a "low tax jurisdiction"—also has a worldwide system, but because its tax rate is so low (12.5 percent), it effectively functions as a territorial regime. Indonesia's CIT rate, at 25 percent, should not produce excessive distortions such as in the U.S. system, even in its current form.

Figure 6. Worldwide System—CIT Rates



Sources: PricewaterhouseCoopers, *Global Tax Policy and Controversy Briefing*, Issues 16, June 2015.

13. Territoriality is likely to reduce revenues, and relative to a worldwide system, it can also encourage outbound investment. Any increase in tax rate differentials due to the repeal of repatriation taxes can also exacerbate incentives to shift income from high-tax to low-tax jurisdictions. Moreover, controlled foreign corporation (CFC) rules need to be strengthened under territoriality in order to distinguish active from passive foreign income (the former being exempt

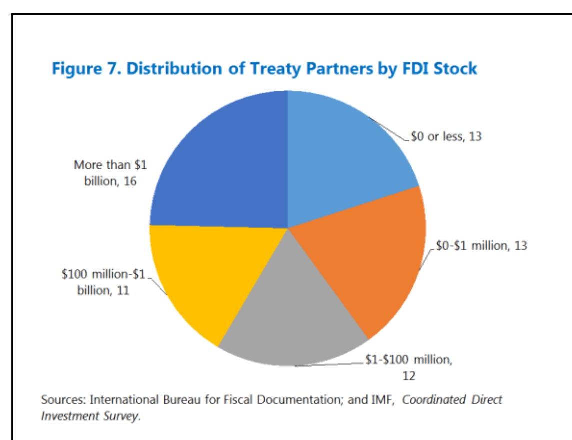
while the latter is taxed). On the whole, there does not thus appear to be a strong case for Indonesia to switch from a worldwide to a territorial system.

D. Tax Treaties

14. Bilateral tax treaties, which were developed among industrialized countries, generally aim at alleviating double-taxation and favor the principle of residence over source taxation. The main trade-off countries make in entering treaties is reducing their domestic tax base, mainly by cutting cross-border withholding tax (WHT) rates, in hopes of attracting greater foreign investment. Empirical studies show some evidence that tax treaties stimulate FDI, particularly in middle-income countries, but results vary widely.[2] Net capital importers such as Indonesia may wish to carefully preserve their domestic tax base when negotiating their tax treaties. Thus far, Indonesia has been fairly successful at this: Few of its tax treaties reduce its cross-border WHT rates, set by domestic law at 20 percent, to less than 10 percent.

15. The total number of Indonesia's tax treaties is large by international standards. Indonesia has 66 bilateral treaty partners, with many of which it has little or no bilateral investment (Figure 7). With more than half of its treaty partners, Indonesia has less than US$100 million in FDI (inbound or outbound). Going forward, treaty partners could be selected on the basis of a cost-benefit analysis incorporating data on capital flows and knowledge of the potential partner's tax system. Where mutual economic relations don't appear to merit or demand a bilateral double tax agreement, it may still be advisable to have tax information exchange agreements (TIEAs).

Figure 7. Distribution of Treaty Partners by FDI Stock



Sources: International Bureau for Fiscal Documentation; and IMF, *Coordinated Direct Investment Survey*.

16. It is important for countries to adopt a strategic approach to tax treaties. Some elements of a strategy could include: (i) Setting reasonable parameters for cross-border investment in domestic law, so that countries without a tax treaty would not be discouraged from investing in Indonesia. Definitions of source, residence, and permanent establishments should accord with international norms to minimize the likelihood of double taxation. It may also be advisable to consider offering a participation exemption or reduced WHT rate for cross-border participating dividends, as it has for domestic corporations; (ii) Using one model treaty to negotiate with all countries. The model treaty parameters should reflect domestic law, which is the starting point for

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[2] See for example F. Barthel, M. Busse and E. Neumayer, 2009, "The Impact of Double Taxation Treaties on Foreign Direct Investment: Evidence from large Dyadic Panel Data," *Contemporary Economic Policy*, Vol. 28, Issue 3, pp. 366−377; and B. Blonigen, L. Oldenski, and N. Sly, 2011, "Separating the Opposing Effects of Bilateral Tax Treaties," NBER Working Paper No. 17480; and P. Egger, and V. Merlo, 2011, "Statutory Corporate Tax Rates and Double-Taxation Treaties as Determinants of Multinational Firm Activity," *FinanzArchiv*, Vol. 67, Issue 2, pp. 145−170.

all treaty negotiations. The government could consider setting minimum reserve values, for example for WHT rates, below which it will not negotiate. The final terms of each tax treaty will then depend on the treaty partner's model treaty parameters and the expected benefits of negotiating the treaty. All treaties should include provisions for exchange of information (EoI), which for non-treaty countries will be provided by the OECD/G-20 Convention on Mutual Administrative Assistance in Tax Matters.

E. Base Erosion and Profit Shifting (BEPS) Action Plan

17. As a G-20 country, Indonesia has endorsed the BEPS Action Plan agreements, as reflected in *BEPS 2015 Final Reports* (OECD, 2015). These Reports reflect a consensus between OECD and a number of non-OECD countries on the current weaknesses of the international tax architecture and suggest measures aimed at addressing current architectural flaws, thereby limiting cross-border base erosion and profit shifting opportunities.

18. Indonesia already has several good measures in its legislation to address base erosion and profit shifting. Provisions include CFC rules, regulations on the application of the "arm's length principle" for transfer pricing purposes, requirements to submit documentation for transactions with related parties, and anti-avoidance measures (against thin capitalization, for example). As further discussed below, these instruments could simply be reinforced.

19. Implementation of the agreements and recommendations of the BEPS project needs to be prioritized and adapted to Indonesia's context. In this respect, three related questions should be considered: (i) which BEPS recommendations are relevant and represent the best option for net capital-importing countries?; (ii) is there sufficient institutional capacity to implement them?; and (iii) if not, what capacity-strengthening measures should be taken? Additionally, countries may wish to implement certain anti-avoidance measures that are not covered by the BEPS project but are nonetheless important, such as capital gains taxation of indirect offshore asset sales.

20. Several BEPS action items take priority based on each country's specific international tax policy concerns as well as its international commitments. The BEPS actions most relevant to Indonesia's specific policy concerns could include strengthening CFC rules (Action 3), limiting base erosion via interest deductions (Action 4), and addressing artificial avoidance of permanent establishment (PE) status, especially in the context of a digital economy (Action 7). As a G-20 country, Indonesia has also committed to implementing the four BEPS action items classified as "minimum standards," which include countering harmful tax practices (Action 5), preventing "treaty-shopping" (Action 6), implementation of country-by-country (CbC) reporting (Action 13); and improving the effectiveness of dispute resolution mechanisms (Action 14).

21. With a worldwide income tax system, Indonesia needs strong CFC rules to ensure that residents' outbound investment is appropriately taxed. CFC rules combat the risk of shifting a resident corporation's profit, often indefinitely, into lower-taxed foreign affiliates to defer taxation. CFC rules allow the resident country jurisdiction to, in effect, tax the income earned by foreign

subsidiaries once certain conditions are met by attributing the income to the resident shareholders.[3] To be effective, the rules must clearly define what constitutes a CFC (CFC control tests), how to determine its attributable income and how to tax its attributable income. Indonesia's current CFC rules are limited to *corporate* shareholdings.[4] They can therefore be avoided with interposed foreign trusts and foreign partnerships. Further, without strong anti-fragmentation rules, ownership can be fragmented among members of group or affiliated companies, each of which falls below the CFC control tests for domestic ownership, below which a foreign entity is not considered a CFC.

22. Indonesia's CFC rules could therefore be broadened in line with BEPS Action 3, widening their scope to capture indirect ownership and tightening the anti-fragmentation rule. Three tests could be used to determine if a company is "controlled." The first test would capture situations where five or fewer Indonesian residents have at least 50 percent associate-inclusive control interests in a foreign company (as suggested above, the control interests would include indirect ownership). The second test would capture individuals with at least 40 percent associate-inclusive control interests (direct and indirect), unless there is another person with a higher interest (assumed controller). Finally, if five or fewer Indonesian residents either alone or together with associates control the foreign company—de facto controllers—it will be classified as a CFC.[5]

23. Excess debt and interest deductions are among the most common base eroding and profit shifting techniques available in international tax planning. Under the standard CIT, interest is deductible while the return to equity (dividends) is not. Multinational groups have the capacity to reduce their overall tax liabilities by allocating debt to affiliates in high-tax countries and equity to affiliates in low-tax countries. This issue is clearly important to Indonesia, as in 2014 more than one-third of all inward direct investment in the country was financed by debt (Table 1). In an effort to limit excessive interest deductions, in September 2015 Indonesia introduced a "thin capitalization" rule,[6] restricting interest deductibility for companies with more than a 4:1 debt-to-equity ratio.[7] This regulation became effective in 2016, so it is too early to assess its impact. However, based on the simulations discussed below, the ratio may be too generous to significantly restrict interest deductions.

Table 1. Inward Direct Investment Positions

	2009	2010	2011	2012	2013	2014
Equity position (net)	68.2%	69.0%	71.2%	65.6%	67.6%	63.1%
Debt instruments	31.8%	31.0%	28.8%	34.4%	32.4%	36.9%

Source: IMF staff estimates based on IMF, *Coordinated Direct Investment Survey* (CDIS).

[3] A CFC is a foreign company in which an Indonesian resident, either alone or jointly with other resident taxpayer(s), holds at least 50 percent of registered capital.

[4] MOF Regulation 256/PMK.03/2008 and implementing DGT regulation PER-59/PJ/2010.

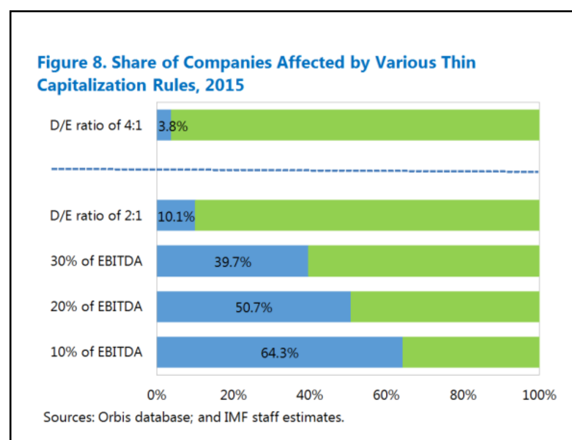
[5] This would arise where there was, for example, an evidence of email messages or directions from residents controlling the CFC and the directors were following the directions.

[6] MOF Regulation 169/PMK.010/2015.

[7] Debt includes both short-term and long-term debts as well as interest-bearing trade payable. Both, the related party loans and loans from independent lenders are included.

24. Augmenting the current thin capitalization rule with an "earnings stripping" rule, consistent with BEPS Action 4, would help address excessive interest deductibility. Earnings stripping rules deny deductibility of interest expense in excess of a certain percentage of earnings before interest, taxes, depreciation and amortization (EBITDA). BEPS Action 4 proposes a range of 10 to 30 percent as a benchmark net interest-to-EBITDA ratio. Analysis of MNEs investing in Indonesia included in the Bureau van Dijk ORBIS database shows that the current debt-to-equity ratio of 4:1 affects only 3.8 percent of MNEs (Figure 8). Even halving this ratio to 2:1 would constrain only 10.1 percent of the MNEs. By contrast, restricting net interest deductibility to 30 percent, 20 percent, and 10 percent of EBITDA would affect 39.7 percent, 50.7 percent, and 64.3 percent of firms, respectively.[8] Thus, Indonesia should consider supplementing the existing debt-to-equity ratio with an earnings stripping rule restricting net interest deductibility to at most 30 percent of EBITDA, since the latter would be more effective at constraining excessive interest deductions.

Figure 8. Share of Companies Affected by Various Thin Capitalization Rules, 2015



Sources: Orbis database; and IMF staff estimates.

25. The rapid growth of the digital economy presents challenges to tax systems designed to function in a "brick-and-mortar" environment-an issue of significance for many countries, including Indonesia. In June 2016, Indonesia's Ministry of Finance announced that it had formed a team to focus on taxation of e-commerce (Ernst and Young, 2016), and government investigations of four internet-based companies have received a great deal of press attention (Reuters, 2016). According to these reports, Indonesia has asserted its intention to tax the advertising income of internet enterprises. Digital economy issues are addressed in BEPS Action 1, which refers to BEPS Action 7 on avoidance of PE status.

26. Indonesia should consider modifying the definition of a PE in both its domestic law and tax treaties to address techniques that firms use to inappropriately avoid PE status. To this end, Indonesia could consider adopting an expanded PE definition that lowers the PE threshold to address "commissionaire arrangements", as well as anti-fragmentation measures, consistent with BEPS Action 7. Anti-fragmentation measures prevent taxpayers from avoiding PE status by fragmenting a business process either functionally or temporally into several activities, each of which falls short of qualifying as a PE. The new PE definition in BEPS Action 7 should be incorporated in future tax treaties as well as the revised income tax law. If Indonesia decides to join the Multilateral

[8] Simulations of tax revenue that could have been "recovered" had Indonesia imposed, for example, a 30 percent EBITDA rule in the year the data was reported, shows additional revenue in the order of 15.4 percent of the total tax revenue paid by the firms in the database. Similar simulations for 20 percent and 10 percent of EBITDA rule show 19.3 percent and 26.8 percent of "recovered tax," respectively. The results of the simulations should be interpreted with extreme caution as no behavioral response has been assumed—an unlikely outcome as corporations would be expected to adjust their tax planning strategy as a consequence of a stricter rules.

Instrument (MLI), consideration should be given to implementing BEPS Action 7 in the existing treaties through the MLI.

27. Indonesia is strengthening its legal framework for transfer pricing adjustments and building capacity to implement new transfer pricing guidance. To strengthen the legal basis of transfer pricing adjustments, current DGT regulation PER-32/PJ/2011 is being upgraded into a Ministry of Finance regulation (PMK). As developed by BEPS Actions 8–10, the new transfer pricing guidance focuses, among other things, on the valuation of intangible assets and transfer pricing risk analysis.

28. To more effectively administer Indonesia's transfer pricing rules, the DGT should consider establishing a specialized transfer pricing unit. Currently, most transfer pricing queries arise during regular tax audits and are addressed by the regular audit teams. However, transfer pricing analysis is a highly specialized activity requiring in-depth knowledge and training. Specialist transfer pricing auditors would be better placed to analyze related-party documents and select taxpayers for audit. Creation of a specialized unit that could work with and train regular audit teams would more effectively build capacity and make better use of DGT resources.

29. BEPS Action 5, a minimum standard, deals with countering harmful tax practices. Specifically, it requires that countries committed to BEPS, including Indonesia, eliminate certain preferential regimes and make any regime granted via individual resolutions transparent. This will be achieved through sharing information, including on unilateral advance pricing agreements (APAs) and private PE rulings. Special attention is given to the preferential tax regimes designed to attract intellectual property (IP) registrations, such as "IP boxes," BEPS Action 5 is of greatest significance to advanced economies, where research and development (R&D) expenses are concentrated, but less so to developing countries. Indonesia does not offer preferential IP regimes. However, in compliance with the BEPS minimum standard, it has joined the Forum on Harmful Tax Practices. Where necessary, existing IP regimes will need to be amended. Transparency of preferential regimes will be achieved through compulsory spontaneous exchanges of information (EoI). Section F discusses EoI issues pertinent to Indonesia.

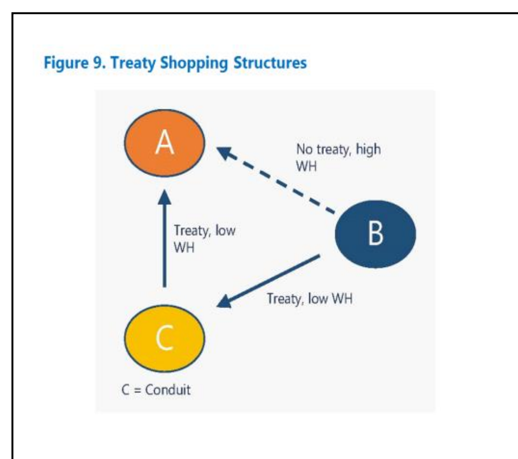


Figure 9. Treaty Shopping Structures

30. BEPS Action 6 addresses "treaty shopping," in which a corporation resident in one country invests in a second country through an entity established in a third country to take advantage of the third country's treaty benefits with the second country. In a hypothetical treaty shopping structure (Figure 9), there is no tax treaty between Countries A

and B. So if a company from Country A invests directly in Country B, any dividends remitted from Country B are subject to a domestic WHT, say 20 percent. Instead, the company from Country A can route its investment through a conduit in Country C to take advantage of the tax treaty between Country C and Country B that reduces the dividend WHT in source country B, say to 5 percent.

31. Indonesia's tax treaties generally provide weak protections against treaty shopping, with a few exceptions including the treaties with India, Hong Kong SAR, and the United States. To address treaty shopping, Indonesia currently uses a "beneficiary ownership" (BO) test to confirm that the transaction has economic substance and is not solely designed to take advantage of tax treaty benefits. The BO tests in Articles 10–12 of Indonesia's tax treaties are limited in effect, as they only apply to conduits and nominees. An interposed entity structure may satisfy the beneficial owner test, where it would not satisfy a principal or specific purpose test. Consideration should be given to implementing BEPS Action 6 by including a principle or specific purpose test in all future treaties and treaty revisions. In an effort to prevent treaty shopping, Indonesia has resorted to requiring that a certification of domicile (Form DG-1 or DG-2) be submitted for each cross-border transaction. This imposes a significant compliance burden, and where an existing tax treaty does not authorize this requirement it may also strain treaty relationships. The Form DG-1/2 should therefore be required only once a year. If a decision is made to join the MLI, BEPS Action 6 could be implemented for existing treaties through the instrument as well.

32. One of the most significant BEPS Project measures has been adoption of CbC reporting under Action 13. CbC requires MNE parent companies to submit detailed documentation on their global operations broken down by country. This information should help tax administrations improve the efficiency and effectiveness of assessing transfer pricing and other BEPS-related risks. Legislative provisions governing the three-tier CbC process—the Master File, the Local File and the CbC report[9]—have been drafted by the Ministry of Finance and are expected to be finalized by the end of 2016. CbC reporting requirements are limited to companies with annual turnover of at least Rp 11 trillion (about US$824 million).

33. A dispute resolution team was created in 2016 to deal with mutual agreement procedures (MAP) and APAs. This enables the Indonesian competent authorities[10] and their staff to specialize in tax treaty dispute resolution. MAP provides opportunities to settle disputes where

[9] Master file will contain a high-level information on global MNE business operations and transfer pricing policies; it will be available to all relevant country tax administrations. Local file will require more transactional transfer pricing documentation in each country. CbC reports should be filed in the jurisdiction of tax residence of the ultimate parent entity and shared between jurisdictions through automatic exchange of information.

[10] The Minister of Finance is the designated competent authority, delegated to the Director of Tax Regulation II of the DGT.

tax treaties are not effective. The authorities usually engage in a MAP when there is a case of genuine double taxation that needs to be resolved. Seeking to resolve MAP cases provides businesses with confidence that double taxation can be avoided.

F. Exchange of Information

34. With the shift towards a more integrated and interdependent world economy, the exchange of information for tax administration purposes comes into prominence. Tax administrations, including that of Indonesia, are increasingly in need of information from foreign jurisdictions, to effectively combat international tax evasion and promote compliance, requiring taxpayers to report their income from all sources, including foreign sources of income.

Indonesia is well-advanced in building the necessary architecture for exchange of information. Global Forum on Transparency and Exchange of Information for Tax Purposes[11]—an international body ensuring the implementation of exchange of information standards—evaluates jurisdictions' compliance with the standards of transparency and exchange of information on request through a peer review process. The Global Forum's peer review of Indonesia (Global Forum, 2014) found that domestic legislative provisions are largely in place.[12] Nonetheless, it pointed to certain limitations. In particular, the Phase 2 peer Review suggested bringing Indonesian laws to access bank information and information on securities accounts held by custodians into line with international standards. Currently, Indonesian competent authorities can only obtain information directly where the information is available from the tax administration database. Where information needs to be collected from a bank or about securities account, additional approval is necessary from Bank Indonesia or the Financial Services Authority. To obtain such approval, the name of the taxpayer holding the bank or securities account, or in the case of securities account, the account number must be provided. This is not in accordance with international standards, which only require that the taxpayer be "identified" (Global Forum, 2014).

35. Indonesia has taken an important step towards enhanced transparency by committing to implement the common reporting standard (CRS) for Automatic Exchange of Information (AEOI). Indonesia signed the multilateral Convention on Mutual Administrative Assistance in Tax Matters (the Convention) in November 2011,[13] thereby securing a legal basis for the exchange of information. As of June 2015, Indonesia is a signatory of the Multilateral Competent Authority Agreement (MCAA)—an administrative agreement between competent authorities that provides the

[11] http://www.oecd.org/tax/transparency/about-the-global-forum/.

[12] That includes Article 32A of ITL (No. 36 of 2008), Article 59 of government regulation No. 74/2011 (with reference to Law No. 16/2009), and Ministry of Finance Regulation No. 60/PMK.03/2014 as last amended Ministry of Finance Regulation No. 125/PMK.010/2015.

[13] The Convention is effective from May 2015.

modalities for AEOI.[14] Another key pillar of AEOI is the domestic legislation that effectively translates the reporting and due diligence requirements into domestic law provisions. The Global Forum monitors the CRS implementation of all committed jurisdictions.[15] As of December 2016, Indonesia's primary legislation is considered to be in place to enable submission of first CRS reports on September 2018. Other requirements, such as secondary legislation, will need to be addressed.

[14] More specifically, the CRS MCAA defines the scope, timing, procedures, and safeguards according to which the AEOI should take place.

[15] http://www.oecd.org/tax/automatic-exchange/crs-implementation-and-assistance/crs-by-jurisdiction/crs-by-jurisdiction-2018.htm

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REFORMING THE SOCIAL SAFETY NET[1]

A. Introduction—The Landscape of Social Safety Nets in Indonesia

1. Over the past decade, Indonesia has made significant progress in a short time toward a comprehensive and adequate social safety net, yet challenges remain, as the country continues to expand the net to reach more of the country's poor and vulnerable households. The importance of a social safety net to protect the poor and vulnerable is enshrined in the Indonesian constitution and has been recognized continuously by government administrations, in particular the current administration pays great attention to the social safety net in main government planning documents and subsequent budget allocations.[2]

2. Indonesia's social safety net is made up of an array of household targeted social assistance programs. These programs have been at the forefront of the central government's efforts to reduce poverty and inequality while promoting inclusive growth. Yet, the current social safety net is lacking in coverage and adequacy, as a large share of poor and vulnerable Indonesian households are not receiving all the programs they are eligible for. At the same time, the programs may fall short of providing the appropriate benefit for low-income households. Spending on social assistance could be more effective by investing in the most effective targeted programs while reforming existing universal subsidies, which is currently underway.

3. This note will discuss the state of and recommendations for improving Indonesia's current social safety net as follows. The remainder of this section will discuss the landscape of social protection, noting the larger context in which the programs are set. Section B focuses on the ongoing efforts to improve the social safety net, detailing first the need for greater program integration, coordination and improved targeting then turning to analyze Indonesia's main household targeted social assistance programs in brief. The programs discussed in this note include a health insurance fee waiver (JKN-PBI), a rice subsidy (Rastra), a scholarship (PIP), a temporary unconditional cash transfer (BLSM), and a conditional cash transfer (PKH). Finally, in Section C, new programs are proposed to address gaps in the net and main recommendations to improve the social safety net are developed.

4. As the Indonesian economy began to recover from the 1998 financial crisis, poverty declined markedly.[3] Since then, poverty has fallen at a slowing significantly (Figure 1). However, since 2010 the rate of poverty reduction has slowed down, while in the same year inequality

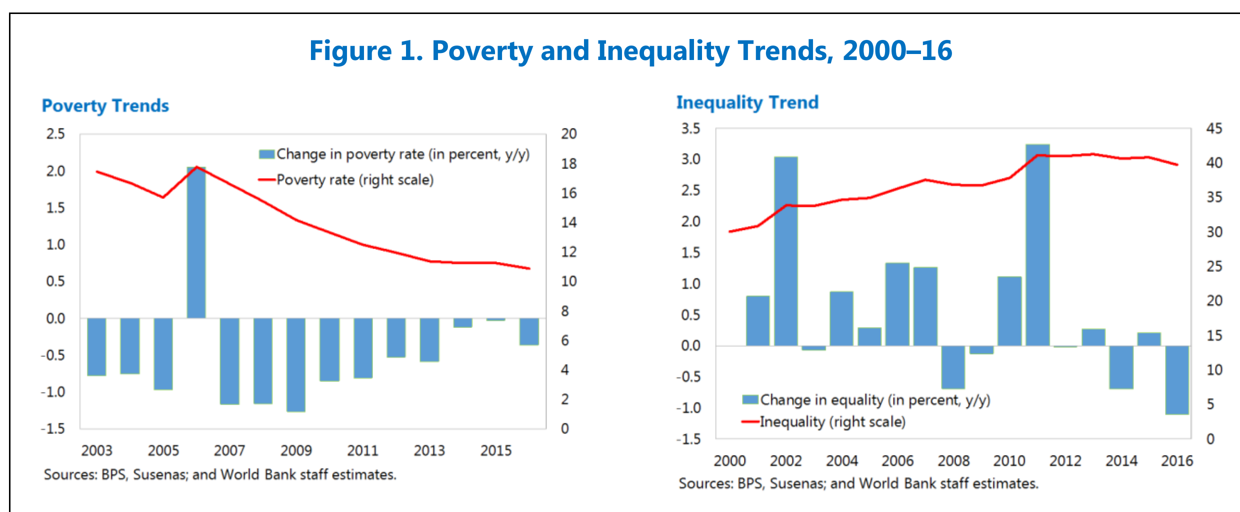
[1] Prepared by Juul Pinxten, Pablo Ariel Acosta and Changqing Sun (all World Bank, Jakarta).

[2] See Indonesia, *National Medium-Term Development Plan* 2010–2014 and 2015–2019.

[3] Prior to the financial crises in 1998, Indonesia managed to halve poverty from 40 percent to 18 percent in the period between 1976 and 1996; one of the most pro-poor growth periods in the economic history of any country. World Bank, 2006, *Making the New Indonesia Work for the Poor*.

increased markedly, from 38 to 41 Gini points in 2014. Recently, inequality has reportedly fallen to 39 Gini points.[4] Most of the reductions in the early 2000s can be attributed to continued pro-poor economic growth following the financial crisis and macro-economic stabilization policies that brought down the price of important staple goods such as rice, which make up a large part of the consumption of the poor. In the later part of that decade and well into this one, the declining poverty (albeit at a slower rate) rate is mainly attributable to initial and sustained nominal investments into social assistance programs. Generally, reducing poverty below 10 percent is difficult because the poor are increasingly further beneath the poverty line. However, further investment in and consolidation of the country's main social assistance programs is one of the more effective ways to reduce poverty in the short term while promoting better human development in the longer term.

Figure 1. Poverty and Inequality Trends, 2000–16

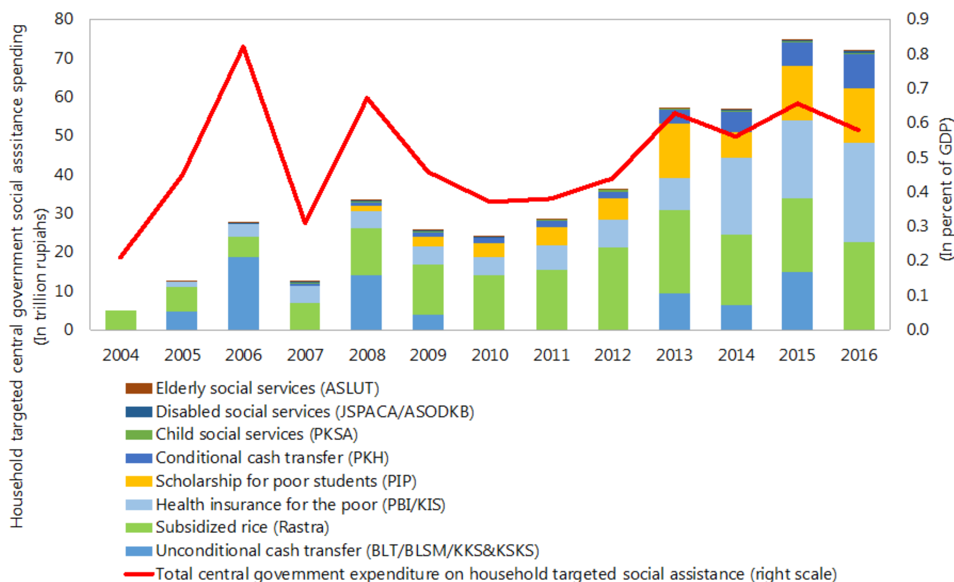


5. Indonesia's investment into social assistance programs is relatively new. While national government spending on household targeted Social Assistance programs has increased markedly in nominal terms over the past decade, it has remained within the range of 0.4 percent to 0.8 percent of GDP; low in comparison to other low and middle income countries (Figures 2 and 3).[5] Spikes in expenditure are driven by the launching of an unconditional cash transfer used to mitigate the impact of a reduction in the fuel subsidy. Key programs promoting poor and vulnerable household access to education and health services were expanded in 2013 (Scholarship for poor students—PIP) and 2014 (Social health insurance fee waiver, JKN-PBI).

[4] Statistics Indonesia, multiple years.

[5] This note refers to the five main social assistance programs and that are centrally executed and household targeted (as referred to in Figures 2 and 3). While ASLUT, JSPACA/ASODKB and PKSA calculate into the total central government expenditure on household targeted SA as a share of GDP, they are very small programs and thus not included in the discussion.

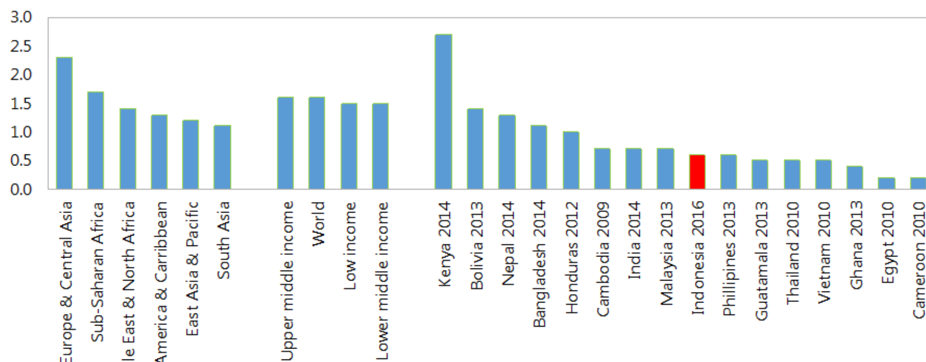
Figure 2. Evolution of Five Main Social Assistance Programs, 2004-16



Sources: 2004-2010 are from *2012 Indonesia Social Assistance Public Expenditure Review*; 2011-2016 are revised Budget from Ministry of Finance, Financial Note and BAPPENAS. 2016 World Bank estimated nominal GDP.

Figure 3. Social Assistance Spending by Regions, Income Levels, and Selected Countries 1/

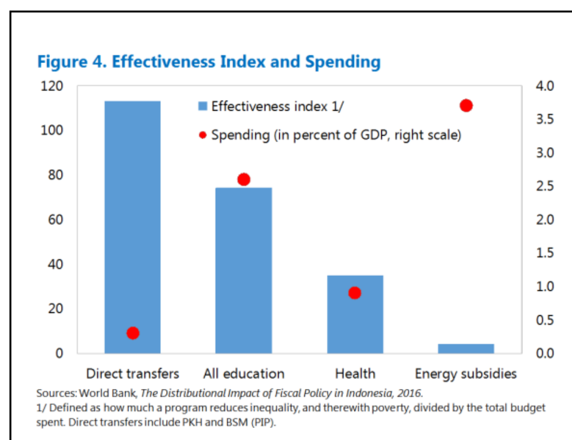
(In percent of GDP)



Source: World Bank, *Aspire database*.

1/ For the categories of regions and income levels, the value shown represents a 2008-2014 average. 2016 Indonesia including only planned central government expenditures.

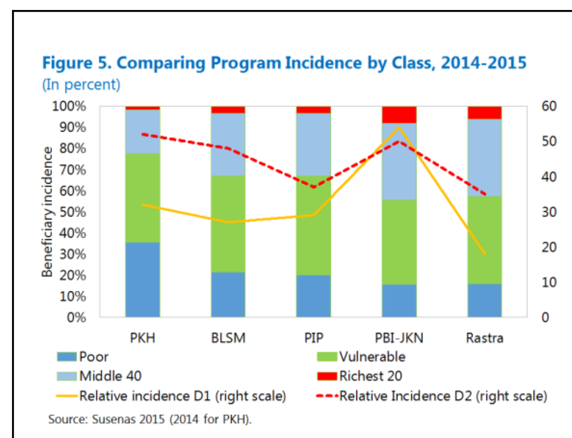
6. Increases in social assistance spending have not been efficiently allocated. Some of the important programs are in place to address economic and social risks faced by poor and vulnerable households (Figure 2). Yet, main risks remain unaddressed and the increase in nominal spending has not been directed to the programs most effective at reducing poverty and inequality (Figure 4). Based on a recently published study on the distributional impact of fiscal policy in Indonesia,[6] direct transfers are most effective at reducing poverty and inequality, yet very little is spent on these (PKH and PIP). Spending on health and education in 2012 was found to be two-thirds and one-third as effective as direct transfers while also receiving a relatively small budget yielding little overall impact as well. While they are being reined in further in 2016–17, energy subsidies comprised 3.7 percent of 2012 GDP and were found to be the least effective in overall terms.[7] The proposed reforms discussed in this brief encompass continued coverage expansion of the more effective social assistance programs while further improving inter-ministerial coordination while improving targeting methods and individual program business processes.[8]



B. Ongoing Efforts and Reforms to Improve Effectiveness

Continued to Improve Targeting, Program Integration and Coordination

7. Targeting accuracy of the main social assistance programs has improved over time, but further reform is needed. The main factor that determines effectiveness in reducing poverty and inequality, is a programs' targeting accuracy. Accuracy can be measured most simply by estimating beneficiary incidence and targeting errors or how much of the total beneficiaries are fall into different groups of the population and how many of the beneficiaries are correctly targeted. Figure 5 displays the benefit incidence of the five main household targeted social assistance programs. Target levels and their corresponding size vary from the poorest consumption



[6] See World Bank, 2016a, *The Distributional Impact of Fiscal Policy in Indonesia* for more detail. Effectiveness here is defined as how much a program reduces inequality, and therewith poverty, divided by the total budget spent. Direct transfers include PKH and PIP (previously called BSM).

[7] Ibid.

[8] This note is based on a forthcoming *Indonesia Social Assistance Public Expenditure Review Update* (2017) and several other publications by the World Bank and other institutions.

decile (PKH), to the poorest 40 percent (JKN-PBI). Having the lowest target level; PKH manages to allocate just under 80 percent of its benefits to the poor and vulnerable. BLSM and PIP also allocate more than 60 percent of their benefits to these groups. Larger programs such as PBI and Rastra have lower exclusion errors but higher inclusion errors; smaller programs such as PKH will have higher exclusion errors but low inclusion errors as they generally do not go to richer households.

8. **Further welfare gains could be achieved through developing a more dynamic targeting system**. Currently, Indonesia's main social assistance programs are targeted using the Unified Database (UDB), most recently updated and expanded in 2015 and based on databases established in 2005, 2008 and 2012.[9] The UDB was updated in 2015 to contain 26 million households (just less than 40 percent of all households). The registry of poor and vulnerable households hosts a range of information that is used, together with several other surveys, to rank households by predicted consumption using a Proxy Mean Test (PMT). While mean testing provides more accurate targeting, the implementation of means testing to inform social assistance targeting is a long-term recommendation due to the lack of reliable tax and/or income data. To reduce targeting errors and raise social assistance equity, a dynamic targeting system such as the ones in place in Chile and the Philippines is recommended and a pilot will be implemented in 2017. In such a system, citizens that feel unjustifiably excluded or have never been surveyed can ask to be surveyed and potentially included in a range of social assistance programs targeted at different groups of the population.

9. **Thus, developing a more dynamic social registry would help reduce exclusion and inclusion errors**. Besides promoting further coverage expansion for programs such as PKH and PBI-JKN, allowing two way updating of the UDB and encouraging continued social assistance program use of it at national and local levels will be key to improving targeting outcomes. This will be crucial to better allocate government spending to reduce poverty and inequality through the development of a more effective social safety net. As noted in previous reviews published by the World Bank, the government should expand the social safety in coverage but also in terms of providing a framework for integration through common standards in delivery processes like targeting and beneficiary identification; socialization, outreach, and enrollment; monitoring and evaluation; and grievance recording, feedback, and remediation.[10]

10. **Households as well as agencies and ministries would be well-served by better coordination between and integration of the existing social assistance programs**. Uniting the existing set of independently-operating programs and their implementing agencies via common minimum standards going beyond targeting alone—could provide a boost to consumption expenditure equal to between 14 percent and 21 percent of an average targeted household's budget and would have an immediate impact on poverty. The government would also experience efficiency gains from integration if the provision of all common program sub-processes mentioned above were rationalized by eliminating the duplication that is currently pervasive.

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[9] See TNP2K, 2015, *Indonesia's Unified Database for Social Protection Programs* for more detail.

[10] World Bank, 2012, *Indonesia Social Assistance Public Expenditure Review* and 2016 update.

11. The existing array of main social assistance programs target the same range of poor income households, but integration at the household level is lacking. For instance, in 2015 only 10 percent of the poorest households are estimated to be receiving both PBI-PBI and PIP. Similarly, only 29 percent of the poorest decile receive Rastra, and JKN-PBI assistance fell from 43 percent in 2014 to 29 percent of the total population in early 2015, likely driven by a decrease in Rastra coverage. Although the majority of poorest households are eligible to receive all three of the aforementioned programs, only about 8 percent do.[11] The "overnight" reduction in the headcount poverty rate that would result from social assistance program integration (estimated for PKH, PIP and Rastra) is expected to be 2 percentage points to 4 percentage points.[12] For instance, extending a social assistance package that combines the three current direct cash or near-cash transfers in one to 10 million households would create a benefit with a magnitude similar to that in countries where direct transfers reduce poverty without distorting labor market decisions.[13]

Expand Coverage, Adequacy and Efficiency of Key Social Assistance Programs

12. This section briefly describes the main five social assistance programs with references on targeting performance (see Figure 5) and specific reforms proposed by program. Table 1 provides an overview of total central government expenditure and targeted beneficiaries since 2004.

Table 1. Central Government Expenditure of Main Social Assistance Programs, 2004-16
(In trillions of rupiah)

Total Central Government Expenditure	2004	2006	2008	2010	2012	2014	2016
Jamkesmas/JKN-PBI	--	3.00	4.40	4.76	7.30	19.90	25.50
Raskin/Rastra	4.80	5.30	12.10	13.92	20.92	18.10	22.50
BLT/BLSM	--	18.60	13.90	--	--	6.20	--
BSM/PIP	--	--	1.20	3.60	5.40	6.60	14.00
PKH	--	--	0.94	1.12	1.90	5.20	9.00

Sources: For 2004-10, *2012 Indonesia Social Assistance Public Expenditure Review*; and for 2011-16, revised Budget from Ministry of Finance, *Financial Note* and BAPPENAS.

[11] Susenas 2015.

[12] For reference, if actual headcount poverty continues to fall at the rate experienced between 2013 and 2014 (approximately one-tenth to one-fifth of a percentage point per year), it would take approximately 10 years to achieve the "overnight" reduction that the least expensive integration scenario achieves immediately, see World Bank (2016b) for details.

[13] In Philippines, the transfer of the conditional cash transfer program represents 21 percent of the average income of the poor. In Mexico and Colombia, the transfers of conditional cash transfer programs range between 21 percent to 25 percent of average consumption of target groups.

Table 2. Target Beneficiaries of Main Social Assistance Programs, 2004-16
(In millions of households and individuals 1/)

Targeted Beneficiaries (In millions)	2004	2006	2008	2010	2012	2014	2016
Jamkesmas/JKN- PBI (Ind)	--	60	76.4	76.4	76.4	86.4	92.2
Raskin/Rastra (HH)	8.5	10.8	19.1	17.5	17.5	15.5	15.5
BLT/BLSM (HH)	--	17.1	19	--	--	15.5	--
BSM/PIP (Ind)	--	--	4.6	5.8	9.5	11.2	19.2
PKH (HH)	--	--	0.72	0.81	1.51	2.8	6

Sources: For 2004-10, *2012 Indonesia Social Assistance Public Expenditure Review*; and for 2011-16, revised Budget from Ministry of Finance, *Financial Note* and BAPPENAS.

1/ HH stands for households; Ind for individuals.

Penerima Bantuan Luran—Jaminan Kesehatan Nasional—PBI-JKN

13. PBI, previously known as Jamkemas is a health insurance fee waiver and has accomplished major coverage increases while it has successfully been absorbed by JKN. Managed by The Ministry of Health and BPJS Health, PBI-JKN is the largest single source of health insurance coverage in Indonesia, covering over 92 million individuals (approximately one-third of the population) in 2016 at the cost of Rp 25.5 trillion. PBI's value to households is potentially significant—it promises a nearly unlimited-in-value health benefit to poor and vulnerable households—so, on paper PBI has become the largest social assistance transfer.[14]

14. PBI-JKN targeting outcomes for the poor and vulnerable populations are relatively good but appear to have slightly worsened.[15] This trend is most likely due to the coverage expansion as well as due to the fact that although PBIs' initial quota was generated by querying a household list containing some socio-economic and demographic information, those households given Jamkesmas cards in 2012 were identified by locally-based Ministry of Health staff, service provider staff, and local government with varying eligibility criteria. Furthermore, there were issues with beneficiary lists as Jamkesmas merged into JKN-PBI in early 2014, and beneficiaries were reportedly often not aware of the extent of benefits they would receive in either Jamkesmas or Jamkesda (local government variant of Jamkesmas).

15. Several reforms are needed to improve the adequacy of the PBI component of JKN. While utilization is not significantly different from other forms of health insurance in Indonesia, it

[14] Meanwhile, in the new National Health Insurance scheme (Jaminan Kesehatan Nasional, or JKN), the premiums that the government contributes on behalf of Jamkesmas card holders account for a large share of all JKN premiums currently collected. In other words, without Jamkesmas beneficiaries, JKN would cover a far smaller share of the population and collect much less in revenue.

[15] Statistics Indonesia Susenas 2010, 2013, and 2015; and World Bank, 2016c, *Benefit Incidence of Main Social Assistance Programs in Indonesia*. Unpublished note provided to Ministry of Finance.

could be increased by improving outreach, facilitation and beneficiary support. In particular, promoting greater dissemination of information to beneficiaries about the scope of PBI-JKN health care coverage and the standards of practice they should be expecting would improve utilization. In tandem, the Government should merge PBI monitoring of the healthcare service sector with that of the JKN system.

Beras Sejahtera—Rastra

16. Rastra, the second largest social assistance initiative in terms of coverage—has positive potential but in its operation fails to achieve fundamental social assistance goals. Rastra, previously known as Raskin, is a subsidized rice delivery program implemented by the Ministry of Social Affairs and Bulog, the State Logistics agency. In 2016, Rastra targeted 15.5 households and program expenditures amounted to Rp 22.5 trillion.[16] The consistent provision of a basic food package could protect poor households from food-price volatility, calorie scarcity and malnutrition. However, Rastra suffers from dilution of benefits and inclusion errors, missing rice, and hidden financing burdens, all of which reduce the transfer values provided to target households.[17] Poor targeting, dilution of benefits, and missing rice are long-standing and well-known Rastra issues.

17. Rastra remains the least well targeted of any Indonesia's SA programs and the average benefit package is significantly diluted when the right to buy Rastra rice is re-allocated at the village level to include many non-poor households. Rastra actual coverage is estimated to far exceed the targeted level of 15.5 million households (23 percent of the population in 2015): according to survey data, 28.6 million households, just over 40 percent of the total population, are receiving Rastra, with only 57 percent of beneficiaries being in the poorest 40 percent. According to the latest available Susenas data, households are receiving only 4 kilograms per household per month, 11 kilograms less than households should be receiving.[18] In addition, a lack of clarity concerning responsibilities and financing at the "last mile" of Rastra distribution means that Rastra-purchasing households—especially those in remote areas—receive a lower per-kilogram benefit than promised.

18. To begin addressing over coverage and an overall inadequate benefit package, the Rastra program should base allocations exclusively on the UDB and monitor allocations and 'last-mile' rice delivery with a stronger oversight system. Furthermore, the program should continue experimenting with different methods of allocating Rastra, in-kind, in cash or in a monetized transfer to be spent only on Rastra rice or other staple goods. The Government is planning to implement an e-voucher reform initiative in 44 cities in early 2017. The new delivery

[16] Revised central government budget from The Ministry of Finance, *Financial Note*, 2015.

[17] World Bank, 2016b, *Indonesia Social Assistance Public Expenditure Review* (forthcoming 2017).

[18] A main reason for low program adequacy is that large proportions of rice procured for Rastra do not reach localities and no extra effort is made to put Rastra rice in targeted households when total supplies are low. This is due in part to a lack of clarity concerning responsibilities and financing at the "last mile" of Rastra distribution means that Rastra-purchasing households—especially those in remote areas—receive a lower per-kilogram benefit than promised.

mechanism called E-Warong aims to leverage existing market players to deliver Rastra benefits but need close monitoring and evaluation as it scales up.

Program Indonesia Pintar—PIP

19. PIP, Indonesia's' scholarship program has matured and has begun to demonstrate its full potential in recent years but can still deliver more to those most in need. PIP, previously referred to as BSM, is a scholarship program for poor students implemented by the Ministry of Education and The Ministry of Religious affairs. PIP targeted 19 million students in 2016 at a budget of Rp 14 trillion. With recent increases in coverage and reforms to implementation, PIP is now making significant positive contributions to welfare in poor and near-poor households (with students) and to the Government's drive to provide universal basic education.

20. 2015 PIP targeting outcomes have shown improvement over 2013 BSM levels. Beneficiary incidence change shows that while incidence decreased slightly for the poorest decile (from 22 percent to 20 percent in 2015) increased for the vulnerable (42 percent to 47 percent) and decreased for the non-poor (18 percent to 14 percent).[19] This change is also reflected in the decline in exclusion and inclusion errors at all levels. That said, exclusion errors are still quite high and likely due to low program uptake rates as students living in households in the poorest 25 percent of the population are technically eligible and may receive PIP if they present a KPS or KKS card (social protection card sent to 15.5 million households).

21. To improve the program further, PIP should focus on continuous and coordinated monitoring, evaluation, and improvements in delivery. A key obstacle is the institutional fragmentation within the two Ministries that oversee the programs' implementation. A reform that is well within reach and long overdue is, benefit-level updating which should occur more frequently in order for the transfer to remain relevant. PIP should be at the forefront of positive outreach to poor students, especially those approaching the senior secondary or university levels and facing the highest out of pocket and opportunity costs. To reach that goal, outreach facilitation could be developed further with the creation of beneficiary support modules for senior secondary and university level drop-outs.[20]

Bantuan Langsung Sementara Masyarakat—BLSM

22. BLSM, Indonesia's Unconditional Cash Transfer (UCT), has a clear objective: temporarily supplement consumption for poor households facing anticipated, policy-based price increases. BLSM, previously called BLT, is a program implemented by the Ministry of Social Affairs. The payment targeted the poorest 25 percent of households (15.8 million in 2015) and provided monthly payments of Rp 150,000 for seven and six months respectively for each tranche. The total budget disbursed in 2015 amounted to Rp 14.6 trillion. Over the years, the government

[19] Statistics Indonesia Susenas 2013 and 2015; and World Bank (2016c) Benefit Incidence of Main Social Assistance Programs in Indonesia. Unpublished note provided to Ministry of Finance.

[20] World Bank, 2016b, *Indonesia Social Assistance Public Expenditure Review* (forthcoming).

has reduced existing fuel subsidies and compensated poor and near-poor households for the subsequent rise in fuel, food, and transport prices with a temporary unconditional cash transfer. Research has shown that the BLT UCT was effective in preventing an increase in poverty due to increased fuel prices; instead of rising the poverty rate fell by about 1 percentage point. Furthermore, there is no evidence that UCT or conditional cash transfers (CCT) affect labor supply or generate dependency. Heads of households were not likely to leave work due to receiving the BLT transfer, which comprised just about 15 percent of household monthly expenditure.[21]

23. BLSM has better targeting outcomes when comparing to other programs of similar size (Rastra targeting 15.5 million households, just under 25 percent of the population and PBI targeting 88.2 million people or approximately 23 percent of the population). A reason for this may be that BLSM is a more direct and simple transfer program than the other Social Assistance programs and so suffers less from implementation issues in using the UDB lists. In 2013, incidence to the target group, the poorest 25 percent of households, is around 45 percent and just about the same as with the 2014 BLSM round (Figure 5).

Program Keluarga Harapan—PKH

24. PKH is Indonesia's CCT program that is implemented by the Ministry of Social Affairs. In 2016, the program is slated to scale up to reach 6 million families in all districts of Indonesia at a budget of Rp 9 trillion. PKH has generated significant and positive impacts in welfare, health, education and nutrition seeking behavior.[22] Proven impacts in behavioral change translate into long run development impacts as educational and health attainment through improved nutrition of young children.

25. PKH is a relatively well targeted program. Based on the latest available data in 2014, the poorest 10 percent of families received over one third of the benefits available; the bottom 20 percent received over half of the benefits available; and the bottom 30 percent received over two-thirds of the benefits available. There are likely many factors that together lead to better targeting results in PKH including the CCT's early adoption of the UDB-based beneficiary identification and verification system that includes two-way dynamic updating of program participants and eligibility status. It must be kept in mind however, that PKH is a small program targeted at the poorest 10 percent of the population and so it is expected that leakage to the non-poor is minimal: inclusion errors are very low but exclusion errors are very high as a result.

[21] World Bank, 2013, *Indonesia Economic Quarterly Adjusting to Pressures;* and JPAL, 2016, *The Impact of Cash Transfers on Labor Supply*, presentation at JPAL SEA Policy Conference.

[22] TNP2K, 2016, *Evaluating Longer-Term Impact of Indonesia's CCT Program: Evidence from a Randomized Control Trial, forthcoming*; and World Bank, 2011, *Main Findings from the Impact Evaluation of Indonesia's Pilot Household Conditional Cash Transfer Program*. The midline evaluation demonstrated that PKH was responsible for statistically significant increases in pre-natal care. The likelihood of attending at least four prenatal visits: increased by 9 percentage points while newborn delivery at a facility or attended by a professional increased by 5 percentage points. Post-natal care improved by almost 10 percentage points while, immunizations, and growth monitoring check-ups increased by 3 percentage points and 22 percentage points respectively.

26. To strengthen the program and prepare for further scale up, the program should continue strengthening institutional capacity, its IT and HR systems and the capacity of affiliated service providers (a task requiring higher level coordination). Continuous enhancement of core program functions is essential for efficient delivery of benefits and effective access for households: timely verification of beneficiaries' status and conditionality fulfillment; regular MIS updating, adjustment of benefit levels and timely disbursements; determination of local level capacity for distributing benefits; as well as suggestions for remediation of local supply inadequacies in health, education and program socialization are some of the aspects that need strengthening.

C. Looking Ahead: Building a More Comprehensive Social Safety

27. At the moment, not all important household risks to well-being are covered. For instance, programs to address old age and disability exist but are low in coverage (ASLUT and ASODKB).[23] In addition, there is no social assistance program to foster poor household low-cost access to early child hood education and development services (ECED). Such a program would stimulate learning and social interaction at an early age while allowing mothers to seek employment at the same time. In addition, an adequate social safety net should provide active support to individuals and households moving from a state of vulnerability and dependence to one of independence and resilience through livelihood and labor market activation initiatives. While Indonesia has some of these programs (some under the heading of the Sustainable Livelihoods initiative P2B, launched in 2015), they are scattered over many Ministries and it is unclear which of these are effective and able to be scaled up. An actionable reform would be to evaluate, consolidate where appropriate and promote scale up existing programs.

28. Finally, Indonesia's nascent Crisis Monitoring and Response System (CMRS) should be fully operational and automatically activated as part of the social safety net when needed. Households in Indonesia are vulnerable to stresses that the international and national economies inevitably produce, and there is as yet no automatic response mechanism providing social and economic support during times of uncertain outlook. A functioning monitoring system is already in place, but it depends upon timely, high quality data inputs from across several government agencies. Response protocols are needed so that programs can be automatically funded, activated, and implemented when needed and so that budgetary and parliamentary procedure does not prevent timely assistance from being released.

29. Indonesia has made significant progress towards the creation of a holistic social safety net. Key programs are in place to protect against economic and social risks faced by poor and vulnerable populations. To improve the adequate, accurate and timely allocation of social assistance to eligible households, some of these programs will need a higher budget allocation and reforms in the sense of increased coverage (PKH), increased benefit levels (PKH and PIP), revised delivery system (Rastra) and standardized systems to conduct monitoring and evaluation, grievance redress, socialization and feedback (all). Tying all programs together to reach the same poor and vulnerable

[23] These programs are being merged into PKH as of late 2016 and may be scaled up within that program.

population will require significantly more cross ministerial coordination and the standardized use of the UDB as well as consolidated progress towards a more dynamic and open targeting system, allowing for greater social inclusion.

30. While some reforms are already underway, others are left at the way side. Indeed, some important risks such as disability, old age, inadequate skills to enter the labor force, stunting, and lack of access to early child hood education remain unaddressed in a systematic way. To spend better, social assistance spending should continue move away from universal subsidies toward targeted programs. To begin protecting better, Indonesia should consider the expansion or integration of existing smaller programs as well as creation of new programs. If gaps are left unaddressed or the social net incomplete, these risks hinder the potential of Indonesia's population to become a more prosperous and equal society.

DRIVERS FOR PRIVATE INVESTMENT IN INDONESIA[1]

Against the backdrop of a commodity down-cycle and slower economic growth, private investment in Indonesia has slowed markedly in recent years, more so than peers. This paper discusses the recent trends and drivers for private investment in Indonesia, and the policies needed to support higher investment. The recent pickup in commodity prices is expected to lead to a gradual recovery in private investment, but structural headwinds need to be addressed to sustain investment and growth.

A. Introduction

1. Total investment in the global and regional economies has slowed over the past several years, driven by private investment. Global investment has slowed into 2016, well below the levels prior to the Global Financial Crisis (GFC) (Figure 1). Asian economies have also seen a deceleration in investment, while investment in Latin America has contracted in recent years. The deceleration in investment has been driven by sluggish private investment, which accounts for around 90 percent of total investment (IMF, 2015b).

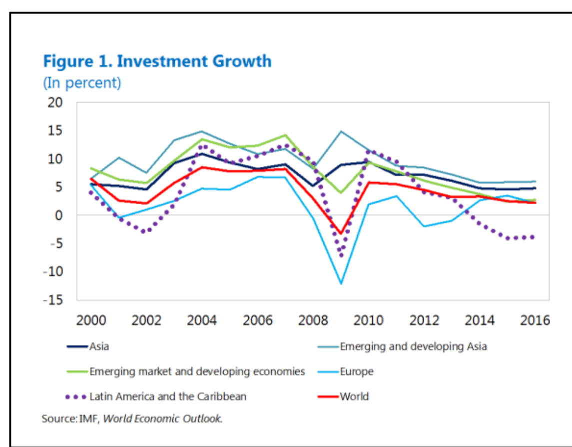


Figure 1. Investment Growth
(In percent)
Source: IMF, *World Economic Outlook*.

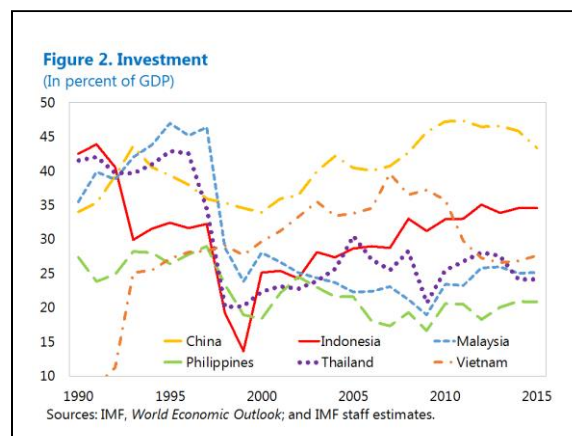
2. The economic literature identifies the main factors behind sluggish private investment to be weak economic activity and the decline in commodity export prices. In the global economy, the main factor for sluggish private investment is weak economic activity, while in some economies, factors include lower commodity export prices, financial constraints, and policy uncertainty (IMF, 2015b; IMF, 2015a). Other studies find that policy uncertainty reduces investment (Baker and others, 2015), and exchange rate volatility can have a negative impact on investment (Darby and others, 1999). As for policy recommendations, the literature suggests that addressing the general weakness in economic activity is crucial to restore growth in private investment (IMF, 2015b) and more decisive progress in improving conditions for private investment would help a recovery in investment (IMF, 2015a).

3. Against this background, this paper proceeds as follows. Section B discusses overview of investment trends in Indonesia. Section C explains cyclical factors, and Section D focuses on structural factors. Section E goes over the implications of those structural constraints and a restrictive foreign direct investment (FDI) regime on external integration. Section F discusses an empirical study of firm-level panel regression to estimate drivers for private investment in Indonesia. Section G summarizes the main findings and policy implications.

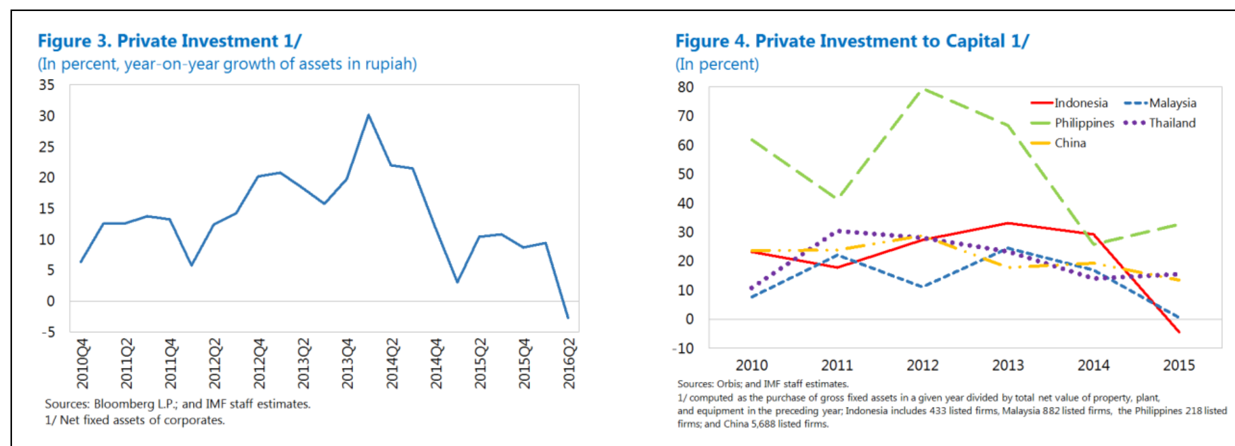
[1] Prepared by Jongsoon Shin (APD).

B. Overview of Investment Trends in Indonesia

4. In Indonesia, investment has become more important in economic output over the past decade. Investment has steadily risen relative to GDP by around 10 percentage points since the early 2000s (Figure 2). Investment now accounts for more than a third of the output of the country's economy, where private investment[2] constitutes around 90 percent of total investment. During the commodity boom in 2011–12, investment contributed to as much as half of economic growth.



5. Nonetheless, Indonesia has seen a marked slowdown in private investment since 2014, compared with EM peers. The weakness in private investment intensified into 2016:H1 (Figure 3), and high frequency indicators—such as cement sales, capital goods imports, and investment credit—suggested little signs of a meaningful recovery into Q3:2016, although there are early signs in Q4:2016 that these indicators have stabilized somewhat. The slowdown is more distinct in Indonesia than that of EM peers which also have seen subdued investment (Figure 4).



6. The weakness in private investment is also in contrast with a pickup in public sector investment. Following the landmark 2015 reforms, the government has been ramping up infrastructure investment (Figure 5). As the government is pushing ahead with infrastructure development, the central government is increasingly channeling investment through local governments and encouraging state-owned enterprise (SOEs) to ramp up capital spending (Figure 6). Capital expenditure of SOEs doubled in 2016, and is expected to rise by around

[2] Private investment in this paper includes the investment of state-owned enterprises (SOEs).

35 percent in 2017. Most of the spending is centered on energy, mining and exploration, and transportation, aimed at meeting infrastructure development needs.

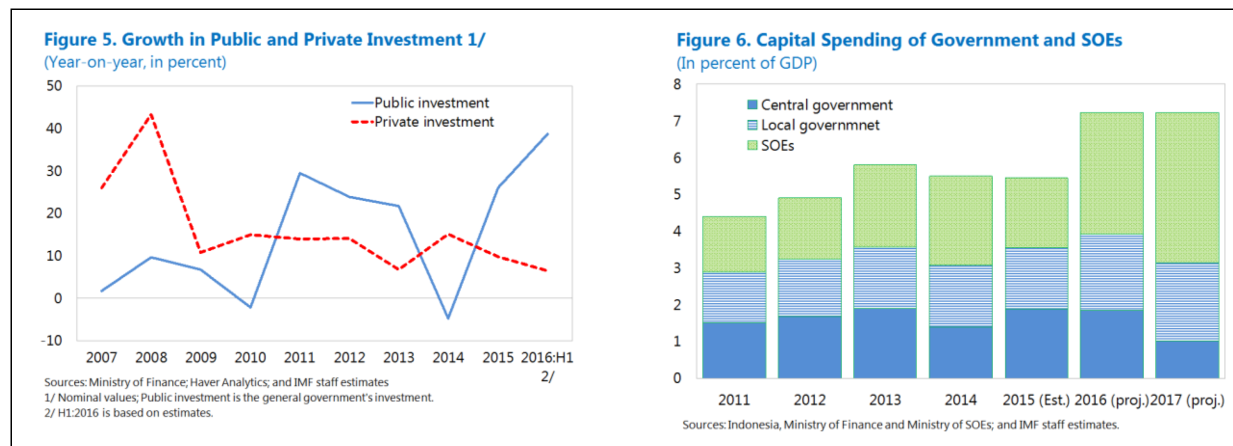


Figure 5. Growth in Public and Private Investment 1/
(Year-on-year, in percent)
Sources: Ministry of Finance; Haver Analytics; and IMF staff estimates
1/ Nominal values; Public investment is the general government's investment.
2/ H1:2016 is based on estimates.

Figure 6. Capital Spending of Government and SOEs
(In percent of GDP)
Sources: Indonesia, Ministry of Finance and Ministry of SOEs; and IMF staff estimates.

C. Cyclical Factors

7. **Investment has heavily relied on the commodity sector since 2010**. During the commodity boom until 2013, investment in the commodity sector surged, driving overall investment in Indonesia (Figure 7). Strong commodity prices led to an investment boom in the mining and quarrying, including oil, gas, and coal, and commodity related industries. Investment in the commodity sector accounted for half of annual realized investment during this period. This is in contrast with the 2000s when the manufacturing and service sectors were the main drivers for investment realization. The strong investment in the commodity sector has also been reflected in robust investment growth in Kalimantan and Sumatera, provinces based on commodities (Figure 8).

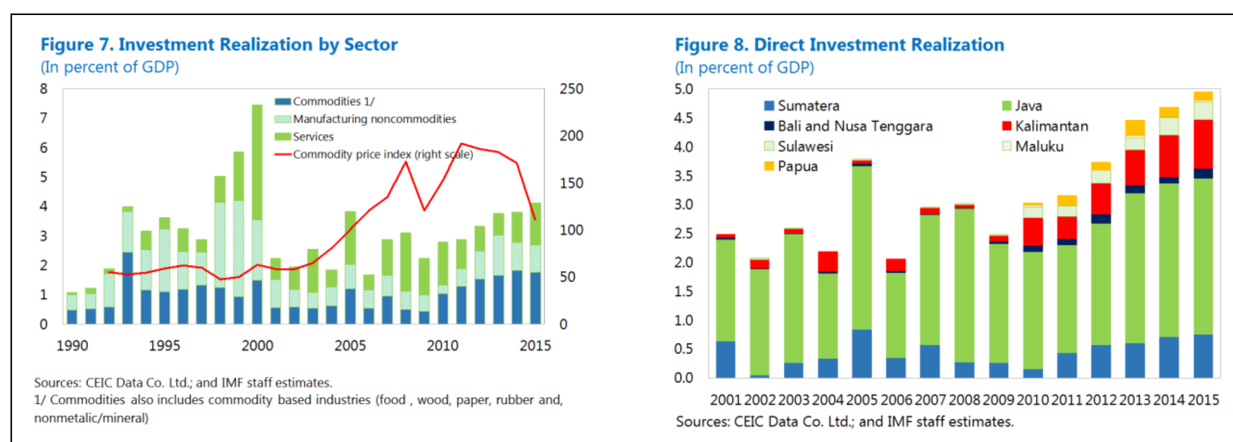


Figure 7. Investment Realization by Sector
(In percent of GDP)
Sources: CEIC Data Co. Ltd.; and IMF staff estimates.
1/ Commodities also includes commodity based industries (food , wood, paper, rubber and, nonmetalic/mineral)

Figure 8. Direct Investment Realization
(In percent of GDP)
Sources: CEIC Data Co. Ltd.; and IMF staff estimates.

8. **With the end of the commodity super-cycle and weakened economic growth, investment growth in the commodity sector stalled, while that in manufacturing contracted**.

- **Investment growth in the commodity sector has stalled, limiting overall investment growth**. During the commodity boom, particularly in the case of coal, new mining firms entered

the market, while existing firms continued to expand production capacity. A sharp fall in commodity prices, in turn, resulted in a significant supply glut and slack capacity utilization. Some mining firms closed and reduced employees, while some mining firms faced difficulties in servicing debt obligations in 2015.

- **Investment in manufacturing has slowed markedly over the past few years, having been further impacted by the economic down-cycle**. When commodity prices are high and economic growth is strong, robust household demand leads foreign corporates to invest more in manufacturing, including automotive. Since 2014, however, investment in manufacturing has sharply slowed, impacted by a confluence of weak economic activity, a slump in selling prices, and tighter borrowing conditions, such as the weak rupiah (Figure 9). In response to the soft economic activity and slack capacity utilization, a number of manufacturing firms operate on existing facilities and projects, rather than launching new projects.

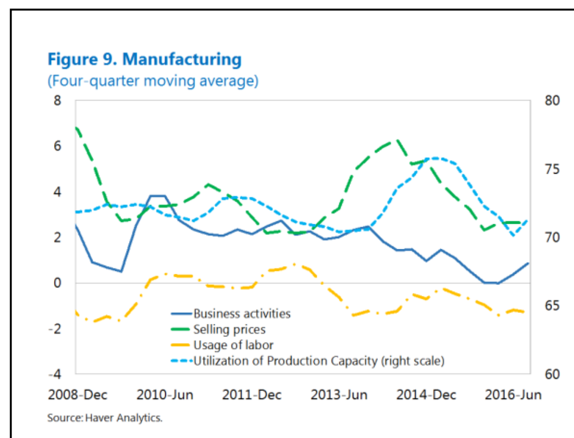


Figure 9. Manufacturing
(Four-quarter moving average)
Source: Haver Analytics.

9. Cash flows have fallen, particularly in manufacturing, which suggests limitations in investment capacity. In Indonesia, cash buffers are an important factor in investment decisions, since a number of corporates still rely on internal cash flows for funding, amid limited financial deepening. Cash flows, denoted by earnings before interest, taxes, and amortization (EBITA), have shown a sharp decline in non-commodity manufacturing (Figure 10). This implies limitations in financing capacity and the appetite for investment in manufacturing. The commodity sector has also exhibited a similar trend, *albeit* to a lesser extent, and has recently recovered somewhat. Despite the sharp fall in cash flows since 2011, Indonesia's corporate profitability remains the highest among EM peers (Figure 11).

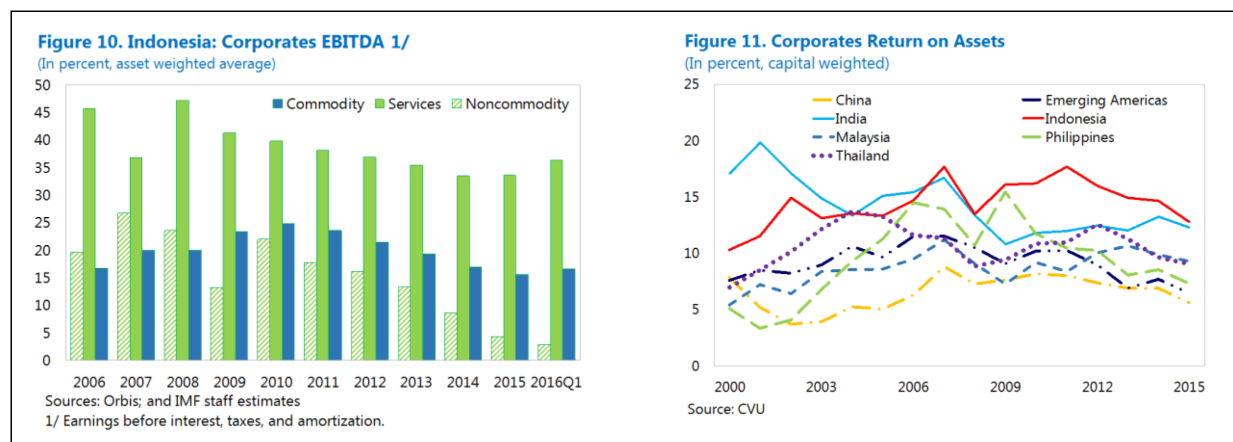


Figure 10. Indonesia: Corporates EBITDA 1/
(In percent, asset weighted average)
Sources: Orbis; and IMF staff estimates
1/ Earnings before interest, taxes, and amortization.

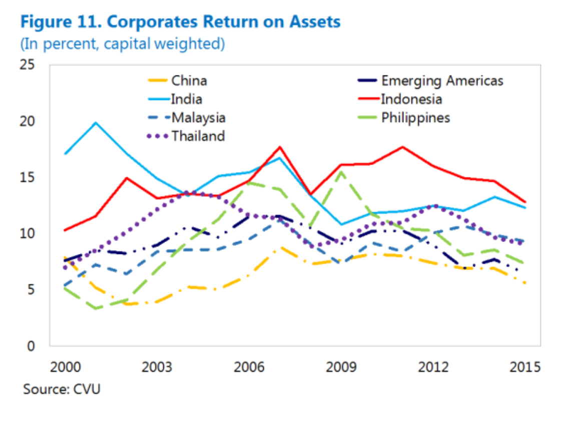


Figure 11. Corporates Return on Assets
(In percent, capital weighted)
Source: CVU

10. Macrofinancial linkages point to decelerated corporate borrowing and tightened financial conditions, which also weigh on investment. Corporate borrowing from banks and overseas has slowed, as corporates undertook consolidation and deleveraged their borrowing, particularly foreign currency denominated debt (Figure 12). While tepid credit demand from corporates has been the main driver of weak credit growth, corporates have also faced tightened financial conditions due to reduced cash flows and tightened lending standards in some banks (Figure 13). Banks have become more cautious, having been affected by weak economic activity and facing increased NPLs and tighter liquidity due to slowing deposit growth (Figure 14).

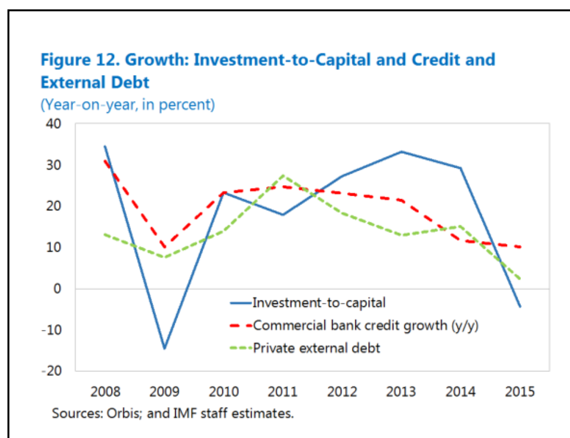


Figure 12. Growth: Investment-to-Capital and Credit and External Debt
(Year-on-year, in percent)
Sources: Orbis; and IMF staff estimates.

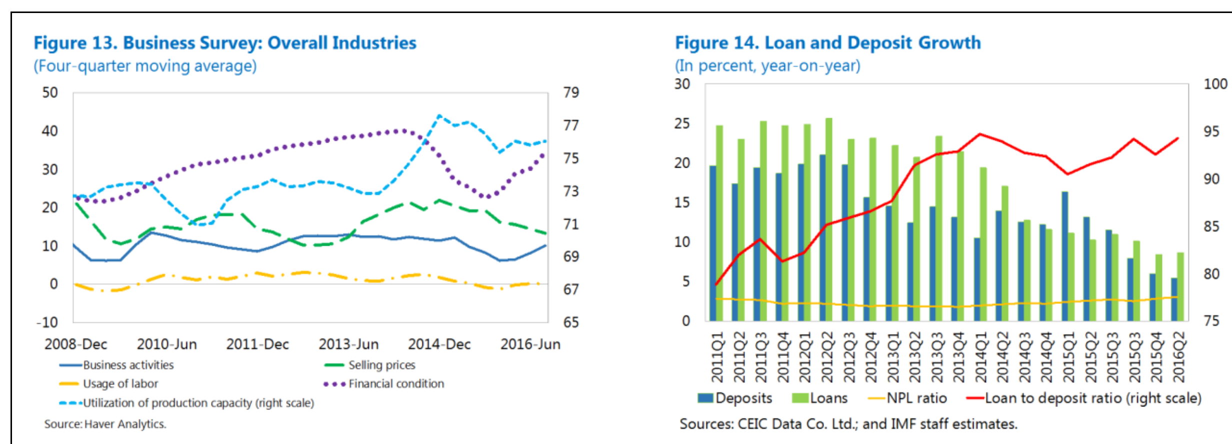


Figure 13. Business Survey: Overall Industries
(Four-quarter moving average)
Source: Haver Analytics.

Figure 14. Loan and Deposit Growth
(In percent, year-on-year)
Sources: CEIC Data Co. Ltd.; and IMF staff estimates.

D. Structural Factors

11. Structural impediments that cause higher fixed costs have also constrained investment, particularly in manufacturing. Over the past decade, investment in manufacturing has provided a limited contribution to overall investment. This is in contrast to the years prior to the Asian financial crisis, when manufacturing investment drove overall investment (Figure 7). A shift-share analysis (Elsby, 2013) suggests that investment in manufacturing and utilities has been lagging behind Indonesia's overall investment trend (Figure 15). In contrast, investment in commodity and domestic consumption related industries, such as the wholesale and retail trades, exceeded the

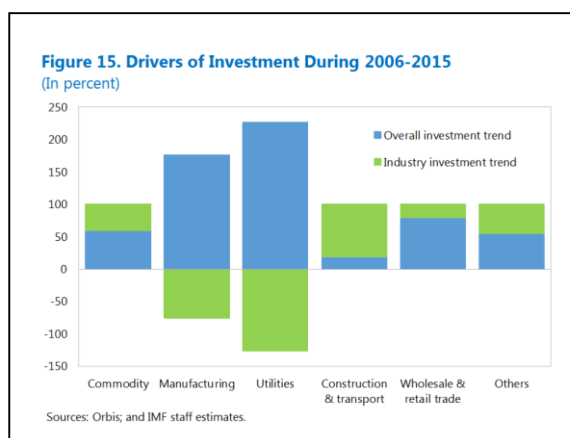
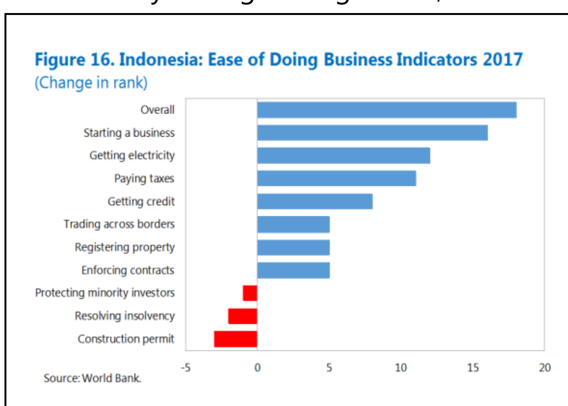


Figure 15. Drivers of Investment During 2006-2015
(In percent)
Sources: Orbis; and IMF staff estimates.

national investment trend. The continuing weakness in manufacturing investment has been affected by high-cost structural factors, such as weak infrastructure, uncertain investment climate, and low productivity from the labor force driven by rigid labor markets coupled with labor skill gaps (World Bank, 2016 and Tabor, 2015).

12. In response, the government has started to improve the investment climate and has seen some early successes. The government has shifted the public debate towards policies to boost competitiveness and productivity. The business climate has started to improve, reflecting the government's concerted efforts. The government has delivered 14 economic policy packages since August 2015 aimed at enhancing the investment climate mainly through deregulation, such as cutting bureaucracy and more one-stop shops, and rationalizing permit and license procedures. The FDI regime has been partially liberalized, the most significant move since 2007,[3] and clarity has increased on the setting of the minimum wage. These actions have contributed to improvement in World Bank's *Doing Business* ranking (by 18 positions to 91 position in 2016), and the authorities aim to improve it to within the top 40 in the near future (Figure 16).

Figure 16. Indonesia: Ease of Doing Business Indicators 2017
(Change in rank)



Source: World Bank.

13. Nonetheless, structural bottlenecks that constrain investment in manufacturing remain, including:

- **Inadequate infrastructure, particularly logistics and energy**. Underdeveloped infrastructure has been the most important barrier to investment in manufacturing and the third most important in services (Soejachmomen, 2015, Figure 17). Weak infrastructure has resulted in high costs and lost time in business decisions, weakening competitiveness and productivity. In particular, significant logistic costs and lack of reliable electricity adds real fixed costs to investment. For instance, weak road conditions and blackouts accounted for 4½ percent and almost 6 percent of total annual sales, respectively, and ownership of electricity generators for back-up power reached more than 60 percent in 2014, due to patchy power supplies (Institute for Economic and Social Research, 2014). In certain elements of logistics, indicators suggest that conditions have weakened this year (Figure 18).

[3] The FDI regime was partially liberalized in May 2016, removing foreign ownership caps on 35 industries and allowing majority foreign ownership for selected sectors, but also limited access to some sectors to protect small and medium-sized enterprises (SMEs).

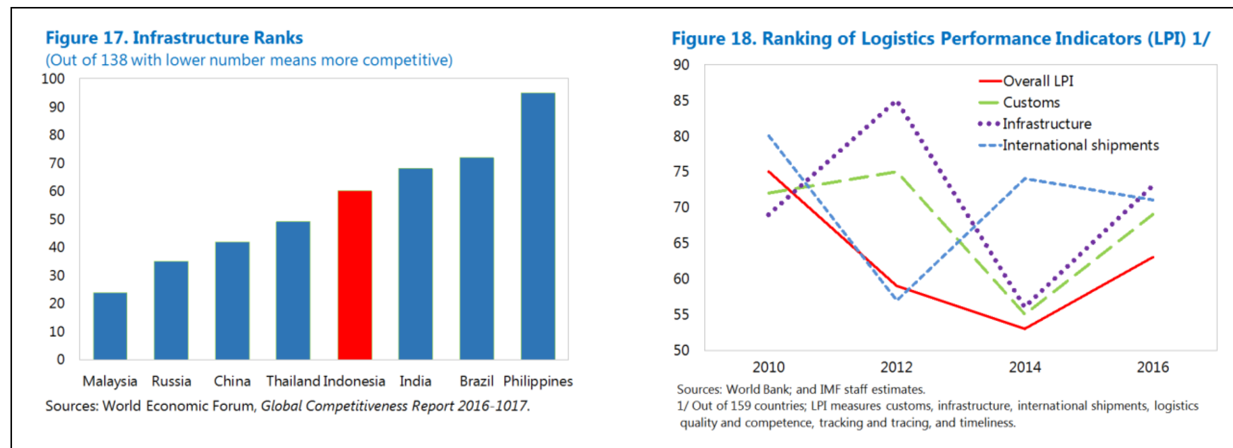


Figure 17. Infrastructure Ranks
(Out of 138 with lower number means more competitive)

Sources: World Economic Forum, *Global Competitiveness Report 2016-1017*.

Figure 18. Ranking of Logistics Performance Indicators (LPI) 1/

Sources: World Bank; and IMF staff estimates.
1/ Out of 159 countries; LPI measures customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing, and timeliness.

- **The investment climate is still weak, with high regulatory compliance costs**. Investment decisions tend to be costly and timing-consuming, due to inconsistent regulations among different layers of government, and burdensome regulations at the local level (e.g., nontariff trade barriers, local content requirements, and license regulations). Investors also express concerns about a lack of policy continuity and transparency, as well as regulatory uncertainty (Figure 19). The FDI regime, for instance, has a tendency for frequent and uncertain changes, and in some areas, the protection of domestic corporates was strengthened in the 2016 revision, which could undermine investor confidence and increase uncertainty.

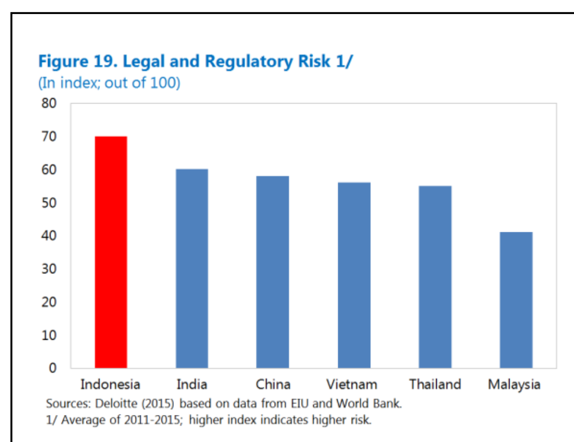


Figure 19. Legal and Regulatory Risk 1/
(In index; out of 100)

Sources: Deloitte (2015) based on data from EIU and World Bank.
1/ Average of 2011-2015; higher index indicates higher risk.

- **The rigid labor market and labor skills gap have contributed to weak labor productivity, raising production costs**. Indonesia's labor markets remain one of the most rigid among EM peers, including high severance pay and complex work dismissal procedures (Figure 20). Rigid labor market practices have resulted in a proliferation of short-term contracts, in turn hampering labor skills buildup in the workplace (Allen, 2016). Investors note a lack of employees with appropriate job skills and vocational training, with gains in labor productivity have been lagging behind global trends and EM peers (Allen, 2016).

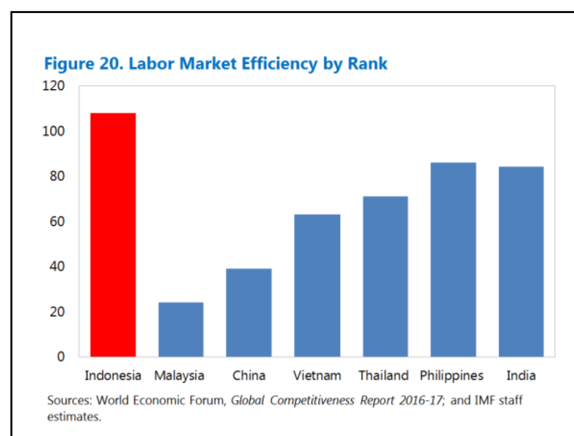


Figure 20. Labor Market Efficiency by Rank

Sources: World Economic Forum, *Global Competitiveness Report 2016-17*; and IMF staff estimates.

E. Weak External Linkages

14. The authorities have started to modernize the FDI regime, which will improve external linkages. Since August 2015, the authorities have started to enhance external linkages including through deregulations and the revision of the FDI regime. Prior to these reforms, Indonesia's FDI regulations had become more restrictive, particularly in the primary sector (Figures 21 and 22). The restrictions were particularly rigid on foreign equity restrictions and hiring experienced foreign personnel (Varela, 2015).

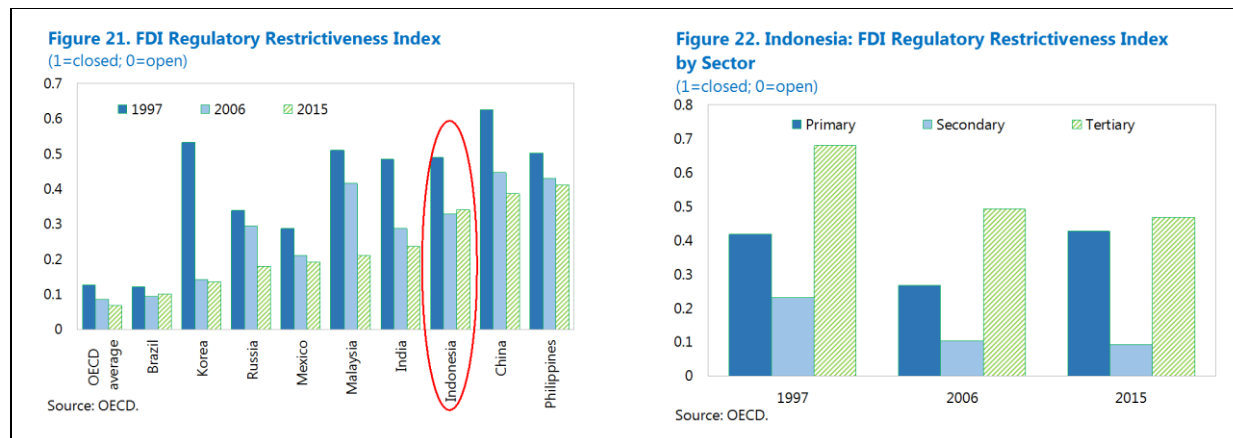


Figure 21. FDI Regulatory Restrictiveness Index
(1=closed; 0=open)
Source: OECD.

Figure 22. Indonesia: FDI Regulatory Restrictiveness Index by Sector
(1=closed; 0=open)
Source: OECD.

15. Indonesia's external linkages have lagged global trends. Exports of goods and services continue to trail world trends and regional peers and have decelerated since 2011 (Figure 23). Imports also show a similar trend, *albeit* to a lesser degree (Figure 24). Since commodity exports—including coal, crude, and palm oil—account for more than half of total exports in Indonesia, the decelerating growth in exports, in particular since 2011, can be also explained by weak growth in manufacturing exports, where structural constraints matter. In line with this trend, Indonesia's share of the world market for manufactured goods fell to 0.6 percent in 2013 from 1.2 percent in 1995 (Tabor, 2015).

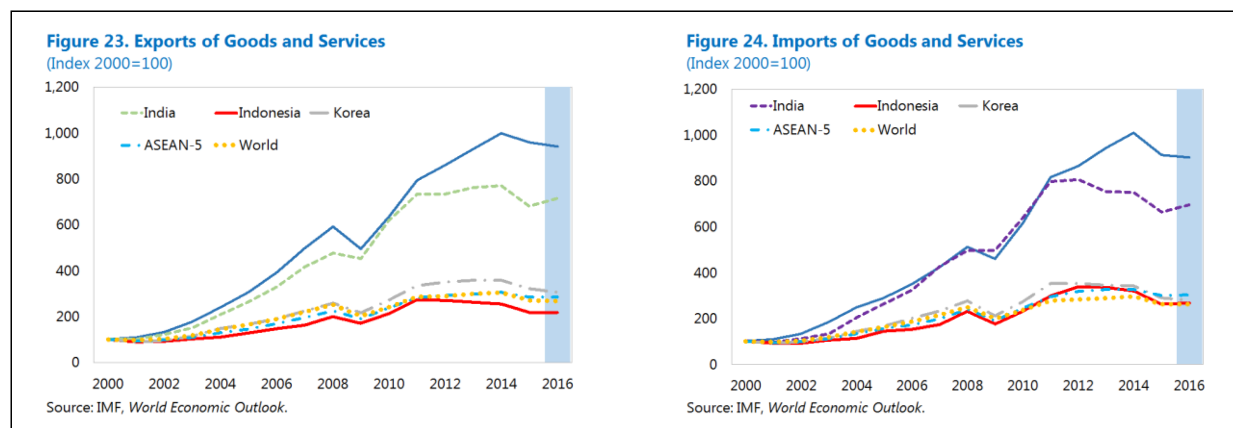
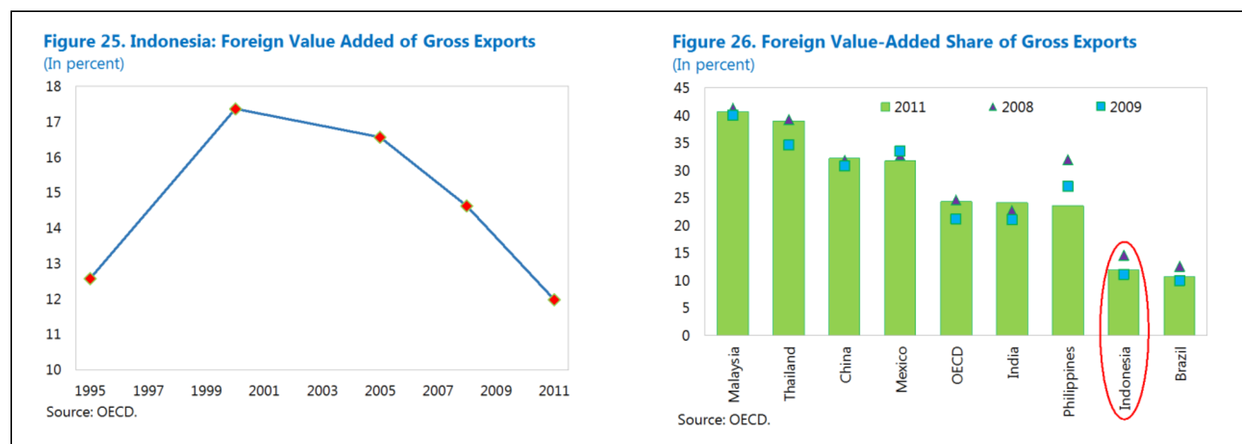


Figure 23. Exports of Goods and Services
(Index 2000=100)
Source: IMF, *World Economic Outlook*.

Figure 24. Imports of Goods and Services
(Index 2000=100)
Source: IMF, *World Economic Outlook*.

16. A closer look at exports shows that linkages with global value chains weakened across industries, particularly with low contribution from the services sector:

- **Foreign value-added share of gross exports declined**. Since the Asian financial crisis, foreign value-added share of gross exports continued to decline (Figure 25). According to the latest available data, foreign value relative to gross exports in Indonesia is only around 12 percent, much lower than the levels of 30–40 percent in Malaysia, Thailand, and China (Figure 26). Given that cross-border production networks account for almost 50 percent of trade within ASEAN (Tabor, 2015), Indonesia demonstrates quite weak linkages even within ASEAN trade. The limited integration can be a drag on investment by reducing investment potential, as firms with higher imported inputs are exceptional performers in Indonesia and grow fast with larger capacity for investment (Rahardja and Varela, 2015).



- **The service sectors' contribution to exports is also low, mainly due to small contribution from foreign value** (Figure 27). The small contribution from foreign value is broadly in line with the restrictive FDI regulations on the service sector. For instance, the rigid restrictions on hiring experienced foreign personnel in Indonesia is more detrimental to the service sector, as the service sector heavily relies on quick access to highly qualified personnel (Duggan and others, 2015). The service sector's contribution to industry is weak across industries, from mining, food to chemicals (Figure 28). This suggests that there is room to strengthen the service sector, which will contribute to improve competitiveness and stimulate investment across industries.

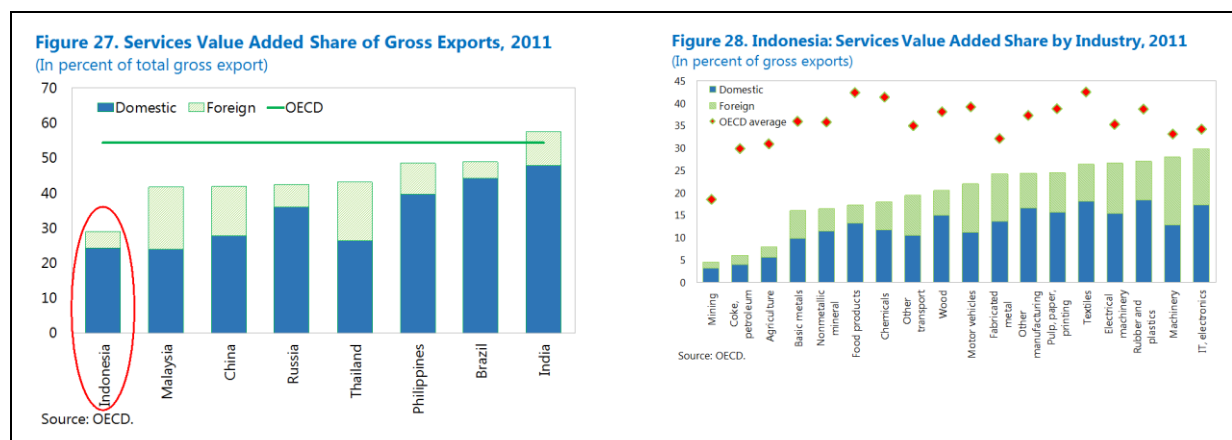


Figure 27. Services Value Added Share of Gross Exports, 2011
(In percent of total gross export)
Source: OECD.

Figure 28. Indonesia: Services Value Added Share by Industry, 2011
(In percent of gross exports)
Source: OECD.

F. Drivers for Private Investment in Indonesia

17. This section is devoted to the empirical analysis of the drivers for private investment in Indonesia. The main hypothesis is that investment is driven by firm-level factors such as cash flows and access to finance, and also affected by macro-level factors including macroeconomic instability, international financial volatility, and policy uncertainty. Structural bottlenecks that cause high fixed costs and undermine corporate earnings could be a factor.

18. To estimate the drivers for private investment in Indonesia, firm-level panel fixed effects models are set up. This model uses the approach of Magud and Sosa (IMF, 2015b), which is based on liner panel regression allowing for both time and firm fixed effects, estimates determinants of private investment in EMs, including cash flows, changes in debt, and effective interest rate payments, among others. Data use the firm-level data of 370 listed Indonesian corporates for 2007−15, and macro variables, such as rupiah volatility, stock index volatility, and volatility index of the Chicago Board Options Exchanges (VIX) to incorporate factors beyond a firm-level, based on other existing literature.[4] The model is as follows:

$$I/K_{i,t} = \alpha + \beta_1 CF_{i,t}/K_{i,t-1} + \beta_2 \Delta Debt/K_{i,t-1} + \beta_3 Int_{i,t-1} + \beta_4 Q_{i,t} + \gamma_1 CF_{i,t}/K_{i,t-1} \times FX\ vol_{i,t} + \gamma_2 CF_{i,t}/K_{i,t-1} \times VIX_{i,t} + \gamma_3 CF_{i,t}/K_{i,t-1} \times Stock\ Vol_{i,t} + \epsilon_t + \theta_i + \mu_{i,t}$$

- ***I/K***: *I* represents investment, measured as the firm's purchase of gross fixed assets, and *K* is the stock of capital, measured as the total net value of property, plants, and equipment.
- ***CF*** is cash flow, measured by EBITA.
- ***ΔDebt*** is changes in debt.
- ***Int*** stands for effective interest rate paid on total debt.
- **Q** stands for the standard Tobin's Q, estimated as the price-to-book value of the firm's equity.
- ***FX vol*** is rupiah volatility against the U.S. dollar (3 months). This is as a proxy for macroeconomic instability, based on Darby and others (1999).

[4] See, for example, IMF (2015a), Baker and others (2015), and Darby and others (1999).

- *VIX* is the Volatility Index of the Chicago Board Options Exchanges (CBOE).
- ***Stock vol*** is the volatility of Jakarta Stock Exchange Composite Index. This is a proxy for policy uncertainty, based on Baker and others (2015).
- ϵ_t is the time-specific fixed effect; θ_i the firm-fixed effect; and $\mu_{i,t}$ is an unobservable error term.

19. The estimation results confirm the hypothesis (Table 1). The empirical analysis concludes that private investment in Indonesia is affected by firm-level factors such as cash flows and access to finance. The analysis also concludes that macro-level factors, including macro instability, uncertainty arising from the international financial markets, and policy uncertainty in Indonesia, could have a negative effect on investment via lower cash flows. High-cost structural impediments that undermine corporate cash flows could have a negative effect on investment.

Firm-level factors *(Table 1, Panel 1)*

- **Investment's positive relationship with cash flows suggests that reduced cash flows during the economic downturn or commodity down-cycle could dampen investment**. Cash buffers are an important factor in investment decisions, since Indonesian corporates still rely on internal cash flows for funding in Indonesia. The significance of cash flows in investment decisions leads to the discussion below that macro variables affecting cash flows could have an effect on investment in Indonesia.

- **Investment's positive relationship with an increase in debt suggests that improving access to debt finance could contribute to investment** (Table 1, Panel 1). Investment shows a positive relationship with a rise in debt, but no significant relationship with effective interest rate payment or Tobin Q. This suggests that alleviating access to debt finance is relatively more important than interest rate cost considerations or equity financing. In this context, improving access to debt finance, such as deepening corporate bond markets or strengthening bank's asset quality or liquidity conditions, could support investment.

Macro-level factors: To estimate the effect of macro factors on corporate investment, interaction terms of macro variables with cash flows are tested, of which conclusion supports the hypothesis (Table 1, Panels 2–4).

- **Investment's negative relationship with rupiah volatility suggests that maintaining macroeconomic stability is positive on investment** (Table 1, Panel 2). Rupiah volatility is denoted for macro instability, based on Darby and others (1999) which find that exchange rate volatility can have an important negative impact on investment, *albeit* smaller than the cost of capital or expected earnings effects. The negative interaction term with rupiah volatility suggests that unstable macroeconomic conditions could weigh on investment, possibly through negative effect on higher cost of capital or lower expected earnings.

- **Investment's negative relationship with VIX suggests that prolonged international financial volatility could weigh on investment** (Table 1, Panel 3). Given corporates' heavy

reliance on external borrowing and exposure to foreign currency denominated debt (Ken and Shin, 2016), volatile international financial markets could lead to tighter external borrowing conditions or higher funding costs, and thus dampen investment decisions.

- **Investment's negative relationship with stock price volatility possibly implies that strengthening policy certainty could support investment** (Table 1, Panel 4). Equity price volatility is denoted for policy uncertainty, based on Baker and others (2015), which finds that policy uncertainty raises stock price volatility and reduces investment, especially in policy sensitive sectors such as infrastructure construction and healthcare. The negative interaction term with stock price volatility suggests that policy uncertainty could have a negative effect on investment, possibly via lower expected earnings.

- **The panel results could possibly imply that addressing costly structural impediments would help support investment growth**. Reducing the major cost factors in production could help support investment by improving cash flows. These include accelerating infrastructure development, reducing regulatory compliance costs, and enhancing labor productivity.

Table 1. Drivers for Investment in Indonesia 1/

	Investment to Capital			
	Panel 1	Panel 2	Panel 3	Panel 4
Cash flow	0.65 ***	3.03 ***	1.02 ***	7.83 ***
	(0.00)	(0.00)	(0.00)	(0.00)
Changes in debt	0.39 ***	0.39 ***	0.31 ***	0.35 ***
	(0.00)	(0.00)	(0.00)	(0.00)
Lagged effective interest rate	-2.46	-2.44	-1.86	-2.20
	(0.93)	(0.93)	(0.94)	(0.94)
Tobin Q	0.00	0.00	0.00	0.00
	(0.97)	(0.97)	(0.97)	(0.97)
Cash flow*rupiah volatility		-0.16 ***		
		(0.00)		
Cash flow*VIX			-0.07 ***	
			(0.00)	
Cash flow*stock price volatility				-0,37 ***
				(0.00)
Sample size	2,722	2,722	2,722	2,722
R-sq	0.34	0.34	0.40	0.36

1/ Includes constant. Significance at *p <0.10, **p <0.05,***p <0.01.

G. Conclusion

20. Investment in Indonesia has also slowed more than in peer countries, with particular weakness in manufacturing. Sluggish commodity prices and soft economic activity have weakened corporate cash flows and limited internal financial space for investment. External financing such as bank loans or foreign bonds has also decelerated, partly because of weak investment sentiment and partly because some banks have tightened lending standards. At the same time, structural factors—such as limited infrastructure, the business climate, low labor productivity, and weakened linkages with global value chains—have hampered investment over the years, particularly in manufacturing.

21. To support the growth of investment, it is important to address the structural headwinds that raise the high cost of capital. With a pickup in commodity prices and economic growth, private investment is expected to gradually recover, but it is essential to address structural constraints and maintain stable macroeconomic conditions in order to sustain and expand the growth of investment.

22. In this regard, deepening structural reforms to support competitiveness and productivity growth could bolster private investment by lowering the cost of capital. Financial deepening to improve access to finance, such as domestic corporate bond markets, and continue to strengthen the financial system, would support investment. Accelerated infrastructure development would reduce logistics and energy-related costs and stimulate investment, especially in manufacturing. Stronger inter-agency coordination to streamline complex regulations and assure policy and regulatory consistency would alleviate costly factors. Opening new sectors of the economy to investment, particularly the primary and services sectors, and closing labor skill gaps through improved education, will strengthen the competitiveness and productivity of the economy and help sustain investment growth.

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