

Indonesia: Financial System Stability Assessment

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INDONESIA

Financial System Stability Assessment

Prepared by the Monetary and Capital Markets and Asia and Pacific Departments

Approved by José Viñals and Anoop Singh

August 12, 2010

This Financial System Stability Assessment (FSSA) is based on the work of two joint IMF/World Bank Financial Sector Assessment Program (FSAP) missions to Jakarta during October 6–16, 2009 and February 24–March 10, 2010. The main findings are:

- **A decisive and successful response, as well as a decade of sound policies and structural reform, helped Indonesia recover quickly from the 2008 global crisis.** However, lingering concerns over weak enforcement of the rule of law, transparency, and governance issues, weigh on market perceptions. Addressing these weaknesses should be a priority. Political risk is currently less of a concern.
- **The banking system is generally healthy.** While banks are vulnerable to credit, interest rate, and liquidity risks, a high capital and earnings buffer has provided a cushion against macroeconomic volatility. The development of a viable capital market will help avoid an over-reliance on banking sector funding.
- **Banking supervision and regulation have improved substantially, but gaps remain in dealing with problem banks and crisis management.**
- **Indonesia is planning a major change in the regulatory architecture by creating an integrated supervisory agency.** This move reflects past thinking and could hamper the quality of supervision. Strengthened enforcement powers, independence, and legal protection for officials should be given priority. Bank Indonesia's financial position should be reinforced.

The main authors of this report are Hervé Ferhani and Cheng Hoon Lim, with contributions from members of the team.

The FSAP team comprised Hervé Ferhani (co-head), Cheng Hoon Lim (co-deputy), Jeanne Gobat, Xiangming Li, Yuliya Makarova, Marta Ruiz-Arranz, Steven Seelig, and Ruud Vermeulen (all IMF); Hormoz Aghdaey (co-head), Susan Marcus (co-deputy), Nagavalli Annamalai, Patrick Conroy, James Hanson, Damodaran Krishnamurti, Katie Shaw, Rodolfo Wehrhahn, and Alice Zanza (all World Bank); and Andrea Corcoran, Keith Hall, William Ryback, Bruce Summers, and Froukelien Wendt (all external experts).

FSAP assessments are designed to assess the stability of the financial system as a whole and not that of individual institutions. They have been developed to help countries identify and remedy weaknesses in their financial sector structure, thereby enhancing their resilience to macroeconomic shocks and cross-border contagion. FSAP assessments do not cover risks that are specific to individual institutions such as asset quality, operational or legal risks, or fraud.

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Glossary

AML-CFT	Anti-Money Laundering and Combating the Financing of Terrorism
A2F	Access to Finance
AFS	Available for Sale
APG	The Asia-Pacific Group on Money Laundering
ATM	Automatic Teller Machine
BAPEPAM	Badan Pengawas Pasar Modal (The Capital Markets and Financial Institutions Supervisory Agency)
Bapepam-LK	Capital Market and Financial Institution Supervisory Agency
BAPPEBTI	Commodity Futures Trading Regulatory Agency
BCP	Basel Core Principles
BCBS	Basel Committee of Banking Supervision
BI	Bank Indonesia
BI-SSSS	Bank Indonesia - Scripless Securities Settlement System
Board	Board of Governors
BoC	Board of Commissioners
BoD	Board of Directors
BPK	Supreme Audit Board
BPS	National Statistics Bureau
BU	Bottom Up
CAR	Capital Adequacy Ratio
CAMELS	Capital adequacy, asset quality, management quality, earnings, Liquidity, and sensitivity to market risk
CASA	Current and Savings Account
CCP	Central Counterparty Clearing House
CDS	Credit Default Swap
CEO	Chief Executive Officer
CFPs	Contingency funding plans
CPA	Certified Public Accountant
CPSS	Committee on Payment and Settlement System
CPSIPS	Core Principles for Systemically Important Payment Systems
CSD	Central Securities Depository
CTP	Centralized trading platform
DGFI	Director General of Financial Institutions
DPR	House of Representatives
DSAK	Dewan Standar Akuntansi Keuangan (Financial Accounting Standards Board)
DVP	Delivery-versus-Payment
ELA	Emergency Liquidity Assistance
FRC	Financial Reporting Council

FASBI	Deposit Facility for Bank Indonesia
FSAP	Financial Sector Assessment Program
FSSA	Financial System Stability Assessment
FSSK	Financial System Stability Forum
FSSN	Financial System Safety Net
FSSC	Financial System Stability Committee
GCG	Good corporate governance
GDP	Gross Domestic Product
HSBC	The Hong Kong and Shanghai Banking Corporation Limited
IAI	Ikatan Akuntan Indonesia (Association of Accountants)
IAIS	International Association of Insurance Supervisors
IAPI	Ikatan Akuntan Publik Indonesia (Indonesian Institute of Public Accountants)
IAS	International Accounting Standards
IBRA	Restructuring Agency
ICR ROSC	Insolvency and Creditors' Rights Assessment
IDR	Indonesia Rupiah
IDX	Indonesia Stock Exchange
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IOSCO	The International Organization of Securities Commissions
IRRBB	Interest rate risk in the banking book
ISQC	International Standard on Quality Control
IT	Inflation Targeting
KPEI	Kliring Penjaminan Efek Indonesia (Clearing and Guarantee Institution)
KSEI	Kustodian Sentral Efek Indonesia (Central Securities Depository)
LLL	Legal lending limit
LOLR	Lender of Last Resort
LPS	Lembaga Penjamin Simpanan (The Deposit Insurance Corporation)
MASS	Microfinance Access and Services Survey
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MMOU	Multilateral Memorandum of Understanding
MPT	Monetary Policy Transparency
MSME	Micro- and Small/Medium Enterprise Finance
NBFI	Non-bank Financial Intermediary
NOP	Net Open Position
NPL	Non-performing Loan
OECD	Organization for Economic Cooperation and Development

OJK	Otoritas Jasa Keuangan (Financial Service Authority)
OTC	Over-the-Counter
PAPI	Accounting and reporting guidelines for banking
PCA	Prompt Corrective Action
PSAK	Pernyataan Standar Akuntansi Keuangan (Indonesian Financial Accounting Standard)
ROA	Return on Assets
ROSC	Report on the Observance of Standards and Codes
RSSS	Recommendations for Securities Settlement Systems
RTGS	Real Time Gross Settlement
SBI	Sertifikat Bank Indonesia (Central Bank Notes)
SID	Credit Information Bureau
SME	Small- and Medium-scale Enterprise
SOCB	State-owned Commercial Bank
SOE	State-owned Enterprise
SRO	Self Regulatory Organization
STP	Straight through process
SUN	Surat Utang Negara (Government of Indonesia Securities)
SUP	Non-marketable government securities (held by BI only)
TD	Top Down
USD	United States Dollar
VAT	Value Added Tax
Y-O-Y	Year-Over-Year

EXECUTIVE SUMMARY

A joint IMF/World Bank team undertook the Financial Sector Assessment Program exercise for Indonesia during October 6–16, 2009 and February 24–March 10, 2010.

The first mission assessed the observance of selected international standards and codes, and initiated discussions on a broad range of financial stability and structural issues.¹ The second mission completed the work and presented a draft aide-mémoire along with drafts of technical notes.² The mission met with a broad spectrum of public and private sector officials, including financial institutions in Singapore.

Indonesia recovered quickly after being hit hard by contagion from the global financial crisis. The initial investor nervousness about Indonesia’s credit worthiness—as global deleveraging intensified—eventually gave way to the recognition that the health of its banks and companies, its supervisory framework, and its macroeconomic policy framework have improved significantly in the last decade. The authorities acted decisively to implement a wide range of measures to ease the liquidity crunch and to provide stimulus to the economy. As a result, the economy expanded by 4.5 percent in 2009, the third fastest among G-20 economies. Reflecting Indonesia’s strong fundamentals, key rating agencies upgraded its sovereign rating to one notch below investment grade and its sovereign outlook to positive.

Despite the remarkable achievements during the last decade, Indonesia still faces challenges to preserve financial stability and develop its financial system. Market participants view Indonesia as a country with great potential, supported by a large consumer base and rich in natural resources. Yet, Indonesian securities continue to trade at a discount relative to regional peers and many wealthy Indonesian individuals still prefer to place their savings offshore. The financial sector lags behind comparable countries in terms of depth and contribution to the economy.

This is because weaknesses in the legal and governance framework undermine investor confidence. In particular, while legislation and institutions are in place, gaps in the legal mandate and powers, governance, and protection for some institutions hamper enforcement. Indeed, concerns about creditor rights have led banks to focus more on consumer and small- and medium-scale enterprise (SME) lending since large corporate borrowers have the economic clout to challenge contracts.

¹ Four standards and codes were assessed: (i) Basel Core Principles (BCP); (ii) International Organization of Securities Commissions Principles of Securities Regulation (IOSCO) (iii) Core Principles for Systemically Important Payment Systems (CPSIPS); and (iv) Monetary Policy Transparency (MPT).

² Six technical notes were prepared: (i) Assessing Corporate Sector Vulnerabilities; (ii) Alternative International Structures of Financial Sector Supervision and Regulation; (iii) Stress Testing Indonesian Banks; (iv) Legal and Regulatory Framework of the Indonesian Financial System; (v) The Insurance Industry; and (vi) Capital Market Development in Indonesia.

More fundamentally, the most critical gap in the oversight of the financial system is the absence of legal protection for the financial sector regulator and supervisor. This has allowed public questioning of and political interference in supervisory actions, slowing down decision making and occasionally paralyzing the prudential system. Legal uncertainty about the timeliness and consistency of judicial support for supervisory interventions compound the problem. Addressing these weaknesses is fundamental for achieving a sound and competitive financial system, and indeed the overall economy. It will also raise the resilience of the system.

Much effort and attention should be devoted to further strengthening the banking sector because of its size and importance. Banking fundamentals have improved, with most Indonesian banks reporting high capital, comfortable levels of liquidity, and solid profitability. However, some risks should be closely monitored:

- **Banks exhibit rising credit exposures to retail and SMEs.** While the move into SME and retail lending helps diversify bank balance sheets, it may expose some banks to new risks in an environment where the quality of information is still weak.
- **Stress tests show that banks are vulnerable to credit risk, and a few mid-sized banks to liquidity risk.** A sharp rise in energy and food prices could depress domestic demand, sour market sentiment and lead to capital outflows and exchange rate pressures (Table 1). A priority should be to strengthen the soundness of the large state-owned banks.
- **The government should refrain from using moral suasion and prudential regulations to promote credit growth.** Targeting a higher loan-to-deposit ratio or reducing risk weights of certain loans independent of the associated risk weakens banks' balance sheets and system stability.

Banking supervision has improved substantially since the Asian crisis but there are gaps. Bank Indonesia (BI) has established supervisory frameworks and methodologies that generally meet international norms. However, it falls short in dealing with problem banks. Legally mandated prompt corrective action (PCA) would speed up BI's actions to resolve weak banks, and make decisions more transparent. Issues with the quality of capital, loan provisioning rules, and home-host supervision also need to be addressed.

The non-bank financial sector is small. Its regulator, the Capital Market and Financial Institution Supervisory Agency (Bapepam-LK) needs greater enforcement powers and independence to enable it to take pre-emptive action against malpractices.

The Indonesian authorities are considering overhauling the regulatory architecture. The BI Act as amended in 1999 requires the establishment of a new integrated supervisory agency (OJK) that consolidates the banking, insurance, and securities supervision functions in one institution. In light of the global initiatives to strengthen the coordination of macro- and micro-supervision, the authorities are aware of the need to reconcile the requirement of

the BI Act and the global trend. Cross-country experiences show that changing the structure of supervision alone does not necessarily lead to improved oversight, or a better assessment of systemic risk. Transferring bank supervision out of BI risks losing competencies that have been built overtime and, hence, entails significant risk. Instead, the existing regulatory and supervisory framework should be strengthened. This also calls for a stronger BI financial position and for enshrining in the legal framework a simpler, more transparent process for the selection of BI's Board members.

The Indonesian authorities responded decisively and successfully to the 2008 crisis but the financial safety net law needs to be passed to ensure that a similar defense can be mounted in the future. The Crisis Management Protocol functioned well during the crisis, but it has lapsed. New legislation is needed to ensure timely response in periods of crisis and to provide legal protection for policy makers and supervisors in the performance of their duties. Furthermore, the deposit insurance corporation (LPS) requires increased funding commensurate with the larger size of deposits being covered.

Finally, much more can be done to develop Indonesia's capital markets. A viable capital market will diversify the sources of funding and provide long-term investment opportunities. The small insurance industry should be restructured and gradually expanded to broaden the institutional investor base.

The full list of FSAP recommendations, including key priorities and areas covered by the World Bank, are summarized in Table 2. Technical assistance could be provided to support their design and implementation.

Table 1. Financial Stability Diagnostic and Assessment Matrix

Indonesia	Overall level of concern	
Nature/Source of Main Threats	Likelihood of severe realization of threat in the next 1–3 years	Expected impact on financial stability if threat is realized
<p>1. Sharper than projected slowdown in economic growth due to slower recovery in commodity markets, in regional or global growth, or decline in domestic consumption.</p>	<p><i>Low/Medium</i></p> <ul style="list-style-type: none"> • Forecast is still for higher growth in 2010 and onwards. • Much hinges on external factors, such as the global economic outlook, along with the government’s ability to provide further stimulus to the domestic economy. Increased spending on infrastructure would provide additional cushion. • Monetary policy will provide limited room for stimulus as policy rates have decreased sharply since mid-2008. However, if the economy weakens and commodity prices remain subdued, policy interest rates could decline somewhat. 	<p><i>Medium</i></p> <ul style="list-style-type: none"> • A slowdown would deteriorate asset quality, although with a lag, and impact bank earnings and profitability. • On the whole, the banking system appears to be adequately capitalized and profitable to sustain an economic slowdown and absorb potentially higher NPLs. • Banks have remained resilient through the 2008 global downturn. Strengthened risk management practices (e.g., lowering exposures to more problematic sectors) and lower dividend payouts would provide additional buffers.
<p>2. Reduced capital inflows and increased capital outflows triggered by heightened investor aversion toward Indonesia.</p>	<p><i>Medium-High</i></p> <ul style="list-style-type: none"> • The political environment is seen as more stable than before (e.g., credit default swap (CDS) spreads have decreased markedly), with a smooth 2009 presidential election. • Notwithstanding, terrorist threats and political risk are factors underpinning Indonesia’s higher sovereign risk premium than comparable countries. • Sustained capital outflows could trigger a sharp downturn in the macro environment (exchange rate, inflation, interest rates), market access problems and heightened roll-over risk for the government. 	<p><i>Medium</i></p> <ul style="list-style-type: none"> • The impact would be felt initially on the securities market, in particular the government bond market, and overall liquidity in the system. However, BI has the instruments to quickly add liquidity. Banks are less vulnerable to a cut off from external finance than the government. Hence government funding costs could increase both domestically and externally, restraining its ability to provide stimulus to the economy. • Credit risk would increase as the second round effects of tighter monetary policy and slower economic growth affect domestic consumption and banks’ SME and retail portfolio. • Banks would also suffer from potential losses on their market risk exposures, although this risk may have been reduced when banks were allowed in 2008 to shift their government bond holdings from available for sale to hold to maturity, and book those in available for sale at fair market value. • Banks in Indonesia have experience

		in dealing with financial market volatility and carry a higher capital buffer to protect against these shocks. The 2008 crisis showed that the impact of capital outflows on credit risk has been minimal so far.
3. Withdrawal of domestic retail deposits.	<p><i>Low</i></p> <ul style="list-style-type: none"> • The threat of a systemic deposit run is unlikely at this stage as the banking sector is relatively sound. Banks did not experience major deposit withdrawals during the second half of 2008 when the global crisis severely affected the financial market in Indonesia. • In addition, macroeconomic fundamentals have strengthened over the years, further lowering the threat of deposit runs. Public confidence in the banking system and in macroeconomic management has increased. The government also introduced a deposit insurance scheme in 2007, and more recently increased the coverage to IDR 2 billion. • The government also stands ready to support the domestic banking sector, if necessary. 	<p><i>Medium</i></p> <ul style="list-style-type: none"> • Bank funding structure is short-term. Currently, banks rely mainly on retail domestic deposits, both foreign and local currency, for funding. Hence, they would be vulnerable to a sudden withdrawal of deposits to nearby off-shore centers. • Second tier large banks and mid-sized banks with tighter liquidity positions and greater reliance on deposits as a source of funding would be more vulnerable. These banks would likely have more difficulty accessing the wholesale market in times of heightened counterparty risk. • Banks' relatively conservative loan-to-deposit ratios and high holdings of government bonds and SBIs minimize the impact of this risk, although banks' margins and profits would be affected as a result of a higher cost of funding. • BI is seen as likely to step in during a general liquidity crisis. BI has the instruments to quickly provide liquidity to the market.
4. Sharp increase in commodity prices (e.g., oil and food) would result in inflation and higher interest rates, which in turn would lead to a further general deterioration of the macro environment.	<p><i>Medium</i></p> <ul style="list-style-type: none"> • Indonesian households and companies are vulnerable to a sharp increase in commodity prices, in particular energy and food given that they account for a significant share of consumption. Corporate margins would be squeezed by higher energy prices. The knock-on effect to the broader economy would be high given that domestic demand accounts for the bulk of economic activity. • Inflation risk would be higher and this could trigger further rounds of interest rate increases to bring inflation under control. 	<p><i>Low</i></p> <ul style="list-style-type: none"> • Sharp commodity price increases could trigger an increase in payment delinquencies and default risk for companies, SMEs and households as their income and cash flows become more constrained.

5. Exchange rate volatility	<p><i>High</i></p> <ul style="list-style-type: none"> Indonesia has a flexible exchange rate regime that can move in both directions in response to changing economic conditions. 	<p><i>Low</i></p> <ul style="list-style-type: none"> Exchange rate exposures are limited. Net open foreign currency positions are tightly managed. The financial system is accustomed to dealing with exchange rate volatility.
6. Shortcomings in the framework for bank intervention and resolution accentuating banking risks	<p><i>Medium</i></p> <ul style="list-style-type: none"> The current framework encompasses shared power between BI, Bapepam-LK, and LPS. It also includes the opportunity for parliament and bank management to intervene. Coordination issues, including delayed action, might emerge in the event of a crisis. Problem banks could be placed under intensive supervision for an indefinite period of time, with their resolution contingent on a number of factors. 	<p><i>Medium</i></p> <ul style="list-style-type: none"> Delays in resolving a bank that has been troubled for an extended period of time could lead to higher than expected cost for the government and financial system. For the impact to be systemic, this would have to involve the failure of a large bank and recent failures have been limited to small banks.

Table 2. FSAP Recommendations

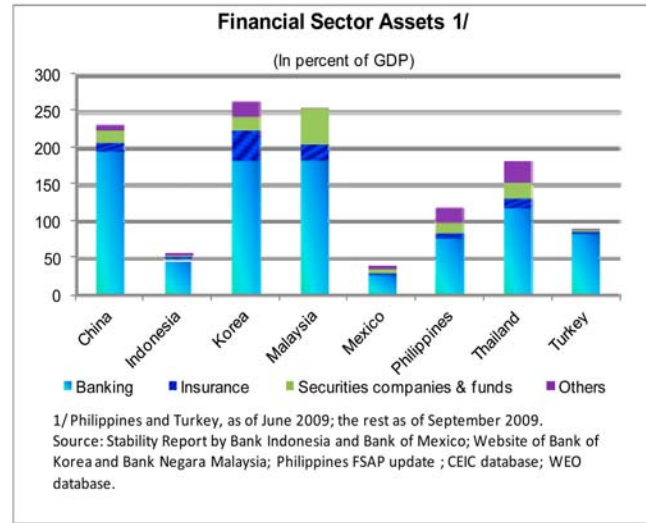
Recommendations	Priority	Time frame
Banking Issues		
Issue revised regulation to strengthen the quality of capital by bringing risk weights to at least Basel I levels and tightening the accounting definition of Tier 1 capital.	H	6
Issue revised regulations to strengthen the regulatory definition of exposure, including related-party exposure.	H	6
Issue revised regulation to strengthen asset classification and provisioning norms, including treatment of restructured loans.	H	6
Issue regulations and supervise interest rate risk on banks' banking book.	M	12
Establish regular contacts with domestic and foreign supervisors to strengthen consolidated supervision and home-host cooperation and information exchange relationships.	H	12
Submit to the House of Representatives (DPR) draft prompt corrective action legislation to achieve timely corrective measures, to remove discretion from the process, and limit the time banks can spend under intensive supervision.	H	12
Maintain capital adequacy requirement in line with the Basel I norms until Pillars 2 and 3 of the Basel II framework are operational; more generally, handle the transition to Basel II and new accounting standards carefully to ensure the right balance between various interactive elements.	H	ongoing
Strengthen BI and banks' stress testing capability.	M	ongoing
Revise the law to give SOCBs more flexibility in dividend payout, debt restructuring, and management of capital structure and business risks.	M	24
Regulatory Structure		
Review financial sector supervision and regulation to ensure micro-macro prudential coordination while reforming the financial supervision framework.	H	ongoing
Central Banking		
Strengthen BI's balance sheet by agreement with the government to restructure zero interest government debt into market interest bearing debt.	H	12
Improve the selection process of BI's Board members.	H	24
Further clarify BI's policy objective and develop a mechanism to eliminate the discrepancy between the official inflation targets announced by the Ministry of Finance (MOF) and the targets used by BI.	M	12
Disclose criteria for selecting counterparties in FOREX market.	L	12
Deposit Insurance		
Increase the deposit insurance fund commensurate with the increased size of deposits covered, through higher premiums or capital injection.	H	12
Improve cooperation between BI and the LPS.	M	24
Adopt more transparent market-based ceiling rates on insured deposits, with a plan to review the effectiveness of the system going forward.	M	24
Capital Markets		
Amend the capital market law to augment regulators' independence and enforcement powers, including the power to assist foreign regulators and gain more expeditious access to bank accounts.	H	12
Encourage SOEs to list in the stock market or issue fixed income instruments to help capital market development.	M	24

Expand the institutional investor base.	M	24
Develop educational programs and professional training.	L	24
Improve the price discovery mechanism of government bond trading.	H	24
Insurance		
Pass an insurance law.	H	12
Deal with insolvent insurance companies to avoid systemic failure.	H	6
Explore options to develop the insurance sector.	M	24
Develop micro and Sharia insurance products for low-income households.	L	Ongoing
Legal Protection Issues		
Amend the Bank Indonesia Act (BI Act) and the Capital Markets Law to enhance the scope and strength of legal protection of bank supervisors and securities regulators.	H	6-12
Enact crisis management legislation including protection for officials involved.	H	6-12
Market Infrastructure		
Consider measures to increase access to finance (A2F) and improve the quality of branch services.	L	Ongoing
Regulate and supervise Sharia finance to bring its capital requirement in line with those governing conventional commercial banks.	L	24
Improve the national credit bureau; consider private credit bureaus.	H	12
Improve the certainty and speed of execution of collateral and of bankruptcy proceedings.	H	24
Strengthen and enforce registration of companies and filing of financial statements using unique identification.	M	24
Carry out insolvency and creditors' rights assessment (ICR ROSC).	M	24
Address weaknesses in laws governing payments systems, including finality of payments, delivery-versus-payment (DVP). Clarify who has access to the payment system and to enforce the regulatory and oversight responsibilities of BI and Bapepam-LK	M	12
Promote efficient sharing of infrastructure and the adoption of standards and support sharing in BI's oversight of the payments system.	L	12
Establish countrywide infrastructure that supports electronic payments and educates consumers about the benefits of electronic means of payment.	L	24
Ensure banks' compliance with PSAK 55 (IAS 39).	H	6
Increase the number of qualified accountants and actuaries.	M	24
Transfer oversight of auditors and public accounts to Bapepam-LK.	H	24
Enact new financial reporting and accountants laws.	H	12
Build the capacity of accountancy organizations.	M	24
Speed up convergence to International Financial Reporting Standards (IFRS) by an assessment of constraints and actions to deal with them.	M	24
Enforce the law requiring audited consolidated accounts for major corporations.	M	24

Priority: H = High; M=Medium; L = Low

I. STRUCTURE OF THE FINANCIAL SYSTEM

1. **Indonesia's financial sector is small relative to peer countries.** Total financial sector assets stood below 60 percent of gross domestic product (GDP) in 2009. This in part reflects the severity of the Asian crisis, when well over half of banking assets had to be written off. Even so, the financial sector has been slow to develop over the last decade. Bank deposits have declined relative to GDP over the last five years. Indonesian companies have been funding their expansion primarily through retained earnings, as private debt is also low relative to GDP.



2. **The financial system is dominated by banks**, accounting for 50 percent of GDP and 80 percent of the financial system (Table III.1). Two types of banks take deposits—commercial and rural banks. Most banks operate almost exclusively in the domestic market, with some owning non-bank financial institutions although their ownership is restricted by regulation.³



3. **Within the banking system, activities are concentrated in a few large commercial banks.** The top three state-owned commercial banks (SOCBs) account for one-third of the banking sector asset and deposit base, and the top 15 banks for about 70 percent. A number of SOCBs hold dominant market positions in all government related transactional banking, micro and rural finance, and mortgage lending. Most of the smaller and mid-sized banks do not have the ability to compete with the larger banks at the national level.

4. **Foreign banks are increasingly playing an important role in the Indonesian banking sector.** This reflects a host of factors, including a liberal foreign investment regime where foreign investors can fully own local financial institutions, in the absence of branch limits. The government also sold its stake in many of the intervened banks to strategic

³ Exposure in Non-bank Financial Intermediaries (NBFIs) cannot exceed 25 percent of banks' consolidated capital.

foreign investors. On balance, participation by foreign investors has been viewed as beneficial, helping to introduce new risk management techniques, enhance competition in retail and SME banking, and strengthen the capital base of some of the weaker banks.⁴

5. **Banks rely on short-term funding.** Over 90 percent of the banks' funding structure is short, with maturities of less than one month and at call. Current and savings accounts (the so-called CASA deposits) represent for over half of the total funding base and time deposits for the rest.⁵ The top 15 banks have access to a larger share of low-cost and stable CASA deposits, and this likely reflects their larger branch network and name recognition, while mid-sized and small banks rely more on time deposits for funding.

6. **The interbank market is thin and segmented.** While there is ample liquidity in the banking system, it is not evenly distributed. The top 15 banks generally have excess liquidity, much of it parked in SBIs. Limited interbank transactions segment the money market and add volatility to interbank rates, with a greater impact on the smaller and mid-sized banks during times of stress. Smaller banks do not generally access the interbank market.

7. **The non-bank financial sector remains small and underdeveloped, accounting for less than 10 percent of GDP.** It includes insurance companies, pension funds, mutual funds, finance companies, securities companies, and pawnshops. The insurance, mutual funds, and pension industries are growing, but from a low base. The insurance sector is the largest among the non-bank financial institutions, accounting for about 3 percent of GDP.

8. **While the Indonesia stock market was one of the best performing indices in 2009, it remains small compared to most other emerging market peers** (Table III.3, Figures III.7 and III.8). The market capitalization of the Jakarta Stock Exchange (IDX) was about 48 percent of GDP at end 2009. It is highly concentrated, with the top 50 listed companies accounting for 80 percent of turnover; limited liquidity hampers its use as a source for long-term capital raising or investment. At end-2009, just over 340 companies are listed, reflecting reluctance by family-owned companies in Indonesia to go public. Out of these, 30 stocks, mostly blue chips, are actively traded on the exchange. The free float (percent of shares owned by the public) at 40 percent is also relatively low. Foreign investors account for about two-thirds of market capitalization.

9. **The bond market is also small, although growing.** Bond market capitalization amounted to 12 percent of GDP at end-2009. The market consists of government debt, corporate debt, bank debentures and SOE debt. The government is the dominant issuer,

⁴ Foreign banks as a group (29 percent of banking assets) consists of locally owned subsidiaries, joint venture banks and foreign bank branches (25 banks) while government owned banks as a group (43 percent of banking assets) consists of SOCBs and regional government banks (31 banks).

⁵ At end-2009, over 65 percent of the time deposits had one month or less tenor, and only 1 percent with more than one year.

accounting for 85 percent of the bond market. Commercial banks are major investors, holding more than half of the government bonds, while foreign investors own some 20 percent. SBI bills also constitute a major part of the debt market, but are issued for monetary policy purposes by BI and not traded on the exchange. SOEs and banks are the major issuers of corporate debt. The secondary market for fixed income securities is not well developed, with a low turnover ratios and relatively high bid-ask spreads. Banks also tend to hold government securities to maturity.

II. BANKING SECTOR STABILITY

A. Recent Financial Performance

10. **Improved capital and liquidity levels since the Asian financial crisis along with stronger earnings capacity have restored banks' ability to lend.** After declining sharply following the 1997 financial crisis, annual loan growth has averaged 21 percent since 2003. During this time, banks reduced their holdings of government securities, including so-called recap government bonds, freeing up liquidity for lending.⁶ The additional liquidity was channeled increasingly to the SME and retail sectors at the expense of the corporate sector. This has helped Indonesian banks diversify their credit risk profile and strengthen their earnings capacity, given higher risk adjusted interest margins on SME and retail lending. Consumer, micro and SME loans now account for 54 percent of total loans compared to 45 percent in 2002, and 30 percent in the 1990s. Corporate loans, however, staged a comeback during 2007-2008, reflecting the pick-up in government infrastructure spending. They accounted for about 46 percent of banks' total lending at end-2009.

11. **Following several years of strong expansion, lending growth slowed in 2009** (Figure III.3). After peaking at 38 percent (y-o-y) in October 2008, annual loan growth decelerated to 10 percent in 2009. Banks became more cautious given the deteriorating global macroeconomic environment. Credit demand for working capital and investment also declined, in particular from the manufacturing industry. Banks continued to expand their exposure to the retail sector as households proved to be more immune to the global economic slowdown. SOCBs and regional government banks reported the strongest loan expansion, most of this coming in the second half of 2009. Foreign currency loans fell sharply across all banks, given tighter foreign currency liquidity conditions and heightened external risks in early 2009.

12. **Despite the difficult operating environment, banks reported robust profits and maintained comfortable liquidity levels** (Figure III.4 and Table III.2). Preliminary data

⁶ To restore financial stability, the government purchased banks' bad debt in return for government bonds (so-called recap bonds) during the Asian crisis. By 2000, banks' held over half of their balance sheet assets in government bonds, compared to almost none prior to the crisis. Banks have since lowered their exposure. As of end-2009, recap bonds accounted for 8 percent, most of them carrying variable rates, while total exposure to government bonds accounted for 11 percent of total assets.

suggest that after tax-ROA increased to 1.8 percent in 2009, with net interest income contributing positively through higher credit spreads and loan growth. This has helped offset higher provisioning charges resulting from the deterioration in asset quality. Banks also became more cautious, holding a higher level of liquid assets against short-term liabilities. After steadily rising while credit was expanding rapidly, the loan to deposit ratio fell to 73 percent at end-2009 from 75 percent in 2008.

13. **Asset quality, however, deteriorated in 2009.** Gross non-performing loans (NPLs) increased by 14 percent for the year, although the NPL ratio remained steady at 3.2 percent (Figure III.5). Corporate loans accounted for about half of the increase in NPLs, and SMEs for another 40 percent. Furthermore, data for listed companies showed a jump in default probabilities for the last quarter of 2008, although they have since declined and expected losses appear manageable.⁷ Various factors affected corporate cash flow, including falling commodity prices and default by a large conglomerate on its obligations. A few banks also restructured loans in anticipation of potential payment problems, with the share of restructured loans rising to 3 percent of total loans in 2009 from 1.9 percent in 2008. The deterioration in asset quality was wide spread, with export-oriented sectors, such as mining, manufacturing, and trade, most affected.

14. **Nevertheless, loan-loss coverage remained adequate.** Banks increased their loan loss provisions, with the coverage ratio increasing to 62 percent of NPLs at end-2009 from 58.5 percent in 2008. While in the past SOCBs reported significantly lower loan-loss coverage, the gap has been closed in recent years.

15. **Capital levels strengthened further.** The average risk-weighted capital adequacy ratio (CAR) for Indonesian banks increased to 17.5 percent at end-2009, well above the regulatory minimum (8 percent, and BI's informal target of 12 percent), supported by a high level of Tier 1 capital and a leverage ratio of 10 percent (Figure III.6). A number of banks increased capital through rights and subordinated debt issuance in 2009 or through higher retained earnings when they temporarily lowered their dividend payouts in 2008. As a result of these efforts, the number of banks that fall below the IDR 100 billion minimum capital requirement, which takes effect by end-2010, declined to 11 from 24 banks at end-2008. The SOCBs continue to report lower capital than private banks.

B. Vulnerabilities and Stress Test Results

16. **While the banking system appears adequately capitalized, the stress tests showed that Indonesian banks are vulnerable to credit risk, with the mid-sized to large banks most at risk.** Top down (TD) and bottom up (BU) stress tests were carried out, subjecting the banking sector to an extreme macro-economic shock (GDP contraction of 5 percent

⁷ See Technical Note on Corporate Sector Vulnerabilities.

compared with average growth of 5 percent over the past nine years) and a series of single-factor shocks.⁸

17. **For several reasons, BU results were more positive than the TD ones.** First, under BU, individual banks determine how the distressed macro environment affects their loan growth, credit default and expected loss rates, while the TD results are model driven with fixed assumptions.⁹ In the non-zero profit assumption, the BU further recognizes that banks may be able to grow their balance sheet and generate profits throughout the cycle, unlike the TD. Third, the BU approach likely better captures recent improvements in credit risk management and quality, including from reduced exposure to foreign currency risk and stronger corporate balance sheets.

18. **The key findings of the macroeconomic stress scenario are:**

- **Credit risk is the main source of risk facing Indonesian banks.** The stress scenario generates significant strain as a result of the recession (see Table 1), with banks accruing substantial credit losses.
 - **Under the TD analysis, system NPLs would peak at 31.5 percent in 2011Q3 from current levels of 3½ percent.** Capital for a number of banks would fall below the regulatory minimum level, with a few becoming insolvent (Table 3). Small banks, with significant capital and liquidity buffers, weather the stress scenarios better than large and mid-sized banks, and private banks better than the four SOCBs. Foreign-owned banks appear relatively resilient, although seven become undercapitalized and one becomes insolvent.
 - **The BU outcome qualifies TD results.** Due to current profits, only 3 of the 8 banks would become undercapitalized and none of them would become insolvent (Appendix I, Table 2). With zero operating profit, 7 out the 8 banks would become undercapitalized, although unlike the TD scenario, no bank would become insolvent (Table 3). This reflects lower credit losses and hence lower recapitalization costs.
- **The SOCBs are most vulnerable to the macroeconomic shock.** This reflects legacy issues, including a sizeable exposure to restructured assets, which are more likely to default in an economic downturn, and their lower provisioning and capital buffers, which limits their ability to cope with a weaker credit environment.¹⁰

⁸ See Appendix I and the technical note for fuller discussion of the stress testing methodology and results.

⁹ The TD results are based on historical relationships between default rates and loss rates and changes in key macro variables, and also reflect the change in the default behavior since the 1997/1998 financial crisis. An average loss rate of 50 percent was assumed, compared to 80 percent realized in the post Asian crisis period.

¹⁰ Typically, 60 percent of restructured loans within the “special mentioned” category are downgraded to NPL status.

19. **The sensitivity analysis showed that the Indonesian banks are relatively resilient to market shocks** (Appendix 1, Tables I.3 and I.4). They are most sensitive to interest rate shocks on their banking book, but can withstand other types of market risks.

- **Second-tier large banks and mid-sized banks are most vulnerable to liquidity risk.**¹¹ Around three quarters of banks would be able to cope with a run on deposits of up to five days. The vulnerability of the remaining group of banks stems from their less diversified funding base, higher loan-to-deposit ratio, and lower holdings of liquid assets.
- **The largest banks are vulnerable to concentration risk.** If the 10 largest system-wide borrowers were to fail, average losses for banks would amount to 1½ percent of CAR with four banks falling below BI's minimum capital requirement. The BU results suggest greater concentration risk for the top 12 banks in the system than for the entire industry. If their 10 largest borrowers were to fail their average CAR would decline by 6½ percentage point and five banks would fall below the minimum regulatory capital requirement. The higher loss reflects their greater loan exposure to large companies, including SOEs, which are subject to a higher legal lending limit (30 percent of capital compared to the 20 percent limit for single exposures).
- **Contagion risks through the interbank market are negligible due to the small size of the interbank exposures.** The interbank market does not play a significant role in the funding or liquidity management of banks.¹²

¹¹ Second tier large banks have assets between IDR 10-20 trillion while mid-sized banks have assets between IDR 1-10 trillion.

¹² The team did not look at contagion risk emanating from reputation or confidence, although this is somewhat captured through the liquidity stress test.

Table 3. Indonesia: Stress Test Summary Results: Top-Down Scenario Analysis

(Based on end-September 2009 data for commercial banks)

	Total	Gov ^{1/}	o/w SOCB ^{2/}	Foreign ^{3/}	Private ^{4/}	Large ^{5/}	Medium ^{6/}	Small ^{7/}	minimum	Median
Pre-shock end-September 2009 CAR	17.8	13.8	13.7	23.7	17.1	17.3	21.9	38.3	6.6	18.8
Post-shock CAR	6.8	-1.1	-3.9	15.3	9.2	5.9	14.9	32.2	-15.2	13.0
<i>Percent change in CAR</i>	-11.0	-15	-17.5	-8.4	-7.8	-11.4	-7.0	-6.1	...	...
Number of under capitalized banks	37	15	4	7	15	17	19	1	...	...
<i>Percent of Total Assets</i>	56.3	39.6	36.5	10.2	6.5	53.4	2.9	0.0	...	...
Number of insolvent banks	13	5	3	1	7	8	5	0	...	...
<i>Percent of Total Assets</i>	33.6	28.8	28.1	0.6	4.2	33.0	0.6	0.0	...	...
Recapitalization need (in trillions Rupiah)	72	55	53	8	9	69	3	0	...	...
<i>Recapitalization needs in percent of 2009 GDP</i>	1.3	1.0	1.0	0.1	0.2	1.3	0.1	0.0	...	...
Memorandum items										
Percent of Total Assets	100.0	45.6	36.5	29.9	24.5	91.0	8.4	0.6	0.0	0.2
Pre-shock NPL (end-September 2009)	3.8	4.4	4.2	3.9	3.0	3.7	4.6	3.1	...	...
Post-shock NPL	31.5	42.5	37.6	27.5	24.0	32.4	21.7	23.6	...	...

Source: BI data, and IMF and BI calculations.

1/Government: state-owned commercial banks and regional government owned commercial banks.

2/SOCB: State-owned commercial banks.

3/Foreign: foreign bank branches and foreign majority-owned locally incorporated commercial banks.

4/Private: foreign exchange licensed and non-foreign exchange licensed domestic private commercial banks.

5/Large: commercial banks with a total asset value exceeding IDR 10 trillion.

6/Median: commercial banks with a total asset value between IDR 1 trillion and IDR 10 trillion.

7/Small: commercial banks with a total asset value below IDR 1 trillion.

III. FINANCIAL SECTOR OVERSIGHT

A. Banking Regulation and Supervision

20. **The assessment of the Basel Core Principles found compliance to be broad, with a few critical exceptions and qualifications.** A serious shortcoming is the absence of effective legal protection for supervisors. Consequently, supervisors are hesitant to make supervisory judgments or take decisions as they may face legal proceedings. This affects their ability to take timely remedial action against problem banks. Amendments to the BI Act are required urgently to explicitly state presumption of good faith in favor of supervisory staff; to protect supervisory staff from omissions and assume all costs for defending their actions; and to grant protection to BI as a supervisory authority.

21. **Although the capital base is adequate, its quality and consistency should be improved.** BI regulation allows certain items to be considered as Tier 1 capital even though they may not be meeting the test of certainty, permanence, and ability to meet losses on an ongoing basis.¹³ In addition, since March 31, 2006, BI has lowered the applicable risk weights for certain categories of assets below those prescribed under the Basel I rules.¹⁴ The resulting impact on the CAR of the banking system does not appear to be material. For example, adjusting for the net inter-office funds of foreign bank branches and lower risk weights would reduce the CAR for the banking system by about 238 basis points to 15.2 percent from the current average level of 17.5 percent. Nonetheless, addressing these gaps is important because the system CAR could mask differences at the individual bank level. While the impact may not be material today, it could become significant in the event of a crisis.

22. **There are also issues with asset classification and provisioning regulations.**¹⁵ In particular, the rules governing restructured loans, provisioning against unsecured loans, and collateral valuation could potentially distort banks' asset quality, result in under-provisioning against the risk profile, and allow for recognition of income where this would not be

¹³ These include foreign currency translation gains; specific (designated) reserves that are set aside for meeting liabilities but over which the bank or BI might not have authority to appropriate for meeting losses on an ongoing basis; unaudited current year's profit (only 50 percent of unaudited profits are included while 100 percent of loss are deducted); and net inter-office funds in respect of foreign bank branches in Indonesia.

¹⁴ These include small business loans, loans against residential property, loans to retired bank and government employees, and state owned enterprises.

¹⁵ The main areas of concern are: (i) exposures backed by certain specified collateral (such as guarantees) do not have to be classified as NPLs even if they are in default; (ii) the uniform asset classification norm and the application of forward looking risk assessment in classifying assets (i.e., three pillar approach) are subject to high exemptions; (iii) loose norms governing restructured loans (e.g., permitting (a) allowing immediate upgrades of restructured loans to substandard NPLs, which allows restructured NPLs to be upgraded to current within a short time period of demonstrated payment performance, and (b) allowing repeated loan restructuring); and (iv) allowing foreclosed collateral and dues to be converted to equity (after restructuring) and be immediately classified as current for a period of up to one year.

warranted under prudent risk management practices. The recent move toward full compliance with PSAK 55 will help bring greater transparency to banks' recognition of impairment.

23. **Regulation and supervision of interest rate risk on banks' banking book is lacking.** The need to address this gap is underscored by the stress tests, which found that banks are vulnerable to interest rate risk given re-pricing mismatches on the banks' asset and liability structures. To address this gap, BI is collecting data on maturity mismatches.

24. **Finally, the lack of effective arrangements for regular cooperation between the various domestic supervisory authorities and foreign supervisors is an impediment to BI in discharging its duties.** Consolidated supervision, implying monitoring of all aspects of the business conducted by banks worldwide and frequent contact between domestic and foreign supervisors, is an important element in this regard. Therefore, it is important for BI to develop effective operating arrangements with the relevant supervisors, based on but also going beyond formal Memoranda of Understanding (MOU).

B. Dealing with Problem Banks

25. **Supervisors' ability to deal with problem banks effectively and expeditiously is still lacking.** Bank supervisors have made great strides since the Asian crisis in their ability to identify problem banks and to assess management weaknesses in these banks. However, a combination of procedures, rules, and reliance on protracted action plans slows the resolution process. Experience shows that banks that have been troubled for an extended period finally fails with a higher-than-expected cost.

26. **Legislated PCA requirements have been enacted in a number of countries as a way to limit supervisory discretion and quickly contain problems.** Such rules have the added benefit of giving supervisors additional protection by making explicit that certain actions must be taken when specified triggers are met. Typically these triggers are tied to capital and, before capital is fully exhausted, can require such measures as changes in management, mandatory capital rehabilitation plans, limitations on expansion, and, as in the United States, closure of the bank.

27. **Presently, problem banks in Indonesia can only be placed into special surveillance contingent on a number of subjective factors.** Under special surveillance, banks receive more continuous supervision and on-site presence, and must be rehabilitated or have their license withdrawn within nine months. Problem banks can *only* be placed into special surveillance because of liquidity problems or if the capital ratio falls below 8 percent. Banks whose capital has not deteriorated below 8 percent but who have other problems are placed into intensive supervision. While in intensive supervision, supervisors may require bank managements and owners to agree to remedial action plans. However, these plans can last several years and typically are focused on very specific corrective actions and usually do not include actions to prevent further deterioration. Past experience suggests that these banks remain under intensive supervision indefinitely rather than moving to special surveillance, with the decision to move contingent on BI's Board of Governors' advice.

28. **Consequently there is a need to tighten the rules regarding the supervision of troubled banks to achieve timely corrective measures and to remove some discretion from the process.** The following, consistent with existing BI regulations, would achieve this goal:

- If a bank has been in intensive supervision for 1 year and has not exited it should be moved to special surveillance, regardless of its capital level.
- Enact prompt corrective action legislation that mandates:
 - If a bank's CAR falls below 8 percent (or the statutory minimum requirement) the supervisor must issue a binding order requiring management or shareholders to take actions that correct deficiencies in the bank and restore capital to a level above the statutory minimum within six months. If after six months the capital position has not improved, but the bank is still solvent, shareholders must sell the bank or the license is revoked. Also, the supervisors must place the bank under continuous on-site supervision.
 - If capital falls to 4 percent, limitations on the ability of the bank to fund itself with wholesale funding should be imposed. BI should only extend credit to such a bank if it is guaranteed by the government. In addition, capital should be restored to the regulatory minimum within three months or the license is to be revoked. If capital falls to 2 percent the license should be revoked.

C. Basel II

29. **BI plans to commence Basel II implementation for all commercial banks over a five year period.** The current timelines for implementation of Pillar 1 is 2011, Pillar 2 is 2012–2014 and Pillar 3 is 2011–2014. The implementation will initially be based on the simplified approach and banks will be allowed to adopt the advanced approaches only with prior authorization from BI. As with other countries in the region, BI is concerned that current regulatory initiatives might address issues not directly relevant to the local context.

30. **It is important to carefully handle the transition to Basel II.** Basel II is designed to be effective when all three pillars play their respective roles. It is important for BI to achieve the right balance among the various elements of the three pillars. The Basel Committee of Banking Supervision (BCBS) proposes the following guidelines:

- A good baseline supervisory system must be in place before moving on to Basel II. The successful implementation of the Basel Core Principles (BCP), including its “preconditions” serves as a baseline upon which to build the infrastructure of Basel II.
- The legal-regulatory infrastructure in place, the disclosure regime, as well as the status of corporate governance, accounting and provisioning practices, will be important to determine the pace of transition. In this respect, Indonesia's adoption of new international accounting standards (IAS) based on IAS 32 and IAS 39 should be managed carefully and implemented well.

- A key objective of Basel II is to encourage improved risk management through the use of three mutually reinforcing Pillars. Pillar 1 minimum capital requirements needs to be complemented by supervisory review under Pillars 2 and 3.

31. **Against this backdrop, the FSAP recommends that banks be required to maintain capital adequacy in line with the Basel I norms until Pillars 2 and 3 of the Basel II framework are operational.** The transition phase will also provide a good opportunity to validate the effectiveness of the Pillar 1 and Pillar 2 elements including the new supervisory processes being developed. Any revisions to the Basel II framework by the BCBS would also need to be properly reflected.

D. Securities Regulation

32. **Bapepam-LK has taken impressive steps to increase regulatory transparency and to institute comprehensive operational programs that meet the International Organization of Securities Commissions (IOSCO) norms.** However, deficiencies in the legal structure, including the absence of a comprehensive and updated capital market law, makes enforcement a challenge. Therefore, pending enhancements to its enforcement powers, greater independence and a full commitment to better cooperation among domestic and international authorities should be accelerated. Bapepam-LK should focus additional efforts on improving and intensifying its oversight programs, develop cooperation arrangements in writing to assure information sharing in the joint oversight of regulated entities, and take steps to combat market abuses. The move toward accounting oversight and practices in line with international standards should be expedited along with contingency and business continuity planning.

E. Insurance Regulation

33. **Supervisory powers to intervene and resolve insolvent insurance companies are incomplete.** The insurance law supports supervisory actions against insolvent companies with respect to admonitions and sanctions, licensing restrictions, and license withdrawal, but does not provide the authority to take control of the company's assets. This shortcoming leaves policyholders unprotected. A legal framework is needed to involve the supervisor in the unwinding of insurance companies and force timely corrective action. Legislation to this effect should be presented to parliament.

F. An Integrated Supervisory Agency: OJK¹⁶

34. **The Indonesian authorities are considering a major change in the regulatory architecture by establishing a new integrated supervisory agency (OJK).** This initiative originates from the 1999 amendments to the BI Act, but the deadline for implementation had been extended. The OJK would merge the non-bank supervision functions of Bapepam-LK

¹⁶ See technical note for further details.

with the bank supervision functions of BI. The decision to restructure financial sector supervision reflects the authorities' desire to address supervisory shortcomings.

35. **However, changing the structure alone does not improve supervision.** Effective supervision will only result if regulators—wherever they are located—have the authority, skills, and resources to keep on top of the risks.

36. **There are significant risks to bank supervision being transferred out of BI.** The risk of a loss of supervisory continuity associated with the transfer of staff to a new organization, as well as concerns about comparability of pay and benefits, may complicate any attempted consolidation and make them more receptive to offers of private sector employment. The risk of a clash of supervisory cultures within a consolidated agency can weaken supervision and compromise information flows during crisis periods. International experience, of which the authorities are well aware, has shown that in some consolidated agencies the tension between market conduct and prudential responsibilities can weaken prudential oversight. Finally, it would seem premature to undertake such an organizational change until the nexus between macro- and micro-prudential supervision has been better defined. Should the authorities proceed with OJK, close integration between BI and OJK would be important to address these risks. This would reconcile the requirement of BI Act with the current global trend.

IV. FINANCIAL SAFETY NETS AND CRISIS MANAGEMENT CAPABILITIES

37. **Indonesia managed the 2008 crisis well, but bank safety nets would require urgent attention.** The presidential decree that provided the crisis management framework has lapsed, leaving the country without a framework to deal with a systemic crisis. Furthermore, the Parliament rejected in late 2008 a proposed financial stability law that contained provisions for a crisis management framework, including emergency lending, leaving a vacuum about the decision-making framework and procedures. The government is now preparing a revised draft Financial System Safety Net (FSSN) law that is expected to be discussed by Parliament this year

A. Emergency Liquidity Provisions

38. **The provision of emergency liquidity facilities in times of crisis requires greater clarity.** BI can provide two types of liquidity facility: (i) a short-term funding facility (SFF) and (ii) an emergency liquidity assistance (ELA) facility that is granted to banks that are considered *systemic*. However, it is unclear how emergency lending should be handled. Under the new FSSN, the decision to provide ELA will be made by the President with a guarantee backing the loan issued by the Minister of Finance upon obtaining parliamentary approval.

B. Deposit Insurance

39. **Indonesia has a deposit insurance regime that is in line with international practice.** The Deposit Insurance Corporation (LPS) covers insured deposits and is responsible for resolving failed banks. In October, 2008, in response to actions by other

countries in the region, the deposit coverage was raised from IDR 100 million (US\$ 10,000) to IDR 2 billion (US\$ 200,000). This was voted into law in December 2008. However, deposits that earn interest above a specified limit will not be covered by the deposit insurance. The prevailing maximum rate on covered deposits, set in October 2009, is 7 percent on IDR deposits for commercial banks and 10.25 percent for rural banks. A maximum rate is set to prevent rural or weak banks from overpaying to attract deposits. Rural banks compete to attract deposits as they do not have other comparative advantage. Through end-2009, LPS has paid off depositors at 21 small banks, primarily in rural areas. Depositors were paid off promptly with no spillovers to other banks.

40. **LPS's approach would benefit from establishing a market-based ceiling rate on insured deposits.** Setting the cap by reference to a market rate (perhaps with a fixed margin as considered appropriate) would allow it to vary with market conditions, thus improving the monetary policy transmission mechanism, while still preventing risky banks from overbidding. Information on the ceiling rate should be prominently displayed in each bank branch. Furthermore, the government should consider whether the indirect subsidy arising from a differentiated cap between rural and commercial banks is appropriate as it allows rural banks to attract insured deposits from commercial banks.¹⁷ Going forward, the authorities should review the overall effectiveness of the system.¹⁸

41. **The cooperation between BI and the LPS could be improved.** BI provides LPS with information on the banks under special surveillance, though not those under intensive supervision. Provision of the latter would enable LPS to plan better before potential bank problems and resource constraints materialize.

42. **With the twenty-fold increase in coverage last year, the ratio of the fund's resources to the insured deposit base has declined substantially.** The LPS may seek a loan from the government in the event of liquidity difficulties and an allocation of additional funds if capital falls below the original level (Article 85), but there are potential delays in obtaining funds. Experience has shown that when a deposit insurance fund is under-capitalized there is a tendency to either bail out banks or keep them open. To cope with such problems, the LPS will need to increase resources through higher premiums or an additional capital contribution by the government, so that the fund size would be adequate to handle the failure of at least two mid-sized banks.¹⁹

¹⁷ The difference in rates has been reduced from 5 percent in 2006 to 3.25 percent in 2009 and likely to narrow further in the future.

¹⁸ Some banks are apparently circumventing the ceiling rate by offering vouchers to depositors, although this practice is not widespread.

¹⁹ The mission is unable to quantify how much this should be, so a short-term recommendation might be to have LPS conduct the necessary study.

C. Bank Resolution Framework

43. **The LPS is legally empowered to manage and resolve problem banks that have a systemic effect.** A coordinating committee of the Minister of Finance and the Governor of BI declares a bank systemically important. Appropriately, the decision is not legally determined rigidly by the bank's size alone; it takes into account whether the bank's closure would create systemic problems given the macroeconomic and financial context. The bank is then handed over to the LPS with or without existing shareholders' participation (Article 22). LPS has a large number of options for dealing with such banks, including liquidation or taking ownership and all management rights. Since the creation of LPS, the issue of systemic importance has only arisen once, in the case of Bank Century. The LPS also has substantial powers to resolve banks not considered systemic, though it has not used these.

44. **LPS, its staff, and seconded staff face substantial legal risks in managing the rescued bank and need better legal protection for such activities.** Resurrecting a failing bank is inherently a risky activity. Staff needs better legal protection against "second guessing" of their decisions. Concerns about such legal issues may well inhibit the full use of the robust resolution powers contained in the LPS Act.

D. Crisis Management

45. **Indonesia has spent the last several years developing a crisis management framework for dealing with a financial sector crisis, however no legally mandated protocol exists.** A crisis management protocol was introduced during the recent crisis by government regulation in lieu of the law. Under this arrangement, all decisions were made by the Governor of BI and the Minister of Finance, with some decisions reserved for the President. In the event that the Governor and Minister do not agree, the minister's decision is binding.

46. **The political furor over the decisions made in 2008 calls into question whether a similar protocol would be possible in the future.** As a crisis management protocol, the approach used was effective. Decisions were taken quickly, which is a requirement in a crisis. However, criticisms directed at the decision makers in the Bank Century case make unlikely that similar actions would be taken in the future in the event of a crisis. In all likelihood all key decisions would have to be made at the highest political level if other decision makers are not legally protected. A revised crisis management protocol is currently under discussion.

47. **It is imperative that an effective crisis management protocol becomes law.** The law must allow for speedy informed decision-making and thus a mechanism for reasoned recommendations to the decision maker. The President should make decisions only on whether a systemic crisis exists or an institution is systemic. Decisions on implementation of a strategy to mitigate a crisis must be delegated to other government officials.

48. **There is a clear need to provide legal protection to all government officials involved in the crisis management process.** However, there should be a requirement to report to parliament within a reasonable period on actions taken, their likely fiscal cost (both real and gross) and the follow-on strategy.

V. DEVELOPMENT ISSUES IN NONBANK SECTORS

A. Capital Markets

49. **Indonesia's capital markets are limited in both scope and depth and are not a major source of funding or a significant vehicle for long-term investment.**²⁰ Further development of the capital markets is needed to diversify funding and investment opportunities and manage risk.

50. **Moving forward, although the challenges are quite significant, there are some steps that can be taken to further develop Indonesia's capital markets.**

- **Investor confidence must be strengthened.** Investor confidence can only improve if, among other things, any single market stakeholder or group of stakeholders cannot unduly influence the functioning of the markets. Augmenting the capital market law to provide Bapepam-LK with the necessary tools, including appropriate enforcement powers, is essential. Sanctions must be of sufficient magnitude to effectively deter violations. Legal and accounting standards, currently not perceived favorably, are critical components of market integrity.
- **The government's strategy should continue to assist in the development of a more diverse and liquid market.** The government can encourage listing on the stock market of additional shares of SOEs to expand the current limited pool of instruments, privatize more SOEs, as well as encourage SOEs to raise long-term funding through the issuance of fixed income securities. The MOF has made significant strides in creating benchmarks and extending the yield curve, and should continue to ensure that its auctions do not crowd out corporate debt issuances.
- **Expand the institutional investor base by further promoting the insurance, pension and mutual fund industry.** As Indonesia continues to grow, these institutions will play an increasingly important role and will require access to a variety of instruments of longer duration as well as tools to effectively hedge their risks (e.g., by increasing mandatory retirement savings as was done in Chile). The authorities could also review the cost of capital market transactions, including taxes, to determine if they are high compared to other markets.²¹ Although the government has provided tax relief to companies that list their shares (a 5 percent reduction for companies who float at least

²⁰ See technical note for further details.

²¹ While transaction costs charged by the IDX are broadly in line with other markets, the negotiable broker commission fees and bid-ask spreads are relatively high.

40 percent of their shares), this concession has not overcome the reluctance of many companies to make their financial information public.

- **Finally, self-regulatory organizations could do more to promote educational programs, professional training, and the credibility of the capital markets as an attractive employment sector.**

B. Insurance Sector

51. **The development of the insurance sector should be a priority not least to diversify the institutional investor base in Indonesia.** However, the industry is under some strain and these problems need to be addressed promptly to place the sector on a sound footing for future growth.²² Tax incentives could be provided to encourage a shift from short-term to long-term saving products, while the served segment of the population could be expanded by promoting the development of micro and Sharia insurance. A policyholder protection fund should also be established along with capacity building both in the industry and in Bapepam-LK.

VI. MONETARY POLICY TRANSPARENCY AND THE SOUNDNESS OF BI'S BALANCE SHEET

52. **BI has achieved a high degree of transparency in conducting monetary policy.** Rules and regulations are in place to safeguard the integrity of BI, and its staff is required to provide financial disclosure and abides by a code of conduct. BI regularly discloses information to the public and to the government. It is taking steps to address any remaining gaps related to its policy objective and operational procedures.

53. **This said, BI's financial position can be improved.** Currently, BI mops up excess liquidity in the financial system by issuing SBIs, against assets that are non-tradable and earn close to zero interest. Consequently, BI becomes a net borrower of the domestic financial system at the extreme, potentially creating a disincentive to raise interest rates when warranted by macroeconomic developments. BI's non-tradable assets should be replaced with interest bearing securities of the same maturity and with a market determined rate. This requires no legislative changes and will not increase the consolidated public debt service cost.

54. **Streamlining the selection process of BI's Board members would improve the governance of the central bank.** In particular, the current practice of drawing up a list of multiple candidates amongst whom Parliament designates the winner opens up competition on undisclosed criteria. Similarly, consideration should be given to selecting a larger number of deputy governors from outside BI's career stream: their diversified background would enhance their oversight role, bringing a fresh perspective to the institution.

²² See technical note for further details.

VII. ANTI-MONEY LAUNDERING AND COMBATING THE FINANCING OF TERRORISM

55. **Indonesia's anti-money laundering and combating the financing of terrorism (AML/CFT) framework was recently assessed against the standard on AML/CFT, the Financial Action Task Force (FATF) 40+9 Recommendations.** The evaluation was conducted in November 2007 by the Asia/Pacific Group on Money Laundering (the FATF-style regional body of which Indonesian is a member). The report indicates that there are significant money laundering (ML), terrorism, and terrorist financing (TF) risks in Indonesia. In addition to domestic laundering of proceeds of crime, Indonesia faces a particular challenge from the movement of funds to regional financial centers. Indonesia has made noteworthy progress in recent years with its implementation of AML measures, but not in its implementation of CFT measures. The report notes that corruption remains a significant issue for Indonesia and combating it is a national priority. The legal and supervisory framework for AML/CFT would also benefit from strengthening.

56. **The authorities indicated that progress has been made since the APG evaluation, notably with the adoption of a National Strategy to Combat Money Laundering and Financial Terrorism for 2009 to 2011.** In early 2010, the FATF acknowledged the progress made but noted that certain strategic AMF/CFT deficiencies still remain. It also indicated that Indonesia had made a high-level political commitment to work with the FATF and the APG to address the deficiencies, and had agreed to the following action plan: (1) adequately criminalizing money laundering and terrorist financing; (2) establishing and implementing adequate procedures to identify and freeze terrorist assets; and (3) amending and implementing laws or other instruments to fully carry out the 1999 International Convention for the Suppression of Financing of Terrorism. Progress in implementing the action plan will be monitored by the FATF.

ANNEX: OBSERVANCE OF FINANCIAL SECTOR STANDARDS AND CODES—SUMMARY ASSESSMENTS

The annex contains summary assessments of international standards and codes relevant for the financial sector. The assessment has helped to identify the extent to which the supervisory and regulatory framework is adequate to address potential risks in the financial system.

The following detailed assessments of financial sector standards were undertaken: the Code of Good Practices on transparency in monetary policy by Ms. Li (IMF); the BCP for Effective Banking Supervision by Mr. Damodaran (WB) and Mr. Ryback (external consultant); the IOSCO Objectives and Principles of Securities Regulation by Ms. Corcoran (external consultant) and Mr. Conroy (WB); the CPSS Core Principles for Systemically Important Payment Systems by Ms. Zanza with the assistance of Mr. Summers (both WB); and the CPSS-IOSCO Core Principles for government bonds, equities, and corporate securities by Ms. Wendt (external consultant).

The assessments were based on the self-assessments undertaken by the Indonesian authorities, a review of relevant documents, and discussions with the Indonesian authorities, market participants, and industry associations on actual practices.

Indonesia's observance of international financial sector standards and codes is broad, though in each area certain aspects were identified where further improvements would be desirable. The Indonesian authorities are aware of the areas that need further reforms and are in the process of addressing them.

A. The Code of Good Practices on Transparency in Monetary Policy

Introduction

57. **This assessment covers the transparency of monetary policy in the Republic of Indonesia.** In particular, it examines the role of BI in the formulation and implementation of monetary policy.

Information and methodology used for assessment

58. **The assessment was conducted according to the IMF's Code of Good Practices on Transparency in Monetary and Financial Policies,** as issued in September 1999, and supporting documents as approved in July 2000.

59. **The assessment is largely based on information available as of October 2009,** in particular on the relevant laws and regulations then in force. After receiving a draft version of this assessment, BI took a number of steps to enhance transparency, and the ratings in some practices have been marked up accordingly. The review also incorporates a wide range of other materials published by the Indonesian authorities, including those on their website and

draws extensively on a self-assessment and a response to a questionnaire. In addition, the assessment was informed by discussions held during the FSAP mission with the authorities at a senior level and with various departments and divisions of BI, as well as with financial sector representatives.

60. **The most important documents underlying the assessment are** (i) the BI Act, (ii) the Banking Act;²³ and (iii) the Act on Foreign Exchange Activities and Exchange Rate System.²⁴ Use was made also of (i) BI's monthly Monetary Policy Review, quarterly Monetary Policy Report, and Annual Economic Report, (ii) press releases, (iii) website pages, (iv) BI regulations and circulars, (v) the Board of Governors Regulations, and (vi) other documents such as BI's Annual Financial Statements and the Report on the Observance of Standards and Codes for Data Dissemination (available on the IMF website). All these documents are available on the BI or IMF website, or can be obtained by contacting the BI's Legal Information Team.

Institutional and market structure—overview

61. **BI conducts monetary policy, supervises commercial and rural banks, and is responsible for the oversight of the payments system.**

62. **BI is an independent state institution.** The BI Act explicitly safeguards the central bank against any government interference in the conduct of monetary policy, with the exception of emergency liquidity lending by BI to systemically important banks and the setting of inflation targets. In addition, BI's operational budget is subject to the DPR's approval. The governing body of the BI is the Board of Governors (Board), which consists of the governor as the chairman of the board, the senior deputy governor as the vice chairman, and at least four but no more than seven deputy governors. The governor and senior deputy governor are nominated by the president and confirmed by the DPR; other deputy governors are also confirmed by the DPR, but their nominations by the president are based on the governor's recommendation. A member of the board is appointed for a term of five years, and can be reappointed for no more than one consecutive term. While the BI Act has a clause stating legal protection for BI staff in the fulfillment of their duties, uncertainties persist regarding the scope and strength of this protection.

63. **The ultimate objective of BI is to achieve and maintain the stable value of the rupiah.** The BI Act specifies that this objective has two key aspects: (i) a stable price of goods and services (internal price), and (ii) a stable exchange rate (external price).²⁵ The priority of these two aspects of the objective is not explicitly stated in the Act. BI's internal regulation explains that "price stability is the ultimate objective of monetary policy, while exchange rate stability is one of the prerequisite conditions for price stability, monetary

²³ Republic of Indonesia Act No.7/1992, which was amended by Act No.10/1998.

²⁴ Republic of Indonesia Act No.24/1999.

²⁵ Elucidation to Article 7 of BI Act.

stability and financial system stability.” Although there could be occasions when these two aspects come into conflict, it has not happened in practice. In a more recent BI internal regulation, it was noted that “the monetary policy framework has one ultimate objective which is inflation.”

64. Under the IT framework, BI is authorized to establish operational targets and to manage the money supply in a manner that is consistent with the official target. BI has the authority to set the overnight interest rate target (BI rate) as the policy rate. BI uses a range of actions and instruments to achieve its policy objective, including by: (i) conducting open market operations in the rupiah or foreign currencies, (ii) setting the statutory reserve requirements, and (iii) establishing regulations for credit or financing. BI securities (SBIs) are the main instrument for liquidity management and have been used to withdraw structural excess liquidity. Repos collateralized with SBIs and government securities (SUNs) are used for standing facilities and fine-tuning for liquidity withdrawal, but they are not a main instrument because of BI’s limited SUN holdings. The reserve requirements are used sometimes to manage liquidity. BI also has a deposit facility (FASBI), whose interest rate, along with the interest rate of the repo facilities, forms the interest rate corridor.

65. Despite significant achievements in improving monetary policy implementation, more work is needed to anchor inflation expectations and counter the perception of some market participants that BI is also aiming to manage the exchange rate. To this end, a clear public statement with the endorsement of the government or the DPR of the primacy of the inflation consideration would be useful. Furthermore, communication to the public about the inflation targets could be made clearer. BI’s monetary reports discuss progress towards the inflation target; however, the target is often different from the official target announced by the MOF. For example, in the September 2009 monthly report, it was noted that “At 6.50 percent, the BI Rate level is also regarded consistent with achievement of the 2010 inflation target set at 5 percent \pm 1 percent.” The official target for 2010, however, was 4 \pm 1 percent. This is confusing to markets. In addition, the measure of inflation—whether it is the annual average or end-year inflation—is not explicitly specified.

66. The effectiveness of monetary policy operations could also be further enhanced by strengthening BI’s balance sheet. This can be achieved by restructuring the non-tradable government securities with tradable ones that carry market interest rate.²⁶ With more tradable government securities on its balance sheet, BI would have greater flexibility to adjust monetary policy in response to changing macroeconomic conditions and in its choice of monetary instruments for implementing monetary policy.

²⁶ BI received non-tradable government bonds (SUPs) in exchange for liquidity injections into the banking system during the Asian crisis in the late 1990s. Partly as a result of this intervention, the money market in Indonesia is characterized by structural liquidity. BI has been mopping up the excess liquidity by issuing SBIs, the stock of which roughly matches the book value of the SUPs. SUPs carry little interest and account for close to 1/3 of BI’s assets. The interest rate on these bonds was cut from the initial 1–3 percent to 0.1 percent in January 2009, far below market rate. With this rate, the present value of the SUPs is worth less than 10 percent of the book value.

Main findings

67. **There is a reasonably high degree of transparency in Indonesia's monetary policy.** Considerable progress has been made over the last decade.
68. **The primary objective of BI with respect to monetary policy is laid out in the BI Act.**²⁷ The Act empowers BI to conduct monetary policy free from any interference from the government and/or other parties. The relationship between BI and fiscal operations is similarly clearly defined in laws and regulations.
69. **The adoption of an inflation targeting (IT) framework in 2005 has significantly enhanced the effectiveness of BI in conveying its objective to the wider public.** The IT framework puts a premium on the transparency of monetary policy in anchoring inflationary expectations. To this end, BI has improved its communication with the public using a range of media outlets, including internet web pages, various publications, and regular press conferences. Data dissemination standards meet the Special Data Dissemination Standard (SDDS) developed by the International Monetary Fund (IMF).
70. **Rules and regulations are also in place to safeguard the integrity of BI.** The BI Act includes provisions to hold BI accountable to the House of Representatives (DPR), the government, and the public by requiring regular disclosure of information to the public and reporting to the President and DPR. Audited financial statements of BI have been published annually since 2000. BI staff is required to provide financial disclosure statements and abide by a code of conduct.
71. **BI has improved transparency in a number of ways after receiving a draft version of this assessment.** These include publishing on the BI website a description in plain language of its monetary policy decision-making process, an explanation of its monetary operations and instruments, and a summary of the internal regulations that safeguard the integrity of BI's operations.
72. **BI plans to further improve transparency in two ways.** First, from a policy perspective, BI's IT objective will be further clarified. Second, from an operational perspective, the criteria for selecting BI's counterparties in the foreign exchange market will be publicly disclosed.

²⁷ Republic of Indonesia Act No.23/1999, which was amended by Act No.3/2004, and Act No.6/2009.

Table 4. Indonesia: Summary Observance of the Transparency Code (Monetary Policy)

Principle	Description
1.1 The ultimate objective(s) and institutional framework of monetary policy should be clearly defined in relevant legislation or regulation, including, where appropriate, a central bank law.	<p>The BI Act states that the ultimate objective of BI is to achieve and maintain the stable value of the rupiah.</p> <p>The clarity of BI's ultimate objective could be enhanced by a more explicit public statement with the endorsement of the government or DPR regarding the primacy of the domestic price target over the exchange rate consideration, since there are periods when these two aspects of BI's objective could potentially be in conflict.</p>
1.2 The institutional relationship between monetary and fiscal operations should be clearly defined.	<p>The institutional relationship between monetary and fiscal operations is defined in the BI Act, government decrees, and memorandum of understanding (MOU) between BI and MOF.</p>
1.3 Agency roles performed by the central bank on behalf of the government should be clearly defined.	<p>The agency role performed by the BI on behalf of the government is defined in the BI Act and other laws such as the Government Securities Act and laws governing Indonesia's membership in international organizations.</p>
2.1 The framework, instruments, and any targets that are used to pursue the objectives of monetary policy should be publicly disclosed and explained.	<p>The framework and targets of BI in conducting monetary policy are set out and publicly disclosed on BI's website and also in various BI publications. The inflation target is set by the MOF in consultation with BI and announced in a decision. Regulations governing monetary instruments are available on BI's website or can be obtained from BI's Legal Information Team.</p> <p>The MOF and BI should establish a clear mechanism for revising the official inflation target. Whenever developments render the official target unrealistic, BI should clearly explain the reasoning for the difference between the official and BI's target.</p> <p>The criteria for selecting BI's counterparties in the foreign exchange market should be disclosed.</p> <p>After receiving a draft version of this assessment, BI has provided more information on its website about its monetary operations and instruments, and has initiated discussions with the MOF to eliminate the discrepancy between BI's inflation targets and the official targets announced by the MOF.</p>
2.2 Where a permanent monetary policy making body meets to assess underlying economic developments, monitor progress toward achieving its monetary policy objective(s), and formulate policy for the period ahead, information on the composition, structure, and functions of that body should be publicly disclosed.	<p>The Board is the highest decision making forum for prescribing BI's monetary policies. Under the BI Act, the Board is required to convene at least monthly to set its monetary policy and at least weekly to assess monetary implementation. The composition of the Board and the role of the Board meeting in monetary policy decisions are stated in Article 41 and 43 of the BI Act.</p> <p>After receiving a draft version of this assessment, BI explained the procedures and organizational structure for the formulation of monetary policy, and thus achieved a higher grade.</p>
2.3 Changes in the setting of monetary policy instruments (other than fine-tuning measures) should be publicly announced and explained in a timely manner.	<p>Changes to the monetary instruments are decided in the monetary policy meeting and communicated immediately (within an hour) to the public through a press release posted on the BI website and in the Official Gazette.</p>
2.4 The central bank should issue periodic public statements on progress toward achieving its monetary policy objective(s) as well as prospects for achieving them. The arrangements could differ depending on the monetary policy framework, including the exchange rate regime.	<p>BI publishes monthly, quarterly, and annual reports, as well as press releases, which cover economic and monetary developments.</p>

Principle	Description
2.5 For proposed substantive technical changes to the structure of monetary regulations, there should be a presumption in favor of public consultations, within an appropriate period.	BI conducts public consultation prior to making changes to the structure of monetary regulations via a series of discussions with commercial banks and experts. Depending on the nature of policy changes under consideration, the consultation period varies from 3–6 months.
2.6 The regulations on data reporting by financial institutions to the central bank for monetary policy purposes should be publicly disclosed.	Regulations and BI circulars on data reporting by financial institutions, both banks and non-bank financial institutions are posted on BI's website. BI's powers to require data reporting are stated in the laws.
3.1 Presentations and releases of central bank data should meet the standards related to coverage, periodicity, timeliness of data and access by the public that are consistent with the International Monetary Fund's data dissemination standards.	Indonesia has met the Special Data Dissemination Standard (SDDS) since June 2000.
3.2 The central bank should publicly disclose its balance sheet on a preannounced schedule and, after a predetermined interval, publicly disclose selected information on its aggregate market transactions.	BI discloses its detailed balance sheet monthly and condensed balance sheet weekly (with less than one-week delay); both are available on BI's website.
3.3 The central bank should establish and maintain public information services.	BI has a Public Relations Bureau, which manages and coordinates information provided to the public, and also a publication program.
3.4 Texts of regulations issued by the central bank should be readily available to the public.	BI regulations are published in the State Gazette and its supplements. BI sends new regulations and circulars to banks by mail. Most BI regulations and circulars issued after 2004 are available on BI's website, in many cases in both English and Indonesian. These documents could also be obtained by contacting the Legal Information Team, whose contact information is listed on web pages for individual regulations and circulars.
4.1 Officials of the central bank should be available to appear before a designated public authority to report on the conduct of monetary policy, explain the policy objective(s) of their institution, describe their performance in achieving their objective(s), and, as appropriate, exchange views on the state of the economy and the financial system.	BI's Board must regularly appear before legislative committees in the DPR to explain the conduct of monetary policy and the state of the economy. Upon request, BI is obliged to provide a written explanation to the DPR on any specific issue on which parliament wishes further clarifications.
4.2 The central bank should publicly disclose audited financial statements of its operations on a preannounced schedule.	<p>Audited financial statements (balance sheet, surplus/deficit report, statement of changes in equities, cash flow report, summary of significant accounting policies, and the note to the financial statements) and an audit opinion have been published annually since 2000.</p> <p>Having the financial statements audited by the Supreme Audit Board (BPK) meets the requirement. However, it would add to BI's credibility to have the accounts audited in parallel by an internationally recognized accounting firm.</p> <p>After receiving a draft version of this assessment, BI published on its website its internal regulation on internal audit arrangements.</p>
4.3 Information on the expenses and revenues in operating the central bank should be publicly disclosed annually.	Information regarding expenses and revenues is published annually in the surplus/deficit section of the annual financial statement.
4.4 Standards for the conduct of personal financial affairs of officials and staff of the central bank and rules to prevent exploitation of conflicts of interest, including any general fiduciary obligation, should be publicly disclosed.	<p>After receiving a draft version of this assessment, BI has published on its website a summary of the financial disclosure requirement and regulations governing staff's conduct.</p> <p>The legal protection provided by the BI Act meets the requirement; however, the clause should be refined to remove uncertainties regarding the scope and strength of this protection.</p>

Recommended action plan and authorities' response

Recommended action plan

Table 5. Recommended Action Plan to Improve Observance of the Transparency Code (Monetary Policy)

Reference Practice		Recommended Action
I. Clarity of Roles, Responsibilities and Objectives of Central Banks for Monetary Policy		
1.1.1	The ultimate objective(s) of monetary policy should be specified in legislation and publicly disclosed and explained.	The clarity of BI's ultimate objective could be enhanced by a more explicit public statement with the endorsement of the government or DPR regarding the primacy of the domestic price target over the exchange rate consideration, since there are periods when these two aspects of BI's objective could potentially be in conflict.
1.1.3	The legislation establishing the central bank should specify that the central bank has the authority to utilize monetary policy instruments to attain the policy objective(s).	Strengthening BI's balance sheet by restructuring the non-tradable government securities with tradable securities that carry market interest rates will increase the stock of BI's collateral for monetary operations and increase the flexibility available to BI in its choice of monetary instruments for the conduct of monetary policy.
II. Open Process for Formulating and Reporting Monetary Policy Decisions		
2.1	The framework, instruments, and any targets that are used to pursue the objectives of monetary policy should be publicly disclosed and explained.	The MOF and BI should establish a clear mechanism for revising the official inflation targets. Whenever developments render the official target unrealistic, BI should clearly explain the rationale for the difference between the official target and BI's projection. After receiving a draft assessment, BI has initiated discussions with the MOF to resolve this issue.
2.1.2	The rules and procedures for the central bank's relationships and transactions with counterparties in its monetary operations and in the markets where it operates should be publicly disclosed.	The criteria for selecting BI's counterparties in the foreign exchange market should be disclosed. This will facilitate an even playing field for banks to act as agents for BI. BI is currently working on implementing this recommendation.
2.4.2	The central bank should present to the public on a specified schedule a report on the evolving macroeconomic situation, and its implications for monetary policy objective(s).	The forecast horizon in the quarterly report could be extended. A monthly report could usefully note upfront the scheduled date of the next policy meeting.
IV. Accountability and Assurances of Integrity by the Central Bank		
4.2.1	The financial statements should be audited by an independent auditor. Information on accounting policies and any qualification to the statements should be an integral part of the publicly disclosed financial statements.	Although the financial statements are audited by BPK, thereby meeting the requirement of Practice 4.2.1, it would add to BI's credibility to have the accounts audited in parallel by an internationally recognized accounting firm.

Authorities' response to the assessment

73. **BI welcomes the assessment that monetary policy in Indonesia is being conducted with a reasonably high degree of transparency.** It also appreciates the recognition that, through BI's continuous and extensive efforts, much progress has been

made over the last decade toward achieving the ultimate objective of domestic price stability. BI is fully committed to further enhancement of its transparency in the conduct of monetary policy, and has the following comments:

- BI has been conducting an extensive campaign to communicate to the public the priority of inflation over exchange rate as BI's ultimate objective. This priority was clearly stated in the 2005 Board of Governors Regulation (PDG, amended in 2008), in the summary of the PDG that is currently on BI's website, and in the monthly press release covering the decisions of the Board of Governors (BOG) Meeting on Monetary Policy. Finally, a statement highlighting the primacy of domestic price stability (inflation) will be explicitly mentioned in the upcoming government decree that set the new inflation target for 2010, 2011, and 2012.
- The Note of Agreement between the Government and BI concerning the Setting Mechanism of Inflation Target, Monitoring, and Control (available on BI's website) states that, if extraordinary conditions cause the stipulated inflation target to become unrealistic, BI shall submit a proposal on revising the inflation target, and the Government will decide the target. Currently the proposal is being discussed by the Government and BI, and the revised target is expected to be realistic and in line with the medium-term disinflation process.
- To enhance monetary transparency, BI publishes the procedures for monetary operations, including disclosure of the criteria for counterparty eligibility in open market operations.
- In BI's Monetary Quarterly Report, which also includes explanations of inflation development, the forecast horizon has been extended to 1 year since Q3-2009, and the Q4 report gives the forecast for the next 2 years. The schedule for the monthly BOG meeting is available on BI's website and now in the monthly report.
- Since early 2009, BI and MOF have been discussing the conversion of long-term non-tradable government bonds held by BI into tradable ones. A parliamentary hearing had been held in February 2010. BI and MOF agree that such a conversion would benefit both and improve the efficiency of asset-liability management, and expect to resolve this matter soon.
- The audit of BI's financial statements by the BPK has already complied with the BI Act, the Indonesian Generally Accepted Audit Standard, and the Governmental Audit Standard, which incorporates the Professional Public Accounting Standards. The BPK is not intending to use international accounting firms due to cost considerations.
- Article 45 of the BI Act has explicitly provided legal protection for BI employees with no limitation on the scope. BI, as a legal entity and public institution, is not immune from legal proceedings in administrative and civil courts, reflecting the principle of equality before the law. BI agrees that Article 45, especially the criteria

of good faith, needs to be refined in the context of both the political and judicial systems of Indonesia.

B. The Basel Core Principles for Effective Banking Supervision

Introduction

74. **The assessment of compliance with the BCP for Effective Banking Supervision was carried out for the banking sector.** The banking sector accounts for 80 percent of financial system assets, consisting of 121 commercial banks, numerous rural banks and 5 sharia banks.

Information and methodology used

75. **This assessment is based on the October 2006 Core Principles Methodology of the Basel Committee on Banking Supervision (BCBS), but by agreement with BI the assessment is limited to a study of the essential criteria.** In view of the small share of sharia and rural banks, the assessment was confined to the regulatory and supervisory framework applicable to commercial banks. The assessment drew on (i) a self-assessment and response to a questionnaire by BI; (ii) laws and regulations governing BI, banking activity and supervision; and (iii) numerous meetings with senior BI officials and supervisors, senior officials of six public, domestic private, and foreign banks operating in Indonesia, the representatives of the bankers' association, FITCH, Ernst & Young, and the Financial Intelligence Unit (PPATK). The assessors also relied on the findings of the ROSC on Accounting and Auditing (2009) and the 2nd Mutual Evaluation Report (July 2008) of the Asia-Pacific Group on Money Laundering (APG).

Overview of the institutional framework

76. **The responsibility for supervising the financial system in Indonesia is shared between two institutions.** BI regulates and supervises the banking sector. Bapepam-LK, which is subordinate and responsible to the MOF, supervises non-bank financial institutions. Indonesia has a deposit insurance regime that is in line with good international practice. The LPS insures deposits and is also responsible for resolving failed banks. The premia for deposit insurance are not risk related, though this is under discussion. An amendment to the BI Act in 2004 envisages the establishment of a supervisory entity (OJK) by December 31, 2010 to conduct supervision of banks and other financial services companies. As the details for the establishment of this entity are unclear, this assessment is confined to the bank supervisory framework prevailing at the time of the assessment.

77. **Within BI, bank regulation and supervision is conducted by eight directorates, which report directly to the Board of Governors through three Deputy Governors.** Commercial bank regulations, including licensing, are handled in two Directorates and supervision, including investigation, is handled in four Directorates. Regulation and supervision of the Islamic banks and the rural banks are handled in two dedicated Directorates.

Review of the preconditions for effective banking supervision

78. **The quality of supervision depends not only on the supervisory authority but also on the establishment of certain preconditions.** These include sound and sustainable macroeconomic policies, a well developed public infrastructure, effective market discipline, and mechanisms for providing an appropriate level of systemic protection. While these are largely beyond the control of the supervisor, they significantly affect the supervisor's ability to conduct effective supervision.

79. **A 2010 ROSC assessment reveals several weaknesses in the Indonesian accounting and auditing standards, a few of which have serious implications for the quality of audited financial information.**

- Although most PSAKs are based on the IFRS, compliance to IFRS are still incomplete : 21 PSAKs are fully comparable; 5 PSAKs are substantially comparable; 4 IFRS not yet adopted; and 8 PSAKs are substantially not-comparable with IFRS because these standards have no IFRS counterparts.
- The review of the financial statements of selected companies showed gaps in compliance with the PSAKs, including in the area of segment information, related party transactions, consolidated financial statements, employee benefits, and derivative transactions.
- Instances of practicing accountants and auditors giving in to undue pressure from corporate management leading to compliance with standards “in appearance” rather than “in substance” were observed.
- There is no mechanism to proactively ensure that practicing accountants and auditors comply with the requirements of the code of ethics for professional accountants.
- Of the more than 400 accounting firms in the country, only 6 to 8 firms appear to have a very high level of compliance with the applicable auditing standards. The small and medium-sized audit practices generally lack necessary resources to put in place arrangements for audit quality control.

80. **BI set up a Credit Information Bureau (SID) in June 2006.** Bank participation in SID is mandatory but NBFIs participation is optional. Despite an MOU signed with the MOF to mandate the participation of NBFIs, the result has been weak and the coverage of credit information in the SID is incomplete.

81. **The legal framework for the financial system has undergone major changes in the last decade, but weaknesses in the enforcement of collateral and creditor rights are reflected in poor recovery rates.** Shortcomings in the efficiency of corporate, bankruptcy, contract and private property laws, consistency in law enforcement, and in the reliability of the legal profession and judiciary can undermine the quality and effectiveness of banking supervision. According to the World Bank Doing Business indicators, Indonesia exhibits one of the lowest recovery rates in the region at below 15 percent and the cost of bankruptcy procedures is about 18 percent of the estate. In addition, due to lengthy court proceedings bankruptcies in Indonesia take between 5 and 6 years to be resolved. Enforcement of

contracts takes about 570 days and the associated costs are about 123 per cent of the claim. Banks are generally hesitant to resort to the court process, which can be unpredictable. Although arbitration is common, it does not seem to be an attractive option as the court's assistance is ultimately required for the enforcement of the award.

82. **BI regulations seek to establish good corporate governance and internal control functions in banks and a minimum set of disclosures.** BI regulations require banks to ensure (i) implementation of good corporate governance (GCG) principles in each business activity at all organizational levels or hierarchy; and (ii) the creation, maintenance and oversight of an effective internal control mechanism. In an effort to establish market discipline BI has published a regulation concerning minimum disclosure by banks which includes ownership details, strategies and management policies, a set of audited financial statements, the level of risk exposures, and the risk management procedures implemented by the bank.

83. **BI and LPS have mechanisms to provide appropriate safety nets.** BI has in place a short-term (up to 90 days) liquidity facility against the collateral of government bonds, SBIs, and loans classified as 'current' (when the bank does not possess eligible government bonds or SBIs). As the lender of last resort, BI caters to illiquid, but solvent institutions that are not deemed to be systemically important. For systemically important solvent banks, an emergency liquidity assistance (ELA) facility was introduced last year that allows for longer term extensions of credit and allows banks to post 'loans' as collateral. BI will provide ELA to an insolvent bank only with the guarantee from the Government of Indonesia.

84. **In the light of its past experience, Indonesia has been developing a crisis management framework for dealing with financial sector crises.** The LPS Law of 2004 established a Coordination Committee comprising the Ministry of Finance, BI and the LPS to determine the policy for the resolution and handling of a failing bank that is expected to have a systemic effect. A joint decree by BI, MOF and the LPS in June 2007 established the Financial System Stability Forum (FSSK) to serve as a forum for cooperation, coordination and exchange of information at a technical level among the three agencies to submit inputs and information required by the Coordination Committee. Pending passage of a law, the President promulgated an Ordinance in lieu of the law in October 2008, establishing the Financial System Stability Committee (FSSC) comprising the Minister of Finance as the Chairperson and Member, and the Governor, Bank Indonesia, as Member. The Committee can determine whether a systemically important financial institution will get BI emergency liquidity assistance, as well as other measures to resolve a troubled institution. However, a draft Financial System Safety Net (FSSN) Law to formalize this arrangement was rejected by the Parliament. The ordinance promulgated in October 2008 has also since lapsed. In these circumstances, pending passage of the law, the Coordination Committee constituted under the LPS law serves as the mechanism for cooperation and coordination for handling crisis management in the banking sector.

Main findings

85. Bank regulation and supervision has improved significantly since the late 1990s.

BI has been continually engaged in improving the regulatory and supervisory frameworks with the primary aim of maintaining a healthy banking system that plays an effective role in financial intermediation. It has also consciously focused on improving staff competency, which has helped it gain credibility among the banking community in Indonesia and in the region. Notwithstanding the above, the increasing globalization and integration of the Indonesian economy and the financial sector, the challenges posed by the secondary impact of the recent global financial crisis and the need to equip the Indonesian banking sector to play a more significant role in the country's economy, require further improvements in regulation and supervision. A summary of the detailed assessment of compliance with the BCPs is presented below

86. Objectives, independence, powers, transparency, and cooperation (principle 1).

- BI has independence and sufficient powers to ensure compliance with laws, regulations, prudential standards and guidance. However, two important weaknesses were identified:
 - BI and its staff lack the necessary legal protection against prosecution
 - The lack of appropriate gateways for information exchanges with domestic and foreign supervisory authorities is a serious impediment to BI discharging its legal responsibilities of regulating and supervising the banking system. The inability to have free exchange of information prevents the BI from forming a view on whether the conditions in other domestic financially related sectors are having a serious impact on the banking sector and whether examination and supervisory priorities may need to be altered.

87. Licensing and structure (principles 2 to 5).

- Although BI has been designated as the licensing authority under the law, and it has the authority to set the licensing criteria, there has been no application for a banking license since 1999.
- The regulations require banks to obtain BI's prior approval for investment in the equity of financial entities and do not permit investment in the equity of non-financial entities. However, the regulations do not apply either to equity investments undertaken by the banks' subsidiaries/group entities or to banks' equity investments in entities via the debt resolution route.

88. Due diligence requirements and framework (principles 6 to 18).

- The framework is broadly in line with Basel I standards, but there are some weaknesses in the capital adequacy framework.
- BI has yet to issue regulations on the management of interest rate risk in the banking book (IRRBB) and country / transfer risk. There is also scope for improvement in the area of liquidity risk and operational risk management.
- Indonesian banks tend not to use internal methodologies for assessing their overall capital adequacy in relation to their risk profile and there is inadequate focus on and perhaps capacity to validate internal models. As the Indonesian banking system is commencing Basel II implementation soon, these aspects gain greater importance.
- The asset classification and provisioning framework applied to delinquent loans is broadly in line with international standards, but has some weaknesses. Board oversight of NPL management needs to be stepped up.
- The definition of single borrower, borrower group and related party exposures could be tightened, and the concept of ‘large exposures’ and ‘portfolio concentrations’ are either not practiced or are not practiced adequately.
- Indonesian banks have a good framework of internal control and compliance functions. While these are governed by comprehensive regulations, BI does not seem to undertake an on-site assessment of the whole internal control function, which is generally assessed indirectly on a piecemeal basis. BI regulations do not explicitly require a risk based audit framework in banks.
- BI is addressing a few gaps identified by the APG 2008 mutual evaluation through revised regulations.

89. Bank supervision methods (principles 19 to 21).

- BI’s supervisory system consists of both off-site and on-site supervision along with regular contact with banks’ management. BI has an efficient and comprehensive off-site supervisory system that includes receipt and analysis of periodical (daily, weekly, monthly, quarterly and annual) reports on both a solo and consolidated basis. The integrity of supervisory reports is ensured through on-site verification by supervisors as well as external auditors. While the off-site reports are used well at the single institution level, they could be better utilized to generate efficient system trends and useful peer group analyses.
- Two key weaknesses are (i) the lack of formal and informal information sharing arrangements with other financial sector supervisory authorities; and (ii) the absence

of effective legal protection, which dampens supervisors' willingness to make decisions and deviate from accepted methods listed in the manual.

90. Requirements with respect to accounting records and financial reporting (principle 22).

- Regulations require that bank financial statements be based on PSAK and accounting and reporting guidelines for banking (PAPI), and that the annual financial statements be audited by a public accountant. While appropriate bank disclosure requirements are broadly in place, there is scope for improvement.
- The introduction of new accounting standards that are aligned to IAS 32 and IAS 39 is likely to pose some challenges to the banking system and needs close watching by BI.

91. Corrective measures (principle 23).

- Supervisors have a large arsenal of supervisory tools to resolve problem situations. BI does not appear hesitant to use its substantial powers to require swift corrective action by the banks under their supervision under normal conditions. However, it was not always apparent that proper moderation or escalation was in use.
- The existing prompt corrective action is largely discretionary and BI tends to allow banks to remain under intensive supervision for several years without resolving the underlying weaknesses.

92. Supervision on a consolidated basis and international cooperation (principles 24 and 25).

- BI performs its oversight through dedicated teams for each commercial bank. Regulatory reports are filed on a solo and consolidated basis allowing for deeper understanding of where the organization is taking risk. On-site examinations include risk taking in subsidiaries.
- BI should pay increased attention to the oversight of foreign operations of Indonesian banks by the banks' management.
- Both formal and informal arrangements for ongoing information sharing and coordination with the other supervisors (domestic and foreign) are largely absent. Peer group analysis is not always efficient and useful. A horizontal examination of a cross section of banks may be useful to make comparisons and propagate best practices through the industry.
- BI needs to set up programs to (i) determine whether home country supervisors of foreign banks in Indonesia are competent and have the authority to enter into an

information sharing agreement; and (ii) make regular visits to the home supervisors of systemically important foreign banks in Indonesia.

93. Table 6 provides a principle-by-principle summary of the assessment.

Table 6. Summary Compliance with the Basel Core Principles—ROSCs

Core Principle	Comments
1. Objectives, independence, powers, transparency, and cooperation	
1.1 Responsibilities and objectives	Laws and regulations clearly spell out BI's responsibilities with respect to the licensing, prudential standards and requirements, supervision of banks, and sanctioning powers. Regulations and prudential standards are generally comprehensive and broadly meet minimum requirements.
1.2 Independence, accountability and transparency	BI Act defines the supervisory objectives and provides for the operational independence of the BI. BI is accountable to the parliament. BI makes periodic visits to the House of Representatives (DPR), and submits a quarterly report with explanations on matters pertaining to supervision. Removal procedures and the broad reasons for removal are contained in the BI Act and are consistent with good practice. While the removal is disclosed, the reason for removal is not disclosed.
1.3 Legal framework	The BI Act provides BI with the authority to issue and withdraw banking licenses, regulate and supervise the banking system, set prudential requirements, gather periodic and ad hoc information from the industry and to conduct examinations to verify the adequacy and accuracy of the information submitted. BI consults with the industry in all major regulatory initiatives.
1.4 Legal powers	The BI Act contains sufficient powers for BI to (i) enforce compliance with prudential standards and regulations, laws, and guidance; (ii) address any given situation up to and including revocation of the license.
1.5 Legal protection	The BI Act contains provisions under Article 45 that protect supervisory staff from legal prosecution for any actions or decisions made in 'good faith' when performing their supervisory duties. However, the law does not explicitly state a presumption of good faith in favor of supervisory staff and consequently the existing provisions cast a heavy burden of proof on them, and so do not provide effective protection. Legal provisions/ regulations do not provide (i) adequate protection to supervisory staff against omission; and (ii) costs for defending their actions. Protection to BI as supervisory authority is absent.
1.6 Cooperation	BI and LPS have signed a formal MOU which covers regular information sharing in respect of all banks, with the key elements being incorporated into the BI Regulation and the LPS Act. There is no formal MOU or regulation with regard to information sharing between BI and Bapepam-LK or the MOF; or with foreign supervisors.
2. Permissible activities	The Banking Act clearly defines the term 'banking,' all other permitted banking activities and impermissible activities. Deposit taking in cooperatives and micro finance institutions is governed by appropriate laws. Law and practice combine to ensure that the term 'bank' is used only by those licensed by the BI.
3. Licensing criteria	BI, as the licensing authority, has the authority to set criteria for licensing, reject applications that do not meet the set standards and revoke licenses that were issued on the basis of false information. The criteria for issuing a license are similar to those used in ongoing supervision. As there have been no applications for opening a new bank in Indonesia since 1999, the effectiveness of the licensing process could not be assessed.
4. Transfer of significant ownership	BI defines significant ownership as equal to or exceeding 25 percent and includes parties acting in concert or otherwise connected. While transfer of shares resulting in ownership exceeding 25 percent requires BI's prior approval, any transfer of ownership above 5 percent and up to 25 percent must be reported to BI within 10 days. BI has the authority to enforce divestiture or reject any proposals that hinder appropriate supervision. BI has

Core Principle	Comments
	adequate authority to take appropriate action to modify, reverse or otherwise address a change of control that has taken place without the necessary notification to or approval from the supervisor.
5. Major acquisitions	BI regulations prohibit banks' equity participation in a company in the non-financial sector and require BI's prior approval for any form of equity participation in the financial sector. BI regulations apply at a solo bank level and prescribe a cap on bank's aggregate 'equity participation for long-term investments at 25 per cent of the bank's capital. BI is empowered to enforce divestment of any existing equity participation, or reject any equity participation proposal made by banks, if the mentioned participation will hinder the supervisory process. There is a gap in regulations as they do not apply to equity investments made either through debt resolution route or by the banks' subsidiaries/ group entities.
6. Capital adequacy	Banks in Indonesia are required to maintain minimum capital in line with Basel I methodology of requiring at least 8 percent of total risk weighted assets, both on a solo and consolidated level. Market risk capital charge is applicable to banks that meet specified criteria relating to the bank's trading book size or total assets and covers 95 percent of banking system assets and 99 percent of trading book assets. The capital adequacy norms are, in some cases inconsistent with Basel principles with regard to definition of capital, and a dilution of risk weights, and warrant immediate strengthening. Full implementation of Basel II is expected from January 2014.
7. Risk management process	According to BI regulations, banks must have risk management policies and procedures in place: (i) non-complex banks should have risk management policies and procedures for at least credit risk, market risk, operational risk, and liquidity risk, while complex banking organizations must additionally consider other material risks, including, legal, reputational, strategic, and compliance risks; (ii) board and senior management must be adequately involved; and (iii) quarterly risk profile self-assessments of banks' solo and consolidated positions must be performed and provided to BI. Banks largely lack internal methodologies for assessing their overall capital adequacy in relation to their risk profile, and there is inadequate capacity and focus on validation of internal models. Recent events suggest that the banking system is not fully equipped to manage its risk exposures effectively, particularly during adverse situations, and that supervisory capacity needs to be enhanced.
8. Credit risk	BI regulations require banks to effectively manage risks arising from their credit and investment activities. While the framework for credit risk management is broadly in compliance with this principle, there are gaps in aspects such as large exposures, related party exposures, asset classification and provisioning requirements, and country risk.
9. Problem assets, provisions, and reserves	BI regulations require banks to establish minimum standards for the identification and classification of problem assets, the establishment of general and specific loan loss provisions, loan write-offs and debt restructuring. The asset classification and provisioning norms applied to nonperforming loans (NPLs) show several weaknesses, which collectively lead to understatement of NPLs, under provisioning, overstatement of income, and capital adequacy; and these need to be reviewed and revised. Reporting requirements for NPLs at the Board level is evident, but there is no showing that the Board actively manages the troubled assets portfolio.
10. Large exposure limits	BI regulations on legal lending limits (LLL) prescribe the ground rules for identifying a borrower group and supervisors have sufficient discretion to exercise judgment in determining groups of connected counterparties. BI regulations need to (i) address shortcomings in the definition of exposure; (ii) promote the concept of 'large exposures' and 'portfolio concentrations', with appropriate prudential limits; and (iii) reduce the time presently allowed for rectifying breaches. Furthermore, from the perspective of risk concentration, BI should consider (i) gross exposures without any deductions; and (ii) SOEs as a group.
11. Exposure to related parties	The definition and limits applicable to related parties are stipulated in BI regulations and are applied both at solo and consolidated levels. BI regulations stipulate that the processes, criteria and controls for assuming exposures on related parties and the terms of sanction must be at least as stringent as the procedures/underwriting standards for non related counterparties, and require that any related party exposure is assumed only with prior approval from the Board of Commissioners (BoC). Regulations allow exemptions from the definition of 'related party' and 'exposures', and do not cover non-credit transactions with

Core Principle	Comments
	related parties and hence they do not fully address conflicts of interest. Regulations do not explicitly require exclusion of interested persons from the process of granting, managing, and resolving related party exposures, and do not cover handling of NPLs in related party transactions.
12. Country and transfer risks	BI regulations do not address country and transfer risk. The supervisory process does not devote adequate resources to this element during either the off-site or on-site processes. As a result, this risk is largely absent from the supervisory radar.
13. Market risks	BI regulations on the risk management framework address market risk management and require banks to manage risks effectively, including active supervision by the BoC and the Board of Directors (BoD). Only banks above a certain threshold are required to maintain capital for market risks. Stress testing outcomes are not explicitly required to feed into banks' risk management policies and practices, including contingency planning.
14. Liquidity risk	BI regulations require banks to develop liquidity risk management that is commensurate with banks' size and complexity, on a solo and consolidated basis. BI has issued revised guidelines on liquidity risk management that became operational on October 30, 2009, to better align BI's regulatory expectations with the Principles for Sound Liquidity Risk Management and Supervision recommended by BCBS in September 2008. BI regulations have some shortcomings with regard to standards or benchmarks for slotting the various items of assets and liabilities, making aggregation and inter-bank comparison difficult. Banks are not explicitly required to inform the BI either when their contingency funding plans (CFPs) are triggered or when they are facing liquidity problems.
15. Operational risk	BI regulations define operational risk, and require banks to develop an operational risk management framework that is commensurate with their size and complexity, on a solo and consolidated basis. BI regulations do not explicitly capture the following elements related to operational risk: outsourcing risk, business continuity planning in areas other than IT, legal risk in banks below the threshold, and supervisory reporting of significant operational risk events
16. Interest rate risk in the banking book	BI regulations on risk management in banks do not explicitly cover interest rate risk in the banking book (IRRBB); banks do not actively manage this risk and the supervisors do not adequately focus on this risk.
17. Internal control and audit	BI regulations require the BoC and the BoD to ensure the creation, maintenance, and oversight of an effective internal control mechanism that aims at safeguarding and securing the property and assets of the bank; ensuring greater accuracy in reporting; strengthening legal and regulatory compliance; minimizing financial irregularities and fraud; and improving efficiency. Further, banks are required to designate a compliance director and establish an independent internal audit unit. BI regulations do not explicitly require a risk based audit framework in banks. BI does not assess the internal control function as a separate function, in its entirety. Banks' internal control functions lack the capacity as well as methodologies for validating internal models and stress testing.
18. Abuse of financial services	BI regulations detail the responsibilities and powers of the banking supervisor. Banks are required to file regular compliance reports and BI examiners verify compliance. At least annually, supervisors conduct an assessment of the implementation of know-your-customer (KYC) and anti-money laundering controls including management oversight, policies, practices and procedures, internal controls, and audit MIS systems and training. The APG 2008 mutual evaluation has revealed several gaps that can expose the banking system to abuse. BI has addressed a few of these gaps through revised regulations.
19. Supervisory approach	BI has in place a system designed to produce risk focused supervision. Supervisory exercises are carried out in accordance with the risk profile. At least once a year banks are subject to an on-site inspection. Other on-site supervisory exercises are carried out during the year depending on the individual bank's risk assessment. While supervisors seem to have a good understanding of individual banks and banking groups, the absence of a formal and encompassing review of banking system trends might lead to a failure to detect an emerging problem. The existing risk based framework would benefit from a sharper focus on consolidated supervision methods, techniques, and procedures, and information sharing agreements with Bapepam-LK and the MOF.
20. Supervisory techniques	BI employs a satisfactory combination of on-site and off-site surveillance combined with

Core Principle	Comments
	frequent communication with the banks they monitor. Weaknesses in banking institutions are identified and pursued. The absence of formal information sharing arrangements with other financial sector supervisory authorities adversely affects the effectiveness of the bank supervision program. The absence of effective legal protection dampens supervisors' willingness to make decisions and deviate from accepted methods listed in the manual.
21. Supervisory reporting	The BI Act requires all banks to submit detailed information covering the range of prudential risks. Where pertinent, such information also applies to bank's subsidiaries and related or affiliated counterparties. Banks file returns on a solo and consolidated basis. The off-site reports are subjected to verification during on-site examinations. The off-site reports are not fully utilized to generate efficient and useful peer group analyses.
22. Accounting and disclosure	While BI requirements on accounting, auditing, valuation, maintenance of accounts and public disclosure of financial statements are broadly in line with requirements, weaknesses in accounting and auditing frameworks raise serious concerns with implications for the quality of financial statements and disclosures. While bank disclosure requirements are broadly in consonance with the core principle, there is scope for improvement to promote availability and comparability of banks' audited financial condition. There is also value in increasing the scope of BI disclosures. The introduction of new accounting standards is likely to pose some challenges to the banking system and the supervisor and needs close watching by BI.
23. Corrective and remedial powers of supervisors	Each commercial bank is actively monitored. Supervisors are not hesitant to raise issues with the bank and demand corrective action where appropriate. Regular progress reports on addressing deficiencies are required. Supervisors have a large arsenal of powers, but it was not always apparent that proper moderation or escalation was in use. Supervisory actions range from administrative sanctions to removal of management and revocation of the license. The existing prompt corrective action is largely discretionary and BI tends to allow banks to remain under intensive supervision for several years without resolving the underlying weaknesses.
24. Consolidated supervision	BI performs its oversight through dedicated teams for each commercial bank. Regulatory reports are filed on a solo and consolidated basis allowing for a deeper understanding of where the organization is taking risk. On-site examinations include, where necessary and prudent, examinations of risk taking in the subsidiaries. Consolidated supervision is being accompanied largely by BI taking responsibility for on-site supervision of the consolidated organization to cover for other financial regulators where routine robust examinations are not part of the supervisory process. Lack of formal arrangements to transfer information between domestic supervisors combined with weaknesses in supervision of overseas branches can pose serious impediments to consolidated supervision. Present exclusions allowed in the scope of consolidated supervision; non-application of regulations on equity participation and sale of structured products on the consolidated bank level; and lack of focus on intra-group transactions where the bank is not directly involved can expose the financial system to risks that are not presently being monitored. BI pays close attention to branches of Indonesian banks located in the region. Frequent on-site visitations and exchanges of views with the host supervisor are routine. There is room for improvement, however, in the supervision of other foreign branches like New York, London, and the Cayman Islands. Both formal and informal arrangements for ongoing information sharing and coordination with the other supervisors (domestic and foreign) need to be strengthened.
25. Home-host relationships	BI maintains relationships with home and host supervisors largely on an ad-hoc basis. While BI is making efforts to strengthen home-host relationships, and one can expect continued improvements, effective supervision of foreign banks requires continuous monitoring of the parent institution and includes reasonably frequent communication with home supervisors. BI lacks a uniform policy with respect to aligning supervisory requirements with risks. BI has exchanges of information with neighboring supervisors, but the lines of communication for information exchange are less clear with home supervisors of systemically relevant foreign financial institutions. This also reflects the larger issue of a non-cooperative attitude by some of the home supervisors. Information exchanges that take place during routine examinations are usually at low levels and without a structured agenda. For legal reasons, many jurisdictions can provide supervisory information to a host country

Core Principle	Comments
	only if a formal information exchange agreement is in place. This could place BI at a significant disadvantage. BI must identify systemically important foreign institutions, make a determination whether the home country supervisor is competent and has the authority to enter into an information sharing agreement, and ensure a regular program of visits to home supervisors.

Recommended action plan and authorities' response

Recommended action plan

Table 7. Recommended Plan of Action to Improve Compliance with the Basel Core Principles

Core Principles	Comments
1.5 Legal protection	Urgent amendments to the BI Act are required to explicitly state a presumption of good faith in favor of supervisory staff; to protect supervisory staff from omissions and cover all costs for defending their actions; and to grant protection to BI as a supervisory authority.
1.6 Cooperation	BI should put in place effective information exchange arrangements with other domestic financial sector supervisors and foreign supervisors.
4. Transfer of significant ownership	Banks should be required to notify BI as soon as they become aware of any material information that might affect the suitability of major shareholders, including controlling shareholders. BI should consider reducing the threshold of 25 percent for obtaining prior approval of transfers or consider applying the same level of detailed scrutiny to all transfers of 5 percent or more.
5. Major acquisitions	As banks can be exposed to equity risks through temporary equity participation and through group entities' equity investments, these need to be brought within the purview of the BI regulations. The accounting norms for equity participation need to be reviewed and brought in line with the intent to hold.
6. Capital adequacy	BI should review its current regulations with respect to risk-weights and tier I capital items to ensure consistency with Basel I framework. BI may also consider whether it is the right time to formally require systemically important banks and banking groups to maintain capital above the minimum prescribed in the Basel framework. BI should consider encouraging banks to adopt a more forward looking approach and incorporate more rigid stress test outcomes into their capital planning framework.
7. Risk management process	As the Indonesian banking system is moving to Basel II soon, internal methodologies for assessing their overall capital adequacy and validation of internal models gain greater importance. BI must issue appropriate regulations as well as guidelines to banks on these aspects and management of interest rate risk in the banking book. BI must also improve its supervisory capacity for the oversight of risk management systems in banks, particularly with regard to new business lines and products.
8. Credit risk	BI should aim at removing all significant gaps in credit risk related aspects such as large exposures, related party exposures, asset classification and provisioning requirements, and country risk.
9. Problem assets, provisions, and reserves	The asset classification and provisioning norms for NPLs need to be reviewed with an eye toward ensuring that the banking system is adequately identifying and managing problem assets, including provisioning, in line with newly emerging risks. Matrix provisioning requires frequent review to make sure it is aligned with actual system experience. Regulations need to be enhanced to ensure the BoC is actively managing troubled assets.

Core Principles	Comments
10. Large exposure limits	BI regulations need to address the shortcomings in the definition of exposure, ensure adoption of the concept of large exposures and portfolio concentrations including prescription of appropriate prudential limits, and reduction of the time allowed to banks to rectify breaches and comply with prudential limits. Further, from the perspective of risk concentration, BI should consider (i) gross exposures without any deductions; and (ii) SOEs as a group. BI should also review the concept of 'market developments' on account of which banks may breach the limits and make it more restrictive to ensure better credit risk management discipline in banks.
11. Exposure to related parties	Regulations need to be reviewed to fully address conflicts of interest by eliminating exemptions from the definition of 'exposure' and 'related party'; enhance the scope of regulation to include non-credit transactions with related parties; ensure that all interested parties not only disclose their interests but also exclude themselves from the process of granting, managing, and resolving related party exposures; and explicitly lay down the requirements for managing and reporting NPLs in related party transactions.
12. Country and transfer risks	Since BI regulations and supervision do not address country and transfer risk, BI must address this regulatory gap and enhance supervisory capacity.
13. Market risk	BI may consider extending the definition of 'trading portfolio' to include the available for sale (AFS) portfolio, if banks are found to trade from that portfolio. BI must revise its guidelines on stress testing to explicitly require banks to factor the outcomes into their risk management practices and policies, and also require banks to draw up robust contingency plans for meeting stress situations, if they were to arise.
14. Liquidity risk	BI must review the existing regulations and consider (i) explicitly requiring banks to manage foreign currency liquidity risk, (ii) laying down the standards or benchmarks for slotting the various items of assets and liabilities, to enable meaningful aggregation and inter-bank comparison; and (iii) explicitly requiring banks to inform BI when their contingency funding plans (CFPs) are triggered or when they are facing liquidity problems. Additionally, BI must ensure effective implementation by banks of various elements of their guidelines issued in July 2009 with particular reference to diversification of funding sources, stress testing, and validity of their CFPs.
15. Operational risk	BI regulations and supervision of operational risk must be reviewed to include explicitly outsourcing risk, business continuity planning in areas other than IT, legal risk in banks below the threshold, and supervisory reporting of significant operational risk events.
16. Interest rate risk in the banking book	BI regulations and supervision do not cover this risk explicitly and comprehensively, and banks are also not actively managing it. BI must address this regulatory gap and enhance supervisory capacity.
17. Internal control and audit	BI should adopt appropriate remedial measures to explicitly require a risk based audit framework in banks, assess the internal control function as a separate function in its entirety, and ensure that banks' internal control functions have the capacity as well as methodologies for validating internal models, and stress testing.
18. Abuse of financial services	The APG 2008 mutual evaluation has revealed several gaps that can expose the banking system either directly or indirectly to abuse. BI has addressed a few gaps through revised regulations. The remaining gaps and effective implementation of the recent initiatives by banks need to be addressed.
19. Supervisory approach	BI needs to undertake comprehensive reviews of banking system trends to help detect emerging problems or identify areas that may need supervisory focus. The existing risk based framework would benefit from a sharper focus on consolidated supervision methods, techniques, and procedures. Development and internal sharing of supervisory benchmarks with regard to various performance indicators and compliance with regulatory requirements at bank, peer group, and banking system levels will immensely improve the quality of supervision.
20. Supervisory techniques	Specific MOU's with other domestic supervisory agencies and effective legal protection to supervisors would enhance supervisory efficiency.
21. Supervisory reporting	BI should consider requiring banks to submit a report on all major risk areas on a solo and consolidated basis. Peer group analysis should be improved to make it more efficient and useful. At some point, horizontal examinations of a cross section of banks may be useful to make comparisons and spread best practices throughout the industry.

Core Principles	Comments
22. Accounting and disclosure	In light of the weaknesses in the accounting and auditing standards, BI needs to focus more supervisory resources on ensuring that banks' financial statements reflect their true financial performance and financial position. It should also develop a process to ensure a stringent quality assurance review of bank audits and auditors. The implementation of IAS 32 and 39 equivalents in 2010-11 can be tricky and needs close watching by BI. Improving disclosures by both banks and BI would promote availability, and comparability of banks' audited financial condition.
23. Corrective and remedial powers of supervisors	To promote a less discretionary approach to prompt corrective action and portray BI as a responsive institution, certain objective and automatic triggers should be built into the framework. BI also needs to put in place appropriate governance mechanisms.
24. Consolidated supervision	BI needs to enhance the scope of consolidation, promote consistency in the application of consolidated supervision, and develop effective operating arrangements for information sharing and coordination with the relevant supervisors (domestic and foreign). Prudential requirements and consolidated reporting in all relevant areas can improve the quality of supervision. BI must pay greater attention to the oversight of Indonesian banks' foreign operations by their management.
25. Home-host relationships	BI must identify systemically important foreign institutions, make a determination as to whether the home country supervisor is competent and has the authority to enter into information sharing agreements, and ensure a regular program of visits to home supervisors. As many jurisdictions must have a formal agreement in place to convey privileged supervisory information, BI needs to enter into formal agreements with relevant home supervisors to ensure effective supervision of foreign bank operations.

Authorities response to the assessment

94. **The Republic of Indonesia welcomes the in-depth assessment by the IMF and World Bank team on the strengths and vulnerabilities of our banking sector.** The assessment confirms Indonesia's compliance with a vast majority of the Basel Core Principles for Effective Bank Supervision. We broadly concur with the overall findings – beyond a few exceptions- and we plan to utilize the assessment as a blueprint to enhance our legislative, regulatory, and supervisory framework. Notwithstanding the above, we do have several clarifying remarks as outlined below:

Preconditions: The authorities are aware of the issues raised in the “preconditions” section of the assessment in regards to accounting and auditing standards and Indonesia's legal framework governing creditor rights and collateral enforcement. Although both elements are outside of BI's jurisdiction and control, we have proactively taken steps to minimize its consequences for banking sector oversight.

Accounting standards. First, there has been a steady trend of convergence between Indonesian and international accounting standards; and by 2012 all remaining gaps will be closed. That said, one should also recognize that “blindly” following the march towards meeting international accounting standards may or may not be in each country's national interests, particularly if local market conditions do not lend itself to a move towards greater use of “fair value” accounting –which implicitly assumes the existence of an underlying, liquid market for various asset classes. In this regard, the pressure for each country to converge with international accounting standards - through for example, the publication of ROSC assessments - without a better appreciation of the country context, needs to be re-

evaluated. Second, Bank Indonesia has secured a seat within Indonesia's accounting standards setting body, and it uses its unique vantage point as a banking authority, to regularly voice concerns on any identified gaps in the application of accounting practices. Third, we concur that strengthening auditor competency continues to be a work in progress; in the meantime, we have imposed a range of unilateral actions on this issue, including the maintenance of a list of authorized auditors; and a required rotation of external audit firms at the same bank beyond a certain period of time.

Legal framework and credit rights: We also concur with the identified shortcomings in the legal-foreclosure framework in Indonesia. At BI, we have taken a number of steps to mitigate the prudential concerns associated with the protracted court resolution process, particularly with respect to the valuation of problem loans. Our loan loss provisioning framework requires banks to establish loss buffers for performing loans –that ignores the value of any collateral; and it applies significant haircuts to collateral – 30 percent up to 100 percent of appraised value- for all other types of loans, for purposes of establishing the minimum amount of required loss provisions. This minimum regulatory standard, is measured against how much loss buffers would be required if banks applied the “time value” concept (e.g., the estimated time it takes to foreclose and liquidate collateral under IAS 39), with the higher of the two approaches, reflected in each banks' capital adequacy calculation (as a deduction to Tier 1 capital). With respect to securing collateral, several prerequisites have been imposed in order to mitigate any legal risk that may arise at the time of foreclosure. These prerequisite covers aspect as valid legal documentation, securing legal rights and first lien to the collateral as well as insurance coverage. Throughout all these processes, BI attempts to explicitly integrate the lengthy foreclosure process into its regulatory and supervisory framework.

The lack of appropriate gateways for information exchange with domestic and foreign supervisory authorities: BI has recently signed MOUs with other domestic regulatory authorities to establish a formal mechanism to share supervisory information across the key financial sector regulators. It should be noted, however, that the lack of formal information sharing arrangements did not materially impede our practice of consolidated supervision, as noted in the overall assessment of consolidated supervision. In regards to information sharing with foreign supervisory authorities, we agree that further efforts are needed; but those efforts must be conducted at a multilateral level, given the inherently unequal relationship between the “host” and “home” country authorities.

Capital Adequacy. While we concur with the need to strengthen some aspects of our capital regime, a better contextual explanation is warranted. First, the eligibility of certain capital components that are in question, are either immaterial and/or do not have a clear international standard, and practices across jurisdictions vary (e.g. - for example, the inclusion of 50 percent of unaudited profits in Tier 1 capital, and the nature of foreign branch capital). If Indonesia were to unilaterally change its definition of capital –to exclude items that are considered as eligible capital items in other jurisdictions– it raises level playing field concerns. Finally, the noted dilutions to the “risk-weights” are still within the parameters allowed under Basel II.

Problem assets, provisions, and reserves. While we concur that there are some gaps in our overall system of classification and provisioning, our application of a minimum regulatory provisioning matrix –that is subject to supervisory review- is well within international norms of other countries that apply such a framework. In addition, our supervisory review process assesses and makes necessary modifications to both reported asset quality and adequacy of provisions during the on-site examination process.

Definition of single borrower, borrower group, related party exposures. Indonesia has one of the most stringent coverage in terms of the definition of single borrower, borrower group and related party. The coverage is very extensive in that it covers almost all level of the bank's group structure as well is direct and indirect transactions, which in our view is comparable to even the scope utilized by developed economies. To tighten more the definition coverage would have significant consequences with respect to the intermediation function in the Indonesian economy given the fact that the banking sector accounts for almost 80 percent of the total financial system, the level of development of the financial market, and that the structure of companies in the economy is tied within a large conglomeration structure.

Liquidity risk. With regards to the recommendations made by the assessor that BI regulations should prescribe standards for slotting various assets and liabilities, from our vantage point, we do not believe there is one “right” method to follow, and it largely depends on one's prevailing regulatory and supervisory philosophy. Meanwhile, with regards to the recommendation on CFP, although this is very formalistic, we will take the recommendation under advisement. In practice our supervisors –through ongoing supervision- will know whether a bank is experiencing liquidity difficulties.

IRRBB. Although BI has yet to issue regulations on the management of IRRBB, BI has addressed this under capital adequacy, asset quality, management quality, earnings, liquidity, and sensitivity to market risk (CAMELS) regulation, whereby banks are required to maintain their soundness rating taking into account the sensitivity of market risks, covering interest rate risk in banking and trading book. Some larger banks have developed their framework and system to manage IRRBB for internal management purposes. In the near term, BI will be issuing consultative paper on this particular topic to be further addressed under the Pillar 2 of Basel II.

Internal control and audit. While we concur that the framework for internal control and audit needs to be improved, however we are of the view that the “piecemeal” approach generally used in examination comes about as a consequence of the adoption of the risk based framework that BI has started to implement. This is not to say that BI do not undertake comprehensive internal control audit. Assessment of the adequacy of the whole internal audit function is a necessity and form an integral part of the risk control system evaluations of banks performed by supervisors. On top of that BI required auditors to perform an assessment of a bank's internal control function prior to performing internal audit. Banks are also obliged to periodically utilize an independent reviewer to review its overall internal

control and audit function, which results are then submitted to BI. Throughout all these processes, BI attempts to explicitly integrate the various approaches in reviewing the internal control and audit function in order for supervisors to have the necessary information with regards to the effectiveness control system of banks.

C. The IOSCO Objectives and Principles of Securities Regulation

Introduction

95. **The law and regulations governing the capital markets in Indonesia are largely consistent with the IOSCO Objectives and Principles of Securities Regulation.** Bapepam-LK, with government support, has taken impressive steps to increase the transparency of regulation and to institute a comprehensive operational program that meets international norms and takes account of best practice. Nevertheless, effectuation and implementation of legislative and other reforms should be accelerated to clarify and expand the security regulator's authority, especially its enforcement and cooperation authority, and to rectify certain self-acknowledged gaps. Further, continued attention is necessary to ensure that the regulatory framework, as complemented by the legal system, (i) reliably detects, deters, and sanctions securities violations; (ii) reliably identifies and prevents or mitigates prudential concerns; and (iii) reliably provides appropriate investor protections including disclosures, proper handling of customer property, and proper pricing of securities.

Information and methodology used for assessment

96. **This assessment was conducted using the Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation of 2003, reissued in 2008, the related e-methodology, and the reports, explanatory notes, instructions and guidance cited therein.** Principle 30 is separately assessed under the Committee on Payment and Settlement Systems/IOSCO Recommendations for Securities Settlement Systems by another assessor.

97. **This assessment is based on a number of sources.** These include a comprehensive self-assessment by Bapepam-LK; review of relevant legislation, regulations, and guidance; statistical and other descriptive information on the financial market; the rules pertinent to the securities exchange, the clearing and settlement system, and commodities transactions; relevant websites; media reports; annual reports; information obtained on the broader system as part of the assessment team; and multiple meetings during two on-site visits with Bapepam-LK staff, the Commodity Futures Trading Regulatory Authority (Bappebti), brokers, fund managers, issuers, end-users that are not themselves issuers, banks, state-owned enterprises, accountants and accounting associations, lawyers, the Indonesian Stock Exchange (IDX), the Jakarta Futures Exchange (JFX), the related clearing and settlement entities, trade (broker) associations, the on-site representatives of the IMF and World Bank, and informal information provided by certain parties providing technical assistance on various matters. The assessments also incorporate intervening exchanges of comments. Bappebti did not provide a separate self-assessment under its authorizing legislation.

Institutional and market structure—overview²⁸

98. **Bapepam-LK is responsible for supervision of the capital markets, including issuers, intermediaries, mutual funds, exchanges, securities depositories and clearing houses and for non-bank financial institutions, such as multi-finance companies, insurance and pension funds.** Listed-derivatives on commodities defined by statute as “the objects of trade which become the subject of Futures Contracts being traded in the futures exchange,” are regulated by the Commodity Futures Trading Regulatory Authority (COFTRA or Bappebti) (Law No.32/1997). This assessment relates only to the capital markets and capital markets institutions.

99. **Bapepam-LK implements Indonesia’s core securities legislation, the Capital Markets Law (CML), No 8/1995 effective as of 1996.** The regulatory framework operates within a civil law legal system, but permits more interpretive scope for the securities regulator than is typical of most civil law systems. As in many civil law countries, the Minister of Finance is accorded a role with respect to the issuance of government regulations and the eponymous ministerial decrees, whereas Bapepam-LK handles day-to-day operations and is responsible for developing its own rules. Indonesia’s modern Company law dates from 1995, but was amended to address evolving norms in 2007; bankruptcy law was modernized in 1998. Relevant Bapepam-LK rules can be found in English at http://www.bapepam.go.id/pasar_modal/regulasi_pm/peraturan_pm/indexEng.htm.

100. **Securities exchanges and the related clearing and depository organizations (KPEI and KSEI) are required by law to supervise their members and enforce their own rules.**²⁹ Futures exchanges also are required by law to take necessary actions to avoid price manipulation. The Jakarta Stock Exchange (JSX) and the Surabaya Stock Exchange (SSX) consolidated in 2007 to form the IDX. The JFX was established in 1999 and a new electronic platform, the Indonesian Commodities and Derivatives Exchange (ICDX) licensed in December 2009 launched in 2010. Corporate and retail government bonds, as well as equities, are traded on the IDX either by outright continuous auction or on the negotiated board, known together as the centralized trading platform (CTP) as well as over-the-counter (OTC). The OTC equity market is unregulated, but may be settled in the KSEI system. All bond transactions, even OTC, are to be reported to CTP in accordance with Bapepam-LK rules.³⁰ The CML also recognizes (i) supporting institutions, such as custodians (including bank custodians) and mutual fund custodial activities which are supervised by Bapepam-LK, and (ii) supporting professionals (e.g., accountants and lawyers) that are required to have special qualifications to provide professional support to capital market participants and institutions.

²⁸More detailed information is in the detailed assessment.

²⁹ See CML n. 40 and related provisions. See also CML Article 7 (2) and Article 9.

³⁰ Rule X.M.3.

101. **Indonesia has a very open market in line with its WTO commitments.** For example, non-domestic investors can own up to 100 percent of listed companies, except banks for which they can hold 99 percent both by direct investment and exchange purchase. Additionally, non-domestic financial companies and brokers may own up to 85 percent and 99 percent, respectively, of unlisted securities companies. Similar limits adopted in 2009 apply to owners of futures brokerages. There are no restrictions on the sale of foreign products to Indonesian nationals from within Indonesia as well as from remote locations. As of November 2009, as much as 70 percent of the value of shares held in the KSEI was held by foreign investors, and in 2009 approximately 25 to 30 percent of trading was of foreign origin. These factors add both depth and complexity to the Indonesian market and underscore the importance of the capacity of the securities regulator to give and receive cross-border enforcement assistance and to apply customer protection to all products sold to and from Indonesia.

Review of preconditions for effective securities regulation

102. **The preconditions for effective securities regulation listed as essential by IOSCO appear to be broadly satisfied in Indonesia, including that there should be no unnecessary barriers to entry and exit from Indonesian markets and products.** This is subject to the caveat that judicial enforcement is sufficient to provide certainty that the relevant capital markets law will be applied as intended. While the regulatory framework is comprehensive, and Bapepam-LK has exercised its already substantial administrative powers proactively, certainty related to the application of sanctions for violations of the CML could be strengthened by confirming administrative sanctioning powers against all market participants and considering extending the concept of a specialist expert prosecutorial corps or fraud squad under the Department of Justice to matters other than corruption, such as insider trading. Additionally, the comprehensive accounting reform that is underway is important to the integrity of financial reporting and to market expansion, and needs to move forward swiftly. Similarly, bankruptcy reform is desirable. There appears to be a customer product preference for depositor-like protections for invested principal. The effectiveness of current efforts to prevent investor confusion about the regulatory requirements pertinent to certain investment products, especially in that products may be distributed through the banking network, should be closely monitored. Such consumer expectations should also be weighed by policy makers in assessing risk disclosures for structured products.

Main Findings

103. **Substantial progress has been made and is ongoing in Indonesia to meet international norms. A number of major initiatives to further enhance customer protection and market integrity are in process. These should be pursued aggressively and, in addition, efforts should be made to accelerate the effectuation and implementation of new authorities.** In particular, the legislative changes to strengthen administrative enforcement powers and to expand cooperative enforcement by the authorities should be expedited, as should changes to strengthen the regulator's capacity to address

insolvencies. Additionally, the implementation of accounting standards that meet international standards and the implementation of more robust means to oversee the application of these standards should move forward swiftly. Ongoing work to improve customer protections related to the security of customer funds, the handling of orders, disclosures, and pricing of securities should be advanced. Similarly the operation of practical protocols for increased cooperation between the banking supervisors and Bapepam-LK that have recently been developed should be kept under close review. As the market evolves, Indonesia should ensure that the relevant authorities have sufficient powers and authority to properly oversee new developments and keep pace with evolving standards, including over-the-counter trading and any new trading platforms that might emerge.

104. **Table 8 contains a principle-by-principle summary of assessment results:**

Table 8. Summary Implementation of the IOSCO Principles—ROSCs

Principle	Findings
Principle 1. The responsibilities of the regulator should be clearly and objectively stated.	The legal and regulatory framework is highly transparent and the roles of the regulators and supervisors are clearly defined. BAPEPAM-LK and BI have accountability in some instances for the same entities, and have recently executed a practical information sharing protocol. The operation of this protocol should be kept under review as experience with heightened information sharing and cooperation is made operational. To the extent that there is significant over-the-counter securities trading or new platforms develop, attention should be paid to ensuring that existing regulatory arrangements are sufficient to prevent regulatory gaps.
Principle 2. The regulator should be operationally independent and accountable in the exercise of its functions and powers.	Legislation in the process of becoming effective that reinforces regulatory independence should be promptly implemented. Such legislation will change the budget process. The existing provision for preclearance by the MOF for reallocation of previously allocated funds should be eliminated—budgetary allocations should be subject to audit <i>ex post</i> as part of the budget process.
Principle 3. The regulator should have adequate powers, proper resources and the capacity to perform its functions and exercise its powers.	Administrative enforcement powers to fine third parties and cooperative powers should be clarified and enhanced. Although BAPEPAM-LK reports no difficulty in recruiting and maintaining staff, assurance that BAPEPAM-LK has adequate technical skills should be kept continuously under review and development of defined career paths should be encouraged. Efforts to promote investor/industry awareness of BAPEPAM-LK's technical capabilities and resources should continue to be augmented.
Principle 4. The regulator should adopt clear and consistent regulatory processes.	Clear processes are in place; enhanced attention should be paid to the extent to which such processes are supported by the judicial system. Measures to heighten the awareness of prosecutors to the need for effective prosecution of financial crime should be pursued. All regulatory interpretation including whether permissions or exceptions, if any, should be made public.
Principle 5. The staff of the regulator should observe the highest professional standards.	Appropriate codes of conduct are being enhanced and compliance is being monitored.

Principle	Findings
Principle 6. The regulatory regime should make appropriate use of self-regulatory organizations (SROs) that exercise some direct oversight responsibility for their respective areas of competence and to the extent appropriate to the size and complexity of the markets.	Appropriate use of self-regulatory functions is encompassed by the CML. See Principle 7.
Principle 7. SROs should be subject to the oversight of the regulator and should observe standards of fairness and confidentiality when exercising powers and delegated responsibilities.	Oversight of exchange programs, especially those of members (and members obligations with respect to non-members) upon which BAPEPAM-LK relies, should be intensified, documented, and reported.
Principle 8. The regulator should have comprehensive inspection, investigation and surveillance powers.	Comprehensive powers are in place; on-site inspections of market intermediaries that are exchange members are handled largely by the exchange, subject to review by BAPEPAM-LK.
Principle 9. The regulator should have comprehensive enforcement powers.	The regulator has wide-ranging administrative enforcement and intervention powers, which its staff has used proactively. Nonetheless, administrative fining powers should be augmented and expanded. Additionally, it should be clarified that all BAPEPAM-LK's administrative sanctioning powers are explicitly applicable to non-licensees. Also, as certain violations must be pursued through the criminal justice system which currently has no specially trained financial prosecution team and must attend to other priorities, efforts should be undertaken to provide a special prosecutorial corps or to expand the capacity of BAPEPAM-LK to participate directly in criminal cases.
Principle 10. The regulatory system should ensure an effective and credible use of inspection, investigation, surveillance and enforcement powers and implementation of an effective compliance program.	Though the overall enforcement program has been enhanced, enforcement is not perceived by the public to be as effective as desirable for regulatory credibility. BAPEPAM-LK has taken recent steps to bring actions, which deprive malfeasors of the fruits of misconduct and to bar persons from practice and to revoke licenses. Nonetheless, improvements can be made. Substantive violations can take a long time to pursue, may not be enforced judicially, and certain sanctions may continue be viewed as mere business expenses. Efforts should be made to assure that the regulated community is sufficiently aware of all enforcement efforts.
Principle 11. The regulator should have the authority to share both public and non-public information with domestic and foreign counterparts.	The regulator has appropriate information sharing authority, although in the case of banking records additional procedures are required that could potentially unduly delay, or adversely affect the use of such information. See also Principle 13. There are, however, no blocking provisions.
Principle 12. Regulators should establish information sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts.	The regulator has several bi-lateral information sharing arrangements with regulators, particularly in the South East Asia region, and has entered into Part B of the IOSCO Multilateral Memorandum of Understanding (MMOU) committing to undertake the changes to become a full signatory.
Principle 13. The regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and exercise of their powers.	While the regulator has the capacity to provide enforcement assistance to foreign regulators, it may have to commence its own investigation; the regulator should proceed with the legislation to permit it to become a full member of the IOSCO MMOU.
Principle 14. There should be full, timely and accurate disclosure of financial results and other information	In general, the disclosures for issuers and public companies meet international standards subject to accounting

Principle	Findings
that is material to investors' decisions.	improvements; the recent addition of proper identification of second tier listings on the exchange platform should assure that such listings do not compromise disclosure with respect to listed companies.
Principle 15. Holders of securities in a company should be treated in a fair and equitable manner.	Company law has recently been improved and enforcement of shareholder rights strengthened; but interconnections among shareholders and large share holdings, may still require more effective disclosure.
Principle 16. Accounting and auditing standards should be of a high and internationally acceptable quality.	Indonesia is rapidly moving toward implementing IFRS, to be completed by 2012. This process together with provision for enhanced accounting and audit oversight, should be accelerated to ensure appropriate reporting of financial information.
Principle 17. The regulatory system should set standards for the eligibility and the regulation of those who wish to market or operate a collective investment scheme.	Effective standards are in place with respect to licensed Investment Managers, portfolio advisors, custodians, sales personnel, and funds. Issues with the confusion as to whether discretionary funds were collective investments and as to the applicable regulatory requirements have been addressed by recent rulemaking. These changes should be kept under review.
Principle 18. The regulatory system should provide for rules governing the legal form and structure of collective investment schemes and the segregation and protection of client assets.	Statutory provisions, addressing the form of collective investment contracts, make the participation unit in a contractual fund a security, subject to a custodial and management contract. This contractual structure, and related accounting, is not atypical of civil jurisdictions where the objective is to insulate the interest of the customer from claims on the manager. The concept of trust is not well developed. This structure, while meeting the spirit of the principle, should be clearly disclosed. Further, to the extent that the judiciary does not actively enforce financial contracts, the effectiveness of this structure should be kept under review.
Principle 19. Regulation should require disclosure, as set forth under the principles for issuers, which is necessary to evaluate the suitability of a collective investment scheme for a particular investor and the value of the investor's interest in the scheme.	The requirements for disclosure are comprehensive and fulfill the list provided by IOSCO. Care must be taken so that customers understand that the capital funds are not guaranteed funds.
Principle 20. Regulation should ensure that there is a proper and disclosed basis for assets valuation and the pricing and the redemption of units in a collective investment scheme.	There is provision for calculation of a daily net asset value, and obligations on the Investment Manager and the custodian for the integrity of pricing and for documentation of prices not made in the market. The system, however, for debt pricing, which is in the process of being reformed can be manipulated. Regarding the majority of retail funds that are currently invested in debt, reform should be expedited.
Principle 21. Regulation should provide for minimum entry standards for market intermediaries.	The licensing requirements for market intermediaries appear to be comprehensive, apply to investment advisors as well as broker dealers, and are enforced through an initial due diligence exercise. Oversight is conducted by the exchange for member firms. More documentation should be made available; however, as to the ongoing monitoring of intermediaries in general, see Principle 7.
Principle 22. There should be initial and ongoing capital and other prudential requirements for market intermediaries that reflect the risks that the intermediaries undertake.	Capital requirements contain a leverage limiter and haircuts on assets; adequacy of coverage in light of market events and liquidity needs should be kept under rigorous review.
Principle 23. Market intermediaries should be required	Good provisions for internal controls and for conduct of

Principle	Findings
to comply with standards for internal organization and operational conduct that aim to protect the interests of clients, ensure proper management of risk, and under which management of the intermediary accepts primary responsibility for these matters.	business are in place. However, there are concerns as to how customer positions are handled in practice. BAPEPAM-LK has sought to address these concerns by the recent creation of a unique identifier to ensure transactions are properly credited to customers' accounts. The effectiveness of this reform to assure appropriate treatment of nominee accounts should be evaluated on an ongoing basis. Also BAPEPAM-LK should be alert that remote branches can breed risks, and assure appropriate coverage of branch supervision is included in its risk-based oversight.
Principle 24. There should be a procedure for dealing with the failure of a market intermediary in order to minimize damage and loss to investors and to contain systemic risk.	Procedures are in place to limit exposures that are unsupported by capital and to limit leverage. Nonetheless, a documented plan for handling intermediary defaults to the exchange or clearing or settlement systems is desirable. Adoption of pending resolution reforms is also recommended. See also Principle 28.
Principle 25. The establishment of trading systems including securities exchanges should be subject to regulatory authorization and oversight.	The provisions for authorizing exchanges/self-regulatory organizations are comprehensive and the requirement for the exchange to have appropriate rules and to enforce them is in place. If OTC equity trading is not bilateral, BAPEPAM-LK may need to ensure that trading facilities are clearly designated as exchanges or otherwise covered.
Principle 26. There should be ongoing regulatory supervision of exchanges and trading systems, which should aim to ensure that the integrity of trading is maintained through fair and equitable rules that strike an appropriate balance between the demands of different market participants.	There are provisions for the oversight of the exchange, including periodic reporting, rule enforcement reviews or inspections, the reporting of sanctions, the requirement for specified follow-up procedures in the case of member capital deficiencies, and the capacity to request raw data to complement BAPEPAM-LK's monitoring activities. Provisions for the halting of trading should be transparent and followed. Also, see Principle 7.
Principle 27. Regulation should promote transparency of trading.	Trading on the exchange is transparent. But see Principle 20 regarding the pricing of debt traded OTC.
Principle 28. Regulation should be designed to detect and deter manipulation and other unfair trading practices.	BAPEPAM-LK has the power to commence investigations and the exchange has state of the art tools to detect manipulation and other abuses. The prosecution of cases to an effective conclusion, however, is lengthy and highly uncertain.
Principle 29. Regulation should aim to ensure the proper management of large exposures, default risk and market disruption.	The taking of positions is governed by an exposure limit set by reference to net adjusted working capital; failure to deliver securities is severely punished, and so infrequently occurs; and there is a progression of access to various resources to fund defaults. Nonetheless, the contingency arrangements between BAPEPAM-LK and the IDX, KPEI, and KSEI should be documented. Delisting procedures might also be reviewed. See also the separate securities and settlement recommendations.
Principle 30. Systems for clearing and settlement of securities transactions should be subject to regulatory oversight, and designed to ensure that they are fair, effective and efficient and that they reduce systemic risk	Assessed under the CPSS/IOSCO Securities Settlement Recommendations by another assessor.

Recommended action plan and authorities' response

Recommended action plan

Table 9. Recommended Action Plan to Improve Implementation of the IOSCO Principles

Principle	Recommended Action
Principles 2, 10, 15, 18, 24 and 28; see also Principles 8 and 13	Implementation of legislative changes to the Capital Markets Law, and other laws as necessary, intended to update and enhance the authority and power of BAPEPAM-LK and otherwise support the regulatory framework. These include: (i) proper immunity from civil damages; (ii) limitation of ministerial budget allocation review to <i>ex post</i> audit after initial budget approval; (iii) the expanded ability to require governance enhancements; (iv) the ability to proceed judicially under civil law or administratively against third parties to sanction securities violations; (v) continued confirmation that contractual fund interests are enforced as a matter of law as well as by contract; (vi) the ability to meet international norms for enforcement cooperation; and (vii) a modernized resolution authority and insolvency law. Enhancement of steps to assure investor awareness of the overall regulatory program should be continued and expanded.
Principles 4, 14, 18 and 20	Enhancements should be pursued to strengthen the fairness and reliability of transactions in relation to transparency and pricing. These include: (i) public clarification that the exemptions are not accorded by law or that such exemptions, if any, will be published; (ii) confirmation that second tier offerings are clearly identified as such on the IDX trading platform; (iii) augmented disclosure to ensure that the risks of capital protected funds are clearly disclosed and understood as not guaranteed ; and (iv) review and modification of the corporate debt pricing methodology to ensure that prices used for mutual funds are equitably determined and are not unduly susceptible manipulation.
Principles 18 ,23 and 26	Augmentation of oversight regimes to confirm that (i) customer funds are properly identified; (ii) the unique customer ID as adopted and implemented enhances customer fund protection as intended that maintenance of the segregation of customer from firm accounts is sufficiently rigorous, and that sales of non-member agents are appropriately overseen.
Principles 7, 10, and 28	Continuation of efforts to assure that the public has due regard for the effectiveness of surveillance and enforcement programs. Augmentation of legal powers to conduct administrative enforcement proceedings, in particular fining powers. Enhancement of the documentation and conduct of on-going monitoring and coverage, particularly with respect to the oversight of customer trades and funds. Extension and continuation of pro-active initiatives to assure that securities violations are punished in a prompt, meaningful way.
Principles 22, 24, and 28	Continuing monitoring and documentation of contingency arrangements to address firm defaults and assurance that capital requirements provide sufficient liquidity cushion to withstand a significant standard deviation price moves in various markets.
Principles 1, 12, and 13	Review of the operation, in practice of the new information sharing arrangement between BAPEPAM-LK and BI to assure the appropriate interchange of information and cooperation among entities with responsibility for the same licensed firm.

Authorities' response to the assessment

105. **We would like to take this opportunity to thank the IMF and the World Bank for the continued support to assist Indonesia in reforming and transforming our domestic capital markets.** We consider the FSAP exercise as an important reference in undertaking our reform activities towards a more resilient and efficient capital market supported by a robust regulatory framework in line with the international best practice and standards.

106. **Indonesia as an emerging market member of G20, views the assessment and its recommendations very seriously, as this would have significant impact on the outcome of the G20 peer group evaluation on the adherence to Global Standards as envisaged under the FSB framework released in April.** We believe that the current assessment provides only a fraction of the on-going reforms Indonesia is taking and we shall continuously undertake factual updates to the World Bank and IMF to facilitate greater awareness on the actual level of Indonesia's International Standards compliance.

107. **There are numerous ongoing legal and regulatory reform efforts which may not have been captured in the report as of April 2010,** among others:

- Substantial efforts are being put in-place to improve the overall investor protection in our markets; these include the implementation of Single Investor ID for Fund and securities for all investors (inclusive of CIS Investors), which would provide a real time monitoring of end-investor activity and potential misuse by market intermediaries.
- The revised Capital Market Law will also include the ability of regulators to appoint statutory managers to takeover institutions (SRO's, market intermediaries and NBFIs) to ensure that the public interest is protected. Investor protection fund will also be introduced to provide coverage in the event of a market participant failure. Efforts are being put in-place to improve the overall dispute resolution to ensure that each market participant has in-place the necessary procedure to ensure that customer disputes are managed effectively.
- The recently submitted OJK (Financial Service Authority) Bill, will provide a complete independence of the Capital Market Regulator (Bapepam-LK) from the Ministry of Finance. OJK will have the ability to draw upon the best resources from the market to complement our resources. A comprehensive "legal immunity" will be provided on top of the current provisions under the Criminal Code (Art 50/51) to protect our resources in discharging their duty in a "bona-fide" manner.

108. **Massive efforts are also on the way to prepare Indonesia's greater regional integration activities with our respective ASEAN neighbors; this includes preparing the regulatory environment to handle the myriad of cross border activities via the Mutual Recognition or Substituted Compliance of our regional peers.** The operating environment

and landscape in the next 5 years will be starkly different than what we are currently accustomed to. To achieve this, efforts are on the way to reform the supporting regulatory, supervisory and enforcement powers and tools to facilitate greater pre-emptive monitoring capabilities over market and institutions under our watch. Among the many on-going reforms include the comprehensive build-up of a consolidated information warehouse to link all related information concerning markets, products, issuers and the activity (on/off exchange) and relationships of all economic agents domestically and regionally. This technology oriented approach will become the foundation on how we enhance our surveillance and monitoring capacity to detect capital market violations, emerging prudential risk on our institutions and the buildup of systemic risk in our markets.

109. The Indonesian capital market regulator in general feels that the amount of resources and the time allocated for the recently completed IOSCO assessment by the IMF and World Bank is insufficient for the assessor to gauge the level of comprehensiveness of the current regulatory systems, its supporting tools and processes, and the on-going reforms efforts being executed. The time and resources constraints reduced the ability to execute a detail fact finding mission in reaching a more comprehensive understanding on the philosophy behind the Indonesian legal and regulatory framework.

D. The CPSS Core Principles for Systemically Important Payment Systems

Introduction

110. This assessment covers BI's real time gross settlement (BI-RTGS) system's observance of the CPSS Core Principles for Systemically Important Payment Systems (SIPS) and BI's responsibilities in applying the Core Principles.

Information and methodology used for assessment

111. Although there are several systems in operation in Indonesia, BI considers the BI-RTGS system to be the only systemically important payment system in the country. To date, the assessment team does not have any information to expand the scope of SIPS in Indonesia and has conducted the assessment of the RTGS system as the sole SIPS in the country.

112. This assessment is based on a number of information sources: (i) interviews held with BI officials; several bank and non bank participants in the BI-RTGS; representatives of the Bankers Association; Artajasa, an ATM switching company with indirect participant status in BI-RTGS; the Bankers Association By- Laws Committee responsible for enforcing members' code of conduct in the BI-RTGS operations; the post office; telecommunications companies and mobile service providers; (ii) a detailed self-assessment of the BI-RTGS; (iii) information on the website of BI; (iv) the BI Act 23 of 1999, (v) Bankruptcy and Suspension of Obligation for Payment of Debts Act; and (vi) various regulations, rules, and circular letters relevant to the operations of payment systems issued by BI in its capacity as the overseer of payment systems.

113. **The tools used to assist and guide the assessors in achieving the objectives of this assessment were the standards report itself** (“CPSS Core Principles for Systemically Important Payment Systems,” January 2001) and the “Guidance Note for Assessing Observance of Core Principles for Systemically Important Payment Systems and the Structure and Scope of the Assessment Report” produced by the IMF and World Bank in collaboration with the Committee on Payment and Settlement Systems.

Institutional and market structure

114. **BI is empowered by the BI Act 23 of 1999 to oversee the payments system.** Using its spread of 40 branches, BI facilitates interbank clearing and the distribution of cash throughout the country. BI also provides settlement in central bank money for the RTGS system it operates, the government securities system, and the national clearing system. The main players in the payment system in Indonesia are banks, most of which have a deliberate policy to extend payment services by establishing branches throughout the country.

115. **Cash remains a dominant means of payment in Indonesia despite the various innovative products and instruments introduced by banks in the provision of payment services.** According to available statistics, cash utilization levels have maintained an upward trend over the last 6 years and peaked in 2008. Other means of payment used in Indonesia include cheques, drafts, and direct debit and credit transfers. Various payment cards are issued by banks and these are switched through different networks which are not interlinked. The biggest of these networks (Artajasa) in terms of the number of banks it services, has access to the BI- RTGS in order to facilitate settlement of card and other retail transactions by member banks.

116. **The BI-RTGS system is the main system for handling payments, and is also used for the settlement of obligations arising from the other payment streams.** The system was introduced in 2000 as part of BI’s strategy to address risks inherent in the cheque clearing system, arising from the ever increasing volumes and values. The BI-RTGS links 149 participants to the central bank, using a designated network.

117. **BI-RTGS settles transactions in real time, using central bank money.** Participants to the system use a front end (provided for interfacing with BI), to input instructions that are sent through a dedicated network to the central bank’s central system. Since the system works on a credit push basis, the settlement account has to be adequately funded before a transaction can be settled. Once a payment is successfully processed in the BI-RTGS—one account debited and the other credited—it is deemed to be final and cannot be reversed.

118. **BI also administers the national clearing system, SKN-BI, as authorized by the BI Act.** The system handles the clearing of debit-pull and credit-push instruments throughout the country. In areas where BI is not represented, agents in the form of commercial banks have been appointed to carry out the clearing function on behalf of the central bank. SKN-BI was established in 2005, and handles clearing through over 100 clearing facilities established throughout the country.

119. **Over the last decade, BI has been involved in collaborative efforts to reform the payment system in Indonesia.** The existing blueprint that provides guidance to this process is currently being revised in response to the ever changing payments environment and to set the strategic direction for the critical international linkages being envisaged by BI.

Main Findings

120. The Legal Framework (CP I)

The legal foundation for payment systems in Indonesia is generally sound with explicit provisions for the central bank's involvement in payment systems. A number of statutes have been enacted and these are supported by regulations and circular letters that the BI issues from time to time. However, the authorities should:

- consider enacting a specific law that governs payment systems; and
- address any areas that need further strengthening and clarity. For example, in order to eliminate ambiguity and uncertainty, netting needs to be explicitly recognized as a legal process. In this regard, it should be noted that reference to the term in the circulars or rules does not translate into recognition of “netting” as a legal term.

121. Management of Risk (CP II–III)

The BI-RTGS generally functions well and is recognized as the only SIPS in Indonesia. All risk related CPs are observed.

122. Settlement (CP IV–VI)

Once a transaction is accepted in the system, and the respective accounts have been debited and credited, it is deemed final and cannot be revoked. Participants understand when finality takes place and system operating hours are followed as far as possible. BI-RTGS settles in central bank money. A collateralized intraday credit facility is in place to ensure the smooth flow of payments in the system.

123. Operational Reliability and Efficiency (CP VII–VIII)

BI has adequate contingency plans in place to address any technical problems. A general security policy and the business continuity procedures are well documented and tested. However, the 40 kilometer separation between the production site and the disaster recovery site is acceptable as a minimum, particularly for an environment that is prone to natural disruptions. BI has advanced plans to implement a new second generation system in 2011. In allocating the “observed” rating to CP IV, these advanced plans were taken into account and must therefore be realized within the stipulated time in order to maintain full observance of the two CPs in future.

124. Access and Governance (CP IX–X)

There are no clear, documented access criteria based on specific indicators. This is because BI requires all banks to be direct participants in the system. The BI would benefit from access criteria that are based on specific indicators agreed between the Payment Systems Department and the Banking Supervision Department. Such criteria should act as a risk management tool by ensuring that weak banks that are likely to pose systemic risk to the system are not automatically granted access. In deciding whether to grant access to non banks, BI should consider the final settlement needs of the market, and clearly distinguish between access to the settlement account only and access to the central bank credit and settlement accounts.

125. Central Bank Responsibilities (CBRs) A–D

- BI's payment system objectives are clearly documented and publicly disclosed via the website and communication with the National Payment System Communication Forum. However, BI's communication with key stakeholders in the payment system could be deepened by explicitly stating the direction to be taken to achieve the objectives identified in the blueprint.
- As rapid financial development is likely to raise the profile of a number of systems, BI should anticipate pressure on the oversight function by ensuring adequate resources in terms of both staff levels and skills.
- BI cooperates with other central banks in the region and also receives technical assistance from them. However, cooperation with domestic authorities and regulators could be improved.

Table 10. Summary Observance of the CPSIPS and Central Bank Responsibilities in Applying the CPs—ROSCs

Core Principle/Responsibility	Comments
Legal foundation	
CP I – The system should have a well-founded legal basis under all relevant jurisdictions	The legal foundation generally provides a basis for the development of payment systems in Indonesia. The lack of an explicit recognition of the practice of “netting” as a legal term, even though it is referred to in the rules and circular letters, should be addressed
Understand and management of risks	
CP II – The system’s rules and procedures should enable participants to have a clear understanding of the system’s impact on each of the financial risks they incur through participation in it.	System rules and procedures are clear to the participants. The “credit push” feature of the system, prefunding and intraday facility help to ensure the flow of payments within the system. However, the lack of a hybrid feature in the system design might mean liquidity is not being optimized and can lead to queue build-up.
CP III – The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.	See comments under CP II above. In addition, credit risk in the system is minimized by system design, use of collateralized intraday credit facilities, throughput guidelines and a queue management system.
Settlement	
CP IV – The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.	Participants understand when finality takes place and system operating hours are followed as far as possible. However, items can be discarded from the queue at the end of the day if funding capacity is lacking. While this has implications for payment system effectiveness, especially for the certainty of cash settlement in the secondary market for government securities, for RTGS purposes, this CP is observed.
CP V – A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation	Not Applicable
CP VI – Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.	BI-RTGS settles in central bank money. A collateralized intraday credit facility is in place to ensure the smooth flow of payments in the system.
Operational reliability and efficiency	
CP VII – The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing	System availability is very good although SLAs could be strengthened. Telecommunications support appears to be generally sufficient although continuing attention is needed regarding connectivity in outlying areas. It is crucial that BI migrate to the new second generation RTGS (and the Scripless Securities Settlement System—SSSS) platform in 2011 as planned to further strengthen reliability and security as well as maintain observance of this CP. The number and skills of technical staff need to be evaluated in preparation for this migration.

CP VIII – The system should provide a means of making payments, which is practical for its users and efficient for the economy.	While the current system design generally supports the financial efficiency needs of the payment system, the second generation hybrid design will improve it. In addition, there are opportunities, including benchmarking, to ensure that cost efficiency meets needs and expectations.
Access and governance	
CP IX – The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.	Clear, explicit, well documented access criteria are needed. The criteria should take into account the BI's broader plans as envisaged in the new RTGS and SSSS systems and the final settlement needs of the financial markets.
CP X – The system's governance arrangements should be effective, accountable and transparent.	Separation of duties between operations and oversight, and collaborative engagement with RTGS stakeholders provide a good governance foundation. There is room for strengthening further the oversight of securities settlement and the proactive role of BI as an overseer.
Central bank responsibilities	
Responsibility A – The central bank should define clearly its payment system objectives and should disclose publicly its role and major policies with respect to systemically important payment systems.	The development of objectives and plans could benefit from the addition of some "top down" consultation as well as from a payment system research agenda.
Responsibility B – The central bank should ensure that the systems it operates comply with the core principles	The BI oversight function is carried out on the RTGS system, which BI recognizes as the only SIPS in Indonesia currently. Placement of responsibility for BI-SSSS oversight is not clear, although there are plans to have the BI-SSSS under the ambit of the Payment Systems Unit.
Responsibility C – The central bank should oversee observance with the core principles by systems it does not operate and it should have the ability to carry out this oversight.	Oversight is carried out on the BI-RTGS. However, there is no formal oversight on other settlement systems that have the potential to be systemically important or of system-wide importance.
Responsibility D – The central bank, in promoting payment system safety and efficiency through the core principles, should cooperate with other central banks and with any other relevant domestic or foreign authorities.	BI cooperates with other central banks in the region and is currently receiving technical assistance from the Bundesbank. BI follows international practices in payment systems and liaises with international bodies on payment systems. Scope remains for increasing domestic cooperation with other regulatory authorities.

Recommended action plan and authorities' response

Recommended action plan

Table 11. Recommended Actions to Improve Observance of the CPSIPS and Central Bank Responsibilities in Applying the CPs—BI-RTGS

<i>Reference principle</i>	<i>Recommended action</i>
Legal foundation <i>CP I</i>	Consider (i) enacting a specific law to govern payment system operations, and (ii) taking steps to explicitly recognize netting as a legal process.
Criteria for participation <i>CP IX</i>	Consider introducing clear documented access criteria based on specific indicators, for both direct and indirect participants.

Reference principle	Recommended action
Governance of the payment system <i>CP X</i>	Consider setting up a BI-RTGS User Group to encourage dialogue on system specific issues. Extend oversight activities to RTGS participants and broaden communications with stakeholders.
Central Bank Responsibilities in applying the CPs <i>Responsibilities B,C,D</i>	Consider measures to achieve full compliance for all CPs. Widen the scope of oversight and strengthen activities through formal arrangements. Improve and structure cooperation with other domestic authorities and regulators by signing formal MOUs and creating joint working groups, where appropriate. This applies to cooperation with other functions of BI (e.g., the Bank Supervision Department) and other external authorities and regulators (e.g., Bapepam, and the telecommunications regulatory authority).

Authorities' response to the assessment

126. *CP I Legal Foundation:* BI noted that currently there are regulations in existence governing netting settlement, e.g., in BI regulations on the national clearing system. While agreeing that it is necessary to have an Act or statute that governs payment and settlement systems (including netting), BI pointed out that the process of enacting statutes is time consuming and involves many parties.

127. *CP IX Access:* BI has agreed with the recommendation of introducing clear, documented access criteria that are based on specific indicators, for both direct and indirect participants. The access criteria are being reviewed to give clear and explicit indicators.

128. *CP X Governance:* BI has advised that the operator of BI-RTGS already conducts an on-site examination of several members as a tool for oversight. BI has noted that the oversight function needs to extend its activities to the operational activities of the securities settlement system.

129. *Central Bank Responsibilities B, C and D:* BI fully agrees with taking appropriate measures to ensure full observance of all CPs. Oversight of the BI-SSSS will commence in 2010 in accordance with the consolidation of BI-RTGS and BI-SSSS under the Payment Systems Directorate. BI has further advised that coordination with the Bank Supervision Department has been conducted in the form of information exchanges and joint teams in on-site examinations. Cooperation with other authorities (Bapepam-LK and Ministry of Information and Communication) will be discussed and followed up.

E. The CPSS-IOSCO Core Principles for Government Bonds, Equities, and Corporate Securities

Government Conventional and Sharia Securities, Equities and Corporate Bonds

Introduction

130. The two CPSS-IOSCO assessments cover the observance of the CPSS/IOSCO Recommendations for Securities Settlement Systems by the BI's Government securities system, which consists of conventional and sharia securities, and the private sector equities and corporate bonds system. Both assessments were conducted on processes and functions as opposed to institutions.^{31, 32}

Information and methodology used for assessment

131. **Information for the assessment was gathered primarily from interviews and documents.** Interviews were held with relevant officials from BI, Ministry of Finance Debt Management Unit, Securities Companies, Association of Indonesian Securities Companies, several banks, and the Bankers' Association By-Laws Committee responsible for enforcing members' code of conduct in BI-SSSS operations. Several documents were provided by the authorities prior to the commencement of the mission, including a detailed assessment of the BI-SSSS; information posted on the website of BI and the MOF; and various statutes. The other main sources of information were (i) the BI Act, (ii) Government Securities Act, (iii) Government Sharia Securities Act, (iv) Bankruptcy and Suspension of Obligation for Payment of Debts Act, (v) various regulations, pronouncements and circular letters relevant to the operations of the securities market and issued by BI and the MOF in their individual capacities.

132. The tools used to assist and guide the assessors in achieving the objectives of the assessments were the IOSCO-CPSS publications "Recommendations for Securities Settlement Systems" (RSSS) and "Assessment Methodology for Recommendations for Securities Settlement Systems" and the Bank-Fund "Guidance for Writing Detailed Assessments for Reports on Observance of Standards and Codes."

Institutional and Market Structure – Overview

133. The regulatory responsibilities for the issuance, registration, trading and settlement of securities in Indonesia lie with three main institutions: (i) the MOF, which is responsible for

³¹ The assessment on government securities focuses on trades that are settled through the BI-SSSS, which is owned and operated by the BI and used for the registration and settlement of SBIs, Government Conventional securities (SBNs) and Government Sharia Securities (SBSNs).

³² The equities and corporate bonds assessment focuses on the clearing and settlement process of two types of trades that are settled through the KSEI settlement system (C-BEST): (i) equities transactions traded on the IDX, cleared through the KPEI clearing system (e-CLEARs), and (ii) the majority of corporate bond transactions that are traded outside the IDX.

the issuance of government securities; (ii) BI, which is responsible for the regulation of open market operations, registration of government and BI securities and the operation and administration of the BI-SSSS; and (iii) Bapepam-LK, which is responsible for the regulation and supervision of the Indonesian capital market.

134. **Securities that are issued and registered in the BI-SSSS are the Bank Indonesia Bills (SBI) and the government securities (SBN), which are classified into conventional securities (SUN) and sharia securities (SBSN).** The system has 170 participants, comprising BI, MoF, Ministry of Religion, banks, primary dealers, and sub-registries. The participants may be connected to the three main components of the system, depending on the role they play in the market. These components are:

- **BI-ST.** The primary dealers, sub-registries and banks are connected to the BI-ST, the component used to settle secondary market and government bond collateral execution transactions.
- **Bid CC.** The BI-ST is also used by brokers to submit bids into the bond auction component, Bid CC, which links the MOF as issuer, BI as auction agent, and authorized primary dealers comprising 4 securities companies and 14 custodian banks.
- **SCC.** SCC handles the central registration of securities (the CSD function), user administration, coupon settlement, and monitoring of secondary market coupon payments. The SCC component is directly linked to the BI-RTGS to facilitate the cash settlement of transactions.

135. **BI acts as the central securities depository (CSD) for government and BI securities.** In carrying out this function, BI maintains a two-tier registry system with the first tier recording holdings for direct participants, who include 15 sub-registries, custodian banks and BI's own holdings. In the second tier, the sub-registries record holdings of the individual clients that are beneficial owners of the securities. Sub-registries are further required to maintain their own system for administering clients' individual accounts.

136. **There are 18 primary dealers authorized by the MOF to participate in the primary market for government securities.** Fourteen of these are banks that also hold settlement accounts in the BI-RTGS systems while the other 4 are securities companies that settle their obligations indirectly through commercial banks. In value terms, approximately 80 percent of the bids in the government securities primary market are allocated to bank primary dealers with securities companies taking the remaining 20 percent. The secondary market trading of government securities and central bank bills is mainly conducted OTC. The bidding for open market operations weekly auctions is open to all banks who are participants in BI-SSSS. These banks can either bid directly or through brokers.

137. **The market participants in the equity and corporate bond market are issuers, securities companies, custodian banks, registrars, and investors.** At end-November 2009,

KSEI counted 489 issuers, 130 securities companies, 22 custodian banks, 10 registrars and 360,340 sub-accounts. Of the securities companies, 120 are exchange and clearing members, of which 114 are active. In the current structure all exchange members are clearing members

138. **A range of securities may be traded on the stock exchange, namely stocks, ETFs, corporate bonds, government bonds, stock options, and index futures.** The securities are traded in one of the four segments of the Stock Exchange, which are (i) a regulated market, in which trading is conducted using an electronic order book and settlement takes place on T+3; (ii) a cash market, in which trading is conducted using two auctions during the day and settlement takes place on T+0; (iii) an immediate market, which is currently closed; and (iv) a negotiated market in which trading is conducted using advertising screens and where settlement cycles are negotiable and may be longer than T+3. Trades concluded in the negotiated market segment are not netted, but cleared trade by trade. The total turnover (in value) of the stock exchange is on average IDR 4.49 trillion per day. The total turnover (in value) of corporate bonds is on average IDR 161 billion per day. As at end-November 2009, the equity market capitalization amounted to IDR 1,896 trillion and the corporate bonds outstanding amount was IDR 79 trillion. In practice, stock exchange turnover comes mainly from equity trades. Stock exchange volumes for corporate bonds and government bonds are low, since market participants prefer to trade these bonds OTC. Stock exchange volumes for ETFs, stock options, and index futures are close to zero. All securities issued after the introduction of the scripless system in 2000 are held in dematerialized form. It is not possible to trade stocks on the exchange when they are still in physical form.

139. **OTC trades are bilaterally concluded between market participants and settled by KSEI.** The trading is mainly conducted by securities companies using a computer based OTC system that is linked to the stock exchange. The central registry and settlement for corporate bonds is handled through KSEI with settlement of trades taking place two days after trading (T+2). All bonds issued after the introduction of the scripless system in 2000 are held in dematerialized form.

140. **Cash settlement for equities and corporate bonds takes place in the cash accounts of one of the four “payment” banks.** Every broker is required to open a cash account with one of the settlement banks in order to facilitate settlement. The four settlement banks are Mandiri, BCA, CIMB, and Permata. In addition, securities accounts in the C-BEST system of KSEI reflect not only the securities of a specific account holder, but also mirror the cash accounts of that account holder at the payment banks for settlement purposes. KSEI has developed a settlement mechanism through which the securities and cash legs are transferred simultaneously, followed by reconciliation within the cash accounts in the payment banks. Once a day the accounts of the payment banks are realigned using the RTGS system of Bank Indonesia (BI-RTGS). For government bonds traded on the stock exchange, cash settlement is directly effected in the BI-RTGS system. The volumes of stock exchange traded government bonds are, however, very low. The possibility of linking the KSEI system to the BI-RTGS system also for equity and corporate bonds settlement is under discussion.

Main Findings and Recommendations: Government Securities

141. Legal Framework

The legal framework governing the operations of the BI-SSSS is based on three main statutes, which are supported by various regulations, pronouncements, and circular letters issued by the BI and MOF. These legal provisions need further strengthening to ensure settlement finality and recognition of netting as a legal process.

142. Pre-settlement risk

- There are shortcomings in the trade confirmation process. Currently, the BI as operator of BI-SSSS has no way of comparing trade information between direct and indirect participants and the confirmation pattern relating to those trades. Although a reporting system is in place for Bapepam's requirements, this is not linked to the BI-SSSS. BI and Bapepam could benefit from a collaborative approach in defining information sharing arrangements.
- The settlement standard of T+3 is not met in the settlement of all government securities transactions; in some instances in the negotiated market it is even longer. BI needs to explore measures to adopt a shorter settlement cycle using a cost benefit analysis.

143. Settlement risk

- Although settlement risk is almost negligible for direct participants in BI-SSSS, some trade failures—0.5 percent of trade volume per year—still occur.
- The securities lending market is very limited and this may be hampered by the imposition of double taxation on repo arrangements.

144. Operational risk

The BI-SSSS shares the same operational structure as the BI-RTGS system, supplied and supported by the same vendor. Like the BI-RTGS system, it is scheduled for second generation replacement in 2010. BI should proceed with this replacement as planned in order to fully observe the BI-RTGS and BI-SSSS operational risk standards in future assessments.

145. Custody risk

There are adequate arrangements in place to ensure protection of customers' securities in the central securities depository. In particular, custodians are required to separate their assets from those of customers when recording, and regular reconciliations are carried out.

146. **Other issues**

The placement of business owner and oversight responsibilities for BI-SSSS within the same organizational unit poses separation of duties issues, in that it is difficult to implement objective oversight and to overcome possible perceptions that oversight is not being carried out in an objective manner.

Table 12. Summary Observance of the CPSS-IOSCO Recommendations for Securities Settlement Systems

Responsibility	Comments
Legal risk	
1. Securities settlement systems should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	The legal framework while generally supported by various pieces of legislation, regulations and circular letters, still requires strengthening by recognizing “netting” as a legal term in general and legalizing finality in securities settlement.
Pre-settlement risk	
2. Confirmation of trades between market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.	BI as operator of BI-SSSS does not have a way of comparing trade information between direct and indirect participants in the system. Bapepam-LK’s system that could help in addressing this shortcoming is not linked to the BI-SSSS. The absence of information pertaining to the actual percentage of trades confirmed in the secondary market within T+0 of trade execution poses a challenge in assessing the degree of observance.
3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be assessed.	No study has been undertaken to evaluate the costs and benefits of accelerated settlement. The settlement standard of T+3 is not observed for all government securities transactions.
4. The benefits and costs of a central counterparty should be assessed. Where such a mechanism is introduced, the central counterparty should rigorously control the risks it assumes.	There is no Central Counterparty Clearing House (CCP) arrangement in place where such an arrangement may be applicable for government securities. The team is not aware of any study conducted in this respect.
5. Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.	Securities lending and borrowing (SLB) is very limited for government securities. BI participates in the market only through its repurchase agreement (repos) programs, and the MOF participates in SLB with the Primary Dealers only. Double taxation of repos could be hampering the development of securities lending.
Settlement risk	
6. Securities should be immobilized or dematerialized and transferred by book entry in CSDs to the greatest extent possible.	The CSD component of BI-SSSS holds securities in dematerialized form and transfers them electronically. The dematerialization and electronic holding is covered by statute.
7. Securities settlement systems should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves delivery versus payment.	BI-SSSS is linked operationally and through BI’s regulations to the BI-RTGS. Accordingly government securities transactions settled through the BI-SSSS are settled on a DVP

Responsibility	Comments
	Model 1 basis (gross basis), ensuring that the ownership of the security passes with the simultaneous transfer of funds in central bank money and with finality.
8. Final settlement on a DVP basis should occur no later than the end of the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.	Final settlement on a DVP basis occurs within the day of settlement. Settlement takes place continuously throughout the business day.
9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems, should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest payment obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements limits.	There is no deferred net settlement within the BI-SSSS. Trades that are not funded are discarded from the system at the end of the day. The BI has not evaluated the cost of ensuring settlement and the possibility of introducing additional failure-to-settle arrangements.
10. Assets used to settle the cash leg of securities transactions between CSD members should carry little or no credit risk. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of a settlement bank.	Central bank money is used to settle trades in BI-SSSS.
Operational risk	
11. Sources of operational risk arising in the clearing and settlement process should be identified and minimized through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Contingency plans and back-up facilities should be established to allow for timely recovery of operations and completion of the settlement process.	The BI-SSSS system shares the same operational support structure and platform as the BI-RTGS and both applications are supplied and supported by the same third party vendor.
Custody risk	
12. Entities holding securities in custody should employ accounting practices and safekeeping procedures that fully protect customers' securities. It is essential that customers' securities be protected against the claims of a custodian's creditors.	Sub-registries holding securities on behalf of individuals are required to maintain an internal system that records these holdings clearly separating their own from those of clients. This separation of assets ensures that the clients' assets are safeguarded in the event of a sub-registry's insolvency. The holdings are audited by internal and external auditors periodically.
Other issues	
13. Governance arrangements for CSDs and central counterparties should be designed to fulfill public interest requirements and to promote the objectives of owners and users.	The CSD is a component of the BI-SSSS which has transparent governance arrangements as it is operated by the Monetary Management Directorate of the BI with key performance management indicators for the system. The BI-SSSS By Laws Committee represents the interests of the banking industry participants and enforces a code of practice as agreed by members. However, the establishment of an all inclusive User Group would help in promoting the interests of users and BI.
14. CSDs and central counterparties should have objective and publicly disclosed criteria for participation that permit fair and open access.	Participation criteria are disclosed and differentiate four types of entities: banks, sub-registries, primary dealers and securities issuers. The criteria that apply to BI-RTGS and BI-SSSS access appear to be harmonized to

Responsibility	Comments
	support DVP arrangements, particularly for bank participants
15. While maintaining safe and secure operations, securities settlement systems should be cost-effective in meeting the requirements of users.	The operational cost structures and approaches to cost recovery are virtually the same for RTGS and BI-SSSS. The central bank judges the cost efficiency of BI-RTGS against broad national payment system efficiency and effectiveness needs. Currently, the BI aims to recover its fixed costs for operating BI-RTGS but not variable costs; it is estimated that the fixed cost component accounts for approximately 90 percent of total cost.
16. Securities settlement systems should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	Communications standards are adaptations of SWIFT standards that meet the needs of the domestic market and provide a basis for supporting international communications.
17. CSDs and central counterparties should provide market participants with sufficient information for them to accurately identify the risks and costs associated with using the CSD or central counterparty services.	Disclosure framework requirements are being met.
18. Securities settlement systems should be subject to regulation and oversight. The responsibilities and objectives of the securities regulator and the central bank with respect to SSSs should be clearly defined, and their roles and major policies should be publicly disclosed. They should have the ability and resources to perform their responsibilities, including assessing and promoting implementation of these recommendations. They should cooperate with each other and with other relevant authorities.	The entities with regulatory cognizance over BI-SSSS and the participants in the markets supported by the system are BI and the MOF, including Bapepam-LK. There is a statute-based definition of these entities' respective responsibilities. The placement of business owner and oversight responsibilities for BI-SSSS within the same organizational unit poses separation of duties issues, in that it is difficult to implement objective oversight and to overcome possible perceptions that oversight is not being carried out in an objective manner.
19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlement.	Currently, there are no cross border links.

Recommended action plan and authorities' response

Recommended action plan

Table 13. Recommended Action Plan to Improve Observance of the RSSS

Reference Recommendation	Recommended Action
Legal risk	
1. Securities settlement systems should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	Explicitly recognize "netting" as a legal process and strengthen the provision dealing with bankruptcy of a non bank participant. Finality of settlement also needs to be legalized.

Reference Recommendation	Recommended Action
Pre-settlement risk	
2. Confirmation of trades between market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.	The absence of information pertaining to the actual percentage of trades confirmed in the secondary market within T+0 of trade execution poses a challenge in assessing the degree of observance. Consider introducing measures to formally collect this information. This should be done in collaboration with Bapepam-LK.
3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be assessed.	Consider undertaking a study to evaluate the costs and benefits of accelerated settlement
4. The benefits and costs of a central counterparty should be assessed. Where such a mechanism is introduced, the central counterparty should rigorously control the risks it assumes.	Given that BI is considering introducing Model 1 and Model 2 DVP settlement (which involve netting) with the second generation systems, BI should carry out a cost benefit analysis assessment of a CCP.
5. Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.	Consider introducing measures that promote active securities lending. Authorities may benefit from a review of the tax regulations that appear to be hampering the development of the repo market (through double taxation) supported by the Master Repurchase Agreement as agreed by the Dealers Association in Indonesia.
Settlement risk	
9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems, should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest payment obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements limits.	Consider measures to minimize the incidence of security related transactions in RTGS that are discarded from the RTGS queue at the end of the day due to insufficient funds.
Other issues	
16. Securities settlement systems should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	It is noted that BI has made a decision to use SWIFT in the second generation systems; thus SWIFT ISO messaging standards will be used for category five messages which pertain to securities.
18. Securities settlement systems should be subject to regulation and oversight. The responsibilities and objectives of the securities regulator and the central bank with respect to SSSs should be clearly defined, and their roles and major policies should be publicly disclosed. They should have the ability and resources to perform their responsibilities, including assessing and promoting implementation of these recommendations. They should cooperate with each other and with other relevant authorities	BI should strengthen and formalize cooperation with other regulatory authorities in the market. Consider separating the BI-SSSS operational function from the oversight function. BI should also proceed with the second generation replacement of the BI-RTGS and BI-SSSS in 2011 as planned.

Authorities' response to the assessment

147. In general, Bapepam-LK agrees with the observation on the lack of explicit and granular legal basis embedded in the Capital Market Laws in the areas of DVP, the irrevocability and settlement finality of settlements executed within the KSEI system.

148. They noted that concrete efforts will be put in to address the gaps identified. In the immediate term, efforts are being made to ensure that the “dedicated liquidity” within the KSEI system is the final position from a legal and business perspective and payment banks must guarantee balances in the system to ensure the technical DVP becomes a true real time DVP both in the KSEI and the payment banks’ systems. Efforts are also being put in place to move towards greater real time synchronization among the payment banks.

149. Bapepam-LK will amend its regulations together with the respective SRO’s to explicitly lay out the provisions for the DVP settlement finality and irrevocability once DVP have been executed by the respective counter-parties to the transaction.

150. In the long term, the authorities aim to phase out the usage of payment banks and integrate KSEI fully into the RTGS system on the payment leg of the transaction. This will require BI’s approval for KSEI to become an entity in the RTGS system to handle the payment leg transactions with respect to all payment agents in the RTGS system.

151. With regard to settlement cycles (RSSH 3), Bapepam-LK believes that the current arrangements comply with best practice even though the T+3 settlement cycle is not met for the negotiated market. The authorities advised that some of the concerns highlighted with regard to RSSH 4, are in the process of being addressed and these include a review of access criteria, enhancement of risk management arrangements, and increasing the distance between the primary and the secondary sites.

152. The authorities advised that KSEI is in the process of developing straight through process (STP) capabilities within C-BEST in order to increase efficiency by replacing some manual processes currently in place. Also, the harmonization of operating hours between the RTGS system and KSEI is being considered.

153. With respect to RSSH 18, the central registry for government securities (BI-SSSH) is appointed via government bond regulation issued by the MOF. The members of the system are banks and custodian institutions. KSEI as one of the sub registry of BI-SSSH is also the central depository for other instruments besides government securities. Bapepam-LK has full regulatory and supervisory responsibility for all custodian functions in Indonesia. BI and KSEI currently undertake daily reporting of all transactions executed under the BI-SSSH and C-BEST to our central trade reporting system (PLTE) via the X.M.3 rule which provides Bapepam-LK the full data of all trades executed in the Indonesian bond market.

154. There is an on-going discussion between Bapepam-LK, the directorate general of debt management and BI on the possibility of merging the two central depositories for KSEI into

a single depository for all instruments. In addition, there is a formal arrangement (MOU) between Bapepam-LK and BI since April 30, 2010 to facilitate greater information sharing and cooperation between the two institutions.

Key findings and Recommendations: Equities and Corporate Bonds

155. The legal framework governing the clearing and settlement operations of the equities and corporate bonds market supports some, but not all, of the key elements of the clearing and settlement processes. The following concepts are not appropriately addressed in the legal framework: (i) finality of settlement—it is not specified when a trade is considered to be irrevocable and unconditional; (ii) DVP is not defined in the rules of KSEI for all types of transactions and the legal framework does not provide guidance on the cash settlement arrangements within payment banks; and (iii) netting is not legally recognized in any of the statutes. The legal framework should include these three concepts, in line with international definitions.

156. The settlement cycle of the stock exchange segment ‘negotiated market’ has no standardized settlement process. Thus, settlement can take place later than T+3, if participants agree. The segment is mainly used for block trades. In 2009, 17 percent of the total value of transactions was concluded in the negotiated market.

157. KPEI, being the CCP for all stock exchange trades, broadly observes the requirements for CCPs. It has addressed legal risk, financial risk, and operational risk in its rules, and financial and operational frameworks. Nevertheless, the CCP should make further improvements in regard to legal risk, access criteria, financial risk methods, and operational procedures.

158. Cash settlement takes place in the accounts of four dedicated “payment” banks. These payment banks have to fulfill a range of requirements set by KSEI to ensure that the cash settlement poses little or no credit or liquidity risk to its members. Settlement volumes are sufficiently spread over the different payment banks. Nevertheless, the introduction of cash settlement in the BI-RTGS system should be explored, since this will reduce the risk of the capital market as a whole. The use of payment banks means that all market participants are exposed to settlement bank risk, which is the risk that one of the payment banks may fail.

159. KSEI has developed a settlement process in which securities and cash transfers occur simultaneously in the C-BEST system. The technical framework ensures DVP. However, since KSEI has no real cash account in C-BEST, the C-BEST accounts only mirror the cash accounts at the payment banks. The legal framework does not provide enough comfort for the cash transfer in C-BEST as being a final transfer. This comfort is necessary, since a time lag exists between the securities transfer in C-BEST and the real cash transfer in the payment banks to the participant account and from the participant account to its own or client accounts.

160. There is a need to review this structure in a manner that ensures that all systems, especially the two CSDs are regulated in a comparable way. Bapepam-LK has

regulatory responsibilities over BI-SSSS, as well as over IDX, KPEI and KSEI, whereas BI has an oversight responsibility over BI-SSSS, a system which it owns. Bapepam-LK and BI should exercise their respective responsibilities in a cooperative way, for example in a covenant or a memorandum of understanding.

Table 14. Summary Observance of the CPSS-IOSCO Recommendations for Equity and Corporate Bond Securities Settlement Systems

Responsibility	Comments
Legal risk	
1. Securities settlement systems should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	The legal framework supports some, but not all, of the key elements of the clearing and settlement process. To fully observe this recommendation “netting”, “finality” as well as “delivery versus payment” should obtain explicit legal recognition, in line with international definitions.
Pre-settlement risk	
2. Confirmation of trades between market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.	Confirmation of trades conducted on the stock exchange occurs in real time. However, confirmation of trades for corporate bonds, conducted OTC, is estimated to be 68 percent on the same day. A watertight system for trade confirmation reporting on T+0 should be implemented.
3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be assessed.	Settlement cycles for equities and corporate bonds vary from T+0 to T+3, which is in line with the recommendation. However, settlement of trades conducted on the negotiated market segment of IDX may take place later than T+3 if participants agree to do so.
4. The benefits and costs of a central counterparty should be assessed. Where such a mechanism is introduced, the central counterparty should rigorously control the risks it assumes.	KPEI, being the CCP for stock exchange trades, has addressed legal risk, financial risk and operational risk in its rules, and financial and operational framework. Nevertheless, it is recommended that the CCP further improve its access criteria, financial risk methods, and operational procedures.
5. Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.	Securities lending and borrowing is available for the equity trades conducted on the stock exchange. Such a mechanism is not available for corporate bonds traded OTC. The securities lending and borrowing service of KPEI should be extended to corporate bonds.
Settlement risk	
6. Securities should be immobilized or dematerialized and transferred by book entry in CSDs to the greatest extent possible.	KSEI holds securities in dematerialized form and transfers them electronically. The dematerialization and electronic holding is covered by statute.
7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves delivery versus payment.	The C-BEST system of KSEI provides for technical DVP. However, the legal framework does not support this fully.
8. Final settlement should occur no later than the end of	Settlement on a DVP basis occurs within the day of

Responsibility	Comments
the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.	settlement. However, finality is not a concept which is supported by the legal framework.
9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems, should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest payment obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements limits.	There is no deferred net settlement within the KSEI, nor does KSEI extend intraday credit to participants.
10. Assets used to settle the cash leg of securities transactions between CSD members should carry little or no credit risk. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of a settlement bank.	Four payment banks are responsible for the cash settlement leg of the securities settlement. The structure observes the requirements of the recommendation. Nevertheless, the authorities should consider analyzing the possibility of introducing cash settlement in the BI-RTGS system, since this will reduce the risk of the capital market as a whole.
Operational risk	
11. Sources of operational risk arising in the clearing and settlement process should be identified and minimized through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Contingency plans and back-up facilities should be established to allow for timely recovery of operations and completion of the settlement process.	The C-BEST system of KSEI observes the requirements of the recommendation. We strongly encourage measures to prevent the simultaneous unavailability of the primary and secondary site in the future, as occurred on 12 November 2009. We encourage consideration of more geographically disparate production and back-up processing for the IDX, KPEI, and KSEI systems.
Custody risk	
12. Entities holding securities in custody should employ accounting practices and safekeeping procedures that fully protect customers' securities. It is essential that customers' securities be protected against the claims of a custodian's creditors.	Sub-registries holding securities on behalf of individuals are required to maintain an internal system that clearly records these holdings, separating their own holdings from those of clients. This separation of assets ensures that the clients' assets are safeguarded in the event of a sub-registry's insolvency
Other issues	
13. Governance arrangements for CSDs and central counterparties should be designed to fulfill public interest requirements and to promote the objectives of owners and users.	The governance arrangements of KSEI and KPEI observe the requirements of the recommendation.
14. CSDs and central counterparties should have objective and publicly disclosed criteria for participation that permit fair and open access.	In general, we recommend that the access and exit criteria of KPEI focus more on the specificities of membership of the CCP.
15. While maintaining safe and secure operations, securities settlement systems should be cost-effective in meeting the requirements of users.	The budget plans of KSEI and KPEI are subject to the approval of Bapepam-LK. Any profits should be used to enhance clearing and settlement systems. User satisfaction surveys are conducted on an annual basis.
16. Securities settlement systems should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	KSEI as well as certain market participants use SWIFT. Not all market participants are willing to migrate to SWIFT however. Migration of the current system to SWIFT for the full market is considered to be difficult.

Responsibility	Comments
17. CSDs and central counterparties should provide market participants with sufficient information for them to accurately identify the risks and costs associated with using the CSD or central counterparty services.	Disclosure framework requirements are being met.
18. Securities settlement systems should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.	The structure of regulation should be reviewed to ensure that all systems, especially the two CSDs are regulated in a comparable way. This means that BI should consider including KSEI and KPEI in their oversight scope. Bapepam-LK and BI should agree formally on the cooperation and coordination of their different responsibilities.
19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlements.	Currently, there are no cross border links.

Recommended Action Plan and Authorities' Response

Recommended action plan

Table 15. Recommended Action Plan to Improve Observance of the RSSS

Reference Recommendation	Recommended Action
Legal risk	
1. Securities settlement systems should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	Include the concepts of netting, finality, and DVP in the legal framework for all types of transactions in line with international definitions.
Pre-settlement risk	
3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be evaluated.	Investigate whether T+3 should also apply to the stock exchange trades conducted in the negotiated market.
4. The benefits and costs of a central counterparty should be assessed. Where such a mechanism is introduced, the central counterparty should rigorously control the risks it assumes.	The CCP would benefit from having explicit legal provisions for finality and DVP. With regard to access criteria, the risk profile of the CCP will improve if only the largest, best capitalized securities companies are clearing members of the CCP. The financial risk calculations of the CCP could benefit from using historic price movements and historic volatility to calculate margin, taking into account the characteristics of the different types of securities. KPEI should introduce back tests for its margin model as well as regular tests to check the adequacy of all its resources in case of default of the clearing member with the largest exposure. Furthermore, a cap needs to be introduced for the replenishment of the guarantee fund by clearing members, in case of a loss which cannot be covered by the existing guarantee fund. Finally, the operational system would need procedures to avoid data loss. Consideration should be given to a larger distance between the primary and secondary sites.

Reference Recommendation	Recommended Action
7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves delivery versus payment.	To observe this recommendation, DVP should also appropriately reflected in the legal framework.
8. Final settlement should occur no later than the end of the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.	The legal framework should explicitly state the moment at which both the securities leg and the cash leg are irrevocable and unconditional. For stock exchange trades the moment should be specified, taking into account that the KPEI account within KSEI is used during the settlement process.
Other issues	
16. Securities settlement systems should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	All KSEI members should become members of SWIFT or should use domestic communication procedures that can be easily converted into SWIFT messages.
18. Securities settlement systems should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.	Bapepam-LK and BI should strengthen and formalize cooperation in the market.

Authorities' response to the assessment

See authorities' response stated in pages 79-80, paragraphs 147-154.

APPENDIX I: STRESS TEST METHODOLOGY AND RESULTS

161. **This appendix summarizes the methodology and findings of the stress tests carried out as part of the Indonesia FSAP.** They aim to assess the resilience of the Indonesian banking sector to a range of “extreme but plausible” shocks.³³ The stress tests involved both scenario analysis and sensitivity analysis. The scenario analysis was used to infer banks’ vulnerability to credit risk, while the sensitivity analysis focused on banks’ vulnerability to a range of market risk shocks, but also incorporated liquidity and contagion effects. For the scenario analysis, BI designed the baseline scenario, while the stress scenario was designed by the FSAP mission. The sensitivity analysis was jointly defined by BI and the mission. Both top down (TD) and bottom up (BU) methodologies were used for the Indonesian FSAP.

162. **The TD stress tests were conducted by the IMF team in collaboration with BI’s stress testing team.** The TD stress test covered all banks. Supervisory return data for all 121 banks in the system were employed to assess the impact of the stress scenario and single-factor shocks on banks’ earnings and capital. Due to data limitations, the scenario analysis included 115 banks, while the sensitivity analysis covered all banks. The results are presented in aggregate form, thus ensuring confidentiality and anonymity of individual bank results. In addition, the results are differentiated by bank ownership and size.

163. **The TD stress tests were informed by the BU stress test.** The BU covered the 12 largest Indonesian banks. These banks account for more than 60 percent of banking sector assets, and are therefore seen as systemically relevant.³⁴ While including a range of banks with different ownership structures, this group is dominated by the state-owned commercial banks (SOCBs) that account for more than half this group’s assets. The 12 participating banks were asked to estimate the impact of the shocks on their balance sheets, using their internal risk management frameworks. The results were discussed with the banks. Some were asked to revise the results to more accurately reflect the severity of the macroeconomic scenario. The final BU results were compared with those that emerged from the TD stress tests. For the scenario analysis, the results of 8 banks were used, while the results of the 12 participating banks were used in the sensitivity analysis.

Macroeconomic Scenario Analysis

164. **The scenario analysis involved assessing the impact of a severe recession on the banking system.** The type of shock that would negatively impact the Indonesian economy

³³ As the stress tests aim to identify systemic risk, BI and the FSAP team decided to exclude non-bank financial institutions and rural banks. Rural banks account for about 1 percent of total financial sector assets, and are subject to different prudential regulations and supervisory oversight.

³⁴ Four of the top 16 banks were excluded. These include three foreign bank branches and one state-owned bank specialized in housing finance.

was actively discussed with the stress testing team in BI. Past historical episodes of stress were reviewed. While the 1997/98 crisis would provide a natural starting point for calibrating an adverse scenario, it was deemed too severe to be plausible. The BI team proposed a real GDP shock of negative 3 percent. The recession would be triggered by a commodity price shock combined with a loss in investor confidence that would cause capital outflows and pressures on the exchange rate. Rising inflation and interest rates would erode real income and negatively impact domestic demand, leading to a sharp decline in economic activity.³⁵ The FSAP team agreed generally with the shocks, but was of the view that BI's scenario entailed too quick a recovery. A more credible protracted recovery would generate a steeper decline in real GDP, with real GDP declining by 5 percent. This scenario would be triggered by a sharp rise in energy and food prices combined with a sudden loss of investor confidence. As a result, domestic demand is severely depressed, market sentiment turns sour, capital outflows ensue, and the exchange rate comes under pressure. The shock was designed to begin in the fourth quarter of 2009, with most of the impact being felt during the first four quarters year of the scenario. The scenario runs over three years through to the final quarter of 2012 (Table 1).

Table I.1. Baseline and Stress Scenario

	Baseline Scenario			
	2009	2010	2011	2012
Real GDP growth (in %)	4.2	4.3	5.4	6.0
Headline inflation (in %)	5.0	5.8	5.6	4.9
Interest rate (in %)	7.1	6.1	5.7	5.9
Exchange rate (Rupiah/USD, period average)	10490	9937	10181	10481
	Stress Scenario			
	2009	2010	2011	2012
Real GDP growth (in %)	3.5	-4.9	0.9	4.2
Headline inflation (in %)	7.2	18.3	5.0	4.8
Interest rate (in %)	10.4	20.9	8.9	6.1
Exchange rate (Rupiah/USD, period average)	11520	13415	12526	11696

Source: BI and IMF projections.

³⁵ Oil prices would increase to USD 120 per barrel in the first quarter of the shock, from previous levels of USD 75 per barrel and against a baseline projection of USD 100 per barrel. As a result of higher energy and food prices and the sharp exchange rate depreciation, inflation would increase to 20 percent (y/y) at the end of the second quarter of the shock. The scenario includes an endogenous interest rate policy rule (i.e., Taylor rule) and some qualitative judgment in adjusting the path for nominal interest rates, generating a significant increase in interest rates.

165. **The Asian crisis provided the natural starting point for calibrating the macro stressed scenario.** The stress scenario was designed as a low probability, but plausible event. It amounts to just over a third of the crisis of the late 1990s (in terms of GDP contraction), reflecting the significant structural improvements in the Indonesian economy. It is, nonetheless, deliberately designed to introduce a substantial amount of risk into the economy in order to inform the FSAP team's assessment of the underlying resilience of the Indonesian banking system. The size of the shock—GDP contraction of 5 percent—is large compared with the stressed scenarios for recent FSAP exercises.

Comparisons of Stress Test Scenarios of Real GDP Growth

		2007	2008	2009	2010
Latvia (FSAP Update 2007)	Baseline	10.5	7.0	4.0	3.0
	Downside I - Negative capital account shock but keep	6.5	1.0	1.0	2.0
	Downside II - Large negative capital account shock t	2.5	-6.5	-4.0	2.0
Macedonia (FSAP Update 2008)	Baseline	...	5.0	...	...
	Scenario I - Global assessment of emerging market	...	3.5	...	...
	Scenario II - Regional instability	...	2.0	...	...
	Scenario III - Currency crisis	...	-5.0	...	...
	Scenario IV - Appreciation pressures	...	7.0	...	...
Romania (FSAP Update 2008)	Baseline	...	6.8	5.8	5.6
	Scenario I - Economic slowdown	...	6.0	4.1	4.4
	Scenario II - Sharp contraction resulted from the glob	...	4.9	-1.3	1.1
South Africa (FSAP Update 2008)	Deviations from baseline	...	-3.7	-0.7	2.5
Dominican Republic (FSAP Update 2009)	Baseline	...	...	0.5	...
	Severe-shock scenario	...	...	-1.2	...
Jordan (FSAP Update 2009)	Baseline	...	...	t+1	...
	Scenario I - Domestic and external strain	...	...	1.5	...
	Scenario II - Fully fledged crisis	...	...	-1.5	...

Source: MCM Stress Testing Database.

166. **To map the scenario into default risk, the TD scenario analysis built on model-based projections of non-performing loan (NPL) ratios.** To this end, the FSAP team and BI worked closely to refine BI's existing macro credit risk model. Using a dynamic panel data methodology, the model estimates the sensitivity of NPL ratios (as proxy for credit default risk) to changes in key macroeconomic variables while controlling for the distortionary effect resulting from the bad asset purchase program of the Indonesian Bank Restructuring Agency (IBRA) between 1999 and 2000 on the parameter estimates. Using the NPL ratio projections generated by this model, bank losses were estimated by assuming a loss rate of 50 percent. This is not overly conservative given that IBRA reported realized loss rates as high as 80 percent on the distressed debt purchased from the intervened banks. The TD scenario analysis abstracts from banks' ability to generate income throughout the

downturn. It assumes zero operating profits, and that all provisions are fully charged against capital.

167. Translating the scenario into key risk factors proved challenging for most BU banks. While most banks, using their business plans, were able to make reasonable projections under the baseline scenario, many faced difficulty mapping the stress scenario into default risk over the shock horizon:

- Only one bank applied an economic capital or risk-based approach using its internal loan grading system to classify assets into different default risk categories, allowing for more granularity than BI's asset classification buckets.
- Two banks used cash flow analysis to determine borrowers' ability to pay in the face of stressed conditions to derive NPL ratios.
- About half of the banks used regression analysis, where the limited sophistication of the models undermined the accuracy and usefulness of the results.³⁶
- Finally, for the SME and retail portfolio, four out of the 12 banks took the NPL ratio profile provided by the FSAP team and mapped it directly into their balance sheet.

168. The first round of the BU results showed a lack of internal consistency. Banks were generally overly optimistic about credit growth, margins, and ability to raise capital during times of economic stress. The majority of banks assumed that their balance sheet would continue to expand rapidly, recording strong profits at the peak of the shock. Similarly, few banks were able to integrate market risk into their loss calculations. The FSAP stress test team used the second mission to work with the banks to generate more plausible outcomes. Eight banks ultimately generated a plausible set of results that were used to inform the TD scenario analysis (Table 2).

169. Notwithstanding the limitations surrounding the BU exercise, the results provided a valuable qualification for the TD scenario analysis. In particular, they provided insights into how banks' earnings would be impacted under stress, such as net interest income and margins, but also the behavior of non-interest earning components such as commission and fees, and by extension profit and loss. This is a relationship that is not captured in the TD analysis, which assumes zero operating profits throughout the shock period.

170. More generally, the BU exercise provided a number of insights into the risk management capabilities of the larger Indonesian banks. There is a wide diversity of

³⁶ Most models excluded key variables, were based on too short time series that did not capture a full economic cycle, and generated results that were intuitively incorrect, with perverse effects for key credit risk determinants.

stress testing capabilities among the 12 participating banks. Most were able to undertake meaningful sensitivity analysis. Similarly, they were able to assess their exposure to concentration risk arising from the failure of their largest borrowers. However, few banks were able to fully evaluate the adverse macro-economic scenario that was chosen for the FSAP. In particular, there were significant shortcomings in the methodologies used by many of them to assess credit risk regardless of whether these were model based and/or incorporated expert judgment. There was also a general reluctance to make realistic assessments about the operating environment in terms of loan growth, margins and access to capital.

Table I.2. Summary of Scenario Analysis Results for 8 BU Banks
(Based on end-September 2009 data for commercial banks)

	Bottom Up 1/			Top Down 1/		
	Number of Banks			Number of Banks		
	worst	average	CAR < 8 %	worst	average	CAR < 8 %
Pre-shock CAR (end-September 2009)	13.1	15.3	0	13.1	15.3	0
Post-shock CAR (excl. profits)	-0.6	5.4	7	-10.4	3.5	5
CAR impact (excl. profits)	-14.2	-9.9		-24.4	-11.8	
Post-shock CAR (incl. profits)	5.2	8.4	3			
CAR impact (incl. profits)	-10.4	-6.8				
Pre-shock NPL ratio	5.7	4.0		5.7	4.0	
Post-shock NPL ratio	30.3	19.2		62.6	32.1	
Impact NPL ratio	24.6	15.3		58.6	28.2	
Pre-shock NPL ratio SME	8.7	5.8		8.7	5.8	
Post-shock NPL ratio SME	46.2	24.7		35.0	23.6	
Impact NPL ratio SME	39.6	18.8		28.4	17.8	
Pre-shock NPL ratio Retail	3.6	2.2		3.6	2.2	
Post-shock NPL ratio Retail	38.7	9.4		10.4	7.2	
Impact NPL ratio Retail	36.0	7.1		8.1	4.9	

Source: IMF staff and banks' calculations.

1/ This only includes the 8 banks that were able to make a meaningful impact assessment of the simulated stress scenario; the other four banks participating in the BU are excluded.

Sensitivity Analysis

171. **The sensitivity analysis involved market risk and concentration risk shocks and also included one multifactor shock.** Focusing on market risk shocks, the sensitivity analysis covered interest rate, exchange rate, liquidity, and interbank contagion risks. Additionally, it included credit concentration risk, simulating the collective default of the system's largest borrowers in the TD and the individual banks' largest borrowers in the BU. Equity prices were not shocked as banks are by law restricted from taking a trading or Available for Sale (AFS) position in equities. Similarly, the sensitivity analysis does not include a shock to real estate prices due to the lack of market data. The types and magnitudes of the various shocks are included in Tables I.3 and I.4, which summarize the TD and BU sensitivity results, respectively.

172. **The market risk shocks were calibrated on the statistical properties of key financial series.** Using daily interest rate series for SBI bills and SUN bonds for different maturities, and spot exchange rate series between 1997 and 2009, the shocks were calibrated

on values observed in the tail of the distribution. The tail risks were not only defined by the extreme values, but also on a more qualitative assessment of the likelihood of the shocks occurring (i.e., using judgment that calibrated parameters reflected plausible realizations). Therefore, the shocks were defined by taking two standard deviations from the mean and adjusted where deemed necessary. The shocks roughly correspond to about half to two-thirds the magnitude of the movements witnessed in the key variables during the 1997-98 crisis.

173. The shocks in the TD and BU sensitivity analyses are largely identical. Both approaches applied the same interest rate and exchange rate shocks to banks' end-September 2009 balance sheet positions. However, comparability of the results is constrained by either inconsistent definitions of the exposures or different reporting dates for the exposures between the two approaches.³⁷ Regarding concentration risk, the TD estimated the impact on bank capital of a collective default of the largest 10 system-wide borrowers, while the BU did so for the largest 10 borrowers for each individual bank. Interbank contagion risk and liquidity risk were only included in the TD sensitivity analysis.

174. The liquidity shock was calibrated on the short-lived episode of liquidity stress that was experienced during September and October 2008. The scenario differentiates daily deposit withdrawal rates by currency denomination (local vs. foreign currency deposits) and by bank size.³⁸ The shock assumed that banks would face restrictions in accessing funding in the interbank market and face more difficulty in liquidating assets viewed as less liquid and lower rated. Hence, haircuts were also assumed on the less liquid assets to simulate possible losses that a bank may face in the event of an unexpected need to liquidate assets in order to meet deposit outflows.

175. The TD sensitivity analysis also included contagion risk through banks' exposures in the interbank market. The scenario simulated the failure of each of the largest banks to assess its impact on the system. The main channel of contagion was the interbank exposures. Exposure to withdrawal of international credit lines was not considered, given Indonesian banks' low balance exposure to this risk.

³⁷ The TD interest rate risk banking book data excluded off-balance sheet items and only captured re-pricing risk for loans on a contractual basis that are rolled-over within the next year, as it does not differentiate between floating and fixed-rate instruments. Regarding the exchange rate shock, the maximum NOP exposures were measured at different points in time, with the BU using the largest exposure for each individual bank between July-September 2009, and the TD using the largest system-wide exposure as a reference point and applying the shock to the NOP of the individual banks at that time (July 2009).

³⁸ The daily withdrawal rates were calibrated on the observed rate of deposit outflow between September and October 2008, when the system was experiencing a liquidity shock resulting primarily from global contagion as the failure of Lehman Brothers temporarily affect liquidity conditions in the Indonesia but also impacted depositor confidence. The largest banks, in particular the SOCBs, witnessed net inflow of deposits, primarily coming from the mid-sized banks in the system.

176. **In sum, the sensitivity analysis showed that Indonesian banks are relatively resilient to market shocks.** This can largely be explained by banks' small proprietary trading positions; tight management of the net open foreign currency positions; the use of plain vanilla interest rate and foreign currency hedging instruments; and the regulatory restrictions on banks' risk exposure to equities and structured products. Furthermore, the sensitivity analysis show that:

- Indonesian banks are most vulnerable to interest rate shocks on their banking book. The TD results show that a parallel upward interest rate shock would result in 22 banks, accounting for one fourth of the system, falling below BI's minimum regulatory capital requirement. On average, system CAR falls by 3 percentage points (size-weighted). Private banks are more vulnerable than government owned banks to repricing risk, mainly because of their lower holdings of short-term, liquid assets. However, the BU provided important qualifications to these results. The BU indicated that none of the largest banks would fall below the minimum capital requirement. The main factor explaining the difference is that participating banks in the BU exercise included the entire maturity structure of their assets and liabilities and were thus able to better incorporate time-to-repricing risk in their assessments.³⁹
- Banks have limited exposure to interest rate risk on their trading book. No bank falls below the minimum capital requirement. A 20 percent price shock to government bonds reduces the average CAR of the system by 1.7 percentage points. Larger banks are more exposed to the shock given their higher holdings of government securities. But overall the results reflect banks' low holdings of fixed income securities in their trading book, with only 6 percent of their portfolio of government securities held in their trading book. Exposure to foreign exchange risk is negligible. Most banks tightly manage their net open position (NOP) limits.

³⁹ TD stress test, because of data constraints, used remaining maturity on contractual basis. It also only included balance sheet items and gaps for interest rate sensitive assets and liabilities up to one year. In the BU, some banks used the economic value approach, which takes into account the entire future cash flow generated by banks' banking book positions.

Table I.3. Summary of Top Down Sensitivity Analysis Results
(Based on end-September 2009 data for commercial banks)

Shock Type	Shock Size				CAR Impact		CAR	
					Average	Worst	Level	Number of Banks CAR < 8 %
Baseline (pre-shock)								
Interest rate Risk (Banking Book)								
	Maturity Buckets (in months)						17.9	2
	< 1m	1m - 3m	3m - 6m	6m-12m				
1 Parallel shift of the Rp yield curve In basis points	1000	1000	1000	1000	-3.1	-11.8	14.8	22
2 Parallel shift of the Rp yield curve In basis points	-300	-300	-300	-300	0.5	-58.7	18.4	2
3 Steepening of the Rp yield curve In basis points	50	100	150	200	-0.1	-0.8	17.8	2
4 Tilting of the Rp yield curve In basis points	400	350	300	250	-1.3	-4.6	16.6	5
5 Parallel shift of the Forex yield curve In basis points	150	150	150	150	-0.1	-0.7	17.8	2
Government Bond (SUN) Price Risk (Trading and AFS book)								
1 Change in Government Bond (SUN) Price In percent		-20%			-1.9	-14.9	16.0	3
2 Change in Government Bond (SUN) Price excluding AFS holdings In percent		-20%			-0.2	-14.3	17.7	2
Exchange Rate Risk								
1 Rupiah depreciates against all other currencies In percent		50%			-0.1	-11.6	17.8	2
2 Rupiah appreciates against all other currencies In percent		-50%			-0.1	-2.0	17.8	1
Concentration Risk								
1 Loss rate on the top 10 largest system-wide borrowers In percent		-50%			-1.5	-18.0	16.4	6

Source: IMF and BI calculations.

Table I.4. Indonesia Stress Test Summary Results: Comparison of Bottom Up and Top Down Sensitivity Analysis
(Based on end-September 2009 data for commercial banks)

Type of Sensitivity Shock	Bottom Up 1/					Top Down 1/				
	Level		Impact		Number of Banks CAR < 8 %	Level		Impact		Number of Banks CAR < 8 %
	worst	average	worst	average		worst	average	worst	average	
Pre-shock CAR (end-September 2009)	13.1	16.2				13.1	16.2			
Interest Rate Risk Banking Book 2/										
1 Parallel upward shift of the Rupiah yield curve	10.5	14.0	-7.3	-2.2	0	6.3	12.4	-7.2	-3.8	2
2 Parallel downward shift of the Rupiah yield curve	11.7	16.9	-1.4	0.6	0	13.2	16.8	0.0	0.6	0
3 A steepening of the Rupiah yield curve	10.9	16.1	-2.2	-0.2	0	13.1	16.1	-0.3	-0.1	0
4 A tilting of the Rupiah yield curve	10.3	15.6	-2.8	-0.7	0	10.0	14.6	-3.1	-1.6	0
5 Parallel upward shift of the USD yield curve	12.8	16.5	-1.4	0.2	0	13.0	16.1	-0.2	-0.1	0
Interest Rate Risk Trading Book										
1 Parallel upward shift of the Rupiah yield curve	8.6	14.4	-7.1	-1.8	0					
2 Parallel downward shift of the Rupiah yield curve	11.7	16.6	-1.4	0.4	0					
3 A steepening of the Rupiah yield curve	10.9	16.1	-2.2	-0.2	0					
4 A tilting of the Rupiah yield curve	10.3	15.9	-2.8	-0.3	0					
5 Parallel upward shift of the USD, EUR, SGD yield curve	12.7	16.5	-1.5	0.3	0					
6 Parallel upward shift of the JPY yield curve	12.7	16.5	-1.5	0.3	0					
Foreign Exchange Rate Risk 3/										
1 Rupiah depreciation	12.0	16.5	-2.1	0.3	0	13.1	16.2	-0.5	-0.1	0
2 Rupiah appreciation	12.4	16.5	-1.8	0.2	0	12.2	16.2	-0.9	0.0	0
Concentration Risk										
1 The top 10 largest performing borrowers default 4/ <i>The top 3 largest performing borrowers default</i>	-23.9	7.3	-37.0	-9.0	5	11.2	14.8	-4.5	-1.4	0
2 Write-down of 50 percent of all equity participation	-18.0	11.8	-31.1	-4.5	1					
	12.5	16.1	-18.8	-1.5	0					
Multi-factor Shock 5/										
1 Rupiah depreciation and parallel increase in Rupiah yield	11.8	15.8	-2.4	-0.5	0					

Source: IMF, BI and banks' calculations

1/ The same banks are included in the bottom up and top downs.

2/ BU exposure includes off-balance sheet items that are excluded from the TD. Repricing is limited to residual maturity in the TD.

3/ Shocks are applied to the largest bank-specific NOP in during July-September 2009 in the BU, and to bank-specific NOP when the largest system-wide NOP was recorded in July 2009 in the TD.

4/ Largest borrowers refer to the largest system-wide borrowers in the TD and the largest bank-specific borrowers in the BU.

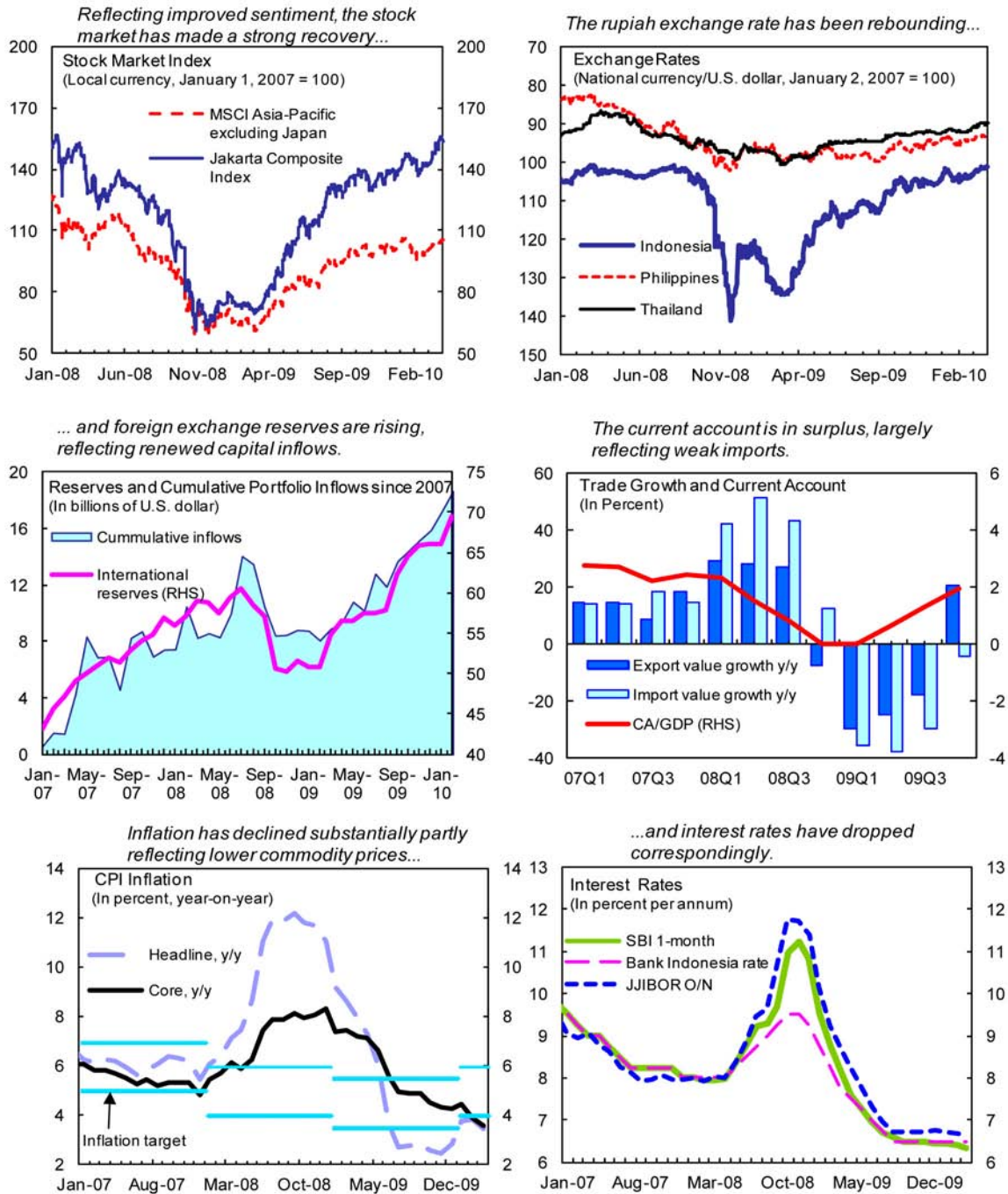
5/ Combination of a 30 percent Rupiah depreciation and a parallel increase in the Rupiah yield curve by +250 basis points.

Appendix II: Policy Interventions in Response to the Global Financial Crisis

Benchmark Policy Rates	Liquidity Support	Securities Market Support	Deposit Insurance/ Debt Guarantees	Bank Recap/Asset Purchases/Other Fiscal and Regulatory
BI's overnight repo rate cut by 200 bps to 10.25 percent and overnight deposit rate increased by 125 bps to 8.50 percent (September 16, 2008)	Reserve requirement for foreign currency deposits cut from 3 percent to 1 percent (October 13, 2008) and for rupiah deposits from 9.1 percent average to 7.5 percent (October 24, 2008)	Ban of short-selling, stock market shut down for three days, and trading in Backrie shares suspended (October 8–10, 2008). Short-selling allowed again in February 2009.	Deposit insurance coverage extended from IDR 100 million to IDR 2 billion for both local and foreign currency deposits (October 13, 2008)	Revision of mark-to-market valuation requirements on banks' bond holdings (October 9, 2008)
BI policy rate lowered by 25 bps to 9.25 percent and interest corridor narrowed to 100 bps, from 200 bps (December 4, 2008). BI policy rate lowered by 50 bps to 8.75 percent (January 7, 2009)	Banks allowed to use SBIs and government bonds worth 2.5 percent of their total rupiah deposits as secondary reserves (October 22, 2008)	New regulations for share buy-backs issued (daily limits scrapped and rule requiring shareholder approval removed); state firms to conduct share buy-backs (October 9, 2009)	Issuance of decree-in-lieu-of-law establishing a Financial Safety Net (October 15, 2008) Legislation is still under discussion by parliament.	All bond auctions suspended until end-2008; government and BI initiate buy-back program of government bonds (October 2008)
BI policy rate lowered by 50 bps to 8.25 percent (February 4, 2009)	Rupiah liquidity injected through repos, expansion of eligible collateral for short-term financing with BI, FX swap facilities expanded (October 13, 2008)		Banks allowed to sell export receivables to the central bank (December 8, 2008). A new export financing agency created to provide trade guarantees, insurance, and lending (December 17, 2008).	Monitoring of foreign exchange transactions strengthened by requiring documentation for underlying transactions in excess of \$100,000 (November 13, 2008)
BI policy rate lowered by 50 bps to 7.75 percent (March 4, 2009)	State firms required to repatriate export proceeds and transfer their foreign currency deposits to domestic banks (October 28, 2008)		Deposit Insurance Corporation took over Bank Century (November 21, 2008)	New regulation banning structured currency derivatives products (November 27 and December 17, 2008)
BI policy rate lowered in 5 steps of 25 bps to 6.50 percent (April 3, May 5, June 3, July 3, and August 5)	Commodities exporters required to use letters of credit issued by local banks in future, to make sure that foreign exchange remains onshore (announced January 9, 2009; implementation delayed till April 1)		BI revoked the business license of Bank IFI. Deposit Insurance Corporation to handle liquidation process (April 17, 2009)	Regulation to ease capital requirements on SME loans (February 2, 2009)
	Agreed with Japan to double the maximum bilateral swap to \$12 billion through Chiang Mai Initiative (April 5, 2009). Signed Chiang Mai Initiative Multilateralization agreement with ASEAN +3, establishing a fund of \$120 billion for currency swap. Indonesia's quota is \$12 billion. (December 28, 2009)			

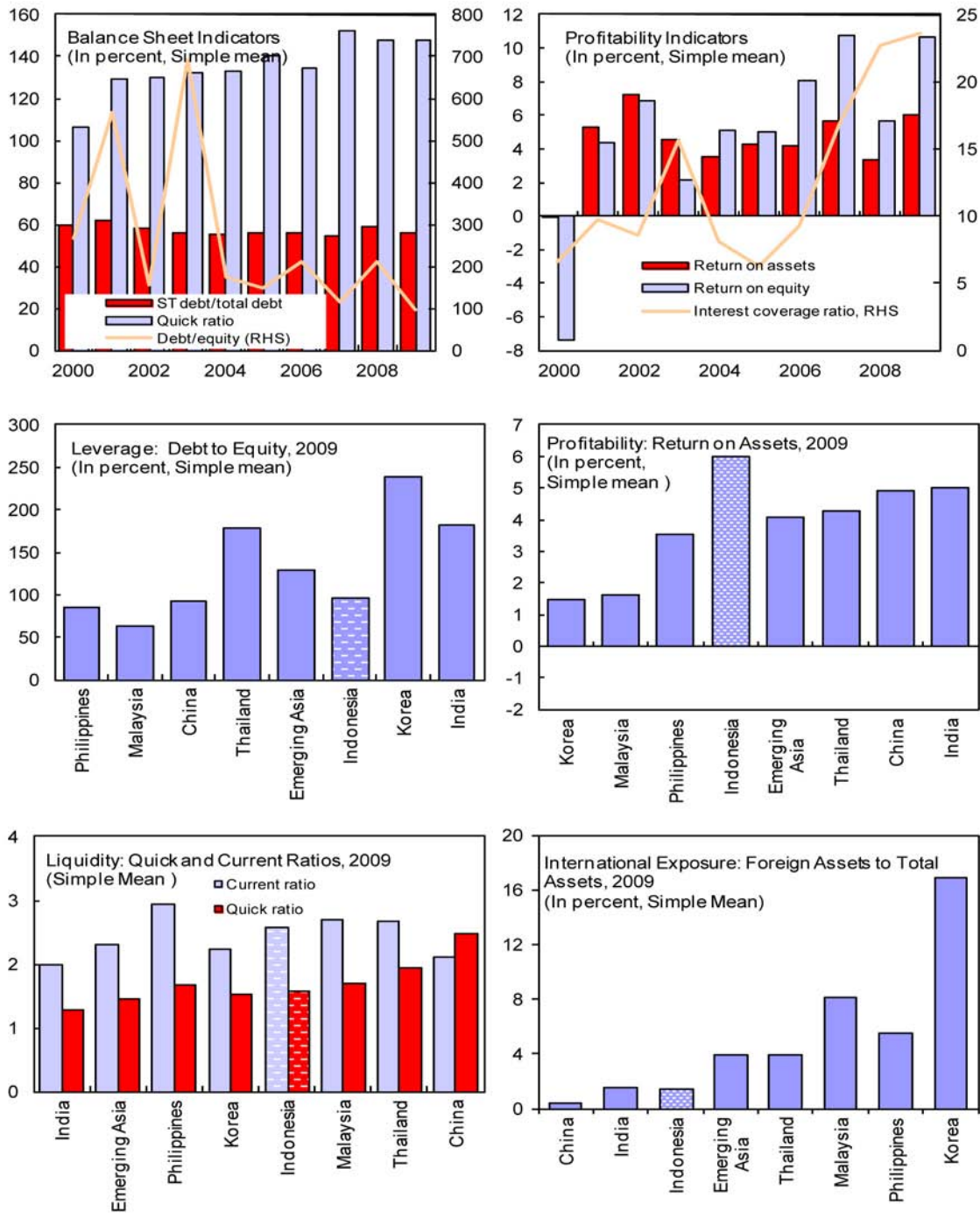
Appendix III. Figures and Tables

Figure III.1. Indonesia: Recent Economic Performance



Source: CEIC Data Co., Ltd.; Bloomberg L.P.; country authorities; and Fund staff calculations

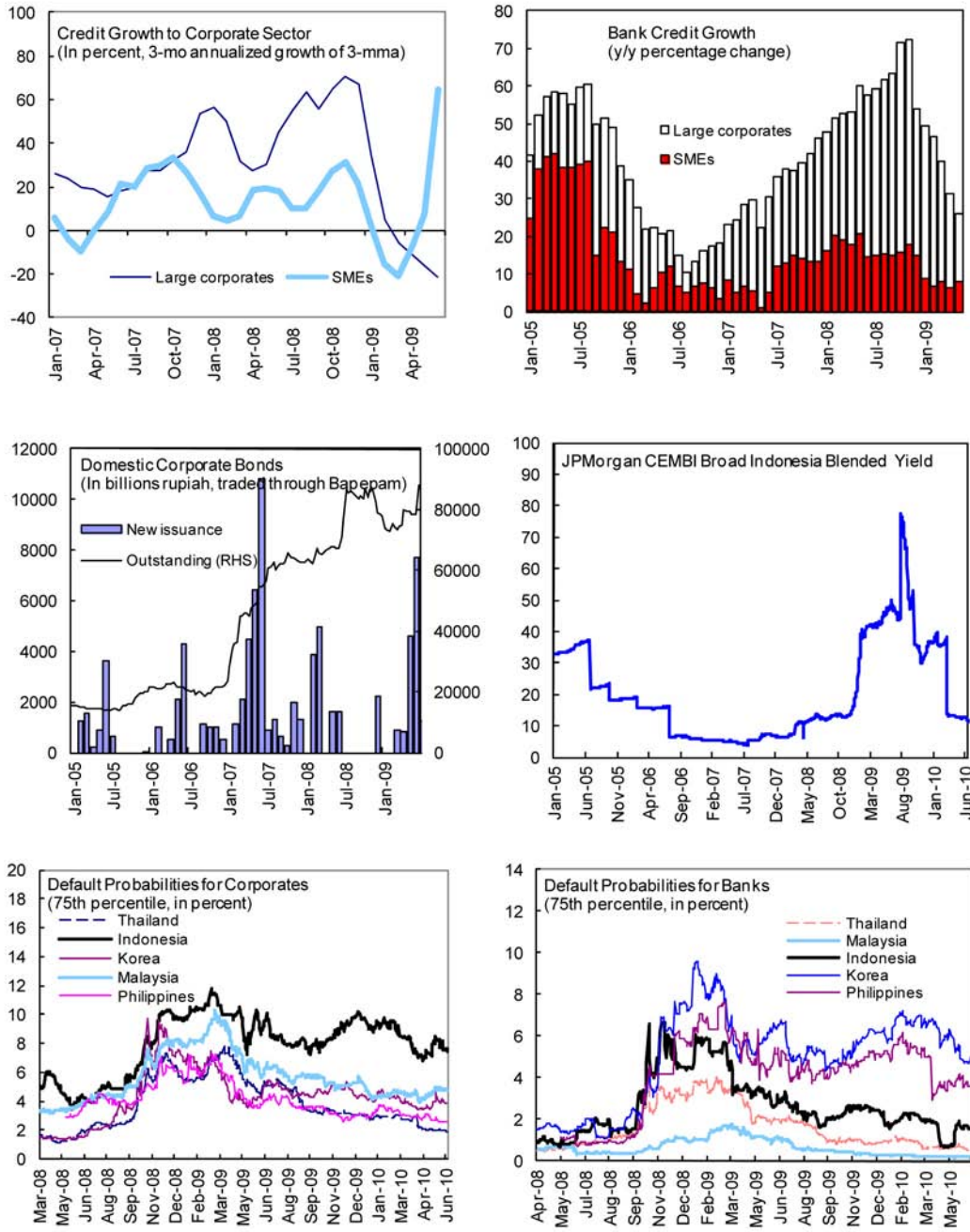
Figure III.2a. Corporate Sector Soundness Indicators^{1/}



Source: IMF, Corporate Vulnerability Utility.

1/ The **current ratio** is the ratio of current assets to current liabilities. It measures the ability of a firm to pay its short-term obligations with assets that can easily and quickly be converted into cash. The **quick ratio** compares cash, cash equivalents and net receivables to current liabilities. It is considered a stricter measure of liquidity than the current ratio because it nets out inventories from current assets. Inventories are considered the least liquid of current assets.

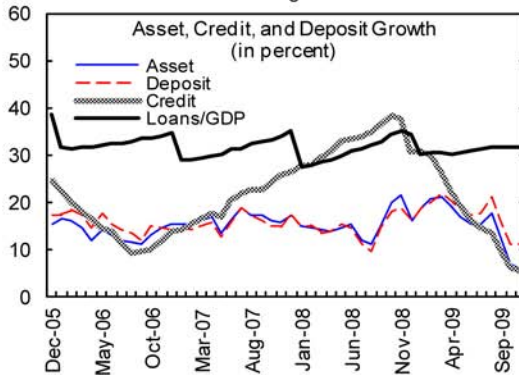
Figure III.2b. Corporate Sector Soundness Indicators



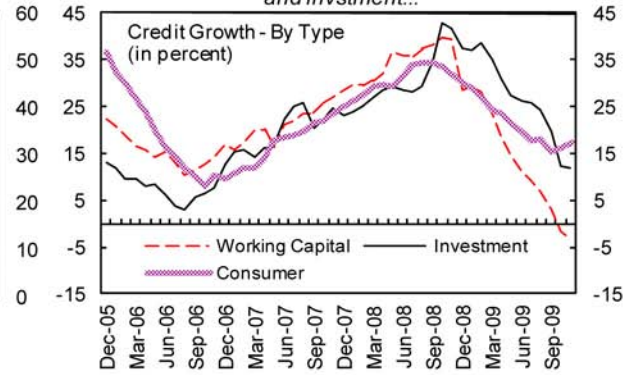
Sources: CEIC Data Co., Ltd.; Bloomberg L.P.; and Moody KMV.

Figure III.3. Indonesia: Credit Growth and Distribution 1/

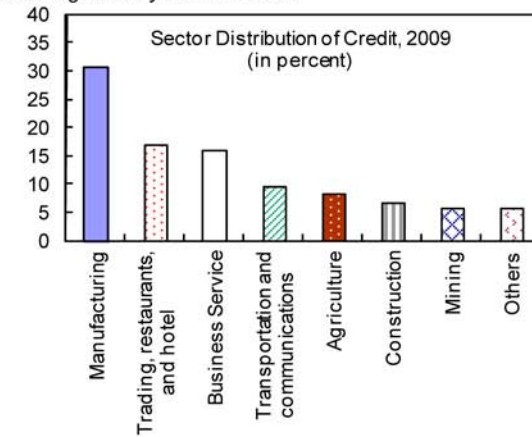
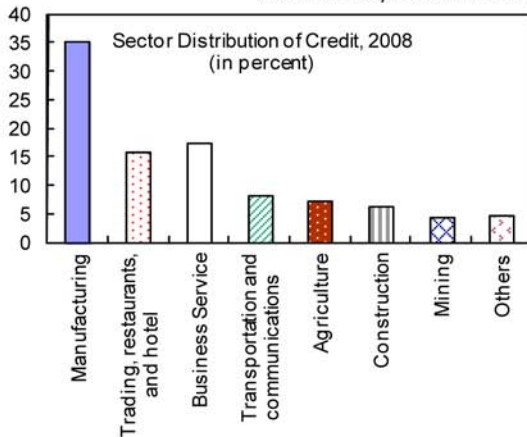
After rapid growth in recent years, credit demand slowed in line with the global downturn...



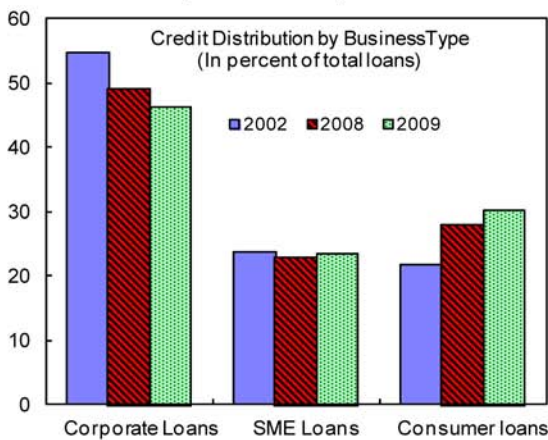
...visible in lower credit demand for working capital and investment...



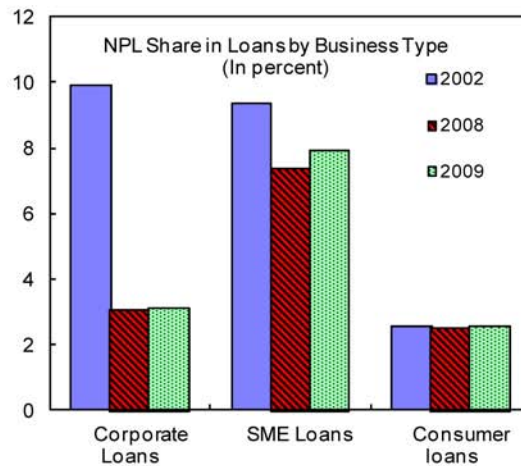
... with the export oriented manufacturing industry most affected.



The share of consumer loans has increased at the expense of the corporate sector ...

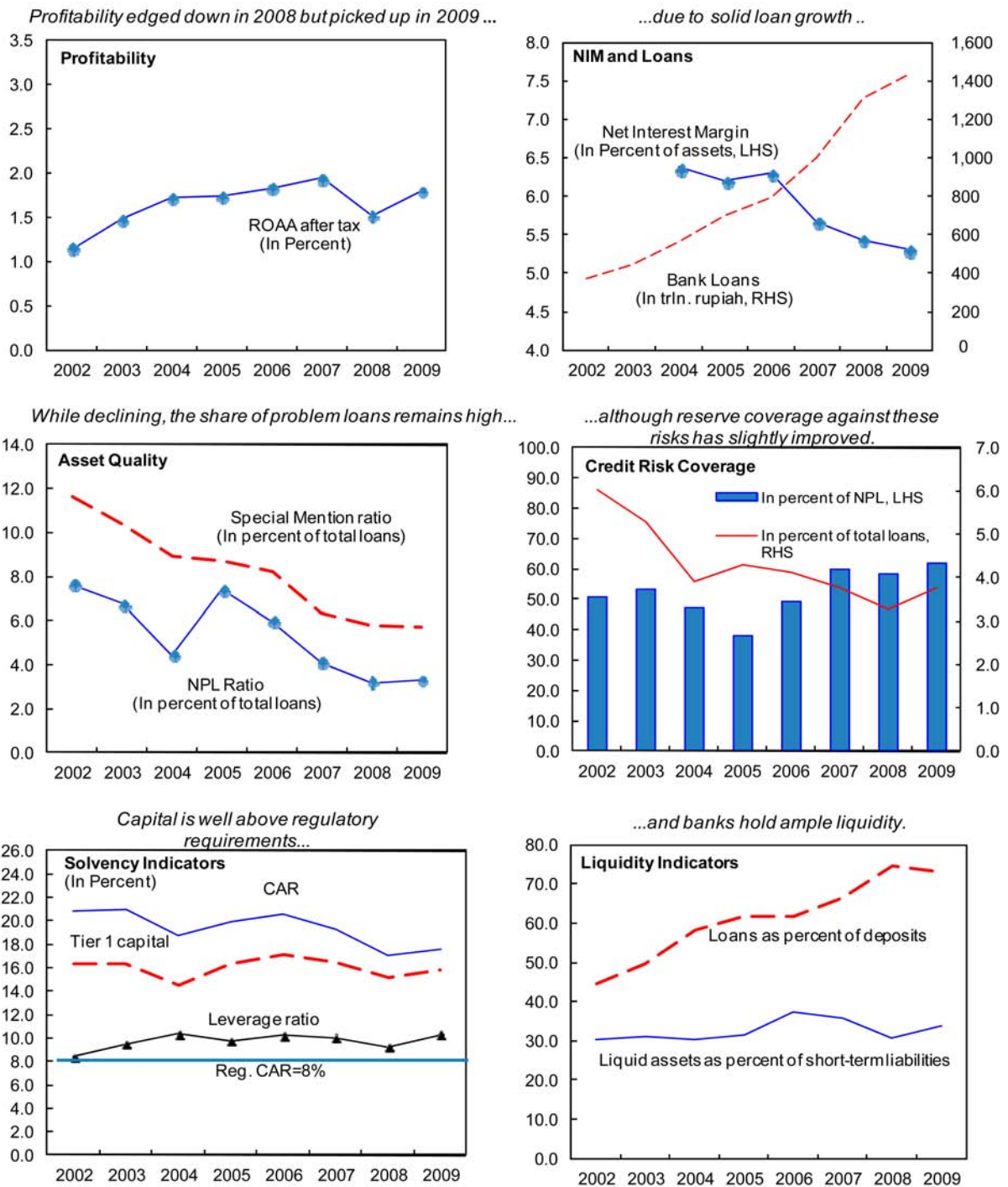


...but this has not yet resulted in a pick up in NPLs for consumer loans.



Source: Bank Indonesia, and staff calculations
1/ Preliminary figures for end-2009

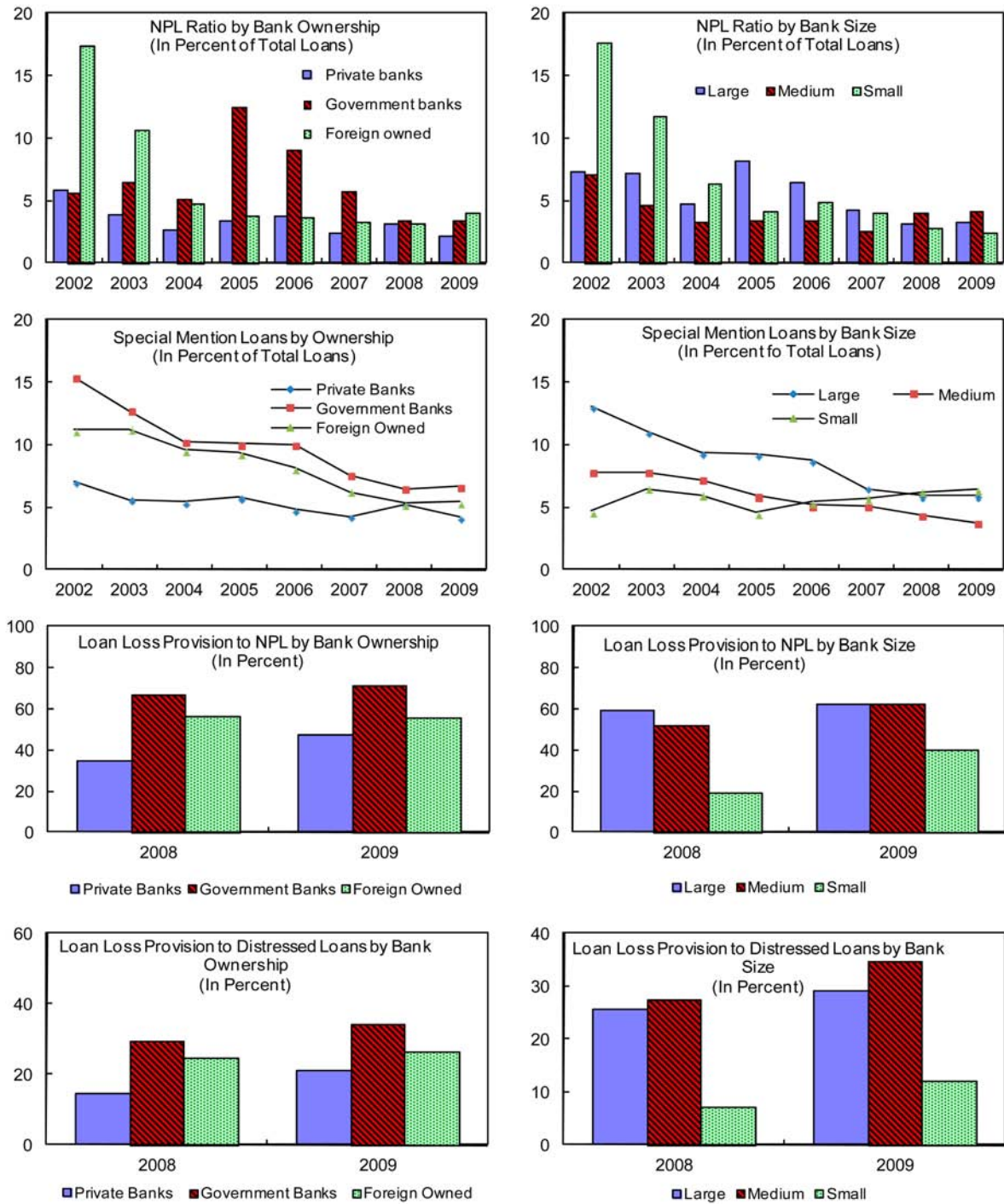
Figure III.4. Indonesia: Banking Sector Soundness Indicators, 2002-2009 1/



Source: Bank Indonesia, and staff calculations.

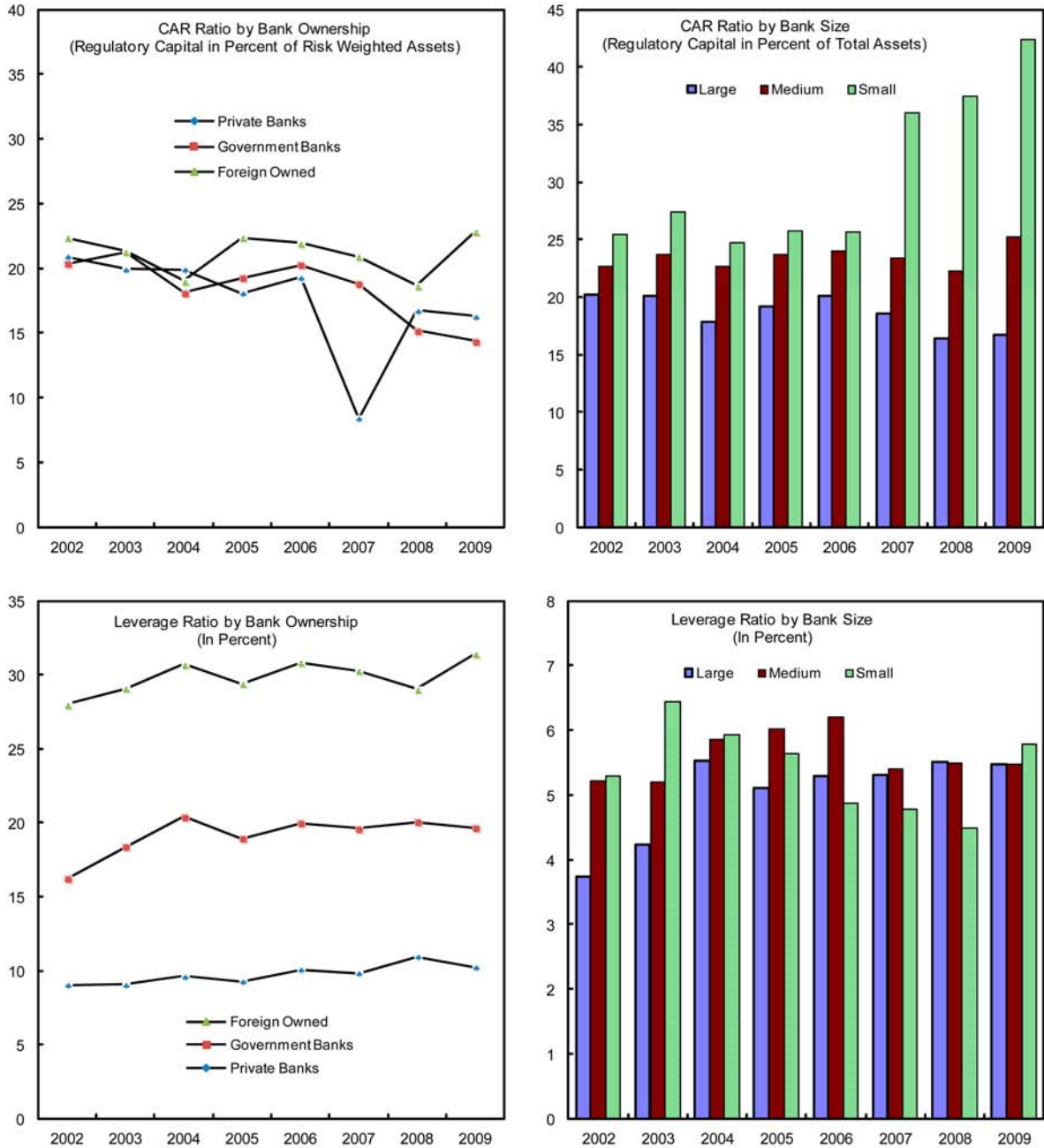
1/ Preliminary figures for end-2009

Figure III.5. Indonesia: Asset Quality and Risk Coverage by Bank Groups 2002-2009



Source: Bank Indonesia and staff calculations

Figure III.6. Indonesia: Bank Solvency Indicators by Bank Groups, 2002-2009



Source: Bank Indonesia, and staff calculations

Preliminary figures for end-2009

Table III.1. Indonesia: Structure of Financial System

	2000	2006	2007	2008	2009 1/	In percent of GDP				
						2000	2006	2007	2008	2009
Size of Financial Sector (in trillions rupiah)										
Financial Sector Assets	1,172	2,172	2,592	2,974	3,060	...	...	...	...	...
In percent of GDP	84.4	65.0	65.6	60.0	56.0	...	...	...	...	...
Deposit-taking financial institutions (in trillions rupiah)										
Commercial Banks	1,066	1,835	2,147	2,500	2,499	77	55	54	50	46
Government 2/	1,040	1,764	2,065	2,402	2,386	75	53	52	48	44
Private banks	...	780	908	1,028	1,086	...	23	23	21	20
Foreign-majority owned	...	411	485	237	569	...	12	12	5	10
Subsidiaries	...	502	589	1,039	731	...	15	15	21	13
Branches of foreign banks	...	346	413	807	518	...	10	10	16	9
Rural Banks	...	156	176	232	213	...	5	4	5	4
Mirco Finance 3/	5	23	28	33	35	0	1	1	1	1
Cooperatives	21	48	54	66	78	2	1	1	1	1
State Owned Pawnshops (Branches)	20	42	47	55	63	...	...	...	...	...
1	1	6	7	11	16	...	...	...	...	...
Non-Bank Financial Institutions (in trillions rupiah)										
Insurance companies	106	337	445	474	561	8	10	11	10	10
Life	31	96	132	137	169	2	3	3	3	3
Mixed	19	71	102	102	132	1	2	3	2	2
Nonlife	0	0	0	0	0	0	0	0	0	0
Mutual Funds	13	25	30	35	37	1	1	1	1	1
Securities dealers (brokers)	6	52	92	75	117	0	2	2	2	2
Pension Funds	...	...	...	...	...	...	...	...	...	...
of which: state-owned	31	78	91	90	102	2	2	2	2	2
Leasing Companies	21	50	58	57	65	2	2	1	1	1
Venture Capital Companies	...	...	...	...	...	...	...	...	...	...
Finance Companies	3	2	3	3	3	0	0	0	0	0
	36	109	127	168	170	3	3	3	3	3
Number of Institutions										
Deposit-taking financial institutions										
Commercial Banks	...	130	130	124	121	...	...	...	...	...
Government 2/	...	31	31	31	31	...	...	...	...	...
Private banks	...	61	57	48	47	...	...	...	...	...
Foreign-majority owned	...	38	42	45	43	...	...	...	...	...
Subsidiaries	...	27	31	35	33	...	...	...	...	...
Branches of foreign banks	...	11	11	10	10	...	...	...	...	...
Rural Banks	2,419	1,880	1,817	1,772	1,765	...	...	...	...	...
Mirco Finance 3/	103,769	142,195	150,903	157,053	168,421	...	...	...	...	...
Cooperatives	103,077	141,326	149,793	154,964	165,155	...	...	...	...	...
State Owned Pawnshops (Branches)	692	869	1,110	2,089	3,266	...	...	...	...	...
Non-Bank Financial Institutions										
Insurance companies	...	...	...	...	...	...	...	...	...	...
Life	62	51	46	45	46	...	...	...	...	...
Mixed	0	0	0	0	0	...	...	...	...	...
Nonlife	111	101	98	94	93	...	...	...	...	...
Mutual Funds	94	403	473	603	642	...	...	...	...	...
Securities dealers (brokers)	204	169	169	158	158	...	...	...	...	...
Pension Funds	372	297	288	281	282	...	...	...	...	...
of which: state-owned	68	74	73	73	73	...	...	...	...	...
Leasing Companies	0	0	0	0	0	...	...	...	...	...
Venture Capital Companies	59	55	60	66	71	...	...	...	...	...
Finance Companies	245	214	217	212	201	...	...	...	...	...

Source: Bank Indonesia; BAPEPAM.

1/ As of September 2009

2/ State-owned and regional development banks

3/ Cooperatives and state-owned pawnshops (branches)

Table III.2. Indonesia: Core and Encouraged Set of Financial Soundness Indicators

Consolidated Commercial Banking Sector (In percent, or otherwise indicated)

	2002	2003	2004	2005	2006	2007	2008	2009 **
Capital adequacy								
Regulatory capital as percent of risk-weighted assets*	20.9	20.9	18.8	19.9	20.6	19.2	17.0	17.6
Regulatory Tier I capital to risk weighted assets*	16.4	16.3	14.5	16.3	17.1	16.4	15.1	15.9
Capital as percent of assets*	8.4	9.5	10.3	9.8	10.2	10.1	9.2	10.3
Asset composition								
Risk weighted assets to total assets	41.7	46.4	52.8	56.5	53.0	56.6	62.0	60.7
Total loans to total assets	33.4	38.1	44.0	47.3	46.8	50.5	56.8	56.7
Government claims in percent of total assets	33.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sectoral distribution of bank corporate credit (as percent of total loan exposure) *								
Agriculture								
Mining	8.7	9.1	10.1	10.1	10.3	10.1	9.4	11.6
Manufacturing	2.4	2.6	3.1	2.3	4.8	6.9	5.8	6.2
Electricity, gas, and water	50.4	44.3	43.6	43.7	42.7	36.6	35.7	31.9
Construction	2.7	2.5	3.1	2.5	2.3	2.1	4.2	4.6
Trading, restaurants, and hotel	2.9	3.8	5.7	7.3	7.0	6.7	6.1	5.9
Transportation, warehousing, and communications	10.2	11.3	16.4	14.8	15.0	17.7	17.0	17.7
Business Service	5.3	6.1	4.8	3.8	5.7	7.8	10.0	11.4
Social Community Services	7.4	8.6	8.4	9.0	8.6	9.4	10.2	8.8
Others	0.9	5.1	1.0	1.3	1.8	1.3	0.7	0.7
Distribution by user (as percent of total loans)								
Corporate	54.8	51.3	49.6	46.6	45.9	47.4	49.1	46.2
SME	23.6	23.4	23.4	23.6	25.5	24.4	22.8	23.4
Consumer loans	21.6	25.3	26.9	29.7	28.6	28.2	28.1	30.4
of which mortgage lending	2.9	4.7	5.4	6.6	7.7	7.8	7.7	8.0
Asset quality								
Non-performing loans (NPL) as percent of gross loans *	7.6	6.8	4.4	7.4	6.0	4.1	3.2	3.3
Special Mention as percent of total loans	11.6	10.3	8.9	8.7	8.2	6.3	5.8	5.7
Restructured loans as percent of total loans	3.5	2.5	5.5	3.7	3.2	2.8	1.9	3.2
Foreclosed assets as percent of total assets	0.6	0.6	0.5	0.5	0.4	0.2	0.2	0.2
Write-offs as percent of total loans	535.2	492.2	448.9	244.9	249.3	312.4	229.0	200.1
NPL net of provisions as percent of tier I capital *	18.4	16.0	13.4	23.4	15.6	8.9	8.0	7.4
Large exposures as percent of tier I capital *					3.6	1.7	2.3	3.5
Exposure to 10 largest names								
Loan loss provision to NPL	50.9	53.0	47.2	38.1	49.1	59.8	58.5	62.0
Total provision to gross loans	6.0	5.3	3.9	4.3	4.1	3.8	3.3	3.8
Earnings and profitability								
Net profits as percent of average assets (ROA, before tax) *	2.1	2.2	2.7	2.5	2.6	2.8	2.3	2.6
Net profits as percent of average assets (ROA, after tax) *	1.1	1.5	1.7	1.7	1.8	1.9	1.5	1.8
Net profits as percent of average equity capital (ROE, after tax) *	16.2	18.8	21.1	21.4	22.4	23.2	15.5	18.4
Net interest margin (net interest income as percent of earnings assets) *	n.a.	97.2	5.9	5.7	6.0	5.1	3.9	4.7
Net interest income as percent of gross income	26.5	33.6	44.5	39.9	39.2	43.6	43.3	43.3
Non-interest income as percent of gross income	3.7	2.4	2.9	2.7	2.8	2.6	2.8	3.1
Trading and foreign exchange income as a percent of gross income *	2.9	1.0	1.7	1.7	0.9	1.0	2.5	2.1
Non-interest expenses as percent of gross income *	24.1	26.4	34.0	32.7	30.2	33.2	33.2	32.6
Non-interest expenses as percent of average assets*	3.6	3.5	4.3	4.3	4.2	4.0	4.2	4.1
Provisioning costs in percent of gross income *	14.7	10.8	9.6	11.3	12.1	11.5	15.6	15.5
Staff costs as percent of non-interest expenses *	32.3	38.0	36.6	39.3	40.2	42.8	41.3	40.9
Spread between reference loan and deposit rates *								
Number of employees	190,763	193,860	202,436	215,006	228,581	1,915,668	276,594	289,847
Number of branches	2,507	2,452	2,489	2,494	2,589	2,688	2,814	2,982
Liquidity								
Liquid assets as percent of total assets *	25.5	26.2	25.4	26.7	31.5	30.1	25.8	28.6
Liquid assets as percent of short-term liabilities *	30.2	31.1	30.3	31.5	37.4	35.6	30.8	33.9
Foreign currency loans as percent of total loans *	26.6	22.6	21.7	18.7	19.4	20.9	19.4	14.6
Foreign currency liabilities as percent of total liabilities *	n.a.	n.a.	n.a.	20.0	17.2	18.4	19.9	17.8
Deposits as percent of total liabilities	n.a.	n.a.	n.a.	85.1	84.7	84.8	83.9	86.8
Loans as percent of deposits *	n.a.	49.6	58.1	61.5	61.6	66.3	74.6	72.9
FX loans-to-FX deposits	n.a.	n.a.	n.a.	65.6	79.4	92.8	86.5	66.1
Sensitivity to market risk								
Gross liability position exposed to market risk (in percent of tier I capital *)	n.a.	n.a.	n.a.	4.0	3.2	2.4	12.1	3.6
Gross asset position exposed to market risk (in percent of tier 1 capital)*	n.a.	n.a.	n.a.	3.6	2.3	2.1	12.2	2.6
Net open position in equities as a percentage of tier I capital *	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Bank Indonesia, and staff calculations

* Core FSI

** Preliminary figures for 2009

Table III.3. Indonesia: Capital Market, 2005-2009

	2005	2006	2007	2008	2009
Equities					
Total market capitalization (IDR trillion)	801	1,249	1,988	1,076	2,019
(in percent of GDP)	28.8	37.4	50.2	21.7	36.0
Average daily trading volume (million shares)	1,654	1,806	4,226	3,216	6,090
Average daily trading value (IDR billion)	1,671	1,842	4,269	4,345	4,046
Number of listed companies	336	344	383	396	398
Warrant					
Number	24	26	37	47	41
Value (IDR trillion)	855	5,423	11,284	2,088	2,363
Over-the-counter markets - corporate bonds					
Total corporate bond outstanding listed on IDX (IDR billion)	62,891	67,806	84,553	72,979	88,452
(in percent of GDP)	2.3	2.0	2.1	1.5	1.6
Initial public offerings (based on the effective statement letters)					
Number of new offers					
Equity IPO	8	12	24	17	13
Bond Offering (including IPO and other seasonal offering)	22	15	45	26	27
Delisted companies					12
Sukuk	3	1	4	4	8
Value of new offers (IDR billion)					
Equity IPO	3,520	3,014	17,182	23,484	3,854
Bond Offering (including IPO and other seasonal offering)	8,185	11,450	31,275	14,100	27,215
Investors (based on the KSEI sub-accounts)					
Equity					
Market share of retail investors (% total value)			5	6	7
Foreign ownership (% total value)			66	68	67
Corporate bonds					
Market share of retail investors (% total value)			1	1	1
Foreign ownership (% total value)			5	4	3
Government Securities (SUN)					
Total nominal value of traded government securities (IDR trillion)	400	419	478	521	582
(in percent of GDP)	14.4	12.5	12.1	10.5	10.4
Average daily number of trading	102	138	232	156	...
Share of foreign holding	7.8	13.1	16.4	16.7	18.6
BI Certificates (SBI)	75	209	245	177	256
Share of foreign holding	19.8	8.7	11.4	4.8	17.3

Source: BABEPAM, IDX, and BI.

**Figure III.7. Indonesia: Capital Market Development, 2003-2009
(In trillions Rupiah)**

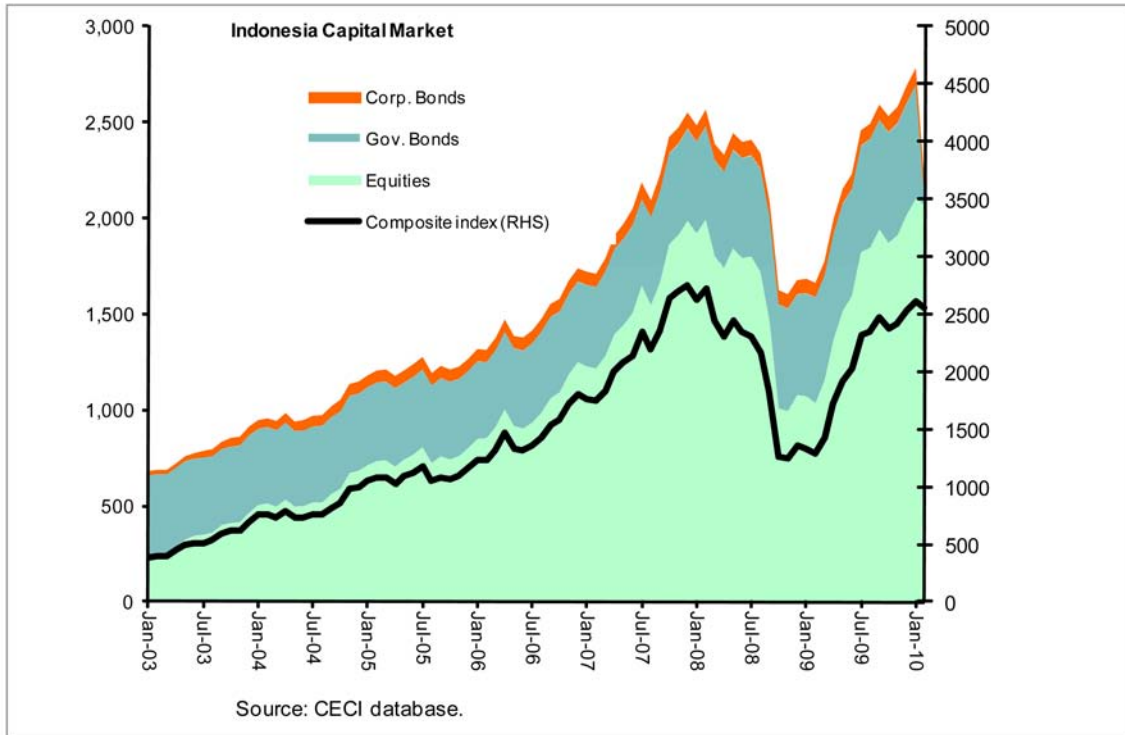
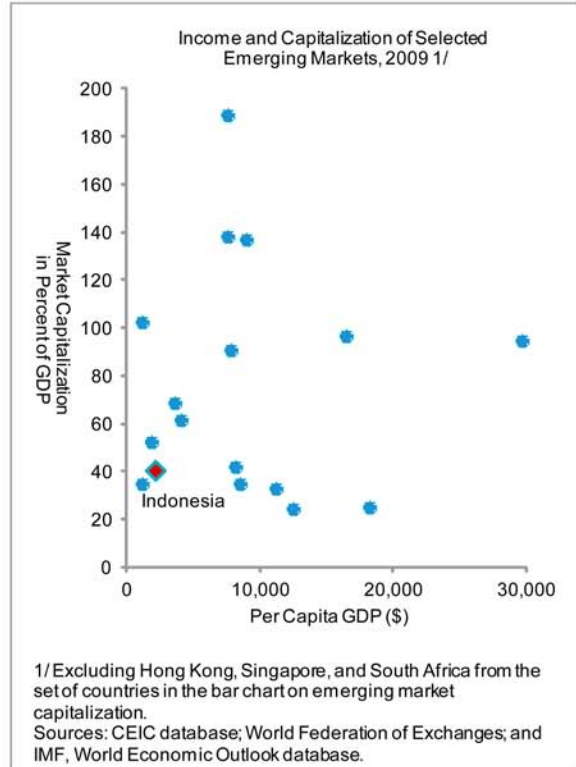
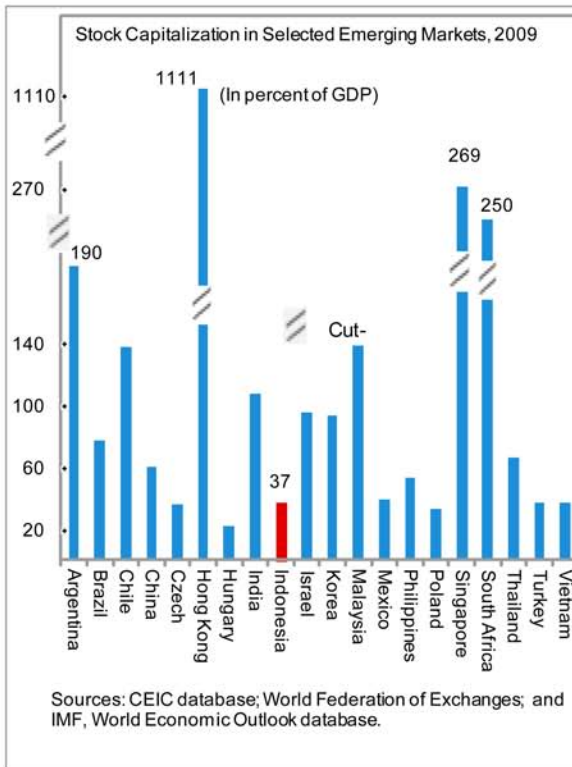
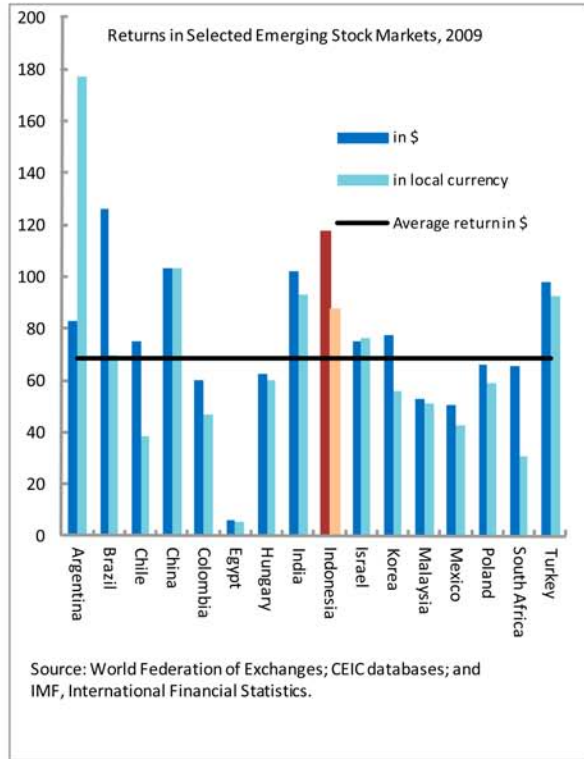
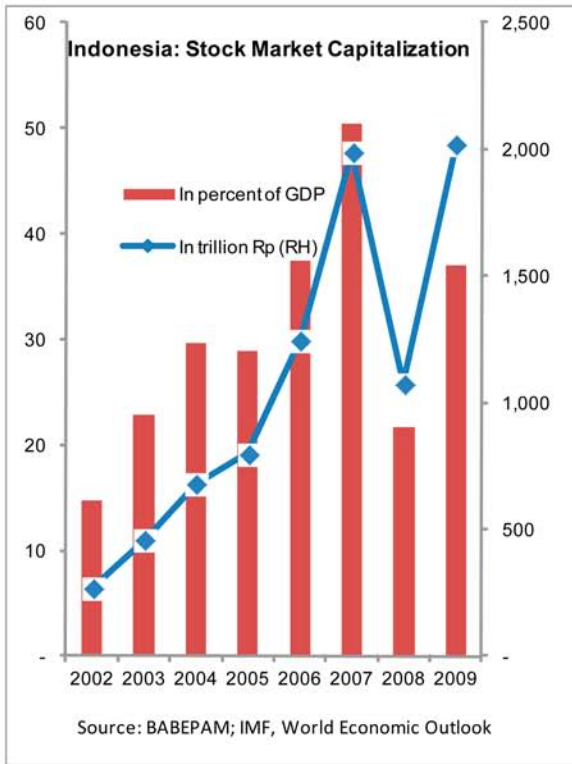


Figure III.8. Indonesia: Equity Market



APPENDIX IV: LEGAL ISSUES

177. **The improvement and amendments to the general legal framework governing the financial system is noteworthy.** The legal system, based on Roman-Dutch law, custom, and Islamic law, has undergone substantial improvement since 1998. In particular, financial system related laws and subsidiary legislation are being continuously amended and updated to meet new demands from a growing financial sector.⁴⁰ The legal framework underpinning supervision and regulation could benefit from strengthening in a number of important areas. The main areas for improvement include:

- The inadequate protection of supervisors. The BI Law states that supervisors cannot be punished for any decisions taken in good faith. However, the proof of “good faith” is so onerous that it nullifies the protection in practice. Also, BI as an institution is not protected. In the case of Bapepam-LK, the law is narrower in protection, has no indemnity for cost and adds additional penalty for mala fide actions. The current defects in the laws need to be rectified to ensure protection of regulators.
- There is excessive ambiguity, overlaps, discretion, and gaps in the financial sector laws. The Banking Law should be reviewed in its entirety to provide comprehensive provisions, clear triggers, minimum criteria, and procedures to ensure predictability and consistency. The gaps in the Capital Market Law, including express power to impose fines and ability to enter into MOUs, also need to be addressed.
- Weak contract enforcement, particularly with respect to unsecured credits to large and connected borrowers, is a major problem. According to the Doing Business Indicator for 2010, Indonesian ranks 146 globally in contract enforcement, significantly worse than its regional peers—such as Thailand (24), Malaysia (59) and the Philippines (118)—with the cost of contract enforcement two and a half times the regional average. Banks reflect this cost in higher lending rates, as the recovery rate on these loans is less than 15 percent. Comprehensive reform is required to improve the performance and credibility of the judicial system.
- Up to 95 percent of businesses outside Jakarta are not formally registered and therefore do not file annual basic information. Only listed companies and public companies fall under Bapepam-LK’s jurisdiction and must adhere to corporate governance requirements. As a result, banks have limited information on unlisted companies, making it difficult to identify related parties and adding to the cost of funds. More stringent accounting and auditing standards, along with an improved Debtor Information System, would help ensure sound credit underwriting.

⁴⁰ Bank Indonesia Law (BI Law), No. 3/2004, Bankruptcy Law 34/ 2004, new Limited Liability Companies Act 40/2007, Eradicating Criminal Acts of Corruption Law 31/1999, Eradicating Money Laundering Law 15/2002, and Establishment of the Commission for Eradication of Corruption (KPK) Law 30/2002.

- The Bankruptcy law is infrequently used for rehabilitation and is not a credible exit mechanism for inefficient and insolvent companies. Banks indicated that out-of-court negotiation and loan restructuring, although leading to less efficient outcomes, is preferred to court supervised rehabilitation. A comprehensive assessment of insolvency and creditors' rights assessment (ICR ROSC) is needed to identify the problems affecting the rehabilitation and insolvency system and the steps to address them.