Session 2.2. IMF Surveillance: Case Study of Korea

In this session, we will...

- Examine the information available in a typical **IMF staff report**--in this case for Korea, 2016. For the report, see:

https://www.imf.org/external/pubs/ft/scr/2016/cr16278.pdf

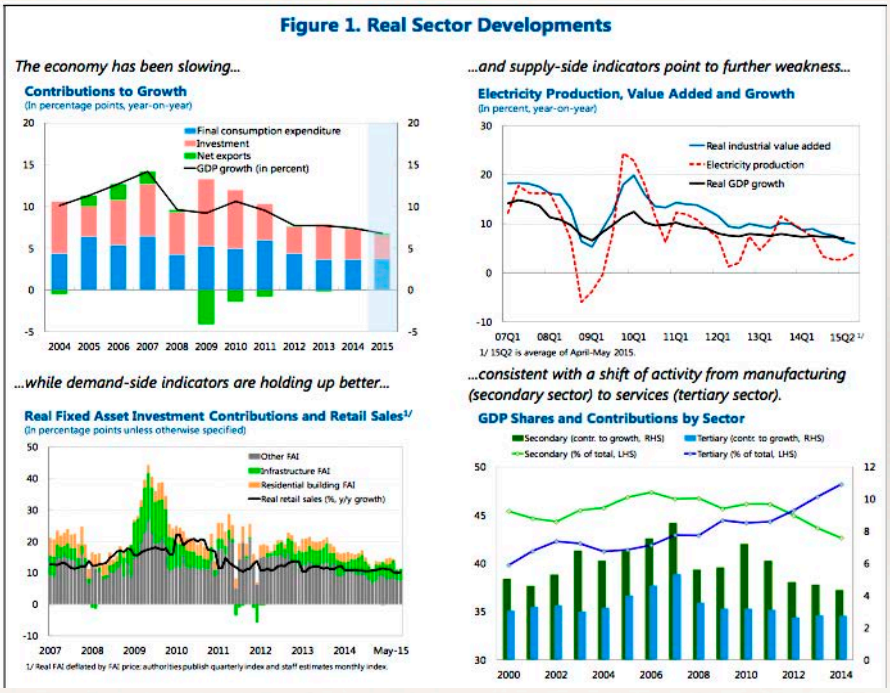
- Use that information to analyze the **macroeconomic position, vulnerabilities, and risks** for Korea
- Think about what that means for **policies**
- Prepare ourselves for **tomorrow's student presentations**

Macroeconomic analysis is…

On one level, macroeconomic analysis is about…..

- Identifying key developments in each sector of the economy
- "Connecting the dots": highlighting links across sectors
- Flagging fiscal, monetary, structural policy issues and developing recommendations

At another level, macroeconomic analysis is story-telling, backed by data.



IMF surveillance in brief

Why surveillance?

- Required by IMF's **Articles of Agreement**
- IMF members agree to subject economic and financial policies to the **scrutiny of international community**
- Also commit to **policies conducive to orderly growth** and **price stability** and to **avoid manipulating exchange rate** for competitive advantage
- Agree to provide **data** to IMF necessary for surveillance
- Country (bilateral) surveillance is ongoing but culminates in **Article IV consultation** and staff report.
- Surveillance also takes place at **regional and global** level—WEO, GFSR, Fiscal Monitor, and REOs.

What does IMF surveillance look at?

- **Exchange rate** policy and valuation
- **Monetary and fiscal policies**, including DSA
- **Financial** sector issues, including macro-financial
- **Consistency** across policy areas
- Assessment of **risks** and vulnerabilities
- Institutional and **structural** issues
- **Spillovers**--inward and outward

The Article IV process

- IMF country team drafts a **briefing paper** for internal review and Management approval
- Country team plus specialists visit country annually—a **"mission"**— to assess economic and financial developments and discuss country policies
- Main **counterparts** are government and central bank officials
- But also meet with **financial analysts, academics, business leaders, unions, and civil society**
- On return, **staff report** drafted, then discussed and approved by IMF's **Executive Board**, as representatives of the global community
- Staff report almost always **published** on line following Board meeting

What is in a staff report?

- Discussion of **recent economic and financial developments**
- Laying out a **baseline** and **risks,** both **domestic** and **external**
- Discussion of **policies**: Fiscal, monetary, exchange rate, financial, structural: What are current policies? Are they right? What changes might be desirable?
- **Spillovers**: inward and outward
- Reports on **discussions**—staff **and** authorities views,
- But ends with **staff appraisal**
- Some **required pieces**—e.g. DSA, external sector assessment, RAM
- Backing **analytical** work—often summarized in Boxes

The IMF Executive Board

Basic tables

What can we learn from this Table?

- What are the trends in growth rate and composition?
- What are the trends in the external CA balance? What explains these trends?
- What trends are observed for reserves?
- How would you describe inflation in Korea?
- How has fiscal policy developed? Is the fiscal stance tight or loose?
- What can we say about monetary policy?

Table 1. Korea: Selected Economic Indicators, 2012–17

	2012	2013	2014	2015	Projections 2016	2017
Real GDP (percent change)	2.3	2.9	3.3	2.6	2.7	3.0
Total domestic demand	1.2	0.7	2.5	3.7	2.4	3.3
Final domestic demand	1.4	2.5	2.5	2.9	3.0	3.4
Consumption	2.2	2.2	2.0	2.4	2.7	3.5
Gross fixed investment	-0.5	3.3	3.4	3.8	3.6	3.2
Stock building 1/	-0.1	-1.7	0.0	0.8	-0.5	-0.1
Net foreign balance 1/	1.6	1.5	0.4	-1.2	-0.3	-0.3
Nominal GDP (in trillions of won)	1,377	1,429	1,486	1,559	1,622	1,697
Saving and investment (in percent of GDP)						
Gross national saving	35.2	35.3	35.3	36.2	36.3	35.6
Gross domestic investment	31.0	29.1	29.3	28.5	28.8	29.2
Current account balance	4.2	6.2	6.0	7.7	7.5	6.5
Prices (percent change)						
CPI inflation (end of period)	1.4	1.1	0.8	1.3	1.5	2.2
CPI inflation (average)	2.2	1.3	1.3	0.7	1.2	1.9
Core inflation (average)	1.7	1.6	2.0	2.2		
GDP deflator	1.0	0.9	0.6	2.2	1.4	1.6
Real effective exchange rate	1.1	9.2	6.6	3.4	...	...
Trade (percent change)						
Export volume	5.6	4.8	4.4	2.5	1.2	2.2
Import volume	0.5	4.3	4.7	3.1	1.9	2.8
Terms of trade	-1.7	3.3	1.7	12.0	2.9	-1.8
Consolidated central government (in percent of GDP)						
Revenue	22.1	21.5	21.2	21.3	22.0	21.7
Expenditure	20.6	20.9	20.8	21.0	21.1	20.6
Net lending (+) / borrowing (-)	1.6	0.6	0.4	0.3	0.8	1.0
Overall balance	1.3	1.0	0.6	0.0	0.3	0.5
Excluding Social Security Funds	-1.3	-1.5	-2.0	-2.4	-2.3	-2.0
General government debt	32.2	34.3	35.9	37.9	38.7	39.0
Money and credit (end of period)						
Credit growth	3.7	3.2	7.4	7.6	6.7	6.5
Overnight call rate	2.8	2.5	2.0	1.5	...	...
Three-year AA- corporate bond yield	3.3	3.3	2.4	2.1	...	...
M3 growth	7.8	6.5	8.7	9.0	...	...
Balance of payments (in billions of U.S. dollars)						
Exports, f.o.b.	603.5	618.2	613.0	548.8	521.5	541.9
Imports, f.o.b.	554.1	535.4	524.1	428.5	398.1	423.7
Oil imports	108.3	99.3	94.9	55.1	47.7	57.4
Current account balance	50.8	81.1	84.4	105.9	103.6	93.1
Gross international reserves (end of period) 2/	323.2	341.7	358.8	363.2	350.9	334.8
In percent of short-term debt (residual maturity)	181.0	203.5	208.8	228.4	230.8	230.5
External debt (in billions of U.S. dollars)						
Total external debt (end of period)	408.9	423.5	424.4	395.4	384.2	374.8
Of which: Short-term (end of period)	128.0	111.8	116.4	107.1	101.1	94.9
Total external debt (in percent of GDP)	33.4	32.4	30.1	28.7	27.9	26.1
Debt service ratio 3/	7.0	7.2	7.9	8.9	9.0	8.6

Sources: Korean authorities; and IMF staff estimates and projections.

Baseline Projections

- How does IMF staff see growth and inflation developing? Is this a positive scenario?
- What might be some risks around this projection? External? Domestic?
- What is the output gap in 2016? How does that change over time? What does that tell you about potential growth?
- What is happening to the external current account? What's driving the change from trade and S-I perspectives?

Table 2. Korea: Medium-Term Projections, 2014–2021

	2014	2015	2016	Projections 2017	2018	2019	2020	2021
Real GDP (percent change)	3.3	2.6	2.7	3.0	3.1	3.0	3.0	3.0
Total domestic demand	2.5	3.7	2.4	3.3	3.4	3.5	3.6	3.6
Final domestic demand	2.5	2.9	3.0	3.4	3.5	3.6	3.6	3.6
Consumption	2.0	2.4	2.7	3.5	3.6	3.6	3.6	3.6
Gross fixed investment	3.4	3.8	3.6	3.2	3.4	3.5	3.6	3.6
Stock building 1/	0.0	0.8	-0.5	-0.1	-0.1	0.0	0.0	0.0
Net foreign balance 1/	0.4	-1.2	-0.3	-0.3	-0.2	-0.3	-0.3	-0.4
Prices, period average (percent change)								
Consumer price	1.3	0.7	1.2	1.9	2.0	2.0	2.0	2.0
GDP deflator	0.6	2.2	1.4	1.6	1.7	1.9	1.9	1.9
Savings and investment (in percent of GDP)								
Gross national savings	35.3	36.2	36.3	35.6	35.1	34.9	34.8	34.4
Gross domestic investment	29.3	28.5	28.8	29.2	29.1	29.1	29.1	29.2
Current account balance	6.0	7.7	7.5	6.5	5.9	5.8	5.6	5.2
Money and credit (end of period)								
Credit growth 2/	7.4	7.6	6.7	6.5	6.1	5.9	5.9	5.9
Consolidated central government (in percent of GDP)								
Revenue	21.2	21.3	22.0	21.7	21.5	21.5	21.5	21.5
Expenditure	20.8	21.0	21.1	20.6	19.8	19.3	19.2	19.1
Net lending (+) / borrowing (-)	0.4	0.3	0.8	1.0	1.7	2.2	2.3	2.4
Overall balance	0.6	0.0	0.3	0.5	1.2	1.7	1.8	2.0
Excluding Social Security Funds	-2.0	-2.4	-2.3	-2.0	-1.4	-0.9	-0.7	-0.6
Trade (percent change)								
Merchandise exports	-0.8	-10.5	-5.0	3.9	3.5	3.8	4.0	3.4
Volumes 3/	4.4	2.5	1.2	2.2	3.0	3.2	3.1	3.2
Merchandise imports	-2.1	-18.2	-7.1	6.4	4.7	4.7	5.3	4.7
Volumes 3/	4.7	3.1	1.9	2.8	3.6	3.9	3.9	4.0
Terms of trade	1.7	12.0	2.9	-1.8	-0.6	-0.2	-0.5	-0.4
Balance of payments (in billions of U.S. dollars)								
Current account	84.4	105.9	103.6	93.1	88.7	91.1	92.3	89.0
(In percent of GDP)	6.0	7.7	7.5	6.5	5.9	5.8	5.6	5.2
Trade balance	88.9	120.3	123.4	118.2	117.0	117.3	116.1	113.9
Merchandise exports	613.0	548.8	521.5	541.9	560.6	581.7	604.9	625.7
Merchandise imports	524.1	428.5	398.1	423.7	443.6	464.4	488.8	511.8
External debt								
In billions of U.S. dollars 4/	424.4	395.4	384.2	374.8	367.4	361.8	358.0	356.2
(In percent of GDP)	30.1	28.7	27.9	26.1	24.6	23.1	21.9	20.9
Of which: Short-term (end of period)	8.2	7.8	7.3	6.6	5.9	5.2	4.6	4.0
Debt service ratio 5/	7.9	8.9	9.0	8.6	8.7	8.8	8.7	8.4
Memorandum items:								
Nominal GDP (in trillions of won)	1,486	1,559	1,622	1,697	1,779	1,868	1,960	2,058
Per capita GDP (in U.S. dollars)	27,989	27,215	27,061	28,158	29,182	30,417	31,690	32,786
Output gap (percent of potential GDP)	-0.9	-1.3	-1.5	-1.3	-1.0	-0.7	-0.4	0.0

The Balance of Payments

- What has happened to exports and imports? Can we say anything about Korea's competitiveness?
  - What does Korea's current account balance tell us?
- What trends are there in capital flows in and out of Korea?
- How can we explain the steady rise in foreign reserves? Is this good or bad?
- Is external debt a problem?

Table 3. Korea: Balance of Payments, 2012–17

(In billions of U.S. dollars, unless otherwise indicated, BPM6 sign)

					Projections	
	2012	2013	2014	2015	2016	2017
Current account balance	50.8	81.1	84.4	105.9	103.6	93.1
Trade balance	49.4	82.8	88.9	120.3	123.4	118.2
Exports	603.5	618.2	613.0	548.8	521.5	541.9
(growth rate, in percent)	2.8	2.4	-0.8	-10.5	-5.0	3.9
Imports	554.1	535.4	524.1	428.5	398.1	423.7
(growth rate, in percent)	-0.7	-3.4	-2.1	-18.2	-7.1	6.4
Services	-5.2	-6.5	-3.7	-15.7	-24.0	-27.9
Primary income	12.1	9.1	4.2	5.9	9.3	8.4
Secondary income	-5.5	-4.2	-5.0	-4.6	-5.1	-5.7
Financial and capital account balance	38.4	63.8	71.5	97.7	115.8	109.2
Financial account	38.4	63.8	71.4	97.7	115.8	109.2
Portfolio investment, net 1/	-9.4	4.9	26.8	51.1	63.1	55.9
Direct investment, net	21.1	15.6	18.8	22.6	24.0	25.4
Inflows	9.5	12.8	9.3	5.0	5.0	5.0
Outflows	30.6	28.4	28.0	27.6	29.0	30.5
Other investment, assets	8.6	37.1	38.4	15.5	20.5	19.5
Other investment, liabilities	-18.0	-6.2	12.5	-8.5	-8.2	-8.4
Of which: trade credits	-1.8	0.3	-0.5	-4.1	-3.9	-4.0
Of which: short-term loans	-14.7	-5.7	5.6	-2.2	-2.2	-2.2
Of which: medium- and long-term loans	1.7	-0.5	5.3	0.1	0.1	0.1
Capital account	0.0	0.0	0.0	-0.1	0.0	0.0
Net errors and omissions	0.8	-1.0	5.0	3.9	0.0	0.0
Overall balance	-13.2	-16.3	-17.9	-12.1	12.2	16.1
Financing	13.2	16.3	17.9	12.1	-12.2	-16.1
Change in reserves (increase +)	13.2	16.3	17.9	12.1	-12.2	-16.1
Net IMF purchases	0.0	0.0	0.0	0.0	0.0	0.0
World Bank/AsDB 1/	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum items:						
Current account balance (in percent of GDP)	4.2	6.2	6.0	7.7	7.5	6.5
Trade balance (in percent of GDP)	4.0	6.3	6.3	8.7	9.0	8.2
Gross reserves minus gold	323.2	341.7	358.8	363.2	350.9	334.8
(in months of imports of goods and services)	5.9	6.4	6.7	8.0	8.1	7.3
External debt	408.9	423.5	424.4	395.4	384.2	374.8
(in percent of GDP)	33.4	32.4	30.1	28.7	27.9	26.1
Short-term external debt (inc. trade credits)	128.0	111.8	116.4	107.1	101.1	94.9
Nominal GDP (U.S. dollars)	1222.8	1305.6	1411.3	1377.9	...	...

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Includes financial derivatives, net.

Fiscal Policy

- What are the trends in overall balance? Primary balance?
  - Are levels of spending and revenue appropriate?
- How should we treat the Social Security Fund?
- Can we say anything about the fiscal stance? Expansionary? Contractionary? Appropriate?
- Does public debt seem to be an issue?

Table 4. Korea: Statement of Central Government Operations, 2012–17

					Projections	
	2012	2013	2014	2015	2016	2017
			(In percent of GDP)			
Revenue	22.1	21.5	21.2	21.3	22.0	21.7
Tax revenue	14.7	14.1	13.8	14.0	14.6	14.6
Social contributions	3.8	3.9	4.0	4.0	4.0	4.0
Of which: Social security contributions	3.2	3.2	3.4	3.4	3.4	3.4
Other revenue	3.6	3.6	3.3	3.3	3.3	3.0
Expenditure	20.6	20.9	20.8	21.0	21.1	20.6
Expense	19.8	20.1	20.0	20.3	20.4	19.9
Net acquisition of nonfinancial assets	0.8	0.8	0.8	0.7	0.8	0.7
Net lending (+) / borrowing (-)	1.6	0.6	0.4	0.3	0.8	1.0
Less: Policy lending	0.2	-0.3	-0.2	0.3	0.5	0.5
Overall balance	1.3	1.0	0.6	0.0	0.3	0.5
Less: Social Security Fund balance	2.6	2.5	2.6	2.4	2.6	2.5
Overall balance excluding Social Security Funds	-1.3	-1.5	-2.0	-2.4	-2.3	-2.0
Memorandum items:						
Operating balance (trillion won)	32.6	21.0	17.6	16.7	25.9	29.5
In percent of GDP	2.4	1.5	1.2	1.1	1.6	1.7
Primary balance (trillion won)	24.5	18.1	14.2	3.9	25.4	39.6
In percent of GDP	1.8	1.3	1.0	0.3	1.6	2.3
Nominal GDP (trillion won)	1,377.5	1,429.4	1,486.1	1,558.6	1,621.9	1,697.1
Central government debt (trillion won)	425.1	464.0	503.0	556.5	593.6	628.0
In percent of GDP	30.9	32.5	33.9	35.7	36.6	37.0
General government debt (trillion won)	443.1	489.8	533.2	590.5	627.6	662.0
In percent of GDP	32.2	34.3	35.9	37.9	38.7	39.0

Sources: Ministry of Strategy and Finance; and IMF staff estimates and projections.

Financial conditions and risks

- Is credit growth sufficient? Too fast?
- Do banks have enough capital? Are they profitable?
- Are bad loans worryingly high?
- Do banks face liquidity or forex risks?

Table 5. Korea: Financial Soundness Indicators

	2010	2011	2012	2013	2014	2015
	(Growth rate, in percent)					
Credit to Private Sector 1/	4.9	6.8	3.7	3.2	7.4	7.6
Loans to Households	8.1	8.5	5.2	6.0	6.7	11.0
Bank Loans to Households	5.4	5.7	2.5	3.0	8.0	8.5
	(In percent)					
Regulatory Capital to Risk-Weighted Assets 2/	14.3	14.0	14.3	14.5	14.2	...
Regulatory Tier 1 Capital to Risk-Weighted Assets	11.3	10.7	11.1	11.4	11.7	...
Non-performing Loans Net of Provisions to Capital	3.4	2.6	3.1	3.6	3.8	...
Non-performing Loans to Total Gross Loans	0.6	0.5	0.6	0.6	0.6	...
Return on Assets	0.7	1.0	0.7	0.3	0.6	...
Return on Equity	9.7	13.2	8.2	4.0	7.2	...
Interest Margin to Gross Income	73.1	73.6	78.3	82.2	70.0	...
Non-interest Expenses to Gross Income	60.6	63.9	71.4	75.3	59.8	...
Liquid Assets to Total Assets (Liquid Asset Ratio)	35.2	35.4	36.2	33.8	34.0	...
Liquid Assets to Short Term Liabilities	117.5	109.3	111.3	107.9	118.4	...
Net Open Position in Foreign Exchange to Capital	0.9	0.9	0.2	-0.2	0.1	...

Source: Financial Soundness Indicators (FSI); Haver.
1/ Depository corporations.
2/ From this indicator on: Depository corporations only. Data for 2014 pertains to 2014Q2.

Risk Assessment Matrix—Global Risks

Risks	Likelihood and Transmission	Potential Impact	Policy Response
Global Risks			
Tighter or more volatile global financial conditions: sharp asset price decline and decompression of credit spreads	**Medium** A reassessment of global risks, growth prospects in China and elsewhere, and financial fundamentals could cause financial conditions to tighten or become more volatile.	**High** Rising bond yields and falling equity prices would lead to weaker growth. Also while Korean banks' reliance on wholesale funding has decreased after the GFC, banks would likely face some funding pressures.	Fiscal easing and exchange rate flexibility, coupled with possible FX intervention to handle disorderly conditions. Ease CFMs aimed at curbing inflows.
Tighter or more volatile global financial conditions: surge in the U.S. dollar	**High** Firms with dollar debt are vulnerable to dollar appreciation.	**Low** Korean banks have reduced their short-term external debt after the GFC, limiting the impact of currency mismatches. Korea's exports may benefit from the depreciation against the dollar.	Fiscal easing and exchange rate flexibility, coupled with possible FX intervention to handle disorderly conditions. Ease CFMs aimed at curbing inflows.
Hard landing in China	**Low/Medium** A sharper-than-expected growth slowdown in China will have a large negative impact on Korea's exports.	**High** China is Korea's main trading partner, accounting for 25 percent of its exports. While most of these are intermediates intended for processing in, and re-export from, China, Korea also produces for Chinese final demand and is thus vulnerable to a slowdown in China. Second-round effects could come into play as a China slowdown would affect the global economy.	Fiscal easing, monetary easing, and exchange rate flexibility, coupled with possible FX intervention to handle disorderly conditions. Ease CFMs aimed at curbing inflows. Continue efforts to diversify export markets and manufacturing base.
Significant slowdown in other large EMs/frontier economies	**Medium** A significant slowdown in large EMs or frontier economies could trigger capital outflows from EMs. Korea could be bunched with EMs and suffer from capital outflows (although markets may also treat Korea as a safe haven). Korea would also be affected through the trade channel.	**Medium** If Korea were to experience capital outflows, rising bond yields and falling equity prices would lead to weaker growth. Also, while Korean banks' reliance on wholesale funding has decreased after the GFC, banks would likely face some funding pressures. A significant slowdown in Korea's trading partners would have an adverse impact on Korea's exports.	Fiscal easing, monetary easing, and exchange rate flexibility, coupled with possible FX intervention to handle disorderly conditions. Ease CFMs aimed at curbing inflows.
Structurally weak growth in key advanced and emerging economies	**High/Medium** Trade (both volume and price) would be the dominant channel.	**High** A deterioration in external conditions could lead to weakening exports and have an adverse impact on domestic demand. This would result in higher unemployment and weaker corporate profits, and would be reflected in higher credit risks in the corporate and household sectors.	Fiscal easing, monetary easing, and exchange rate flexibility, coupled with possible FX intervention to handle disorderly conditions. Accelerate rebalancing through structural reforms and expansionary fiscal spending.

Risk Assessment Matrix—Domestic Risks

Domestic Risks			
Rebound in private consumption fails to materialize	**Medium** The removal of fiscal support, a decline in consumer confidence and a more significant drag from household debt could impede recovery.	**Medium** Consumption is expected to be a key driver of growth going forward. Any delay in its pick-up may lead to substantial revisions to the outlook.	Fiscal and monetary easing, plus exchange rate flexibility. Fiscal transfers targeted to the poor; safety net reform. Improve consumer confidence by carrying out structural reforms in education, reducing labor market duality and income equality, and increasing labor force participation.
Disorderly corporate restructuring	**Medium** While a positive for growth and investment in the medium to long term, the process of corporate restructuring could have an immediate adverse impact on individuals and also on banks' balance sheets and their ability to provide credit.	**Medium** A slowdown in credit growth would have negative implications for investment.	Provide fiscal support, including in the form of unemployment insurance benefits, retraining opportunities, and job-search facilities. Monetary easing. Possible need for fiscal resources for bank recapitalization. Enhance business environment by promoting competition in healthcare, education, and protected professions and by removing regulatory impediments to investment.
Sharp deterioration in the housing market	**Low** Despite the relatively benign aggregate picture, there are pockets of vulnerabilities in household and corporate balance sheets, which could pose risks to financial stability under extreme shocks to macroeconomic growth.	**High** A sharp deterioration in the housing market possibly triggered by extreme shocks to the macroeconomy, could also lead to an increase in household credit risks. Corporate sector stress testing indicates that a shock comparable to that faced by an average firm during the 2008 crisis would induce aggregate expected losses comparable to late 2008 levels. The authorities have taken measures to address balance sheet vulnerabilities in household and corporate sectors.	Supportive macro policies plus exchange rate flexibility, while tightening macroprudential policies to curb a rapid rise in household debt. Expand the social safety net, and carry out structural reforms on labor markets, labor participation, education, and deregulation in the service sector. Fiscal transfers targeted to the poor; safety net reform.
Relationship with North Korea	**Low** An increase in tensions with North Korea could destabilize the economy. On the other hand, a peaceful reunification scenario could also materialize.	**High** The fallout of a serious escalation would have a vast impact on South Korea and will be multifaceted, entailing considerable fiscal costs and financial market instability. On the other hand, a peaceful reunification scenario, while having immediate and possibly large fiscal costs, could confer long-term benefits related to access to additional labor and investment opportunities.	Appropriate fiscal spending. Supportive macro policies. Exchange rate flexibility coupled with possible intervention to address disorderly conditions.

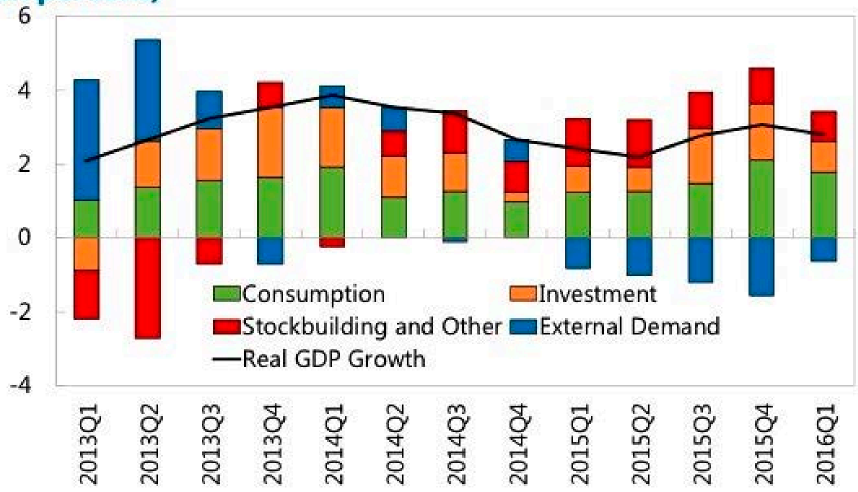
1/ The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

Analytical charts

Sources of growth

Growth has been weak, especially after shocks in 2014 and 2015.

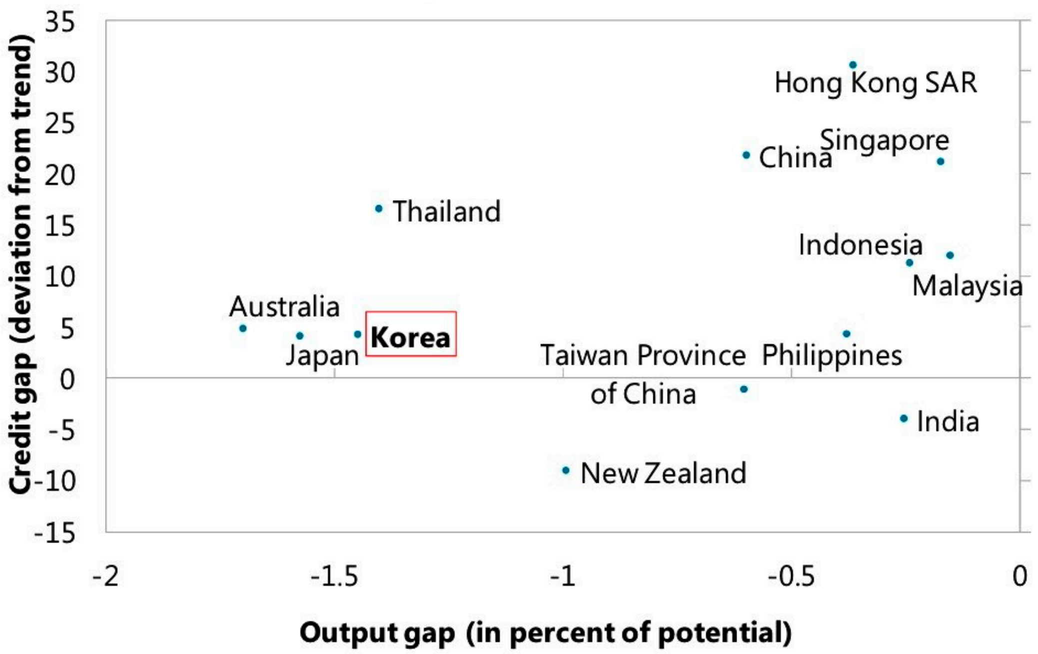
Contributions to GDP Growth
(In percent)



Sources: CEIC Data Company Ltd; and IMF staff estimates.

Negative output gap

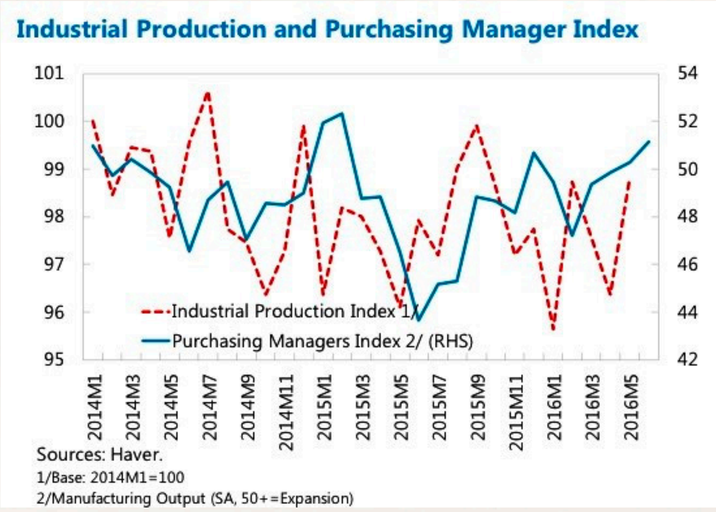
Output Gap Versus Credit Gap

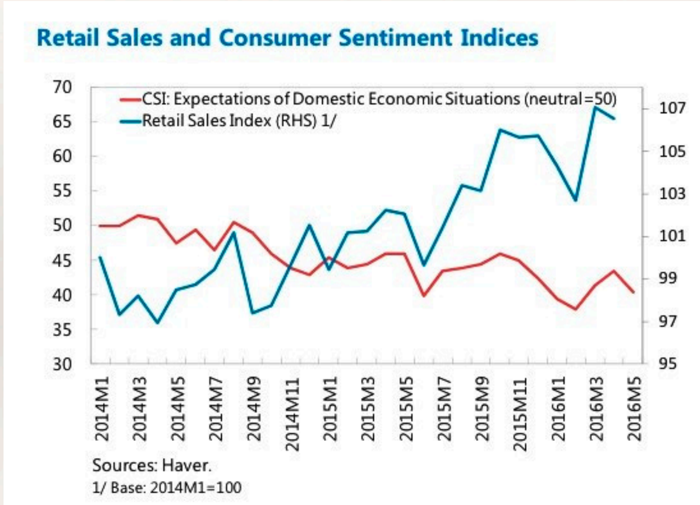


Sources: BIS; CEIC Data Company Ltd.; IMF, World Economic Outlook database; and IMF staff calculations.

High frequency indicators

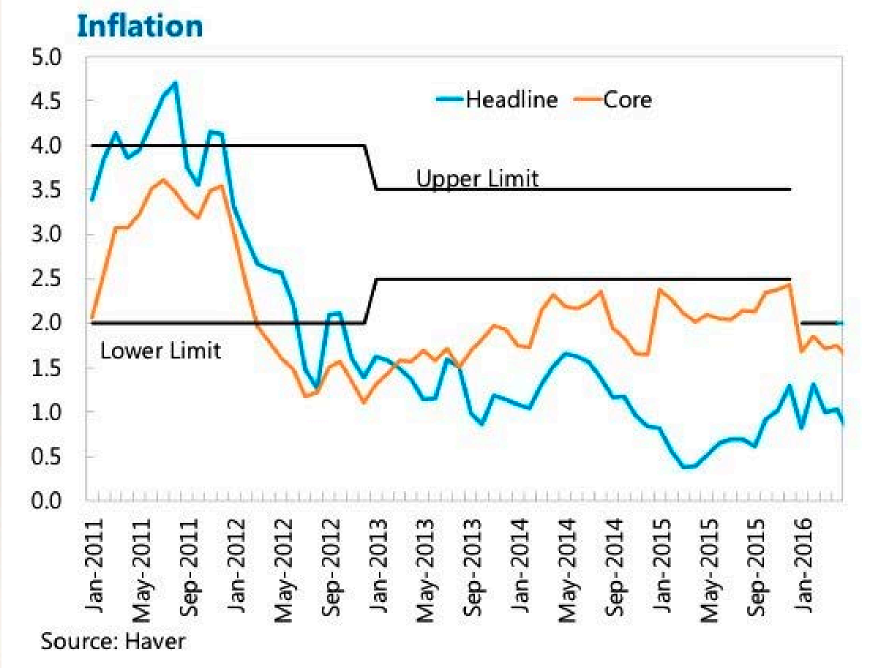
What do they tell us?



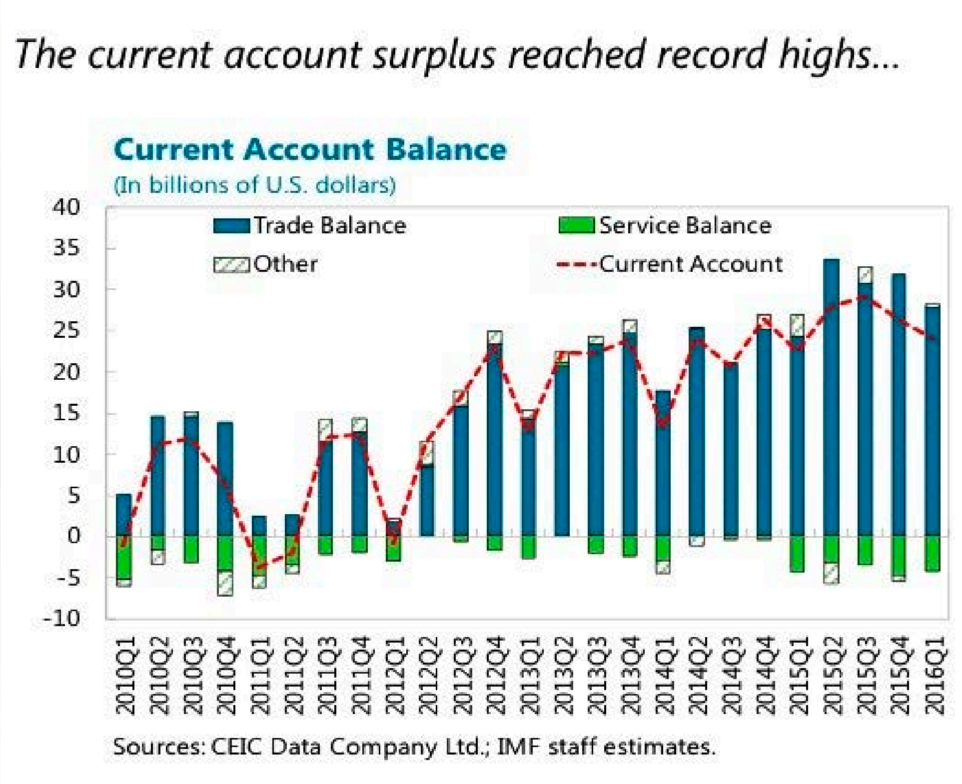


Inflation consistently below target

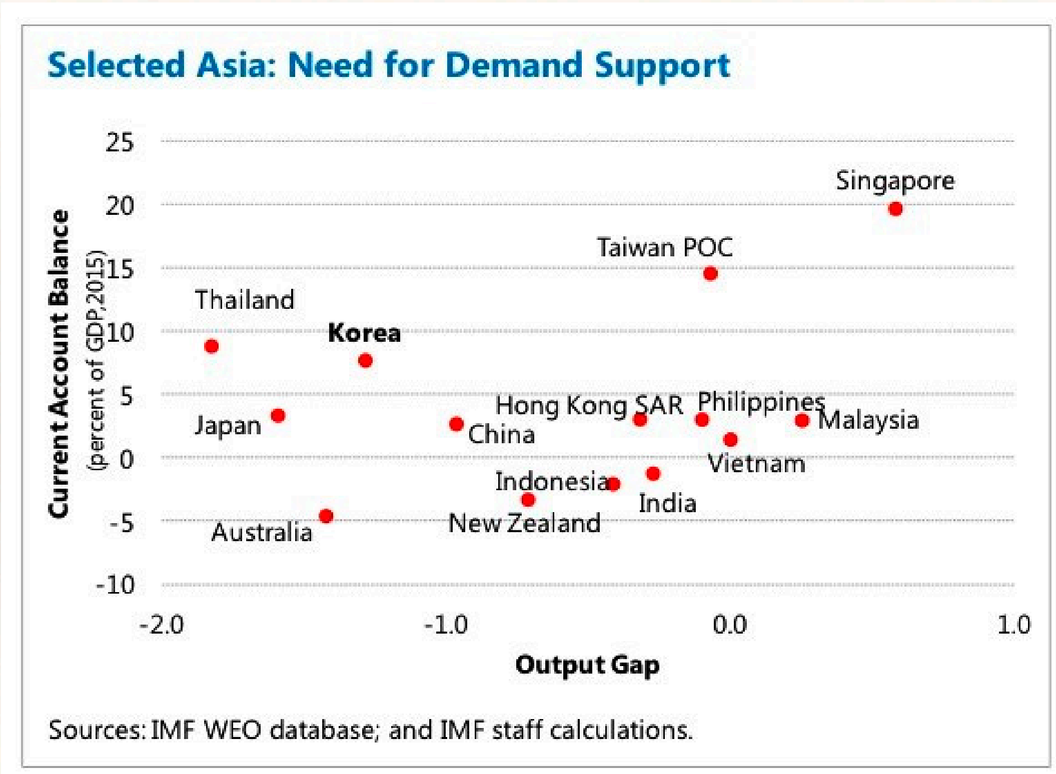
Inflation has been well below the BOK's target...



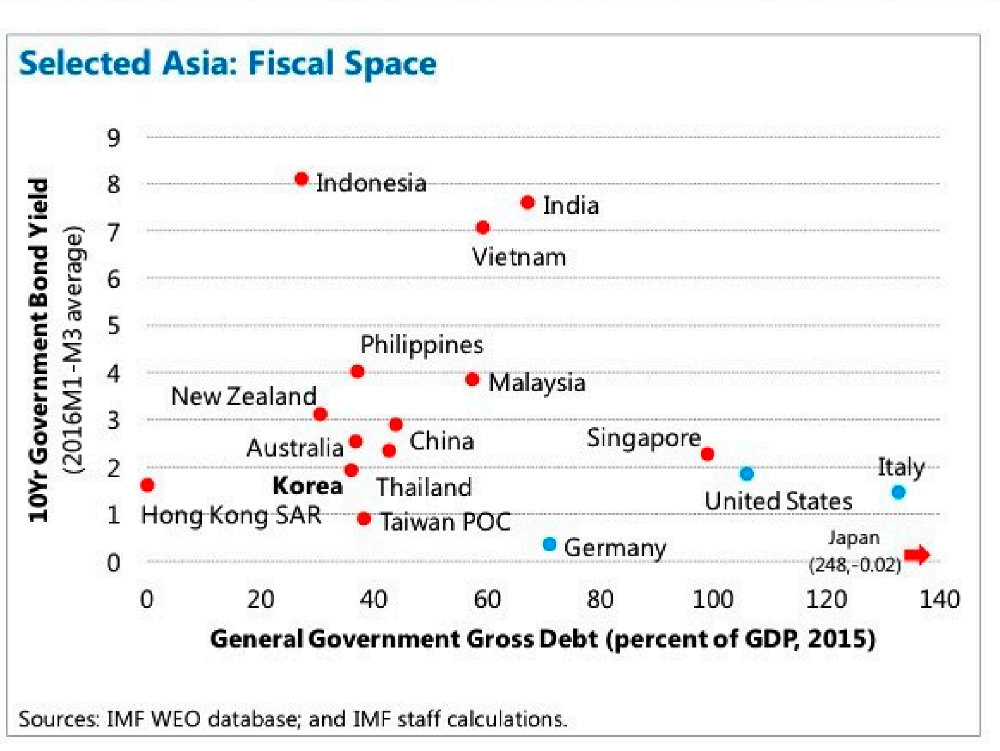
Large CA surplus: A problem?



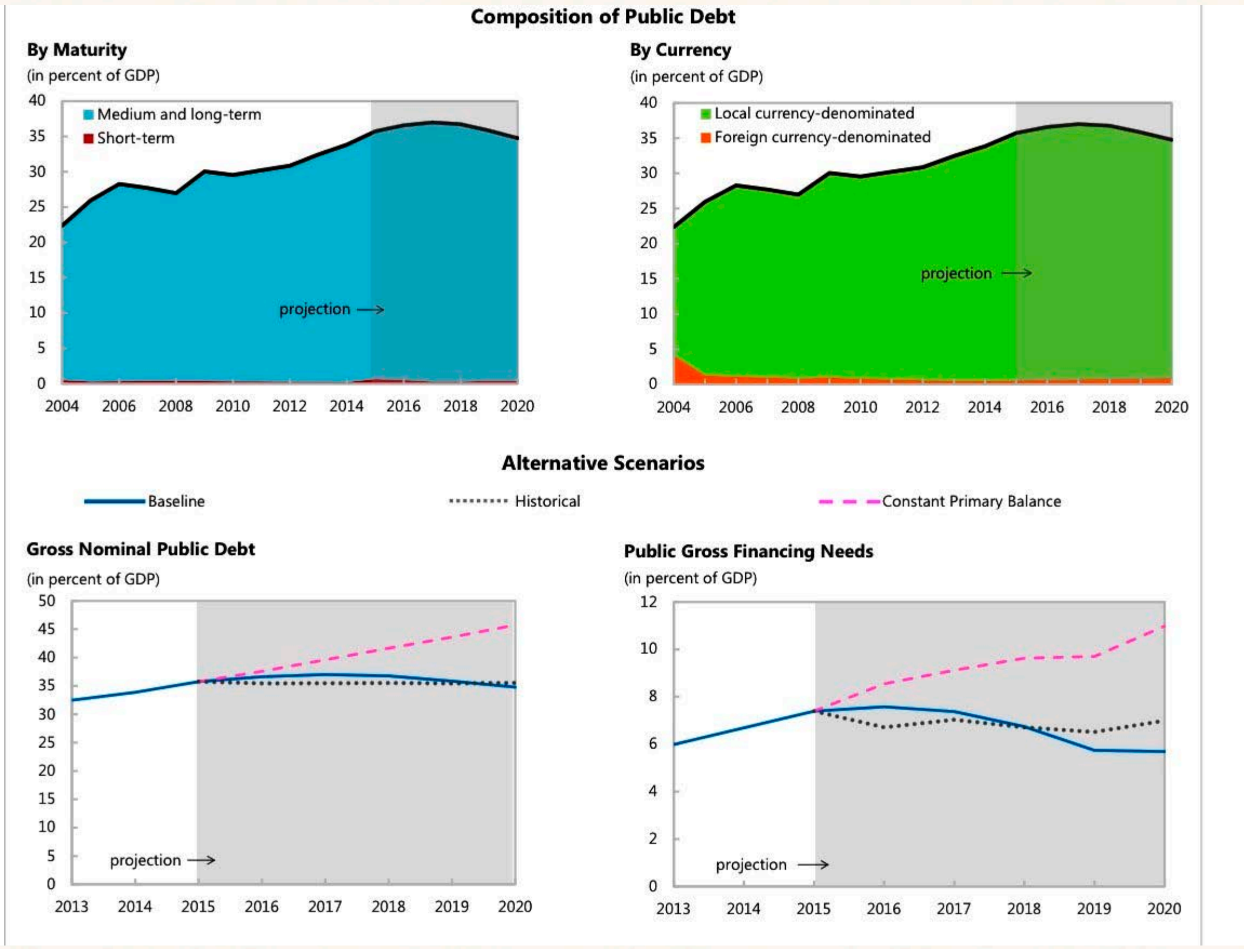
Stimulus needed?



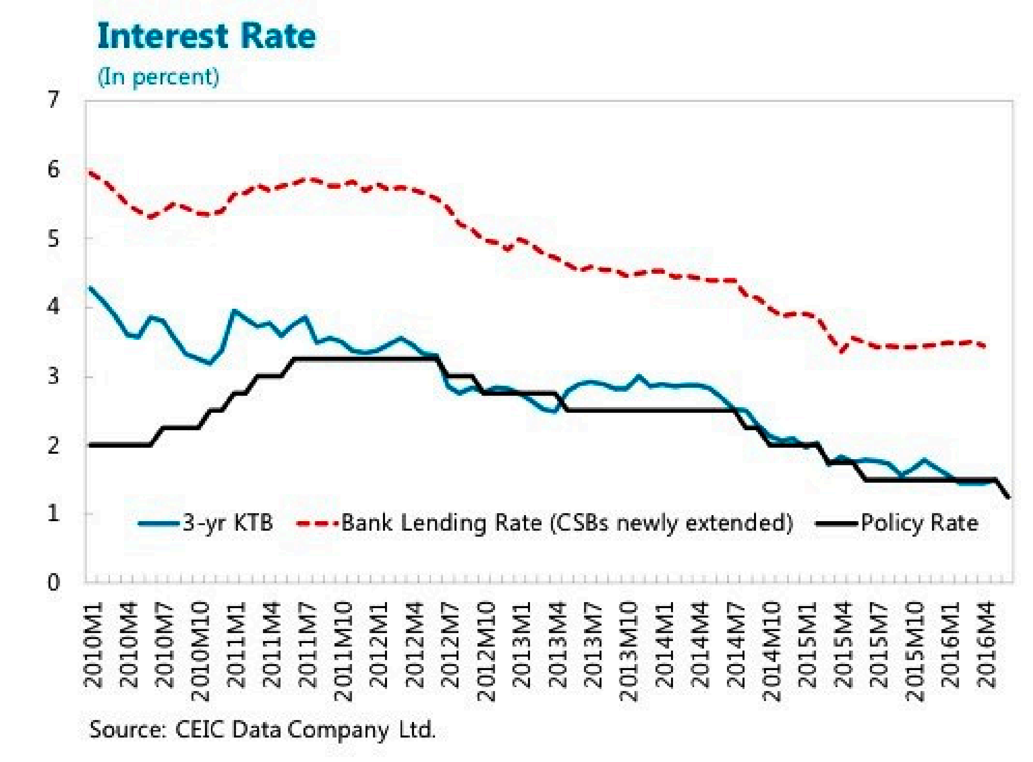
Room for fiscal response?



Manageable fiscal risks?

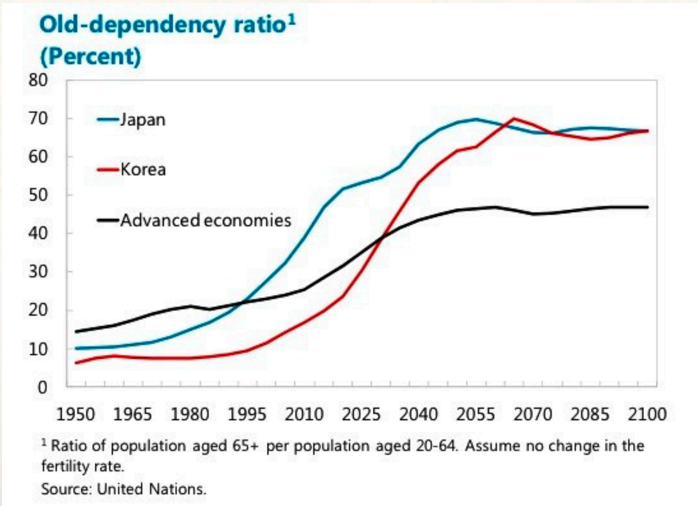


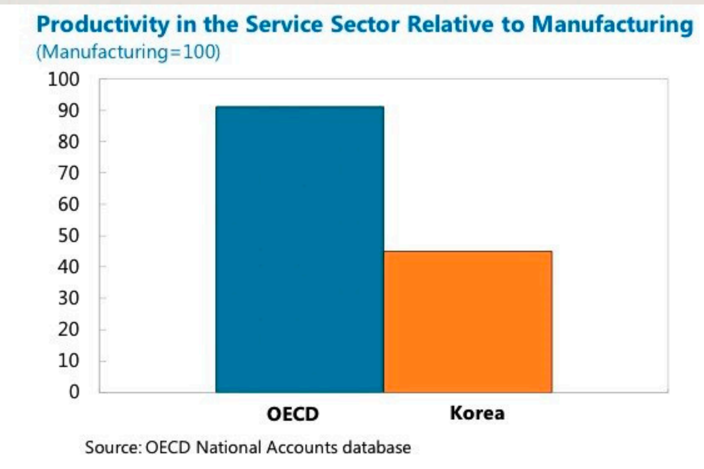
Monetary policy: Is stance right?

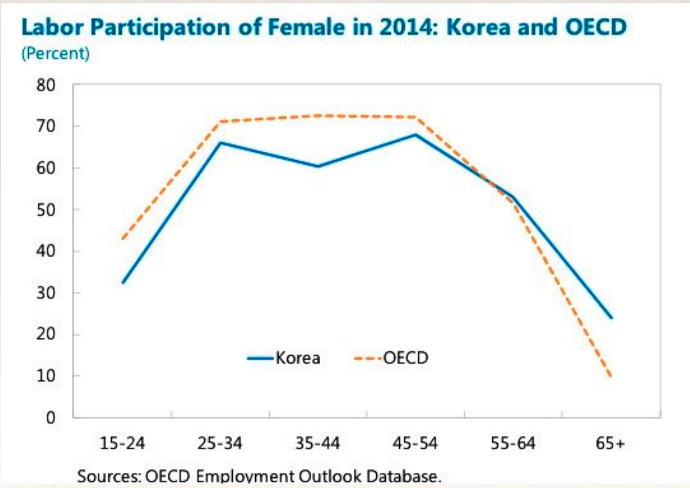


Structural headwinds limit growth

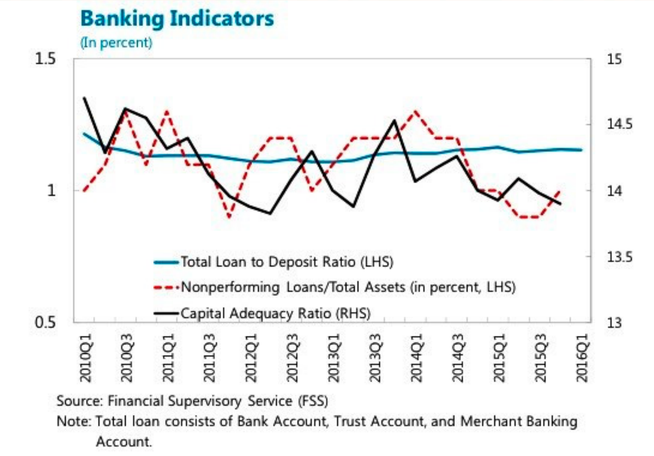
How can potential growth be raised?

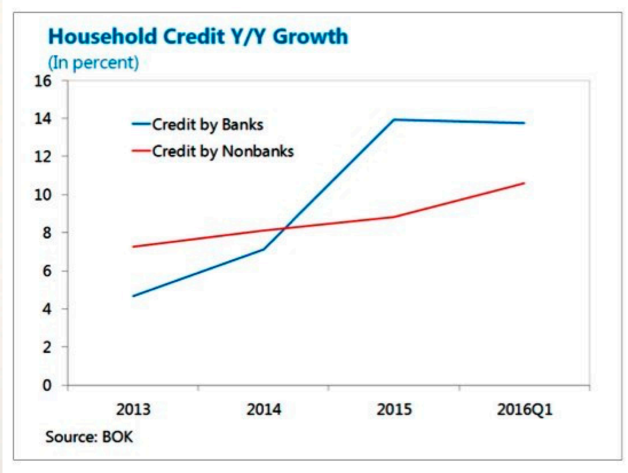


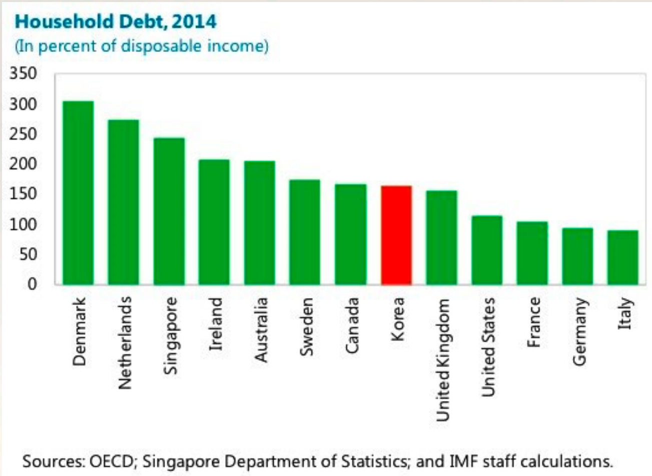


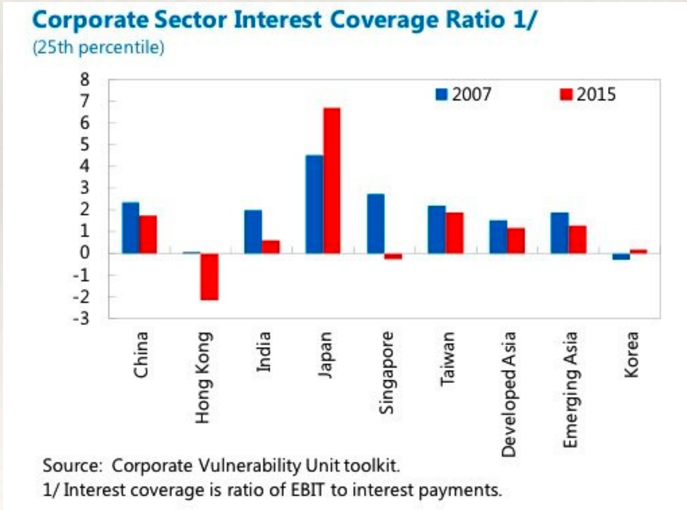


Financial risks?







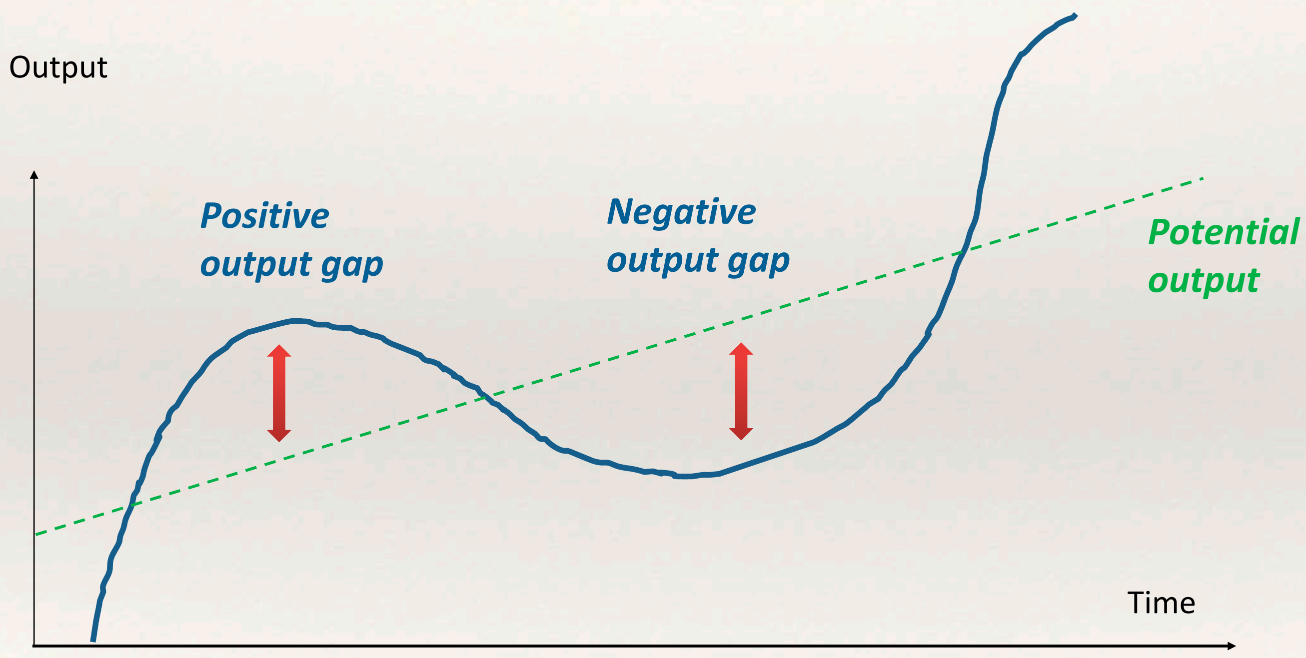


What was staff's assessment?

- "Given the weak conjuncture and downside risks, staff urged additional **fiscal stimulus**…Stimulus spending could focus on targeted transfers to the most vulnerable"
- "Staff also recommended **monetary easing** and, following the recent BOK cut, a continued supportive stance seems to be appropriate"
- "Further measures are needed to address **macro financial risks** …household debt…nonbank credit…"
- "**Labor markets** are another key priority…Boosting **productivity** in the **services** sector and among **SMEs** is another area of focus.."

Extra slides

Potential output and the output gap



Fiscal Indicators

Target	Use if concerned with:
Overall balance (Total revenue-total expenditure)	***Aggregate demand—inflation, current account deficit***
Primary balance (Overall balance less interest expenditure)	***Debt burden; fiscal effort***
Current balance (Current revenue-current expenditure)	***Government savings; protecting capital spending***
Debt-to-GDP ratio	***Debt sustainability***
Gross financing needs	***Liquidity***

Will generally want to monitor a number of indicators

Fiscal balance: Sources of changes

Discretionary policy measures
- Tax measures
- Expenditure measures

Focus is assessing **discretionary** policy

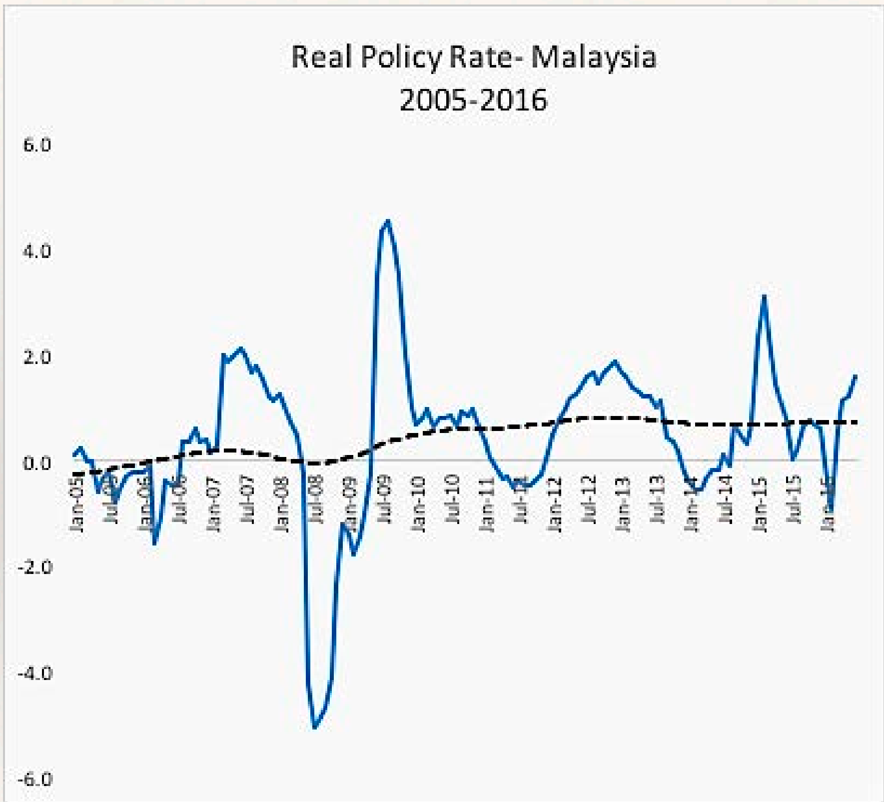
Cyclical factors
- Automatic stabilizers

Factors beyond the business cycle
- Assets effects
- Commodity price effects
- Output composition effects

Fiscal balances can provide misleading signals:

- A large deficit does not always mean discretionary fiscal expansion
- A large fiscal surplus does not always mean fiscal tightening

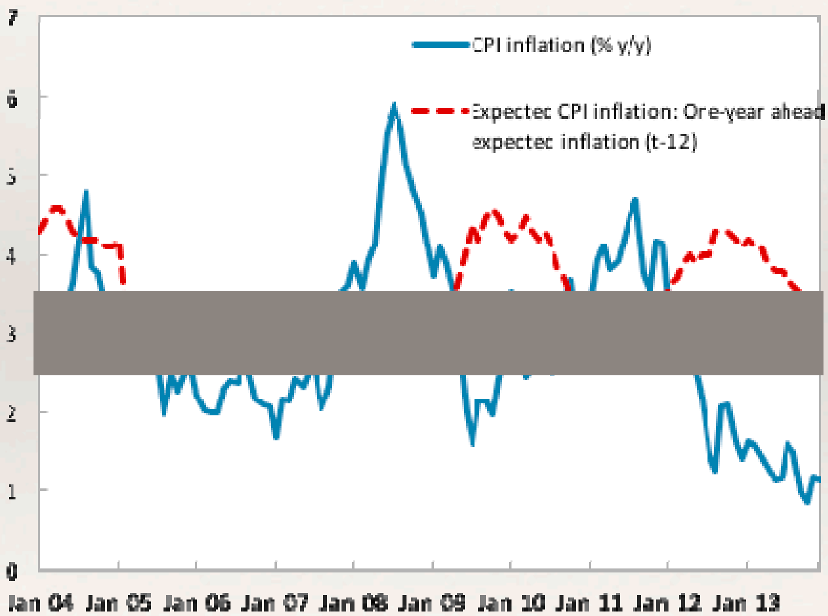
The real interest rate “gap” in Malaysia



Source: Haver Analytics; Bloomberg

Utilizing inflation expectations

Korea Inflation and Inflation Expectations
(In percent)



Sources: CEIC, IMF Staff estimates

Taylor rule

- Taylor (1993) defines interest rate rule relating fed funds rate with steady state real interest rate and inflation gap and output gap.

Inflation

$$i_t = \bar{r} + \pi_t + c_1(\pi_t - \bar{\pi}) + c_2 \hat{y}_t + \varepsilon_t$$

Central bank or short-term money market interest rate

Short-term trend real interest rate

Explicit or implicit definition of price stability

Output gap