Time Varying Macroprudential Policies in Saudi Arabia

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Outline

- Motivation for the use of countercyclical macroprudential policies
- The international experience with countercyclical macroprudential policies
- Description of countercyclical macroprudential policies in Saudi Arabia – past and planned
- Policy recommendations

MOTIVATION FOR THE USE OF COUNTERCYCLICAL MACROPRUDENTIAL POLICIES

Oil prices drive real and financial cycles in Saudi Arabia

- Oil exports are over 70 percent of non-oil GDP, over 80 percent of exports of goods and services
- Oil revenues are 90 percent of central government revenues, government spending is an important component of aggregate demand
- Credit is 116 percent of non-oil GDP
- Equity market capitalization is 120 percent of non-oil GDP

Oil prices drive equity prices



Oil prices drive government spending



Oil prices drive non-oil output



Results from unrestricted VAR using quarterly data



Transmission of an Oil Price Shock: Results from a VAR Analysis

Note: Accumulated responses from an unrestricted VAR at one and six lags. Quarterly data 1997-2014. Numbers represent a statistically significant response (in %) to a 1% shock. Numbers represented by dark blue arrows are significant at the 99 percent confidence level, while those represented by light blue arrows are significant at the 95 percent confidence level.

THE INTERNATIONAL EXPERIENCE WITH COUNTERCYCLICAL MACROPRUDENTIAL POLICIES

Countercyclical MaPP can mitigate systemic risks over the financial cycle

- A tightening of macroprudential measures during an upswing in the financial cycle can help reduce the buildup of systemic risks
- A relaxation of macroprudential measures when financial stress emerges can mitigate adverse feedback loops

Examples of countercylical MaPP: capital tools

	Azerbaijan	Canada	Malaysia	Norway	Peru
Capital tools					
Countercyclical buffers				Law passed in July 2013; range is 0-2.5 percent of RWAs; applied to domestic banks and foreign branches; calibrated with 4 indicators for tightening; being phased in from June 2015	Implemented in July 2011; size determined based on stress tests; calibrated using GDP growth rate
Leverage ratio	Introduced in 2010; minimum 8 percent; calibrated using credit indicators				
Dynamic provisioning requirements					Introduced in 2008; trigger based system, using GDP growth rate

Examples of countercylical MaPP: household sector

	Azerbaijan	Canada	Malaysia	Norway	Peru
Household sector tools					
Capital requirements			Higher risk weights or capital charges for housing loans and personal financing		
Loan-to-value ratio		Introduced in 2008; calibration based on performance of housing market.	Introduced in 1995; targeted limits for individuals with multiple housing loans; calibrated based on credit and asset prices.	Introduced in 2010; on new residential mortgages; ecalibrated based on sectoral credit growth and asset prices.	
Debt-service- to-income ratio		Introduced in 2008; applies to new loans by banks and nonbanks; calibration based on performance of housing market; supported by limits on amortization periods.		Introduced in 2010; applies to new residential mortgages by banks	
Caps on exposure		-	Introduced in 1997; limits on lending to the property sector and for purchase of equities		

Examples of countercylical MaPP: corporate sector and liquidity tools

	Azerbaijan	Canada	Malaysia	Norway	Peru
Corporate sect	tor tools				
Capital requirements					
Caps on exposure					
Loan-to-value ratio (on CRE)			Targeted limits for businesses; applied to new loans by banks and selected nonbanks, limits on amortization periods since July 2013.		
Liquidity Tools	;		-		
Liquidity buffers	Calibration based or assessment of liquidity indicators	Calibration based on assessment of liquidity and market risk indicators			
Reserve requirements	Introduced in 2005; calibrated using credit indicators				Applied to outstanding stock and new liabilities; used to limit foreign currency exposures; adjusted based on market indicators and systemic risk measures

Assessing the effectiveness of MaPPs is challenging

- Too early to assess effectiveness of tools introduced not too long ago
- Empirical assessment difficult in the absence of wellestablished macro-financial models
- Hard to isolate the effect of the tools from that of other accompanying policies—MaPP measures are often not taken in isolation



Weak evidence supporting effectiveness of MaPP in a bust

- MaPPs can reduce the incidence of credit booms and the probability that booms end badly (Dell' Ariccia et al 2012)
- MaPPs are more effective in booms, but evidence on effectiveness in busts is weak:
 - Limited evidence on loosening hampers analysis
 - Small sample of countries with CCBs relaxation
 - Dynamic provisioning effective in Spain in smoothing the downturn
 - LTV and DSTI limits help in mitigating credit decline in a contractionary phase (Kuttner and Shim (2013), Claessens et al (2014), McDonald (2015))

DESCRIPTION OF COUNTERCYCLICAL MACROPRUDENTIAL POLICIES IN SAUDI ARABIA – PAST AND PLANNED

Some of Saudi Arabia's macroprudential tools have been used countercyclically

Capital Tools	Capital Adequacy ratio Leverage Ratio Provisions
Sectoral Tools	Loan to Value Ratio (70 percent for mortgages) Debt to Income Ratio (33 percent for consumer credit, not including mortgages), Debt Burden Ratio being considered
Liquidity Tools	Loan to Deposit Ratio (85 percent) Liquid Assets/Deposits (20 percent) Reserve Requirements (7 percent on demand deposits, 4 percent on time and saving deposits)

Evidence of countercyclicality in capital and provisioning ratios

Determinants of bank-by-bank capital and provision ratios in Saudi Arabia

Dependent variable	Capital ratio			Provisioning to loans		
Dependent variable (L1)	1.081***	1.163***	1.108***	0.472**	0.363	0.402**
Real credit growth (L1)	0.027*	0.045**	0.043**	-0.005	0	0
Nonoil GDP gap (L1)	0.11	0.174	0.287	0.066**	0.058*	0.050***
Credit to GDP gap (L1)	0.043	0.067	0.063	0.025*	0.035**	0.032**
Real oil price growth (L1)	0.01	0.014	0.024	0.007	0.006	0.006*
Constant	-1.97	-3.659	-2.727	0.332**	0.357	0.325**
Number of observations Lag of GMM instruments	126 1	126 2	126 3	127 1	127 2	127 3

Buffers have been built to strengthen financial stability

- Capital and provisions are countercyclical with respect to real credit growth, implemented on a bank-by-bank basis
- Reserve

requirements used countercyclically in 2008



Saudi Arabia: NPL and Provisions, 2000-2014

Banking sector is well-capitalized, liquid, and profitable

	Capital	Provisions for	NPLs to	Loan to
	Adequacy Ratio	NPLs	Gross Loans	Deposits
Bahrain	19.2	56.0	5.6	-
Kuwait	18.5	30.4	3.8	71.7
Oman	16.2	68.8	2.1	97.8
Qatar	16	96.8	1.9	105.9
Saudi Arabia	17.8	158.8	1.4	79.4
UAE	18.3	102.1	7.1	85.8
GCC average	17.7	85.5	3.6	88.1
Azerbaijan	18	1.0	4.5	187.7
Canada	13.7	16.5	0.6	122.2
Kazakhstan	16.8	71.6	20.4	103.5
Malaysia	14.5	30.1	1.8	81.0
Mexico	15.9	132.4	2.9	-
Norway	15.7	35.1	1.3	115.5
Peru	14.4	122.4	3.8	-
Russia	12.8	69.8	6.5	97.4
Non-GCC average	15.2	59.9	5.2	117.9

Sources: Authorities data; Haver; IMF staff calculations Note: Data is for 2014 or latest year available

SAMA is developing its formal macroprudential policy framework

- SAMA is working on defining countercyclical buffers in line with Basel III.
 - Need to define size and coverage (reciprocity principle for foreign branches).
- Financial Stability Report has been published to strengthen communication of risks and effectiveness of policy response.

POLICY RECOMMENDATIONS

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Policy recommendations

- Ensure a strong and clear macroprudential policy framework to guide countercyclical approach
 - Assign clear roles and responsibilities of all agencies and the proposed NFSB and provide necessary support.
 - Improve coordination and information sharing
 - Identify reliable early warning indicators and address data gaps
- Scope to enhance countercyclical role of sectoral and liquidity tools
- Provide clear guidance on policy implementation (including CCB, DPR, and other tools)

Policy Recommendations

- Address potential leakages from:
 - DSTI ratio
 - LTV ratio
 - Corporate sector
- Sectoral concentration limits could be considered
- Balancing between stability and development
 - As SAMA is making efforts for financial sector development, coordination with macroprudential policy is important
 - The package of development initiatives should come with a set of MaPP measures to ensure no impact on financial stability

Policy Recommendations

- Relax policies if financial sector stress emerges and policy space is available:
 - For pressures on the asset side, release provisions first to mitigate adverse feedback loops, and then CCBs.
 - For pressures on liquidity, relax reserve requirements first, and then the loan to deposit ratio
- Ensure microprudential norms are met even after loosening of MaPP requirements, and strong supervision

Questions?