Annex:
Alternative central bank policy instruments

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Introduction

This Annex reviews "alternative" policy instruments used by emerging market central banks to deal with the effects of external factors on their domestic financial systems. The term "alternative" here means policy instruments other than standard tools such as interest rates or foreign exchange market intervention.

We group these alternative instruments into three broad categories: first, alternative monetary policy and macroprudential tools aimed at offsetting the financial implications of capital flows; second, balance sheet policies other than foreign exchange intervention; and third, fiscal and quasi-fiscal measures to offset the domestic consequences of foreign exchange intervention. The analysis is based on information provided by the central banks in response to a BIS questionnaire prepared for this meeting. The time horizon for policy measures is 2008–11.

The rationale for the use of alternative central bank policy instruments in emerging markets is fairly straightforward. Most central banks have a broad mandate that includes not only price (or exchange rate) stability, but also the safeguarding of financial stability, as well as the promotion of economic growth, and, sometimes, financial development. To fulfil these multiple objectives within the constraints imposed by a particular policy regime – inflation targeting, fixed exchange rate or a managed float – central banks use all available tools, including cooperation in some instances with fiscal authorities and other policymakers. This does not imply that monetary and fiscal policymakers do not normally cooperate; rather, there are occasions where the line between what appears to be distinct responsibilities and tasks becomes blurred. Moreover, interest rates and foreign exchange intervention may not be sufficient to resolve the policy dilemmas resulting from the impact of external factors on the domestic financial system, which are discussed in the BIS notes prepared for this meeting.

Another way to think about alternative central bank policy instruments is in terms of the evolution of the central banks' role, especially since the global financial crisis of 2007–10. Over the two decades preceding the crisis, a broad consensus had emerged that price stability – a low and stable inflation rate – should be the main, if not exclusive, goal of central banks. The consensus further held that the goal of price stability was best served by monetary policy focused on one instrument, the policy interest rate. Apart from price stability, it was not entirely clear what other roles central banks should play to ensure macroeconomic and financial stability.

During the crisis of 2007–10, however, as conventional monetary easing ran its course and approached the zero bound, central banks in a number of countries shifted their focus from

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prices to quantities (Table 1).[2] These unconventional measures included: liquidity provision to banks on extraordinary terms, especially at longer maturities, in order to alleviate pressures in the interbank market; intervention in selected credit markets to support secondary market liquidity and credit pricing and supply; and outright bond purchases aimed at easing financing conditions beyond what could be achieved by policy rate cuts.

Table 1

Central bank roles and policy tools

Conventional	**Monetary policy tools**	**Prudential policy tools**
Focus on prices Indirect approach to influencing financial conditions and asset prices Direct influence on the very short-term interbank market only	Policy interest rate Reserve requirements	Capital requirements Liquidity requirements
Unconventional	**Central bank balance sheet tools**	
	Intervention in domestic financial markets	**Intervention in FX markets**
Focus shifted from prices to quantities Direct intervention in financial markets	Term interbank market Sovereign bond markets Credit markets (corporate and covered bonds, ABS) Mortgage markets	FX intervention Reserve accumulation Currency swap arrangements

Source: Hannoun (2010).

As a result, central banks' balance sheets in advanced economies have expanded significantly, with a notable lengthening of asset duration. In the emerging market economies, the size of central banks' balance sheets had already expanded considerably before the crisis, as many central banks had built up foreign reserves in what might be considered a long-standing form of unconventional policies. As market and macroeconomic conditions stabilised and improved over the course of 2009–10, central banks began to wind down these unconventional measures and to prepare for the return to conventional policy mode.

Since the start of the crisis in 2007, the prevailing view on the role of central banks has thus shifted from the relatively narrow focus on price stability to a view that central banks can and often should maintain a key presence in the financial system. Against this background, the following tables in this Annex provide a summary list (which is not necessarily exhaustive) of various measures used by central banks in major EMEs to deal with effects of external factors on their domestic financial systems over the past three years.

[2] See H Hannoun, "The expanding role of central banks since the crisis: what are the limits?" Speech at the Conference on the 150th Anniversary of the Central Bank of the Russian Federation, Moscow, 18 June 2010. www.bis.org.

Table 1A

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Changes in reserve requirements	
Brazil (3 December 2010): Reserve requirements on time deposits increased from 15% to 20%.	
Colombia (7 May 2007): Imposing marginal reserve requirements on local currency checking accounts, savings accounts and CDs, and a reserve requirement on foreign indebtedness. Shortly after, the finance ministry imposed a similar requirement on portfolio inflows. (June 2008): Central bank decided to eliminate marginal reserve requirements from September 2008 on and to raise ordinary reserve requirements (which were then cut on 24 October 2008).	Aimed at mitigating the exchange rate appreciation; cooling credit growth and private indebtedness; and accelerating the transmission of policy interest rate hikes. The measures led to a shift in the composition of inflows (fewer short-term speculative inflows) and strengthened the transmission of policy rate movements.
Hungary (October 2008): Reserve requirement ratio lowered from 5% to 2%. (November 2010): flexible reserve requirements (2–5%) are available for banks depending on their needs.	
India: Between 26 December 2006 and 10 October 2008 the cash reserve ratio was gradually increased from 5% to 9%. Between 13 October 2008 and 19 January 2009, the ratio was cut in several steps back to 5%, and stayed at that level until 12 February 2010. It was subsequently raised in three steps back to 6%.	Sterilisation of the domestic liquidity implications of capital inflows.
Peru (31 January 2008): Central bank raised its reserve requirements on deposits in domestic and foreign currency, from 6% to 25% and from 30% to 49%, respectively. Reserve requirement ratio for non-resident deposits was set at 120%; and for external borrowing of banks to 49%. After the collapse of Lehman Brothers, reserve requirements were lowered to levels observed before the start of the crisis. (June 2010): Central bank raised legal minimum reserve requirement (from 6% to 9%); reserve requirements on deposits in local and foreign currency (from 6% to 25%, and from 30% to 55%, respectively); requirements on non-resident deposits (from 35% to 120%), and requirements on external short-term borrowings of banks (from 35% to 75%).	Discourage short-term capital inflows and external borrowing, as well as rapid growth of domestic credit. The measures helped to moderate the high growth rates of credit in soles and dollars, thereby controlling domestic demand and its impact on inflation. The actions during the first stage of the recent crisis helped to improve the level of international liquidity of the economy and provided greater flexibility to confront any reversal of capital flows.
Poland (mid-2009): Reserve requirement ratio was lowered from 3.5% to 3%.	

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Changes in reserve requirements	
Russia (15 January–17 September 2008): Required reserve ratio on credit institutions' liabilities to non-resident banks in local and foreign currencies was gradually raised from 3.5% to 8.5%; required reserve ratio on liabilities to individuals and on credit institutions' other liabilities raised from 3% to 5.5%, and from 3.5% to 6%, respectively. (18 September 2008–30 April 2009): All required reserve ratios were gradually cut to 0.5%. (Since May 1, 2009): Required reserve ratios were again gradually raised, with the most recent increase on 1 February 2011 (increase in reserve requirements on non-resident companies to 3.5% from 2.5%, and of other reserve requirements by 50 basis points to 3.0%).	
Saudi Arabia (2007–09): Changes in the required reserve requirements.	Contain the rapid growth of bank credit.
Turkey (2010): Any debt contracted by offshore branches of the Turkish banks made subject to reserve requirements.	Eliminate advantage of foreign borrowing by offshore branches of Turkish banks.
Turkey (November 2008–April 2010): In November 2008, reserve requirements on deposits in foreign currency were reduced from 11% to 9%. In October 2009, reserve requirements for deposits in local currency were reduced from 6% to 5%.	Supporting liquidity.
(April 2010–July 2011): In April–November 2010, reserve requirements on deposits in domestic and foreign currencies were gradually raised back to 6% and 11%, respectively. The increases in reserve requirements continued in January–July 2011, as reserve requirements on deposits in domestic currency were gradually raised to 16% on demand deposits, notice deposits, private current accounts and deposits/participation accounts with maturity up to one month; to 13% on deposits and participation accounts with maturity up to three months and liabilities other than deposits; to 9% on deposits and participation accounts with maturity up to six months. At the same time, reserve requirements on local currency deposits and participation accounts with one-year or longer maturities were cut to 5%. In April 2011, reserve requirements on short-term (up to one year) FX deposits and other short-term FX liabilities were raised to 12% and on other FX liabilities with maturity 1–3 years, to 11.5%. (July 2011): reserve requirements on FX deposits with one year or longer maturity and other FX liabilities with 1–3 years maturity were cut to 10%, and to 9% on other FX liabilities with maturity longer than three years.	Lowering credit growth in the light of capital inflows.

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Real estate market measures / Limits on credit growth	
Brazil (20 October 2009): 2% tax on capital inflows to equities and fixed income public securities issued domestically (October 2010): Tax on fixed income instruments issued domestically raised to 6%.	The 6% tax on fixed income securities had a significant impact: from January–October 2010, net inflow was $14.8 billion; from November–December, there was a net outflow of $0.2 billion.
China (April 2010): Lowered LTV ceiling from 80% to 70% for the first home buyers of apartments over 90 m^2, lowered the LTV ceiling to 50% and set the minimum mortgage rate at 110% of the base rate for second home buyers; in certain areas, suspended mortgages on third homes and mortgage loans to non-local residents. (September 2010): Suspended all mortgages on third homes and mortgage loans to non-local residents; lowered the LTV ceiling to 70% for all first home buyers. (January 2011): For mortgages of second homes, lowered the LTV cap to 40% and set the minimum mortgage rate at 110% of the benchmark rate.	
Hong Kong SAR (23 October 2009): Lowered LTV ceiling for residential mortgages on properties valued at HKD 20 million or more, from 70% to 60%. Reminded authorised institutions that they should be prudent in valuing properties and calculating borrowers' debt-servicing ratios.	To ensure banks properly manage their mortgage lending-related risks and to maintain stability of the banking system. As a result, number and value of new mortgage loans approved in November 2009 dropped by 25% and 23%, respectively, from September 2009. Market optimism tempered in Q4 2009 as investors were more mindful of the risk of asset bubbles.
Hong Kong SAR (13 August 2010): Applying a maximum loan-to-value (LTV) ratio of 60% to properties with a value at or above HKD 12 million. For properties valued below HKD 12 million, the 70% LTV guideline continues to apply, but the maximum loan amount is capped at HKD 7.2 million. Lowering the maximum LTV ratio for properties which are not intended to be occupied by the owners to 60%. Banks should require mortgage applicants to declare whether they intend to occupy the mortgaged property. Standardising the limit on debt servicing ratios (DSRs) of mortgage applicants to 50% instead of the current range of 50–60%. In addition, banks should stress-test mortgage applicants' repayment ability, assuming an increase in mortgage rates of at least 2 percentage points, and limit the stressed DSR to a cap of 60%.	Managing risks to the stability of the banking system, as well as safety and soundness of individual institutions. These risks were prevailing as a result of rising property prices and buoyant investment sentiment due to the unusually low interest rate environment. As a result of the continued rise in property prices, various indicators gauging housing affordability were rising.

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Real estate market measures / Limits on credit growth	
Hong Kong SAR (November 2010): Lowered the LTV ceiling to 50% for flats over HKD 12 million and non-owner occupied properties; to 60% (with cap of HKD 6 million) for flats in the range of HKD 8–12 million; and to 70% with cap of HKD 4.8 million for flats below HKD 8 million.	
India (November 2010): Introduced a LTV ceiling of 80% and increased risk weights for mortgage loans over INR 7.5 million to 125%.	
Korea (2009): Ceiling on LTV ratios lowered in the Seoul region from 60% to 50% for bank housing loans of less than 10 years (July 2009), and for non-bank housing loans (October 2009). Debt-to-income ceilings, which had applied only to speculative zones, were extended to all of Seoul. (August 2010): Eased the debt-to-income restrictions for mortgage loans to low-income earners who buy homes for own occupancy.	
Malaysia (November 2010): Lowered the LTV ceiling to 70% for third mortgages.	
Poland (February 2010, effective December 2010): Recommendation on good practice regarding risk management of retail credit exposures. The payment-to-income ratio may not exceed 50% for borrowers earning less than the average national wage, or 65% for other borrowers. For FX-denominated loans to unhedged borrowers, the calculation of the payment-to-income ratio has to assume, in addition, a 10% depreciation of the zloty (20% for loans of maturity above five years).	The aim is to strengthen risk management practices in the area of retail (household) exposures. Too early to assess the impact of the recommendation, but regular NBP surveys indicate that banks have tightened their lending policy in response to the recommendation.

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Real estate market measures / Limits on credit growth	
Singapore (September 2009): Interest-only loans and loans in which the developer absorbed interest on behalf of the borrower for a period of time disallowed. (February 2010): LTV ceiling for housing loans extended by financial institutions was lowered from 90% to 80%. Seller's stamp duty (SDD) on all residential properties bought and sold within one year was introduced. (August 2010): the hold period of the imposition of SDD increased from one year to three years. The minimum cash down-payment for housing raised from 5% to 10%. LTV ratio for borrowers seeking to purchase property and who already have one or more outstanding housing loans lowered from 80% to 70%. The minimum period for which a person must occupy his public housing unit before he can sublet or resell the unit was raised. Concurrent ownership of public housing and private properties during minimum occupation period was disallowed. (January 2011): LTV ceiling was lowered from 60% to 50% for property buyers who are not individuals and from 70% to 60% for individuals with one or more outstanding housing loans.	To temper effervescence in property sector.
Thailand (November 2010): Setting an LTV ceiling of 95% for low-rise residential properties and 90% for condominium units below THB 10 million. If the cap is breached, the risk weight for mortgage loans increased from 35% to 75%.	
Turkey (2007): Setting maximum LTV ratio of 75% on residential mortgages and 50% on commercial property; introducing adjustable rate mortgages.	
Limits to FX exposure	
Brazil (6 January 2011): Limiting financial institutions' FX short position in the spot market to $3 billion or the bank regulatory capital (whichever is lower). 60% of the excess amount must be deposited, in domestic currency, at central bank without remuneration.	With a transition period of 90 days, the measure took effect at the start of April 2011. Aimed at preventing excessive currency appreciation.
Colombia (7 May 2007): Central bank restricted the size of the gross FX derivatives exposure of domestic financial institutions at 500% of technical capital.	Mitigating counterparty risk in FX derivatives markets.

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Limits to FX exposure	
Hungary (2008): Moral suasion by the National Bank of Hungary and the Hungarian Financial Supervisory Authority to steer banks and consumers away from FX-denominated loans, especially from JPY loans. (Beginning of 2010): LTV regulation differentiating HUF- and FX-denominated loans, and payment-to-income limit for FX-denominated loans in relation to HUF loans. The highest possible rates for HUF, then for EUR and the lowest for the other FX loans. (August 2010): FX-denominated mortgage lending was banned by the new government.	In 2010, the proportion of HUF-denominated loans in new loan volumes increased considerably; total volume of new loans did not decrease.
Korea*:* (June 2010): Ceilings on FX forward positions relative to banks' equity capital; tighter management of foreign currency lending; and stronger management of FX soundness. The ceilings were set and applied as 50% of previous month's capital for domestic banks, and 250% for foreign bank branches.	Reducing systemic risk related to excessive volatility of capital flows. Curb excessive short-term overseas borrowings. As a result, growth in short-term foreign borrowing has slowed since June.
Philippines (October 2010): Increasing foreign exchange transaction ceilings for over-the-counter FX purchases by residents for non-trade current account purposes; to cover advance payment requirements; for outward investments and/or investments in Philippine debt papers issued offshore; and for currency reconversion by non-resident tourists at ports of exit.	Increase flexibility in managing FX exposures and facilitate foreign investment payments.
Poland (13 March 2007, effective 1 April 2007, but banks had the option not to apply new rules until 31 December 2007): Higher risk weights for FX mortgages. If the currency of a loan is different from the currency of borrower's income, a 75% risk weight was applied to the "fully and completely" secured part of exposure secured by borrower-occupied residential property (35% risk weight if the currency of exposure is the same as the currency of borrower's income). (2009): early warnings were given on FX lending. (2010): moral suasion was used to stop banks lending JPY-denominated mortgages.	Difficult to judge the impact because the time span of the influence of the higher risk weight in an undisturbed environment was quite short: new FX mortgage lending declined strongly starting in Q4 2008 due to the market turmoil, exchange rate depreciation and higher costs of hedging FX positions.
Elements of dynamic provisioning	
Colombia (2008): Financial Superintendency established a provisioning system for commercial loans with countercyclical features, and decided to increase provisioning requirements on consumer loans in anticipation of the implementation of a similar system for consumer lending.	

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Elements of dynamic provisioning	
India (October 2009): Higher risk weights and provisioning requirements on bank loans to specific sector such as commercial estate and exposure to the capital market.	
Israel (July 2010): Bank supervisor published new guidelines on the development of housing loan risks, which require banking corporations to examine their housing credit risk management and make additional provisions for housing loans with high loan-to-value ratios.	
Peru (November 2008): Supervisor of banking, insurance and pension funds established a pro-cyclical provisioning scheme that accumulates additional provisions during the expansionary stage of the business cycle, and uses them during the contractionary stage.	
Other measures	
Colombia*:* Minimum stay requirement on foreign direct investments of two years.	
Czech Republic (until September 2008): Improving credit risk analysis and data collection.	
Hungary (until September 2008): The supervisors required some banks to strengthen risk management. Moratorium on mortgage foreclosures starting in late 2009 and set to expire in April 2011. Banning foreclosures of FX mortgages originated after July 2010.	
Philippines (October 2010): Allow private sector to prepay foreign currency loans without prior BSP approval; banks allowed to act on foreign investors' requests for FX conversion and outward remittance of peso funds.	Increase flexibility in managing FX exposures and facilitate foreign investment payments.
Peru (2009): Ban on foreign investors' purchases of central bank bills. (2010): Increased fee on foreign purchases of central bank liquidity draining instruments, to 400 basis points.	Restricting foreign investors' access to central bank instruments.
Poland (end-2008–beginning of 2009): The authorities convinced most banks to retain 2008 profits. (2009–10): The financial supervisors allowed banks to count some convertible and long-term bonds as own capital for two years.	

Table 1A (cont)

Alternative monetary policy and macroprudential tools to offset the implications of heavy capital inflows

Policy tools	Objectives / effects[1]
Other measures	
Turkey (2008): Removing obstacles on domestic foreign currency loans.	Shifting a portion of external debt to Turkey and hence preventing exaggeration of external debt shock. Shift in foreign currency borrowing from Turkish banks' foreign branches or affiliates to borrowing from domestic banks.
Turkey (2007): Banks were instructed to target 12% capital adequacy ratios. (2008–09): Banks needed approval before distributing 2008 profits, renewed for 2009 profits and later; banks with capital adequacy ratios above 16% were to lower general provisioning until March 2011; banks allowed to reclassify non-performing loans to performing if slippage was related to liquidity crunch; and banks could also reclassify government bonds from available-to-sale to hold-to-maturity.	

[1] Preliminary assessment.

Source: Central bank responses to the BIS questionnaire; IMF; national sources.

Table 1B

Balance sheet policies other than foreign exchange intervention

Policy tools	Objectives / effects[1]
Intervention in domestic financial market	
Hungary (October 2008): FX swap tenders for domestic banks, backed by agreements with the ECB and the Swiss National Bank. Broadening the range of eligible collateral and reducing the reserve ratio from 5% to 2%.	Reinforcing financial markets and the FX liquidity of the banking sector. Collateralised loans with longer maturities supported banks' HUF liquidity management and thereby reduced the volatility of HUF interbank rates.
India (2008): Greater access to the central bank repo facility. Introduction of 14-day term collateralised repo facility for banks, non-banks, housing finance companies and mutual funds. (2009–10): Market Stabilisation Scheme (MSS) securities were unwound to inject domestic liquidity.	Enhancing the availability of domestic liquidity during crisis. Managing the impact of capital inflows (MSS securities were issued to absorb surplus liquidity from capital inflows).
Korea (October 2008): financial market stabilisation measures, including provision of liquidity to the market through long-term and non-regular repo purchases one-off interest payments on bank reserve requirements; and contributions to the Bank Recapitalisation Fund, the Bond Market Stabilisation fund, and the Korea Credit Guarantee Fund. Provision of foreign currency liquidity to financial institutions via a swap facility using the official reserves and a swap facility with the Federal Reserve.	The measures have contributed to the stabilisation of the financial markets during the crisis.
Mexico*:* Interest rate swap auction programme for up to MXN 50 billion for domestic financial institutions. Banco de Mexico offered the floating rate (the 28-day interbank equilibrium rate) in exchange for a fixed rate.	Reduce sensitivity of banks' portfolios to fluctuations in the yield curve. Actual use of this measure was limited: less than 10% of the total amount originally considered was allocated.
Peru (October 2008): Extending maturity term of the liquidity provision to the financial system and easing reserve requirement ratios. Impact of the full range of instruments deployed (repo, central bank certificates, central bank swaps and reserve requirements) on credit supply over October 2008–March 2009 estimated at 9.6% of GDP. Repurchase of central bank certificates.	Prevent credit crunch caused by over-reactions of banks to the non-renewal of foreign credit lines, or to deterioration of the quality of the loan portfolio. Preserve market liquidity of the system; maintain collateral value of the assets for money market operations; set a benchmark for longer-term lending operations.
Poland (October 2008): Providing liquidity in domestic currency in the form of repo transactions; providing liquidity in foreign currency through seven-day and one-month FX swap transactions; earlier redemption of central bank's bonds; lowering the required reserve rate from 3% to 3.5%.	Prompt and appropriate response of the NBP helped to restore confidence on the interbank market. The new set of operations reduced liquidity risk in banks. It has led to the resumption of bilateral quotations on the interbank repo market for transactions longer than overnight.

Table 1B (cont)

Balance sheet policies other than foreign exchange intervention

Policy tools	Objectives / effects[1]
Intervention in domestic financial market	
Philippines (October–November 2008): Establishment of a US dollar repurchase agreement facility.	Increase dollar liquidity in the foreign exchange market.
Dollar swap transactions to sterilise BSP's participation in the foreign exchange market.	BSP's dollar forward transactions allowed banks to increase their foreign assets and limit their foreign currency exposure.
Turkey (19 June 2009–15 October 2010): Maturity of daily repo tenders increased to three months maturity.	Mitigating stress on one-week repo auction and money market interest rates.
Purchases of bonds issued by government	
Hungary (October–December 2008): Secondary market purchases of the Hungarian government securities.	Provided HUF liquidity to the banking system and improved the secondary market liquidity by supporting market-making by primary dealers in the secondary market.
Israel (February–August 2009): Buying government bonds in the secondary market (total of NIS 18 billion).	Government bond yields were lowered by 30–40 basis points.
Mexico (October 2008): Banco de Mexico implemented a special programme and acquired MXN 146 billion of deposit insurance agency (BPA) bonds, which are guaranteed by the Federal Government, but the guarantee must be ratified every year.	Purchases of BPAs effectively improved the liquidity in the market (many financial institutions hold large amounts of these BPA bonds).
(December 2008): Programme to repurchase long-term government bonds in the secondary market through auctions.	Improving liquidity in secondary market.
Intervention in credit market	
Brazil (Q4 2008): FX liquidity provision through loans to the private sector. Domestic currency liquidity provision through lower reserve requirements. Measures mostly reversed in March–December 2010.	Replace supply of trade credit, as commercial credit lines were almost completely cut off.
Stimulating the acquisition by large banks of assets from small and medium banks.	
India: Increase in export credit refinance limit for commercial banks, and special refinance facilities for specialised financial institutions.	
Philippines: Liberalisation of rediscounting guidelines.	Enable banks to access additional funds that can be re-lent to the public.

[1] Preliminary assessment.

Source: Central bank responses to the BIS questionnaire; national sources.

Table 1C

Fiscal policies to offset domestic consequences of foreign exchange interventions

Policy tools	Objectives
Higher taxes	
Hong Kong SAR (1 April 2010): Stamp duty rate on transactions of property valued over HK$20 million raised from 3.75% to 4.25%; no deferral in payment of stamp duty allowed. Inland Revenue Department closely follows up on property transactions and levies tax on the profits arising from property transactions.	Preventing excessive volatility in property prices and stabilising the property market.
Peru (January 2010): Government imposed a 30% tax on foreign investors' profits from short-term currency futures.	Avoid volatility in the foreign exchange market and stabilise the Peruvian currency.
Thailand (13 October 2010): Revenue Department reintroduced 15% withholding tax on foreign investments in government and quasi-government bonds.	Restraining speculative inflows into the government debt market.
Reduced deductibility of interest expenses on foreign debt	
Colombia (Q4 2010): Eliminating deductibility of interest expenses on foreign debt.	Reducing attractiveness of external borrowing.
Russia (27 July 2010): Amendments to the Tax Code of the Russian Federation, reducing the limit on deductibility of interest on foreign currency loans (deduction can be taken from the profit tax base for the periods of 2011 and 2012; previously 15%, now refinancing rate multiplied by the ratio 0.8). At the same time, the limit on deductibility for rouble loans was raised to 1.8 times refinancing rate (previously 1.1 8 times refinancing rate).	Discouraging foreign currency borrowing.
Interest rate ceilings on external borrowing	
India (December 2009): External commercial borrowing under so-called automatic and approval routes moderated by reintroducing interest rate ceilings. Additional ceiling set imposed on the amount of external commercial borrowing under the automatic route.	Increase restrictions on external borrowing and prevent high-cost borrowing.
Prepayment of foreign-denominated debt	
Philippines (2006–2008): National government, several government-owned and controlled corporations, the BSP, and private corporations undertook prepayments of their foreign-denominated debt. Fiscal borrowing mix leaned towards domestic sources.	The prepayments helped mitigate exchange rate appreciation pressures and reduce significantly the country's total outstanding external debt. Taking advantage of a stronger currency as well as to limit external debt volatility. The share of external borrowings in gross borrowings in 2007 was only 27%.

Table 1C (cont)

Fiscal policies to offset domestic consequences of foreign exchange interventions

Policy tools	Objectives
Other measures	
Singapore (September 2009): More land was released by the government for property developers to build private properties.	

Source: Central bank responses to the BIS questionnaire; national sources.

Sources of information

Tables 1A–1C in this Annex are based on the following questions from the central bank questionnaire prepared by the BIS in August 2010:

(i) Which macroprudential tools have proved effective in offsetting the financial implications of heavy capital inflows in your jurisdiction (please specify dates)? Examples include: dynamic provisioning; countercyclical changes in reserve requirements and/or bank capital; changes in loan-to-value, debt-to-income and debt service ratios for mortgage and foreign currency loans; reserve requirements on external borrowing of banks; limits on credit growth etc.

(ii) Which balance sheet policies other than foreign exchange intervention has your central bank used in the past? Examples include central bank intervention in domestic financial markets such as term interbank market; purchases of bonds issued by your government; intervention in credit markets (purchases of domestic corporate and covered bonds, asset-backed securities); and intervention in domestic mortgage markets.

(iii) Which fiscal policy measures have been used in the past few years to offset the domestic consequences of forex intervention (please specify dates)? Examples include: higher taxes (on stock market and real estate transactions, property, capital gains, and capital income); reduced deductibility of interest expenses; expenditure measures (lower subsidies for housing or loans to defined groups of borrowers) etc.

Additional information was collected from central bank websites and other official publications.