

| Jurisdiction <sup>1</sup> | Additional questions: 1. Please describe, at a high level, the types of methodologies, indicators and reports used in your jurisdiction to identify, analyse, communicate and address systemic risks.   | 2. Please describe the range of policy tools (prudential and other) currently available to the authorities for macroprudential purposes.   | 3. Please indicate which tools have been deployed for macroprudential purposes over the past year, including the objective for their use and the process used to select, calibrate, and apply them.   | 4. Please describe whether and, if so, how the relevant authorities assess the ex-ante cost and benefits of macroprudential policies and their ex-post effectiveness.   |
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| Argentina                 | The BCRA uses a set of methodologies and indicators in order to adequately monitor potential systemic events and sources of risks. A systemic financial risk could be defined as a risk of disruption in the normal functioning of the financial system, with potential impact on the real economy. The BCRA monitors especially the largest banks, since the failure of even a small number of large and complex institutions could spread through a multiplicity of contagion channels to the whole financial system. The BCRA regularly monitors aggregate risk indicators and banks' balance sheets as well as other data on the macroeconomic and market conditions, such as: companies and households' indebtedness, debt service burden, banks' common exposures (by region or economic sector), stress tests analysis and metrics of risk concentration within the system. The types of methodology, indicators and reports depend on the mandates of the two departments within the BCRA in charge of the monitoring: one within the SEFyC, directly involved with supervision and institutions' performance, and the other dedicated to financial stability and the analysis of macroeconomic and capital markets issues. A significant part of these indicators and their methodological notes are disclosed by the BCRA through a wide set of publications, such as the "Report on Banks" (monthly), the "Financial Stability Report" (half-yearly), the book "Information of Financial Institutions" (monthly), among other institutional releases. Many are also provided to the IMF on a quarterly basis under the framework of the Financial Soundness Indicators (and also published on the BCRA website). | In recent years, the BCRA has implemented a set of regulations for micro and macro-prudential purposes:  Mandatory 30% reserve requirement on short term funds from abroad;  Limits on open FX positions and currency mismatches;  Limits on foreign currency loans (that can only be granted to customers having income in foreign currencies);  Differentiated cash reserve requirements for foreign currency deposits;  Capital surcharge for D-SIBs;  Limits in interbank exposures;  Concentration limits;  Liquidity coverage ratio;  Higher capital requirements on banks for mortgages with high loan-to-value ratios.  Monitoring of the leverage ratio. Work in progress:  Monitoring of Net Stable Funding Ratios for a sample of banks;  Countercyclical Capital Buffer / Basel III Capital Conservation Buffer. | In 2014, the BCRA introduced regulations with the aim of: - Helping reduce foreign exchange risk: limits to foreign currency open positions - Encouraging savings in domestic and foreign currencies:  • Floor for interest rates on retail time deposits in pesos;  • Increased amount covered by the deposit insurance; Finally, in 2014 the BCRA concluded the calibration of the Liquidity Coverage Ratio, which entered into force in January 2015, and the disclosure requirement for the Leverage Ratio, in force since Q1 2015. | Ad-hoc technical groups within the BCRA analyse the potential impact of policy measures (ex-ante assessment). Once the analysis is finished, the BCRA authorities decide whether to implement them or not and on their calibration. If a policy is to be implemented, authorities may require further technical analysis to evaluate its real effectiveness and final calibration (ex-post analysis). |
| Australia                 | Responsibility for financial stability policy in Australia is spread across several agencies, including the RBA, ASIC, the Australian Treasury and APRA. The Council of Financial Regulators (CFR), which includes representatives from all four agencies, plays a central coordinating role. APRA and the RBA monitor a range of financial data at both an aggregated and  | APRA is the main agency that has power to directly change the behaviour (and if necessary, the balance sheets) of entities to achieve macroprudential outcomes. The main tool that APRA exercises is to vary through the cycle the intensity of supervision, backed up as appropriate by APRA's prudential tools   | APRA regularly uses speeches and written publications to convey its expectations from industry on areas of systemic risk. For example, on 9 December 2014, APRA wrote to all locally-incorporated authorised deposit-taking institutions (ADIs) to reinforce sound  | APRA continually assesses and monitors the risk and resilience of regulated institutions as part of its supervisory process. APRA collects a range of financial data in relation to APRA-regulated industries and   |

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<sup>&</sup>lt;sup>1</sup> To view the complete responses to the 2015 IMN Survey, see <a href="http://www.fsb.org/what-we-do/implementation-monitoring/other-areas/nationalregional-responses-by-jurisdiction/">http://www.fsb.org/what-we-do/implementation-monitoring/other-areas/nationalregional-responses-by-jurisdiction/</a>

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|                           | institution level. The set of data monitored is subject to ongoing review, according to criteria such as data quality, relevance and analytical usefulness. APRA is Australia's national statistical agency for the financial sector and actively shares information on key metrics in relation to the financial performance of APRA-regulated industries and individual entities with a number of regulatory agencies, including the RBA. APRA may seek additional data from the industry on an ad hoc basis if it assesses a particular topic to be vulnerable to systemic stress. In monitoring data, APRA and the RBA look for signs that balance sheet developments could make an entity or sector more vulnerable to particular shocks. Behavioural indicators such as risk appetite and exuberant expectations are also helpful for detecting risks to financial stability. APRA also has a set of systems, tools and processes that monitor industry trends and potential industry risks. These include its Industry Risk Management Framework, which assists in identifying and acting on significant emerging industry-wide risks; its Industry Analysis team, which is primarily responsible for conducting analysis and research on current and emerging industry risks; Industry Groups, which address, and seek APRA-wide consensus on, emerging industry issues; and Risk registers, which record material emerging concerns. APRA uses tools such as industry-wide stress tests, horizontal reviews and thematic analysis of emerging risks to inform its supervisory focus and actions. APRA regularly assesses the vulnerability of the financial system by conducting stress tests on the banking and insurance sectors. The results of APRA's stress tests inform its prudential supervision. APRA also conducts thematic risk reviews on a regular basis on specific areas of interest on a regular basis. For example, a recent thematic survey was conducted on mortgage loan serviceability standards. At the RBA, the analysis and policy development on financial stability Department. Specific are | (particularly capital) and, in extreme cases, its direction powers. APRA can also change prudential standards (subject to consultation) to dampen risk in the system. APRA also has the ability to alter the behaviour of regulated entities through suasion, via communication with individual entities, industry-wide communication and through the promulgation of messages during presentations at a range of public fora. The instruments available to the RBA in pursuing its financial stability objective include the use of its role as liquidity provider to the financial system and its regulatory powers in respect of the payments system, including oversight of clearing and settlement systems. | residential mortgage lending practices. The letter was issued against the backdrop of increasing prudential risks in the housing market and identified risk profile, investor lending, and serviceability assessments as specific areas of prudential concern. The letter complemented APRA's use of other tools in this area, which included increasing the level of analysis of mortgage portfolios, completing an ADI industry stress test focused on risks in the housing market, and issuing guidance on sound risk management practices for residential mortgage lending in Prudential Practice Guide APG 223 Residential Mortgage Lending.  Decisions regarding the selection, calibration and application of macroprudential tools are subject to APRA's normal internal governance processes. Potential tools that could be taken to reinforce sound lending practices were also discussed with other Australian regulators that are members of the CFR. | individual entities, which assists in its assessment of the ex-ante costs and benefits of policies.   |

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|                           | systemic issues at meetings of the CFR and the Coordination Committee. Several other, less frequent, vehicles for coordination have also been put in place in recent times. For example, analysts from both agencies meet two to three times a year to present and discuss their recent work and share findings of mutual interest.  |   |   |  |
| Brazil                    | The off-site supervisory team prepares reports, red flags and tools of analysis to be used by the on-site supervisory team and to be addressed at the Financial Stability Committee's (Comef) quarterly meetings. Stress test are also conducted on a regular basis, gauging the possible effects of changes in the prices of certain market parameters (e.g. loans, interest rates, exchange rates) in the solvency of the financial system as a whole. As examples of recent initiatives in this regard, BCB has developed a methodology for monitoring nationwide changes in real estate prices and has introduced a non-risk-based leverage measure based on total exposures to be disclosed by banks. | BCB has a wide list of policy tools for macroprudential purposes. As Brazilian banks adopt a simplified non-ratings-based approach of Basel II to address credit risk, BCB has ample latitude to assign specific risk-weights (RW) to those segments identified as sources of systemic risks. For instance, in 2013, BCB increased the RW for consumer loan exposures involving longer maturities and higher loan-to-value ratios, a high-risk segment that had outgrown its economic fundaments. BCB also has a vast experience with administering reserve requirements as a macroprudential tool to deal with liquidity issues. As for the Basel 3 framework, BCB has implemented a countercyclical capital buffer. | No specific macroprudential tool has been used in the past year.  | BCB's research team has been working closely with both the prudential regulation and the financial monitoring teams on how to assess ex ante the costs and benefits of macroprudential policies and their ex post effectiveness. The following papers are a result of this work: 1- an estimated DSGE to gauge the macroeconomic impact of macroprudential policies, 2- a bayesian analysis of a wide range of credit-based early-warning indicators, and 3- an ex-post evaluation of the macroprudential policies adopted to curb excessive growth in the segment of auto loans |
| Canada                    | The Bank has a systematic approach to monitoring, identifying and evaluating cyclical and structural vulnerabilities across all sectors in the Canadian financial system. The vulnerability assessment draws on a wide range of data, quantitative and qualitative indicators, and empirical models. Judgement about mitigating measures, such as regulation and supervisory regimes, is also included in order to arrive at an assessed level (high/medium/low) of concern for each area of potential vulnerability according to each sector. Given the set of vulnerabilities and potential trigger events, financial system risks are then identified and assessed.                                     | Canada primary use of macroprudential tools has been in the housing finance sector, including four adjustment to the regulation of government-backed mortgage insurance. These adjustments, implemented by the Minister of Finance between 2008 and 2012, included: reductions to the maximum mortgage amortization period; caps on the loan-to-value limits for new mortgages and mortgage refinancing; limits of total-debt service and gross-debt service ratios; and limits to the use of mortgage insurance. Canada has adopted the Basel Committee on Banking Supervision's countercyclical capital buffer framework. The Superintendent of financial institutions is responsible for activating this tool.     | The Government and regulatory agencies have not deployed macroprudential measures in the past year.   | Ex ante, the Department of Finance monitors housing market activity and prices, and household debt levels. It shares its assessments with partner agencies such as the Bank of Canada and OSFI and listens to the views and assessments of industry stakeholders   |

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| China                     | The PBC coordinates different authorities to monitor systemic risks in the system, whereas each of the financial regulatory authority has its own risk identifying and monitoring system related to their specific mandate. The results of these practices could be seen in the annual China Financial Stability Report. The PBC also lead discussions and analysis of systemic risks with other authorities on the platform of Joint Ministerial Conference on Financial Regulatory coordination since 2013.   | The Chinese authorities have a wide range of tools that can be used for macroprudential purposes. For example, the PBC introduced the dynamic adjustment of differentiated reserve requirements as a key macroprudential tool in 2011. The PBC also provides window guidance that is used to guide bank lending and is adjusted on a countercyclical basis.  | (see above)   | The effectiveness of macroprudential policies is assessed by whether they can maintain stable credit growth and keep the financial system steady. In sum, the dynamic adjustment mechanism of differentiated reserve requirement, combined with the traditional monetary policy instruments including open market operation, adjustment of interest rate and reserve ratio etc., have played a crucial role in maintaining stable gross volume of credit, optimizing credit structure, and enhancing resilience of financial institutions.  |
| France                    | Identifying and measuring systemic risk sufficiently early are key to the successful implementation of macroprudential instruments. The HCSF therefore places particular emphasis on developing appropriate methods and indicators complementing them by in-depth ad hoc analysis, to enable it to effectively monitor and evaluate the contributions of different market participants and sectors to systemic risk, as well as the interlinkages between them. The HCSF regularly monitors the financial sector as a whole, looking both at economic developments and at potential structural weaknesses. These assessments incorporate appropriate indicators and analyses which will guide the activation and release of macroprudential instruments, notably a broad set of indicators relating to macroeconomic, credit, market, liquidity and solvency risk, as well as to the risk of excessive concentration and interdependency. The HCSF uses its external communication to bolster its macroprudential policy, by providing the general public with information and explanations on the potential systemic risks it identifies and the measures it implements. The HCSF issues opinions and recommendations designed to prevent the emergence of systemic risks and threats to financial stability. HCSF notices are posted on its website (www.hcsf.gouv.fr), provided their disclosure is not likely to jeopardise financial | The HCSF has been entrusted with a wide range of macroprudential tools: - ensuring smooth information exchange and cooperation between authorities implied in the supervision and regulation of the financial sector, which improves the collective efficiency in preserving financial stability; - issuing any advice or recommendation to prevent systemic risk; - providing analysis of the financial sector and financial markets, and evaluating the systemic risk they incorporate; - upon a proposal from the BdF Governor, imposing a systemic risk buffer to strengthen the resilience of the financial system; - upon a proposal from the BdF Governor, imposing a countercyclical capital buffer to moderate and prevent excessive credit growth and leverage; - upon a proposal from the BdF Governor, setting credit institutions' credit standards to prevent, in particular, undue increases in asset prices and excessive private debt levels; - facilitating the cooperation of member authorities as regards the preparation of European and international financial regulations and issuing advice in that respect. | While developing macroprudential tools and preparing for a possible implementation, given the current situation, the HCSF has not deemed necessary to mobilise any instrument.                      | In general, the HCSF's decision-making process is an ongoing cycle comprised of four different stages: (i) evaluation of systemic risk, (ii) selection and calibration of the instruments, (iii) implementation of the macroprudential policy, and (iv) evaluation of the policy. Evaluation of systemic risk. The HCSF regularly monitors the financial sector as a whole, looking both at economic developments and at potential structural weaknesses. Its assessments incorporate appropriate indicators and analyses which will guide the activation and release of macroprudential instruments. These include a broad set of indicators relating to macroeconomic, credit, market, liquidity and solvency risk, as well as to the risk of excessive concentration and interdependency. Microprudential variables are also |

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|                           | stability.  |  |   | needed to conduct a more granular analysis of systemic risk, and the High Council can also back up some of the raw indicators with model-based indicators. However, quantitative data needs to be supplemented with a more qualitative appreciation. The HCSF therefore bases its decision-making on the principle of guided discretion, where a set of rules and indicators are used to signal what kind of adjustments might be necessary, but the authority exercises its own judgement when making its final decision, taking into account all the available information. Evaluation of the policy. This consists in verifying ex post that the measure has had the desired effect in terms of mitigating the systemic risk, and adjusting it where warranted. The HCSF takes particular care to identify any leakages in its policy: for example, where, following a policy tightening, credit is extended via other segments of the financial sector not covered by the activated instrument, or leakages where financial intermediation operates through foreign financial sectors. If leakages are detected, the HCSF endeavours to find the best way to tackle them, if necessary by cooperating closely with other supervisory authorities. More generally, the HCSF periodically reexamines the effectiveness of its macroprudential tools, whether planned or already implemented, drawing on the experience of other |

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|                           |  |  |  | countries.  |
| Germany                   | The Bundesbank analyses factors relevant to financial stability on an ongoing basis, identifies risks to financial stability in the process and, where applicable, proposes warnings and recommendations to the FSC i. Besides official meetings of the FSC, the Bundesbank, the BaFin and the MOF frequently exchange views on macro-prudential issues.   | Macro-prudential tools can be distinguished by their legal allocation. Soft tools like press releases, press conferences and the annual report are at the disposal of the FSC. Medium tools like warnings and recommendations are at the FSC's disposal as well. Hard tools, like the countercyclical capital buffer the national flexibility package, the systemic risk buffer or sectoral capital requirements (all of the above apply to the banking sector and are based on CRD IV / CRR), are at the disposal of BaFin. FSC recommendations to BaFin may trigger the application of hard macro-prudential tools   | According to the law, the FSC can issue warnings and recommendations to the Federal Government, the BaFin or other public authorities in Germany. Addressees have to comply or explain their inaction in great detail. So far, no warnings or recommendations have been necessary.   | Ex-ante impact assessments are conducted by applying both theoretical and quantitative models (e.g. DSGE models, time series analyses, stress tests, Monte Carlo simulations). A framework for expost evaluation of policy measures is under construction.  |
| Hong Kong<br>SAR          | The IA regularly carries out stress testing on insurers and the insurance market. Where there are areas of concern, the IA would carry out thematic reviews and collect additional information for further assessments. Issues arising from these analyses and assessments that may pose risk(s) to the stability of the industry/individual insurers will be communicated with the industry/ individual insurers to facilitate timely preventive actions. As far as the HKMA is concerned, a host of indicators in relation to global and domestic macroeconomic and financial stability are being monitored by the MSC regularly with a view to identifying risks and threats to the monetary and financial systems in Hong Kong and devising possible measures to address such risks. Property Lending The HKMA uses various tools to analyse and monitor property market risks in Hong Kong. The key types of tools used by the HKMA include: a) risk indicators (e.g. property price and transaction volume indicators; indicators on speculative activities; affordability indicators; and user-cost measures) and other macroeconomic indicators. b) models (e.g. Housing price model based on demand-supply dynamics and asset-pricing models) c) monthly survey on residential mortgage lending. In addition to the above, focused macro-financial stability analyses will also be conducted. | The IA primarily uses prudential tools for macroprudential purposes. Property Lending The range of tools for property mortgage lending includes: (i) Various maximum limits on LTV depending on the type and value of properties and borrowers' background. (ii) Various maximum limits on DSR and stressed DSR depending on the type of properties and borrowers' background. (iii) Maximum limit on loan tenor (iv) Capital risk weight floor for residential mortgage portfolios of banks using internal ratings based approach for managing their credit risks (v) Requirement for banks to share positive mortgage data through credit reference agency In addition to those related to property mortgage lending, the HKMA also requires banks to provide regulatory reserves to build a stronger buffer against possible material deterioration in their asset quality. | The IA has not identified threat(s) to the stability of the insurance industry from the assessments last year; hence, no deployment of tools was necessary for macroprudential purposes. CCyB The HKMA announced on 27/01/2015 a Hong Kong CCyB rate of 0.625%, in line with the Basel III phase-in level of the maximum CCyB rate, to become effective on 01/01/2015. The primary objective of the CCyB is to make the banking sector more resilient against system-wide risk associated with excessive aggregate credit growth. Decisions on whether to activate, increase, decrease or release the Hong Kong jurisdictional CCyB rate hinge on an assessment of: (i) the extent to which any aggregate credit growth in Hong Kong may be deemed excessive; (ii) the risks that may be building up across the banking system; (iii) the fragility of the Hong Kong banking system vis à vis such risks; and (iv) the degree to which an excessive credit contraction may be underway or is likely imminent. The HKMA will use a "guided discretion" approach in making decisions on the CCyB (and indeed on the deployment of other macroprudential policy | For the HKMA, the ex ante cost and benefits of macroprudential policies and their ex post effectiveness are deliberated regularly in various internal meetings, such as the MSC meetings.  1.CCyB In making CCyB decisions, the HKMA will also consider the balance of costs and benefits of policy options, at least on a qualitative basis. The HKMA also intends to undertake periodic reviews of the performance of the Initial Reference Calculator, and of the CCyB decision making process more broadly, with a view to enhancing them wherever deemed appropriate.  2.Property Lending Please refer to 3 above regarding the ex ante cost and benefits assessment. As regards the assessment of the effectiveness of the measures, the objective of the measures is to strengthen the resilience of AIs. This can be reflected from the average LTV and |

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|                           |   |  | instruments), based on regularly monitoring and analysing the following: a) The Basel Common Reference Guide (BCRG) based on the credit/GDP gap (calculated and published quarterly). b) The Initial Reference Calculator (IRC) (also calculated and published quarterly), i.e. a guide for both the build-up of the CCyB and the timely (partial or full) release of the CCyB in the presence of early signs of banking system stress, calculated with a methodology that combines the credit/GDP gap with additional indicators on local property prices and rents, the interbank market spread and average loan quality. c) A broader set of Comprehensive Reference Indicators that can help the HKMA develop a more complete view of systemic risk by covering risk factors that may not be adequately captured by the BCRG and the IRC. d) Other relevant information and analyses. Based on the analysis of the available information as described above and before considering a decision on the Hong Kong jurisdictional CCyB rate, the HKMA will first determine a "macroprudential policy stance", i.e. it will first focus on deciding whether the broad systemic picture suggests that the appropriate macroprudential policy stance, relative to that indicated by the IRC, should be "neutral", "tightening" or "loosening". The HKMA will review its macroprudential policy stance, relative to that indicated by the IRC, should be "neutral", "tightening" or "loosening". The HKMA will review its macroprudential policy stance on at least a quarterly basis. Once a macroprudential policy stance has been determined, the HKMA will consider and assess the available policy options (including possible combinations of CCyB rate levels with other complementary or alternative macroprudential policy instruments designed to bolster the resilience of the banking sector). Before reaching a decision, the MA may also consult any other parties as the MA may deem | DSR for the new mortgage loans approved each month. The average LTV dropped from 64% in September 2009 before the first round of macroprudential measures was introduced to 53% in April 2015. The average DSR also dropped from 41% in August 2010 when the tighter requirement on DSR was introduced to 34% in April 2015. |

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|                           |   |  | appropriate in order to arrive at an informed judgement based on all relevant information. The public announcement of the decision will include a reasoned justification where there is any divergence from the IRC. Property Lending The macroprudential measures on property mortgage lending aims to strengthen the resilience of the Hong Kong banking system in weathering a possible correction in property prices. The measures do not aim to influence property prices. The choice of countercyclical parameters (e.g. caps on LTV & DSR, and loan tenor), the setting (or adjustment) of the respective maximum loan amounts, and the type of mortgage loans that are subject to the countercyclical measures are principally based on professional judgement. In making a decision, the HKMA will conduct relevant studies and consider the potential impact of the proposed measures on members of the public (e.g. LTV and/or DSR, the reduced amount of property mortgage loans that mortgage loan applicants could borrow from AIs; or the proportion of mortgage loan applicants that would be affected). |  |
| India                     | In SRMT, the indicators are categorized market wise - primary and secondary, and segment wise- cash and derivatives- and related to indices, turnover, holdings, liquidity, volatility, settlement/margins/SGF, open interest, FIIs, and mutual funds. The template seeks to monitor systemically important aspects like market sentiments, liquidity, concentrations, interconnectedness, risk management, etc. relevant to securities markets in India. | The range of prudential and other policy tools currently available to the authorities have been indicated under the "Short description of the content of the legislation/regulation/guideline"   | The tools deployed for macroprudential purposes over the past year have been indicated under "Highlight main developments since last year's Survey"  | Not Applicable   |
| Indonesia                 | In identifying systemic risks, BI monitors risk indicators, events, and/or behaviours that may present potential risks in the financial system. BI considers various indicators both endogenous and exogenous indicators. For endogenous indicators BI consider various indicators within financial markets, financial institutions, and payment system. For  | A wide range of macroprudential policy tools can be introduced to serve the following objectives: a. improving capital resilience and preventing excessive leverage; b. maintaining intermediation function and mitigating potential systemic risk; c. limiting the exposure concentration; d. improving financial | Macroprudential instruments that have been implemented by BI are among others: • LTV ratio, BI issued a revised regulation on LTV ratio in 2015. This regulation is intended to target/restrain housing loan growth. BI applies different risk weight for residential property   | As mentioned above, a research will be conducted to assess the ex-ante cost and benefits of potential macroprudential policies to address/mitigate particular situation and sources of risks. Continuous |

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|                           | exogenous indicators, BI will consider domestic macroeconomic indicators, real sector, global, and event risks. BI publishes Financial Stability Review twice a year to inform its analysis to its stakeholders. The Financial Stability Review will cover BI's analysis regarding the current state of Indonesia's financial system stability. It will also present BI's analysis on potential risks in financial markets, household and corporate, banking and non-banking, as well as financial system infrastructures. | infrastructure resilience; and e. improving financial system efficiency and financial access. Examples of macroprudential policy tools that can be introduced are among others countercyclical capital buffer, macroprudential leverage ratio, requirements on LTV ratio, debt to income ratio, macroprudential reserve requirement, macroprudential LCR, hedging requirement, credit limitation on a certain sector, etc. | loans for different LTV ratios. • LDR-based reserve requirement (RR) ratio, this requirement is as a measure to balance a bank's intermediation role and its liquidity state. According to this regulation, the bank will get disincentive of higher RR if its LDR falls outside the range of the required LDR. • A requirement on the publication of base lending rates for four credit segments (corporate, retail, mortgages and non-mortgages consumer loan). The objective of this policy is, among others, to enhance good governance and to promote sound competition in the banking industry by improving market discipline. • A regulation concerning prudential principles in managing non-financial corporate external debt, this regulation requires non-financial corporates to meet requirements on minimum hedging ratio, liquidity ratio, and credit rating. It is expected that these requirements will help non-financial corporate to mitigate various risks that may arise from their external debt (such as currency, liquidity, and overleverage risks) and will strengthen non-bank corporate risk management. When selecting a macroprudential instrument to be used in a particular situation, the authority will assess an instrument that can deliver the best outcome to address potential risks with the least negative impacts to the economy. A research will be conducted to analyse the cost and benefit of implementing potential instruments. Continuous monitoring and assessment will also be conducted to identify the need to recalibrate the requirement or to introduce a new requirement. | monitoring and evaluation will also be conducted to measure the effectiveness of macroprudential policies and, if needed, to recommend necessary adjustments. The newest example of these processes is the revision of the 2013 LTV ratio regulation in 2015. The revised regulation was issued in June 2015 to respond the need of a countercyclical regulation that can support banking intermediation and provide incentive to the economy. |
| Italy                     | BANKING. To monitor systemic risk the BI makes use of a wide range of analytical tools, including a number of early-warning indicators of financial stability and stress tests to assess the resilience of the banking system. Top-down stress tests are   | The Bank of Italy has under its direct control the following macroprudential instruments: - Countercyclical capital buffer and sectorial requirements are available to mitigate and prevent  | a) The Bank of Italy has exercised the option provided for in Article 160(6) of Directive 2013/36/EU (CRD IV) to implement without any further transitional period the capital  | The Financial Stability Directorate of the Bank of Italy includes among its duties the evaluation of the effects of the implementation of  |

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|                           | also used to assess the internal capital adequacy calculations performed by banks and to calibrate Pillar 2 requirements. The BI also monitors shadow banking and non-banking institutions and is working to enhance its toolkit, in particular metrics of risk concentration within the system. The analytical framework and the monitoring tools are reflected in the BI's Financial Stability Report, published twice yearly, such as: the analysis of credit and leverage developments; the analysis of the liquidity positions and funding structure of banks and the review of market indicators; indicators on exposure concentrations; the focus on systemic risks deriving from the insurance sector and from other financial intermediaries and markets; the assessments of risks emanating from financial market infrastructures. INSURANCE. IVASS implemented the following main prudential indicators/tools for the insurance sector: 1.  Assessment of vulnerabilities: Based on a 2011 EIOPA's survey, IVASS developed national exercises in order to detect vulnerabilities in the insurance sector timely. IVASS requests specific qualitative and quantitative information to a selected sample of undertakings, on quarterly basis and semi-annual basis; 2. Questionnaires to the main Italian life insurance players (ad hoc analysis, e.g. on the low interest rate environment; on credit ratings) 3. Monthly monitoring on financial stability. This is carried out on a monthly basis and based on available data. It is focused on the main risk drivers of Italian insurance sector. It is submitted to the Top Management of IVASS and shared with Micro-Surveillance Division (linkage between micro and macro supervision). 4. Sensitivity analysis on Interest rate risk. IVASS systematically asks (since September 2013 and on semi-annual basis) to life insurance companies to assess their exposures to interest rate risk, i.e. to assess the impact of an unexpected change in interest rates on their ability to discharge their obligations under with-profits policies. 5. Stress tes | excessive credit growth and leverage; - Liquidity coverage ratio and Net stable funding ratio will be available, once implemented, to mitigate and prevent excessive maturity mismatch and market illiquidity; - Large exposure limits and powers under pillar 2 can be used to limit direct and indirect exposure concentrations; - Capital buffers can be imposed on G-SIIs and O-SIIs to limit the systemic impact of misaligned incentives with a view to reducing moral hazard; - CCPs' models and parameters of margins and haircuts are validated by the Bank of Italy; according to the EMIR legislation, this validation is a pre-requisite for a CCP's authorisation and aims at limiting risks to financial stability originating from these infrastructures and strengthening their resilience. Moreover, a EU-wide stress testing exercise on CCPs is being carried out by ESMA, on the basis of scenarios developed in coperation with the European Systemic Risk Board; the bank of Italy follows closely this exercise. The outcome of the exercise is expected to provide significant inputs from a system-wide monitoring perspective. The Bank of Italy can also apply macroprudential instruments not harmonized by EU legislation, such as LTV, LTI, DTI ratios, by making use of the wide-ranging powers under art. 5 of the Italian Banking Law, to prevent or mitigate risks to the stability of the financial system. | conservation buffer, which however in our opinion has a prevalent microprudential nature. As a result, as of 1 January 2014, banks must maintain a level of Common Equity Tier 1 capital equal to 7 per cent of risk-weighted assets, calculated in accordance with Article 92(3) of Regulation (EU) 575/2013 (CRR), of which 4.5 per cent as a minimum requirement and 2.5 per cent as a capital conservation buffer requirement. Banks that fail to comply with the latter may not distribute dividends, variable remuneration and other components forming the regulatory capital over and above predetermined limits and must define the measures necessary to restore the required level of capital. The Bank of Italy has also exercised the option under Article 129(2) of CRD IV and exempted small and medium-sized investment firms from the capital conservation buffer requirement. These firms' contribution to systemic risk is negligible and their exemption from the requirement does not threaten the stability of the Italian financial system. For further information please see above web-link to the macroprudential policy decisions of the Bank of Italy. b) The Bank of Italy has identified UniCredit banking group as a global systemically important institution (G-SII) authorized to operate in Italy. Based on data as at 31 December 2013, the UniCredit group is in the first subcategory of global systemic importance. According to the transition period envisaged under Directive 2013/36/EU (Capital Requirements Directive IV – CRD IV), the UniCredit group is required to maintain a capital buffer for the G-SIIs of an amount equal to 0.25 per cent of its total risk exposure from 1 January 2016. This buffer must be increased annually by 0.25 per cent of total risk exposure to reach 1 per cent of total risk exposure no | macroprudential instruments. The framework for assessing costs, benefits and effectiveness of macroprudential measures is currently being developed. As said before a Risk Dashboard covering the Italian market was introduced in the past year based on the experience within the EIOPA context. |

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|                           | risk factors, based on homogeneous shock levels for insurance market, as instrument to analyse the impact of on the financial stability of insurance sector of specific adverse scenarios and in order to identify systemic risks). 6. Risk Dashboard (RD). By taking inspiration from the European Risk Dashboard (RD) developed by EIOPA, our RD encompasses 24 indicators for 7 categories of risks (macro, credit, profitability and so on). IVASS Customization: all the suitable Indicators (not the macro' ones) have been weighted with the gross written premiums; all the Indicators have been computed mainly using market and insurance Italian data; Indicators have been computed for the whole Italian market (all Italian undertakings not only the main groups). Data are based on individual balance sheets not on consolidated ones. The main Indicators in terms of risk (taking into account Italian specificities) have been chosen (24 out of 40 EIOPA). 2 new Indicators have been introduced. Scores have been calibrated in a different way whenever it has been deemed necessary. The main outcomes of the Risk Dashboard are systematically reported to the internal Crisis Management Committee. |   | later than 1 January 2019. The decision was taken pursuant to Bank of Italy Circular No. 285 on prudential regulations for banks, published on 17 December 2013. For more details please see above web-link to the macroprudential policy decisions of the Bank of Italy.  |  |
| Japan                     | The BOJ reviews the development of indicators such as asset prices and credit aggregates in the semi-annual Financial System Report. The BOJ is also developing indicators and publishes those in the Reports. In addition, the BOJ released a report on "The Bank of Japan's Initiatives on the Macroprudential Front" that stipulated various measures taken by the Bank to enhance macroprudential monitoring in October 2011. The JFSA also evaluates the Japan's financial system soundness, and publishes the findings in the Financial System Monitoring Report annually. BOJ and JFSA are closely cooperating with each other on this issue through various channels.   | JFSA has supervisor tools covering broad range of financial institutions, and these tools can be utilized for macroprudential purpose as well. Also, it is scheduled that the counter cyclical buffer will become available from next year.   | N.A.   | N.A. (In recent years, there is no case for activating macroprudential tools in Japan)   |
| Mexico                    | The CESF analyses the developments in the financial system and any potential threats arising in particular sectors. In particular, the CESF analyses stress tests conducted by the CNBV. It also closely monitors the situation of the banking system, given its relevance in the Mexican Financial System (about 50% of the assets in the system). It analyses solvency and liquidity indicators (loan-loss provisions, evolution of default rates, LCR, concentration indexes, stable funding to loans ratios,  | Regulation (for example on limits to related parties) has been drafted when threats or vulnerabilities have been identified. The use of microprudential measures with macroprudential purposes could also be deployed. In this case, the authority in charge of a given microprudential measure would also be the one to deploy it. Discussions at the CESF about what tools to use and how to use them would take place on a case by | The macroprudential measures implemented during the last two years include: limits on lending to related parties, which were increased as a response to the increasing amount of exposures observed during the crisis, and rules for sale and transfer of operations between related parties (e.g. transfer or sale of credit portfolios) which were included to limit the | No analysis of this kind has been undertaken so far. The implementation of certain specific elements of the macroprudential toolkit (such as the countercyclical capital buffer) as well as the leverage ratio is still under development; in particular with respect to the |

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|                           | etc.) The results of such analysis are published in the annual report of the CESF (published by the end of March each year). In addition, Banco de Mexico conducts stress tests for the banking system and undertakes network analysis to determine the risks of contagion. It also evaluates the situation of the banking system and any other sectors which may exhibit patterns or behaviours which may be a cause of concern (shadow banking entities and activities, mutual funds, REITs, etc.). Banco de Mexico publishes an annual report with a detailed assessment of the financial system, threats to financial stability, a balance of risks and potential measures to mitigate such risks. Such report is published in the second half of each year.   | case basis.   | potential for contagion. Mexican authorities are close to finalise the secondary regulation to implement the countercyclical capital buffer and the leverage ratio, as well as the framework for D-SIBs.  | secondary regulation about them.   |
| Republic of<br>Korea      | The Bank of Korea develops and makes full use of a wide range of indicators to detect, assess and provide early warning of various risks present in the financial system in a timely fashion. Based upon this, the Bank prepares and releases a half-yearly Financial Stability Report, analysing potential risks in the financial system and their effects while providing a comprehensive assessment of the system as a whole  | Korea has introduced LTV and DTI in 2002 and in 2005 respectively. The Korean authorities could modify the ratio of LTV and DTI considering overheating/shrink of the real estate market. And Korea has decided to introduce recently CCB (Countercyclical Capital Buffer) framework following the Basel III.   | In 2014, the FSC and the FSS have decided to loosen LTV and DTI ratios so that LTV/DTI would not impede stagnant real estate market in Korea.   | N.A.   |
| Russia                    |  |   |   |  |
| Saudi Arabia              | SAMA objective is to measure the systemic risks that arise from either or both time and transversal dimensions. Tools used to accomplish this objective are financial statements and other market indicators, internal macroprudential dashboard, early warning indicators, and stress testing. The analysis does not only cover risks in SAMA regulated sectors, but also extends to other sectors such as the capital market. The inputs used for the analysis includes supervisory data collected by SAMA's different supervisory departments, data requested from financial entities on ad-hoc basis to address contemporaneous risk concerns, and the outcomes from stress testing. Other agencies contribute to the analysis through the provisioning of data, and the engagement of bilateral meetings to discuss financial stability issues and the impact of recent financial sector developments. There are several channels through which SAMA communicates its macroprudential decisions and market assessment. These channels provide the needed accountability | SAMA has a long history of using macroprudential policy tools. In particular, the following tools apply: *Loan-to-value ratio caps *Regulatory capital requirements *Counter-cyclical provisions *Debt-to-service-income caps *Profit distribution limits (profit distribution require SAMA approval) *Reserve requirements *Liquidity coverage ratio requirements *Net stable funding ratio requirements *Loan-to-deposit ratio caps *Constraints on foreign currency lending (requires SAMA approval) *Caps on name concentration (single exposure) These tools have been deployed to mitigate systemic financial stability risks. These tools ensure that credit institutions within the Kingdom comply with internationally-established standards, and control any potential misbehaving practices by individual institutions | Loan to value ratio (LTV) was implemented during Fall 2014 when concerns on risks arose from the real estate sector. However, other tools for example been used during the financial crisis. In addition to reducing the statutory deposit ratio for demand deposits to 7% from 13% and maintaining the ratio for time and savings deposits at 4%, other steps taken by SAMA were: •Gradually reducing the repo rate from its previous level of 5.50% to 2% from October 2008 to January 2009, and the reverse repo rate from 2% to 0.25% from October 2008 to June 2009. •Reducing the pricing of treasury bills by 50 bp lower than the Saudi interbank deposit rate (SIBID) – the bills remained priced at 80% of the interbank rate in Q2 2009. •Creating cash deposits, not only in domestic | The assessment of the cost and benefits of macroprudential policies in SAMA takes two different approaches. First, is the research-based approach that is undertaken by SAMA's Research, Financial Stability, and Financial Sector Development departments. The second approach is an operational approach through meetings with SAMA, and non-SAMA, departments to discuss the implications of macroprudential policies. As for SAMA's ex-post evaluation, all macroprudential tools that SAMA has used to date have served the country well as they have facilitated the |

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|                           | and transparency. One channel is through the publication of the financial stability report. The report conveys SAMA's views and risk assessment of the whole financial sector. It also provides an overview of its macroprudential framework and tools. Another channel to communicate actions with the market is the issuance of circulars encompassing regulations, rules, guidance, and data sharing that are shared with financial entities and followed up to ensure proper, and common understanding and implementations. Additionally, to ensure a proper understanding of macroprudential and financial stability issues by market participants, SAMA has initiated a quarterly conducted series of seminars to discuss the recent financial and macroeconomic issues with invited representatives from the banking sectors, insurance, CMA, investment funds, research centres, public entities, universities, and others. Several topics have been discussed so far including SAMA's macroprudential policy, capital market valuations, the Bitcoin, and the impact of ultraloose monetary policy. Finally, SAMA also uses the traditional ways of communication with the public through posting latest actions on its website and also using the press. |  | currency but also in USD, in the domestic money market in order to enhance liquidity through the placement of time deposits with domestic banks. •Placing time deposits with domestic banks for a relatively long period on behalf of government agencies and institutions and in coordination with them. Since such deposits are considered to be customers' deposits included within the ratio of loans to deposits, this measure was designed to help banks expand credit. •A major factor affecting the local interbank market was the announcement made by the Supreme Economic Council that the Government was continuing to guarantee the safety of local bank deposits. This went a long way to assuring all depositors and assuaging any negative sentiment relating to Saudi banks. Injecting dollar liquidity through foreign exchange (FX) swaps and direct deposits with local banks. | achievement of intended consequences. For more details please refer to the BIS paper number 54 " The global financial crisis: impact on Saudi Arabia"  |
| Singapore                 | MAS publishes the Financial Stability Review annually. The Financial Stability Review identifies potential risks and vulnerabilities in Singapore's financial system and aims to contribute to a better understanding among market participants, analysts and the public of issues affecting Singapore's financial system. In addition, MAS also issues press releases when policy measures are implemented.   | Singapore's use of macroprudential instruments has centred on the housing market, bearing in mind the systemic risks that it could pose. The government has used a broad range of policy tools such as Loan-to-Value and Debt Servicing limits, as well as stamp duties. | MAS' previously deployed macroprudential tools (mentioned above) continue to be in place and no additional tools were introduced in the past year.   | MAS' approach on macro-prudential policy including considerations on its costs and benefits can be summarised in three key words, namely "targeted", "calibrated" and "multipronged" (or TCM for short). • Firstly, financial vulnerabilities are not spread evenly across the economy and tend to be concentrated in certain sec tors. Singapore's measures were targeted at real estate specifically. This "targeted" approach will likely have a faster impact compared to broad policy instruments, which are subject to long and variable lags and also minimises trade-offs with broader macroeconomic policies such as price stability. • Secondly, we adopt a "calibrated" approach. We would like to do enough to alter |

|  | ic risks.  | authorities for macroprudential purposes.   | the past year, including the objective for<br>their use and the process used to select,<br>calibrate, and apply them. | assess the ex-ante cost and benefits<br>of macroprudential policies and<br>their ex-post effectiveness.  |
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|  |  |   |   | incentives but not overdo so as to avoid overshooting macroprudential objectives, resulting in unintended effects. As such, we have implemented policies in incremental steps, re-adjusting when needed, over several rounds. We have tightened measures when they needed more bite. • We have also adopted a "multi-pronged" approach where there is a coordinated use of multiple tools. Over-reliance on any one measure renders that measure less and less effective over time- there is leakage in potency. Employing a whole package of measures to specifically address risks on the other hand, helps to ensure policy effectiveness. It sends a strong signal of coordinated actions to address risks. Careful monitoring of the appropriate qualitative and quantitative indicators, such as price and transaction volumes, are conducted alongside assessment of anecdotal evidence of after the implementation of macroprudential policies. Small, calibrated steps are then taken to re-adjust policy errors. |
| Reserve macropr Improve ones are elevated facilitate The Naticurrently | ancial Stability Department of the South African e Bank uses quantitative indicators as part of its rudential tools to analyse the financial services sector. ement of the existing tools and the development of new e ongoing. The South African Reserve Bank has also d its Financial Stability Committee to a higher level to e the implementation of macroprudential policy tools. tional Treasury and Financial Services Board are ty investigating ways to regulate OTC derivatives. To this number of provisions have been enabled in the Financial | The Financial Stability Department of the SARB is investigating a list of possible macroprudential instruments. The list of policy instruments and potential indicators are adopted from the BIS report on "Operationalising the Selection and Application of Macroprudential Instruments (December 2012)". The instruments are classified as capital-based instruments, (countercyclical capital buffer, sectoral capital requirements and dynamic provisions); Liquidity-based instruments (countercyclical liquidity requirements, |   |  |

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|                           | Markets Act. Further, a Working Group consisting of SARB, BASA, NT, JSE, FSB has agreed to a phased approach and has drafted a consultative paper for Phase 1 to seek market participants' views in this regard. Phase 1 is at an advance stage at this point. In the meantime the Pensions department at the FSB in consultation with National Treasury has drafted guidelines for retirement funds regarding the use of derivatives under Regulation 28. The guideline is in the form of a draft Notice to Regulation 28 that will be issued for public comment.  | margins and haircuts in the markets) Asset-side instruments (LTVs and DTIs). The Department is also studying a number of indicators using South African data to assess the information content of these indicators in identifying build-ups of imbalances in the financial system.  |  |  |
| Spain                     | Banking: At the national level, Banco de España is working on several forward-looking methodologies to identify risks and guide the macroprudential policy, which will be used as input for the Financial Stability Report. First, Banco de España has developed a forward looking tool (FLESB or forward looking exercise on Spanish banks) that allows evaluating the solvency position of Spanish banks in the face of different macroeconomic scenarios. In addition, Banco de España is working on a CAMELS model to estimate a forward-looking measure of banks' defaults. Finally, Banco de España is developing a risk dashboard based on a comprehensive set of indicators with the final goal of generating early warning signals for emerging vulnerabilities.  Securities: CNMV carries out regular financial stability analyses based on the information gathered from the regular supervisory process (periodic financial reporting of financial institutions, off-site and on-site supervision) and other information provided by external entities. In particular, CNMV performs liquidity, funding, market and credit risk and solvency analyses. To this aim, an ample variety of indicators have been developed. It also carries out analyses on developments in other parts of the financial system with a direct or indirect connection with the securities markets (e.g. credit, banks' funding, households' savings patterns, etc.). In the context of financial contagion, CNMV has a set of indicators measuring correlations as well as spill overs across markets and asset classes. In addition, CNMV has performed recently some work on the design of some heat maps and an indicator to measure stress in the whole financial system has been developed. Network theory is also being used to explore the existing linkages in the stock | Banking: There are a number of macro-prudential tools for banks harmonised under EU law, mainly capital-related (Counter-cyclical Capital Buffer, Systemic Risk Buffer etc). Other tools are governed by national law (LTV, LTI etc).  Securities: Regarding the asset management sector, we have already in place a number of tools for general prudential supervision, and which, given their nature, can be used for macroprudential purposes: - Capital requirements to asset managers. Their minimum capital requirement is proportional to the amount of assets under management. When the asset manager manages alternative funds, additional capital is requested to mitigate possible operational risk Availability of data. Collective Investment Schemes are subject to comprehensive reporting to CNMV on their investment portfolios. This includes identification of any asset, valuation as of the end of the month, daily net asset value, daily subscription and redemptions, derivatives investments, counterparty information, leverage and counterparty risk. This information allows an ongoing monitoring of outflows and the valuation procedures followed by the managers Regarding liquidity management, management companies should set an appropriate liquidity policy regarding each CIS managed, aimed at ensuring that its management strategy and liquidity profile matches its redemption policy. Stress tests should be carried out to test the resilience of the CIS to redemptions Additionally, management companies may resort to different tools to | Banking: No instrument has been activated over the last year, since the indicators described in question 1 support a neutral macroprudential policy stance at the moment.  Securities: Over the last year, we have not deployed tools for specific macroprudential concerns. | Banking: Banco de España has analysed in the past the impact and effectiveness of previous measures with a macroprudential interpretation, such as dynamic provisioning. In addition, Banco de España is currently working, in the context of the FSC and the ESRB in the development of new models to assess the costs and benefits of CRD IV/CRR macroprudential policies, as well as their effectiveness. |

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|                           | exchange market. CNMV collects the information from financial accounts and other financial market indicators. Large exposures and market shares are helpful in the analysis. Part of this information is published regularly (in the Quarterly Bulletin of CNMV) or occasionally (in CNMV Working Paper series). The most relevant CNMV publications regarding financial stability and systemic risks are the following: (i) The "Securities markets and their agents: situation and outlook" report, published in the Quarterly Bulletin of CNMV, provides an overview of the Spanish securities markets and their participants. This semi-annual report takes into account the relevant international context and focuses on the relevant risks factors affecting prices and volumes in the main trading venues, the performance of securities markets intermediaries and investment vehicles (mutual funds, SICAV, hedge funds and venture capital). (ii) Annual Report. The Annual Report of CNMV (chapter 1) analyses the main macro-financial developments of the preceding year and identifies the most important risks on the international and domestic context. (iii) Ad-hoc documents. Finally, CNMV carries out some specific studies over particular areas of interest that are published as CNMV working papers. | deal with redemptions pressures. We can distinguish between ordinary and extraordinary tools. Ordinary tools are: 1) Swing prices. Asset managers' valuation procedures may contemplate the possibility of assessment using offer prices whenever redemptions pressure appears. 2) It is also possible to set a redemption fee to compensate the cost of disinvestment. 3) Ten-day notice period may be requested when redemptions by one investor exceeds 300.000 €. Extraordinary tools can be used in extraordinary circumstances. These include: 4) Side pockets where the illiquid assets are put aside. 5) Temporary suspension of redemptions, when it is not possible to determine unit's fair value or a "force majeure" event occurs. 6) Paying redemptions in kind. In case of Hedge Funds, gates and lock-up periods are also allowed. Regarding broker-dealers and dealers, they are subject to the same prudential regulation as banks, including the Basel buffers contained in Directive 2013/36, recently transposed into Spanish legislation through Royal Decree 358/2015 in the case of investment services companies (modifying article 101 of Royakl Decree 217/2008 on investment services companies). Nevertheless, broker-dealers do not give loans and the overall size of their assets under management does not have systemic relevance (they barely represent 0.3% of financial assets of resident banks). |  |  |
| Switzerland               | Quantitative indicators regularly enter the monitoring and analysis of SNB, FINMA and the FDF. SNB is continuously monitoring a broad range of indicators – among them asset prices, credit volumes – and their implications for financial stability. The SNB also launched an additional quarterly survey on mortgage lending in early 2011. In the survey, the 25 largest banks in the domestic market, representing a total market share of over 80%, are asked about key risk indicators such as loan-to-value ratios and affordability criteria for new mortgages. Further, the SNB publishes on an annual basis a Financial stability report. FINMA has implemented a macroeconomic monitoring process which concentrates on the Swiss domestic  | In addition to capital and other regulatory requirements in general, more specific available policy tools include the countercyclical buffer, capital requirements for risky mortgage lending business, self-regulation on lending practices in the mortgage market. Moreover, FINMA can impose specific measures on individual banks where appropriate.  | In January 2014, the Federal Council, upon proposal by the SNB, decided to increase the CCB to 2% of risk weighted positions, still restricted to residential mortgage loans, and being effective as of June 30, 2014 (see web link above). The CCB had been implemented in July 2012 and activated (to a level of 1% of risk weighted positions) by the Federal Council upon proposal by the SNB in February 2013. Its objective is to increase the resilience of the banking sector against the consequences of excessive credit growth but also to mitigate the | Assessment of costs and benefits enters, for example, into the decision whether to adjust countercyclical buffer. More generally, the authorities continuously assess the effectiveness of the measures taken. |

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|                           | real estate market and selected foreign asset markets.   |  | build-up of excesses in mortgage markets. The decision on activation, adjustment and deactivation is made by the Federal Council upon proposal by the SNB and after consultation with FINMA. The SNBs decision on proposing adjustments is based on an approach of guided discretion (see web-link above) based on a set of key quantitative indicators. Second, amendments to the Capital Adequacy Ordinance have been made: First, capital requirements for risky mortgage lending business have been increased, being effective as of January 2013. Complementary, self-regulation in the mortgage market has been tightened, requiring a minimum down payment of 10% of the real estate transaction coming from a source other than occupational benefits provision (second pillar). In July 2014, FINMA approved further amendments to the minimum standards for mortgage financing issued by the SBA. The revisions to the self-regulation entered into force on 1 September 2014. This includes: i) stricter amortization requirements ii) stricter use of second income for financial sustainability evaluation iii) stricter valuation requirements for residential real estate. |   |
| Netherlands               | The adopted ESRB Recommendation on intermediate objectives and instruments of macro-prudential policies proposes a list of intermediate objectives of macro-prudential policies and a corresponding list of instruments that can be used by macro-prudential authorities to meet the intermediate objectives. The Recommendation gives an indicative list of instruments that national macro-prudential authorities can use to fulfil their mandate. These instruments, as shaped in the implementation of the CRD-IV, will be conferred on the Dutch central bank. In the execution of its new role as macroprudential authority, the Dutch central bank will execute a 'macroprudential policy cycle', consisting of the following stages: (i) the risk identification stage, where vulnerabilities are detected and assessed (against the intermediate objectives) and relevant | There are a number of macro-prudential tools for banks harmonised under EU law, mainly capital-related (Counter-cyclical Capital Buffer, Systemic Risk Buffer etc. Also, the risk weights on certain exposures weights can be modified because of macroprudential reasons. Currently, LTV and LTI limits are mainly motive out of consumer protection concerns, and are not purely macro-prudential instruments. |   | Measures have been activated too recently to be able to properly assess their effectiveness ex post. The ESRB, ECB and national macroprudential authorities are working on ways to do this. |

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|                           | indicators and thresholds are defined; (ii) the instrument selection and calibration stage; (iii) the implementation and communication stage, where instruments are activated; and (iv) the evaluation phase, where the impact of instruments is assessed in view of possible adjustment/de-activation. DNB's has published a plan to introduce a systemic risk buffer for four of largest Dutch banks, acting upon its foreseen ability under the finalization of the implementing law of the CRD-IV. It has also sent a notification to the ESRB regarding this measure, which details the selection, calibration and application in more detail. The Financial Stability Committee has issued a recommendation to lower the loan-to-value ratio to 90%, because it could provide additional benefits in terms of financial stability. |   |   |   |
| Turkey                    | Systemic risk is monitored and analysed by the authorities regularly in both aggregate and granular level within the scope of the duties and powers. The FSC's role is to coordinate policy actions and to better integrate micro and macroprudential perspectives among institutions. The CBRT regularly monitors the developments in the global and Turkish economy. The CBRT follows a "guided discretionary approach" considering the systemic threats to financial stability in a proactive manner. CBRT's Financial Stability Report and the BRSA's Annual Report communicate macro prudential instruments.  | Related authorities have been using various macro prudential tools. • Loan-to-value (LTV) ceilings on residential mortgage loans, vehicle loans; • High risk weights for consumer loans; • Increased provisions for consumer loans; • Limits to credit card payments; • Liquidity requirements • Measures on Extension of the Maturity of Deposits (Withdrawal before maturity, differentiation of withholding according to maturity of deposits, differentiation of Resource Utilization Support Fund (RUSF) based on Maturity) • Differentiation on Deposit Insurance System Premiums (risk based premium system) • Reserve requirements • Leverage Based Reserve Requirements • Equity financing regulations | Equity financing regulation: Corporations are allowed to deduct 50% of paid in cash equity financing costs to enhance financing channels for corporates and prevent excessive leverage.             | The CBRT both uses top down and bottom up approaches in terms of the decision making process. Also, stress tests implemented by the regulatory authorities provide the necessary findings for a sound policy need in the financial system. Quantitative Impact Studies (QIS) on the pre- and post- implementation of macroprudential instruments have an important role in assessing the cost and benefits such policies. Research notes in economics and working papers also establish a ground to analyse the cost and benefits of the policies. On the BRSA side, based on the impact analysis or cost/benefit analysis policies are developed. Cost and benefit analysis is done both on data observation and qualitative assessment. The BRSA reviews regularly the cost and benefit of macroprudential instruments with The Banks Association of Turkey and Interbank Card Center. Thus both quantitative and qualitative |

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|                           |   |   |   | approaches are used in this issue.  |
| United Kingdom            | The FPC has identified a list of core financial and economic indicators for the CCB and countercyclical leverage ratio buffers (CCLB), SCRs and housing tools. The FPC core indicators for the CCB and SCRs contain several variables under bank balance sheet stretch (e.g. bank leverage), non-bank balance sheet stretch (e.g. real-economy credit) and conditions and terms in markets (e.g. risk appetite measures). As a guiding principle, the FPC move the CCB and the CCLB together, thus it would consider the same indicators and broader information in deciding on their use. The indicators for adjusting housing tools contain variables on lender balance sheet and household balance sheet stretch and conditions and terms in markets. But the FPC acknowledges that no single set of indicators can ever provide a perfect guide to systemic risks, or the appropriate policy responses, and judgement, play a material role in all FPC decisions. To support its judgement, the FPC will monitor a wide set of information, varying over time depending on the emerging risks, including both market and supervisory intelligence, and 'stress tests' of banking sector resilience. However, the FPC routinely reviews its set of core indicators, which have proved helpful in identifying emerging risks to financial stability in the past. These indicators give a basis for explaining the FPC's decisions to an external audience. The core indicators are published semi-annually in the Financial Stabilty Report and updated regularly on the Bank of England website. | The current FPC macroprudential toolkit includes both time-varying tools, that allow it to target risk that are changing over time, as well as more structural tools that permit it to address systemic risk generated by structural features of the financial system. Regarding time-varying tools the FPC can set the CCB that applies to all relevant domestic exposures and can be varied as systemic risk in the system (arising from credit conditions) increases and released as stress materialises. The FPC also has flexibility to implement SCRs on exposures to targeted sectors judged to pose a risk to the system as a whole. Time-varying leverage ratios – i.e. the CCLB, may complement risk-weighted capital ratios and will be used to remove or reduce systemic risks attributable to periods of unsustainable credit growth in the economy. The FPC expects that operating a CCLB alongside the CCB will help to mitigate risks to financial stability as they change over time. The FPC can also use product tools such as LTV and DTI limits on mortgages when it has identified specific risks within sectors and desires to mitigate those risks to reduce the build-up of asset bubbles. Regarding structural tools, the FPC has in its toolkit instruments such as SIB buffers and supplement leverage buffers which it uses to internalise some of the cost of distress or failure of systemic financial institutions and address the implicit subsidy these institutions enjoyed prior to the recent crisis, thus providing incentives for these firms to reduce their systemic importance. | The results of the first concurrent stress test of the UK banking system were published on 16 December 2014. The test covered eight major UK banks and building societies and was run on end-2013 balance sheets. To derive final projections of bank capital ratios in the stress scenario, Bank staff used an analytical framework that included banks' own models, in-house models, sectoral analysis and peer comparison. Key judgements to arrive at the final projections were taken by Bank staff, under the guidance of the FPC and PRA Board, whose objectives the stress test serves.  Amongst others, the macroprudential purpose of the stress tests was to inform the FPC as part of its evaluation of the resilience of the system as a whole and help the FPC form its judgement on macroprudential policy. The FPC judged that no system-wide, macroprudential actions were needed in response to the 2014 stress test. In June 2014, the FPC set the UK CCB for the first time at 0% and kept it unchanged since then. The FPC is required by law to set the CCB quarterly. The CCB enables the FPC to put banks in a better position to withstand stress through the financial cycle by requiring them to build capital as threats to financial stability increase and to run it down if financial stability risks crystallise or ease. As part of its CCB setting decisions, legislation requires the FPC to calculate and consider the 'buffer guide', a simple metric identified in Basel III and EU legislation that provides a guide for the CCB rate based on the gap between the ratio of credit to GDP and its long-term trend. But there is no mechanical link between the guide and CCB | Section 138J of the Financial Services Act 2012 requires that when the PRA consults on draft rules that the consultation includes an (ex-ante) analysis of the costs and benefits, together with estimates of them, unless they cannot reasonably be estimated. Section 9S of the Financial Services Act 2012 requires the FPC (FPC) to prepare an explanation of the exercise of its powers (e.g. Directions or Recommendations), which includes an estimate of the costs and benefits, unless in the opinion of the FPC it is not reasonably practicable to produce an estimate. This ex ante analysis is typically published in the Bank's Financial Stability Reports or in consultation documents on macroprudential tools. Proposed PRA rule changes and new FPC policy proposals are considered by senior policymaking committees, and are supported by staff papers which include an ex-ante cost-benefit analysis. |
|                           |   |   | setting. To set the CCB, the FPC also uses its judgement, looking at a wider set of core  |   |

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|                           | Systemic risks.   |  |   |   |
|                           |   |  | high LTI multiples. The FPC did not believe that household indebtedness posed an imminent threat to stability. But it recognised that the recovery in the UK housing market has been associated with a marked rise in the share of mortgages extended at high loan to income multiples. To aid its policy judgement, the FPC considered estimates of the impact of its action |   |

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|                           |  |  | against a central scenario and an upside housing scenario. The scenarios were used to illustrate how the housing and mortgage markets might evolve, including the resulting effect on the distribution and overall level of household indebtedness.   |  |
| United States of America  | The FSOC, comprised of representatives of U.S. federal and state financial regulators, has a framework for identifying and responding to potential risks to financial stability. This framework includes staff committees that facilitate interagency coordination and analysis, a collaborative effort to produce an annual report, and tools developed by the Office of Financial Research (OFR) to support the monitoring and identification of risks. The Council's staff committees are each composed of staff of Council members and their agencies with a range of supervisory, examination, data, surveillance, and policy expertise. The committees meet on a regular basis throughout the year for agencies to report on and discuss matters of potential financial stability implications. In particular, the Council's Systemic Risk Committee (SRC) was established to identify, analyze, and monitor vulnerabilities in the financial system and emerging threats to financial stability, and therefore is a key structure for the Council to identify risks across the financial system. The work of the SRC includes a combination of qualitative and quantitative analysis of potential threats and identification of potential appropriate responses, if any. FSOC is made up of individual members whose agencies employ their own policy tools as appropriate based on their authorities and missions. Many tools exist across the Council's members and member agencies. For example, the OFR's Financial Stability Monitor and Financial Markets Monitor complement SRC member contributions and analyses regarding risk monitoring and identification. Both of these tools monitor financial indicators over time and can provide important quantitative perspectives on risk. In addition, qualitative analysis is incorporated into these monitors to highlight certain trends and developments. These tools are useful to test risk hypotheses or to provide context for risk topics, but are not intended to identify potential threats to financial stability on their own. The OFRs annual report | FSOC has a number of tools available to address risks to U.S. financial stability it identifies, including:  • highlighting potential emerging threats or making recommendations in the Council's annual reports to Congress;  • making recommendations to existing primary regulators to apply heightened standards and safeguards under Section 120 of the Dodd-Frank Act;  • designating certain nonbank financial companies and financial market utilities for heightened supervision and prudential standards; and  • collecting and facilitating the sharing of information to assess threats to U.S. financial stability. | Over the past year, FSOC has issued an annual report, designated nonbank financial companies, and collected and facilitated the sharing of information to assess threats to U.S. financial stability. The objective for using these tools has been to promote the stability of the U.S. financial system. | With respect to FSOC's nonbank designations process, FSOC conducted three rounds of public comment before issuing its final rule in 2012. FSOC's duty under the Dodd-Frank Act is to designate a nonbank financial company whose distress or composition could pose a threat to U.S. financial stability. The regulations that designated firms will be subject to are established by the Federal Reserve. |

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|                           | they have underway.   |  |  |  |
| European<br>Commission    | The methodologies used and indicators monitored vary across MS and national macro-prudential authorities. Through its flagship report, its recommendations and its operational handbook, the ESRB fosters identification of good practices and convergence among authorities; The ECB in its new supervisory role (micro- and macro-) should also foster convergence in the area. | There are a number of macro-prudential tools for banks harmonised under EU law, mainly capital-related (Counter-cyclical Capital Buffer, Systemic Risk Buffer etc). Other tools are governed by national law (LTV, LTI etc). | MS have activated more than 90 macro-<br>prudential measures since January 2014. The<br>instruments activated target mainly the 'too big<br>to fail' issue (i.e. systemically important banks)<br>or the housing market. | The ESRB should foster good practices in the cost/benefit analysis area in its coordination role; measures have been activated too recently to be able to properly assess their effectiveness ex post. The ESRB, ECB and national macro-prudential authorities are working on ways to do this. |