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## Central Banks and the G20 Agenda: Ensuring Policy Coherence

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### Abstract

The G20 has come a long way in pulling economies back from the brink. Yet, a lot remains to be done in its pursuit of inclusive and sustainable growth. Its leaders have continuously highlighted the urgent need to use all policy levers in targeting its objectives. Central banks should not be carved out from this imperative. They need to assess, report and engage on their effects on inclusive and sustainable growth. Several central banks have already taken steps in that direction. G20 leaders should endorse their actions and encourage them and their peers to move further in ensuring policy coherence with the G20 agenda.



## Challenge

The G20 has come a long way in pulling economies back from the brink. Yet, a lot remains to be done in its pursuit of inclusive and sustainable growth. Productivity growth is sluggish (IMF 2018), unemployment remains well above pre-crisis levels (ILO 2019), inequality is hitting record highs (World Inequality Lab 2018), and environmental risks pose threats worldwide (WEF 2019).

Against this background, the repeated pledge by G20 leaders to use all policy levers in targeting their objectives is as important as ever. Central banks should not be carved out from this imperative. Consistent with their mandates and acknowledging their essential role in safeguarding price and financial stability their impact on further G20 objectives must move up agendas. The urgent need – as highlighted in the joint declaration by G20 leaders in Buenos Aires (G20 2018) – to address distributional challenges, foster financial inclusion, close persistent infrastructure financing gaps, and protect the environment are cases in point.

Several central banks have already taken steps in this direction. Many have started evaluating the distributional effects of their policies over the last years. Some have deepened their engagement on financial inclusion. Others have strengthened their role in supporting infrastructure financing. And more than 20 central banks and financial supervisors are now members of the NGFS, the “Central Banks and Supervisors Network for Greening the Financial System”, to mobilize finance for the transition to a sustainable economy.

Their initial steps are encouraging and provide a robust foundation to accelerate momentum. Central bank decisions on monetary policy and financial supervision play a crucial role in fostering inclusive and sustainable growth. Safeguarding price and financial stability is an essential pillar for that, but not the only factor through which central banks affect this goal. Understanding and engaging on the broader impacts they have on the G20 agenda is vital.

## Proposal

G20 leaders should endorse the initial steps central banks have taken to evaluate the alignment of monetary policy and financial supervision with the



goal of inclusive and sustainable growth. They should also encourage them and their peers to move further in assessing, reporting and engaging on the broader effects of their policies and thus to ensure policy coherence with the G20 agenda.

### **Mitigating inequality**

The call for inclusive growth has been at the core of the G20 agenda starting with its 2009 Leaders Summit in Pittsburgh and has repeatedly been part of the joint declaration by G20 leaders ever since. At the same time, inequality has continued to grow and now stands at record levels across several G20 economies. The rise in the top 10% share of pre-tax national income in the US from 34% in 1970 to 44% in 2009 to a new high of 47% in 2014 is a case in point (World Inequality Lab 2018).

The alarm bells triggered by this development are loud and clear – also among central bankers. In his opening remarks at the G20 Finance and Central Bank Deputies Meeting in January 2019, Governor Kuroda of the Bank of Japan (BoJ) emphasized the “need to address the increasing inequality in advanced economies” (Kuroda 2019). Jerome Powell, the Governor of the Federal Reserve, pointed to income inequality as one of the biggest challenges for the US in the coming decade (Federal Reserve 2019). And Mario Draghi, the President of the European Central Bank (ECB), referred to growing inequality in Europe as “highly destabilizing” (ECB 2017).

An increasing number of central banks has started investigating their own role in mitigating this challenge. References to the distributional effects of monetary policy by e.g. the President of the Minneapolis Fed, the Senior Deputy Governor of the Bank of Canada and the Deputy Governor of the Swedish central bank are examples (Kashkari 2017, Wilkins 2018, Ohlsson 2017). Studies of the impact of monetary easing on inequality by staff from the Bank of England (BoE), the BoJ and the ECB, provide further illustration (see e.g. Bunn et al. 2018, Inui et al. 2017, Ampudia et al. 2018).

Building on this momentum to ensure central bank alignment with the goal of inclusive growth is essential. Further research on the linkages between monetary policy, financial supervision and inequality is a critical pillar in this



context. The distributional analysis of policy alternatives, such as different approaches to quantitative easing and macroprudential regulation, should be a key part of this. Deepened engagement on the topic with key stakeholders should follow. Addressing their distributive effects in central bank press conferences, speeches and key events – such as the annual Economic Symposium hosted by the Federal Reserve Bank of Kansas City in Jackson Hole as well as the annual ECB Forum in Sintra – is an important step in this direction.

### **Expanding financial inclusion**

Financial inclusion – access to affordable financial services – has been another long-term G20 objective. Its 2017 Financial Inclusion Action Plan, a revision of the earlier 2010 and 2014 versions, highlights financial inclusion as a global priority to support economic growth and inclusivity on the level of households and firms. It also points to the need to “[mainstream] financial inclusion alongside other financial sector development goals of stability, integrity and consumer protection” (GPFI 2017).

Much has been achieved in expanding financial inclusion in recent years. Between 2011 and 2017, the global share of adults with an account at a bank or mobile money service rose from 51 to 69% – still, however, leaving 1.7 billion adults unbanked (Demirgüç-Kunt et al. 2018). While most of them are based in developing countries, developed economies report households without an account too. In fact, 9% of the poorest quintile in the Eurozone and 22% of the poorest quintile in the United States remain unbanked (Ampudia and Ehrmann 2017).

Similarly, access to finance for small and medium-sized enterprises (SMEs) continues to pose constraints – both within and outside the G20. 65% of micro, small and medium-sized enterprises in developing countries are estimated to have unmet financing needs (SME Finance Forum 2019). In the US, 30% of small firms list credit availability as a financial challenge (Federal Reserve Banks 2018). 7% of SMEs in the Eurozone cite access to finance as their most important problem (ECB 2018).

Central banks play a critical role for financial inclusion in multiple ways. As



financial supervisors they safeguard the functioning of the financial system. In that context, they also have a vital responsibility in balancing the opportunities of expanding credit with the risks of lending to marginal borrowers. Moreover, they are at the forefront of designing pathways that seize the potential of digital finance and at the same time ensure consumer and data protection (see e.g. Brainard 2018). Growing interest in digital central bank currencies adds a further key aspect to this task (Mancini-Griffoli et al. 2018). The Reserve Bank of India's relaxing of regulatory requirements to open bank accounts (Mundra 2016), incentives for SME lending through the BoE's Funding for Lending Scheme (BoE 2019) as well as recent interventions by the People's Bank of China, including reduced reserve ratios, to boost credit to small and micro enterprises are further cases in point (China Daily 2019). The commitment by the Banque de France to ensure strict compliance by French banks with their December 2018 promise to cap bank charges at 25 Euro a month for 3.5 million vulnerable customers provides another illustration (Villeroy de Galhau 2019).

To further strengthen this alignment the mainstreaming of financial inclusion into central bank decision-making is key. As highlighted by the Global Partnership for Financial Inclusion, engaging global financial standard-setting bodies and integrating inclusion into financial sector assessments are critical steps in that direction. Ensuring that financial inclusion is also reflected in central bank analysis and policy decisions on a national level is equally essential.

### **Facilitating infrastructure investments**

Infrastructure has been a core topic on the G20 agenda for many years. At the 2014 summit in Brisbane, G20 leaders emphasized the critical role of infrastructure for growth, job creation and productivity, and endorsed a multi-year Global Infrastructure Initiative (G20 2014). Investments in infrastructure, with a particular focus on the Quality Infrastructure Investment (QII) agenda, remains a central theme under the Japanese G20 Presidency in 2019 (Aso 2018).

Gaps in infrastructure investments continue to pose a significant challenge worldwide. In the EU, one in three large municipalities report current infrastructure investments to be below their needs. The annual gap between



infrastructure funding required until 2030 to reach EU policy targets and current levels is estimated at 155 billion Euro (EIB 2018). For China, the annual infrastructure financing gap until 2020 is projected at 151 billion US\$ (ADB 2018). In the US, unmet infrastructure investment needs are estimated at an annual 144 billion US\$ until 2025 (ASCE 2016). Worldwide, the G20 Eminent Persons Group on Global Financial Governance reports annual infrastructure funding gaps of over 1 trillion US\$ (G20 EPG 2018).

Closing these gaps is critical and will require significant scaling up in both public and private funding. Central banks provide a core pillar in achieving this objective. Price and financial stability are an essential foundation to mobilize investment. Functioning payment systems and developed capital markets are equally important.

Central banks have also started engaging with measures specifically targeted at infrastructure investments. Bank Indonesia has coordinated with the Indonesian Government, the country's Financial Services Authority and other financial institutions to develop new instruments for infrastructure funding (Warjiyo 2018). The Hong Kong Monetary Authority set up the Infrastructure Financing Facilitation Office to expand infrastructure investment and started investing into infrastructure itself through the Long-Term Growth Portfolio of its Exchange Fund (Chan 2018, Yue 2018).

G20 leaders should endorse the important role that central banks have already taken in the field and encourage them to deepen their engagement. Next steps should include further analysis of the effects of post-crisis financial regulatory reforms and supervisory practices on infrastructure funding. The November 2018 "Evaluation of the effects of financial regulatory reforms on infrastructure finance" by the Financial Stability Board (FSB) provides an excellent foundation for that (FSB 2018). Further engagement should also include an exploration to what extent central bank balance sheets can bolster an expansion of infrastructure financing. The allocation of reserves into infrastructure investments by the HKMA as well as the integration of a "physical and human capital" filter into the equity purchases by the Bank of Japan offer interesting case studies in this context (BoJ 2018).



## Addressing environmental risks

Environmental protection has been an objective of G20 leaders ever since their first summit in Washington in 2008. Their joint declaration in Buenos Aires ten years later reaffirmed this commitment and highlighted the interdependencies between a healthy planet and a strong economy. Yet, in between those two summits many environmental indicators have deteriorated. Biodiversity continues to fall (FAO 2019). Water resources are being depleted (see e.g. NITI Aayog 2018). Air pollution remains a global threat (WHO 2018). And rising atmospheric greenhouse gas concentrations are putting the global community on a path toward dangerous climate change (WMO 2018).

G20 leaders have recognized these threats on multiple occasions. In 2016 they highlighted the critical role that the financial sector must play in addressing them with the launch of the “G20 Green Finance Study Group” – later renamed to the “G20 Sustainable Finance Study Group” – and called for clearer policy signals and frameworks for green investments (G20 2016).

A year later, eight central banks and financial supervisors echoed this call when they launched the Central Banks and Supervisors Network for Greening the Financial System (NGFS). The network, which has since grown to more than 20 central banks and financial supervisors, aims to contribute to the analysis and management of environmental risks in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy.

With their first progress report, NGFS members highlighted that environmental risks are a source of financial risk and that it is within their mandates to ensure the financial system is resilient to these risks. They also warned that such environmental risks are not sufficiently accounted for in financial markets and called for central banks to “lead by example” and to reflect environmental risks in their activities (NGFS 2018).

Many central banks and supervisors have already made important steps in this direction. The People’s Bank of China (PBoC) included green bonds with an AA rating and high-quality green loans as collateral into its medium-term loan facility (PBoC 2018). The central banks of Finland, France and the Netherlands, among others, have started integrating environmental, social and governance



criteria into the management of their non-monetary policy portfolios (Rehn 2018, BdF 2018, DNB 2019). The ECB is exploring similar steps (Draghi 2019). The Austrian National Bank (OeNB) commissioned research to assess climate-related financial risks across its entire balance sheet (Monasterolo and Battiston 2019). And the BoE started consultations on a supervisory statement that sets out its expectations on how the financial sector should manage the financial risks from climate change (BoE 2018).

Accelerating this momentum to ensure that environmental risks are adequately reflected in financial markets and thus in capital allocation is vital. In 2015, the G20 has already played a key role in laying the groundwork to move in this direction by asking the FSB to review how the financial sector can take account of climate risks (G20 2015) and thus catalyzing the launch of the FSB's Task Force on Climate-Related Financial Disclosures (TCFD).

G20 leaders should now endorse next steps to ensure that the analytics resulting from corporate disclosure of environmental risks are reflected in financial markets and thus also by central banks – both in their role as supervisors as well as in their monetary policy operations. Accounting for environmental risks in the calculation of risk-weighted assets and thus in determining capital requirements is critical. Reflecting the systemic risks resulting from environmental threats in macroprudential regulation is equally important. And integrating environmental risk analytics into central banks' asset purchases and collateral frameworks is essential to safeguard their own risk management standards (Monnin 2018).

## **Conclusion**

Central banks play a vital role for sustainable prosperity. With price and financial stability at the core of their mandates they provide key pillars for macroeconomic development. As lenders of last resort, microprudential supervisors, and macroprudential regulators they fulfill key tasks for functioning financial markets. And with oversight of payment as well as clearing and settlement systems they are essential for an integrated world economy.

The instruments at their disposal to target their objectives are closely



interlinked with and have significant repercussions on a broad range of policy goals – including many of those on the G20 agenda. The distributional impact of monetary policy, the effects of financial supervision on financial inclusion and infrastructure investing, as well as the environmental risks inherent to central banks’ asset purchases and collateral frameworks are cases in point.

Understanding these linkages and ensuring alignment between central bank policies and the broader goal of inclusive and sustainable growth is critical. Many central banks have already made important steps in this direction. G20 leaders should endorse the momentum they have built. They should also encourage them and their peers to move further in assessing, reporting and engaging on the broader effects of their policies and thus to ensure policy coherence with the G20 agenda.

## References

- ADB (2018). “Closing the Financing Gap in Asian Infrastructure”, Asian Development Bank,  
<https://www.adb.org/sites/default/files/publication/431261/swp-057-financing-gap-asian-infrastructure.pdf>.
- Ampudia, M., D. Georgarakos, J. Slacalek, O. Tristani, P. Vermeulen, G. Violante (2018). “Monetary policy and household inequality”,  
<https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2170.en.pdf>.
- \_\_\_\_\_, M. Ehrmann (2017). “Financial inclusion. What’s it worth?”, ECB Working Paper 1990, January 2017,  
<https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1990.en.pdf>.
- ASCE (2016). “Failure to Act. Closing the Infrastructure Investment Gap for America’s Economic Future”,  
<https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/ASCE-Failure-to-Act-2016-FINAL.pdf>.
- Aso, T. (2018). “Statement by Minister Aso on G20 FMCBG Meeting under the Japanese Presidency”,  
[https://www.mof.go.jp/english/international\\_policy/convention/g20/20181202.htm](https://www.mof.go.jp/english/international_policy/convention/g20/20181202.htm).
- BdF (2018). “Responsible Investment Charter of the Banque de France”,



- Banque de France, [https://www.banque-france.fr/sites/default/files/media/2018/03/29/818080 -charte-invest en 2018 03 28 12h12m41.pdf](https://www.banque-france.fr/sites/default/files/media/2018/03/29/818080_-_charte-invest_en_2018_03_28_12h12m41.pdf).
- BoE (2019). “The Bank of England’s Operations Under the Funding for Lending Scheme – Operating Procedures”, Bank of England, <https://www.bankofengland.co.uk/-/media/boe/files/markets/funding-for-lending/operating-procedures>.
  - \_\_\_\_\_ (2018). “Enhancing Banks’ and Insurers’ Approaches to Managing the Financial Risks from Climate Change”, Bank of England, <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/consultation-paper/2018/cp2318.pdf>.
  - BoJ (2017). “Special Rules for Purchases of ETFs to Support Firms Proactively Investing in Physical and Human Capital”, Bank of Japan, [https://www.boj.or.jp/en/mopo/measures/term\\_cond/yoryo91.htm/](https://www.boj.or.jp/en/mopo/measures/term_cond/yoryo91.htm/).
  - Brainard, L. (2018). “FinTech and the Search for Full Stack Financial Inclusion”, <https://www.federalreserve.gov/newsevents/speech/brainard20181017a.htm>.
  - Bunn, P., A. Pugh, C. Yeates (2018). “The distributional impact of monetary policy easing in the UK between 2008 and 2014”, Bank of England Working Paper, <https://www.bankofengland.co.uk/working-paper/2018/the-distributional-impact-of-monetary-policy-easing-in-the-uk-between-2008-and-2014>.
  - Chan, N. (2018). “Hong Kong’s pivotal role in infrastructure financing”, <https://www.bis.org/review/r181016e.pdf>.
  - China Daily (2019). “Central bank to use policy tools to help small firms”, <http://www.chinadaily.com.cn/a/201901/10/WS5c364af5a3106c65c34e38b6.html>.
  - Demirgüç-Kunt, A., L. Klapper, D. Singer, S. Ansar, J. Hess (2018). “The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution.” Washington, DC: World Bank, <https://openknowledge.worldbank.org/bitstream/handle/10986/29510/9781464812590.pdf>.
  - DNB (2019). “Reserve Management”, De Nederlandsche Bank, <https://www.dnb.nl/en/interest-rates-and-inflation/management-of->



- [reserves/index.jsp](#).
- Draghi, M. (2019). “Letter to MEP Paul Tang”,  
[https://www.ecb.europa.eu/pub/pdf/other/ecb.mepletter190222\\_Tang~97a514ac0c.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/ecb.mepletter190222_Tang~97a514ac0c.en.pdf).
  - ECB (2018). “Survey on the Access to Finance of Enterprises in the euro area”,  
<https://www.ecb.europa.eu/stats/accesstofinancesofenterprises/pdf/ecb.safe201811.en.pdf>.
  - \_\_\_\_\_ (2017). “Youth, innovation and productivity in Europe”, ECB Youth Dialogue, June 2017, Lisbon, Portugal,  
<https://www.ecb.europa.eu/ecb/educational/youth-initiatives/ecb-youth-dialogue/html/index.en.html>.
  - EIB (2018). “EIB Investment Report 2018/2019. Retooling Europe’s Economy”, European Investment Bank,  
[http://www.eib.org/attachments/efs/economic\\_investment\\_report\\_2018\\_en.pdf](http://www.eib.org/attachments/efs/economic_investment_report_2018_en.pdf).
  - FAO (2019). “The State of the World’s Biodiversity for Food and Agriculture”, <http://www.fao.org/3/CA3129EN/CA3129EN.pdf>.
  - Federal Reserve (2019). “Conversation with the Chairman: A Teacher Town Hall Meeting”, Transcript,  
<https://www.federalreserve.gov/mediacenter/files/teacher-town-hall-transcript-20190206.pdf>.
  - Federal Reserve Banks (2018). “2017 Small Business Credit Survey”,  
<https://www.fedsmallbusiness.org/medialibrary/fedsmallbusiness/files/2018/sbcs-employer-firms-report.pdf>.
  - FSB (2018). “Evaluation of the Effects of Financial Regulatory Reforms on Infrastructure Finance”, Financial Stability Board,  
<http://www.fsb.org/wp-content/uploads/P201118-1.pdf>.
  - G20 (2018). “G20 Leaders Declaration. Building Consensus for Fair and Sustainable Development”, <http://www.g20.utoronto.ca/2018/2018-leaders-declaration.html>.
  - \_\_\_\_\_ (2016). “G20 Leaders’ Communiqué”,  
<http://www.g20.utoronto.ca/2016/160905-communique.html>.
  - \_\_\_\_\_ (2015). “G20 Leaders’ Communiqué”,  
<http://www.g20.utoronto.ca/2015/151116-communique.html>.
  - \_\_\_\_\_ (2014). “G20 Leaders’ Communiqué”,



- <http://www.g20.utoronto.ca/2014/2014-1116-communique.html>.
- G20 EPG (2018). “Making the Global Financial System Work for All”, G20 Eminent Persons Group on Global Financial Governance, <https://www.globalfinancialgovernance.org/assets/pdf/G20EPG-Full%20Report.pdf>.
  - GPGI (2017). “2017 Financial Inclusion Action Plan”, Global Partnership for Financial Inclusion, <https://www.gpgi.org/sites/default/files/documents/2017%20G20%20Financial%20Inclusion%20Action%20Plan%20final.pdf>.
  - ILO (2019). “World Employment Social Outlook. Trends 2019”, International Labour Organization, [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_670542.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_670542.pdf).
  - IMF (2018). “G-20 Surveillance Note”, International Monetary Fund, <https://www.imf.org/external/np/g20/pdf/2018/112818.pdf>.
  - Inui, M., N. Sudo, T. Yamada (2017). “Effects of Monetary Policy Shocks on Inequality in Japan”, Bank of Japan Working Paper, [https://www.boj.or.jp/en/research/wps\\_rev/wps\\_2017/data/wp17e03.pdf](https://www.boj.or.jp/en/research/wps_rev/wps_2017/data/wp17e03.pdf).
  - Kashkari, N. (2017). “Introducing the Opportunity and Inclusive Growth Institute”, <https://www.minneapolisfed.org/news-and-events/presidents-speeches/introducing-the-opportunity-and-inclusive-growth-institute>.
  - Kuroda, H. (2019). “Opening Remarks at the G20 Finance and Central Bank Deputies Meeting”, <https://www.bis.org/review/r190117b.pdf>.
  - Mancini-Griffoli, T., M. Soledad Martinez Peria, I. Agur, A. Ari, J. Kiff, A. Popescu, C. Rochon (2018). “Casting Light on Central Bank Digital Currencies”, <https://www.imf.org/~media/Files/Publications/SDN/2018/SDN1808.ashx>.
  - Monasterolo, I., S. Battiston (2019). “A carbon risk assessment of central banks' portfolios under 2°C aligned climate scenarios”, [https://ec.europa.eu/jrc/sites/jrcsh/files/presentation\\_irene\\_monasterolo.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/presentation_irene_monasterolo.pdf).
  - Monnin, P. (2018). “Integrating Climate Risks into Credit Risk Assessment: Current Methodologies and the Case of Central Banks



- Corporate Bond Purchases”, <https://www.cepweb.org/integrating-climate-risks-into-credit-risk-assessment-current-methodologies-and-the-case-of-central-banks-corporate-bond-purchases/>.
- Mundra, S S (2016). “Financial Inclusion in India – The Journey so far and the Way Ahead”, [https://www.rbi.org.in/scripts/BS\\_SpeechesView.aspx?Id=1024](https://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1024).
  - NGFS (2018). “NGFS First Progress Report”, <https://www.banque-france.fr/sites/default/files/media/2018/10/11/818366-ngfs-first-progress-report-20181011.pdf>.
  - NITI Aayog (2018). “Composite Water Management Index. A Tool for Water Management”, [http://www.niti.gov.in/writereaddata/files/document\\_publication/2018-05-18-Water-index-Report\\_vS6B.pdf](http://www.niti.gov.in/writereaddata/files/document_publication/2018-05-18-Water-index-Report_vS6B.pdf).
  - Ohlsson, H. (2017). “The distributional effects of monetary policy”, <https://www.riksbank.se/en-gb/press-and-published/speeches-and-presentations/2017/ohlsson-the-distributional-effects-of-monetary-policy/>.
  - PBoC (2018). “PBC Decides to Expand the Range of Acceptable Collaterals of Medium-Term Lending Facility”, People’s Bank of China, <http://www.pbc.gov.cn/en/3688110/3688172/3711519/index.html>.
  - Rehn, O. (2018). “Climate Change and Green Finance”, <https://www.suomenpankki.fi/en/media-and-publications/speeches-and-interviews/2018/olli-rehn-climate-change-and-green-finance.-helsinki-13-june-2018/>.
  - SME Finance Forum (2019). “MSME Finance Gap”, <http://www.smefinanceforum.org/data-sites/msme-finance-gap>.
  - Villeroy de Galhau, F. (2019). “New Year wishes to the Paris financial centre”, <https://www.banque-france.fr/en/intervention/new-year-wishes-paris-financial-centre-francois-villeroy-de-galhau-governor-banque-de-france>.
  - Warjiyo, P. (2018). “Synergy for resilience and growth”, <https://www.bis.org/review/r181220n.htm>.
  - WEF (2019). “The Global Risks Report 2019”, World Economic Forum, <https://www.weforum.org/reports/the-global-risks-report-2019>.
  - WHO (2018). “9 out of 10 people worldwide breathe polluted air, but more countries are taking action”, World Health Organization,



<https://www.who.int/news-room/detail/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action>.

- Wilkins, C. (2018). “Choosing the Best Monetary Policy Framework for Canada”, <https://www.bankofcanada.ca/2018/11/choosing-best-monetary-policy-framework-canada/>.
- WMO (2018). “Greenhouse Gas Levels in Atmosphere Reach New Record”, World Meteorological Organization, <https://public.wmo.int/en/media/press-release/greenhouse-gas-levels-atmosphere-reach-new-record>.
- World Inequality Lab (2018). “World Inequality Database”, <https://wid.world>.
- Yue, E. (2018). “Exchange Fund’s Investment in Infrastructure – Creating Value by Adopting a Gradual and Prudent Approach”, <https://www.hkma.gov.hk/eng/key-information/insight/20181029.shtml>.