CHAPTER 8

Collaboration in the global system

KEY MESSAGES

Australia and China both benefit from strong global institutions that are inclusive, rules-based and promote open and efficient international markets. An effective global governance framework will be critical to the success of China's economic transition and the resilience of the global economy. But many of these institutions were created decades ago and do not reflect current realities of the global economy. Australia, China and other partners can effect incremental change in reforming global governance.

Australia and China have powerful interests in entrenching the G20 as the preeminent forum for global economic governance. Without the G20, Australia may be excluded from a smaller alternative grouping (such as a 'G10') which, dominated by developed rather than emerging economies, would also see China with less voice in global rule-setting. Australia and China should actively use the G20, ensure its agenda is inclusive and targeted, ensure continuity by prioritising its multi-year 'two-in-five' growth agenda, and deepen its work on global governance reform. Most importantly, deficiencies in the global financial safety net create systemic risks that threaten the trading, financial and production networks that are integral to the Australian and Chinese economies.

- Australia and China collaborate within the G20 on global financial safety net issues on four key fronts: the next stage of IMF reform, implementing arrangements to make the IMF and regional financing arrangements more cohesive, renegotiating bilateral loans and strengthening domestic macroeconomic frameworks.
- In the near term, China should work to build-up the analytical capacity of the ASEAN Plus Three Macroeconomic Research Office and strengthen institutional collaboration between regional initiatives and the IMF. In the longer term, Australia and China should encourage G20 discussions on the next stage of IMF quota reform, assume a leading role in renegotiating bilateral loans between G20 countries and the IMF, and focus the G20 growth agenda on improving macro-financial resilience of all countries.

Australia and China benefit more from multilateral trade liberalisation than from plurilateral or bilateral initiatives. But increased fragmentation is swelling business costs, reducing trade flows and weakening production networks.

- Australia and China should lead a greater G20 focus on the multilateral trading system and initiate a pragmatic, incremental process on WTO reform and define a pathway for RCEP and other arrangements like the TPP to raise the standard of regional agreements and strengthen the WTO. They should also encourage the use of the G20 growth strategies to achieve ambitious commitments under the Trade Facilitation Agreement.

Australia and China can take other important steps to progress collaboration.

- Australia and China should initiate a step-by-step process towards a multilateral framework for investment, as well as increasing and streamlining multilateral funding for investment in infrastructure. Australia and China should collaborate in the G20 towards instituting more structured cooperation between the AIIB, the BRICS New Development Bank and existing multilateral development banks.

- Both countries should work within the G20 to promote global energy governance reform that addresses the substantial gaps in existing frameworks and institutions like the International Energy Agency.
- Australia and China should develop their partnership within the global response to climate change. This cooperation can draw on a variety of existing forums for dialogue at the official and political levels, including ministerial-level consultations and academic collaborations.

The global economic system has many dimensions: trade, finance, energy, development, security, climate and many more. Ensuring that markets are open, inclusive and governed by a predictable and stable set of rules and norms is critical to their successful functioning. Australia and China will both be active beneficiaries of good outcomes in all of these dimensions.

The system of rules, norms and institutions that govern the interactions between countries, in all of these dimensions, is collectively referred to as the 'architecture of global economic governance'. This architecture is becoming more fragmented. In the aftermath of World War II, the global governance system consisted of large multilateral institutions like the United Nations, IMF and World Bank. Today, it is more diversified across multilateral, regional and bilateral layers. This fragmentation has challenged the ability of global policymakers to respond adequately to the needs of the international community.

The architecture of global economic governance is now in need of reform. The changing structure of the global economy and the rise of emerging market economies, particularly China, have presented immense opportunities for the world but have also presented challenges for global governance. Global institutions that have served the international community well have not kept up with these transitions. They are in need of reform and the gaps that have emerged in global economic governance need to be filled.

The G20 is now the world's primary vehicle for such a reform of global economic governance. It is vital that the G20's status as the 'global steering committee' is entrenched. The G20 is the only forum in which it is possible to determine, and remake, the priorities of the institutions, forums and organisations that together make up the architecture of global economic governance. In addition, the G20 is the only forum in which advanced and emerging economies can cooperate in this governance reform on an equal footing.

Making sure that this happens is something that is particularly important for both Australia and China. The decline of the G20 would represent a substantial risk for Australia, given that Australia is much more likely to be excluded from the smaller ad-hoc groupings of great powers which would likely then emerge. As for China, these smaller ad-hoc groupings might well be dominated by advanced economies, and China's input in them would be afforded less weight. As a consequence, there would be less international balance in the global process of economic rule-setting.

Australia and China are in a position to cooperate, in important ways, in ensuring that this objective is achieved. Acting together, Australia and China should ensure that the G20 agenda remains inclusive and that its members work collaboratively on global economic issues in a way that resonates across the full membership of the G20 and beyond. In particular, Australia and China can promote the G20 by actively using it as a forum in which major global issues are raised and negotiated, instead of that being done in an ad-hoc way in other global or regional bodies.

There are five key areas of global policymaking in which Australia and China share an interest in strengthening the G20's leadership.

The first priority area for Australia and China is to ensure continuity in the G20 agenda by maintaining its core focus on growth and strengthening the recovery from the global financial crisis of 2007–2008. It is nearly a decade since this crisis struck, and yet the global recovery is still not complete. The G20 is in a position to make a difference to the strength of this recovery: the 'two-in-five' agenda that Australia initiated when it held the G20 presidency in 2014 has put it in a position to do just this. This agenda, agreed at the G20 Leaders' Summit in Brisbane in November 2014, is a process in which G20 members undertook to carry out policies which — when taken together — would ensure that global GDP is 2 per cent higher by the year 2018 than it would otherwise have been. This agreement was a significant achievement, but the follow-through since Brisbane then has been patchy. China can strengthen this follow-through by reinvigorating the G20 Mutual Assessment Process (G20MAP). The two-in-five process could also play an important part in a resurrection of the G20's leadership role in international cooperation on macroeconomic policies. This was a role that the G20 held in 2008–2009 during the global financial crisis; it is important that it takes this role again. The G20's ability to take a lead in strengthening the global recovery will also be helped by its ability to promote infrastructure investment worldwide. This agenda item is discussed in more detail below.

The second priority area for Australia and China is to ensure the adequacy of the global financial safety net. There are big gaps. It is too small and too fragmented. This reduces its coverage, consistency and responsiveness. Australia and China have a common interest in a strong, inclusive and responsive global financial safety net, centred on a representative IMF and with strong cooperation among the major economies. Australia and China should use their influence in the G20, IMF and regional arrangements to focus on five key issues: the next stage of IMF quota reform; the necessity, at both global and regional levels, of countries being able to obtain liquidity financing as necessary, including the urgent need for China to gain access to the group of countries that are able to obtain very large currency swaps; the implementation of arrangements to make the IMF and regional financing arrangements, such as the Chiang Mai Initiative Multilateralization (CMIM), more cohesive; renegotiating bilateral loans between G20 countries and the IMF; and using the G20 growth strategies and peer review process to boost efforts on strengthening domestic macroeconomic frameworks to improve resilience.

The third priority area is trade. Australia and China benefit most from trade liberalisation when it is multilateral rather than bilateral or plurilateral. Australia and China should work to support the cohesiveness of the global trading system by encouraging the G20 to refocus on the multilateral trading system rather than on regional or bilateral alternatives. This should include a focus on what incremental and pragmatic steps could be taken on WTO reform. Australia and China should use regional arrangements, such as RCEP, to raise the standard for cohesive regional agreements, pushing for better collaboration between the WTO and regional agreements and by delivering ambitious commitments under the Trade Facilitation Agreement by giving the structural reforms under the G20 growth strategies a stronger trade focus.

The fourth priority area is investment. There is scope for Australia and China to support the G20 in consolidating the work of the WTO, G20, OECD, UNCTAD and others on a process towards a multilateral framework for investment. There is also specific scope for greater multilateral cooperation on infrastructure investment. Australia and China should promote infrastructure investment in the G20 as a cross-cutting theme to bring G20 countries together to take action on multiple fronts, including growth, macroeconomic management, development, trade, energy and climate change. There is scope for better cooperation and synergies between the AIIB, the BRICS New Development Bank and existing multilateral development banks. The G20 should continue to support development banks in optimising their resources by leveraging private-sector finance. Success in this area will clearly be helpful in taking forward the G20's agenda of promoting a sustained worldwide recovery from the global financial crisis.

The fifth and final key area for collaboration between Australia and China concerns energy transformation and climate change. The global energy governance architecture has failed to keep up with significant changes in global energy markets and the global economy, and needs to be reformed. Australia and China should support the positive momentum in the G20 on global energy governance reform in building and adapting existing organisations and ensuring that they work together effectively. Closely related to the need for energy collaboration is the fact that Australia and China both have a vital interest in supporting a strong global response to climate change. China's economic and climate change strategy is increasingly geared towards low-carbon growth. Australia has the potential to become an exporter of low-carbon energy, which could supply China. Australia and China should work together on both climate change and energy strategies. This should involve government, industry and the research community. An existing research-based collaboration model could be scaled up to an international initiative.

Australia and China within the global system

The foundations of the economic partnership between Australia and China are multilateral and global in character. There are many areas in which collaboration between China, Australia and their partners in global affairs will become increasingly important because China's role in the global economy is growing. Although participation in some global or regional institutions is unique to just one of the two countries, Australia and China have more in common than not given the nature of their economic ties and their location in the world.

Australian and Chinese leaders, ministers and senior officials have a greater range of opportunities for regular engagement now than ever before. Figure 8.1 gives a snapshot of how Australia and China engage in global governance — the institutions they have in common and those they do not.

Figure 8.1 provides several important insights. First, it shows the scale of multilateral cooperation between Australia and China. The leaders of both countries come together at least four times a year at the G20, APEC, East Asia Summit and United Nations. The finance ministers of both countries meet around five times a year just for the G20, as well as separate regular meetings for APEC, ASEAN, the IMF and the World Bank. Central bank governors meet regularly at the Bank for International Settlements, G20 and APEC. For each of these institutions and forums, hundreds of Australian and Chinese officials are engaging on an almost continual basis in support of their ministers and leaders.

Second, Figure 8.1 illustrates the breadth of issues on which Australia and China cooperate through multilateral institutions and forums. Today, almost every domestic policy issue has an international dimension, and most international issues can have significant domestic consequences. As a result, the agendas of international institutions and forums have increased exponentially over time, covering a broad range of issues from trade, finance, development, tax, financial regulation and macroeconomic policies to issues like security, human rights, climate change, the environment and reforming the global governance architecture itself.

Third, Australia and China have more in common in these affairs than not. The institutions in which Australia and China cooperate are more influential and systemically important than the institutions unique to just one of the countries. These processes have helped develop extensive personal networks of leaders, ministers and officials, as well as representatives from business, labour, academia and civil society.

Finally, Figure 8.1 highlights the large number of regional institutions in which Australia and China cooperate, some of which compete directly or indirectly with existing global institutions. The only major global institutions in which Australia and China do not both participate are the United Nations Security Council (which excludes Australia), and the OECD and related International Energy Agency (which exclude China, although China participates in both institutions through an associate status).

Figure 8.1: Australia and China in the global governance architecture

China only	Australia only	Both China and Australia
• UN Security Council • New Development Bank (formerly the BRICS Development Bank) • Chiang Mai • Brazil-Russia-India-China-South Africa • One Belt, One Road Initiative	• Trans-Pacific Partnership • Asian Development Bank • International Energy Agency • Pacific Islands Forum • OECD • ANZUS treaty • Commonwealth Heads of Government Meeting	• G20 • ASEAN+6 • UN General Assembly • East Asia Summit • APEC • IMF • WTO • World Bank • Regional Comprehensive Economic Partnership • International Energy Forum • Asian Infrastructure Investment Bank • Bank of International Settlements

Source: Authors' schema.

The Australia–China relationship and sustaining international cooperation

The Australia-China relationship is of geopolitical significance, both for economic reasons and for reasons of political economy. This is despite the disparity between China and Australia in terms of economic and political weight. It is this fact that makes Australia–China cooperation particularly important, both in relation to strengthening the G20's role in global economic governance and in relation to the five key areas of global policymaking discussed above.

The geopolitical significance of the Australia–China economic relationship stems from Australia's role as a major supplier of primary commodity inputs to the Chinese industrial system, and the emerging future of bilateral services trade, direct investment and economic partnership. Prosperity in the two economies goes together. Such prosperity is vital for the world economy.

While its economy is closely linked to China, and to Asia more generally, Australia's strategic and political alliance with the United States has been confirmed as paramount by successive Australian governments. Australia has a strong incentive to avoid conflict between its economic partners and its US alliance. Australia's ability to steer such a middle path is greatly helped by its long history of engagement with global economic institutions such as the IMF, World Bank, WTO and UN agencies. For many years Australia has played an important role both in the governance of these institutions and in the determination of their policy stances. Australia's ability to keep the Australia–China relationship within such a broad multilateral framework, while at the same time building on the bilateral relationship, gives Australia the ability to make a significant contribution to the task of addressing global challenges and disputes. Such a contribution by Australia might help the world to avoid the counterproductive and unnecessary fragmentation of relationships, something that will hurt both countries.

On many issues, the most effective way for Australia and China to engage bilaterally will be to work together within multilateral frameworks and to develop coalitions of like-minded countries that can attract broader support for action. Collaboration between Australia and China is itself symbolic of the sort of global coalitions that need to be built — those that form across the divides of advanced and emerging economies. The focus of coalition-building efforts should be on both process and content.

On process, Australia and China have a common interest in ensuring that the global and regional rules, norms and institutions that govern interactions between countries are effective, inclusive and comprehensive. This Report has already argued that the G20 is the primary vehicle for achieving this. This chapter will illustrate some of the challenges facing global governance mechanisms, and will identify the common interests which Australia and China have in working with their partners in the G20 in addressing these challenges.

On content, Australia and China should work within these global frameworks to promote the common global interests that the two countries share in relation to particular areas. This Report has already mentioned five of these on which this chapter will focus: fostering global macroeconomic policy cooperation; strengthening the global financial safety net; strengthening the multilateral trading system; fostering better global coordination of infrastructure investment; and addressing global energy policy and climate change.

Strains on the global governance architecture

At the end of World War II, countries set about building a new global order to govern the interactions between countries and promote peace, stability and growth. This global architecture has served the global community well. It has provided a framework within which Australia and China have been able to pursue their national economic and political goals. Its core design remains important to serving those objectives consistently with the interests of other countries. Although it has been relatively resilient up to this point, a number of related forces are now straining this architecture and it will need to be reformed if it is to be as effective in the future as it has been in the past.

One such force is globalisation. Emerging economies now constitute a large share of the global economy (Figure 8.2). Economies are more connected and integrated than ever before. Figures 8.3 and 8.4 illustrate this through two key and related transmission mechanisms: trade and capital flows. From 1980 to 2015, global trade flows have increased six-fold. Similarly, there has been a significant increase in the size of gross capital flows. Global gross capital flows increased from less than 5 per cent of global GDP during 1980 to a peak of around 20 per cent by 2007.

This increased interconnectedness means countries are more susceptible to the policies and events in each other's economies. It also means that the global institutions and forums developed to govern the interactions between countries have a much larger task on their hands, requiring increased resources and a broader focus.

Figure 8.2: Share of global GDP (ppp)

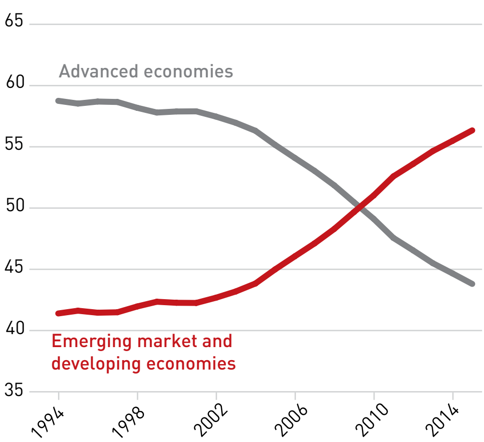
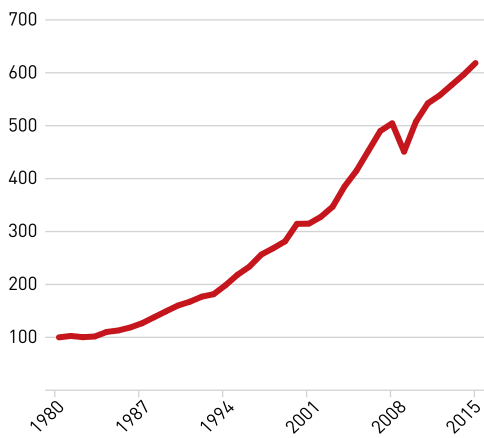
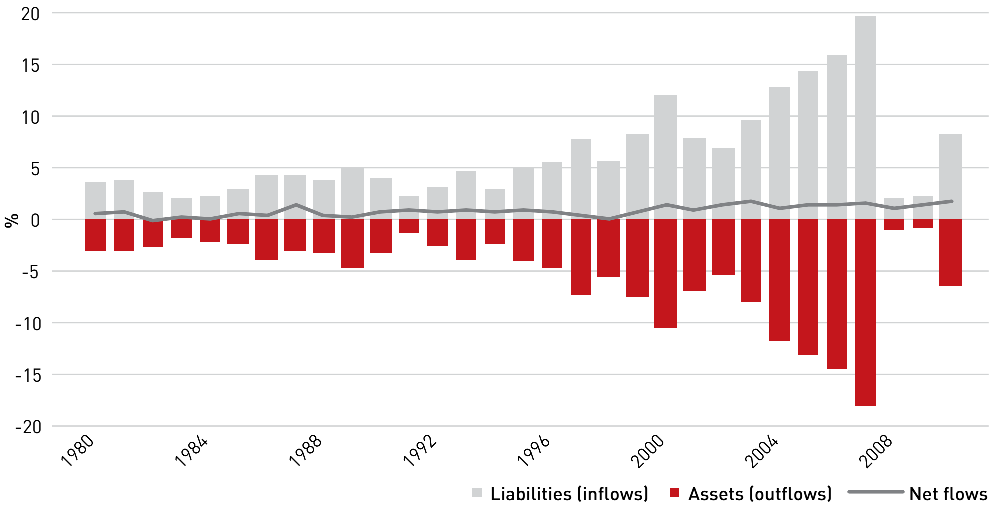


Figure 8.3: Global trade volumne of goods and services (1980=100)



Source: IMF WEO 2015.

Figure 8.4: Global capital flows since 1980



Source: Hawkins et al 2014.

While the size of the global economy has increased, countries' relative shares of global GDP have changed. Figure 8.2 shows the change in the composition of global GDP from 1994 to 2015. Emerging market and developing economies now contribute a greater share of global GDP (purchasing power parity) than advanced economies. As the composition of the global economy changes, so too must the composition of the international institutions and forums that govern it. Failure to do this not only means that these institutions' decisions will appear less legitimate, but it would also impair their effectiveness, due to the reduction in the funding and coverage of their activities.

Innovation and advances in technology also act to strain the existing global governance architecture. New technologies alter the ways in which countries interact, potentially requiring new governance structures to deal with emerging issues. Advances in technology and transportation, for example, have changed the way in which countries trade, from imports and exports of final products to global and regional production networks. Financial innovation has similarly posed challenges that have required new regulatory frameworks through the creation of the Financial Stability Board and Basel III.

Retaining the G20 as the preeminent forum for global economic governance

For many years, the G20 remained below the radar, working quietly but effectively at the level of finance ministers and central bank governors (Hulst 2015). This changed in 2008 when, faced with the global financial crisis, the need for significant macroeconomic policy cooperation led to the evolution of the G20 as a forum for national leaders. Leaders identified 'inconsistent and insufficiently coordinated macroeconomic policies' as a root cause of the crisis, and responded with the largest coordinated policy response in history, consisting of liquidity support to stabilise markets, the use of conventional monetary policies to support demand and fiscal stimulus packages coordinated across almost all G20 countries.

In 2009, under the presidency of the United States, G20 leaders declared it as 'the premier forum for international economic cooperation'. Its attention gradually shifted from fighting the crisis to implementing the longer-term policies, both macroeconomic and structural, that were necessary to promote strong, sustainable and balanced growth. Although the legitimacy of the G20 as a 'self-appointed club' is questioned, the G20 is today established as the only global economic forum where advanced and emerging economies cooperate on an equal footing (Hulst 2015).

Since 2008, the G20's agenda has expanded significantly. It now includes specific agenda items devoted to growth, employment, trade, anti-corruption, financial regulation, tax, infrastructure, investment, development, climate change, energy, food security, remittances and, at times, pandemics and terrorism. A consistent and cross-cutting theme of the G20 has been global governance reform. The G20 has emerged as the world's primary vehicle for reforming the global governance architecture and in helping steer the priorities of the institutions, forums and organisations that underpin it. The G20 is often referred to as the 'global steering committee', with a focus on rules-based and market-oriented approaches. This is an area in which the G20 has a clear comparative advantage given the composition of its membership, reflecting, in particular, the growing dynamism of the Asia Pacific region and the global influence of emerging economies.

G20 decisions, which take the form of policy proposals rather than enforceable policy strategies, must in most cases be brought before the governance organs of treaty-based institutions, such as the IMF, and be adopted by them on behalf of the global community. The G20 cannot decide for others, although the voting power that G20 members have in most international institutions means that their proposals are likely to become decisions (Drysdale and DerviĐ 2014).

The importance of the G20 to Australia and China

Unlike the G7, the G8 or the former G10, the G20 includes Australia and China. There are no guarantees the G20 will be a permanent fixture, let alone remain as a global steering committee. Leaders have a variety of multilateral, regional and bilateral institutions and forums available to them, as well as the ability to create new ones if they see fit. If the G20 stops being effective in the eyes of leaders, then the G20 may quickly find itself replaced.

Losing the G20 would represent a particular risk for Australia given Australia is much more likely to be excluded from alternative, smaller groupings than is China, as Australia is less important to the global economy. But China faces risks too. Should the G20 fall into disuse, a new smaller grouping may be dominated by advanced economies, which may not share China's perspectives, concerns and challenges as an emerging economy. There is a worse danger, still, that competing non-cooperative centres of global power are established — such as a BRICS versus G7 dichotomy — although these are to be avoided within a forum like the G20 too.

The G20 is the best avenue for Australia and China in influencing the rules, norms and institutions of global governance and the delivery of global public goods. Working within this framework is one of the most effective ways for Australia to engage with the international system. Australia has a strong incentive to have a seat at the table and influence how this framework develops. As a key beneficiary of global governance reform, China also has a strong incentive to play an active role in these discussions. As global governance evolves to reflect economic realities, China will find itself playing an increasing role in global institutions as well as in shaping the rules and norms that underpin them.

Increased Chinese leadership in global governance will be of significant importance into the future, particularly within the G20. Vines (2015) has argued that two things are required for effective Chinese leadership. The first is domestic competence. This requires transforming China's model of economic development from export-led growth to consumption-led growth, supported by a resilient financial system (see Chapters 1 and 2). The second is global leadership. This means developing an understanding of how to act on the world stage and an understanding of how the actions of different countries might be brought together. Most importantly, this requires China, and all countries, to nurture a forum in which information is exchanged, preferences articulated, discussions take place and compromises reached. The G20 is the ideal forum for this to take place. As such, maintaining the relevance and effectiveness of the G20 should be a top priority for China.

The G20 is not just a means for Australia and China to influence global outcomes. It is also a means for influencing outcomes and priorities domestically. When used strategically, the G20 can be an effective way of providing political cover to help undertake tough domestic reforms. This was on display, in particular, in how countries responded to the global financial crisis. Coordinated stimulus gave political cover to governments in implementing their own fiscal measures. Showing that other countries were undertaking similar actions not only gave these policies credibility, it also helped alleviate concerns that other countries might free-ride on the fiscal leakages from one country to another. The coordinated loosening of monetary policy similarly helped reduce the risk of a loss of confidence or currency attack (Vines 2015).

Maintaining the relevance and effectiveness of the G20

There are practical things Australia and China can do both individually and jointly to help maintain the relevance and effectiveness of the G20. Australia and China must ensure its agenda is inclusive. They should work collaboratively not only on issues that are \ important to the global economy, but also on issues that both countries can exhibit strong leadership on to help motivate others. Importantly, Australia and China must ensure there is continuity in the G20's agenda.

The two-in-five agenda has put the G20 in a position to ensure continuity and support for the global economic recovery. In 2014, countries put forward over 1000 reforms with the goal of ensuring that the G20 GDP in 2018 is 2 per cent higher than it would otherwise have been. Countries have since implemented, revised and added to these reforms in 2015 and 2016 through a comprehensive peer review process. This process should play an important part in the resurrection of the G20's leadership role in international cooperation on macroeconomic policies. The two-in-five agenda can help overcome the 'growth versus austerity' debate within the G20 by providing an acceptable means for countries committed to austerity to undertake public investment while all countries simultaneously undertake supply-side reforms to boost potential output. This, in turn, helps boost global aggregate demand and takes some pressure off monetary policy.

A strategy of investing more in infrastructure and carrying out supply-side reforms will stimulate global demand. This would lead to the creation of capital assets, which increase the supply-side potential of the economy, and would also increase demand during the investment period. While public–private partnerships can help optimise public resources, infrastructure investment will also enable a moderation of austerity in advanced countries that have fiscal space for public investment. The justification would be that investment in infrastructure leads to the creation of assets that can be used as collateral to the additional public sector debt incurred. Policymakers may be more willing to moderate austerity in the knowledge that additional infrastructure investment will not lead to a worsening in the public sector balance sheet.

In terms of the G20 agenda, another option for achieving continuity would be to create a permanent G20 secretariat. G20 countries would continue to take turns hosting the G20 Summit, but the secretariat would help manage the expanding agenda and ensure continuity from one year to the next. The cost of having a permanent secretariat, however, is that the G20 loses its status as an informal forum; it makes the G20 less country-owned as the secretariat will become its own political entity which must then be negotiated with, slowing down reform processes. Past experience with other international forums that created permanent secretariats would also suggest that this does little in improving continuity and that, instead, it is the political will of countries that determines whether any particular summit is successful or not. Given the G20 has routinely rejected the notion of a permanent secretariat, emphasising the G20's long-run growth agenda is likely a better option for promoting continuity.

Australia and China can also promote the G20 by actively using it to raise and negotiate global issues, instead of using other regional or global alternatives. This includes having leaders and ministers use the G20 for key announcements that are of global significance, as well as using the G20 as the platform for important negotiations. Australia and China can also promote the G20 by being ambitious in the commitments they make and in encouraging other countries to do the same.

Ensuring the G20 remains an effective forum requires Australia and China to actively avoid G20 gridlock by not supporting or participating in the formation of damaging strategic blocs. In particular, this means avoiding a G7 versus BRICS scenario where countries agree to pre-align their positions within the G20. China and Australia should deliberately and publicly approach the G20 on an issue-by-issue basis and seek to build coalitions on individual issues across advanced, emerging and developing divides, as well as geographically across Europe, Asia, the Americas, Africa and the Middle East.

Supporting a stronger global financial safety net

The global financial safety net consists of the international financial resources and institutional arrangements to help countries experiencing a financial or economic crisis and preventing its contagion. It is of fundamental importance to the Australian and Chinese economies through the stability it provides to the global financial system by ensuring countries can access liquidity financing as necessary. It supports stability by acting as a financial backstop, providing emergency financing where a country is unable to meet external payments and cannot access markets (Sterland 2013). The safety net also acts as a form of insurance (Shafik 2015). Countries contribute resources to the safety net and, knowing they will receive assistance if they experience problems with their external payments, are more willing to open their economies. Both Australia and China have played key roles in strengthening the safety net in the past. This includes through their quota and bilateral contributions to the IMF, their support for G20-led initiatives around IMF reform and, for China, through its leadership in regional initiatives and establishing currency swap lines to bolster the safety net in the Asia Pacific.

It is therefore important to ensure the adequacy and effectiveness of the global financial safety net as part of the reform of the international monetary system that the IMF should advance. As PBoC Governor Zhou Xiaochuan stated on behalf of China to the recent International Monetary and Financial Committee (Zhou 2016), this requires enhancing the role of the IMF, improving its lending facilities, allowing regional financial arrangements to play a better supplementary role, and further improving the sovereign debt restructuring mechanism, with better coordination among creditors and debtors and wider use of its enhanced contractual clauses.

Given the strong institutions, macroeconomic policy framework and flexibility of the Australian economy, it is unlikely that Australia will require any direct support from the IMF in the future. This is similarly the case for China given the significant domestic buffers and policy space available to Chinese authorities — and also because, in the event that China did require external assistance, the sheer size of its economy would mean the amount of support required would utterly dwarf the capabilities of the IMF and all regional institutions combined. External support would instead come from countries in the region and the reserve-asset countries, particularly the United States and the European Union. Big player cooperation has to be the anchor for an IMF-based financial safety net. The relevance of the global financial safety net to Australia and China is in the fundamental role it plays in stabilising the global financial system given its proven ability to transmit shocks into the Australian and Chinese economies through trade and investment channels.

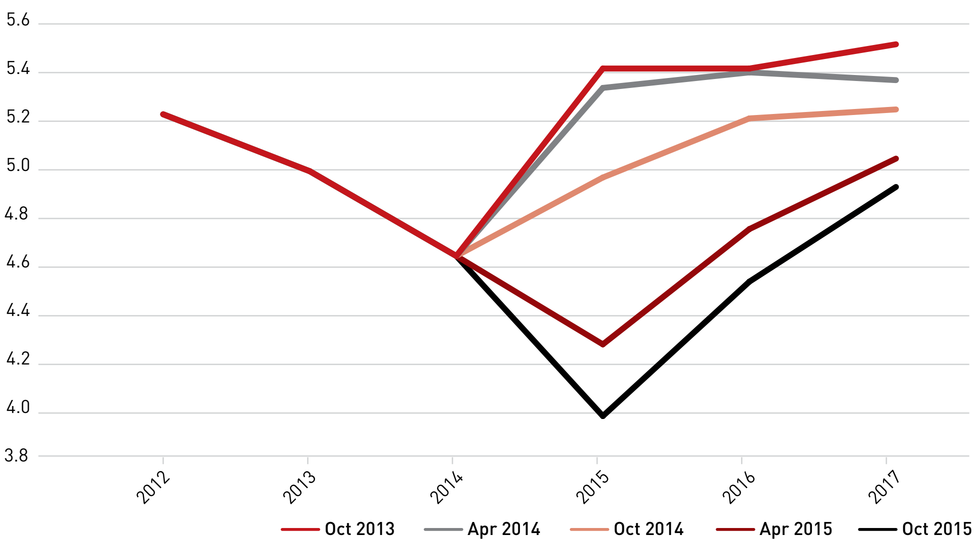
Australia is an open economy that is dependent on foreign savings to finance investment, particularly for its mining and resources sectors, and on international trade for maintaining its high standard of living. Australian authorities hold limited domestic reserves, relying instead on the economic flexibility that has been developed in the Australian economy over many decades. Although the flexibility of Australia's economy, particularly its floating exchange and inflation-targeting monetary policy, helps it weather volatility from international markets, the Australian economy is nevertheless susceptible to global and regional shocks through trade and investment channels. Australia significantly benefits from the stability derived from the safety net and from having strong mechanisms and institutions underpinning it. Australia also benefits from ensuring the IMF remains central to the global financial safety net because, unlike China, Australia does not yet participate in any regional financing arrangements such as the CMIM or the European Stability Mechanism (ESM).

While China does participate in regional initiatives and has significant domestic reserves, the Chinese economy has shown itself to be increasingly susceptible to international shocks. The Asian financial crisis, the global financial crisis and more recently the so-called Taper Tantrum in 2013 have highlighted the susceptibility of the Chinese economy to global shocks through financial channels. These shocks, particularly the European debt crisis, have also highlighted the susceptibility of the Chinese economy to reduced global demand through trade channels. China is a key beneficiary from global efforts to have the IMF, and global governance more generally, better reflect the economic realities of the 21st century. These reforms will be key to facilitating China's economic transition and having it play a more active role in the global financial system of the future, as well as in having input into how global rules, norms and institutions develop over time.

Ensuring that countries can access liquidity financing, both regionally and globally, in times of difficulty is of critical importance. The response to the global financial crisis, particularly through the currency swap lines established between central banks, showed both the importance of ensuring adequate access to liquidity but also the ad hoc and unpredictable nature in which this is currently supplied. The global financial safety net is particularly important for Australia and China. Emerging market economies are more systemically important to the global economy than ever before and many of them are facing difficult transitions and significant risks in the short to medium term that threaten to reduce the confidence of investors in holding assets in these economies. Capital outflows from emerging markets have surged toward US$1 trillion over 2014–2015. That is approximately double the amount that exited emerging markets during the global financial crisis (NN Investment Partners 2015). According to the Bank for International Settlements, investors are increasingly focused on growing vulnerabilities in the emerging market economies as they reassess the global growth outlook (BIS 2015).

Figure 8.5 shows that economic activity in these economies is now projected to slow for the fifth successive year (IMF 2015a). These downgrades reflect common as well as country-specific factors. Common factors include weaker demand from advanced economies, weaker growth in oil exports, adjustments in the aftermath of credit and investment booms, a weaker outlook for exporters of other commodities (including in Latin America), as well as more difficult external financing conditions. Should downside risks increase or materialise for the emerging market economies, the global financial safety net will have a critical role to play in preventing contagion and buffering its effects on the Australian and Chinese economies. But, as the following section explains, the safety net, at present, is too small, too unresponsive and too fragmented to play this role.

Figure 8.5: IMF GDP forecasts for emerging market and developing economies



Source: IMF WEO 2015.

The evolution of the global financial safety net

In 2003, the safety net consisted predominantly of the IMF and the US$365 billion it held to fight crises (Australian Treasury 2014). Since then, the safety net has significantly increased in size but has fragmented in composition. There are several reasons for this fragmentation. The most significant is the slow pace in reforming the IMF so as to boost its permanent funding and make its governance structure more representative of the contemporary global economy.

The slow pace of IMF reform has made the IMF more reliant on secondary sources of funding, such as bilateral loan commitments, and has made the global economy more reliant on regional and bilateral alternatives outside of the IMF. In 2010, the euro area created the European Financial and Stability Fund, which later became the European Stability Mechanism, to respond to the European debt crisis. Similarly in 2010, BRICS countries created the US$100 billion BRICS currency reserve pool and the 13 ASEAN Plus Three countries created what is now the CMIM — a pool of foreign exchange reserves that expanded to US$240 billion in 2012 (Kawai 2015).

For the emerging market economies, these initiatives occurred because of insufficient IMF resources as well as dissatisfaction with the IMF's response to the Asian financial crisis and the slow pace of IMF reform. This has also seen countries increase domestic and bilateral buffers through foreign exchange reserves and bilateral swap lines, respectively. Foreign exchange reserves have increased from less than US$2 trillion in 1990 to over US$11 trillion in 2016 while the value of currency swaps utilised during the global financial crisis was over US$600 billion (Australian Treasury 2014).

These challenges are more apparent in Asia than anywhere else. While Asia is large compared to other regions, the safety net in Asia is highly fragmented and patchy in its coverage. As of 2016, it consists of the IMF, CMIM, BRICS currency reserve pool, bilateral currency swap lines, domestic foreign exchange reserves and, potentially, the World Bank and the ADB — which provided liquidity support during the Asian financial crisis.

Of course, this 'fragmentation' is not necessarily new. Historically, most crises have required some form of a coordinated, ad hoc response between different institutions, organisations and countries, whether it be Mexico in 1994 (requiring a coordinated response from the US administration, US Federal Reserve, the IMF and Bank for International Settlements) or Asia in 1997 (with resources from the IMF, World Bank, ADB, the United States, Japan and others). But the size of the current designated safety net is too small to assist even those economies that are relatively small and not necessarily systemically significant.

Quantifying the size and adequacy of the safety net

Quantifying the size of the safety net means adding together its multilateral, regional and bilateral components (Figure 8.6). The global component consists predominantly of the IMF. As of June 2015, the IMF has total resources of US$1.3 trillion, which includes its quota resources, resources from the IMF's New Arrangements to Borrow and General Arrangements to Borrow, and bilateral loans with the IMF. The regional component totals around US$840 billion if the resources available in the major regional arrangements are added together — the European Stability Mechanism, the CMIM and the BRICS currency reserve pool. Finally, a good proxy for the size of swap lines during a time of crisis is to use the peak value of the dollar swap lines during the global financial crisis. These peaked at around

US$600 billion, although it should be noted that many of these swap lines no longer exist (the United States still has unlimited swap lines with the United Kingdom, European Union, Switzerland and Japan) and additional swap lines have been created since then, particularly by China.

Adding these components together, the overall safety net is around US$2.7 trillion: about 50 per cent comes from the IMF, 20 per cent from swap lines, 20 per cent from the European Stability Mechanism and 10 per cent from BRICS and the CMIM. The IMF (2016) estimates the safety net to be around US$3.7 trillion. This larger number appears because the IMF includes additional, albeit smaller, regional financing arrangements. If we were to include even more regional arrangements, including regional development banks, which have historically played a role in crisis response, the size of the safety net is even larger still, calculated in this Report at around US$4.6 trillion. However as the analysis below shows, the adequacy of the safety net's size is questionable even using these larger estimates.

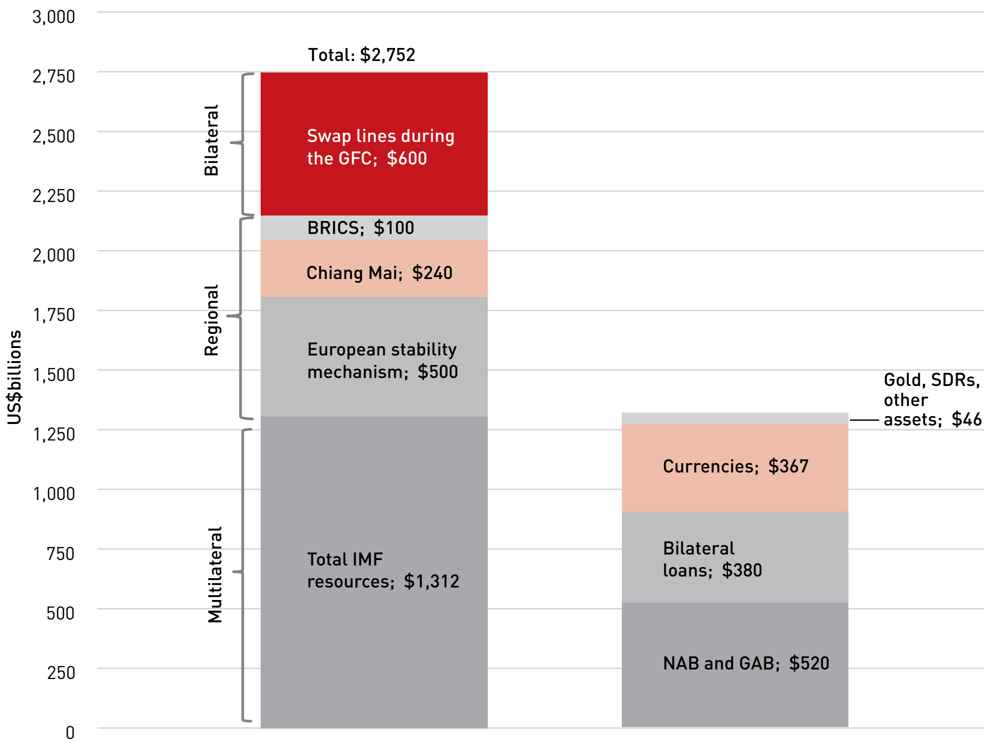
While domestic foreign exchange reserves could be added as a fourth component, these reserves are generally a country's first line of defence. Although important (as discussed below), it can be argued that they are no more part of the global financial safety net than domestic macroeconomic policy.

The adequacy of the safety net relates to its size and composition, which, in turn, influences its coverage, consistency and speed in responding to a crisis (IMF 2016). Countries are now more exposed to financial contagion than ever before, so a larger safety net makes sense. But the US$2.7 trillion figure represented above, or the IMF's US$3.7 trillion figure, overstate the safety net that is actually available.

First, Figure 8.7 shows that, if we exclude resources that are not immediately available, the size of the safety net drops to around US$1.75 trillion. For the IMF, much of its resources are tied up in existing programs or come from borrowing commitments that have not been paid-in. As a result, its resources drop from US$1.3 trillion to US$421 billion. Similarly, the forward commitment capacity of the ESM drops from US$500 billion to US$369 billion. It should also be noted that the dollar swap lines from the US Federal Reserve may not necessarily be of the same size or extended to the same countries. How the US Federal Reserve chose these countries also remains unclear.

Second, whether a safety net of US$1.75 trillion is adequate or not depends on the size of the crisis that it is responding to. The IMF (2016) notes that the size of the safety net, and particularly the IMF's resources, have not kept pace with the 25-fold increase in global capital flows since 1980 (Lagarde 2016). It has also failed to keep pace with the increasing stock of debt among troubled economies. Greece, for example, represents just 0.25 per cent of global GDP (PPP; IMF 2016). But if the IMF were required to shoulder the burden of the Greek bailout on its own (approximately US$279 billion since 2010), this would absorb almost 70 per cent of the IMF's capacity. A worse scenario would be bailing out a larger economy, such as Spain. Spain represents 1.5 per cent of global GDP (PPP; IMF 2016) and has US$669.5 billion of debt to refinance in the five years from 2015 to 2020 (Gilbert 2014). This would exhaust the IMF's capacity and most of the ESM.

Figure 8.6: The components of the global financial safety net



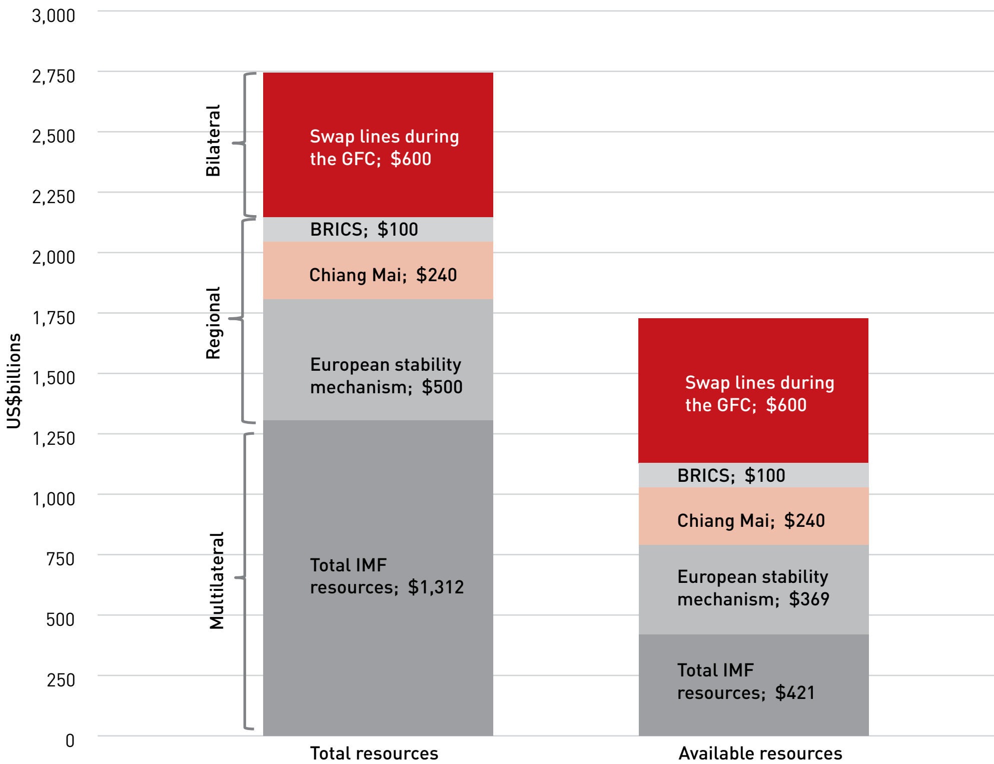
Source: Authors' calculations.

Third, the adequacy of the global safety net depends on what is meant by the term 'global'. The actual size of the safety net depends on the country in question. For Australia, the safety net consists entirely of the IMF and its swap line with China, since Australia does not participate in any relevant regional initiatives. Similarly, swap lines are only available to those who can negotiate them, and it is worth noting that emerging markets and developing economies were excluded from the US Federal Reserve swap lines in the global financial crisis. The IMF (2016) acknowledges that the safety net's coverage is increasingly patchy, which is a particular risk for non-developed countries.

Fourth, market confidence is reduced when investors are unable to see a designated war chest and necessary institutional arrangements to respond to a crisis. Assuming that only ad hoc international cooperation will be forthcoming during a time of crisis is not conducive to market confidence. It also erodes the implicit insurance policy, which encourages countries to open their economies in the first place (Shafik 2015). Having a strong safety net can help encourage cross-border investment and increase consumption through reduced precautionary savings.

Fifth, increased fragmentation means greater dependence on the ability of different institutions and arrangements to coordinate with one another at a time of crisis. This can mean a slower and less consistent response from one crisis to the next (IMF 2016). The G20 identified these concerns as reasons for developing principles to guide cooperation between the IMF and regional funding arrangements (RFAs) (G20 2011). The IMF (2016) has also found that most countries would need to use several elements of the safety net to fully cover their financing needs, the coordination of which the IMF calls 'a strong assumption'.

Figure 8.7: Total resources compared to available resources



Source: Authors' calculations

Finally, these regional financing arrangements are weak substitutes for the IMF. The closeness of countries that participate in regional arrangements means that imposing potentially painful but necessary conditionality can be difficult and uncomfortable. The narrower base of resources means they are less reliable, less diversified and more risky for contributing countries. Surveillance activities also tend to be partial as the global picture is not as obvious.

For these reasons, the IMF should remain at the centre of the global financial safety net. Its diverse membership and long history provides the IMF with several unique features that are irreplaceable at a regional or bilateral level. The IMF has the greatest capacity to raise resources in times of need and to ensure that credit risk is diversified globally to the greatest extent possible. As such, it provides the most effective and low cost insurance against crises.

Avenues for collaboration between Australia and China in the G20

Reforming the safety net would benefit the Asian region if the IMF takes a holistic approach that addresses the root causes of its fragmentation. This requires a focus on increased and more permanent funding for the IMF, better tailored financing facilities to meet the needs of Asian economies, a new phase of reforms to give Asian economies a greater voice in the IMF, and better cooperation between the IMF and RFAs.

The global financial safety net is a policy challenge that G20 finance ministers and central bankers have been at the frontier of for close to 15 years. It is an issue uniquely suited to the G20 as all countries benefit from the positive externalities that flow from an effective global financial safety net that takes in global, regional, bilateral and national arrangements.

The G20 is uniquely suited to address the inadequacies of the current safety net. One-third of the IMF's funding from bilateral loans will start to expire over 2016 and 2017, and the G20 will need to discuss the next stage of IMF reform following the recent ratification of the 2010 quota reforms by the United States Congress. The G20's history has shown, however, that efforts to achieve sweeping changes to global governance, so-called 'grand bargains', have been unsuccessful, except perhaps in the context of an emergency on the scale of the global financial crisis. The focus of the G20 under the French presidency in 2011, for example, was to take a holistic look at the international monetary system with a focus on radical reforms. The outcomes achieved from this process, however, were significantly less than the amount of political capital that was expended.

Instead, the G20 should focus on what pragmatic steps it can take in supporting an incremental process to strengthen the safety net. To this extent, Australia and China should support G20 efforts on the issue of the global safety net from four key perspectives: the next stage of IMF reform, implementing arrangements to make the IMF and RFAs more cohesive, renegotiating bilateral loans, and strengthening domestic macroeconomic frameworks.

IMF reform

IMF reform is the linchpin for addressing the challenges facing the global financial safety net. China's G20 presidency in 2016 presents an awkward contradiction where the country chairing the global steering committee remains grossly underrepresented in many of the world's most important institutions. While the ratification of the 2010 IMF reforms helped address this, there is still much to be done. Australia and China should encourage the G20 to start a conversation on the next stage of IMF quota reform. This will be an incremental process over many years, and it is reasonable to expect hesitation from some members, notably the United States, in wanting to advance a new round of reforms so quickly after the ratification of the last round. However, momentum from the recent success of the 2010 reforms should not be lost.

There are a number of other aspects of IMF reform that similarly still need to take place. This includes bringing forward the 15th General Review of Quotas and implementing the agreement reached in 2010 whereby advanced European countries would free up an IMF board chair for an emerging market economy. There is also additional work to do in reviewing the IMF's quota formula, although resolution on this issue will require a political solution and will not be solved through technical reviews. Finally, there is a longer-term opportunity for Australia and China to begin planting the seeds for having a representative from an emerging market economy appointed as the head of the IMF at the end of Lagarde's term.

Reforms to the IMF could also focus on its financing facilities to ensure they are meeting the needs of its members. This could include a greater use of precautionary financing to make the safety net faster, more flexible and more responsive. The IMF took a significant step in this direction in developing the flexible credit line and the precautionary and liquidity line in 2010. These facilities are aimed at strongly performing economies hit by external shocks — the so-called 'innocent bystanders'. The IMF (2016) has found that without prompt liquidity provision, innocent bystanders can quickly become vulnerable during systemic crises. This is also a motivation for countries to stockpile foreign exchange reserves. Having a greater focus on precautionary financing could help better meet the needs of members, reduce fragmentation and improve the IMF's response to crises.

Composition of the SDR basket of currencies

On 13 November 2015, IMF staff recommended the renminbi (RMB) be included in the Special Drawing Rights (SDR) basket (IMF 2015c). China, of course, continues to have a key role to play in this regard. Liberalisation of China's capital account is pivotal not only to the RMB's inclusion in the SDR, but also for China to play an increasing role in the global economy more generally. Importantly, the RMB's inclusion can be used by China as a catalyst to help drive difficult financial reforms at home.

Strengthening collaboration between the IMF and RFAs

While reforming the IMF is the best way to address the challenges facing the safety net, there are other steps that can be taken to make the patchwork of global and regional initiatives more cohesive. Regional and bilateral initiatives can have an important role within the safety net, but they must be rigorous and structured so as to complement the IMF. At the Cannes Summit in 2011, leaders endorsed 'G20 Principles for Cooperation between the IMF and Regional Financing Arrangements' (G20 2011). This should be used as the basis for developing an overarching framework for better cooperation between the IMF and RFAs.

Such a framework could be gradually developed and strengthened through informal and formal methods. Informally, regular dialogues could be held between the IMF and RFAs to reach a better understanding on how to coordinate with each other, such as establishing procedures for information sharing and jointly conducting crisis scenario exercises. This suggestion was put forward by South Korea in 2012 and received broad support (G20 India Secretariat 2014). It has also been canvassed by the IMF (2013) as a practical step to fine-tune the current flexible approach to IMF–RFA cooperation.

More formally, the G20 could task a working group to develop detailed guidelines on IMF–RFA cooperation. Such an agreement could formalise the expectation that co-financing operations would be subject to certain principles and safeguards, similar to those stipulated under the IMF's lending framework. The detailed guidelines could provide concrete guidance on how these principles could be achieved. This proposal has also been canvassed by the IMF (2013) and should be considered by the G20.

Renewing bilateral funding of the IMF

The expiration of US$369 billion of IMF bilateral loan funding over 2016 and 2017 requires an urgent response under China's G20 presidency. This funding represents a third of the IMF's funding and its potential loss introduces an unacceptable amount of systemic risk into the global economy at a time when many economies are going through difficult transitions. These loans must be renewed.

However, Australia and China should not lose sight of the ultimate goal, which is long-term, adequate and sustainable funding for the IMF. While these bilateral loans are critical in filling a short-term gap, their renewal should form part of a broader discussion around the timetables for quota reform so that, ultimately, these bilateral loans can be folded into longer-term forms of IMF financing.

Strengthening domestic frameworks

Finally, the safety net also needs to be considered in a broader context. It is not a panacea. It is, and should remain, a last resort. There needs to be an equal focus on domestic reforms to build sound macroeconomic frameworks within countries to cushion against economic shocks and ensure flexible responses. Australia and China should ensure that the macroeconomic focus of the G20 growth strategies is not lost, and that these strategies and the G20 peer review process expressly consider how domestic frameworks could be strengthened, with analytical support from the IMF.

Supporting and promoting the global trading system

The global trading system refers to the rules, norms and institutions that govern international trade. Although it can be characterised in many ways, the system consists of multilateral, plurilateral and bilateral components. Bilaterally, it consists of hundreds of FTAs or other forms of trade agreement that have emerged over the last 20 years. Plurilaterally, the system consists of regional and cross-regional agreements such as the North American Free Trade Area (NAFTA), TPP, RCEP and TTIP. Multilaterally, the system consists of the WTO and the multilateral agreements it has produced.

Australia and China actively cooperate multilaterally through the WTO as well as bilaterally through ChAFTA, which has set new directions in trade policy strategy. Differences emerge, however, in regards to plurilateral arrangements. While Australia and China cooperate through RCEP under the auspices of ASEAN, Australia is a member of the TPP while China is not. Figure 8.8 gives a snapshot of how Australia and China fit within the increasingly complex global trading system.

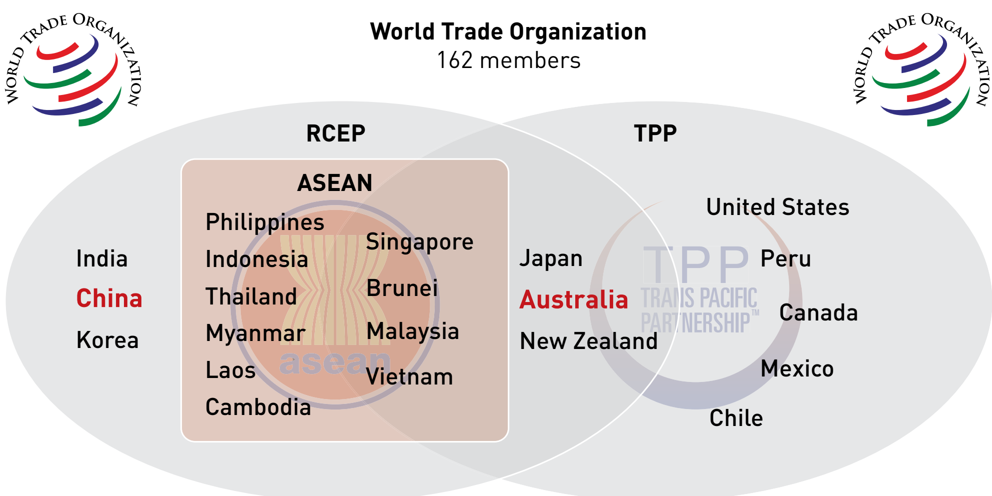
All three of these components — multilateral, plurilateral and bilateral — are important and relevant to the Australia–China relationship. Australia and China are both trading nations. Both countries have benefited immensely from the global trading system through increased consumption, investment and higher productivity through the more efficient allocation of resources that trade liberalisation facilitates.

Exports represent about 21 per cent of Australian GDP and about 23 per cent of China's GDP. Compare this to the United States, where exports represent just 13 per cent of GDP, and it is clear that Australia and China have strong interests in the efficiency and effectiveness of the global trading system. Australia and China have a particular interest in ensuring the global trading system supports regional and global value chains by facilitating trade and investment flows across borders. This has been aided by improvements in physical infrastructure and logistics services, rapid developments of information and communication technology, and falls in trade barriers and trade costs, all of which have helped expand trade and foreign investment. The fact that the WTO has been locked in a decade-long preoccupation with 20th century trade issues (such as tariffs and agriculture) in the Doha Round has merely exacerbated this regionalisation effect (Baldwin 2013).

Australia and China gain the most from trade liberalisation when it is multilateral, rather than bilateral or plurilateral. In short, the GDP and, more importantly, consumption growth enjoyed by Australia and China will be bigger when liberalisation efforts are undertaken within larger, and preferably worldwide, groups (McKibbin 1998). The larger the group, the greater the potential for more efficient allocation of resources within these economies is. In larger groupings the stimulation of demand for exports and capital as trade barriers are also lowered. A larger grouping also helps prevent trade being diverted away from non-participating countries.

There are three priority areas for collaboration between Australia and China. First, given the benefits of multilateral trade liberalisation to both countries, Australia and China should refocus the G20's efforts on boosting the multilateral trading framework by promoting an incremental process through which the G20 can work towards WTO reform over the coming years. Second, Australia and China should focus their efforts in the G20, WTO and RCEP on taking practical steps to try to reduce fragmentation in the global trading system. Third, given the importance of investment to the effectiveness of the global and regional value chains Australia and China participate in, both countries should support the G20 on an incremental process that supports a multilateral framework for investment.

Figure 8.8: Australia and China within the global trading system



Source: Authors' schema.

Promoting multilateral liberalisation and WTO reform through the G20

The responsibility for global trade governance has rested with the WTO since its creation in 1995. Its membership has grown to 162 as of May 2016. The WTO's central function is to provide a forum for international trade negotiations, which results in WTO agreements. The WTO's other functions include administering WTO agreements, monitoring national trade policies, and providing technical assistance and training for developing countries (Baldwin 2013).

The WTO is the preferred vehicle for pursuing trade liberalisation and managing the global trading system for both the Australian and Chinese governments. It is the only organisation that can take a comprehensive view of the increasing complexities of the evolving economic engagements between countries. But WTO negotiations have now been stalled for two decades, largely over a divide on major issues such as agriculture subsidies, industrial tariffs and non-tariff barriers.

As a result, the WTO has not kept up with the evolution of the global trading system, particularly the development of global and regional value chains and the intertwining of trade, investment, intellectual property and services. While the WTO remained focused on tariffs and agriculture, more complex global and regional production networks were forming. Without WTO reform that allows entrenchment of the stronger regulatory and institutional arrangements necessary for more complex international commercial ties (in trade, services and investment), the global economy risks the steady decline in the relevance of one of its most valuable international institutions and the consequent loss of extraordinary opportunities to improve global living standards and creation of a permanently fragmented global economic system.

The difficulty in reforming the WTO is not in coming up with alternative rules or institutional frameworks but in achieving political agreement that reform is required and on what form it should take. The focus needs to be on developing an incremental, inclusive and robust process through which such issues can be discussed. The G20 presents the most effective forum given its global governance focus.

The G20's focus on trade has been moving in the wrong direction in recent years, giving greater emphasis to FTAs and regional agreements. Under Australia's G20 presidency, as under Turkey's, the focus was on domestic structural reforms in national growth strategies to reduce the cost of doing business, streamline customs procedures, reduce regulatory burdens and strengthen trade-enabling services. While these are important areas of focus, the G20's key area of comparative advantage is in tending to the multilateral system and shaping how bilateral, plurilateral and multilateral components fit together. Increasingly, communiqués depict the G20 as a forum for information sharing on trade issues rather as the driving force for instigating necessary global governance reform.

The G20 needs to refocus on the multilateral trading system and develop a process for moving forward on WTO reform. Pangestu and Nellor (2014) provide practical suggestions on how a G20 process could be developed, building on the creation of a designated G20 working group. They suggest that leaders announce the appointment of an Eminent Persons Group (EPG) comprised of highly regarded people in international governance, trade and other areas, tasked to make recommendations on the global trade regime and specifically on the principles to be observed by G20 members as they consider governance reform in regards to trade. The composition of the EPG should reflect the need to move trade discussions beyond the negotiation paradigm to reflect the broader economic 'wins' of a stronger, more modern regime.

Reforming the WTO and entrenching its authority is of central importance to Australia and China. Regional agreements are fragmenting the relationship and both countries benefit the most from trade liberalisation that is undertaken across the largest number of countries possible. WTO reform is also the linchpin for addressing fragmentation in the global system, which benefits neither Australia nor China given the increased cost of trade and investment it entails.

Integral to this will be giving the business community (represented through the Business 20, or 'B20') a greater voice within the G20. The B20 has a fundamental role to play in advising G20 leaders, ministers and officials on the practical steps the G20 can take to improve the ease of trading and doing business across borders, particularly by producing a more cohesive international trade architecture. The G20 needs to ensure it provides platforms for the B20 to make its recommendations to leaders, including significant engagement by leaders, ministers and officials with the B20 and its recommendations. Responsibility also falls to the B20 to ensure its recommendations are specific, targeted and firmly rooted in a robust evidence-base. The B20 can play a continued role in the implementation of those recommendations and should not concern itself only with the recommendations themselves.

A more cohesive and integrated global trading system

There are other practical steps Australia and China could support to help address fragmentation in the global trading system. Called the 'noodle bowl effect' in the context of Asia, trade fragmentation risks reducing trade and investment flows by increasing the cost and complexity of doing business across borders (Urata 2013). These costs include different and competing tariff schedules, exclusion lists, rules and standards. Since the coexistence of bilateral, plurilateral and multilateral agreements is unlikely to change any time soon, the focus should be on achieving greater coherence between these diverse agreements.

Preferential trade agreements have positive and negative effects. The positive effects come from the exposure of uncompetitive, sheltered home producers to competition from lower-cost partner country suppliers. The negative effects are that these agreements divert trade away from more efficient and competitive third country suppliers towards partner suppliers who only become competitive because of the preferential treatment they receive under the agreement (Armstrong 2015; see Chapter 7). Having a large number of intertwined preferential trade agreements not only risks trade diversion but also exacerbates these negative effects by increasing complexity and compliance costs. The 'noodle bowl' can make Asian firms — particularly small- and medium-sized enterprises, which disproportionately use FTA preferences — face costly business procedures and cumbersome requirements (Baldwin 2013). Ensuring coherence between these agreements helps eliminate these negative effects.

The goal for the TPP and RCEP must be to ensure they act as a stepping-stone towards multilateralisation. The TPP was signed in February 2016, although it still awaits approval in the US Congress and in other jurisdictions. There is a risk that these rules and standards have been negotiated bilaterally such that the TPP may have some of the characteristics of a series of bilateral arrangements rather than a genuinely common set of regional rules. This is far from ideal in terms of economic efficiency since it will protect suppliers within the arrangement against lower cost suppliers outside it, such as China, Indonesia or Europe for instance, diverting trade rather than creating it (Drysdale 2015).

The focus of Australia and China should now be on working with partners in RCEP to ensure it is not only complementary with the TPP but goes further on key issues so as to raise the standard for regional agreements. This requires a strong political commitment from leaders to better integrate the five ASEAN Plus One FTAs with China, Japan, South Korea, India and Australia–New Zealand. From a practical point of view, the ASEAN Plus Six countries should adopt a gradual approach, which has been shown to be effective in the establishment of the ASEAN Free Trade Area (AFTA), in tariff elimination, as well as a co-equal approach in the definition of rules of origin (Urata 2013).

There are other practical things that can be done to help ensure coherence between these agreements. These include encouraging rationalisation and flexibility of rules of origin, upgrading origin administration, improving business participation in FTA consultations and strengthening support systems for SMEs (Baldwin 2013). There are also important ways in which the WTO process can be used to assist with these regional integration efforts to help ensure they act as stepping-stones for multilateralisation. For example, the WTO and ASEAN could collaborate on judicial and monitoring functions to ensure greater coherence between global and regional rules (Oshikawa 2013).

Finally, implementation of the Trade Facilitation Agreement (TFA) offers opportunities for reducing the cost of trade. The 2015 OECD Trade Facilitation Indicators find that the implementation of the TFA could reduce worldwide trade costs by between 12.5 and 17.5 per cent. Countries that implement the TFA in full will reduce their trade costs by between 1.4 and 3.9 percentage points more than those that do only the minimum that the TFA requires (OECD 2015).

Australia and China should use their influence in the G20 to modify the G20 growth strategy process to require each country to include specific reforms to implement the TFA. Trade is already a component of the growth strategies; however, to date it has been one of the weakest areas. The TFA provides something tangible for countries to aspire to. The OECD's Trade Facilitation Indicators should be used to measure and report on the level of ambition being displayed by individual countries.

Multilateral cooperation on investment and infrastructure

While trade barriers have typically fallen over past decades, barriers to foreign direct investment remain high. Then Director General of the WTO, Pascal Lamy, calls this a gap in international cooperation:

> We see the absence of multilateral rules on investment as a gap in cooperation. Current bilateral arrangements are not a satisfactory substitute for a comprehensive international investment agreement (Lamy 2013).

Barriers to foreign investment are a significant issue for Australia and China. Foreign investment flows are fundamental to the spread of global production networks, from which Australia and China are significant beneficiaries.

As a capital-importing country that relies on foreign savings to finance investment in fundamental sectors of its economy such as mining, resources and agriculture, Australia has a strong interest in ensuring these channels remain open. For China, like many developing countries in Asia, much of its success in participating in global value chains has come from being able to attract the necessary investment to build production bases. Since 2008, East Asia, and China in particular, attracted the largest share of global foreign direct investment because of its high growth rate and large markets (Zhang and Wang 2014).

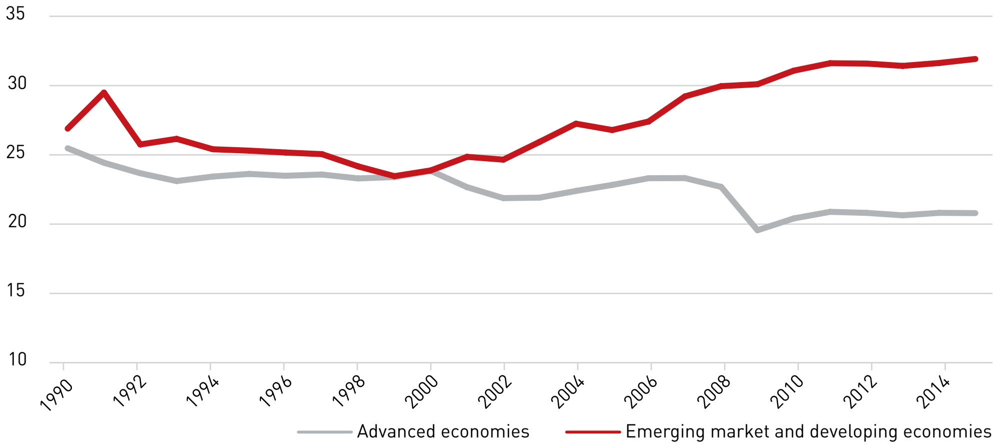
Globally, subdued investment remains a stubborn legacy of the global financial crisis. G20 leaders noted in 2014 that 'tackling global investment shortfalls is crucial to lifting growth, job creation and productivity' (G20 2014). Figure 8.9 shows total investment (public and private) as a percentage of GDP for advanced and emerging market economies. For advanced economies in particular, investment has struggled to rebound from its fall following the global financial crisis. While investment has been growing rapidly over time for emerging market economies, it has plateaued since 2009 and is now growing at a lower rate. Emerging market economies have also faced significant investment challenges in recent years as global capital flows respond to monetary policy changes in advanced economies. Improving domestic investment climates is a critical element in addressing this.

Addressing these global investment challenges has three components. The first is domestic. Improving domestic investment and financing climates is essential to ensuring the competitive, stable and predictable returns necessary for attracting private sector investment. Australia and China should support the G20 in the special focus it has given in recent years on reforms to improve domestic investment environments. These include increased public investment in infrastructure, regulatory and institutional reforms to leverage public–private partnerships, introducing tax incentives to raise investment and enhancing access to finance for SMEs.

The second component in addressing the global investment challenge is multilateral. There has been an unrelenting movement towards the adoption of a de facto investment agreement at the global level through a variety of multilateral, regional and bilateral initiatives (Dhar 2013). These include investment measures under GATT, the WTO Agreement on Trade-Related Investment Measures (TRIMs), the OECD's Declaration and Decisions on International Investment and Multilateral Enterprises, UNCTAD's Investment Policy Framework for Sustainable Development, the G20's Global Infrastructure Hub, and regional initiatives such as the European single market, NAFTA, the ASEAN Investment Area and the investment component of RCEP. These initiatives have developed good practice guidelines for foreign investment, but this is insufficient. A case emerges for an eventual multilateral agreement on investment covering transparency on investment rules and investor facilitation, ideally housed in the WTO (Baldwin 2013).

The G20 stands as the most effective forum for continuing this push. It has also taken important steps in regards to the need for collective, multilateral action on investment through its global infrastructure initiative and work on SME financing. The next step is for the G20 to consolidate the work done to date and begin a holistic discussion around developing a multilateral foreign investment framework. Importantly, the G20's work also needs to address increasing fragmentation between regional agreements and the investment mechanisms they embody, specifically on investor–protection. The investor–protection mechanisms embodied in a number of regional agreements, particularly the TPP, as well as the differences between these agreements, act to significantly fragment the existing system. Consolidating the existing work on a multilateral foreign investment framework needs to have a specific focus on achieving harmony across these mechanisms.

Figure 8.9: Investment as a percentage of GDP



Source: IMF WEO 2015, Investment (public and private) as a percentage of GDP.

Despite all the shortcomings of the deadlocked Doha Round WTO negotiations, the best framework for such an initiative is still the WTO. Not only does it already contain general principles on MFN status, national treatment, general exceptions and the right to regulate, among other key elements, but it also has the most effective system under international law to settle disputes between states. The shape of such an agreement and what flexibilities would be available for specific countries are matters that have to be discussed and settled during the negotiations (Jara 2013).

Zhang and Wang (2014) have shown that a foreign investment framework could be obtained by consolidating the work done by the G20, UNCTAD and the OECD. But it should go further, to a higher-level arrangement that realises an integrated framework beyond TRIMs. It is important that a single agreement at the multilateral level be the ultimate goal. Basic components should include transparency on investment policies, rules and regulations, with a clear identification of agencies responsible for issuing relevant licenses, permits and approvals. Foreign investors should also be required to commit to transparency in their labour and environmental standards, and public scrutiny of their conformance.

The third component for addressing the global investment challenge relates specifically to infrastructure investment. According to the OECD, total global infrastructure investment requirements by 2030 for transport, electricity generation, transmission and distribution, water and telecommunications will come to US$71 trillion, or about 3.5 per cent of the annual global GDP from 2007 to 2030 (OECD 2012). However it is widely recognised that public investment, including that from the multilateral and national development banks, will be insufficient to meet the global shortfall in infrastructure investment. Greater private sector investment in infrastructure will be fundamental. Although investment opportunities are plentiful across developed and developing countries alike, investors are not fully seizing them — often due to gaps in the domestic investment environment (OECD 2012).

Infrastructure investment is a significant domestic priority for the governments of both Australia and China. There are a number of benefits to both countries from supporting a continued, and greater, international focus on this issue, both as participants in the global economy and for country-specific reasons.

The common interests between Australia and China on infrastructure investment should be capitalised on within international forums and institutions. The focus of the collaboration efforts between Australia and China should be on maintaining a strong focus through China's G20 presidency on infrastructure investment. As discussed earlier, this is a cross-cutting theme that is capable of assisting on multiple fronts — including growth, macroeconomic policy coordination, development, trade, energy and climate change. Infrastructure investment, particularly through the G20's two-in-five growth agenda, has the capacity to bridge the gap in the international community on the need for macroeconomic policy cooperation. It provides a much-needed framework for surplus economies to increase public investment and contribute to global aggregate demand while deficit economies undertake commensurate structural reform to boost the supply side of their economies.

China should build on the efforts of Australia and Turkey, utilising the G20 growth strategy and mutual assessment processes to deliver ambitious commitments from G20 members and, from Turkey's presidency, using the estimated 1 percentage point increase in the aggregate G20 investment-to-GDP ratio as a means for targeting G20 efforts. There is continued scope for greater public investment from many key G20 countries as well as increased efforts across the membership in improving domestic investment environments and identifying innovative ways of crowding in private finance.

Australia and China should use their influence in the G20 to achieve better cooperation and synergies between the AIIB and New Development Bank with existing multilateral development banks. China has already outlined this as a priority in the concept note for its G20 presidency. There should similarly be an increased focus on coordinating funding between these different institutions, centred on a concrete list of bankable projects that could be developed through G20 support. The G20 should continue to support and drive the efforts within development banks to optimise their resources with an eye on how best to leverage private-sector finance.

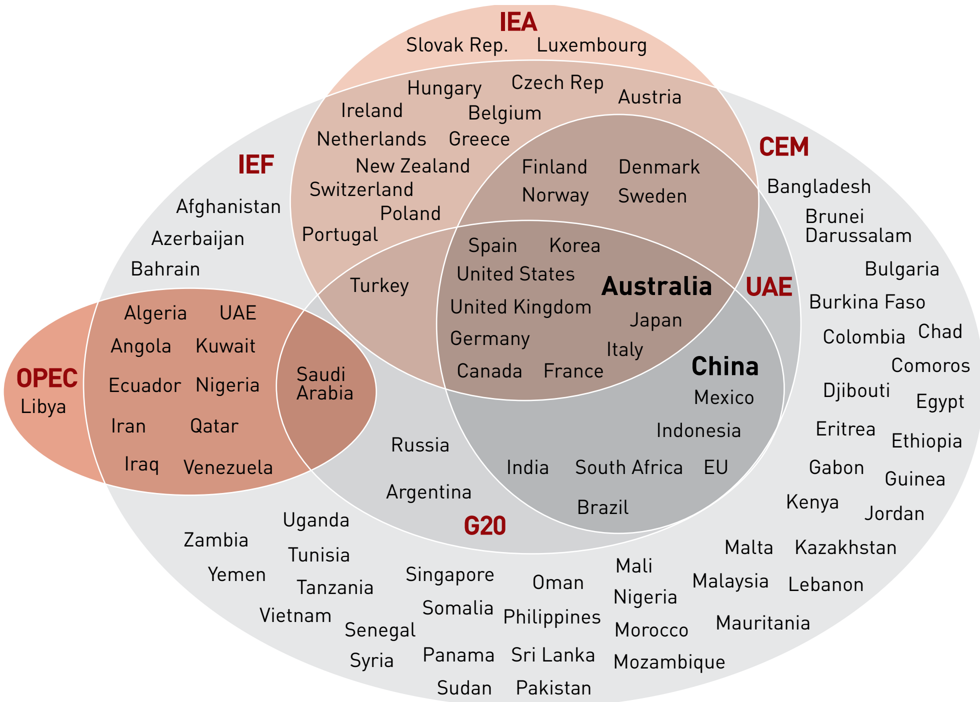
Supporting global energy governance reform and action on climate change

The existing architecture for global energy governance has been described as 'a mess, with many actors, many priorities, little coherence and limited effectiveness' (Florini 2012). There are countless multilateral, regional and bilateral initiatives relating to energy. Figure 8.10 gives a snapshot of just a few of them and shows how Australia and China fit in with this broad framework.

The need for global energy governance reform is well recognised, particularly by the G20, which has had a special focus on this issue in recent years. The global energy sector has undergone, and continues to undergo, significant transitions. World energy consumption and trade used to be dominated by the developed nations of the OECD, but now major developing nations like China, India and Brazil are amongst the largest players (Hirst 2012). Countries, like China, which just a few years ago were major energy exporters, have become energy importers. China is now the world's largest energy consumer and the world's largest oil importing country. The United States, which used to be the largest oil importer, has similarly made spectacular technical progress in oil and gas production and is now heading towards self-sufficiency.

Global energy governance has not kept up with these transitions (Hirst 2015). It is now widely recognised among policymakers and commentators alike that the global energy governance architecture needs to be reformed. At present, there is no genuinely global energy organisation that can bring the major energy consumer countries around to table to address the core energy challenges of security, equity, development and the environment (Hirst 2015).

Figure 8.10: Australia and China within the global energy governance architecture



Acronyms: Organisation of Petroleum Exporting Countries (OPEC), International Energy Forum (IEF), International Energy Agency (IEA), Group of 20 (G20), Clean Energy Ministerial (CEM).
Source: Authors' schema

The fact that major emerging market and developing economies are underrepresented in the global energy governance architecture is a serious problem for several reasons. First, it limits the scope for global cooperation on energy policy, which is critical in addressing broader challenges around development, infrastructure, the environment and climate change.

Second, a major objective of international diplomacy more generally is in managing the inclusion of these new powers in global governance so that they make peaceful contributions to world leadership. This is especially true in the field of energy, which has historically been a source of conflict.

Third, the International Energy Agency's (IEA) limited membership undermines global energy security by weakening the IEA's emergency oil plans. These plans rely on IEA members holding strategic oil reserves equivalent to 90 days of imports. The more countries that are absent from these arrangements the weaker these reserves are. Hirst (2015) has similarly shown that the existing governance structure preserves the divide between developed and developing countries. The IEA's restricted membership results in it being insufficiently engaged on the energy challenges facing developing nations, particularly development and access to affordable energy. This leaves a big gap at the heart of its process.

Finally, the existing fragmented governance architecture has resulted in a serious lack of cooperation on specific areas of energy technology and policy. Technology collaboration has rightly been identified as a crucial dimension of climate change mitigation and, as described above, this has led to the creation of a number of new collaborations in the most important areas. Unfortunately, mainly due to the limited membership of the IEA (and notwithstanding the fact that the IEA's technology networks have been opened to non-members of the IEA), these collaborations have generally not been built on the IEA's networks but have, to some extent, duplicated them (Hirst 2012). There is an obvious need for better coordination of these bodies through broader governance reform.

The benefits of governance reform to Australia and China

The energy sector plays a vital role in both the Australian and Chinese economies. Given the significant extent to which this sector is shaped by global forces, Australia and China have a strong common interest in ensuring they are actively participating in global energy policymaking and in shaping the rules, norms and institutions that will govern this sector into the future.

The slowdown in global commodity prices and the deterioration in Australia's terms of trade in recent years have illustrated the extent to which global forces shape the Australian economy through its energy sector. Australia is the among the world's largest exporters of LNG, coal and uranium, and Australia's importance to global energy markets will continue to grow (Department of Industry 2014).

China is the world's largest energy consumer and has been the key driver of the increase in energy consumption globally over the last 10 years (EIA 2015). In 2009, it went from being a net exporter to a net importer of coal for the first time in 20 years. It is now the largest producer and consumer of coal in the world and accounts for almost half of the world's coal consumption. China is similarly the world's second-largest consumer and importer of oil and the fourth-largest consumer of natural gas.

Multiple Australian prime ministers have noted the deficiencies in the existing governance architecture and the need for reform. Prime Minister Turnbull in November 2015 said 'the reform of the International Energy Agency is very important … the IEA's membership should reflect the reality of the energy producers and consumers of 2015, not the 1970s' (Turnbull 2015). Similarly, for China, in a speech in Abu Dhabi in 2012, then premier Wen Jiabao highlighted the deficiencies in the existing architecture and proposed multilateral cooperation on energy 'within the framework of the G20' China has since been a strong supporter and advocate for the G20's work on reforming global energy governance (Hirst 2012).

Importantly, the United States and other key countries are also strong supporters of the G20's efforts to reform the global energy architecture. When Secretary of State, Hillary Clinton advocated for Chinese and Indian membership of the IEA (Hirst 2012), and Henry Kissinger, the founding father of the IEA, has called for the evolution of the institution, noting that it 'stands at a critical juncture' (Kissinger 2009). In their New Delhi summit communiqué, the BRICS nations have said that 'strengthening representation of emerging and developing countries in the institutions of global governance will enhance their effectiveness' (BRICS 2012).

Ensuring security and the role of strategic oil stockpiles are similarly important issues for both Australia and China, for different reasons. China has been building its oil stocks for some time now (Hirst 2012). Australia, on the other hand, does not stockpile oil reserves. As a result, Australia has been in breach of the IEA Treaty for some time. This gives Australia a strong incentive to work with the IEA and emerging economies, particularly China, in helping shape the rules and norms that will operate into the future.

Supporting the G20's progress in reforming global energy governance

While the G20 has made significant progress on the issue of global energy governance reform, there is still much work to be done. It is in the interests of Australia and China to support this incremental process and the Chinese G20 presidency provides a unique opportunity to do so.

Although there was some discussion of energy topics in 2012 and 2013, it was not until 2014, under the Australian presidency, that energy became a major part of the G20's remit. Hirst (2015) outlines three highly significant developments from the 2014 G20 summit: first, leaders agreed to work together to achieve nine 'G20 principles on energy collaboration', including having energy governance reflect economic reality; second, leaders had G20 energy ministers meet in 2015 and report on the way forward; and third, leaders consolidated the role of the G20 energy sustainability working group as a regular forum for G20 senior officials.

It is important now to build on this positive momentum. This should follow the pragmatic approach that has been adopted by the G20, which focuses on building and adapting existing organisations and ensuring that they work together effectively. Hirst suggests that a practical way to do this would be to have the G20's Energy Sustainability Working Group commission from the main international organisations their analyses of the roles they can play in delivering the principles agreed by the G20, including how they can cooperate with other organisations, the actions that they are planning and any gaps that they see.

G20 energy ministers could report to leaders on progress, offer their suggestions on how to improve cooperation between the organisations and fill gaps in the delivery of the principles. The IEA has a vital role to play, especially in how it responds to the G20's calls to 'make international energy institutions more representative and inclusive'. The IEA could consider further steps towards closer relations with the other partner countries in the Association initiative.

Climate change and energy transformation

China and Australia both have a vital interest in strong global action to limit future climate change. Both countries are particularly exposed to the expected future impacts from climate change, which would bring significant economic and social risks. The UN Paris Agreement on climate change provides a solid basis for nationally determined yet internationally agreed, and to some extent coordinated, action on climate change.

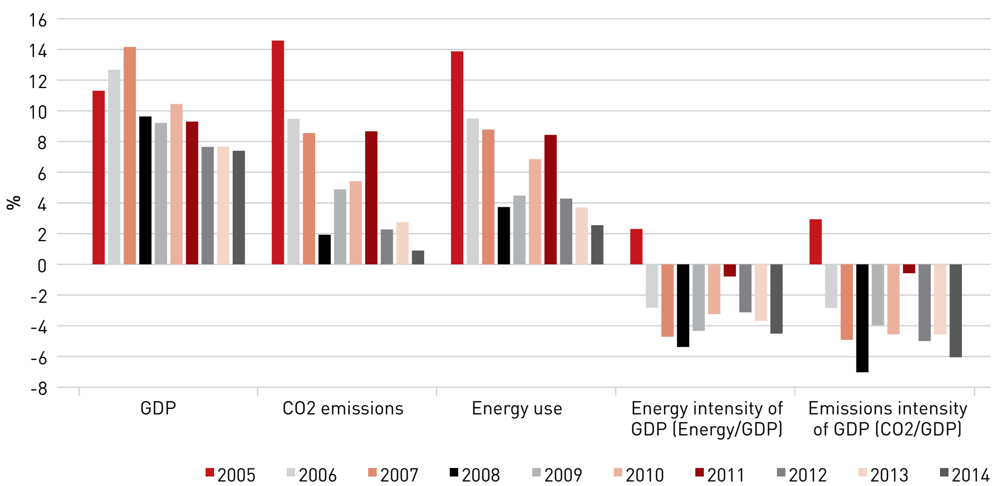
The Paris Agreement sets out a strong long-term global ambition of limiting global warming to less than two degrees, that was agreed to by all countries. It puts in place a system of nationally based pledges for emissions targets and actions, and a mechanism for regular review and ratcheting up of national pledges. Both China and Australia have been supporters of the agreement, and in their respective capacities contributed to the successful conclusions of the negotiation process. Both countries can position themselves to maximise gains from successful global action on climate change.

As part of this, there are opportunities for Australia and China to jointly develop new strategies for growth in both countries based on the low-carbon technologies of the future. Such strategies could entail Australia supplying resources and energy, as well as specialised knowledge services, and China utilising Australia's inputs to support its industries and then provide capital for investments in Australia. This pattern is similar to what is already starting to occur. However, the new waves of economic integration and growth would rely on different resources and new technologies.

China is strengthening its climate change policy portfolio with the aim of achieving a 60 to 65 per cent reduction in the emissions intensity of its economy (the ratio of carbon dioxide emissions to GDP) in 2030 compared to 2005, with a peak in carbon dioxide emissions by 2030 or earlier. The 2020 target is a 40 to 45 per cent reduction in emissions intensity relative to 2005 (Government of China 2015).

China is on track to achieve its 2020 target, and can achieve or outperform the 2030 target if the current policy effort is intensified. The targets require an average annual reduction in emissions intensity of around 4 per cent. China has achieved this on average over the last 10 years, largely by way of reducing the energy intensity of its economy (Figure 8.11). This was made possible through improvements in energy efficiency and structural change. China's slowing economic growth is now tending to make it more challenging to achieve the 4 per cent annual decarbonisation rate. However, if that rate continues to be achieved then a slowing economy means that the peak in emissions will be achieved earlier.

Figure 8.11: China's annual growth in GDP, CO2 emissions, energy and emissions and energy intensity, 2005–2014



Source: BP 2015 (for total primary energy use and CO2); IMF 2015a (for GDP).

In future, limiting and then reducing emissions will require much greater structural change in China's economy towards higher value-added activities; continued improvements in the technical efficiency of power generation, industry, transport and housing; and a sustained shift away from coal as the mainstay of energy supply towards renewable energy, nuclear power and gas, with remaining coal use potentially equipped with carbon capture and storage technology (Deep Decarbonization Pathways Project 2015; Teng et al 2014). These changes are already underway and it is expected that they can be sustained at relatively high annual rates for decades to come (Jotzo and Teng 2014).

Australia's national emissions target is a reduction of 26 to 28 per cent in emissions levels at 2030 relative to 2005 (Department of the Environment 2015). Achieving this will require a turnaround in emissions trends. It is technologically possible to achieve this and more ambitious targets, including net zero emissions by mid-century (Denis et al 2014). The key is a sustained shift from coal towards renewable or other zero-carbon energy sources, accelerated improvement of energy efficiency and sequestering carbon emissions on the land, including through forest plantations.

A recent study of Australia's options for future sustainability and economic growth (Hatfield-Dodds et al 2015) found that Australia is 'free to choose' a trajectory that will result in better long-term environmental outcomes and sustained economic growth: the technical opportunities are there, but the new technologies and activities will become widely used only if there is deliberate and broad-based policy intervention.

Benefiting from low-carbon growth

China has recognised the opportunities from low-carbon growth and has begun to grasp them in a number of areas, as have some Western countries. Archetypal examples are renewable energy systems, which during the last decade have seen massive improvements in technology and costs, and the emerging wave of electric vehicles. For China to achieve the transition to an innovation-driven economy with an environmentally sustainable development trajectory, China will need to invest significantly in research and development and knowledge industries (Jin and Zhang 2016).

In Australia, policy development and business investment on the whole has been more defensive to date, with a relatively strong emphasis on traditional resource extracting industries. To quote Martin Parkinson (2015):

> This capacity for technological leap-frogging, combined with the need to address global and geographically specific environmental problems (i.e. climate change and air and water pollution), lies behind China's massive investments in low-emissions technologies. The US is also investing massively in these technologies. Australia is not.

Reducing carbon dioxide emissions goes hand in hand with other Chinese policy objectives, including improving air quality, improving energy security by shifting away from fossil fuels and the emergence of new manufacturing industries in the production of wind turbines and solar panels, for example (Teng and Jotzo 2014).

It is likely that China is already past the point of peak consumption of coal, as the production of commodities such as steel and cement is declining, the efficiency of coal use keeps improving and alternative energy sources are growing. China's coal imports have fallen and a three-year ban on approvals of new coalmines has recently been put in place. The rate of emissions growth has slowed dramatically in the past two years, and some observers believe that 'peak CO2' could occur sooner than is implied in China's emissions targets (Green and Stern 2015).

For Australia, the most significant effects are related to exports of energy and energy-intensive products. A low-carbon transition in China and globally poses near-term difficulties for some industries, but also longer-term opportunities — potentially of very large magnitudes — for others.

International moves towards lower-carbon energy systems mean less favourable conditions for the export-oriented fossil fuel industry, in particular for producers of thermal coal (as distinct from coking coal used for steel production). Global coal demand growth has been tailing off, and steam coal prices have fallen (by around 60 per cent over the last five years) (World Bank 2016).

Coal demand continues to rise in many developing countries including India, but this growth cannot last if the world is to achieve meaningful outcomes on climate change. Even if technology to use coal with carbon capture and storage became technologically mature, the longer-term outlook for global coal demand is weakening.

Demand in China and globally for natural gas, by contrast, is increasing and is projected to increase for some time given increasing climate action. Gas is much lower in carbon dioxide emissions than coal, and is a suitable bridge from coal to a zero-emissions energy system. It also burns much more cleanly than coal and is therefore attractive to China and many other countries in the bid to reduce air pollution. Australia's gas industry is benefiting from strong global demand. Demand for uranium, which Australia also exports, is set to increase as well.

In the longer term however, Australia's opportunities as an energy producer lie in entirely new industries. Australia has very large technical and economic potential to become an 'energy superpower' in a carbon-constrained world (Garnaut 2015).

Australia as a zero-carbon energy supplier to China

Achieving the global goal to keep temperature rises to well below two degrees would require a complete de-carbonisation of the world's energy system (IPCC 2014). The pace and depth of this transition largely determines how close the world can get to the goal set out in the Paris Agreement.

In scenarios run by the Deep Decarbonisation Pathways Project (DDPP 2015), a detailed nationally grounded technical study, under a two-degree compatible trajectory, electricity becomes nearly carbon-free by 2050, with average carbon intensity across 16 major countries reduced by a factor of 15 below its 2010 value. The Chinese DDPP study shows a scenario with dramatically reduced emissions by shifting electricity production to a mix of renewable sources and nuclear power and by equipping the majority of remaining fossil fuel power plants with carbon capture and storage by 2050.

Australia is in a favourable position as a large scale producer of renewable energy, on account of its practically unlimited access to a range of different renewable energy sources including high insolation rates, large amounts of available land, extensive technical expertise and business frameworks in energy industries, and a comparatively stable regulatory and investment environment. Australia is thus well placed to supply a large share of its domestic energy use from renewable energy sources.

A global low-carbon economy could bring new and large-scale comparative advantage for Australia. First, Australia could be a producer of energy-intensive commodities using zero-emissions electricity (Denis et al 2014). This could include, for example, aluminium, which requires large amounts of electricity to produce. Given that the majority of Australia's heavy industry installations are relatively old, this would mean building up a new stock of industrial infrastructure.

Second, Australia could be an exporter of renewable energy, producing fuels such as hydrogen or methanol in Australia using renewable energy and exporting these to the densely populated areas of East Asia (Drew 2015). Producing and shipping synthetic renewable fuels would draw on a broadly similar engineering base and industrial structures as existing industries such as natural gas production and processing.

The potential for Australia as a large producer of zero-carbon energy is obvious; however, the prospects for building export industries based on that potential require much further investigation. Research is needed into: the technological basis for producing exportable renewable energy and energy-intensive products using renewable energy; whether and to what extent Australia has a comparative economic advantage and cost advantage that would warrant production for export; to what extent such energy and energy-intensive products could fit in with China's future energy and industrial system; and what policy and regulatory frameworks would be needed to facilitate the development of these technologies and industries.

The potential benefits of a renewables-based energy export industry for Australia in a decarbonised world economy are very large, as are the potential benefits to China of having a secure source of such low-carbon energy and energy intensive products to supplement domestic production.

A new agenda for cooperation

Australia and China can benefit by broadening and extending the bilateral dialogue and collaboration on climate change measures and the transition of energy systems.

A first plank is to intensify government-to-government cooperation on climate change issues. The Paris Agreement has prepared the ground for a new phase of international collaborations on climate change. Australia and China's objectives on climate change are compatible and complementary. The two countries can build on a variety of forums for dialogue at the official and political level, including the ministerial-level consultations on climate change that have taken place on several occasions and the Australia–China Climate Change Forums held at the ANU and the UNSW in recent years.

Second, the two countries should strive to facilitate business and investment relationships in the areas of climate change and low-carbon energy. This may involve reducing remaining regulatory hurdles to investment in new energy technologies, especially for Chinese investment in Australia. The two countries can also strive to enhance knowledge exchange at the business level. There is also a critical opportunity to better involve the financial sector cooperatively across both countries through 'green finance'. As part of a broader focus of integrating financial services and financial flows between Australia and China (discussed in detail in Chapter 5) both countries should explore how cooperation on financial products and financial services can be tailored to improve access to finance for green projects, such as investment in renewable energy and low-carbon technologies.

Third, experience has shown that active support by governments for research in energy technology development can bring substantial benefits in accelerating technological change. China has provided substantial support in many different forms to the deployment of renewable as well as nuclear energy, and advanced energy-saving technologies. In Australia, there are new government institutions that have proved successful in supporting the development and deployment of clean energy, especially the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC). These models may be attractive for China also. The model of co-financing commercial investments in cutting edge clean energy via a government-financed body like the CEFC may prove successful in stimulating investment in new energy options in the Asian region. Options to link this to operations of the AIIB may be worth investigating.

Finally, collaboration should be fostered between research organisations and universities in Australia and China, in the form of joint initiatives on scientific research and engineering as well as economic and regulatory frameworks. Promising models exist such as the Australia–China Research Program on Climate Policy, which has brought together researchers from several leading Australian and Chinese universities to work on specific joint research projects. The program has operated at relatively small scale, convened at the ANU and with particular support at Tsinghua University in China. It could be readily expanded to cover a broader range of issues and a wider range of research institutions, and scaled up to a national initiative in both countries.

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