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‘Major Economic Shocks and Pacific Island Countries’

Patrick Colmer and Richard Wood

Australian Treasury

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MAJOR ECONOMIC SHOCKS AND PACIFIC ISLAND COUNTRIES

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EXECUTIVE SUMMARY

Broad Findings

- The ability of Pacific Island countries (PICs) to cope with external economic shocks varies across the region. The diversity of economic structures and imbalances among PICs is considerable. Some economies are more globally integrated than others, but some have high import dependency and limited supplies of foreign sourced income (remittances, exports and tourism receipts). There is considerable variation in natural resource endowments and economic and export bases. Macroeconomic imbalances are very considerable in some countries. It is crucial, therefore, to avoid generalisations about the impact of external economic shocks across the PICs and the proposed policies to counter them.
- The dramatic run-up in *food and fuel prices* in 2007 and 2008 adversely impacted inflation, cost structures, competitiveness, demand and output, real incomes, and living standards in the PICs. The *global financial crisis* of 2008 did not have a substantial direct impact on PICs generally, given low levels of global financial market integration. However, some smaller PICs with globally diversified wealth funds were adversely impacted by the global fall in equity prices. The subsequent *global recession* of 2009 saw a significant negative impact on exports from many PICs.
- The combined effects of the three shocks resulted in a flattening of output levels in middle-sized, non-resource-rich PICs, and substantial declines in output for a number of the smaller, most fragile states. Some of these fragile Pacific states are among those farthest away from 'external balance', and are highly dependent on foreign aid flows.
- The relatively strong performance of the Australian economy provided significant support, through remittances, tourism and trade, to some PICs during this period of substantial global economic volatility (extending from 2007 to 2012). Those PICs reliant on the Australian dollar for import payments benefitted from the appreciation of the Australian dollar during the period when international food and fuel prices increased.
- While inflation spiked up across the region, the resource-rich PICs came through this period relatively unscathed, with strong growth recorded. During the extended crisis, there has been a widespread tendency to overvaluation.

Policy scope for increasing resilience

- Expansionary fiscal policy may be used in some cases to address future external shocks; however, the scope to do so is limited at the present time in some countries as a result of high fiscal deficits and debt. Generally, the ability of monetary policy to counter external demand shocks is limited by shallow financial markets, high interest rate spreads and the need to contain inflation and control liquidity.
- In order to better address external shocks in the future, countries should seek to maintain adequate levels of foreign exchange reserves, and some countries could reconsider exchange rate issues by examining the benefits and costs of greater exchange rate flexibility.

- A number of PICs will need to continue to address difficult economic imbalances (e.g. current account and fiscal imbalances) through monetary, fiscal and exchange rate policies, in order to build greater resilience against future external shocks.
- Well-directed resource allocation policies and further microeconomic reform are likely to assist over the longer term.
 - Appropriate resource allocation policies might include actions aimed at diversifying food production, reducing food import dependency, export diversification policies, greater diversity in production bases where viable, and removal of distorting price controls. Further, PICs should consider innovative methods to achieve greater fuel efficiencies and make greater use of alternative, including renewable, energy sources in order to reduce the high dependency on imported fuel.
 - Microeconomic reform could improve productivity by addressing inefficiencies in state-owned enterprises, progressively removing trade distorting barriers, improving government service delivery, facilitating land reform and adopting improved agricultural techniques, supporting and improving transport and communications links, promoting deregulation and encouraging greater competition.
- Foreign donors should note the important role of aid policy in these economies, particularly in respect of 'capacity building' where needed, and in regard to the development of vital social and physical infrastructure that will increase productivity, export capacity and economic welfare.

1. Introduction

Small island states are vulnerable to external shocks and generally experience greater instability in exports and agricultural production than do other developing countries¹. PICs are highly vulnerable to natural disasters and other economic shocks².

PIC economies are very small and they have limited domestic and regional markets. They are remote from large international markets, they have high transport costs and they are not able to benefit from economies of large scale production. PICs generally have narrow resource, production and export bases, and many are dependent on primary commodities. Most PICs are heavily dependent on imports, particularly of food and fuel. High import dependency, constrained export capacity, limited infrastructure, an inability to rapidly increase exports, and minimal export diversification make some PICs particularly vulnerable to shocks that impact adversely on world trade. Even resource-rich PICs, as large commodity exporters, are vulnerable to global demand and international price shocks.

Economic shocks may arise from many sources, including major terms-of-trade adjustments, a sharp fall in external demand, balance of payments difficulties, exchange rate misalignments, economic policy mistakes, debt explosions, political crises, business collapses, corruption and other foreign economic developments.

The current global economic difficulties (spanning 2007 to 2012) imposed a number of complex interrelated external shocks on PICs: the first food and fuel price shock, the global financial crisis, the global recession, the ongoing banking crisis and, more recently, further food and fuel price shocks and the public debt crises.

The purpose of this paper is to review available statistics and literature in order to shed light on the effects of the recent series of shocks on PICs, and to try to discern policy lessons. As one can imagine, disentangling the various channels of causality and the different effects of these multiple, time-contiguous shocks is extremely difficult. Importantly, the effects of natural disasters are also reflected in economic data and, consequently, care is needed, where possible, to distinguish these from the impact of external economic shocks.

This paper focusses mainly on Fiji, Papua New Guinea (PNG), Samoa, Solomon Islands, Tonga and Vanuatu; these countries – referred to in this paper as ‘selected PICS’ – were selected on the basis of data availability. However, other countries are included where reliable data are available.

The paper begins by reviewing the main transmission mechanisms through which the global economic crisis passed through into the Pacific region. These transmission mechanisms include the pass-through effects from the *global financial crisis* on Pacific banks, financial markets and trust funds, and the effects from the *food and fuel price hikes* and the *global recession* on exports, remittances, tourism, foreign aid, inflation, demand and output.

2. The overall effects of recent global economic shocks

A) Effects on GDP

As is well documented³, emerging and developing countries generally fared better than industrialised countries during the current global crisis. This was also the case for the PICs (see Chart 1). As Chart 1 also shows, the economic slowdown in selected PICs, due to the global shocks, arrived later and was shallower than the rate of slowdown experienced in the emerging/developing countries group. Again, in comparison, the recovery by selected PICs appears to have been relatively slow in 2010, but has been sustained in 2011.

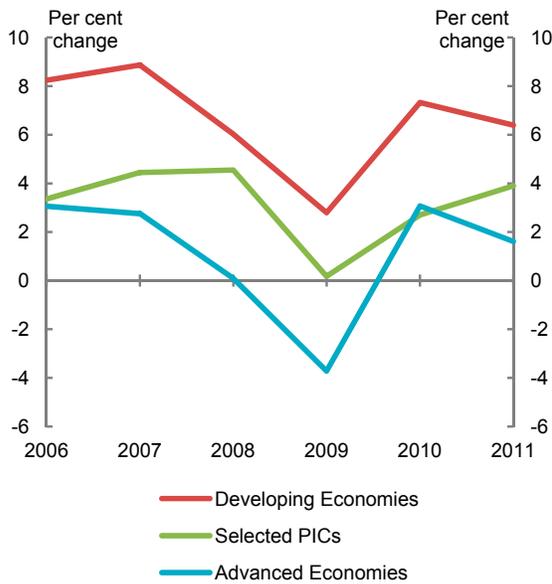
Chart 2 illustrates that the combined global economic shocks experienced over the period 2007 to 2011 appear to have had no substantial negative impact on growth in PNG, Solomon Islands and Vanuatu. During this period, output growth in PNG was assisted by strong investment growth and fiscal spending. In Solomon Islands, growth rebounded strongly in 2010 due to high demand for logging, strong logging prices and increased production of copra. More recently, the prospects for the Solomon Islands have been buoyed by the commencement of production at the Gold Ridge mine in April 2011. Vanuatu was also cushioned by strong tourism and investment growth and increased copra production. These countries reported relatively high average annual growth rates of 7.0 per cent, 4.2 per cent and 3.9 per cent respectively over the four years to 2011. In contrast, Fiji, Tuvalu and Samoa experienced significant disruption to their economic performance, going from annual average growth rates of 3.8 per cent, 2.5 per cent and 8.5 per cent respectively over the period from 2000 to 2007, to negligible or negative growth in the period since the start of the global financial crisis.

The Pacific region is highly vulnerable to natural disasters and political disturbances⁴. Samoa, Solomon Islands and Tonga suffered from a major tsunami in 2009, the physical damage costs of which were estimated at more than 10 per cent of GDP for Samoa alone⁵. Kiribati and Tuvalu continue to suffer from climactic challenges, including the severe drought conditions experienced by Tuvalu in September-October 2011, for which Australia and New Zealand provided fresh water and desalination units.

Fiji has experienced internal political difficulties since 2006; the resulting uncertainty, combined with slow progress on structural reforms and price controls, has suppressed potential growth, which is unlikely to exceed 2 per cent without accelerated reforms⁶. Fiji also suffered from the effects of Cyclone Tomas in March 2010, with extensive damage to homes and infrastructure, and, more recently, severe flooding in January 2012. The ADB has estimated the damage from the January floods to be 0.5 per cent of GDP. Cane production losses were 300,000 tonnes of raw sugar, equal to F\$27 million in revenue⁷.

It can be concluded that the real output levels of a number of PICs have been relatively resilient during the global crisis (Chart 2). However, in contrast, the smaller states reviewed in Box 1 suffered greatly, experiencing substantial falls in real output.

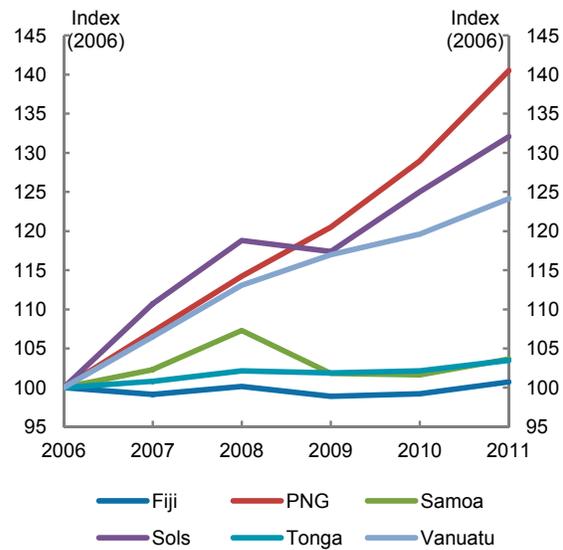
Chart 1: Real GDP (Per cent change)



Source: International Monetary Fund, World Economic Outlook Database.

*Data covers 'selected PICs' (i.e. Fiji, PNG, Samoa, Solomon Islands, Tonga and Vanuatu) and Tuvalu and Kiribati.

Chart 2: Real GDP (Indexed 2006)



Source: International Monetary Fund, World Economic Outlook Database.

BOX 1: External shocks and the Pacific microstates

This Box examines how the Pacific microstates have fared relative to PICs as a whole during the global economic crisis. The selected microstates are Niue (population 1,479), Nauru (9,976), Tuvalu (11,149), Cook Islands (15,529), Palau (20,518), Republic of Marshall Islands (RMI) (54,439), and Kiribati (100,835).

These countries are identified later in this paper as the PICs that are most vulnerable to external food and fuel price shocks based largely on their high import dependency. International food prices rose by 57 per cent between January 2007 and January 2008, and international fuel prices rose by 145 per cent. During the second international price shock, food prices rose by 68 per cent between February 2009 and April 2011, and international oil prices rose by 195 per cent. Much of these international price gains were passed on into domestic inflation.

Apart from Palau, which has a relatively large tourism sector, the microstates have very low levels of foreign sourced income. For example, RMI, Tuvalu, Nauru and Kiribati have combined foreign sourced income (from tourism, remittances and exports) of less than 17 per cent of their GDP⁸. For the larger Pacific island states (as a group) – 'other PICs' – the ratio is between 40 per cent and 80 per cent. Nauru has negligible tourism or remittance receipts. Tuvalu has negligible tourism or export receipts.

As a consequence, it is not surprising that among PICs, the microstates are among those farthest from 'external balance'⁹. In turn, it is the microstates that are most heavily dependent on foreign aid.

Table 1 reports real output changes and Chart 3 provides a comparison of inflation performance during the global economic crisis. It is clear that the microstates experienced substantial contractions in real GDP levels during 2007 to 2009. By way of comparison, real GDP for 'other PICs' increased by 4.8 per cent over the period 2007 to 2009.

BOX 1 continued...

The microstates suffered large terms-of-trade shocks. The case of Palau was made worse because of an 'internal' shock – the failure of an airline company – which caused a contraction in the tourism sector; GDP also fell due to the completion of construction projects and the curtailment of foreign investment. Tuvalu suffered lower offshore earnings, including from Tuvalu Trust Fund distributions.

As Chart 4 (see later) indicates, the fall in exports in the microstates was far greater than the fall in exports in the 'other PICs'.

Furthermore, inflation rates in the microstates were generally higher in 2008 than for 'other PICs'. The average inflation rate in the microstates was 12.4 per cent in 2008. For 'other PICs', the average inflation rate in 2008 was 9.5 per cent, with five out of six 'other PICs' recording inflation rates of below 12 per cent.

The implication here is that, as a consequence of the global financial crisis, the first food and fuel price hike and the global economic recession, the output and inflation performances of the microstates were generally worse than for 'other PICs'. This supports the supposition that the view that these microstates are generally more vulnerable to external economic shocks than are 'other PICs'.

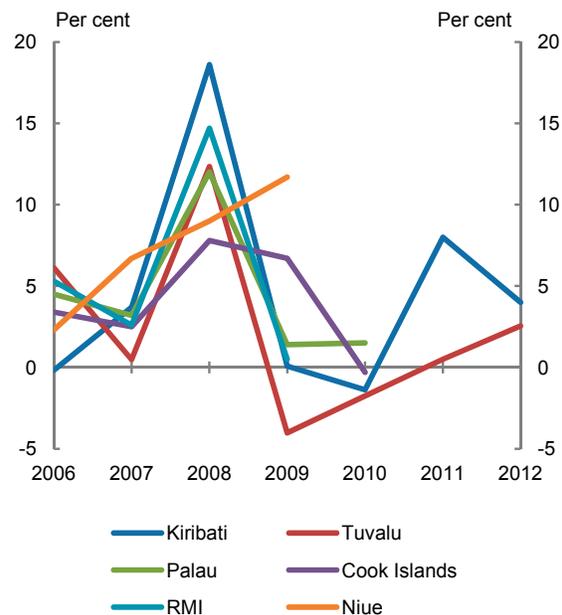
Table 1: Percentage change in real GDP

	Between 2007 and 2009
Cook Islands	-7.0
RMI	-3.2
Kiribati	-1.8
Palau*	-10.4
Tuvalu	-2.2 (2009 to 2010)
Nauru	-18.1 (2008 to 2009)
'Other PICs'	+4.8

Source: IMF, except for Cook Islands and Nauru, which are sourced from the ADB

*Financial years from 2006-07 to 2008-09

Chart 3: Annual inflation rates



Source: IMF and ADB

B) Effects on exports

The impact of weak global economic conditions on international trade was greater than the impact on global output. In 2009, real world output decreased by 0.7 per cent, whereas real world trade flows collapsed by close to 11 per cent¹⁰. In light of this, it is not surprising that the major channel of disturbance to PICs has been through exports¹¹.

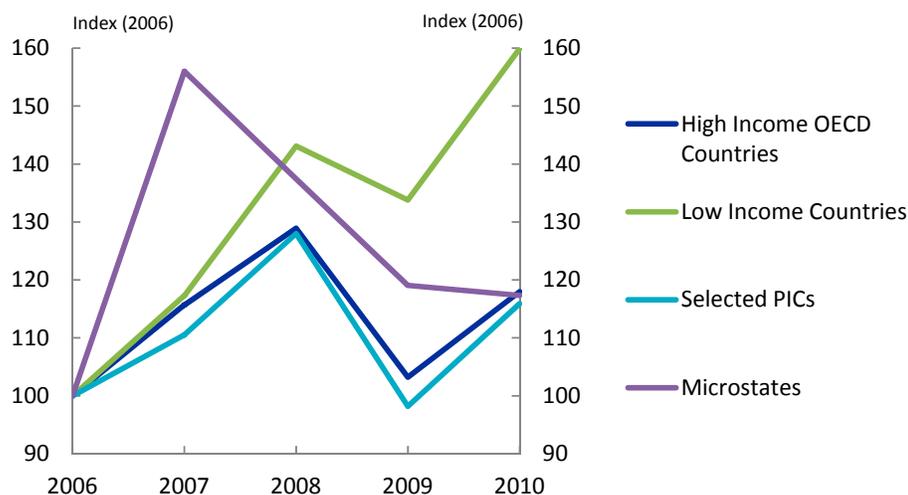
Exports are very important to PICs, given their relatively high dependence on imports, limited foreign capital inflow and general balance of payments constraints. For the larger exporters (PNG and Solomon Islands), export receipts are a major source of budget revenues. In PNG, revenues from mining and natural gas account for around 20 per cent of government revenues. In Solomon Islands, revenues from logging account for around 14 per cent of government revenues.

Among the PICs, Fiji – with perhaps the most diversified export base¹² (both in terms of products and markets) – is a major exporter, with exports equal to 46 per cent of GDP in 2009. Fiji has benefited substantially from exporting over a long period of time, as reflected in its relatively high per capita income levels. For the smaller states – Cook Islands, Federated States of Micronesia (FSM), Kiribati, Tuvalu, Palau and RMI – exports are less than 15 per cent of GDP.

Chart 4 illustrates that the value of exports for selected PICs fell by around 23 per cent in 2009, recovering somewhat in 2010. For the microstates, export receipts fell by around 25 per cent between 2007 and 2010. The contraction in export values experienced by advanced economies was around 20 per cent between 2008 and 2009. In contrast, however, export values from the world's 'low income countries' as a group declined only marginally throughout the crisis.

The region's largest commodity exporters (PNG and Solomon Islands) suffered substantial reductions in export values, driven by the falls in commodity prices in 2009. However, the strong rebound in commodity prices in 2010 saw exports from PNG returning to around 2008 levels, and exceeding previous highs in Solomon Islands. The export performances of other individual PICs during the global financial crisis are reported in Table 2.

Chart 4: Exports (nominal)



Source: World Bank and ADB. The selected PICs include Solomon Islands, Samoa, Fiji, PNG, Tonga and Vanuatu. The microstates include the Cook Islands, Republic of the Marshall Islands, Kiribati and Palau.

Table 2: Fall in the value of exports during the global crisis

Country	Change in Exports % 2007 / 2008	Change in Exports % 2008 / 2009	Change in Exports % 2007 / 2009
Cook Islands	-16	-25	-38
Fiji	22	-16	2
Kiribati	-23	-22	-39
RMI	15	6	21
Palau	4	0	4
PNG	11	-23	-14
Samoa	-25	9	-19
Solomon Islands	30	-19	5
Tonga	-25	-4	-29
Vanuatu	12	8	21

Source: ADB

Table 3 indicates that, currently, Australia accounts for around 26 per cent of exports from PICs. China and Japan together account for around 17 per cent, while Europe accounts for around 4.5 per cent of exports, and the USA takes only 2.4 per cent of PIC exports. Chart 5 shows that PIC exports to Australia have increased strongly over the past decade, while PIC exports to China and Japan rose less rapidly.

The relatively strong expansion of the Asian and Australian economies during the global economic recession provided direct demand for PIC exports, partly cushioning the effects of the global economic recession. Australian demand for PIC exports has, in part, been buoyed by the strong Asia-Australia trade link.

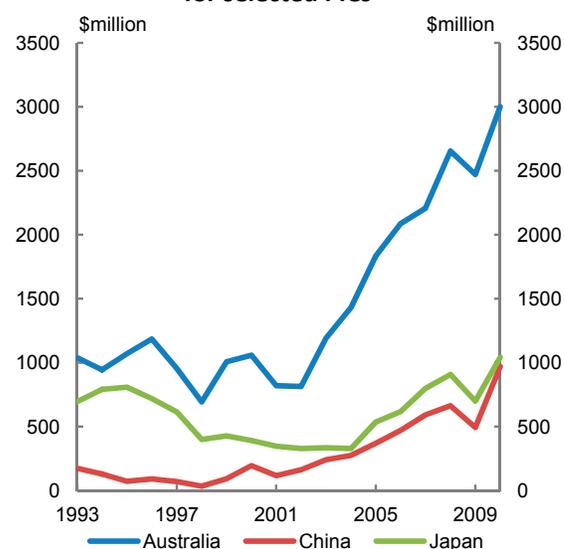
Going forward, and assuming any renewed global recession is largely confined to European countries, the 'shock' effects of any new recession abroad on PICs will be smaller than would be the case if the PICs had larger export markets in Europe, rather than in Australia and China.

Table 3: Destination of exports from selected PICs (2010)

Destination	Exports from selected PICs as per cent of their total exports
European Nations	4.4
United States	2.5
Japan	8.5
China	8.3
Australia	25.8

Source: Asian Development Bank. The PICs used to develop this table are Solomon Islands, Samoa, Fiji, PNG and Tuvalu

Chart 5: Three largest export markets for selected PICs



Source: Asian Development Bank. The PICs used to develop this chart are Solomon Islands, Samoa, Fiji, PNG and Tuvalu.

C) Effects on remittances

Over a long period of time, remittances have been an important source of income and foreign exchange for some of the PICs. The contribution of remittance flows to output growth in the Pacific has been more than double that of the remittance flows to small island developing states in the Caribbean¹³.

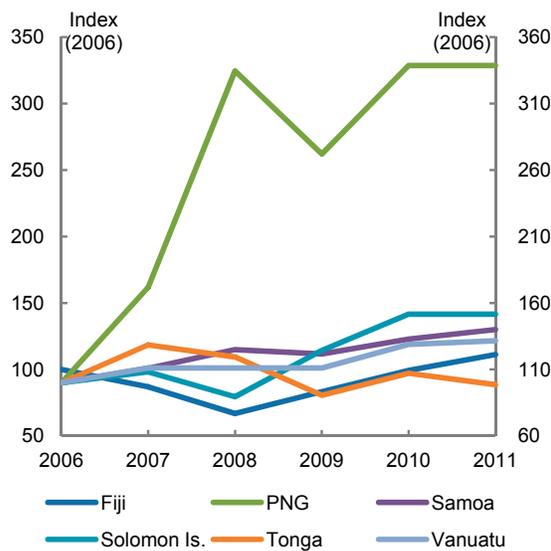
As Charts 6 and 7 illustrate, remittance flows to individual PICs vary considerably. Remittance flows are particularly important for Tonga (24 per cent of GDP in 2010) and Samoa (25 per cent of GDP in 2010). However, for a number of states, including the Melanesian states (PNG, Solomon Islands and Vanuatu), remittance flows are very small, reflecting limited migration or foreign work opportunities.

As Chart 6 shows, the value of remittances for Fiji fell by 33 per cent between 2006 and 2008, due primarily to international and domestic difficulties, before staging a recovery. For Tonga, remittances fell by 29.4 per cent between 2007 and 2009, largely reflecting Tonga’s heavy reliance on remittances from the United States, which went into recession in December 2007. For Samoa, remittances increased throughout the crisis. (The strong growth recorded for PNG was from an extremely low base.)

As Chart 7 shows, during the global economic crisis, remittances as a percentage of GDP remained relatively stable in most PICs, except for Tonga, where remittances fell. The principal sources of remittances to the Pacific are Australia, New Zealand and the United States¹⁴. For Samoa, 73 per cent of remittances derive from Oceania, and 27 per cent from North America. For Tonga, 73 per cent of remittances derive from Oceania, and 27 per cent from North America. For Samoa, 50 per cent of remittances derive from Australia, and 48 per cent from the United States¹⁵.

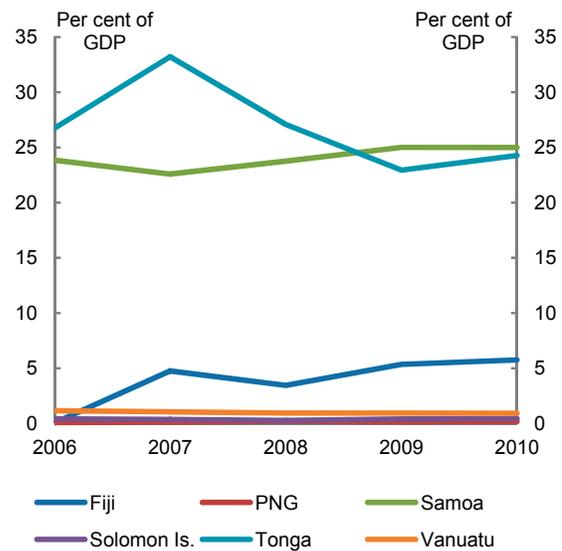
The relative buoyancy of the Australian economy over the past five years will have worked to partly cushion the effects on PICs from declining remittances during the global economic crisis. In contrast, the prolonged recession in the United States is likely to have led to lower remittance flows to a number of PICs.

Chart 6: Remittances (nominal)



Source: World Bank, Prospects, Annual Remittances Data.

Chart 7: Remittances as a percentage of GDP



Source: World Bank.

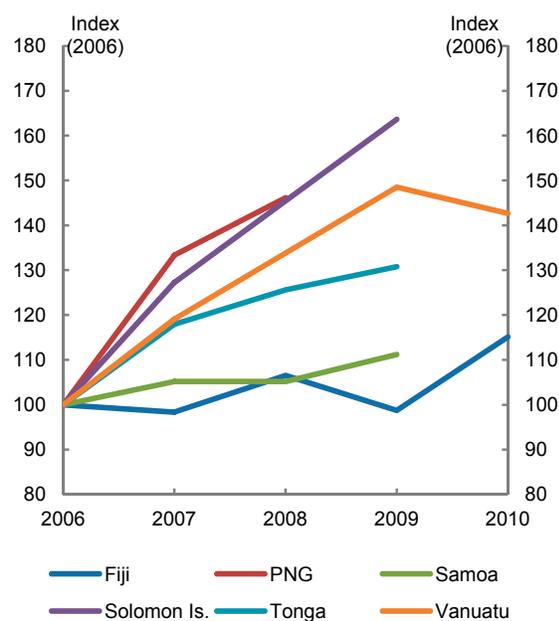
D) Effects on tourism

While trade in physical goods declined sharply in many PICs during the global economic crisis, tourist and business visitor arrivals generally increased across the region, as shown in Chart 8. Tourism provides formal employment and tourism receipts are an important source of income and foreign exchange in a number of PICs¹⁶. Tourism receipts have historically accounted for around 60 per cent of GDP in Palau and 50 per cent of GDP in Cook Islands. In Vanuatu, tourism accounts for almost 30 per cent of GDP. Samoa and Fiji are also heavily dependent on the tourism sector – tourism accounts for more than 20 per cent of GDP in these countries. Other small island states are relatively remote and lacking relevant infrastructure, and the tourism sector is relatively small.

Tourist and business arrivals in PICs increased during the global economic crisis, although arrivals in Fiji and Samoa were subdued. In the case of Palau (not shown in Chart 8), tourism receipts fell by a cumulative 17 percentage points during 2008 and 2009, largely due to the bankruptcy of a Taiwanese airline. Civil unrest and extreme weather events can also have a substantial influence on tourism.

On face value, an increase in visitor arrivals during a global crisis may appear somewhat counter-intuitive. However, around 36 per cent of all tourist and business visitor arrivals in PICs are sourced from Australia¹⁷, which experienced relatively strong growth. Consequently, as Australia has been relatively buoyant during the global economic recession, and the Australian dollar has been particularly strong¹⁸, tourist and business visitor arrivals to PICs have been stronger than might otherwise have been the case.

Chart 8: Tourism and business (visitor arrivals)



Source: World Bank.

E) Effects on financial systems

Many of the Pacific island microstates surveyed in this paper were largely immune from the worst direct monetary transmission impacts of the global financial and debt crises. This reflected the fact that Pacific island financial markets and banks are small, largely domestically funded, and not strongly or directly integrated into, or exposed to, international financial markets.

However, Kiribati was affected by large falls in the value of wealth and pension funds — the Revenue Equalisation Reserve Fund (RERF) and the Kiribati Provident Fund. The value of RERF assets fell by 20 per cent in 2008 due to the global financial crisis and drawdowns to finance the budget deficit. In Tuvalu, the value of trust funds fell by around 13 per cent. Palau, FSM and RMI also have trust funds with assets invested offshore, and were also negatively impacted.

F) Effects on aid flows into the Pacific

Aid flows into many PICs have historically been a more important source of finance than remittances and foreign direct investment. The small PICs are more dependent on aid flows than the small island developing states in Africa and the Caribbean¹⁹. Among the most aid-dependent states, aid flows in the form of grants represent 74 per cent of GDP in Tuvalu and in other small states, 69 per cent in Kiribati, 45 per cent in RMI, 34 per cent in FSM and 24 per cent in Palau²⁰.

The global financial crisis, the global economic recession and ongoing public debt problems in Europe, Japan and the United States may have potential implications for the future flow of foreign aid to developing countries and small island states.

A recent IMF Working Paper²¹ concludes that severe economic downturns in donor countries have historically triggered persistent declines in aid disbursement. The Working Paper further concludes that bilateral aid flows decline more sharply in the aftermath of large output contractions in donor countries when they have higher public debt burdens. In particular, the United States, Japan and Eurozone countries have been experiencing output weakness and relatively high levels of public debt. Together, these countries account for around 32.1 per cent of aid flows into the Pacific. However, to date at least, there appears to have been no substantial evidence of a downturn in aid flows from these countries into the Pacific.

Australia is the major bilateral aid donor to the PICs. As Chart 9 shows, Australia currently provides around 45 per cent of all aid resources in the Pacific. Australia provides more than 60 per cent of all donor assistance to Melanesia. Australia has continued to grow strongly during the global economic crisis and is not suffering from a high level of public debt. The Pacific will continue to be an area of major interest for the Australian aid program.

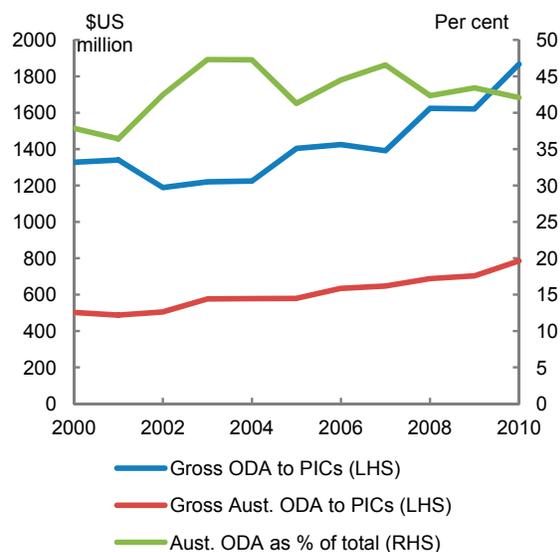
Official Development Assistance flows provided to the Pacific are predominantly (95 per cent) in the form of grants, rather than loans.

G) Summary of transmission effects

In summary:

- The main general channel by which the PICs have been adversely affected by the global economic difficulties has been through a relatively widespread decline in exports.
- Remittance flows fell substantially — by around 30 per cent — in Fiji and Tonga. In some PICs, the values of trust funds were negatively impacted.
- The output and inflation performances of the smaller, fragile and most vulnerable PICs were particularly adversely impacted during the global economic crisis.

Chart 9: Gross ODA flows into Pacific



Source: OECD.

3. Possible buffer role for reserves and exchange rates

A) Foreign currency reserves

Table 4 below reports actual and target levels of foreign exchange reserves measured as months of import cover over recent years. Reserves declined in a number of PICs during 2008 and into 2009, suggesting that they played a cushioning role in the face of external shocks, particularly when nominal exchange rates generally remained fixed.

In order to cushion their domestic economies in 2008, reserves fell substantially below target levels in Fiji, less severely so in Solomon Islands. However, in both cases, these countries were threatened by balance of payments crises as a result. Fiji subsequently raised its reserve target from three months of import cover to five months of cover. This new target was reached in September 2011. Reserves in the Solomon Islands recovered relatively quickly.

During August and September 2009, the IMF allocated new special drawing rights (SDRs)²² to IMF member countries, including the PICs (equivalent to around US\$ 370 million)²³, effectively raising their holdings of foreign currency reserves. Import compression, higher remittances and increased tourism receipts contributed to the build-up in reserves during 2009 in some countries.

Most PICs continued to build foreign reserves after the global recession. The rebound in commodity prices assisted the reserves build-up in PNG and Solomon Islands, and substantial development assistance flows provided benefits in the cases of Samoa and Tonga, in particular.

Fiji, Solomon Islands, Tonga and Samoa now have a higher level of reserves than at the end of 2007. They are, therefore, relatively better placed now — with a larger buffer — to withstand future external economic shocks.

Table 4: Official foreign currency reserves (months of import cover)

	Current Reserves target	End 2007	End 2008	2009	2010	2011
Fiji Islands	5	4.4	2.9	1.3 (Apr)	3.4 (Apr)	5.1 (Oct)
PNG	No target	13.0	10.9	9.7 (Mar)	10.5 (Jun)	10.5 (Jun)
Samoa	4	4.7	4.4	5.1 (May)	7.0 (May)	6.1 (Aug)
Solomon Islands	3	3.7	2.5	3.2 (May)	6.2 (May)	8.5 (Sep)
Tonga	3-4	4.4	4.8	4.6 (May)	7.1 (Jun)	8.2 (Oct)
Vanuatu	4	7.0	5.8	5.2 (Mar)	5.9 (Feb)	6.5 (Oct)

Sources: Asian Development Bank (ADB), 'Taking the Helm: A Policy Brief on the Response to the Global Economic Crisis, 2009; *Pacific Economic Monitor*, ADB, August 2009, July 2010, Dec 2011; Tonga Ministry of Finance and National Planning, *At a Glance*, June 2009; Sada Reddy, Presentation to the Public and Private Sector Consultative Forum on the 2010 Budget, Fiji, September 2009; Central Bank of Samoa, *Monetary Policy Statement 2009/2010*; National Reserve Bank of Tonga, *Monetary Policy Statement*, September 2009, and various other later Monetary Policy Statements.

B) Exchange rate overvaluation

There are a number of different exchange rate systems in the Pacific Island region, displayed in Table 5. The nature of these different exchange rate regimes would have had some implications for the manner and extent to which the effects of the global crisis were transmitted to PICs.

Table 5: Exchange rate regimes*

Fixed (peg)	Samoa, Tonga, Solomon Islands, Vanuatu
Dollarisation	
<i>Australian dollar</i>	Kiribati, Tuvalu, Nauru
<i>New Zealand dollar</i>	Niue, Tokelau, Cook Islands
<i>US Dollar</i>	RMI, FSM, Palau
Managed floating	Papua New Guinea

* For Samoa and Tonga there is a margin — a horizontal band — in the pegged arrangements that provides the opportunity for the authorities to move the exchange rate within the band. For Samoa, the margin is plus or minus 2 per cent, while for Tonga the margin is plus or minus 5 per cent per month around the central value.

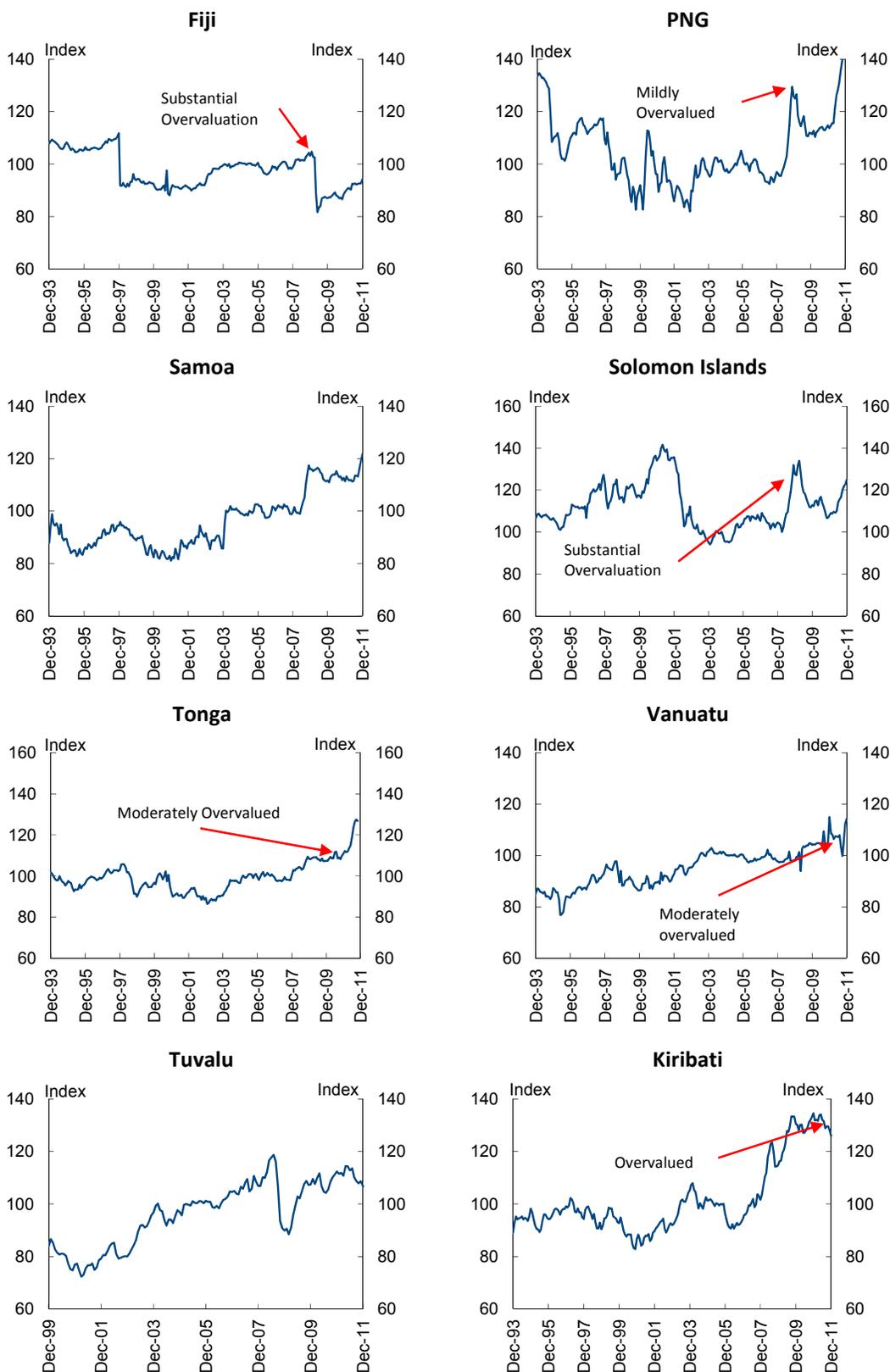
As Chart 10 illustrates, as a result of the crisis, during 2009 the real effective exchange rates of a number of PICs became overvalued²⁴. This overvaluation did not apparently persist into 2010 in some countries, but the overvaluation may nonetheless have damaged trade performance, particularly in 2009 when trade volumes collapsed.

More recently, real exchange rates appreciated in a number of countries, largely as a result of the higher inflation rates recorded in the Pacific than in major trading partner nations²⁵. As a consequence, some exchange rates appear to have become overvalued once again.

One question that arises as a consequence of the tendency toward currency overvaluation in some PICs in 2009 and more recently, is whether some PICs with fixed exchange rate regimes would have been better able to cope with the recent series of external economic shocks if those countries had an exchange rate system that allowed for greater exchange rate flexibility, or made greater use of the existing scope for flexibility within the existing adjustment band. This issue – the use of the exchange rate as a shock absorber – may become relevant into the future depending on the magnitude and nature of future economic shocks.

The international evidence appears to suggest that, generally, developing countries with flexible exchange rate regimes are better able to absorb economic shocks (for example, external demand shocks, negative terms-of-trade shocks²⁶ and natural disasters), and deal more effectively with high current account deficits and exchange rate risk²⁷, than those with fixed exchange rates. However, empirical paradigms established by reference to the experience of developing countries as a whole may not necessarily be applicable to Pacific island microstates²⁸.

Chart 10: Real effective exchange rates



Source: International Monetary Fund, *International Financial Statistics Database, 2012*; relevant published IMF Article IV Consultation Staff Reports. The descriptors for overvaluation shown in the above charts are taken from the IMF Article IV Consultation Staff Reports.

C) Vulnerability to international food and fuel price surges and exchange rates

Small island states are generally characterised by low levels of diversification in production and exports, and are thought to be highly vulnerable to adverse external price shocks. Consequently, for these countries, adverse terms-of-trade shocks, particularly those of long duration, can lead to a substantial deterioration in their current account balances, which, in turn, increases national indebtedness.

The vast majority of calories consumed in PNG and Solomon Islands come from domestically produced food. The PICs that are most vulnerable to international food price hikes are mainly smaller, remote, high-import-dependent states with low export bases. The smaller PICs have a relatively high dependency on imported food (Chart 11). However, when consideration is also given to the ability of PICs to pay for food imports, and an assessment of the vulnerability of children and women²⁹, then many other small PICs are also highly vulnerable.

Most PICs are heavily dependent on oil for their energy needs, especially power generation and transportation. Intensity of oil use is more than 80 per cent in the Pacific, with countries such as Cook Islands, Kiribati, Nauru, Solomon Islands and Tonga relying almost exclusively on oil for their commercial energy requirements³⁰. The smaller PICs use more oil per citizen and hence are generally more vulnerable to international fuel price hikes.

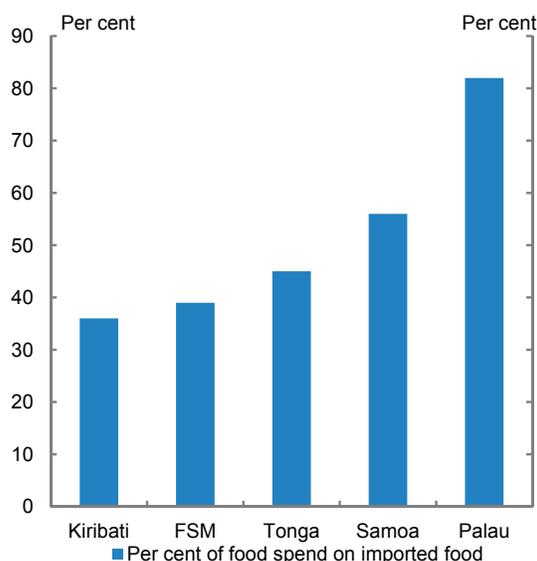
The Asian Development Bank has noted that PICs are among the most vulnerable countries when it comes to crude oil price fluctuations³¹. Chart 12 illustrates the vulnerability of different PICs to oil price movements.

It seems likely that RMI, Kiribati and most likely Nauru are highly vulnerable both to food and to fuel price shocks.

In 2008, surging international food and fuel prices contributed to increased domestic inflation across the Pacific region, lifting inflation rates for PICs from 2.5 per cent to around 12 per cent per annum.

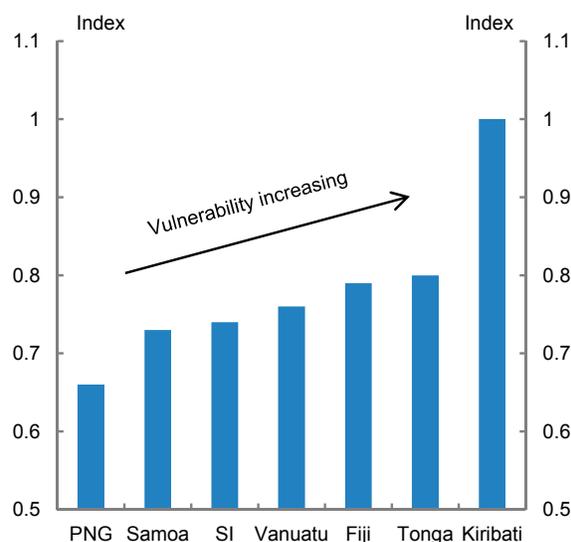
Most recently, in relation to the second food and fuel price shock (evident since early 2010), food prices have moderated somewhat. International oil prices have, however, remained elevated. Whether this is due to demand or supply forces is unclear. With the oil price already high, any future supply shock could create serious difficulties for PICs heavily reliant on fuel imports.

Chart 11: Proportion of food expenditure accounted for by imported food



Source: "Pacific island food security: situation, challenges and opportunities", Paper prepared for Pacific Island Ministers of Agriculture and Fisheries Meeting, Apia, Samoa, September 2008. While data for Nauru are not readily available, Nauru's dependence on imported food is high.

Chart 12: Oil Price Vulnerability Index (2008)

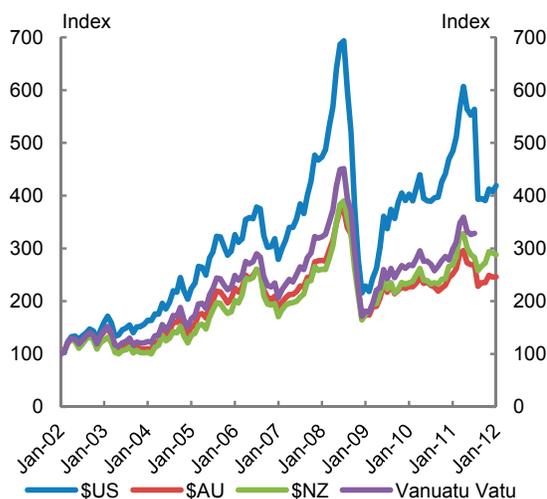


Source: Asian Development Bank³²

Exchange rate arrangements, local exchange rate developments and the currency used to pay for purchases of imported food and fuel can be important determinants of the severity of international price increases on local PIC economies³³.

Generally those PICs with appreciating currencies during periods of global food and fuel price hikes have suffered less as a result of rising domestic inflation than those with depreciating currencies. This pattern can be observed in Chart 13 and Chart 14. Those countries with exchange rates tied to the depreciating US dollar reported substantially higher imported fuel costs than those using the appreciating Australian and New Zealand dollars. However, the choice of exchange rate policies, anchors and tying arrangements is, desirably, based on various longer term considerations (including the pattern of trade and investment linkages, remittance and tourism sources, sources of aid, migration arrangements, relative competitive advantages, etc.) rather than on shorter-term trends in exchange rates that may not be sustained and are unpredictable.

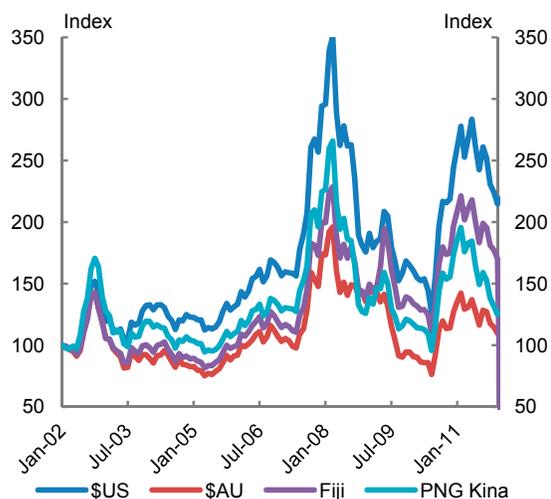
Chart 13: Oil price in \$US terms for RMI, FSM and Palau; in the local currencies of Vanuatu; in \$A terms for Kiribati, Nauru, Tuvalu; and in \$NZ terms for Cook Islands, and Niue



Source: Prices (World Bank), Exchange rates (IMF).

Note: This chart covers the period to January 2012. Since then, the price of Brent crude oil has risen by around 15 per cent.

Chart 14: Wheat price in the local currencies of PNG and Fiji; in \$A terms for Kiribati, Nauru and Tuvalu; and in \$US terms for RMI, FSM and Palau



Source: Prices (World Bank), Exchange rates (IMF).

It seems possible that the food and fuel price surge combined with exchange rate policies may have resulted in significant adverse effects on competitiveness and exports for some countries.

D) Exchange rates and shocks due to the global economic recession

The global recession directly contributed to falling global demand, including for some exports of the Pacific island countries.

With narrow production bases, high export concentration and inflexible economic structures, high import dependency, low short-run trade elasticities, constrained external demand and slow supply-side responsiveness, there is likely to be limited capacity for rapid import substitution, or rapid and substantially increased exports in the short- run, in some small Pacific islands states. To the extent this is the case, the ability of a more flexible exchange rate regime to act as a shock absorber, and to cause export and import substitution production to increase *in the short run*, is likely to be limited.

However, looking beyond the short-term to a time when foreign demand will no longer be so *volume constrained*, and resource allocation can be adjusted to take advantage of relative price changes, the devaluation (that would be permitted by a more flexible exchange rate arrangement) is likely to be more effective³⁴ in raising the foreign demand for exports from Pacific island states³⁵, assuming the devaluation is maintained.

There were two major external economic shocks in quick succession – the food and fuel price shock and the global recession. To address both of these shocks using the exchange rate could create tensions between the objective of offsetting the higher inflation due to rising food and fuel prices (by currency appreciation), and the objective of stimulating exports to address falling global demand (by currency depreciation).

4. Monetary, fiscal and resource allocation policy responses

A) Monetary policy: shocks and responsiveness

Monetary policy authorities in most PICs adopted a generally cautious approach to monetary policy management during the global economic crisis. In line with the contemporary charters of central banks in PICs, the principal objectives of monetary policy during much of this period were to maintain an adequate level of foreign currency reserves and to contain and lower inflation. The scope to attempt a counter-cyclical monetary stimulus to lift economic activity – an objective not usually listed in central bank charters in these small island states – was largely precluded in 2008 and into 2009 by the need to address both of these higher priority problems (declining reserves and high inflation).

During the global economic crisis, foreign currency receipts contracted and reserves fell in a number of PICs. As a result, the balances of exchange settlement accounts also fell and, in turn, fewer funds were injected into the banking system and demand deposits, resulting in lower liquidity. Injecting liquidity when reserves fell, and draining-off excess liquidity when it accumulated, proved to be a substantial function of monetary policy in PICs during the global economic crisis.

The management of interest rates also contributed to economic adjustment during the global economic crisis³⁶. However, the relatively large gap between lending and borrowing interest rates in some PICs complicates the task of using a policy interest rate as a means to impact inflation and smooth economic cycles, encourage savings, influence private investment and address large current account deficits.

With constrained transmission mechanisms³⁷, macroeconomic variables may not be strongly responsive to changes in monetary policy. It follows that the ability to quickly offset the effects of the global economic recession on economic activity by counter-cyclical monetary policy is likely to be limited, particularly as monetary policy was already busy addressing elevated inflation rates.

More recently, headline inflation has picked up substantially as a result of higher food and energy prices. Banking sector liquidity remains high across the region, reflecting healthy balance of payments outcomes and a more conservative approach to lending by the commercial banks following the global financial crisis. Despite an increasingly strong case for the withdrawal of the stimulus of the past several years, several factors explain the cautious approach of the PIC central banks towards tightening monetary policy. Headline inflation is not expected to rise much beyond current levels, with core inflation remaining within reasonable bounds; private sector credit growth remains generally subdued. The healthy level of foreign exchange reserves in the region is also likely to have delayed the need to aggressively tighten monetary policy.

From a structural perspective, the PICs face enormous challenges in enhancing the effectiveness of monetary policy and the ability of monetary policy to deal with external economic shocks. Financial intermediation is low compared to other small island economies at a similar stage of economic development. Interbank lending is limited and secondary markets for government and central bank securities are mostly non-existent. There is substantial banking sector liquidity, reflecting limited lending opportunities, though official interest rates remain relatively low. Large subsistence sectors, shallow financial markets, limited private investment opportunities, sticky interest rates, limited financial arbitrage and oligopolistic commercial banking sectors also inhibit the effectiveness of monetary policy to respond to economic shocks.

B) Fiscal policy: shocks and available fiscal space

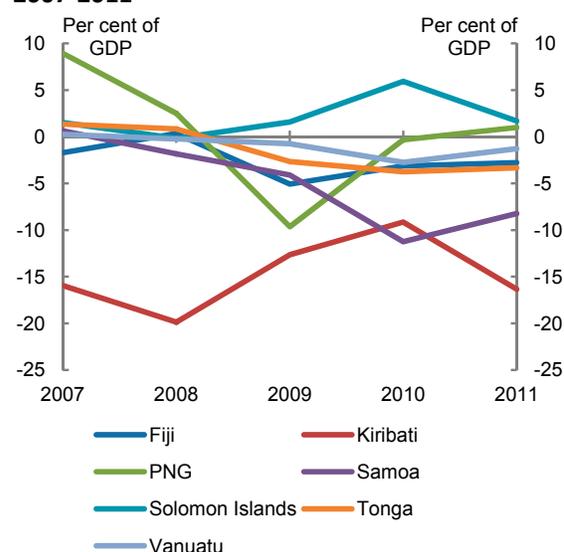
At the beginning of the global economic crisis, public debt was already very high in Nauru, RMI and Solomon Islands, and for these countries there was judged to be no space for additional fiscal stimulus. By 2009, Kiribati, Cook Islands and PNG had relaxed fiscal policy excessively in response to the global economic crisis³⁸.

Since the beginning of the global economic crisis, fiscal balances have deteriorated in Vanuatu, Samoa and Tonga. The information in Chart 15 suggests that budget deficits in 2011 remain clearly excessive in Kiribati and Samoa.

Public debt levels have deteriorated since the beginning of the global crisis. As at 2010, (Table 6) several countries had levels of public external debt which exceed the IMF/World Bank threshold parameter of 30 per cent of GDP³⁹. Total public debt is excessive in some other countries.

The main implication is that the room for additional fiscal stimulus is currently limited in a number of countries.

Chart 15: Net government lending/borrowing 2007-2011



Source: IMF WEO database 2011

Table 6: Debt in Pacific island countries 2010

Country	External Public Debt (per cent of GDP) [^]	Total Gross Public Debt (per cent of GDP) [#]
Fiji	9	55.6
Kiribati	11.3	31.9
PNG	10.7	26.5
Samoa	52.4	54.3
Solomon Islands	19.9	28.1
Tonga	36.6	42.8
Tuvalu	31	43.6
Vanuatu	16	20.2

[^] Fiji represents actuals, Tonga represents preliminaries, PNG, Solomon Islands and Tuvalu represent estimates, Kiribati and Samoa represent projections.

[#] Fiji and Tonga represents actuals, all others are estimates and projections.

Source: IMF Article IV Reports (2010-2012)

C) Resource allocation policies

The food and fuel price hikes and the global economic recession have exposed resource allocation vulnerabilities in PICs.

Clearly, a broadening of the economic base where it is possible would result in more diversified production and export structures, thereby creating potential for PICs to better withstand external economic shocks. Enhancing export capacity, and the diversification of exports and export markets, may therefore assist some countries to achieve greater internal stability during periods of economic shocks.

Some PICs are heavily dependent on imported food and fuel. Greater diversification in energy supplies, and greater self-sufficiency in agriculture production, could assist to reduce the adverse effects on domestic inflation and living standards created by surges in international food and fuel prices.

Greater diversification of output and exports into service industries including tourism, where feasible, may also assist PICs to become more resilient to external economic shocks.

Structural policies generally aimed at raising productivity are also likely to assist in generating scope for flexibility, lower production costs, improved competitiveness and higher incomes. They also establish the basis for greater overall economic resilience in difficult times. This includes addressing inefficiencies in state-owned enterprises, improving transport and communications links, progressively removing trade distorting barriers, improving government service delivery, facilitating land reform and adopting improved agricultural techniques, greater deregulation and encouraging greater domestic and overseas competition.

5. Current economic imbalances and vulnerability to future external shocks

A number of PICs are experiencing relatively large macroeconomic imbalances, including excessive budget deficits, high public or external debt and high current account deficits. Such macroeconomic imbalances may constrain the ability of these countries to respond to future economic shocks. Large budget deficits and high public debt constrain fiscal responses to shocks, and high current account deficits and high external debt imply greater vulnerability to adverse external shocks.

Notes

- 1 See UNCTAD webpage on Indicators Entering the Formulation of the Economic Vulnerability Index, 30 May, 2010.
- 2 For example, see 'Fragility and Vulnerability in Small Island Developing States: Issues and Challenges', A Santos-Paulino, UNCTAD, September 2011. UNCTAD estimates that small island developing states are 34 per cent more economically vulnerable than other developing countries. See UNCTAD webpage on Small Island Developing States, May 2010.
- 3 See for example, 'World Economic Outlook: Slowing Growth, Rising Risks', International Monetary Fund, September 2011 and 'The Global Financial Crisis and Development: Implications for the Entrepreneurial Economy', W. Naudé, January 2011
- 4 Since the 1950s, PICs have experienced more than 200 disaster events, affecting 3.5 million people and costing in excess of US\$6.5 billion. Natural disasters are believed to hit small island states – which are least able to cope – relatively hard. Natural disasters can substantially lower exports for up to three years (see J. Andrade da Silva and L. Cernat, 'Coping with loss: The impact of natural disasters on developing countries trade flows', Vox Economics, February 2012). During disaster years, the World Bank reported average disaster costs of 46 per cent of GDP in Samoa (see World Bank, 'Not if, but when: Adapting to Natural Hazards in the Pacific Islands region', Policy Note, January 2006). Over the period 1972 to 2004, Fiji suffered annual losses of F\$20 million per year from cyclones and storms. The ADB reports that the earthquake and accompanying tsunami that hit the Solomon Islands in 2007 cost around 90 per cent of the recurrent budget estimate (see ADB, 'Rehabilitation and Reconstruction Program for Disaster-affected Areas, Solomon Islands', draft, 2007). Cyclone Heta (2004) costs exceed the value of GDP by over 5 times in Niue. In 1989, a series of cyclones in Vanuatu resulted in damage and economic losses amounting to twice the national income (see 'Small States: Meeting Challenges in the Global Economy', Report of the Commonwealth Secretariat/World Bank Joint Taskforce on Small States, April 2000).
- 5 IMF Article IV Staff Report, Samoa 2010
- 6 IMF Article IV Staff Report, Fiji, 2011
- 7 See 'Asia Pacific Research', Pacific Monthly, ANZ Research, 15 March 2012
- 8 See 'Pacific Island Nations: How Viable are their Economies', Francis Hezel, Pacific Islands Policy No. 7, Honolulu: East-West Centre, 2012.
- 9 This distance for 'external balance' can be judged by reference to the level of external debt and the level of the current account minus aid flows, as a percentage of GDP.
- 10 See 'Estimating trade elasticities: Demand composition and the trade collapse of 2008-09.', M. Bussiere, F Ghironi and G Sestieri, Vox Economics, 14 February 2012.
- 11 Care is required when assessing the impacts of falling recorded export volumes on individual Pacific Island economies as significant elements of export values (for instance, some significant part of mineral export earnings) may not always be received in PICs.
- 12 Among PICs, Fiji and PNG have increased export diversification over the past two decades. Prospective LNG exports in PNG and mining exports in Solomon Islands will further contribute to export diversification. There has been little export diversification in other PICs over recent decades, and in some, increased export concentration has occurred. See 'Pacific export diversification – going the wrong way', Pacific Quarterly, ANZ Bank, February 2012.
- 13 See A Santos-Paulino, 'Fragility and Vulnerability in Small Island Developing States', UNCTAD, 2011.
- 14 See C Browne and A. Mineshima, 'Remittances in the Pacific Region', IMF Working Paper, WP/07/35.
- 15 See 'Remittance Profile; Samoa' and 'Remittance Profile; Tonga', Migration Policy Institute, 2011.
- 16 As with exports, care is required for interpreting the effects on PICs implied by tourism data. Significant elements of tourism receipts are held offshore, or are earned by foreign-owned hotels and airlines, and do not reach the island states.
- 17 See 'Australian Outbound Travel', Pacific Islands Trade and Investment Commission, Sydney, 2008.

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- 18 The Australian dollar fell by 17.3 per cent against the US dollar from September 2008 to January 2009, at the outset of the global economic crisis, but has since been very strong, averaging US\$1.08 in February 2012.
- 19 See A. Santos-Paulino, 'Fragility and Vulnerability in Small Island Developing States: Issues and Challenges', UNCTAD, September 2011.
- 20 See F. X. Hezel, 'Pacific Island Nations: How Viable Are Their Economies?', Pacific Islands Policy, East-West Center, 2012.
- 21 See E. Dabla-Norris, C Minoiu, and L Zanna, '*Business Cycle Fluctuations, large Shocks, and Development Aid: New Evidence*', *IMF Working Paper*, WP/10/240, October 2010
- 22 The SDR is an international reserve asset allocated by the IMF to IMF-member countries. SDRs are recorded as part of a country's official foreign currency reserves and are readily convertible into foreign currency held by another IMF member.
- 23 SDR allocations to PICs included Fiji (US\$94 million), Solomon Islands (US\$14.6 million), Kiribati (US\$8.4 million), RMI (US\$5.2 million), FSM (US\$7.6 million), Palau (US\$4.7 million), PNG (US\$183 million), Samoa (US\$15.7 million), Tonga (US\$10.4 million) and Vanuatu (US\$25.6 million).
- 24 Such assessments are based on information in IMF Article IV Staff Reports. Where no label is provided the IMF does not appear to have expressed a concluded view on currency alignments.
- 25 The rise in the nominal exchange rates of PNG contributed to a real appreciation of the currency during 2011. Nonetheless, looking forward, a tendency may develop toward currency undervaluation in PNG, based on the current level of the real effective exchange rate and prospective exports of LNG. See Papua New Guinea 2011, IMF, Article IV Staff Report.
- 26 See Berg, Borensztein and Mauro, 'Monetary Regime Options for Latin America', *Finance and Development*, IMF, September 2003, Vol 40, No. 3.
- 27 Floating exchange rate regimes force borrowers to confront the existence of exchange rate risk, thereby reducing unhedged foreign currency borrowings. See L. Cespedes, R. Chang and A. Velasco, 'Balance Sheets and Exchange Rate Policy', *The American Economic Review*, 94(4), 2004.
- 28 See Imam, op cit, for an analysis of the unique characteristics of microstates.
- 29 See "Situation Monitoring: Food Price Increases in the Pacific Islands, UNICEF, March 2011
- 30 See "Taking Control of Oil: Managing Dependence on Petroleum Fuels in the Pacific", Pacific Studies Series, Asian Development Bank, 2009.
- 31 Ibid.
- 32 Asian Development Bank 2009, 'Taking Control of Oil: Managing Dependence on Petroleum Fuels in the Pacific', *Pacific Studies Series*.
- 33 If a country is a net exporter of food and fuel (Papua New Guinea for instance), some part of the observed rise in the real effective exchange rate during this period may not have reflected a loss of price competitiveness, but, rather, an improvement in the terms-of-trade.
- 34 The latest (November 2009) IMF Article IV Staff Report for Solomon Islands suggests that while the authorities are concerned about the low elasticity of imports, the historical experience suggests that exports are more responsive than imports to a devaluation of the currency, and that devaluation could, therefore, be a useful adjustment instrument. Round logs, which account for 70 per cent by value, are sold predominantly on the basis of contracts transacted in US dollars, and are not affected by changes in the Solomon Islands exchange rate (that is de facto pegged to the US dollar).
- 35 There are few published studies on trade elasticities in Pacific island countries. In the case of Fiji, the long-run own price elasticity for export demand is estimated to lie between -1.25 and -1.49, suggesting devaluation improves export performance in the long-run. See S. Narayan and P. Narayan, op cit. In another article the same authors find that a 10 per cent devaluation in Fiji increases output by around 3.3 per cent. See 'Is Devaluation Expansionary or Contractionary? Empirical Evidence from Fiji', *Applied Economics*, 2007, 39.

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- 36 There is little evidence to suggest that interest rate policy was used pro-actively to directly reduce cross-border capital outflows and protect foreign currency reserves.
- 37 A number of academic studies suggest that the existence of stable monetary demand functions and inadequately developed capital markets in some PICs provide a basis to use monetary aggregates rather than interest rates as an instrument of policy. See T. Jayaraman and C. Choong, 'How Does Monetary Policy Transmission Work in Fiji?', *International Review of Economics*, 2009. See T. Jayaraman and J. Dahalan, 'Monetary Policy Adjustment in an Undeveloped South Pacific Island Country: A Case Study of Samoa', *International Journal of Monetary Economics and Finance*, 2008. Also, see R. Singh and S. Kumar, 'Some Empirical Evidence on the Demand for Money in the Pacific Island Countries', *MPRA Paper*, No. 18703, November 2009.
- 38 See 'Taking the Helm: A Policy Brief On A Response to the Global Economic Crisis', Asian Development Bank, 2009.
- 39 See "Debt Sustainability in Low-Income Countries: Proposal for an Operational Framework and Policy Implications", the IMF and the World Bank, February, 3, 2004.