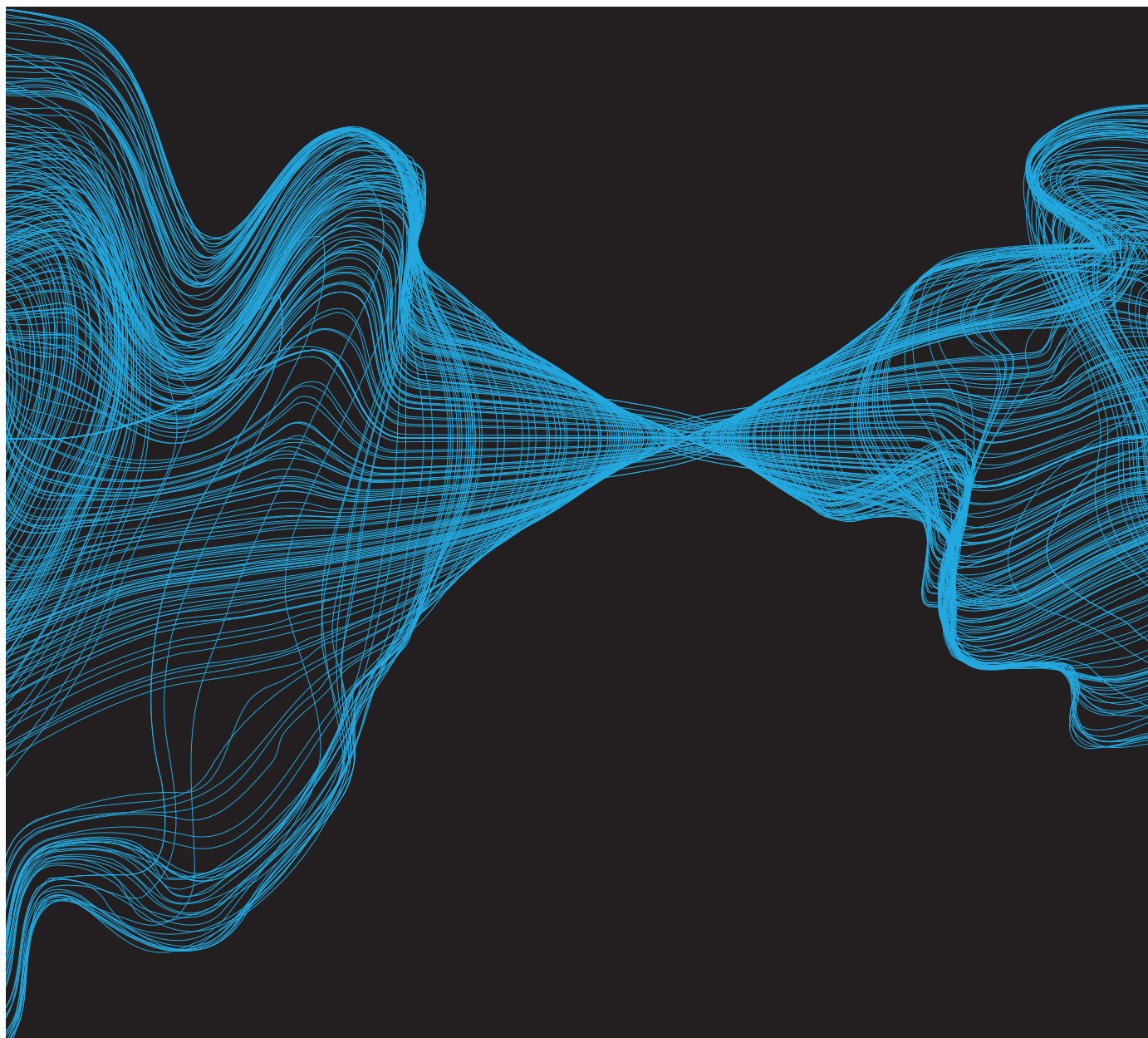


STATE OF THE REGION

2011 – 2012



ABOUT THE PACIFIC ECONOMIC COOPERATION COUNCIL

The Pacific Economic Cooperation Council (PECC) is a non-profit international organization committed to the promotion of cooperation and dialogue in the Asia-Pacific. Founded in 1980, PECC is a tripartite network of 26 member committees comprising individuals and institutions dedicated to this shared mission. As the only non-governmental official observer of APEC (Asia-Pacific Economic Cooperation), PECC provides independent business and research input to influence the regional policy-making process.

www.pecc.org

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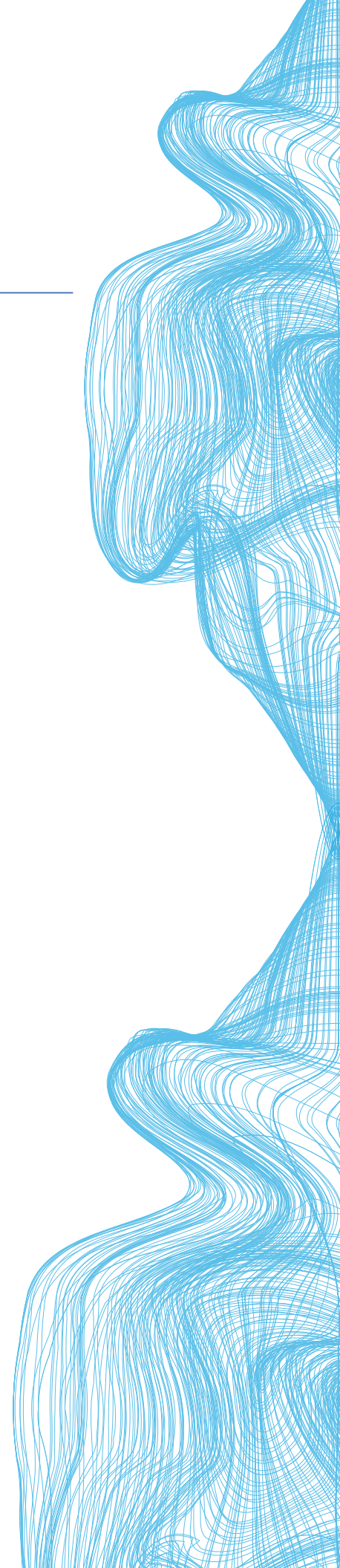
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MESSAGE FROM THE CO-CHAIRS OF PECC

The world economy is at a critical juncture. At no time since the height of the economic crisis has anxiety been at a higher level. The concerted actions to respond to the financial crisis that were forged through the G20 in 2008 now seem long ago, and consensus on what to do next is elusive. Even as some issues – such as the mortgage loan crisis in the United States seemed contained, other issues – notably debt burden and possible defaults in Europe – have emerged with new vengeance.

Over the coming weeks global leaders will have the opportunity to inject a much needed sense of purpose and unity, first at the G20 summit in Cannes, next at the APEC leaders' meeting in Honolulu and finally at the East Asia Summit in Bali.

This sequence of meetings places the Asia-Pacific region in a position to demonstrate its role as a steward of the global economy. We have argued in previous reports the core of the global economy is shifting from the Atlantic to the Pacific basin. This is a shift that has been taking place since the founding of the Pacific Economic Cooperation Council in 1980 and has been accelerated by the global financial and economic crisis that struck in 2008. As the core of the global economy, the region has a responsibility to develop strategies and take initiatives to sustain the global system as a whole.


A task force on the global economic crisis established by the Council in 2009 argued that substantial structural changes are needed to address the imbalances that had arisen in the run up to the crisis. These shifts included increasing domestic consumption in surplus economies and increasing savings in deficit economies. Both of these seem to be happening. However, this is being forgotten amidst the anxiety and turmoil in capital markets. What is missing is restored confidence in the business community. Businesses must begin investing to kick-start the growth process. Coordinated stimulus has been critical but it cannot go on forever. APEC's focus this year on green growth and innovation may help provide an impetus to this process.

The ongoing agenda for economic integration and support for the global multilateral system are critical to the process of restoring confidence. Progress in these areas will send a strong signal to the business community that protectionism will not close off markets to their goods and services. Efforts to make the regulatory environment easier to navigate and less burdensome, especially for small and medium enterprises, need to bear fruit. As indicated by our survey findings in chapter 2, business finds "behind-the-border" problems like regulatory impediments the most burdensome.

As we have done in previous reports, we focus on one particular aspect of regional economic cooperation; in this case, the Asia-Pacific energy market. Energy trade is one of the largest sectoral flows in the Asia-Pacific and energy security concerns have been a consistently high risk to growth in every one of our surveys. This year's nuclear tragedy in Japan has further accentuated energy security and safety issues.

There are many people who made this report possible; Yuen Pau Woo and our other colleagues in the editorial committee. We would also like to express our appreciation to those who have contributed thoughts and ideas for this report, especially Tilak Doshi, Nahim Bin Zahur, Jane Drake-Brockman, and Peter Petri. Lastly, we would like to thank our member committees and the over 400 people who took the time to respond to the survey and shed some light and sense of priority to the plethora of issues that regional cooperation is expected to address.


CHARLES E. MORRISON


JUSUF WANANDI

MESSAGE FROM THE COORDINATOR

By the time this report is released, the increasingly dark clouds over the world economy may have passed, to great relief, or they may have unleashed an unwanted torrent of economic disengagement that threatens to reverse the modest recovery from global recession barely two years ago. Our panel of Asia-Pacific opinion-leaders has expressed a degree of pessimism about the economic outlook not seen since 2008 and developments in the US and in the Euro zone even in the few short months since the survey was conducted have served to validate the gloomy outlook.

A recession, however, is not inevitable, and even if the major developed economies experience another period of contraction, there is hope that emerging markets can provide a modicum of ballast for the world economy, as they have in the 2008-2009 recession. To be sure, emerging markets have not “decoupled” from the industrialized world, and the extraordinary fiscal stimulus that these rising powers were able to implement in the past three years cannot be sustained indefinitely. Nevertheless, the “two-speed” recovery that has characterized global economic performance in recent years is likely to continue for the foreseeable future.

More than any other region, the Asia-Pacific epitomizes the two-speed world, with the United States and Japan on the one hand still struggling to emerge out of recession (albeit for different reasons), and China, most other Asian economies, and parts of South America on the other hand experiencing relatively robust economic growth. The presence of strong performers in the region (China in particular) has been a critical factor in sustaining the overall economic health of the Asia-Pacific.

Ideally, the contrasting growth experience of the two sides of the Pacific would be accompanied by structural changes that result in more balanced growth for the region as a whole, including adjustments in external and internal balances in the US and in China. While some of this rebalancing is taking place, it has been limited to date, and may even have run its course. As PECC has stressed in previous reports, the prospects for sustained growth will require deeper structural changes in surplus and deficit economies, accompanied by more inclusive and lower-carbon intensive development strategies.

This year’s report looks at the pattern of trade in major product categories and finds that much of the trade in these categories is conducted within sub-regions rather than broadly across the Asia-Pacific. This is especially true in the case of oil and gas, for which there is virtually no transpacific exchange. As a result, there is no single Asia-Pacific market for natural gas, which is reflected in the wide discrepancy in gas prices between East Asia and North America. A separate PECC paper commissioned for the State of the Region report discusses in more detail the prospects for emergence of a transpacific energy market.

I would like to thank the State of the Region report editorial committee for valuable feedback and advice, to Tilak K. Doshi and Nahim Bin Zahur from the Energy Studies Institute of the National University of Singapore for an excellent background paper on transpacific energy relations, and especially to Eduardo Pedrosa, PECC’s Secretary General, for his considerable assistance in the design and preparation of this report. Thanks also to Jessica Yom at the PECC Secretariat who provided editorial help and led the production and communications effort. The survey of opinion-leaders would not have been possible without the support of PECC member committees, and they once again ensured that we were able to access a high quality respondent pool across the region.



YUEN PAU WOO

EXECUTIVE SUMMARY

Growth in the Asia-Pacific to Slow

Growth in the Asia-Pacific region is expected to slow to below 3.6 percent this year, down from 4.8 percent in 2010. The multi-speed recovery from the crisis continues into 2011 with emerging economies performing considerably better than developed ones. Although the recovery continues, pessimism is on the rise and it is widely expected that the growth outlook for major developed economies will be further revised downwards in the last quarter of 2011. Emerging economies, however, are continuing to perform relatively well, contributing two thirds of the region's 3.6 percent growth this year.

Inflation in Emerging Markets

Inflation in the region for 2011 is expected to be close to 3.0 percent and to moderate to 2.1 percent in 2012. However, as with the GDP growth figures, the aggregate number masks a multi-speed region with inflation in developed economies running at 1.8 percent and emerging economies at 5.3 percent - the second highest rise in prices over the past decade. As with the forecasts for GDP growth, these are based on forecasts made by the IMF in April, and it is most likely that these forecasts will be revised upwards by the time of the October update later this year.

Growing Sense of Pessimism

Our annual survey of opinion-leaders reflects the growing sense of pessimism about the economic outlook. Over 65 percent of opinion-leaders expect global growth to be weaker over the next 12 months compared to the previous 12 months. The last time pessimism was this high was in 2008 just as the crisis was breaking.

Macroeconomic risk factors such as a slowdown in the US economy, a sovereign debt crisis in the Euro-zone, and a slowdown in the Chinese economy dominate the risks to growth in the region.

Opinion-leaders see investment in new technologies and innovation systems as the top policy objective for sustaining growth, followed by addressing the US fiscal and current account deficits and rebalancing growth in East Asia.

When asked what the APEC leaders should focus on at their discussions in Honolulu during their annual summit, FTAAP ranked number 1, followed by green growth, WTO DDA, corruption, and the APEC growth strategy. However, views

on pathways to a Free Trade Area of the Asia-Pacific (FTAAP) remain somewhat equivocal with different sub-regions preferring either the Trans-Pacific Partnership or the ASEAN plus agreements. The critical point is that there is no reason to force a choice, ultimately the ASEAN plus and TPP tracks can be mutually reinforcing. Clearly, opinion-leaders support this view with over 70 percent of respondents agreeing that regional economic integration should be pursued along multiple tracks.

There was also a high degree of support for what could be deemed as a sectoral initiative, albeit a global one, with over 70 percent of respondents agreeing that APEC members should take a lead in promoting a plurilateral agreement on services.

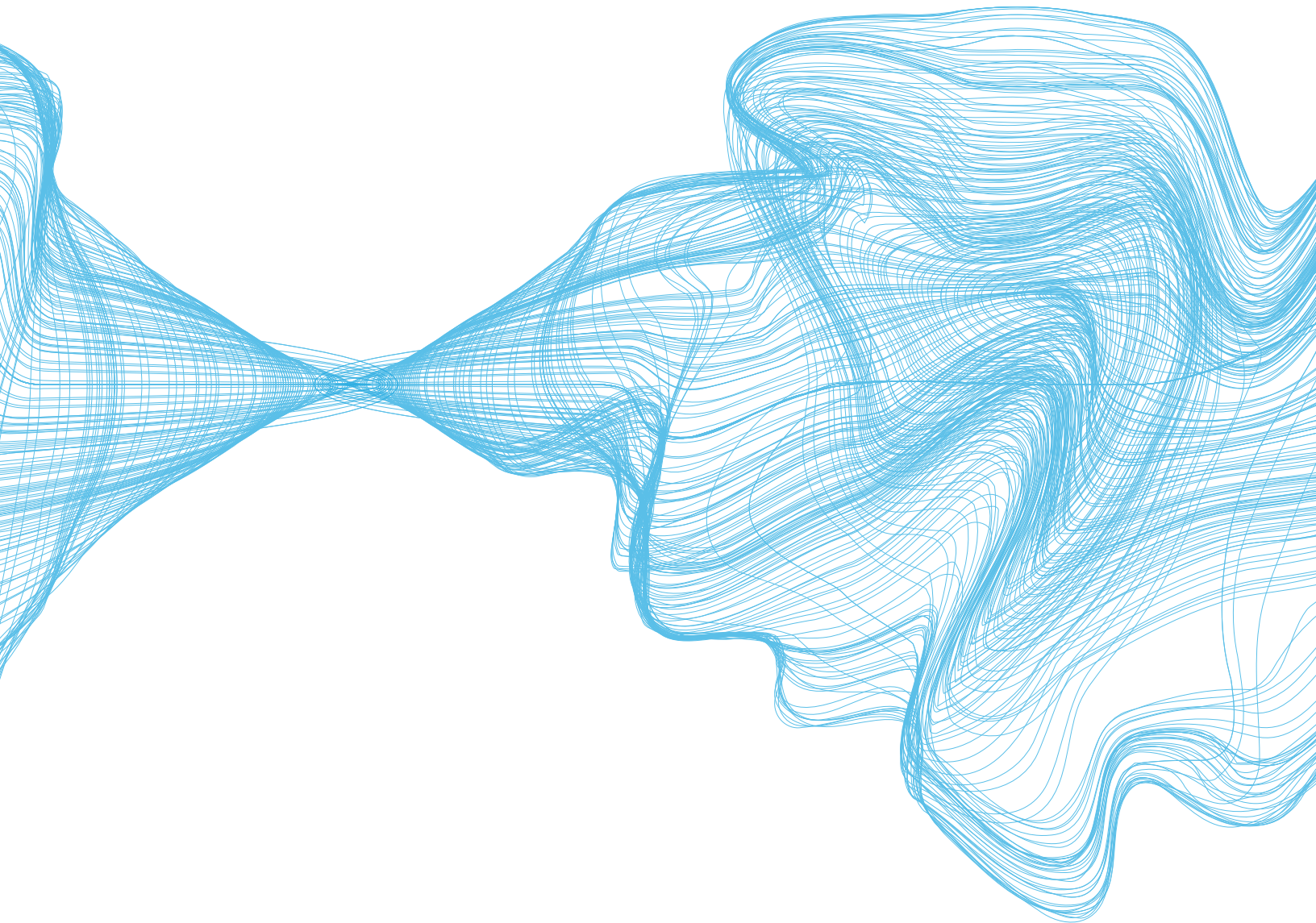
Sub-Regional Trade Dominates

The pattern of trade in major product categories is dominated by exchange within sub-regions rather than broadly across the Asia-Pacific. This is especially true in the case of oil and gas, for which there is virtually no movement across the Pacific ocean. The recent discovery of massive "unconventional gas" reserves in North America has raised the prospect of the emergence of a transpacific energy market.

Crisis Impacts Regional Economic Integration

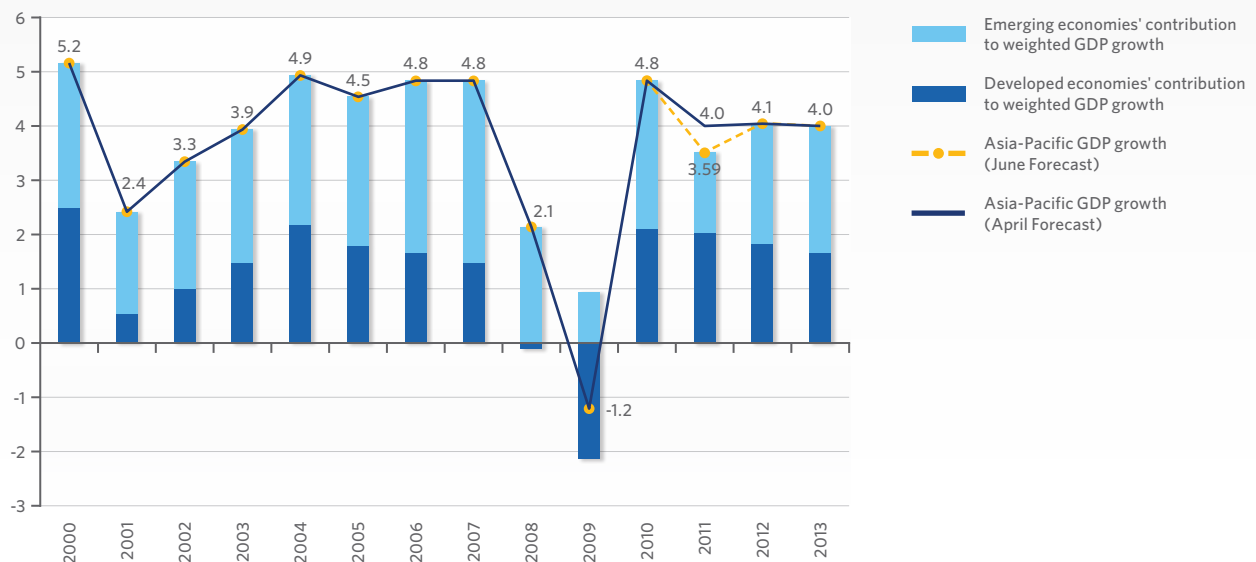
The PECC composite index of regional economic integration shows that overall economic integration slowed in 2008 due to decreased intra-regional flows and increasing divergence among the economies of the Asia-Pacific region. As data for the index comes in with a significant lag, the index is measuring the state of integration as of the end of 2008. Although all three major flows that the index covers showed decreases in 2008, it was the drop in intra-regional flows of foreign direct investment that had the most impact on the index. This is not surprising given that FDI flows are a pro-cyclical indicator with the dip foreshadowing the negative shock from the economic crisis.

The convergence sub-index continued to fall in 2008. This sub-index measures the degree to which the economies of the region are becoming more alike in terms of key economic variables such as GDP per capita, expenditure on education, and share of non-agricultural GDP. A falling index means economies in the region are not converging in terms of these indicators.



ASIA-PACIFIC ECONOMIC OUTLOOK

Figure 1: GDP Growth in the Asia-Pacific



Just three years after the “Great Recession”, the world economy is facing the threat of a stalled recovery or worse, a double-dip economic downturn.

The skittish outlook is due to prolonged and possibly worsening economic weakness in the traditional engines of growth -- the United States and the EU -- and is compounded by the reality that emerging markets are not yet able to provide a sustained source of global demand to replace the US and the EU, notwithstanding the important reflationary role that they played (China in particular) during the 2008-2009 downturn. Even before the deal to raise the debt ceiling was reached, recovery in the US was sputtering. The fiscal drag from any likely package of deficit reduction in the US in the foreseeable future will only add to near-term economic weakness, if not outright recession. The Euro zone in turn is constrained not only by sharp fiscal tightening but also from a sovereign debt crisis that could spill over into a broader financial sector meltdown.

On Shaky Ground

The economies of the Asia-Pacific region grew by 4.8 percent in 2010, higher than had been forecast in the IMF's October 2010 update to the World Economic Outlook, and matching the rate the region grew at in 2006 and 2007. However, the June 2011 IMF update revised downwards the 2011 forecasts for Japan and the United States, resulting in a slower real GDP growth forecast for the region as a whole at 3.6 percent in 2011. It is likely that there will be further downward revisions to the growth outlook for the US and other Asia-Pacific economies, which will effectively mean a substantial slowing compared to 2010, barely two years into a “recovery”.

Emerging Markets Driving Growth

A multi-speed recovery has continued to characterize the growth picture in 2011 and likely into 2012 with emerging market economies doing considerably better than industrialized economies. The weighted average real GDP growth for developed market economies this year is expected to be 1.8 percent, rising to 2.8 percent in 2012. Emerging market economies in the region are expected to grow by 7.1 percent in 2011, moderating slightly to 6.9 percent next year.

Asia-Pacific Economies

The combined economic output of the Asia-Pacific region in 2010 was US\$35 trillion or a little over half of the world's total. Japan and the United States account for over 55 percent of the regional total so it comes as little surprise that the downgrade in forecast for these two economies results in lower growth estimates for the Asia-Pacific as a whole.

The Asia-Pacific region is itself characterized by multi-speed growth, as can be seen in the performance of various sub-regions. Of the 3.6 percent real GDP growth that the region is expected to experience in 2011, 1.8 percentage points are projected to come from Northeast Asia and 0.3 points from Southeast Asia. Over the past decade, emerging market economies have contributed well over 50 percent to the region's growth.

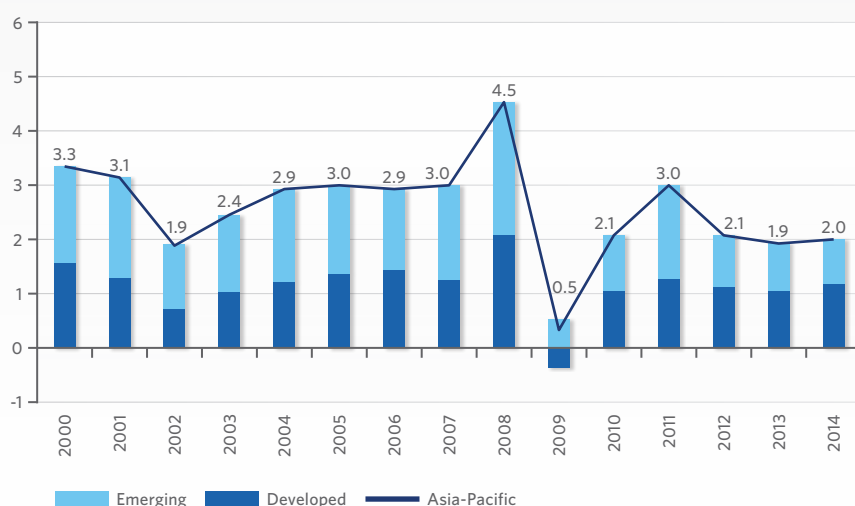
Figure 2: Revisions to the IMF's Forecast (%)

	April 2011	June 2011
China	9.6	9.6
Japan	1.4	-0.7
United States	2.8	2.5

Figure 3: Sub-Regional Contributions to Asia-Pacific Growth

	2009	2010	2011	2012	2013
Asia-Pacific	-1.2	4.8	3.6	4.2	4.0
Northeast Asia	0.1	2.7	1.8	2.3	2.1
North America	-1.4	1.5	1.3	1.4	1.4
Southeast Asia	0.1	0.4	0.3	0.3	0.3
South America	0.0	0.1	0.1	0.1	0.1
Oceania	0.0	0.1	0.1	0.1	0.1

Figure 4: Inflation in the Asia-Pacific



Rising Concerns over Inflation

Inflation in the region for 2011 is expected to be close to 3.0 percent, moderating to 2.1 percent in 2012. However, as with the GDP growth, the aggregate inflation number masks large differences between developed and developing economies. The developed economies of the Asia-Pacific region are experiencing price increases around 1.8 percent per annum whereas inflation in emerging economies is over 5.0 percent.

A major concern during the first half of 2011 was the sharp rebound in energy prices to levels not seen since the first half of 2008. While the rising price of oil can be attributed to extraordinary events that took place in major oil exporting regions in early 2011 and have since moderated, food prices remain high due to longer adjustment periods in supply and demand.

Figure 5: Food and Oil Prices

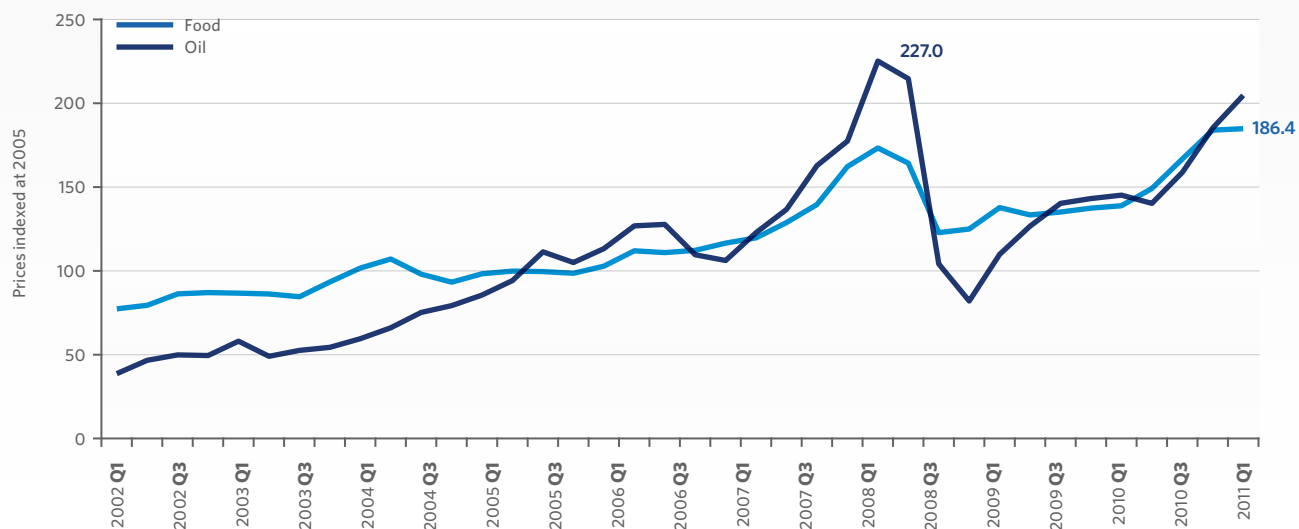


Figure 6: Unemployment in the Asia-Pacific

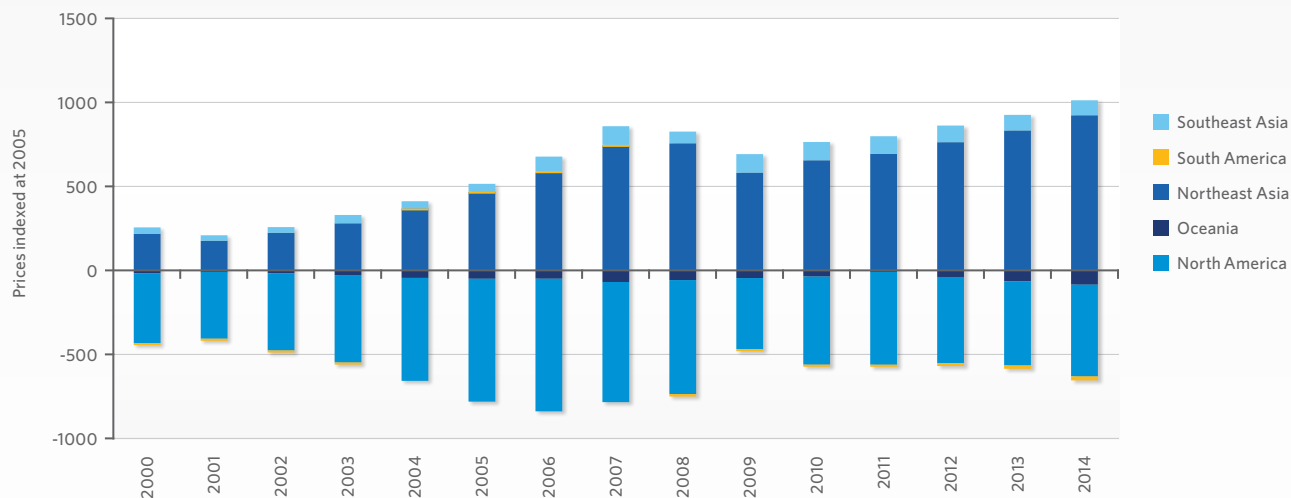
	2011	2010	2009	Change from 2009
	(%)	(%)	(%)	(Percentage point)
Australia	5.0	5.2	5.6	-0.6
Brunei Darussalam	3.7	3.7	3.7	0.0
Canada	7.6	8.0	8.3	-0.7
Chile	7.2	8.3	9.6	-2.4
China	4.0	4.1	4.3	-0.3
Colombia	11.5	11.8	12.0	-0.5
Ecuador	7.3	7.6	8.5	-1.2
Hong Kong (China)	3.6	4.3	5.2	-1.6
Indonesia	6.7	7.1	7.9	-1.2
Japan	4.9	5.1	5.1	-0.2
Korea	3.3	3.7	3.7	-0.4
Malaysia	3.2	3.3	3.6	-0.4
Mexico	4.5	5.4	5.5	-1.0
Mongolia	3.0	3.3	3.3	-0.3
New Zealand	6.7	6.5	6.2	+0.5
Papua New Guinea	na	na	na	na
Peru	7.5	8.0	8.6	-1.1
Philippines	7.2	7.2	7.5	-0.3
Russia	7.3	7.5	8.4	-1.1
Singapore	2.2	2.2	3.0	-0.8
Chinese Taipei	4.6	5.2	5.9	-1.3
Thailand	1.2	1.0	1.5	-0.3
United States	8.5	9.6	9.3	-0.8
Vietnam	5.0	5.0	6.0	-1.0
Regional Average	5.4	5.7	6.3	-0.9

Unemployment

Even though growth has returned to the region, there is concern in some economies about a jobless recovery. At the height of the crisis in 2009, the average unemployment rate in the region was 6.2 percent. While the unemployment rate is expected to fall to 5.5 percent this year and to 5.3 percent in 2012, these levels are still higher than the 5.1 percent rate before the downturn. Unemployment not only remains stubbornly high in the United States, but is showing signs of worsening in the second half of 2011.

Source: IMF, International Financial Statistics

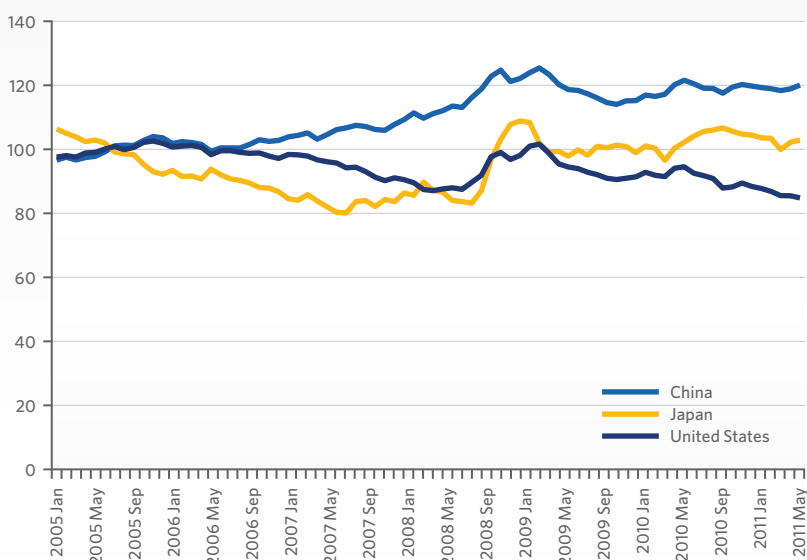
Figure 7: Current Account Balances



Current Account Imbalances

One of the positive outcomes of the recent economic downturn has been a correction of current account imbalances in the region. As shown in Figure 7, the US current account deficit peaked in 2006, and declined sharply in 2007-2009. Further improvement appears to have stalled, however, and there is a prospect of a modestly widening US current account deficit in the years ahead. At the same time, the current account surpluses of Southeast and Northeast Asia appear to again be on a rising trajectory. These imbalances may not be an economic problem as such, since they represent a stable or falling share of GDP, but widening deficit numbers in the US could become political fodder and lead to trade tensions, especially in a presidential election year.

Figure 8: Real Effective Exchange Rates



Exchange Rates

Since the beginning of the crisis the real effective exchange rates of the three largest economies of the Asia-Pacific have shown signs of adjustments. The US dollar's real effective exchange rate, for example, has depreciated by about 7 percent since the Lehman Brothers bankruptcy in September 2008 while the Japanese Yen has appreciated by 18 percent over the same period. The Chinese Yuan has only appreciated by 1 percent. Taking a longer time frame, however, the change in relative prices is greater: using 2005 as the base year and comparing it with June 2011, the IMF's REER shows that the Yuan has appreciated by 20 percent, the Yen by 3 percent, and the US dollar has depreciated by 15 percent over the period.

A Sustainable Recovery?

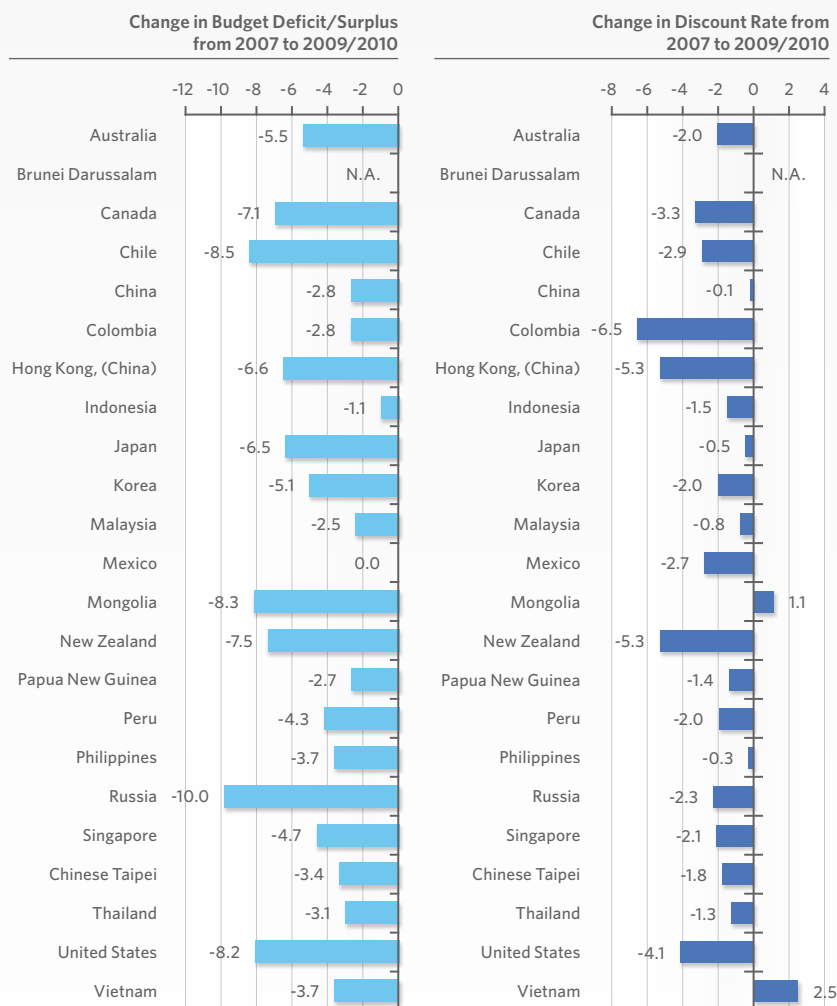
In 2009, a PECC task force on the global economic crisis looked at the expenditure patterns before the crisis and recommended adjustments that needed to take place for sustainable growth in the post-crisis period. To assess the implications of rebalancing, the task force used a simple simulation to calculate a pattern of expenditures in 2007 that would have brought U.S. deficits down to sustainable levels. For example, compared to their levels in 2007 (the last 'normal' year before the crisis), investment in Southeast Asia would need to increase by 5 percent, consumption in the United States would need to decrease by 2 percent, and consumption in China would need to increase by about 5 percent. For the external sector, the United States would need to increase its exports by 9 percent, while China and Japan would need to decrease their exports by about 4 percent compared to their levels in 2007.

The good news is that there are signs that rebalancing is beginning to take place but it is still too early to make a judgment on whether or not these structural changes are simply a result of the extraordinary economic conditions prevailing in the region. These adjustments are most obvious in the external balances (net exports). In 2007, China's net exports accounted for 9 percent of total GDP; by 2010, this had fallen to 4 percent. Likewise, the US' net exports were a negative 5 percent of GDP; by 2010, this had fallen to a negative 4 percent (*see annex Table 5 for details*).

However, while the news is positive on external demand, internal structural imbalances are still evident with high private consumption in deficit economies and low private consumption in surplus economies.

In China, the share of private consumption in GDP has fallen from 54 percent of GDP in 1990 to 36 percent in 2008 or by 0.96 percentage points over the past two decades. While the decline has moderated to 0.4 percentage point decline between 2008 and 2009, the persistence of a downward trend is not encouraging. Likewise, the United States is struggling to overcome its own structural imbalance, with consumption as a percentage of GDP remaining stubbornly high at 71 percent.

Figure 9: Fiscal and Monetary Expansion



Sources: IMF IFS, Mexico money market rate, WEO database, ADB and <http://www.cbc.gov.tw/>

Less Room to Maneuver

In response to the financial crisis that began in 2008, the economies of the region and the world adopted unprecedented coordinated stimulus policies to mitigate the impacts of the crisis. Economies of the Asia-Pacific region adopted stimulus packages of about US\$1.7 trillion.

As a result of the fiscal stimulus during 2007-2010, public deficits have increased as a percentage of GDP in the region over the past three years. Although some economies have more room to maneuver than others in the case of another downturn, there is a need to impose fiscal discipline at some point in the near future. Likewise, interest rates have been lowered to near zero in a number of Asia-Pacific economies.

Changing Asia-Pacific Trade Patterns

Rebalancing of demand in the Asia-Pacific region has had a modest impact on trade flows. North America has become a less important destination for Asian exports, but this trend predates the 2008 recession. In some sectors, as described below, there was relatively little transpacific trade to start with, despite very large numbers for the region as a whole. The following section provides a glimpse into the sub-regional dimensions of Asia-Pacific trade and they highlight the dominance of intra-regional trade in some of the most-traded product categories.

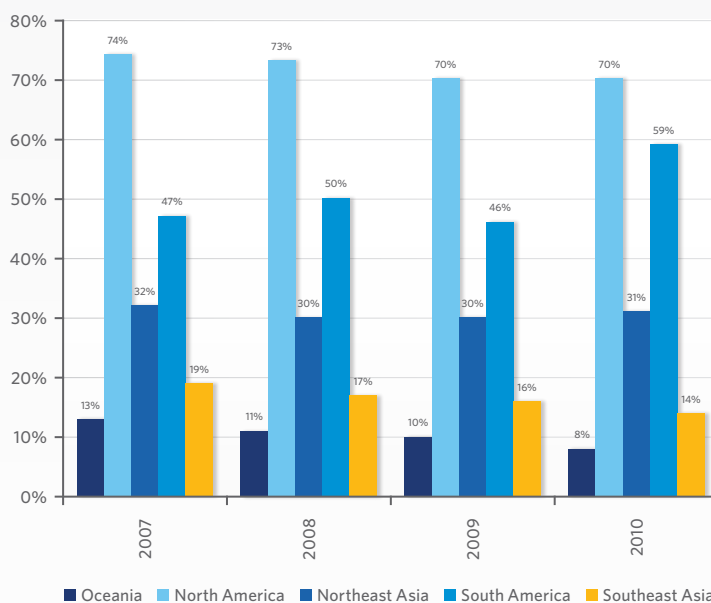
Exports to North America Slowing

Prior to the crisis, North America absorbed 44 percent of regional exports. During the 2008-2009 period, this dropped to 42 and 40 percent respectively. However, the picture is much more mixed when looking at sub-regional trade to North America.

Intra-North American exports still account for 70 percent of the sub-region's exports to the Asia-Pacific region, while South American exports to North America are also high at 59 percent.

However, transpacific trade flows tell a different picture. North America's share of Southeast Asia's exports to the region has been declining since 2007, from 19 percent in that year to 14 percent in 2010. The share of Northeast Asia's exports to North America compared to exports to the Asia-Pacific region as a whole has remained steady at roughly 30 percent.

Figure 10: Exports to North America



In 2010 intra-regional exports were worth US\$3.5 trillion or 63 percent of the region's total exports. However, this trade is dominated by a number of sub-regional relationships. Exports among Canada, Mexico and the United States (North America) account for 24 percent of total intra-Asia-Pacific exports, while exports among Northeast Asian economies account for another 21 percent of regional trade.

The top products exported in the Asia-Pacific region in 2010 were: electronic integrated circuits; petroleum oils derived from crude; cars; automatic data processing machines; petroleum oils derived from non-crude sources; telephones; car parts; computer parts; and monitors. As with overall flows, the trade pattern of many of these items is dominated by sub-regional flows rather than by trade more broadly across the Asia-Pacific region.

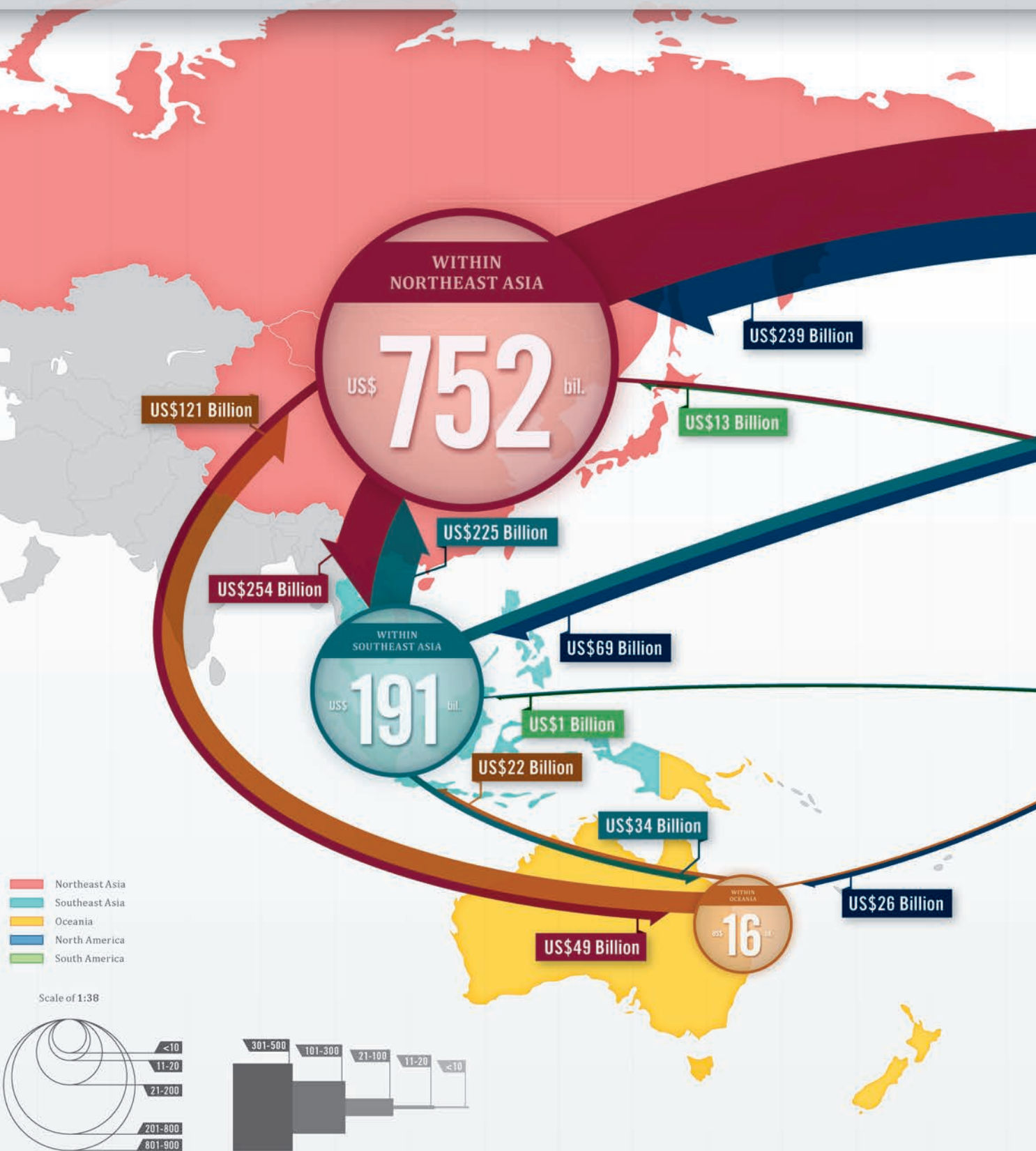
Figure 11: Asia-Pacific Trade Flows (US\$ billion, 2010)

Region	AP	NA	NEA	OCE	SA	SEA	World	AP Share
Asia-Pacific	3,542	1,455	1,349	124	76	537	5,591	63%
North America	1,236	861	239	26	41	69	1,781	69%
Northeast Asia	1,554	477	752	49	23	254	2,735	57%
Oceania	173	13	121	16	0	22	236	73%
South America	57	34	13	0	10	1	92	62%
Southeast Asia	521	70	225	34	2	191	746	70%

Source: COMTRADE, downloaded on 5 August 2011

INTRA ASIA-PACIFIC TRADE FLOWS (2010)

US \$3.5 Trillion = 63% of global goods export



The area of each circle is proportional to the total trade flows (Billions in U.S. dollars) within the region in the 2011.

The width of each band is proportional to the total trade flows (Billions in U.S. dollars) between the different region in the 2011.



WITHIN
NORTH AMERICA

US\$ **861** bil.

US\$477 Billion

US\$70 Billion

US\$13 Billion

US\$34 Billion

US\$41 Billion

US\$23 Billion

US\$2 Billion

WITHIN
SOUTH AMERICA

US\$ **10** bil.

TOP 10 EXPORT PRODUCTS WITHIN THE ASIA-PACIFIC

Export US\$ Billion	HS Product Code	HS 2007 Product Description
160	8542	Electronic Integrated Circuits
147	2709	Petroleum oils, crude
141	8703	Motor cars
138	8471	Computers
138	2710	Petroleum oils, other than crude
109	8517	Telephones
90	8708	Parts and accessories of motor vehicles
52	8473	Parts and accessories of computers and printers
49	8528	TVs and monitors
47	2601	Iron ores and concentrates

SOURCE: COMTRADE, downloaded on 5th August 2011

Exports of Electronic Circuits: Dominated by Intra-Asian Flows

Electronic circuits were the top exported good within the Asia-Pacific region in 2010 totalling US\$160 billion dollars. However, much of these flows were exports either within East Asia (Northeast and Southeast Asia combined) reflecting regional supply chains. The transpacific trade in electronic circuits (from East Asia across the Pacific) was just 8 percent of this trade.

Figure 12: Trade in Electronic Integrated Circuits

HS 8542	North America	North-East Asia	Oceania	South America	South-East Asia	Total
North America	2.5%	4.5%	0.0%	0.0%	6.0%	13.1%
Northeast Asia	2.2%	20.0%	0.0%	0.0%	9.7%	31.8%
Oceania	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South America	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast Asia	5.5%	35.6%	0.3%	0.0%	13.6%	55.0%
Total	10.2%	60.1%	0.3%	0.0%	29.3%	100.0%

Exports of Petroleum: Dominated by Intra-American Flows

Exports of petroleum oils and oils obtained from crude were the second highest exported product within the region in 2010 totalling US\$147 billion. As with trade in electronic circuits, this trade is dominated by sub-regional trading flows. Intra-North American trade accounted for 56 percent of the total exports of these products within the region, with another 10 percent coming from South America to North America.

Figure 13: Trade in Crude Derived Oil Products

HS 2709	North America	North-east Asia	Oceania	South America	South-east Asia	Total
North America	56.1%	0.6%	0.0%	0.0%	0.0%	56.7%
Northeast Asia	3.3%	13.1%	0.1%	0.0%	1.4%	18.0%
Oceania	0.2%	3.1%	1.1%	0.0%	2.3%	6.7%
South America	10.0%	1.0%	0.0%	1.5%	0.3%	12.8%
Southeast Asia	0.3%	1.0%	2.3%	0.0%	2.2%	5.8%
Total	69.9%	18.8%	3.5%	1.5%	6.3%	100.0%

Exports of Cars: Dominated by North American Trade

The third most trade product within the region was cars. Exports of cars within the region totalled US\$141 billion dollars in 2010, while 47 percent of this was trade within North America, 26 percent were flows from Northeast Asia to North America and another 9 percent.

Figure 14: Trade in Cars

HS 8703	North America	North-east Asia	Oceania	South America	South-east Asia	Total
North America	47.3%	3.7%	0.6%	0.8%	0.3%	52.7%
Northeast Asia	26.4%	8.8%	5.2%	1.6%	1.5%	43.5%
Oceania	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%
South America	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Southeast Asia	0.0%	0.4%	1.1%	0.3%	1.7%	3.5%
Total	73.8%	12.9%	7.0%	2.8%	3.5%	100.0%

Prospects for the Development of Transpacific Energy Trade

Even though oil and gas is the most traded product in the Asia-Pacific region, there is virtually no energy trade across the Pacific. The major energy importing countries of Northeast Asia source their oil and gas largely from the Middle East, Southeast Asia and Australia, while the United States imports energy from the Americas, West Africa, and the Middle East. Indeed, transpacific trade in energy products (oil, gas, and coal) accounts for only 1.4 percent of global trade in those products. The segmentation of energy markets between Asia and the Americas is seen in the sharp price differential for natural gas between the two regions, and – more recently – in a price differential for crude oil as well.

A number of developments in recent years have raised the possibility of transpacific trade in oil and gas, and the emergence of a more integrated and competitive market in energy products in the Asia-Pacific region. These include:

- a) The discovery of massive unconventional (shale) gas deposits in the United States and Canada which are creating a gas glut in North America;*
- b) Increased demand in Asian countries for less carbon-intensive energy sources, in particular a shift away from coal to natural gas;*
- c) Concerns about nuclear power following the Fukushima Daiichi disaster and the resulting search for clean alternatives to nuclear energy;*
- d) The changing energy balance in Southeast Asia, particularly Indonesia and Malaysia, which will soon be importers of natural gas*
- e) Rapidly growing investment by Asian national oil and gas companies in North American energy assets, especially in the Canadian oil sands, which has the third largest proven reserves of crude oil in the world.*

Even taking into account the higher cost of shale gas production, the substantial investments required to build pipelines and liquefaction plants, and the transportation cost of shipping LNG across the Pacific, North American gas could be competitive in Asia against existing suppliers, or at the very least serve as an secondary source of supply for Northeast Asian countries looking to diversify their energy imports or seeking more secure sources. Likewise, the prospect of North American crude oil exports to Asia is increasingly attractive given the gas glut in the United States and a widening price differential between benchmark West Texas Intermediate and Brent crude oil prices.

Favorable economics, however, do not guarantee that transpacific energy trade will become a reality, since there are political, regulatory, and environmental risks to be overcome, as well as a need for substantial capital investment. Nevertheless, the prospect of transpacific energy trade would be good news for Asia-Pacific regional integration, since it would lead to a more competitive energy market and more transparent pricing of energy products, likely resulting in a reduction in price differentials between Asia and North America. In addition, transpacific energy trade would allow both exporters and importers in the region to diversify their markets, and hence support energy security objectives.

Source: *Prospects for Transpacific Trade: Supplement to the State of the Region 2011-2012*

Trade in Services

Services are an increasingly important part of the region's economies. For the APEC region as a whole, the service sector accounts for 61 percent of jobs and 68 percent of value add. What has been most impressive is that the services sector's share of employment has almost doubled over the past 10 years. While services account for over 50 percent of value add in most APEC economies, services trade as a percentage of GDP is much lower with a much great range of importance ranging from as low as 5 percent to as high as 90 percent. This indicates a large amount of room for services trade to grow within the region.

Trade in services is an issue PECC has been looking at over the past year. Services exports for Asia-Pacific economies have grown by over 135 percent over the past decade. While the growth of services exports has been impressive, the Asia-Pacific region's share of global services exports has been declining over the same period from 42 percent to around 40 percent.

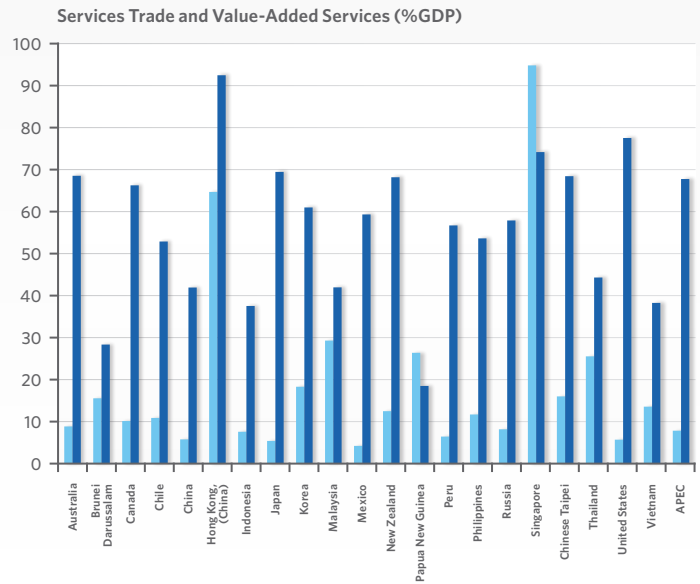
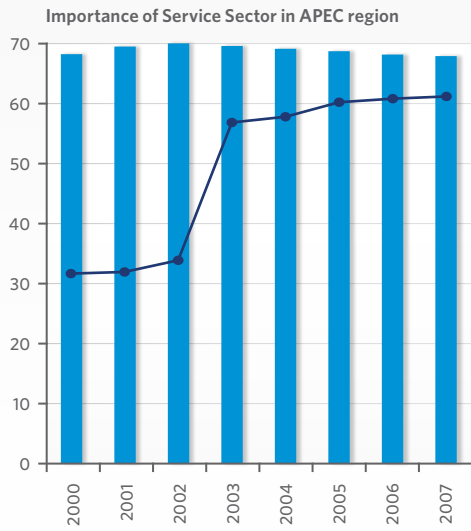
Global trade in services naturally experienced some decline in 2009 but much less so than the decline in trade in goods that year. Importantly, the APEC region experienced even less of a decline in 2009 than the global average, the outcome being that APEC economies gained in percentage share of global Services exports, a trend that continued, indeed intensified, into 2010. By 2010, the APEC region accounted for 40% of global services exports.

However, there is very little disaggregation in the official data; even the best national collections available cover at most 70 categories of services, as distinct from 7000 categories of goods. There is very limited data on the direction of services trade and where it exists it is for very aggregated groups of activities. There is no published official data on mode of international services supply. This makes it difficult for policy-makers to react to changes taking place in the business community.

It is important to recognize, in addition, that the services sector makes a much larger contribution to exports than its direct share because services are often integrated or bundled with goods. Some studies indicate that services account for 25 percent of the export value of some commodities, likely higher for manufactured goods.

A PECC study for the APEC Policy Support Unit (PSU) suggests that this low level of services trade has much to do with policy-related barriers to trade. Despite the fact that services is the sector with the highest degree of government intervention, and where the pay-off from trade and investment reform has been shown to be greatest, relatively little binding progress has been made in inter-governmental negotiation on services at either the global or regional level. The longer stalemate persists in the Doha Development Agenda, the more momentum appears to be building in the regional business community for a reinvigorated, stand-alone approach to services trade negotiations, if necessary on a critical mass plurilateral basis.

Figure 15: Services Trade



■ Value Added, Services (% of GDP) ■ Services, Trade (% of GDP)
● Employment, Services (% of total employment) ■ Value Added, Services (% of GDP)

Sources: Statistics APEC, World Trade Organization, Time Series on International Trade, International Labour Organization, Key Indicators of the Labour Market. (latest figures available)

CHAPTER 02

SURVEY OF OPINION-LEADERS

According to our panel of opinion leaders, the expectations for growth are at their lowest since the 2008 economic crisis. Sixty-five percent of respondents believe real GDP growth will be much weaker in the next twelve months compared to the previous year, with only 10 percent who feel economic growth will be stronger. This pessimistic outlook is in stark contrast to most forecasts by leading institutions, including the June update of the International Monetary Fund, which is expecting 3.6 percent real GDP growth for the region. In effect, our panel is predicting another economic contraction in the year ahead, albeit not as severe as in 2008-2009 (see Figure 1: Expectations for Growth).

The rising sense of pessimism is consistent across the region, even though the outlook for large emerging market economies is somewhat more positive. Even in the case of China, the number of respondents expecting growth to slow down in China narrowly exceeds those who believe in a rosier outlook. The only economy where the balance of opinion is in favor of stronger growth is India.

The gloomy outlook is most pronounced in the case of the United States and Europe where over 80 percent of respondents expect slower growth in the next 12 months. This finding is not surprising given that the survey was conducted on the heels of the US debt ceiling agreement and following a series of sovereign debt incidents in Europe (see Figure 2).

Figure 1: Expectation for Growth

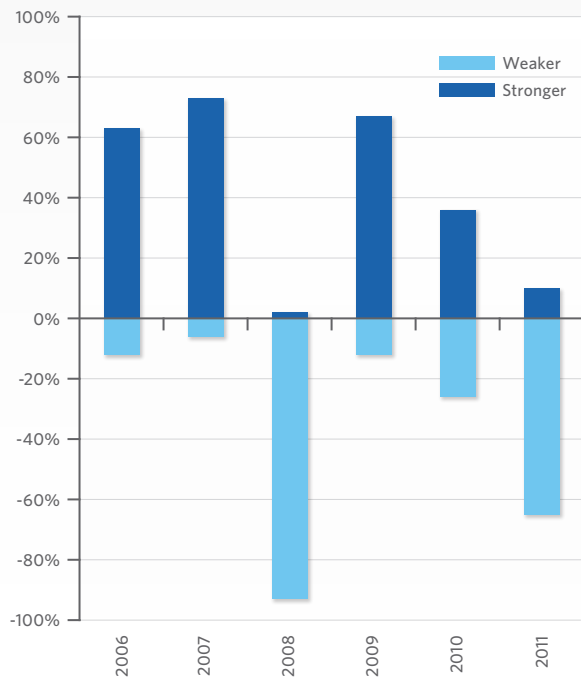
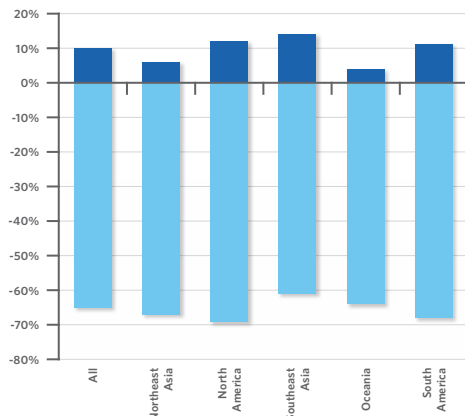
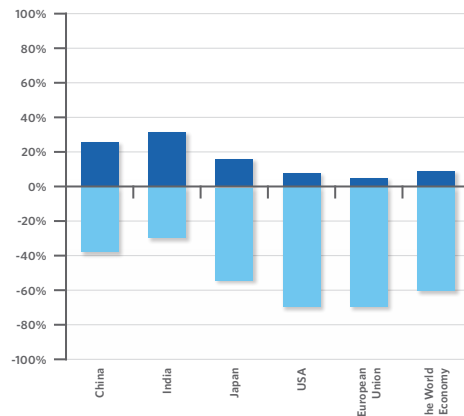


Figure 2: Expectation for Growth

Expectations for Global Growth by Sub-region



Expectations for Growth



Top 5 Issues for APEC Leaders' Meeting

The leaders of the Asia-Pacific region will gather in Honolulu in mid-November against this backdrop of a deteriorating economic outlook and possibly even an unfolding economic crisis. While the immediate challenge of any economic crisis will crowd out consideration of longer term priorities, the top five issues chosen by our respondents for APEC leaders to consider in Honolulu are as follows:

1. **A Free Trade Area of the Asia-Pacific**
2. **A green growth strategy for the region**
3. **The WTO Doha Development Round**
4. **Corruption**
5. **The APEC growth strategy**

There were significant differences in the ranking of issues by respondents from different sectors. Business respondents, for example, appear to have given up on the

WTO Doha round, ranking it 12th out of a list of 23 issues, and instead placing top priority on what is seen by many as "Plan B" – the FTAAP. Respondents from the government placed much higher priority on growth strategies than the business and non-government sectors. Both business and government respondents highlighted regulatory issues as top issues to be addressed by APEC economic leaders.

Respondents from Northeast Asia and South America placed more emphasis on growth strategies than respondents in other regions. Northeast Asian respondents were alone in listing financial sector regulatory reform as a top issue for leaders to address. Respondents from Oceania rated regulatory impediments to business as the top issue for APEC leaders. Southeast Asians and North Americans gave particular emphasis to addressing corruption.

Macroeconomic factors dominate risks to growth

Slow growth in the United States is the top risk facing economies in the region, followed by a possible sovereign debt crisis in the Euro-zone and concerns about energy prices and supply. Macroeconomic risk factors dominate opinion-leaders' thinking in this year's survey, with geopolitical and other factors ranking much lower. Almost all of the top ten risks are the same as last year, which suggests that opinion leaders are not confident about the state of the global recovery, even though it is into its second year.

While opinion-leaders from the different sectors generally shared the same views on the major risks to growth in their respective economies, some differences are worth noting. Respondents from the business community rank slower growth in China as a much higher risk than their counterparts in government and the non-government sectors. Business respondents were alone in ranking shortages of available talent and skills as a top-ten risk to growth.

Among the sub-regions of the Asia-Pacific, there was also convergence in views on the major risks. However, Southeast Asians are much more concerned about high food prices, ranking it as the highest risk to economic growth above a slowdown in the US economy. Both Southeast Asia and Oceania rank a shortage of talent/skills as a top ten risk to growth unlike respondents from other sub-regions.

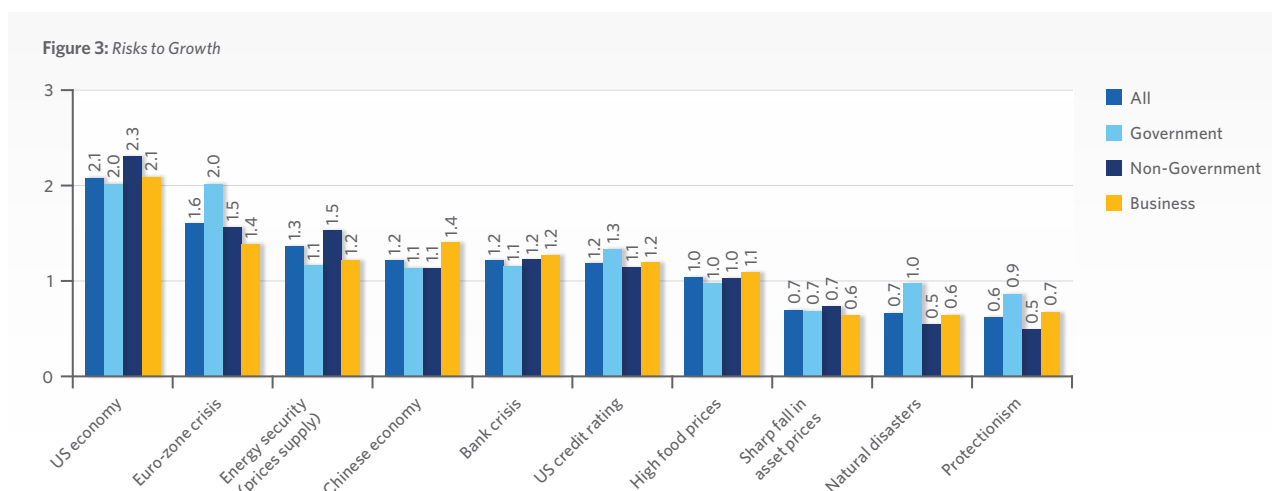
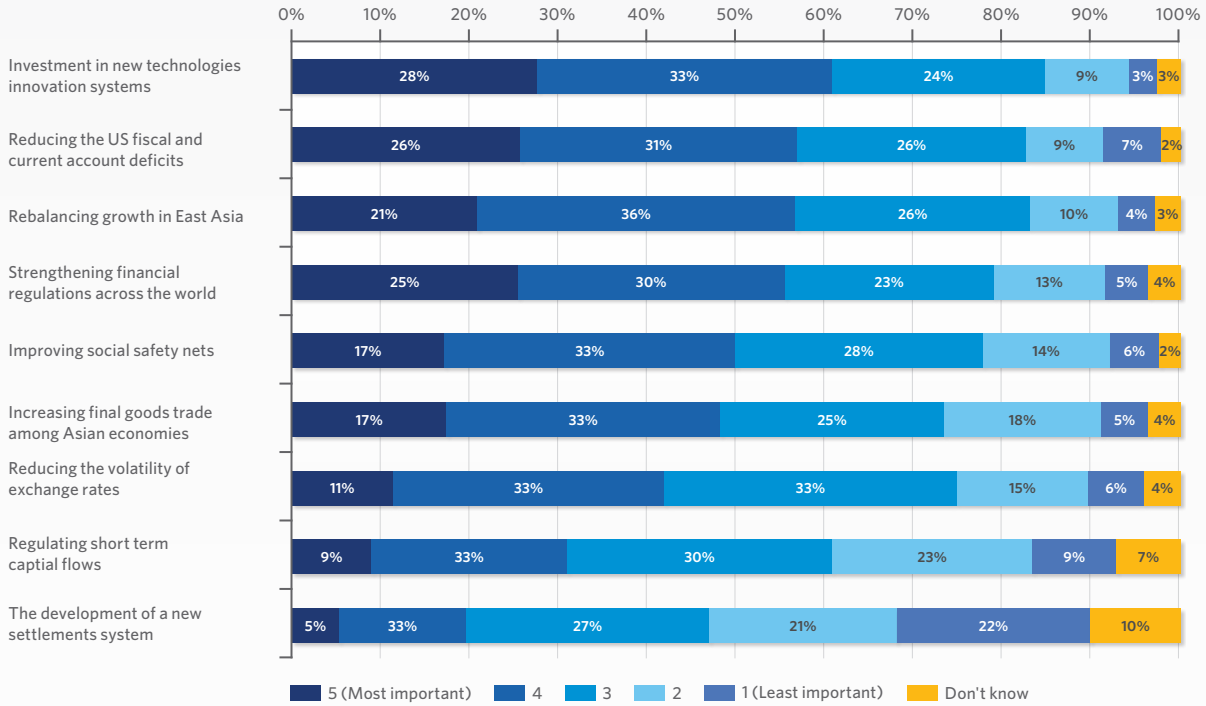


Figure 4: Policy Objectives for Achieving Sustained Growth in the Asia-Pacific Over the Next Five Years



Innovation Critical to Sustained Growth

As discussed in chapter one, the Asia-Pacific region needs period of structural reform to address internal and external imbalances that stand in the way of long-term sustainable growth. This is a theme that APEC leaders have also taken up, and we asked our panel to rank policy objectives for achieving sustained growth in the region over the next five years.

Investment in new technologies and innovation systems was ranked as the most important policy objective for achieving sustained growth, followed by a reduction in the US current account and fiscal balances and the need to rebalance growth in East Asia.

There were significant differences in policy priorities between the sub-regions. Respondents from Northeast Asia and Oceania rated a reduction in the US current and fiscal deficits as the most important policy objective, while Southeast Asians rated increasing final goods trade within East Asia as the most important. North Americans rated increasing domestic demand within East Asia as the most important. Not surprisingly, each sub-region is looking to other jurisdictions for solutions to challenges that they are facing and which are fundamentally regional in scope. There is an opportunity for APEC leaders meeting in Honolulu to take a broader, collective view of the problem, and to embrace solutions that involve all member economies.

Behind-the-Border Issues Biggest Challenges to Doing Business

Opinion leaders in the region have again emphasized behind-the-border barriers as the most important barriers to doing business in the region. With the steady fall in tariffs over the years, regulatory and other non-tariff barriers are emerging as more significant obstacles to international trade and investment.

The top three challenges identified by the panel are as follows:

Figure 5: Challenges to Doing Business in the Asia-Pacific

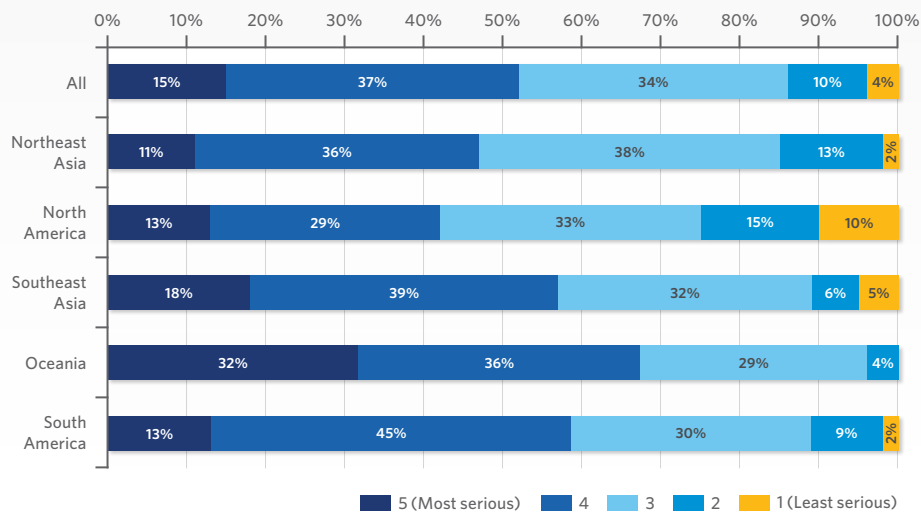
	Score from 1 to 5
Corruption	3.79
Regulatory impediments in overseas markets	3.50
Poor intellectual property rights protection	3.38
Protectionism in developed market economies	3.37
Multiple standards for products and services across the region	3.28
Protectionism in emerging markets	3.23
Complex rules of origin	3.21
Lack of openness to foreign direct investment	3.15
Inflexible labor markets	2.99

Regulatory Impediments a Region-Wide Concern

These findings resonate with the APEC focus this year on “regulatory coherence” and should provide the impetus and rationale for longer-term attention to this issue.

Respondents from Oceania were the most concerned about regulatory impediments, followed by South America and Southeast Asia. Respondents from business, government and non-government sectors were uniform in their assessment of the regulatory impediments.

Figure 6: Seriousness of Regulatory Impediments in Overseas Markets (by sub-region)



Pathways to Regional Economic Integration

At their meeting in Yokohama last year, APEC leaders said that a Free Trade Area of the Asia-Pacific should be pursued by developing and building on ongoing regional undertakings, such as the ASEAN+3, the ASEAN+6, and the Trans-Pacific Partnership (TPP). This approach was validated by our survey findings last year and is again confirmed by this year's results.

There was very broad support for the suggestion that "APEC members take the lead in promoting a plurilateral agreement on services" with 72 percent of respondents agreeing with the statement and only 5 percent disagreeing. Among the sub-regions, agreement on this suggestion was highest in South America followed by Northeast Asia. There was strong support for this idea from all sub-regions.

Although respondents on the whole tended to agree that "the conclusion of the WTO DDA is essential for APEC to meet its goals of regional economic integration", this was not a view that was shared across the region. Respondents from North America in fact disagreed with this statement, and there was only lukewarm support from respondents from Oceania. Respondents from Northeast Asia, however, strongly agreed with the idea that a conclusion of the DDA is essential for APEC to meet its objectives.

Figure 7: Pathways to FTAAP

Figure 7a: The Trans-Pacific Partnership (TPP)

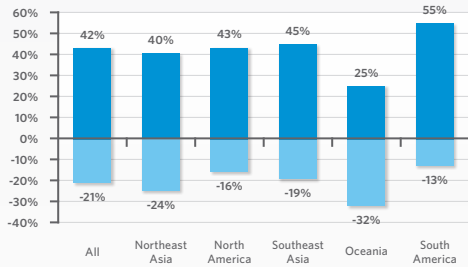


Figure 7b: The ASEAN Plus Agreements

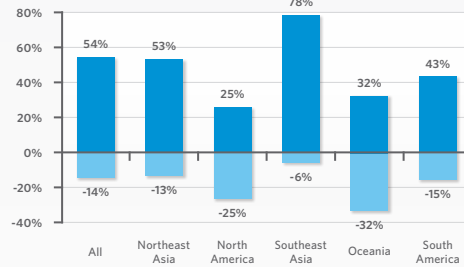
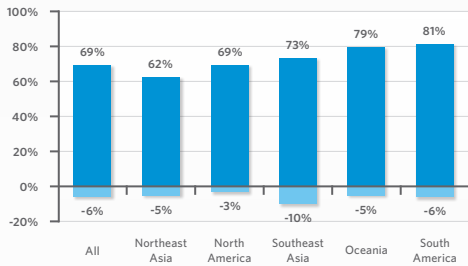


Figure 8: We Should Pursue Regional Economic Integration on Multiple Tracks

2010



2011

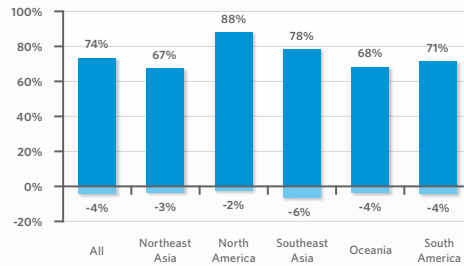
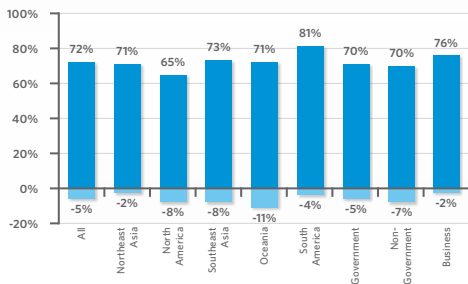


Figure 9: Trade in Services and the WTO DDA

APEC members should take the lead in promoting a plurilateral agreement on services



The conclusion of the WTO DDA is essential for APEC to meet its goals of regional economic integration

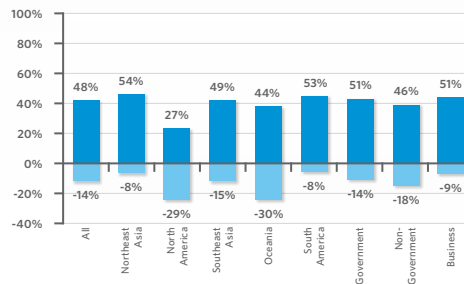
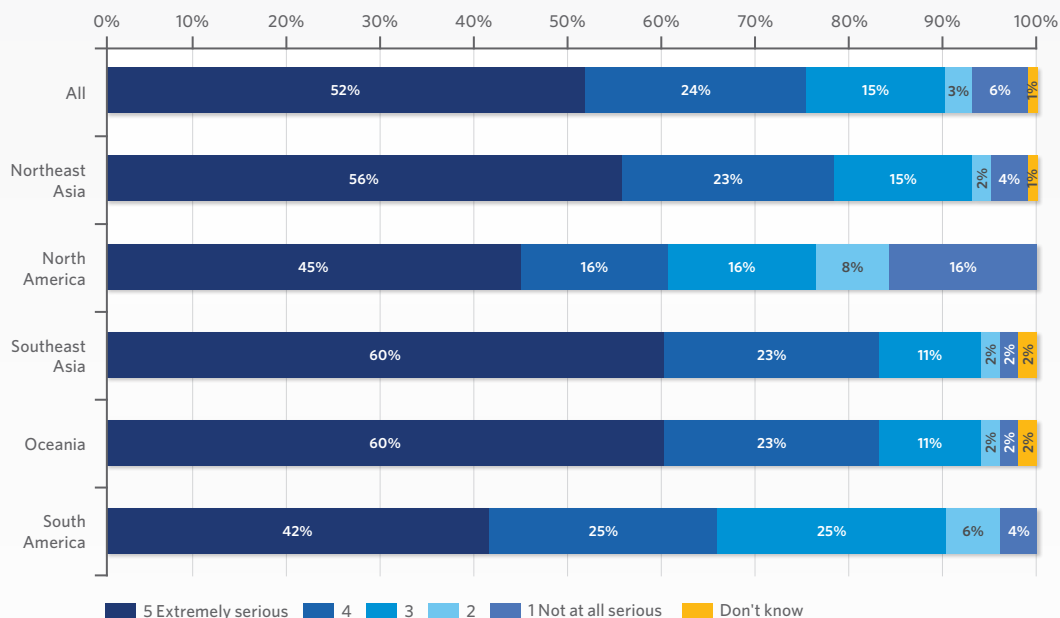


Figure 10: How serious is the issue of having safe and secure access to energy supplies for your economy?



Energy Security and Prospects for Transpacific Energy Trade

Energy products are among the most traded goods in the region and around the world. However, there is to date very little transpacific trade in energy, despite growing concerns – especially in East Asia – around energy security. Indeed, as a risk to growth, energy issues have consistently been ranked in the top 5 since the survey of opinion leaders was initiated. Over 50 percent of respondents rated safe and secure access to energy supplies as an extremely serious issue for their economy, with particular concern expressed by respondents from East Asia.

When asked about energy use in the future, respondents on the whole identified renewable energy sources as the most important source. There were, however, wide disparities among sub-regions, with respondents from Northeast Asia and Oceania placing more emphasis on conventional fossil fuels than other energy sources. Northeast Asians also continue to see nuclear energy as a more important energy source than unconventional fossil fuels, whereas other sub-regions believe unconventional fossil fuels should be a more important source of energy for their economies.

In terms of addressing energy security concerns, demand-side solutions such as increasing energy efficiency and promoting conservation were generally ranked as more effective than supply side responses such as further exploration and developing new sources of energy.

Figure 11: How important should different sources of energy be?

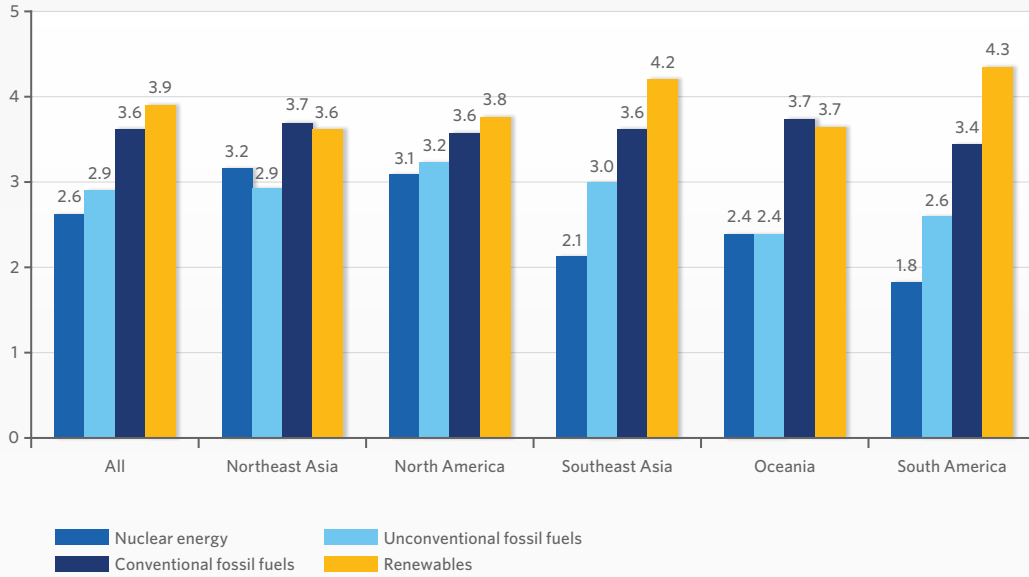
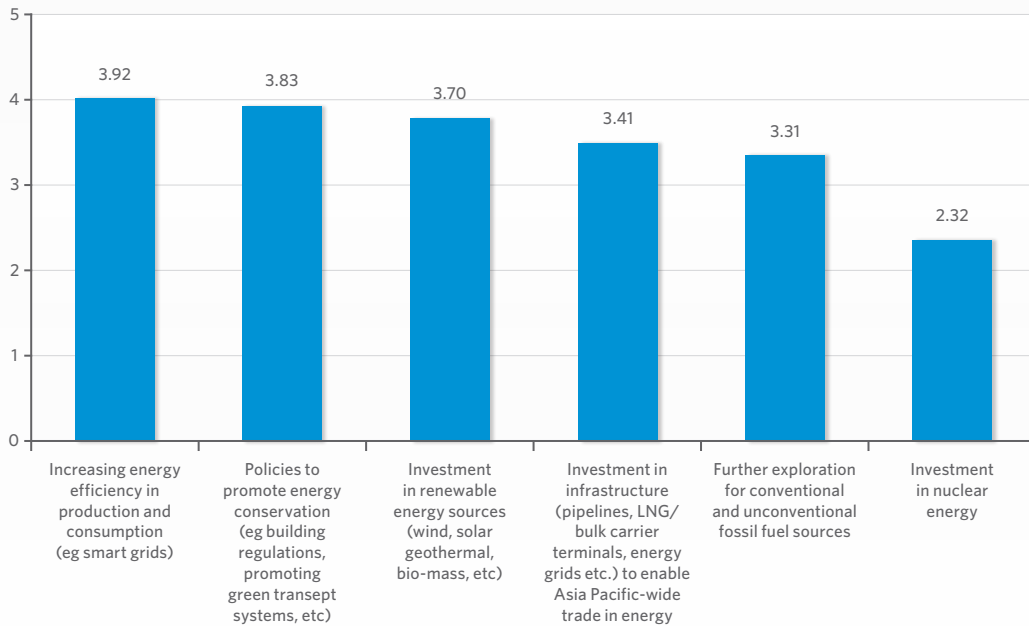


Figure 12: Effectiveness of Actions to Promote Energy Security (on a scale of 1 to 5 with 1 being not at all effective and 5 extremely effective)

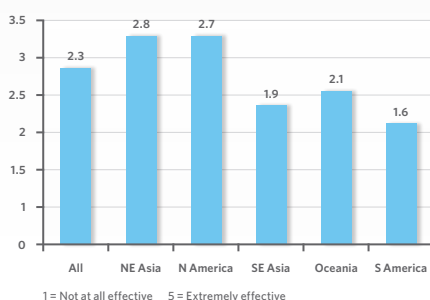


Nuclear Energy Post-Fukushima

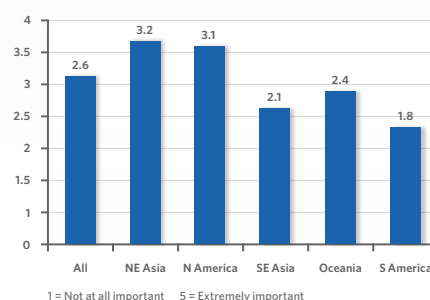
The future of the nuclear power industry has been cast into doubt following the Fukushima nuclear disaster in the wake of the tsunami that hit Northeast Japan in March 2011. Respondents on the whole ranked investment in nuclear energy lowest in terms of an effective energy security strategy, but views vary widely by sub-region. Northeast Asia and North Americans see nuclear power as a more important source of energy than other sub-regions, with Southeast Asians the least inclined to support this option.

Figure 13: Perceptions of Nuclear Power

How effective is investment in nuclear energy in addressing energy security concerns for your economy?



How important should nuclear energy be as a source of energy for your economy?



Reducing Greenhouse Gas Emissions

Since 2007 when APEC placed climate change on its agenda, there has been intermittent discussion on measures to reduce greenhouse gas emissions. APEC and G20 leaders have already agreed to phase out fossil fuel subsidies to encourage lower consumption. This policy was one of the top five measures identified by respondents as key actions to reduce greenhouse gas emissions. The other four priorities were technology transfer from developed to emerging economies; government subsidies for renewable energy sources; the introduction of carbon taxes; and investment in carbon capture and storage technologies.

There is significant diversity in the ranking of GHG reducing policies among the sub-regions, with respondents from Oceania generally not in favor of government subsidies for renewable energy and limited support as well from North American respondents.

Figure 14: Effectiveness of Policy Actions to Reduce Greenhouse Gas Emissions

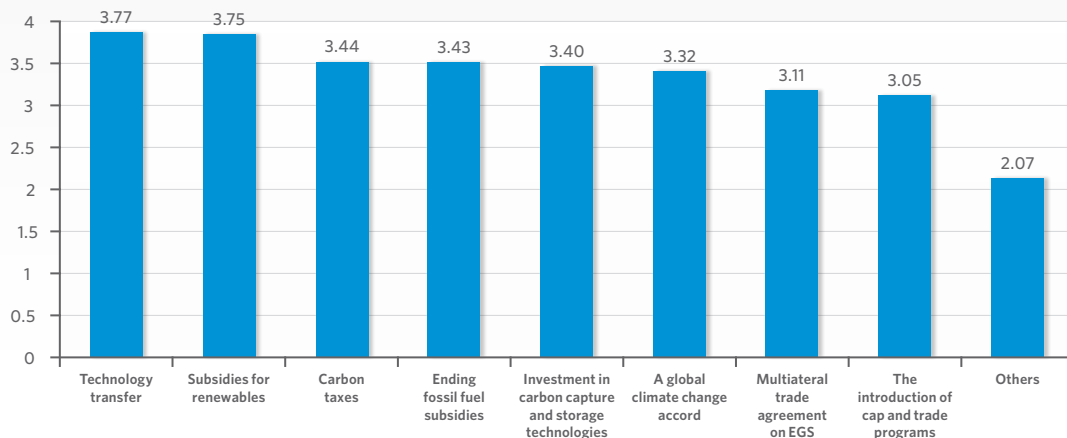
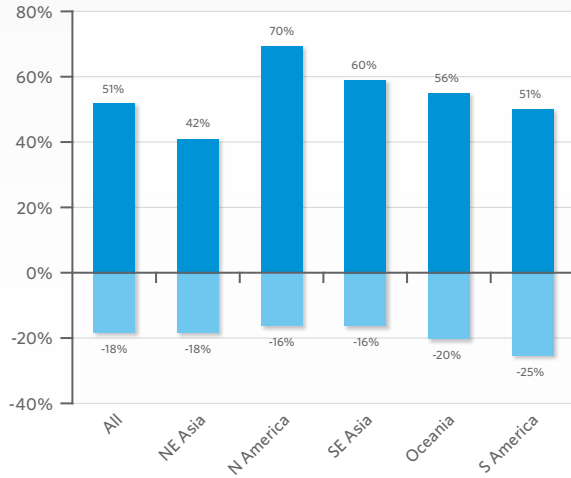
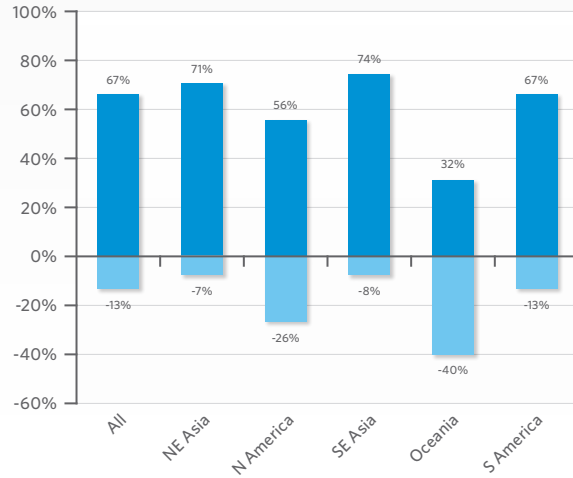


Figure 15: Views on Government Subsidies for Energy

Government should end subsidies for fossil fuels



Government should subsidize for renewable energy sources (wind, solar, geothermal, bio-mass, etc.)



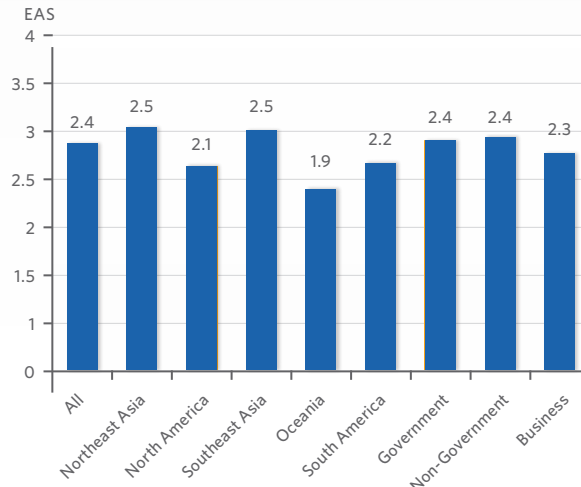
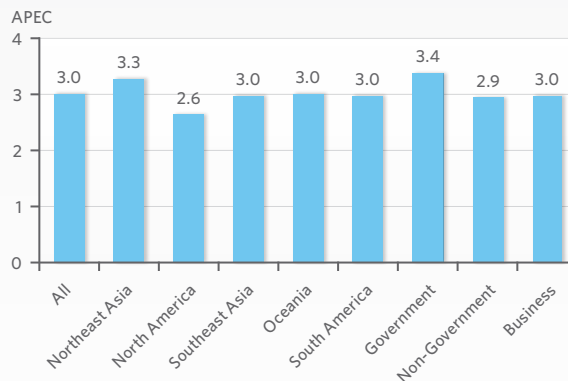
Regional Institutions

When APEC was founded in 1989, there was no other inter-governmental institution dealing with transpacific relations. The ASEAN Regional Forum (ARF) was founded in 1994, which primarily deals with political and security cooperation in the Asia-Pacific. The ASEAN Plus Three grouping, though not transpacific, includes much of the membership of APEC and was established in 1997 as a response to the Asian financial crisis. More recently, the East Asia Summit (EAS) established in 2005 has included the United States and Russia since 2010 at the foreign minister level and will include the heads of state of those two new members at its upcoming meeting in Indonesia in Bali in late October.

As a relatively well-established institution, APEC generally received higher ratings than other regional organizations. The results, however, are far from outstanding, with 23 percent of respondents giving APEC a low score of '1 - not at all effective' or '2' the next lowest. Only 10 percent of respondents gave APEC a score of '5 - extremely effective.'

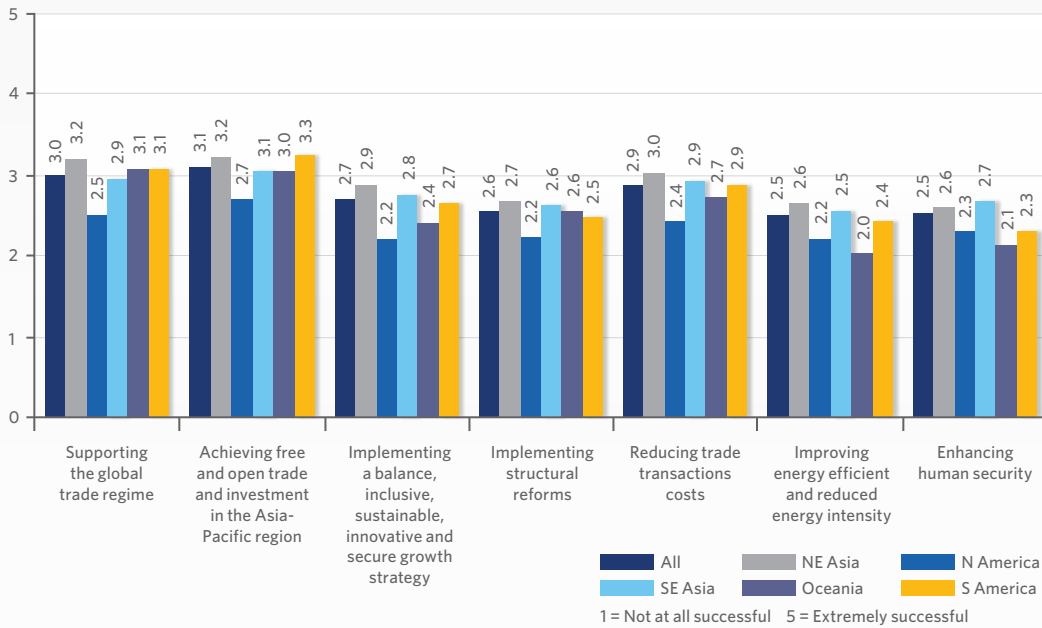
Respondents from Northeast Asia were the most enthusiastic about APEC's performance, while North Americans were the least impressed. In the case of the East Asia Summit, Northeast and Southeast Asians gave higher scores, whereas respondents from Oceania were more downbeat.

Figure 16: Views on Effectiveness of Regional Institutions



1 = Not at all effective 5 = Extremely effective

Figure 17: Evaluating APEC's Effectiveness in Implementing Objectives

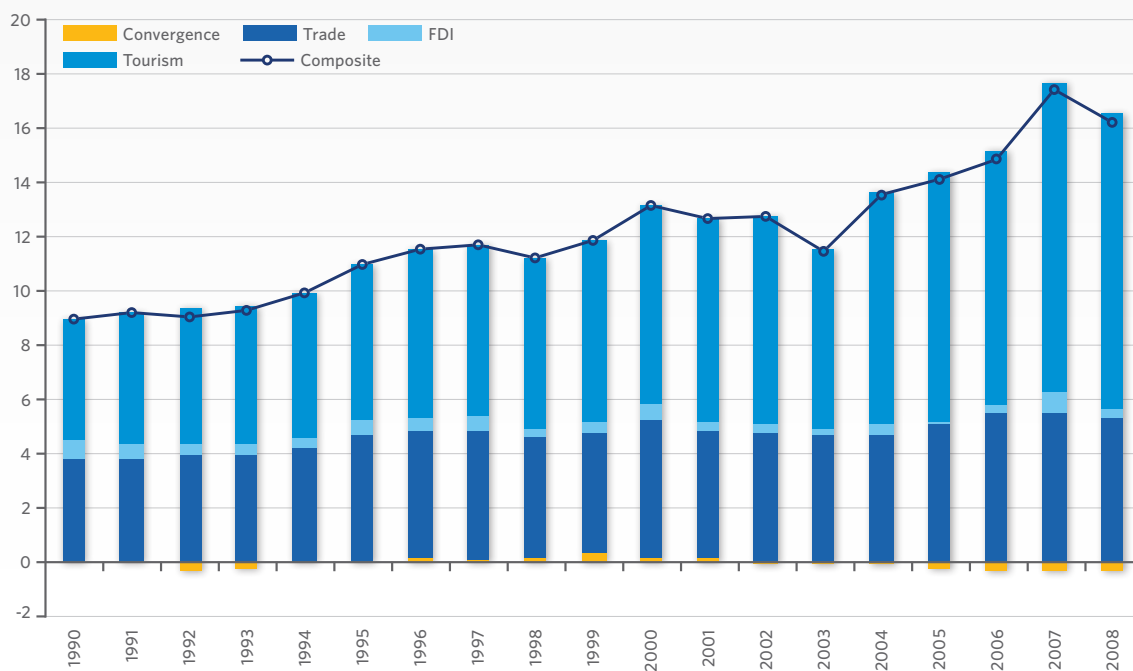


Respondents were also asked to evaluate APEC's performance in achieving its goals, as articulated at various leaders' meetings. APEC ranks reasonably well in its core trade and investment focus. However, the assessment is somewhat mixed, with feedback from North American respondents generally less favorable across all dimensions compared to other sub-regions.

CHAPTER 03

REGIONAL ECONOMIC INTEGRATION

Figure 1: Index of Regional Economic Integration



The Asia-Pacific region consists of diverse economies ranging from very small to the world's biggest three, from island states to continental economies. The region is also very diverse in terms of economic development, with a very wide range in GDP per capita. Despite these differences, members of APEC share in common the desire for closer economic integration and a commitment to regional cooperation.

The process of economic integration is commonly characterized by the liberal movement of goods, services, labor, and capital across borders. Since 2008, PECC has been tracking regional economic integration through a unique index that was developed specifically for this task. The index tracks regional flows in goods; people and investment as well as how much the region is converging in terms of key economic indicators: GDP per capita; non-agriculture share of GDP, the urban resident ratio, life expectancy and education expenditure to GDP.

As data availability is limited, the index is updated on a lagged basis. The latest version presented in this report uses data from 2008. Data was collected from 17 economies in the Asia-Pacific region, as follows: Australia; Canada; Chile; China; Hong Kong (China); Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Philippines; Singapore; Chinese Taipei; Thailand; United States and Vietnam.

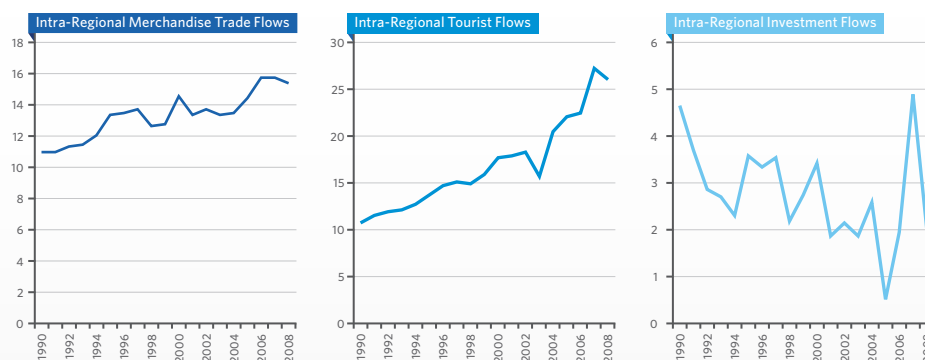
REGIONAL FLOWS AND REGIONAL DIVERGENCES SLOWING

This latest update to the index shows a fall in all components of the index between 2007 and 2008, and hence in the overall composite index as well. The fall in the index is the first in five years, and reflects the decline in intra-regional trade, investment, and people flows during the global recession of 2008, as well as the widening disparity in “development” indicators. While the reversal in regional economic integration may be due to special factors related to the recession, the “two-speed” recovery that has since taken place could set in motion a longer-term trend away from deeper regional integration.

While the decline in intra-regional trade and investment is very recent, and possibly temporary, there has been a longer-term decline in the “convergence” measure, which is a key component of the overall composite index. In previous years, the decline in the convergence measure has been more than compensated by increases in intra-regional trade and investment, resulting in a rise in the overall index. The convergence measure includes differences in per capital GDP, which have been widening for the entire period that the index has been calculated.

Figure 2 below shows the share of intra-regional imports and exports (to regional GDP), intra-regional FDI share (to regional gross capital formation), and the intra-regional tourist share (to total annual international tourists hosted by each of the sample economies). As illustrated in **Figure 2**: the trade share decreased in 2008, though slightly; the FDI share in 2008 dropped to its 2006 levels; and the tourist share also stopped its increase. In sum, though intra-regional trade and tourism shares only decreased a little in 2008, the intra-regional FDI share, a pro-cyclical indicator, dipped significantly as a result of the economic downturn.

Figure 2: Regional Flows



An important feature of this index is that it excludes trade and investment flows among geographically contiguous sub-regions:

- North America
- Southeast Asia
- Australia and New Zealand
- China, Hong Kong (China), and Chinese Taipei

This is to control for the effect that sub-regional flows may have on the index whereby a very high degree of integration within a sub-regional could lead to a false high measure of integration within the whole Asia-Pacific. As discussed in **Chapter 1**, some product flows within the Asia-Pacific are concentrated within a particular sub-region.

i. Merchandise Trade Flows

Merchandise trade flows (exports and imports) account for 35 percent of the weight of the index. From 2007 to 2008 intra-regional merchandise trade flows decreased slightly from 15.8 percent to 15.5 percent.

ii. Tourist Flows

The index measures the intra-regional tourist share as a proportion of worldwide tourists of the receiving economy. The number of intra-regional tourists tripled between 1990 and 2008 rising from 22 million to over 65 million.

iii. FDI Flows

The index's measure of FDI integration takes an economy's FDI flows from the rest of the region as a proportion of nominal GDP over the economy's gross capital formation. Intra-regional flows of FDI fell sharply between 2007 and 2008 from US\$329 billion to US\$155 billion.

CONVERGENCE CRITERIA

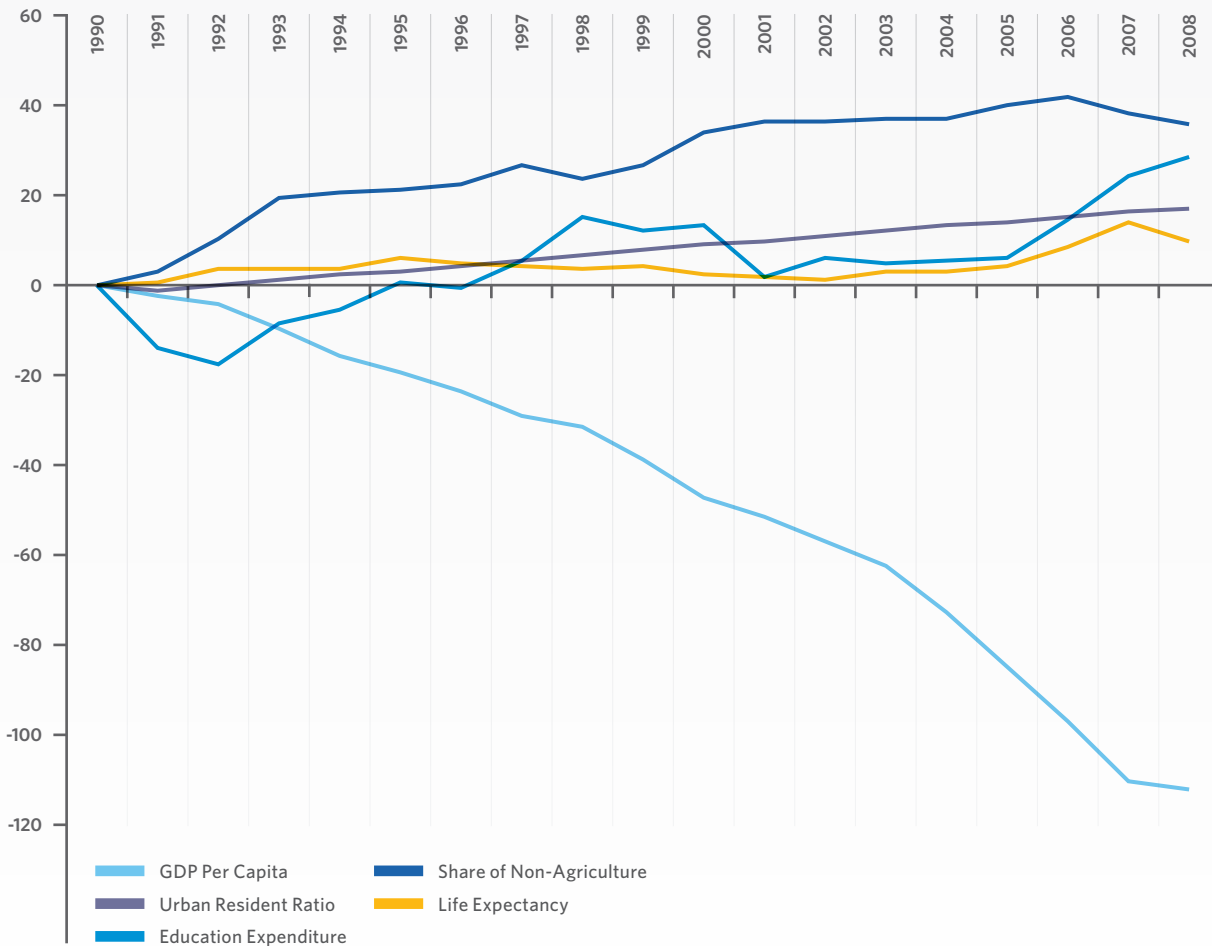
In addition to intra-regional flows, the index also includes convergence criteria. These are macroeconomic indicators of development. The index measures absolute deviation among the regional economies in each of the five dimensions and aggregates them into a 'convergence index' on a weighted basis.

The measures of convergence have been normalized to zero for the base year - 1990 - a positive result implies the absolute deviation of that year is smaller than that of the base year, i.e. there has been convergence compared to 1990; a negative number implies the opposite - greater divergence. As in previous versions of the index, there has been steady convergence across four of the five dimensions: share of non-agriculture; the urban resident ratio; life expectancy and expenditure on education. However, over the period GDP per capita has been diverging.

Table 1: Weightings of Convergence Criteria

Criteria	Weight
GDP per capita	0.21
Share of non-agriculture	0.21
Urban ratio	0.19
Life expectancy	0.13
Expenditure on education	0.26

Figure 3: Convergence Criteria



I. GDP PER CAPITA

Between 1990 and 2008, average incomes as measured by GDP per capita in the region increased from US\$9,785 to US\$23,338. The index measures divergence of each individual economy's GDP per capita from the regional average. A value of zero for an individual economy within the index implies that the economy's GDP per capita is exactly that of the regional average (US\$23,338).

On an aggregate basis, negative values indicate that income differences are increasing compared to their level in 1990 and positive values indicate that differences are narrowing.

Over the sample period, the divergence of incomes within the region has been growing, even though the latest figures comparing 2007 with 2008 suggest some moderation in the rate at which incomes are diverging. The long-term widening of per capital incomes in the region is a source of concern and could emerge as a serious constraint on deepening integration in the years to come.

II. DEVELOPMENT: SHARE OF NON-AGRICULTURE SECTOR

Another component of the convergence index is the share of the non-agriculture sector (manufacturing and services) in the economy. The regional average has been steadily increasing over the sample period, from 89 to 94 percent. Differences in the share of non-agriculture are much smaller than those of the other indicators used in the index.

III. URBAN RESIDENT RATIO

A similar measure of convergence to the share of the non-agricultural sector in GDP is the urban resident ratio. The regional average of urban residents to total population in 1990 was 63 percent; this has increased to over 70 per cent by 2008. The index shows that the divergence among Asia-Pacific economies has been steadily decreasing over time.

IV. LIFE EXPECTANCY

As with the other convergence measures, life expectancy in the region has also been increasing; from an average of 72 years in 1990 to 77 years in 2008. As with the degree of urbanization and share of non-agriculture GDP the divergence within the region is relatively small; the spread is just 13 years between the economy with the highest life expectancy and the economy with the lowest.

V. EDUCATION EXPENDITURE

The last deviation measure is public expenditure on education as a percentage of GDP. Over the period the regional average has increased from 3.6 to 3.9 percent. The deviation between regional economies' expenditure on education has been decreasing over time.

Table 2: Comparison of 2007 and 2008 indices

Economy	2008 (Chained)	2008 Ranking	2007	2007 Ranking	Rank Change
Hong Kong, (China)	488.41	1	312.11	2	+1
Singapore	266.91	2	325.83	1	-1
New Zealand	107.64	3	107.24	4	+1
Malaysia	58.21	4	56.6	6	+2
Korea	53.36	5	58.06	5	0
Australia	46.86	6	41.77	7	+1
Chinese Taipei	46.46	7	131.95	3	-4
Chile	23.22	8	17.23	9	+1
Thailand	17.24	9	23.58	8	-1
Japan	13.43	10	14.69	10	0
Mexico	9.68	11	9.47	11	0
Canada	6.16	12	5.86	12	0
Vietnam	5.8	13	3.1	13	0
Philippines	-7.7	14	-6.88	14	0
United States	-14.19	15	-14.14	15	0
Indonesia	-14.57	16	-14.33	16	0
China	-17.66	17	-18.86	17	0
Asia-Pacific	9.58		10.3		

Most Asia-Pacific economies increased their integration in the regional economy between 2007 and 2008 with a few exceptions: Singapore, Chinese Taipei, Thailand, and the Philippines. Much of the decrease in integration exhibited in these economies came as a result of significant drops in intra-regional flows of FDI. Note that the index results for 2008 are chained - unlike the index results in Figure 1 which are unchained. This is done to compare how economies and the region as a whole have changed from 2007 to 2008.

METHODOLOGY

Table 3: Weights of Different Dimensions of the Index

	Normalized
Convergence	0.078
Trade	0.349
FDI	0.154
Tourism	0.418
TOTAL	1.000

The index assigns weights to the variables using statistical methodology. Rather than assign weights based on the perceived importance of the different dimensions of integration, the index uses variations within the data to determine the weights.

An important feature of this index is that it excludes trade and investment flows among geographically contiguous sub-regions:

- *North America*
- *Southeast Asia*
- *Australia and New Zealand*
- *China, Hong Kong (China), and Chinese Taipei*

This is to control for the effect that sub-regional flows may have on the index whereby a very high degree of integration within a sub-regional could lead to a false high measure of integration within the whole Asia-Pacific. As discussed in **Chapter 1**, some product flows within the Asia-Pacific are concentrated within a particular sub-region.

The weights assigned to each dimension of the index are derived from the data itself. Flows of tourists within the region are 42 percent of the index; merchandise trade is 35 percent; investment flows are 15 percent; and the convergence sub-index is 8 percent.

The weightings for each dimension of the index are derived using principal component analysis – they are determined by the variation among the indicators themselves. What this means is that while the indexes weights change over time, they are more objective being derived from the data rather than the analysts pre-conceived notions of which factors are more important.

ANNEX

Table 1: GDP Growth in the Asia-Pacific Region

Economy	2007	2008	2009	2010	2011	2012	2013
Australia	4.6	2.6	1.3	2.7	3.0	3.5	3.5
Brunei Darussalam	0.2	-1.9	-1.8	4.1	3.1	2.6	2.1
Canada	2.2	0.5	-2.5	3.2	2.9	2.6	2.5
Chile	4.6	3.7	-1.7	5.3	5.9	4.9	4.5
China	14.2	9.6	9.2	10.3	9.6	9.5	9.5
Colombia	6.9	3.5	1.5	4.3	4.6	4.5	4.5
Ecuador	2.0	7.2	0.4	3.2	3.2	2.8	2.5
Hong Kong (China)	6.4	2.3	-2.7	6.8	5.4	4.2	4.2
Indonesia	6.3	6.0	4.6	6.1	6.2	6.5	6.7
Japan	2.4	-1.2	-6.3	3.9	-0.7	2.9	1.7
Korea	5.1	2.3	0.2	6.1	4.5	4.2	4.2
Malaysia	6.5	4.7	-1.7	7.2	5.5	5.2	5.1
Mexico	3.2	1.5	-6.1	5.5	4.6	4.0	3.4
Mongolia	10.2	8.9	-1.3	6.1	9.8	7.1	23.1
New Zealand	2.8	-0.2	-2.1	1.5	0.9	4.1	3.4
Papua New Guinea	7.2	6.6	5.5	7.0	8.0	5.0	1.5
Peru	8.9	9.8	0.9	8.8	7.5	5.8	5.7
Philippines	7.1	3.7	1.1	7.3	5.0	5.0	5.0
Russia	8.5	5.2	-7.8	4.0	4.8	4.5	4.3
Singapore	8.8	1.5	-0.8	14.5	5.2	4.4	4.3
Chinese Taipei	6.0	0.7	-1.9	10.8	5.4	5.2	5.1
Thailand	5.0	2.5	-2.3	7.8	4.0	4.5	4.7
United States	1.9	0.0	-2.6	2.8	2.5	2.7	2.7
Vietnam	8.5	6.3	5.3	6.8	6.3	6.8	7.2

Contributions to Weighted Growth in the Asia-Pacific (%)

	2007	2008	2009	2010	2011	2012	2013
Oceania	0.2	0.1	0.0	0.1	0.1	0.1	0.1
North America	1.0	0.1	-1.4	1.5	1.3	1.4	1.4
Northeast Asia	3.2	1.6	0.1	2.7	1.8	2.3	2.1
South America	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Southeast Asia	0.3	0.2	0.1	0.4	0.3	0.3	0.3
Developed	1.5	-0.1	-2.2	2.1	1.2	1.8	1.7
Emerging	3.3	2.1	0.9	2.7	2.4	2.3	2.3
Asia-Pacific	4.8	2.1	-1.2	4.8	3.6	4.2	4.0

Table 2: Inflation in the Asia-Pacific (CPI %)

Economy	2007	2008	2009	2010	2011	2012	2013
Australia	2.3	4.4	1.8	2.8	3.0	3.0	2.8
Brunei Darussalam	1.0	2.1	1.0	0.5	1.2	1.2	1.2
Canada	2.1	2.4	0.3	1.8	2.2	1.9	2.0
Chile	4.4	8.7	1.7	1.5	3.6	3.2	3.0
China	4.8	5.9	-0.7	3.3	5.0	2.5	2.0
Colombia	5.5	7.0	4.2	2.3	3.6	2.8	3.0
Ecuador	2.3	8.4	5.2	3.6	3.5	3.2	3.0
Hong Kong (China)	2.0	4.3	0.5	2.4	5.8	4.4	2.5
Indonesia	6.0	9.8	4.8	5.1	7.1	5.9	5.3
Japan	0.0	1.4	-1.4	-0.7	0.2	0.2	0.4
Korea	2.5	4.7	2.8	3.0	4.5	3.0	3.0
Malaysia	2.0	5.4	0.6	1.7	2.8	2.5	2.4
Mexico	4.0	5.1	5.3	4.2	3.6	3.1	3.0
Mongolia	8.2	26.8	6.3	10.2	16.4	16.0	8.5
New Zealand	2.4	4.0	2.1	2.3	4.1	2.7	2.4
Papua New Guinea	0.9	10.8	6.9	6.6	8.3	8.0	6.7
Peru	1.8	5.8	2.9	1.5	2.7	3.2	2.5
Philippines	2.8	9.3	3.2	3.8	4.9	4.3	4.0
Russia	9.0	14.1	11.7	6.9	9.3	8.0	7.1
Singapore	2.1	6.6	0.6	2.8	3.3	3.0	2.3
Chinese Taipei	1.8	3.5	-0.9	1.0	2.0	2.0	2.0
Thailand	2.2	5.5	-0.8	3.3	4.0	3.4	2.3
United States	2.9	3.8	-0.3	1.6	2.2	1.6	1.4
Vietnam	8.3	23.1	6.7	9.2	13.5	6.7	6.0

Contributions to Weighted Inflation in the Asia-Pacific (%)

	2007	2008	2009	2010	2011	2012	2013
Oceania	0.1	0.2	0.1	0.1	0.1	0.1	0.1
North America	1.4	1.9	0.0	0.9	1.1	0.9	0.8
Northeast Asia	1.2	1.9	0.3	0.8	1.4	0.9	0.8
South America	0.1	0.1	0.1	0.0	0.1	0.1	0.1
Southeast Asia	0.2	0.4	0.1	0.2	0.3	0.2	0.2
Developed	1.4	2.1	-0.3	0.8	1.2	0.9	0.9
Emerging	1.6	2.4	0.8	1.3	1.8	1.2	1.1
Asia-Pacific	3.0	4.5	0.5	2.0	3.0	2.1	1.9

Table 3: Current Account Balances (US\$ billion)

Economy	2007	2008	2009	2010	2011	2012	2013
Australia	-58.9	-47.2	-41.9	-31.7	-5.5	-30.7	-55.3
Brunei Darussalam	6.3	7.8	4.3	5.6	7.3	7.5	7.4
Canada	11.9	6.5	-38.1	-48.5	-49.1	-47.9	-44.2
Chile	7.5	-3.3	2.6	3.8	1.2	-3.2	-5.4
China	371.8	436.1	297.1	306.2	372.2	454.6	548.7
Colombia	-6.0	-6.9	-5.0	-8.9	-6.4	-7.1	-6.6
Ecuador	1.7	1.2	-0.4	-2.6	-2.6	-2.7	-2.8
Hong Kong (China)	25.5	29.5	18.0	14.8	12.7	14.7	16.8
Indonesia	10.5	0.1	13.9	6.3	7.3	3.7	-0.7
Japan	211.0	157.1	141.8	194.8	134.1	138.6	136.0
Korea	21.8	3.2	32.8	28.2	11.9	11.6	11.6
Malaysia	29.8	38.9	31.8	28.1	28.2	29.0	29.7
Mexico	-9.0	-16.3	-6.3	-5.7	-10.5	-13.5	-17.1
Mongolia	0.3	-0.7	-0.4	-0.9	-1.2	-1.5	0.2
New Zealand	-10.6	-11.5	-3.4	-3.1	-0.3	-6.9	-8.6
Papua New Guinea	0.2	0.8	-0.6	-2.3	-2.7	-2.0	-1.2
Peru	1.5	-5.3	0.2	-2.3	-3.4	-5.1	-5.0
Philippines	7.1	3.6	9.4	8.5	5.9	6.1	5.5
Russia	77.0	103.7	49.5	71.5	105.1	85.7	58.9
Singapore	48.5	27.6	34.9	49.5	51.8	50.6	50.0
Chinese Taipei	35.2	27.5	42.9	40.6	58.4	59.2	60.6
Thailand	15.7	2.2	21.9	14.8	9.1	7.1	6.0
United States	-718.1	-668.9	-378.4	-470.2	-493.9	-450.7	-439.8
Vietnam	-7.0	-10.8	-6.1	-3.9	-4.8	-5.1	-5.5

Current Account Balance by sub-region (US\$ billion)

	2007	2008	2009	2010	2011	2012	2013
Oceania	-69.3	-57.9	-45.9	-37.1	-8.5	-39.5	-65.1
North America	-715.2	-678.7	-422.8	-524.4	-553.4	-512.1	-501.1
Northeast Asia	742.5	756.4	581.7	655.1	693.3	762.9	832.7
South America	4.6	-14.3	-2.6	-9.9	-11.3	-18.2	-19.8
Southeast Asia	110.8	69.4	110.1	108.8	104.9	98.9	92.6

Table 4: Current Account Balances (% of GDP)

Economy	2007	2008	2009	2010	2011	2012	2013
Australia	-6.2%	-4.5%	-4.2%	-2.6%	-0.4%	-2.1%	-3.5%
Brunei Darussalam	51.1%	54.3%	40.2%	42.8%	44.6%	44.5%	44.5%
Canada	0.8%	0.4%	-2.8%	-3.1%	-2.8%	-2.6%	-2.4%
Chile	4.5%	-1.9%	1.6%	1.9%	0.5%	-1.3%	-2.1%
China	10.6%	9.6%	6.0%	5.2%	5.7%	6.3%	6.8%
Colombia	-2.9%	-3.0%	-2.2%	-3.1%	-2.1%	-2.2%	-1.9%
Ecuador	3.6%	2.2%	-0.7%	-4.4%	-4.0%	-4.0%	-3.9%
Hong Kong (China)	12.3%	13.7%	8.6%	6.6%	5.2%	5.5%	5.9%
Indonesia	2.4%	0.0%	2.6%	0.9%	0.9%	0.4%	-0.1%
Japan	4.8%	3.2%	2.8%	3.6%	2.3%	2.3%	2.2%
Korea	2.1%	0.3%	3.9%	2.8%	1.1%	1.0%	0.9%
Malaysia	15.9%	17.5%	16.5%	11.8%	11.4%	10.8%	10.3%
Mexico	-0.9%	-1.5%	-0.7%	-0.5%	-0.9%	-1.1%	-1.3%
Mongolia	6.3%	-12.9%	-9.0%	-15.2%	-13.3%	-14.0%	1.5%
New Zealand	-8.0%	-8.7%	-2.9%	-2.2%	-0.2%	-4.4%	-5.2%
Papua New Guinea	3.3%	10.1%	-7.6%	-23.7%	-24.2%	-17.6%	-10.6%
Peru	1.4%	-4.2%	0.2%	-1.5%	-2.1%	-2.8%	-2.5%
Philippines	4.9%	2.2%	5.8%	4.5%	2.9%	2.8%	2.4%
Russia	5.9%	6.2%	4.1%	4.9%	5.6%	3.9%	2.4%
Singapore	27.3%	14.6%	19.0%	22.2%	20.4%	19.0%	17.9%
Chinese Taipei	8.9%	6.9%	11.4%	9.4%	11.6%	10.9%	10.3%
Thailand	6.3%	0.8%	8.3%	4.6%	2.7%	1.9%	1.5%
United States	-5.1%	-4.7%	-2.7%	-3.2%	-3.2%	-2.8%	-2.7%
Vietnam	-9.8%	-11.9%	-6.6%	-3.8%	-4.0%	-3.9%	-3.8%

Current Account Balance by sub-region (% of GDP)

	2007	2008	2009	2010	2011	2012	2013
Oceania	-6.3%	-4.8%	-4.1%	-2.7%	-0.5%	-2.4%	-3.7%
North America	-4.3%	-4.0%	-2.6%	-3.0%	-3.1%	-2.7%	-2.5%
Northeast Asia	6.9%	6.0%	4.6%	4.5%	4.3%	4.4%	4.5%
South America	0.9%	-2.4%	-0.5%	-1.4%	-1.5%	-2.2%	-2.3%
Southeast Asia	8.7%	4.7%	7.6%	6.1%	5.3%	4.5%	3.9%

Table 5: Changes in GDP by Expenditure, 2007 to 2010

	Consumption		Government		Investment		Net Exports	
	2007	2010	2007	2010	2007	2010	2007	2010
Australia	56%	53%	17%	18%	29%	27%	-2%	1%
Brunei Darussalam	21%	24%	24%	23%	14%	17%	42%	36%
Canada	56%	58%	20%	22%	22%	22%	2%	-2%
Chile	55%	58%	11%	13%	20%	21%	14%	7%
China	37%	36%	14%	13%	40%	46%	9%	4%
Colombia	na	na	na	na	na	Na	na	na
Ecuador	na	na	na	na	na	Na	na	na
Hong Kong (China)	61%	64%	8%	9%	20%	22%	11%	6%
Indonesia	63%	57%	8%	9%	25%	32%	4%	2%
Japan	57%	58%	18%	20%	23%	20%	2%	1%
Korea	55%	53%	15%	15%	29%	29%	2%	3%
Malaysia	46%	49%	12%	13%	22%	21%	21%	18%
Mexico	68%	68%	11%	12%	22%	21%	-2%	-2%
Mongolia	na	na	na	na	na	Na	na	na
New Zealand	59%	58%	19%	20%	23%	20%	-1%	1%
Papua New Guinea	na	na	na	na	na	Na	na	na
Peru	62%	62%	9%	10%	22%	25%	7%	3%
Philippines	74%	72%	10%	10%	16%	16%	0%	3%
Russia	na	na	na	na	na	Na	na	na
Singapore	36%	37%	9%	11%	23%	25%	32%	28%
Chinese Taipei	na	na	na	na	na	Na	na	na
Thailand	53%	54%	12%	13%	26%	25%	8%	8%
United States	70%	71%	16%	17%	19%	16%	-5%	-4%
Vietnam	69%	69%	6%	7%	41%	36%	-17%	-11%

Source: IMF International Financial Statistics, Data for Brunei, China, and Vietnam data for 2009

Table 6: Government Surplus/Deficit as Percent of GDP

Economy	2007	2008	2009	2010
Australia	1.2	-0.8	-4.2	-4.3
Brunei Darussalam	na	na	na	na
Canada	2.2	0.1	-4.6	-4.9
Chile	8.2	4.0	-4.6	-0.3
China	0.6	-0.4	-2.2	-2.2
Colombia	1.7	2.2	-0.5	-1.0
Ecuador	na	na	na	na
Hong Kong (China)	7.7	0.2	1.1	...
Indonesia	-1.3	-0.1	-2.3	...
Japan	-1.9	-3.4	-9.4	-8.4
Korea	3.5	1.2	-1.7	...
Malaysia	-1.1	-1.9	-4.3	-3.6
Mexico	na	na	na	na
Mongolia	2.9	-4.9	-5.4	...
New Zealand	4.0	0.4	-3.5	-4.3
Papua New Guinea	2.6	-2.2	-0.1	...
Peru	4.9	3.7	-0.8	0.6
Philippines	-0.2	-0.9	-3.9	...
Russia	6.8	5.1	-6.0	-3.2
Singapore	9.3	4.6	-1.5	4.6
Chinese Taipei	-0.2	-0.8	-3.6	...
Thailand	1.2	1.0	-2.4	-1.9
United States	-0.7	-4.5	-10.9	-8.9
Vietnam	-1.4	-0.1	-7.6	-5.1

Source: IMF WEO, ADB

Table 7: Asia-Pacific Policy Rates

Economy	2007	2008	2009	2010
Australia	6.39	6.67	3.28	4.35
Brunei Darussalam	na	na	na	na
Canada	4.25	1.50	0.25	1.00
Chile	6.00	8.25	0.50	3.12
China	3.33	2.79	2.79	3.25
Colombia	11.50	11.50	5.50	5.00
Ecuador	na	na	na	na
Hong Kong (China)	5.75	0.50	0.50	0.50
Indonesia	8.00	9.25	6.50	6.50
Japan	0.75	0.30	0.30	0.30
Korea	3.25	1.75	1.25	1.25
Malaysia	3.50	3.25	2.00	2.75
Mexico*	7.658	8.276	5.933	4.910
Mongolia	9.85	14.78	10.82	10.99
New Zealand	8.25	5.00	2.50	3.00
Papua New Guinea	7.38	7.00	6.92	6.00
Peru	5.75	7.25	2.05	3.80
Philippines	4.28	6.00	3.50	4.00
Russia	10.00	13.00	8.75	7.75
Singapore	2.30	0.84	0.27	0.22
Chinese Taipei [†]	3.38	2.00	1.25	1.63
Thailand	3.75	3.25	1.75	2.50
United States	4.25	0.13	0.13	0.13
Vietnam	6.50	10.25	8.00	9.00

Source: IMF IFS

* Mexico's figures are based on money market rates

† <http://www.cbc.gov.tw/>

