

**United Nations  
Department of Economic and Social Affairs**

**Report on the Project LINK Meeting**

**26-28 October 2009  
ESCAP  
Bangkok**

**Prepared by:  
*Global Economic Monitoring Unit  
Development Policy and Analysis Division***

# CONTENTS

<b>CONTENTS</b> .....	<b>2</b>
<b>1. INTRODUCTION AND OPENING OF THE MEETING</b> .....	<b>3</b>
<b>2. WORLD ECONOMIC OUTLOOK</b> .....	<b>3</b>
<b>3. COMMODITY PRICES AND ECONOMIC IMPLICATIONS</b> .....	<b>10</b>
<b>4. REGIONAL OUTLOOK</b> .....	<b>12</b>
DEVELOPED COUNTRIES .....	12
UNITED STATES.....	12
JAPAN.....	13
WESTERN EUROPE.....	14
ECONOMIES IN TRANSITION AND NEW EU MEMBERS .....	16
AFRICA.....	18
WESTERN ASIA.....	20
EAST AND SOUTH ASIA .....	21
LATIN AMERICA AND THE CARIBBEAN.....	23
<b>5. THE GLOBAL FINANCIAL CRISIS AND POLICY IMPLICATIONS</b> .....	<b>24</b>
GLOBAL FINANCIAL CRISIS.....	24
EUROPEAN ECONOMIES DURING THE CRISIS .....	27
ASIAN ECONOMIES AFTER THE CRISIS .....	29
THE ECONOMIC CRISIS IN RETROSPECT.....	31
<b>6. TOPICS IN APPLIED ECONOMETRICS</b> .....	<b>33</b>
<b>7. ANNEXES</b> .....	<b>37</b>
AGENDA .....	38
ECONOMIC OUTLOOK REPORTS.....	43
LIST OF PARTICIPANTS .....	44

## 1. Introduction and opening of the meeting

The Fall 2009 Project LINK Meeting was held from October 26-28 in Bangkok, hosted by the United Nations Economic and Social Commission for Asia and Pacific. Around 80 participants from 30 countries attended the meeting. The agenda comprised the following main themes: the global and regional economic outlook; developments in the global commodity markets; the financial crisis and its policy implications; and topics on applied econometrics. This document summarizes the presentations and discussions.

The LINK Global Economic Outlook prepared for this meeting by the Global Economic Monitoring Unit of DPAD-DESA, the LINK country reports prepared by country participants, and most of the documents presented at the meeting are available on the United Nations website (<http://www.un.org/esa/policy/>) and the Project LINK Research Centre website at the Institute for Policy Analysis at the University of Toronto (<http://www.chass.utoronto.ca/link/>).

**Mr. Nagesh Kumar (MPDD/ESCAP)** welcomed the participants, expressing his thanks to DESA, the University of Toronto and his colleagues in ESCAP for arranging the meeting.

**Mr. Rob Vos (UN-DESA)** also welcomed the participants, highlighting major improvements in global economic conditions one year after the beginning of the financial crisis, but emphasized serious challenges and risks remain for the outlook in the coming year.

## 2. World Economic Outlook

**Mr. Rob Vos (UN-DESA)** presented the global economic forecast of UN-DESA/LINK, the major downside risks for the world economy and the key policy challenges. He pointed out that a shift in economic policy thinking had occurred with Keynesian counter-cyclical measures having come to play a central role in the responses to the global economic crisis.

Mr. Vos noted that the global economy had moved away from the abyss. In the course of 2009, equity markets rebounded and risk premiums narrowed. The spreads on emerging market bonds have almost come down to pre-crisis levels. The strong correlation of those spreads signals a high degree of contagion during the current crisis. International trade flows and industrial production have also started to recover, though the recovery has so far not been strong and it may take years to get back to pre-crisis levels. The prices of oil and non-oil commodities, particularly minerals, have rebounded in the course of 2009 as industrial production recovered and the United States dollar weakened.

Mr. Vos emphasized that significant fragilities remain in the world economy. While financial market conditions have improved significantly, credit conditions in Europe and the United States remain tight. Parts of the banking sector remain under strain and both

households and firms need to further reduce leverage. In many developing countries, the major exception is China, bank lending is still relatively weak and there are high rollover risks in the private sector. The trade recovery also looks fragile.

Mr. Vos presented the growth prospects for the world economy. He pointed out that UN-DESA expected a mild recovery in 2010, with global growth forecast at 2.4 per cent, compared to -2.2 per cent in 2009. The global trade volume is also expected to rebound in 2010 following the deep slump in 2009. Overall, the global economic recovery is likely to be less synchronized than the downturn. Asian economies, in particular China and India, are expected to lead the recovery, while developed economies and economies in transition will move only slowly out of recession. The recovery is forecasted to be particularly sluggish in the EU-15 area and in South-eastern Europe. Among developing regions, gross domestic product (GDP) declined in Western Asia and Latin America in 2009; Africa experienced a decline in GDP per capita.

Mr. Vos noted that the risks are mostly to the downside. A premature exit from the fiscal stimulus provided by Governments poses a severe risk for the global recovery. So far, the recovery has been largely driven by increased fiscal expenditures and the restocking of inventories, with private demand remaining weak. At the global level, the fiscal stimulus measures are estimated to account for 2 per cent of world gross product in 2009, and slightly less in 2010. The global stimulus is, however, unbalanced as many developing countries, and particularly the least developed countries, do not have the capacity to use fiscal policy as a counter-cyclical instrument. Despite the mild economic recovery over the past six months unemployment continues to rise and the employment outlook for 2010 is grim. In many developed economies there are increasing fears of mounting public debt (above 100 per cent in several of them). A second major risk for the global economy is related to a re-widening of the global imbalances, which had narrowed in the first half of 2009. As net external debt of the United States continues to increase, better macroeconomic policy coordination will be needed to reduce the risk of a hard landing of the United States dollar.

Mr. Vos concluded his presentation by identifying the major policy challenges. First, counter-cyclical fiscal measures must continue to play a key role in policy-making. This also implies additional support for low-income countries. Second, effective policy coordination is needed to achieve truly sustainable and balanced global growth. In this context, the recent G20 agreements should be regarded as a starting point for a new framework for international policy coordination. Such a framework requires a stronger focus on outcomes (for instance, limiting the macroeconomic imbalances of the surplus and the deficit countries) and more institutionalized and binding mechanisms (beyond the G20). Third, the systemic flaws of the international financial system that led to the current crisis need to be fully addressed. Comprehensive financial sector reform must be complemented by reform of the global reserve system. By giving a greater role to special drawing rights, the dependency of the global economy on the United States dollar can be reduced.

**Mr. Prakash Kannan (IMF)** presented the latest forecasts and downside risks for the world economy against the backdrop of the international financial crisis as outlined in the IMF's *World Economic Outlook*. After providing an overview of the current situation and the forecast for the years ahead, he shed light on the major risks to the outlook. He finally highlighted the major policy challenges for the global economy.

Mr. Kannan stressed that the worst of the global financial crisis was probably behind us as the global recession was ending and the recovery was in the works. World trade has started to rebound during the second quarter. The Purchasing Managers' Index (PMI) has also begun to recover, while the monthly average prices of stocks started to move up since February 2009 in advanced and emerging economies. The financial conditions have also begun to normalize in advanced economies, where the interbank and corporate spreads decreased significantly. In emerging markets – although there is a huge difference across regions – equity markets also rebounded over the same period while interest rate spreads of sovereign and corporate bonds declined. Mr. Kannan pointed out that public support had been crucial in easing financial stress, although such measures had come at a significant cost. The balance sheets of many central banks have increased tremendously. The sum of the different types of supports for the financial and others sectors provided by the Governments and central banks of advanced and G20 emerging economies correspond to about 30 per cent and 15 per cent of their GDP.

Mr. Kannan stated that the IMF anticipated global growth to pick up in 2010, but he also warned that the recovery was expected to be sluggish with aggregate growth of about 2.9 per cent. Advanced economies are emerging from recession and are expected to grow by 1.3 per cent in 2010. Meanwhile, many emerging and developing economies are forecast to post relatively solid growth in 2010. This is particularly the case for Asian developing economies where average growth is predicted to reach 7.4 per cent in 2010. By contrast, growth in the Central and Eastern Europe (CEE) economies, in the Baltic States as well as in the Commonwealth of Independent States (CIS) will remain more than 3 percentage points below the average growth rate during the period 1998 and 2007 with growth in 2010 estimated at about 2.0 per cent.

Looking back in history, Mr. Kannan stated that financial crisis had led on average to longer and more severe recessions followed by weaker recoveries as output and private consumption recovered much slower. The current situation does not seem to contradict this stylized fact as the pace of the recovery remains seriously constrained by tight financial conditions. In advanced economies, corporate spreads continue to be above pre-crisis levels and consumer confidence also remains low, as the employment outlook is still bleak. Moreover, the boost to growth from fiscal support is also expected to diminish as fiscal balances deteriorate and public debt levels rise. In emerging economies, the general financial conditions have stabilized, although lower grade borrowers will struggle to get new loans.

Mr. Kannan presented the key factors that are shaping the recovery and the medium-run perspectives. He stated that the rebalancing must involve two dimensions. First, private

demand needs to replace public demand. Second, additional demand in external surplus economies needs to make up for slowing demand in external deficit countries. Looking back again in history, Mr. Kannan highlighted that banking crises were typically associated with large and permanent output losses. Thus, the global economy will be swimming against a strong tide where imbalances will decline in the short-term – as the saving rates are expected to increase in deficit countries and lower oil prices will reduce the surplus of oil economies – but come back in the medium- or long-term as the IMF has not yet seen a real structural readjustment.

Mr. Kannan identified three downside risks and one upside risk to the global economic outlook. On the downside, he first warned against a premature withdrawal of public support, based on the notion that the recovery was self-sustaining or due to reduced public appetite for fiscal support, as this could trigger another decline in global demand. Second, Mr. Kannan highlighted that the progress in repairing financial sector balance sheets had been slow. Third, he emphasized that the independence of central banks had been questioned and that there had been a huge loss of fiscal credibility. On the upside, Mr. Kannan pointed out that we may underestimate the positive effects of reduced uncertainty and greater confidence.

Mr. Kannan concluded his presentation by pointing to the policies needed to reconcile short- and medium-run requirements. In particular, he stressed the need to maintain accommodative fiscal and monetary policies. He also emphasized that we should prepare for unwinding central bank balance sheets. Moreover, Governments must also be ready to cut future fiscal deficits and set up medium-term adjustment plans, supported by strong fiscal frameworks with clear rules and enforcement mechanisms. In addition, Mr. Kannan said that it was crucial to identify weak assets with stress tests and to recapitalize financial institutions.

Going forward, Mr. Kannan stated that policy frameworks would need to be rethought, notably with a view to enhancing self-stabilizing properties of economic systems. The reform of the financial system should include better regulation and market discipline, the implementation of further counter-cyclical measures and greater international collaboration. To this respect, it is essential to strengthen automatic stabilizers in the fiscal and labor market areas, because asset busts have proved difficult to foresee. Finally, Mr. Kannan noted the need to broaden the objectives of monetary policy and to develop new tools to help maintain financial stability as well as to enhance stronger coordination and collaboration between monetary and financial policymakers.

**Hans Timmer (Development Prospects Group, World Bank)** asked whether developing countries could lead the global recovery, noting that there were very strong signs of recovery in East Asia. China's latest quarter of growth was 8%, boosted by strong fiscal policy. But the question was how important is this for the world as a whole, particularly in the area of global investment.

Domestic demand in East Asia represents 6% of world domestic demand compared to the US at 30%. The growth dynamism of the recent past has been due to exports and

intermediate demand which were absorbed by US imports, so this would indicate that the US consumer will still ultimately drive the global recovery. But despite their small absolute share, the developing country contribution to global growth was three times that of the advanced economies, and in investment, the East Asian share in the world total is 25%, but their contribution to world investment growth is 1.5 times that of the US. So if investment is to lead the recovery then the developing economies are important.

The world has already successfully dealt with a US slowdown; US growth was slowing as early as 2006, and then after the financial crisis in 2007, consumption and imports completely stalled, but the rest of the world was strong; investment was very strong in developing countries in 2007. This boosted US export growth to 10% providing strong support to GDP growth. But this all changed after the collapse of Lehman Bros. in September 2008; all developing economies were hit on their domestic side with both consumption and investment falling, but this was not an impulse from the US through trade. Note the contrast. In the first months into the crisis, the decline in import growth in developing countries was much greater than the decline in their exports, indicating that there was a separate negative impulse from domestic demand, while in high-income economies the reverse was true. This was because there was more fiscal space in high-income countries and so they were better able to pursue countercyclical policies to mitigate the effect on domestic demand. The problem is that the stimulus would have been more effective if directed to developing countries.

The acute phase of the crisis is now over, especially in financial markets, and industrial production and trade have stabilized. The global rebound is led by emerging Asia. There is a very strong inventory cycle and counter cyclical policies are in place, but these will be of short duration, so a double dip or at least slowing in second half of 2010 is probable. After this the recovery will depend on whether other components of demand pick up.

There are a number of longer term issues. It will take a many years of decent growth to repair the damage from this episode. Looking at industrial production in levels, there's a clear turning point but it remains well below its pre-crisis level; four years of cumulative growth have been lost. So far interbank spreads have come down and equity prices have rebounded, but there are important differences across regions and sectors due to vulnerabilities. Emerging market spreads have fallen, but not to pre crisis levels. Volumes of lending to developing countries have rebounded, but most of this rebound is government not private sector lending. Before the crisis most lending was by the private sector, but this is now held back by increased caution, and tightened regulation.

Output gaps are at historically large levels, and growth is not forecast to be above potential so they will not close by 2011, and consequently labour markets will be weak with unemployment continuing to increase through 2011.

A key policy issue is to find the right balance in exit strategies, with concerns more to the danger in premature exit. There is an additional consideration, however. Standard fiscal policy, boosting domestic demand will increasingly be inappropriate for many countries,

and instead should shift to policies that support long run growth potential or in some cases to smooth the transition from the high growth phase of development to a new period of lower growth and less impetus from investment. This latter applies to countries in central Europe and some developing economies. This is the transition that proved such a painful experience in Japan.

Finally, he pointed out that the consequences of the crisis in low income countries have been forgotten in the current situation. At the global level these countries have little impact, but the long term damage could be greater for low income than for middle and high income countries.

### *Discussion*

A representative from the Philippines asked for further elaboration on inflation risks. Mr. Kannan answered that since the output gap is still negative and is expected to remain so until 2013, inflation is not a major risk at the world level. However, he added that in developing Asia, this might be different as economies are growing faster and the region continues to receive significant capital inflows. Mr. Byron Gangnes added that United States data currently did not signal any risk of inflation.

Another participant asked for clarification of confidence intervals in the forecast. Mr. Kannan said that giving confidence intervals for forecasts was a tricky issue. He added that the projection for growth was still skewed to the downside. Mr. Vos responded by indicating that he had not talked about confidence intervals. He said that it was hard to give precise and scientific values to confidence intervals in forecasting and that merely looking at previous errors might not be the best indicator. Usually, he and his team work on alternative scenarios. He also added that it was important to look at longer perspectives in order to avoid a repetition of past mistakes and to be able to face future challenges such as ageing populations and climate change concerns.

Mr. Gangnes then inquired about the implications of ageing populations. Mr. Kannan replied that the implications of ageing societies were more important for economies in surplus like Germany or Japan, since it was more difficult to reduce surpluses under these conditions. Mr. Vos added that the *World Economic and Social Survey 2007* had addressed the issue of ageing populations and its impact on savings around the world. The main aspect was that more transfers to older people will be needed. Hence, in countries that have not finished their demographic transition or in economies where pension systems are still underdeveloped, the Governments will have to take care of old people. This may increase the pressure on government budgets.

Mr. Pingfan Hong commented that we would need two caveats for judging the recovering of the world economy to “normal” situation. First, we should use the pre-crisis risk premiums as the benchmark to assess the normalization of credit markets, as those premiums were too low, particularly for risky borrowers. Secondly, we should not use the pre-crisis growth rate as the benchmark to assess the ‘permanent’ loss of output, as the pre-crisis growth trend was not sustainable. Mr. Kannan responded that in the IMF study

the authors were very careful about pre-crisis trends. In all cases, the three years prior to the crisis were excluded when computing the trends. Regarding the risk premium, Mr. Kannan supported the view that the spreads had been too low prior to the crisis.

Another participant asked whether the speakers saw new risks of emerging bubbles and whether regulatory reform had been concluded. Mr. Vos replied that it would probably take time for new bubbles to form and that the risks in the short-run were limited. However, he pointed out that regulation was still a big issue. He mentioned the case of new forms of derivatives, like in the life insurance sector and emphasized that broader financial regulations needed to be implemented.

Juan Rafael Vargas (Costa Rica) asked about the \$US, noting that surplus countries have large reserves so that they want a stable \$US, but then they will remain in surplus. He also noted that confidence in the \$US was due to good policy makers in the United States. He also asked about the linkages between the macro forecast and environmental concerns.

Rob Vos said that for poor countries to fix the climate and still grow would require significant financing flows. Investment must go to the energy sector and renewable sources. The cost would go down with larger investment, but would need a public investment agenda to drive investment into green energy. And this was a way out for the global imbalances as investment would be targeted towards developing countries.

Hans Timmer said that the global imbalances were already rebalancing before the crisis. In the US the imbalance was already declining in 2006 as domestic demand slowed - savings increased with the deflating housing bubble and was coupled with fiscal prudence. But this rebalancing wasn't obvious because the current account was distorted by the sharp rise in oil prices. In China there were already policy changes moving away from subsidizing manufacturing and exports. But the crisis and subsequent policy reactions may have wrecked the rebalancing. In the US, the household balance has improved but now the fiscal balance has deteriorated dramatically. In China, policies to boost consumption and services have given way to a renewed concentration on the manufacturing sector. This is good in the short run but not in the long run, where it will simply necessitate higher exports. On green growth, he said that for high income countries it was a matter of restructuring growth, but developing countries need to concentrate on higher growth (particularly potential). Energy is increasingly a constraint, but the solution is not to transfer technology so that energy sectors get larger in developing countries, but rather to find ways grow with less energy, as well as taking into account environmental concerns.

A question was asked about whether developing countries and Asia in particular could generate enough import demand to drive global growth. Mr. Timmer responded that we have already seen the reverse, that reduced Asian demand for capital goods hurt developed country export growth.

Alex Izurieta (UN-DESA) noted that with such a high investment contribution to growth in some Developing countries, its share in output would continue to rise and questioned whether this was sustainable. He said it might be more sustainable to raise consumption growth through policy measures.

A question was asked about Africa's contribution to global growth through its role as an energy supplier and whether debt relief could be used to kick start growth in other countries in the region.

Hans Timmer said that export-led strategies were wrong for many higher income developing countries. But he noted that exports did not lead the downturn in growth in most developing countries rather it was due to the financial crisis and integration into the global economy. The drop in imports was much larger than the drop in exports. And maybe this was a reason to rethink export led growth although opening and the attendant increase in exports brings benefits on the supply side.

### **3. Commodity prices and economic implications**

**Willy Meyers (University of Missouri-Columbia)** started with a review of recent developments in the agricultural commodities market. There has been a small rebound in 2009, although prices are still below their levels of 2008. The exception in this regard is sugar, which is still in a soaring phase due to a very poor crop in India. In the dairy market, producers are squeezed by the combination of higher feed prices and lower dairy product prices.

The latest production data indicate that output responded to higher prices, although production is lower on a year-on-year basis for wheat, coarse grain and rice. In parallel to this, stock levels have increased, and real US farm prices are forecast to move slightly lower.

Regarding the link between agricultural commodity prices and oil prices, Willy Myers pointed towards two possible scenarios. First, higher oil prices induce stronger demand for ethanol, driving up corn prices. Second, in the case of falling oil prices, the renewable fuel standard ensures a mandated quantity demanded, to some extent de-linking oil prices from corn prices. Although energy prices are considerably below their peak levels, upward price pressure is still strong, especially in developing countries. Looking ahead, a number of questions arise, such as in the context of climate change policies and potential changes in biofuel policies.

**Robert Kaufmann (Boston University)** pointed out that at the last meeting, oil prices stood at around \$100 pb, before falling to about \$40 pb and rising back up to \$80 pb. The actual price trajectory followed one of the scenarios outlined at the last meeting. The current forecast does not regard the recent price moves as an aberration but envisages a

fairly strong recovery. This is largely due to the combination of an only slight increase in OPEC capacity and demand that is pushing back up towards capacity levels.

Robert Kaufmann elaborated on the possible role of speculation in the spike and collapse of oil prices. In a quantitative analysis, the one-step-ahead out-of-sample forecasts performed well until 2003. After that, the model shows a bad performance, one possible explanation for which might be a speculative bubble that supersedes fundamentals in both directions. He pointed out that there did not seem to have shown any change in market fundamentals that could have underpinned the sharp price movements that started in 2004.

**F. Gerard Adams (Northeastern University)** presented the actual situation in the metals and minerals commodity markets. Looking at commodity prices on a monthly basis for the five broad categories of commodities (food, beverages, raw materials, metals and energy), data shows that prices highly fluctuated – sharp decline in late 2008 and then a sharp rise in early 2009. Metal prices in particular illustrate well the recent high volatility in commodity markets: for instance, copper price went up 90 per cent between January 2009 and September 2009.

Mr. Adams discussed several factors that could explain the actual situation in the metals and minerals commodity markets. On the demand side, swings in China helped prices to go up. In turn, the demand from China should have been offset by the deep recession in developed economies. On the supply side, several production failures may have had a relatively weak impact on the actual trend. Changes in the value of the dollar, as well as speculative activity have definitely played a more important role, although the latest may be only a short term effect. Another major factor is the change in transportation and production costs, rising final prices.

In a longer term perspective, Mr. Adams questioned if the actual upward trend in commodity prices could be considered a leading indicator of improving demand conditions and a deteriorating US dollar.

### *Discussion*

In response to a question of Rob Vos, Robert Kaufmann pointed out that he did not expect any meaningful effect of any climate change agreement on oil prices. This is much more relevant for coal. Gerard Adams pointed out that the effect of such agreements, stimulating the use of alternative sources of energy, might lead to an increase in agricultural prices due essentially to a competition for the use of land.

Hans Timmer asked how FX rates had been incorporated in the model. Robert Kaufmann pointed out that he added FX rates and stated his view that the link was not from FX rates to oil prices but, instead, the other way round.

In reply to a question whether there had been any fundamental change in the oil market, especially on the supply side, Robert Kaufmann explained that an analysis of oil stocks as

well as the role of OPEC as the marginal supplier did not help to explain the sharp swings in oil prices. Absent these more fundamental explanations, it seems possible to argue that speculation did play a significant role.

Regarding a question on a possible minimum oil price, he explained that oil production entails high investment costs but low operating costs. Consequently, a fall of oil prices below operating costs seems very unlikely.

## **4. Regional outlook**

### ***Developed countries***

**David Turner (OECD, Paris)** stated that recovery was underway but would probably be slow in OECD countries. Financial conditions are improving, at least on the spreads.

Trade is starting to rise and stock-building (the pace of accumulation of inventories) starts to move upwards. The output gap generated during the crisis may be in the order of 6 per cent of aggregate GDP. Improved conditions are apparent for all OECD countries, most in particular for the UK, which benefits from a favourable exchange rate.

However, the recovery will be slow as unemployment is high and stimuli will fade away. The recovery will be dragged by adjustments in balance sheets of households in the US and the UK. In addition, business investment is substantially below historic averages of previous recessions. This may protract economic recovery, but it may also give scope to an upside risk, i.e. business investments rising too quickly once confidence returns.

The sizes of fiscal deficits are so large that consolidation efforts are going to be tremendous in the next few years. If the financial markets (investors) feel like government debt is going to be unbearable, then the pressures will rise onto interest rates. However, in most OECD countries considerable tightening won't happen until about the end of next year. What will likely be scaled back is 'structural measures' and employment promotion efforts.

While fiscal consolidation and scaling back employment measures may imply some adjustment, this leads as well to an opportunity to improve efficiency of fiscal and employment policy.

### ***United States***

**Hung-Yi Li (UN-DESA, New York)** said the economic situation in the United States was stabilizing. The recovery will however be slow and will perhaps take about 3 years. By decomposing growth of aggregate demand by its various factors, a critical feature of

the United States economy in the last 2 years was the negative contribution of business investment and inventory adjustments to growth.

The behaviour of the households is very much dependent on the housing market. A dramatic deterioration over the last three years has wiped out about 20% of household wealth. But the indicators are starting to turn around, such as house prices.

The analysis of inventories is also a telling story. The sales to inventory ratio in the retail sector has been stable but recently it has declined dramatically. The same can be told for the industrial aggregates. In sum, production has been decreasing and sales relied heavily on cutting inventories. There is still some slack, which suggests that recovery is not going to be strong. Meanwhile, consumer demand will continue to be sluggish, not only because of balance sheet adjustments but also because of the unemployment situation. Thus, it seems normal that households will be adjusting their consumption since the fix costs like mortgages and consumer credit payments continue to be a burden.

The other problem is that high unemployment is going to continue to push back the real wage, with the implication that consumer demand is going to be sluggish for long. This means that unemployment will likely continue to rise.

Finally, inflation is not going to be a concern in the immediate horizon.

In the outlook, apart from the sluggish recovery of consumption and investment, the relatively slow recovery elsewhere may hold a possible back contribution of next exports.

## ***Japan***

**Kanemi Ban (Osaka University)** presented the outlook for Japan and stated that Japan was in a more severe situation than the United States. Business sentiment as indicated by the Tankan index bottomed in March 2009 and then showed a gradual increase, especially in manufacturing. Production capacity and employment conditions were seen to be excessive after the Lehman shock, but fell back slightly afterwards. Production bottomed in March 2009 and improved gradually afterwards, with the problem being a lack of investment. Unemployment is expected to increase further to over 6 per cent. Hourly wages have been declining since mid-2008, while consumption bottomed in February before showing a slight increase despite rising unemployment. Inflation in terms of the CPI has recently been negative, but is expected to pick up in the near term.

While exports started to decline in September 2008 and imports followed suit soon thereafter, both have shown a recovery recently. The solid trade performance with Asia, in particular China, has been especially noteworthy in this regard. Trade with the United States and Europe has also improved recently, albeit to a more moderate degree. One problem in this context is the performance of the yen, which has been appreciating since

late 2008. Overall, the economy is forecast to contract by 6.2 per cent in 2009, followed by a contraction by 0.8 per cent in 2010.

## ***Western Europe***

**Clive Altshuler (UN-DESA, New York)** presented the outlook for Western Europe. He pointed out that economic activity in the region started to slow in the second quarter of 2008 and that higher oil prices and the spike in the value of the euro have put additional pressure on economic growth. Germany experienced the sharpest slowdown followed by Italy, while France proved more resilient. In terms of growth components, exports and imports were very negative, while government spending served as a stabilizing force. Expectations, as indicated by the German IFO index, turned around at the beginning of the year and there have been three months of increases recently. After recent revisions, industrial production showed a convincing increase for the last four months.

In the forecast, the region will see a moderate rebound in 2010, while investment and net exports will be the biggest drag on growth in 2009. Looking at individual growth components, private consumption last year suffered from higher oil prices, inflation and the resulting effect on disposable incomes. In 2009, government impulses including automatic stabilizers helped to stabilize private consumption. Fixed investment will rebound in 2010 while still remaining fragile. Exports of goods and services have recovered to positive growth rates, although doubts remain as to the sustainability of the recovery.

Unemployment rates have shown great diversity across the region. For example, Spain saw an increase from 8 per cent to 18 per cent and Ireland from 4 per cent to 12 per cent. At the same time, the region is faced with the possibility of hysteresis in unemployment. Headline inflation in the region has fallen, especially also due to base effects, while core inflation has seen a more moderate downward movement. In the outlook, inflation will move up again as base effects vanish and energy prices again put upward pressure on prices.

In terms of economic policies, interest rates have been reduced significantly and the future policy stance will encompass a slow removal of quantitative easing accompanied by a continued low level of interest rates, with a slight increase in interest rates forecast for the end of 2010. Risks and uncertainties to the forecast include a sharper deterioration in the labour market situation as well as an increase in permanent unemployment, which also negatively affect potential growth. A further risk is a premature removal of stimulus measures that would endanger the sustainability of the economic recovery.

### *Discussion*

Mr Turner, commenting a reaction from the floor, mentioned that unemployment will remain a serious cause for concern for a long time. The steady-state level of employment

will be lower in the long run, even if there are employment protection mechanisms in place.

In reaction to a comment from the floor, Mr Li noted that it was true that even a very weak recovery through asset markets (especially the stock market) might have a positive net wealth effect, but unemployment (about 10 per cent) would continue to be a drag on consumer demand. The net effect will be only at most slightly positive.

Subsequent comments from various conference participants provided details regarding the economic outlook in other developed economies.

In Canada, the current constellation does not constitute the worst recession, given the existing fiscal cushion and the strength of the financial sector. All negative impacts have occurred as external factors and policies have played no reinforcing role.

In Germany, the labour market finds itself in a less bad situation than production due to the use of working time accounts and short-time working arrangements combined with support from the state. Regulations regarding short-time working arrangements have reduced productivity, which is expected to return to trend. However, the labour market is forecast to worsen over the next quarters.

In Italy, several factors keep the recovery in a fragile state. Unemployment is expected to increase due to the expiration of automatic stabilizers. At the same time, credit supply remains a problem while the stimulus measures are increasing debt levels.

The performance of the Austrian economy is closely linked to that of Germany. For 2009, it is expected to contract by 4.0 per cent, before seeing an expansion by 1.0 per cent in 2010, not least due to the support through government spending for private consumption. Eastern Europe remains especially important for Austria and while the export potential is expected to fall, the credit risks are not expected to materialize. In the outlook, the economy will see a moderate recovery.

Greece did not escape the recession, with its economy expected to contract by 1.2 per cent in 2009. Unemployment has increased to 9.5 per cent in 2009 from 7.4 per cent in 2008. The public deficit exceeds the threshold of 3.0 per cent of GDP and in the outlook the economy is forecast to show a flat performance in 2010.

Norway shows a solid economic performance despite the crisis. There has been no financial crisis in the country due to the absence of any toxic assets and while bank losses have increased, this has still been at low levels. Moreover, the economy also benefits from various structural features such as its reliance on commodity exports and the relatively large size of the government sector. In addition, government spending that is drawing upon oil funds is helping to support economic activity. Looking ahead, the economy will see positive growth in the next years, although it will remain below trend.

In further comments from the audience, it was pointed out that employment indicators have been positive in Europe, with employment creation amounting to twice the rate in the United States. This is due to comprehensive reforms initiated in Europe, especially in Germany, which has provided a positive example for structural labour market reforms.

In reply to various comments, Clive Altshuler pointed out that the stronger euro helped to keep a lid on inflation. However, if oil prices were to stay high, this could create a major risk on the output and income side of the economy. On unemployment, he agreed that significant progress had been made in terms of structural reforms and that the increase in unemployment rates could also be viewed as a sign for less stringent regulations. Regarding demand, he viewed it as a good sign that exports had picked up, but emphasized that an increase in investment would be needed in order to make the recovery more sustainable.

### ***Economies in transition and new EU members***

**Robert Shelburne (UNECE)** presented an overview of the general trends in the economies in transition (EiT), which include the new EU member states, South-Eastern Europe and the CIS. In his presentation he pointed out that the economies in transition was the most significantly affected by the global economic and financial crisis: having exhibited the highest rate of growth prior to the crisis, the region as a whole contracted by the largest percentage globally in 2009. He pointed out that while the exposure to subprime assets was in general insignificant in the region, the effects of the crisis manifested itself primarily through large declines in trade, particularly with Europe, and through declines in the prices of natural resources, particularly for oil price. A high degree of dependence on foreign capital exacerbated the vulnerability of many countries; in some countries the dependence was high in corporate and financial sectors, while in others dependence on remittances accelerated the economic decline as labour markets for migrant workers suffered from the impact of the crisis.

Looking at the region in greater detail, it was noted that while the Commonwealth of Independent States (CIS) and South-east Europe (SEE ) will see GDP decline in 2009, they grew in 2008 and expect growth in 2010. In contrast, the Baltics experienced a decline in GDP in 2008 and 2009 and are expected to do so in 2010. This will result in significant declines in GDP exceeding 20 per cent. Nevertheless, Mr. Shelburne pointed out that for all subregions, the impact of the current crisis on the EiT is relatively moderate compared to that experienced during their transition period.

Noting that the variation of growth in the EiT has been high, Mr. Shelburne emphasized that the Russian Federation is a regional driver of growth. The weak performance of the Russian economy in 2009, manifesting through significant declines in imports and exports, has weighted heavily on the region as a whole. He also made mention that while current account deficits were a primary vulnerability – all but the resource-rich countries of the CIS will register significant current account deficits in 2009 – these are largely

driven by the private sector, which is, in turn, also seeing increasing levels of debt. In addition, the stability of the financial systems in the region, particularly in the CIS, continues to be a source of concern. This is due to the heavy reliance on foreign financing to finance domestic expansion and due to weak depositor confidence. Thus, in several countries the proportion of non-performing loans is increasing and several bank failures have taken place. In contrast, in SEE and the NMS, the presence of multinational banks has contributed to a greater level of stability. Nevertheless, a general depreciation of currencies, except for the Russian Rouble, has been observed in 2009.

The presentation also highlighted that while several resource-rich countries of the CIS were able to implement large fiscal expansions by tapping the assets of their sovereign wealth funds, IMF support has been critical for many countries in the region, including, for example, Hungary, Latvia, Romania, Serbia, Bosnia, Ukraine, Georgia, Belarus, Armenia; Poland; Kyrgyzstan and Tajikistan. However, it was pointed out that the policies that have been implemented in line with the IMF in these countries, though procyclical, were not as harsh as had been, for instance, the case in previous crisis in Asian countries in the 1990s.

Noting that low savings, particularly in Central and Eastern Europe, and low investment, particularly in the CIS, characterise the EiT, he stated that short-term factors that would affect the recovery of the EiT include slow growth in the EU which would limit export potential; impaired domestic financial systems that would limit investment; and low remittances. In the medium-term, factors included political instability and frozen conflicts in SEE, the Caucasus and Central Asia as well as the lack of diversification.

The presentation was followed by comments from a number of country participants.

### *Discussion*

In Russia, firms have responded to the crisis in two stages. While in the first (which took place in spring 2009) they decreased investment to offset the negative impact of the crisis, they strived to cut expenses in the second phase (summer 2009) by, for instance, decreasing wages or shedding labour.

While Estonia has been severely affected by the current crisis, the domestic slowdown started in 2007 and that no financial crisis was affecting the country. In particular, banks have seen no need for requesting assistance from the public sector as, despite having to write off 12 per cent of their assets, sufficient capital buffers has allowed them to meet their capital requirements. Moreover, declines in remittances to the country have been offset by increases in structural funds from the European Union.

While Poland has seen a slowdown in growth, the impact of the crisis on its financial sector has been limited. Despite decreases in investment, the main impact has resulted from a decline in exports to Europe, while an unexpected devaluation of the Zloty has constrained imports. Nevertheless, wage growth has been positive and labour friendly policies have limited the impact of the crisis on unemployment.

Output in Ukraine is expected to contract significantly in 2009 as the financial crisis exacerbated weak economic environment within which the country was operating. However, a return to positive growth in 2010 seems likely, according to the forecast presented.

In Hungary, in contrast to most economies in the region, the private sector was not too highly leveraged at the onset of the crisis. Rather, the country is currently facing a budget crisis, such that the government has had to tighten its policy stance, resulting in pro-cyclical policy.

## **Africa**

**Mr. Adam Elhiraika (UN-ECA)** gave a presentation on Africa's economic outlook. He started by pointing out that there was a huge diversity in Africa and that it would be preferable not to talk about Africa as a whole, but due to time constraints he was forced to do so. He also emphasized that there had been a sharp decline in growth across the continent with moderate inflation.

Africa's growth decelerated sharply in 2009, dropping below 2 per cent, which represents negative growth per capita. In 2010, growth is expected to rebound to about 4 per cent. In 2009, inflation has dropped to the levels reached prior to the global food crisis owing to the decline of food and energy prices. In 2010, a further decline in inflation is anticipated.

Mr. Adam Elhiraika also stressed that most African countries were still highly vulnerable to external shocks. The continent faces a severe drought and food crisis that is particularly affecting East Africa. He also emphasized that while the impact of the economic crisis was delayed, Africa was ultimately hard hit by the global recession. The main transmission channels were: international trade with falling commodity demand and prices, declining ODA, restrained access to international credit markets, lower private capital inflows especially foreign direct investment and remittances. Finally, Mr. Elhiraika explained that, in contrast to previous crises, the region's response was different as many Governments entered the crisis with bigger reserves and greater policy space that allowed them to partially cushion the impact of the crisis. Partly for this reason, the group of oil-importing countries was the hardest hit despite falling oil prices as many of these economies lack fiscal space.

Mr. Elhiraika emphasized that external and internal imbalances were widening. The current account balance for the region as a whole switched from surplus to deficit as oil and mineral prices collapsed in late 2008 and early 2009.

Mr. Elhiraika then pointed out that Africa remained committed to reforms and good macroeconomic management. Despite the economic crisis, many African Governments have put in place prudent counter-cyclical policies. Several central banks eased their monetary policy. Regarding deeper reforms, significant progress was achieved, for

example in the areas of exchange rates policies, financial sector health and economic governance, whereas political governance saw only marginal improvements. In addition, there have been further reforms to improve the business environment and investment climate in Africa.

Mr. Elhiraika then presented the outlook for 2010. Several factors point towards a brighter situation in the coming year. This includes a potential global recovery, increased commodity demand and prices and stronger domestic demand partly owing to fiscal expansions in high reserve countries. In addition, it is expected that FDI and other private flows will recover and that the political situation will improve in many countries, including Chad, Democratic Republic of the Congo, Nigeria and Sudan.

However, several significant downside risks remain. Among them, Mr. Elhiraika highlighted particularly the possibility of a very slow global growth recovery or a prolonged recession. He also stressed the vulnerability of many countries to the volatility of commodity demand and prices, the potential failure of donors to meet their aid commitments, the remaining fragility in domestic financial markets, the prolonged squeezed access to international credit, the erratic weather conditions, the political instability in some countries and the possibility of disruptive conflicts.

To conclude, Mr. Adam Elhiraika highlighted the main policy challenges for Africa by adding that the priorities may differ across countries. In the short-run, Governments should mitigate the immediate impact of the food and financial crisis and strengthen the social safety nets and the protection of vulnerable groups. In the medium- and long-run, it is essential to accelerate and sustain long-term growth through economic diversification and trade, as well as to sustain macroeconomic reforms. Growth in low-income countries should also be restarted or maintained. In addition, strong emphasis should be placed on creating decent jobs to reduce poverty, on mobilizing domestic resources, on reducing dependence on aid and on external debt for some non-HIPC countries, on strengthening private sector development and, finally, on promoting regional trade and international competitiveness.

### *Discussion*

Ms. Grace Kasisira emphasized that Uganda was mainly hit indirectly since domestic banks were not really affected. However, she highlighted that Uganda suffered from lower demand for exports, FDI and revenues from tourism. Hence, growth is expected to decline to 6.6 per cent in 2009 from an average of more than 8 per cent over the last three years. She also indicated some reasons for optimism because Uganda increased its export diversity. The country also managed to have a low fiscal deficit. However, she noted that the exchange rate had suffered owing to withdrawals from foreign investors.

Ms. Charlotte du Toit from South Africa said that her country suffered severely from the financial crisis. Investment slowed down from 10 per cent to about 0 per cent although it was somewhat buffered by the upcoming Football World Cup. The current account deficit declined as the monthly trade account moved into surplus since imports fell faster

than exports. Meanwhile, the country also experienced portfolio outflows. Ms du Toit stated that as inflation declined, the central bank cut their main interest rate by 5 percentage points. To conclude, Ms du Toit emphasized that the recession had bottomed out in the second quarter of 2009 and that the country continued to face a very high rate of unemployment.

Ms. Faiza Awad Mohamed Osman from Sudan noted that the political stability had increased after the peace agreement of 2002. She also pointed out that pledged aid had not arrived in Sudan and that the country had been affected by the decline of oil prices. She emphasized that in the first quarter of 2009, the GDP growth rate was only 3 per cent. Since then, growth has accelerated.

A representative of Malawi pointed out that his country had experienced significant growth despite the economic downturn. In 2009, growth is forecast at 6.5 per cent compared to 7.9 per cent in 2008. He also mentioned that the telecommunication sector was still expanding. However, the country suffered some declines of ODA as many donors' pledges were not fulfilled. He finally noted that since the financial sector is not really integrated in the international system, it had not been affected by the financial crisis. However, the country's exports declined strongly as prices and demand for their main commodities (cotton, tobacco) decreased in late 2008 and early 2009.

Mr. Jamal Bakhti described the recent economic developments in Morocco. He highlighted that his country had not remained immune from the economic crisis and that many important sectors had registered declines in growth from about 5 per cent to 2 per cent. However, he noted that Morocco had registered an exceptional harvest which helped to cushion the economic slowdown and allowed the unemployment rate to decline.

## ***Western Asia***

**Mr. Matthias Kempf (UN-DESA, New-York)** presented the economic outlook for Western Asia. After providing growth estimates at the regional and country level, he gave an overview of the key macroeconomic developments in the region in 2009 and the prospects for 2010.

Mr. Kempf pointed out that Western Asia was expected to experience an economic contraction of 1.2 per cent in 2009, following 4.5 per cent growth in 2008. This average figure masks significant differences among countries: The Turkish economy is estimated to shrink by 4.9 per cent in 2009 as countries' manufacturing export sector was badly hit by the global crisis. Kuwait, Saudi Arabia and the United Arab Emirates are also expected to register full-year-contractions. Qatar, by contrast, is experiencing another year of strong growth as new liquefied natural gas projects have come on stream. The economies of Jordan, Lebanon and the Syrian Arab Republic have benefited in 2009 from healthy financial sectors and increased tourism receipts.

In 2010, Western Asia is expected to recover, with average growth forecast at 3.8 per cent. The oil-exporting countries of the region will rebound owing to significantly higher oil prices, while the manufacturing exporters are likely to benefit from the mild recovery in global demand. However, significant uncertainties and downside risks remain, including a renewed decline in the oil price that could also weaken intraregional tourism and remittance flows.

Mr. Kempf emphasized that, in spite of the crisis, remittance outflows from Western Asian countries were still strong. Several factors help to explain this phenomenon: the strongly expansionary fiscal policies, particularly in the countries of the Gulf Cooperation Council (GCC); the characteristics of the domestic labour markets, notably the sponsorship system; and the increased relocation of migrant workers within the region. As export revenues fell more rapidly than import spending, trade surpluses declined sharply in the oil-exporting countries in 2009. The non-oil exporters, in turn, have mostly seen improvements in their trade balances. The impact of the economic crisis on the labour markets in Western Asia has been cushioned by the large share of public employment in total employment.

On the monetary side, Mr. Kempf illustrated that the interbank market rates in the GCC countries had declined more slowly than in other regions. Average regional inflation slowed from 10.2 per cent in 2008 to 5 per cent in 2009. The marked drop in commodity prices weakened domestic demand in 2009, particularly in the GCC countries, while at the same time lowering input costs. In 2010, inflation may increase slightly as demand recovers and oil prices move higher. The Central Bank of Israel was the first major monetary authority that raised interest rates during the recovery, responding to the need to moderate inflation.

## ***East and South Asia***

**Ms. Tiziana Bonapace** and **Ms. Amy Wong (UN-ESCAP, Bangkok)** presented the regional outlook for East and South Asia. Ms. Bonapace emphasized that the region had entered the crisis in a position of strength as fiscal and external balances were in surplus. The region also benefited from the reforms that were introduced in the aftermath of the Asian financial crisis in 1997/98. As a result, the Asian and Pacific countries have shown remarkable resilience during the current crisis. Nonetheless, the region was severely affected by the global recession as domestic trade sectors suffered deep contractions. In the last quarter of 2008 and the first quarter of 2009, the region's exports plunged at an unprecedented speed and imports declined even more sharply. While total exports to the United States and the countries of the European Union fell significantly, most Asian exporters were able to gain market shares. In the medium run, additional reforms are needed to reduce the region's export dependency of growth.

Ms. Bonapace illustrated the severe setbacks in economic growth in the different sub-regions. On average, the developing economies of Asia and the Pacific are estimated to

grow by about 5 per cent in 2009. China and some of its neighboring economies remain the fastest growing economies in the region. In many countries, most notably in the highly export-dependent economies of the region, the slowdown has resulted in sharply higher unemployment rates. She noted that official unemployment rates might underestimate the true impact of the crisis as labour market surveys were often conducted infrequently and underemployment was widespread. Moreover, high rates of youth unemployment are a major challenge for the region. If high unemployment and underemployment persist, aggregate domestic demand may be adversely impacted in 2010. Ms. Bonapace emphasized that in most countries social protection mechanisms had been set up in an ad-hoc manner in response to the crisis. In some cases, support for the rural population has come at the expense of urban workers. She also noted that inflationary pressures had largely subsided in 2009, except in India.

Ms. Wong presented the economic prospects for 2010, highlighting the emerging signs of a recovery. She pointed out that the regional and country-level forecasts were derived from the Oxford Model and were based on four key assumptions: the resumption of positive growth in the developed economies, an increase in the average price of oil due to higher global demand, a loose monetary policy stance until mid-2010 and an edging up of the United States dollar owing to the economic recovery. The pace of the recovery is expected to differ sharply. While the Chinese economy is forecast to expand by approximately 9 per cent, the developed economies of the region are likely to see average growth of only about 1.5 per cent. Inflation is expected to remain subdued throughout the year.

Ms. Wong concluded the presentation by identifying the major risks to the recovery in 2010. These include: the strength of the recovery in the developed economies; a premature or too sharp reversal of the monetary and fiscal policy stances; and an escalation of the pandemic flu.

### *Discussion*

Mr. Dennis Arroyo highlighted that the Philippines were not in a recession and would achieve slightly positive growth in 2009. In 2010, GDP growth is forecast to accelerate to 2.7 per cent. The gross national product (GNP) may expand by 6 per cent in 2010 owing to a strong increase in remittance inflows. Despite the deep global crisis, remittance inflows have continued to grow, exceeding analysts' forecasts. The Philippines are especially benefiting from the fact that the country's overseas workers are spread all over the world.

Mr. Song Gyu Lee first pointed out that – contrary to some perceptions, the Republic of Korea had actually gained export market shares in the United States. He noted that growth in the third quarter of 2009 had been very strong. It now seems possible that the country would achieve positive full-year growth for 2009. The export sector has rebounded sharply since the second quarter of 2009.

Mr. Baoliang Zhu stated that the Chinese economy continued to expand at a rapid pace. Public investment has become a main driver of growth. Private consumption has remained robust as exemplified by year-on-year growth of car sales of almost 50 per cent and strong growth in house sales. Mr. China identified three major problems for the Chinese economy related to the surge in bank credit and public investment: overcapacities; increased default risks; and asset price bubbles. Major domestic reforms and a more prudential monetary policy are needed to control investment and stimulate consumption, thus achieving more balanced growth. Inflation is currently not seen as a major problem.

Mr. Dilli Raj Khanal noted that the financial crisis had so far had a limited impact on the Nepalese economy. Exports and foreign direct investment have weakened, but the financial sector has not been affected. As in other South Asian countries, remittance inflows remained strong. Growth in the fiscal year 2009/10 is forecast at 3.5 per cent. The economy continues to face a number of structural problems, including a low domestic savings rates, a high unemployment rate and a high inflation rate.

Mr. Nagapudi Rangareddy Bhanumurthy stated that growth in 2009 was expected to decline to 5.8 per cent, partly owing to weak monsoon rains. In 2010, growth is forecast to accelerate to 8.2 per cent. The country currently faces two major risks: high inflation, which may lead to an early monetary tightening; and a very high budget deficit, which may require fiscal adjustments.

Mr. Masood Ahmed Qazi emphasized the importance of oil and commodity prices for Pakistan's economy as they are the main drivers of inflation. Growth in Pakistan slowed markedly in 2008 and inflation reached 26 per cent. In 2009, growth is expected to range between 3.5 per cent and 4 per cent, while inflation has declined steadily.

Mr. Salahuddin Ahmad noted that the economy of Bangladesh was expected to expand by 5.6 per cent in 2009 and by about 6 per cent in 2010. Average annual inflation has declined to 7 per cent. While workers' remittances continued to grow at a strong rate, some export sectors have suffered from weaker demand.

## ***Latin America and the Caribbean***

**Mr. Osvaldo Kacef (ECLAC, Santiago)** presented the economic outlook for Latin America and the Caribbean. In the third quarter of 2008, while exports were already falling all around the world, Latin America and the Caribbean economies were relatively resilient. However, as the world economic activity contracted further through 2009, the terms of trade in Latin America fell considerably, 8.8 per cent in 2009 comparatively to 2008. In 2009, external demand and remittances declined also markedly, leading to a deep contraction of investment and private consumption. Therefore, growth is expected to contract by 1.6 per cent in 2009, in particular due to the deep contraction in Mexico. The impact of the economic crisis on labor markets is also expected to be significant, inverting the progress made in previous years, as unemployment rates rose rapidly in

2009. Within the region, South America and Central America will however present positive growth in 2009, between 0 and 1 per cent. Panama, Bolivia and Haiti will register the highest growth rates in the whole region, between 2 and 3 per cent.

However, there are signs that the current crisis in Latin America and the Caribbean will be milder than previous ones. First, there are signs that the world industrial production and international trade is rebounding. In fact, in Latin America, although industrial production fell more than in other regions, it has also recovered faster. Second, commodity prices rebounded, as global activity and international trade recovered. Third, international financial conditions gradually improved with risk premium rising less than in previous crisis, access to international financial markets being renewed and equity markets recovering to the levels previous to the crisis. Fourth, expectations and leading indicators are getting better. Consumer confidence for instance is gradually getting back. Fifth, governments were particularly active in implementing countercyclical macroeconomic policies, expanding public expenditure, while central banks decreased interest rates. Therefore, a broad recovery is expected for 2010, as economic activity is clearly on the upswing. However, the durability and sustainability of the recover remains in doubt.

### *Discussion*

In the general discussion, Ms. Paula Acosta (Fedesarrollo, Colombia) confirmed that the actual situation in Colombia follows the pattern presented for Latin America as a whole. However, in the specific case of Colombia, there is a major issue related to the fiscal sustainability of the social policies implemented recently, while unemployment has increased fast. In the future, as the sharp deceleration of the United States and Venezuelan economies had a negative impact on the demand for Colombian exports, the country will need to diversify its trading partners.

Mr. Eustaquio Reis (Instituto Brasileiro de Geografia e Estatística, Brazil), pointed out the important effort from the Brazilian Government in implementing strategic social policies, as well as tax rebates, which boosted private consumption in 2009. Car sales for instance presented a new record in 2009. Next year, in 2010, the carry over of the actual dynamism and the presidential elections will continue to have a positive impact.

## **5. The global financial crisis and policy implications**

### ***Global Financial crisis***

#### **Gerard Adams (Northeastern University)**

At present, the global economic situation could be said to be between ‘uncertainty’ and ‘relief’. The chances of the crisis being over are around 6/10. To understand such a high uncertainty, Mr. Adams highlighted the causes of the crisis and what are at present the remaining problems.

Core to the causes of the crisis is the ‘new financial economy’, which underscores problems often described as ‘global imbalances’, the ‘housing bubble’ in the US, and the expansion of credit. The latter can be seen as a problem only to the extent that they are sustained by extraordinarily large degrees of leverage. The housing bubble can be seen as a problem derived from new financial instruments, highly speculative.

An also important consideration was the undue emphasis on free-markets, the lack of consideration of the possibility that markets can fail and that failures can be systemic. As a result of such philosophy many changes took place, like the derogation of the Glass-Steigel act in the US. Not only regulation changed in the face of this philosophy, also Central Banks were very easy at relaxing their monetary stance without contemplating the possibility that such stance may aggravate such failures and trigger risks.

In so far as the stimuli in place have given a sense of ‘relief’, two problems remain and on their resolution depends whether the crisis is eventually overcome. First, what to do with the excess liquidity and second, how to re-engineer a robust financial regulation?

#### **Nagesh Kumar (ESCAP, Bangkok)**

The recovery is on the horizon, but the US may not again be the motor of the world economy. There is a weakening of the dollar and growing pressure for the US to contain global imbalances.

Asia will then have to find new sources of growth. There is room to grow by greater domestic activity and greater intraregional integration. But that can only happen over time. This also requires improved financial systems, social protection and inclusiveness. Another avenue for expansion is intra-regional trade. The number of trade and investment bilateral agreements is rising, as transpired in the Asian Summit. In addition, there is more interest in financial and monetary integration. Finally, there are also signs of developments of an Asian bond market, with potential to grow ahead.

In conclusion, the crisis has opened avenues for greater Keynesianism at a regional level, more robust capital market integration to avert capital flights (eg to Nasdaq, etc.), and more interest in regulating capital flows (including, for example, the introduction of a ‘Tobin-tax’).

#### **Eustaquio Reis (Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro)**

Except Mexico, which will likely continue with low positive growth in the outlook period, other Latin American countries have spared some of the consequences of earlier recessions in the US and are expected to recover in 2010.

This time the question should be what went right. The pre-crisis were different than in the past. The regulation of financial markets was robust (high capital requirements) and economic fundamentals were strong (due in part to the Washington Consensus). External debt went down to about 10% of GDP in most debtor countries. Inflation had significantly moderated. Current accounts moved generally towards surplus. Growth was

positive to about 5%. In addition, there was little ‘contagion’ from the financial crisis in the US. Latin America was only very partially affected by the subprime crisis. There were no strong financial linkages emanating from the crisis which would have implied capital flights, debt defaults, hyper-inflation, devaluations, etc. Finally, government responses helped to sustain economic recovery.

Looking ahead, the question is whether the crisis is over and Latin American countries could soon resume their growth path? The expectations are leaning towards a prognosis of positive growth in the region, with beneficial implications for global demand as well. It is worth emphasizing that the size of consumption in the region as a whole is significantly higher than that of China. The dark note in this predicament is that Central America and the Caribbean region remains heavily dependent on the US economy and may be subject to a more lasting effect of the crisis.

**Hans Timmer (The World Bank, Washington)**

The policies that have saved the world from a global meltdown would not be the policies to lead the world to the recovery in the long run. For example, in the short run, the fiscal stimulus put in place to stimulate demand was correct, but in the long run, the demand stimuli should be replaced by policies aimed at stimulating the supply side of the private sector. In terms of monetary policy, it was needed to lower interest rate in the short run, but an important monetary policy for the long run would be to get credit creation under control in the global economy. In terms of financial policies, the bailout of some financial institutions might be necessary in the short run, but in the long run, those least efficient companies should be allowed to be cleansed, and the financial policy in the long run should be aimed at supporting creativity and innovation in the economy. The challenge is how and when to make the transition between those sets of policies.

**Jean -Pierre Verbiest (Country Director, ADB, Bangkok/Manila)**

From the Asian perspective, savings in most Asian economies were too high (consumption was too low). One challenge is how to channel the savings into effective investment while avoiding asset price inflation. To rebalance savings, we would need policies to enhance social safety net. He mentioned that, unlike in the Asian financial crisis of the 1990s, exchange rates in Asian economies in this global financial crisis did not play a key role. He also reviewed regional economic integration in Asia. Commenting on regional trade integration, he noted that tariffs would not be an issue, but efforts should be on reduction of non-tariff barriers. Remarking on regional financial integration, he pointed out that the Chiang Mai initiative, the framework for swaps of foreign exchange among ASEAN+3, was mainly for gaining long-run confidence, but in the short run, as in the current global financial crisis, no members would use it for their short-run need. Instead, some Chiang Mai members resort to the US Fed for swap arrangements.

*Discussion*

Hans Timmer noted again that the real challenge is to reverse policy expansionary measures.

Rob Vos recalled that the framework should be countercyclical. Demand and supply side will complement each other, but even if supply is the issue of the mid-term, that implies fiscal support anyway.

He further stressed the potential for intra-regional integration

Eustaquio Reis elaborated the importance of countercyclical measures. In Brazil, for example, there was a predominant role for development and public banks. But implementing countercyclical measures requires fiscal space (reserves and sustainability due to low debt). Only at present this is becoming possible in Latin American economies. Yet, he argued that the critical thing at this moment is to make sure that the crisis is left behind.

Nagesh Kumar argued that long term investments and counter-cyclical policies can indeed be facilitated by reserve accumulation by a pool of governments.

### ***European Economies during the crisis***

**Gyorgy Barabas (RWI, Essen)** presented a paper on “fiscal stimulus in Germany during the current recession. He summed up the fiscal measures in Germany during the current recession, characterized the RWI-business cycle model, discussed the difficulties to implement these measures into the model context, and presented simulation of effects of the stimulus packages on the German economy.

In his simulation of stimulus package II, he applied 43 billion euro through 2009 and 2010, and 14.5 billion in 2011, but did not include measures for public guarantees, as these measures are difficult to model. He applied two versions of RWI model. The main results showed that multipliers were below 1, results depended on the model version, employment reacted in the updated model more slowly and weaker to GDP, capacity utilization restricted the export, and strong effects on deficit. Under these circumstances, the main German fiscal stimulus package increase GDP in 2009 by  $\frac{1}{2}$  and in 2010 by  $\frac{1}{4}$  percentage points.

**Franjo Stiblar (University of Ljubljana, Slovenia)** presented a paper on “assessing the role for central banks in the crisis: Fed versus ECB”. After reviewed the theory about the function of a central bank, he compared various measures, conventional and unconventional, adopted by the US Fed and the European Central Bank. He also discussed exit strategies for central banks.

In terms of the change in the balance-sheet, the policy stance adopted by the US Fed seems to be much stronger than that of the ECB, with the former expanding by about 160 per cent while the latter by only 70 per cent.

Comparing the exit strategies of fiscal policy with that of monetary policy, he commented that central bankers can act quickly to change monetary stance when necessary, but fiscal authorities would face more constraints, at both the stages of stimulating and exit. He believed that fiscal authorities would need a focus on rules and transparency, similar to monetary authorities: limiting deficits, transparent budgeting and fiscal council as independent body to assess politicians' budget decisions.

He concluded by mentioning that structural changes are needed, as to focus on medium and long-term instead of short term sustainability in macroeconomic policies and financial strategies: constant monitoring and resilience in the financial sector instead of complacency; a holistic approach to rethink links between financial behavior and macroeconomic policies, which implies new institutional framework in domestic (unified regulators and supervisors) and international macro governance (G-20).

**David Turner (OECD, Paris)** presented a paper entitled “What Drives Sovereign Risk Premiums?” He first highlighted the background for this paper in the context of recent global recession and the impacts on the fiscal imbalance in many countries. He then reviewed the literature on the drivers of long-term sovereign interest rates and spreads between euro area countries. From those studies, he has identified some key determinants for the spreads, such as government indebtedness and the expected fiscal deficit. He also pointed out the possibility for the non-linearity of the interest rate effects. For the euro area specifically, debt service ratios explain spread better than either debt- or deficit-to-GDP ratio.

To assess the determinants of spreads, the authors) have estimated a simple panel model of the spread between the yield on ten-year sovereign bonds between ten euro area countries and Germany. The sample period is December 2005 to December 2008 at 6 monthly intervals. The explanatory variables included are: general risk, debt service ratio, gross and net debt ratio, expected fiscal balance, fiscal track record, illiquidity and expected pension expenditure. The estimation method is two-stage least squares (2SLS) and the interaction effects between fiscal variables and risk and track record are also included.

David Turner presented the main findings for the model as: a) risk is important in magnifying the effect of other variables, especially the fiscal variables, b) debt service ratio is more important than debt ratio, c) expectation for fiscal balance matters, d) fiscal track record matters in some cases.

David Turner concluded his presentation by proposing some policy conclusions: a) government likely to face more market discipline, b) credible medium-term plans is important; c) many OECD countries will go well beyond previous post-war highs.

## ***Asian Economies after the crisis***

**Malcolm Dowling (University of Hawaii)** made a presentation on “Asia and the Global Economic Crisis: Policy Response and Balancing Measures”. He started the presentation with the observation that Asia had been rebounding faster than anyone anticipated one year ago and that foreign direct investment was beginning to flow into the region again. He also highlighted the observation that countries with a high dependence on exports were still affected adversely, while Asian countries in general had strong financial sectors and ample foreign exchange reserves. The monetary and fiscal policy actions taken were timely and robust. However, he also pointed out that some countries may need to address particular issues (e.g. current account imbalances for Pakistan, Laos, Cambodia and Vietnam, short-term external debt for Indonesia and the Republic of Korea).

He reviewed the importance of remittance flows to the region and emphasized its contribution to poverty reduction; he also called upon Governments to take measures to increase migration and remittances. He also examined the contribution of net exports to GDP growth for the period 2000-2008 and found that net exports were not a main driver of growth for many Asian countries (for example less than one third for the Newly Industrialized Economies except Taiwan Province of China).

He used the IMF projection for 2009 and 2010 to get estimates of the growth shortfall for the period 2008 to 2010. The growth shortfalls for the three most populous Asian economies (China, India and Indonesia) are smaller than for the three least populous economies (Singapore, Hong Kong SAR, Taiwan Province of China). For Indonesia, Malaysia and Thailand the shortfalls for this crisis were not as great as the ones for the 1997/98 Asian Financial Crisis. He finished the presentation by analyzing the impact of the crisis on poverty in the region; a one percentage point decline in the growth rate may bring about a 2 to 3 percent increase in the number of people living below the poverty line.

**Sudip Ranjan Basu, UNCTAD)** made a presentation on “Emerging South: Drivers of the Global Economic Recovery”. He started the presentation by quoting Paul A. Samuelson, who pointed to the importance of export-led growth over the past millennium. He then presented an analysis of trade developments among countries in the Southern hemisphere. The share of the South in the world export market has increased in the long run. Within this group, the emerging South countries displayed higher dependence on the North countries than the other South countries. He also emphasized the difference between the regions within the South group; for example, the Asian countries have a much higher share in the world market than African and Latin American countries and also tend to trade more with partners outside the region.

He presented the analysis of commodity structure of the exports from the South in the context of climbing up the technology ladder. The difference between the emerging Southern and other Southern countries was displayed. He also used data for China and India to corroborate this observation. For China, the export structure has shifted from

medium technology products to high technology products while India's export goods have shifted from labour-intensive products to low-technology products between 1995 to 2007. He also presented the results of some empirical studies to support his hypothesis that the institutional quality and key economic policy measures that aimed at improving the productive capacities were key factors for a country to be able to climb up the technology ladder.

With respect to economic policies, he noted that targeted stimulus packages in important sectors could hold key to overcome the ongoing crisis and help exports to recover, but that protectionist implications should be considered and revisited.

**Shuvojit Banerjee (MPAS/MPDD, ESCAP)** made a presentation on "Asia Pacific as the Emerging Global Growth Pole". He emphasized that increased cooperation would not only support the ongoing economic recovery but would also help to prevent future crises.

Mr. Banerjee pointed out that some Asian economies required a structural transformation that favours domestic consumption. In this context, poverty reduction, for instance through expanded safety nets, plays a crucial role. The Asian economies need to exploit the potential for intra-regional trade and investment by creating regional trade agreements, customs unions and common markets. Such an approach would be particularly rewarding for the smaller and poorer economies.

Concerning monetary and financial cooperation, Mr. Banerjee indicated that the economies in the Asia-Pacific region had very different exchange-rate regimes. This has created significant problems, including high volatility of real exchange rates and the possibility of beggar-thy-neighbour policies. Establishing a regional unit of account for intra-regional trade could bring about relative stability of exchange rates. The recent convergence of the East Asian economies would facilitate such a move.

Mr. Banerjee then emphasized the role of regional Keynesianism in supplementing national efforts to generate additional aggregate demand. A larger part of the foreign exchange reserves should be invested within the region, most importantly on infrastructure development. This, however, requires an expansion of the regional financial architecture, for example by setting up a regional fund or reserve pool.

With respect to crisis management, Mr. Banerjee indicated that the potential for regional cooperation had so far been insufficiently exploited. The institutional framework and the scope of the Chiang-Mai Initiative (CMI) need to be reformed to allow an adequate response in times of crisis. In addition, regional controls to moderate the volatility of capital flows should be introduced.

**Juthathip Jongwanich (Economics and Research Department, Asian Development Bank)** made a presentation on "Capital Mobility in Developing Asia: How Does It Respond to Financial Crises". He first noted that the issue of capital flows was at the center of attention during the Asian crisis and had now returned to receive a lot of interest as the global financial crisis had led to a significant pullback of short-term capital from

the region. He emphasized that the impact of the first wave of capital outflows had a more severe impact on the region's economies. During the current financial crisis, the region benefited from healthy macroeconomic fundamentals, including sound financial institutions, large foreign exchange reserves and fiscal surpluses. This allowed central banks and Governments to support financial sector activity, in particular the continuing flow of credit, and domestic demand.

In his empirical analysis, Mr. Jongwanich pointed out that before the Asian financial crisis, capital inflows and savings had been substitutes, while after the crisis they were complements. He then emphasized that further development of financial markets in Asia would create additional opportunities to tap and mobilize the region's excess savings. Government and monetary authorities should aim at promoting the allocation of savings towards more productive sectors to ensure medium to long-term economic growth. A number of countries, most importantly China, should pursue policies that help reduce precautionary savings in order to promote a rebalancing of the economy.

### *Discussion*

Mr. Dilli Raj Khanal (Nepal) emphasized the strength of investment to increase productive capacities in Nepal. He inquired about the need for increased policy coordination and a potential need for protection of domestic industries. He also noted some controversy concerning estimates of the poverty elasticity of remittances in Nepal.

Mr. Peng Zhang (China) explained some of the effects of the country's one-child policy. He noted that China has particularly high boys-to-girls ratio at birth. However, death rates for boys are higher than for girls. He also related the policy to China's very high savings rate.

Mr. Song Gyu Lee (Republic of Korea) stated that short-term debt levels before the crisis in the Republic of Korea had been relatively high though lower than in Japan. He also noted that the domestic financial sector had experienced a confidence crisis in the early stages of the global financial crisis.

Mr. Dowling remarked that Nepal might be different from many other Asian developing economies. He noted that the poverty elasticity of remittances was positive, but the magnitude was unclear. He also indicated that countries with a high share of manufacturing in gross domestic product had suffered especially strong downturns. Mr. Dowling and Mr. Basu pointed out that the composition of exports mattered for growth and vulnerability. Mr. Banerjee emphasized the crucial role of development finance and the need for greater regional coordination to reduce development gaps.

## ***The Economic Crisis in Retrospect***

**Robert Kaufmann (Boston University)** analyzed the link between energy prices and mortgage delinquency in the United States in his presentation in an attempt to identify

whether the increase in energy prices may have triggered the mortgage crisis in the United States. The underlying hypothesis is that as energy prices increase, consumption patterns change; moreover, given the importance of expenditure on transport in the United States, a higher rate of mortgage delinquencies may result. Presenting a graph on energy prices and recessions, he argued that since the 1970s, most recessions were in fact preceded by peaks in energy prices.

To test his hypothesis, Robert Kaufmann analyzed foreclosure data using a cohort model. His analysis indeed showed that there is a co-integrating relationship between energy prices and mortgage delinquencies, and that a 1 percentage point increase in GDP expenditure on energy increases mortgage delinquency by 6 percentage points.

**Ms. Ji Choud (Shih Hsin University)** presented her analysis of the impact of the global financial crisis on forming a currency union in East Asia. She noted that after the Asian financial crisis at the end of the 1990s in which many countries in the Asian region experienced a sudden reversal of international capital outflows, interest in deepening financial cooperation and integration at the regional level increased. Outlining the benefits that the region could face from monetary integration, she presented the various steps that have been taken in the region to promote capital account liberalization before proceeding to analyze whether the global financial crisis should be considered as a catalyst of a hindrance for monetary integration in East Asia. By looking at business cyclical synchronization before and after encountering the global financial crisis, a large-scale structural dynamic factor model was employed to assess the response of a large set of real and nominal variables in the region and investigate the role of transmission channels such as shocks from market volatility and industrial production. Overall, the findings imply that there has been a remarkable increase in the degree of cyclical synchronization despite decoupling on some variables in East Asia. Nevertheless, essentially only multiple-currency monetary union is politically feasible at this stage of integration, such as was introduced in Europe (the EMU) prior to the introduction of the Euro.

**Mr. Byron Gangnes (University of Hawaii)** held a presentation on alternative policies for US economic recovery. After presenting some challenges that the economic recovery in the United States faces, including, for instance, poor prospects for a rebound in consumer confidence, weak labour markets and the unlikelihood of a strong rebound of residential investment, the current dilemma that policy-makers are presented with was outlined. In particular, the case was made that while more stimulus may be needed, deficit and inflation concerns are increasing pressures to reduce the stimulus.

Mr. Gangnes continued by presenting results of a large-scale econometric model to analyze the impact of various policy simulations on the business cycle. Thus, the model suggests that a persistent expansionary monetary policy will have little impact on the baseline forecast, which sees weak labor markets characterized by high unemployment for a number of years, and low growth of 2 per cent (3 per cent) in 2010 (2011). In contrast, a large, comprehensive fiscal stimulus of \$100 billion annually would lead to output surges of 6 per cent in 2011 and would reduce unemployment by almost 2

percentage points in 2012, 5 years earlier than the baseline case, while inflation would only increase marginally. Moreover, the debt-to-GDP ratio would not worsen due to endogenous revenue growth.

The presenter then outlined the scenario of a coordinated foreign stimulus, showing that while US exports would expand significantly, the US\$ would depreciate further and the growth rate of real GDP would only increase by one half of a percentage point. A further scenario combined expansionary monetary policy and a larger domestic and foreign fiscal stimulus. In this case, unemployment would decline significantly and the US budget deficit and trade deficit would be kept in check.

Finally, an early end to the fiscal stimulus was argued to pose the greatest risk to the US economy as federal deficits would remain large, debt would continue to increase and GDP growth would be surprised by 2 percentage points in 2010.

### *Discussion*

Several issues were raised regarding the methodology applied and the variables selected. One issue was whether energy expenditure relative to disposable income (rather than GDP) would be more relevant. The presenter however responded that the results essentially remain unchanged. A suggestion was made to analyze whether credit card delinquency may have contributed to the mortgage crisis; the presenter responded that he would consider this extension.

In the ensuing discussion, the issues was raised as to whether in the future an expansionary monetary policy may be able to reduce fiscal deficits by stimulating private demand; this was the case in the middle of the 1990s in the US and in Canada. The presenter agreed that, indeed, this may be feasible. A further issue was whether in the model exchange rates were endogenous (they are) and whether the model considered that any fiscal stimulus would eventually have to be repaid. Here it was noted that while the model does consider the impact of higher levels of debt on interest rates, the effect may in reality be greater than in the model.

## **6. Topics in Applied Econometrics**

**Pami Dua (Delhi School of Economics, New Delhi)** presented “Synchronization of Recessions in Major Developed and Emerging Economies”

The presentation focused on proposed indicators that can be used to detect recessions, their degree of synchronization and also indicators that may suggest whether policy decisions could have changed the course of events. The central conclusion of this study is that the current crisis was the most synchronized recession on record. Such synchronization may in part be the result of the great degree of internationalization / globalization in recent times and other factors. The first part of the presentation focused

on determining the degree of synchronization. The second part dealt with the factors that help in explaining such synchronization.

The current global recession has shown interesting features, which help explaining the high degree of synchronization. For example, the US recession started before the collapse of financial institutions, showing the starting point of this recessionary cycle and how synchronized it was.

Using a framework that encompasses various macroeconomic, financial and trade indicators we can assess that there was no decoupling effect. The policy stance that was dominant at the earlier stage of the cycle, particularly tightening monetary policy in EU and elsewhere, aggravated the crisis. This was exacerbated and spread across countries by the global tightening of credit that resulted from the early financial turmoil.

To see with more clarity whether there was synchronization, it is useful to propose the notion of ‘diffusion’. The measure of ‘diffusion’ can be decomposed into: starting points, an index of “coincidence” and an index of “proportion”.

a) Starting points. According to the Economic Cycle Research Institute (ECRI), most of the OECD countries and few East Asian emerging economies shifted to recessionary cycles before the financial turmoil.

b) The ‘coincident index’ tracks how cycles of different economies evolve vis-à-vis others. According to this index, the 2008/09 recession was far more synchronized than the 1991 recession.

c) The “proportion” index looks at the number of economies in opposite sides of the dominant cycle. During the 2008/09 recession, only 10% of economies were in expansion, which is the lowest in records of global recessions in the past.

On this basis it is possible to conclude that there was a clear synchronization during the current crisis, and that the degree of synchronization was significantly greater for the G7 than for the G20.

In the recent past, exports with respect to GDP were about twice the levels of the 1990s for most countries, particularly in East Asia, but also in Europe and the US. In addition, growth rates of exports were significantly higher with respect to growth rates of GDP. By the same token, export contraction in most countries during the global recession was extraordinary, as was the contraction of GDP. The real-economy linkage between GDP performance and export performance can be further elucidated with the notion of the ‘bullwhip effect’. This helps describing how tied to each other were consumer demand, industrial production at global level and, in turn, exports of capital goods. Consumer demand, industrial production and global exports fell dramatically and at once during this recession.

Another important linkage was financial. The current period was characterized by a extremely high integration of financial systems, credit and financial flows. It seems very clear to every observer that finance was a critical means through which the global crisis spread.

The last aspect of this presentation dealt with policy. The critical question is whether some sort of policy action may have helped to avert or diminish the synchronization that took place during the current crisis. It seems that, overall, central banks across the globe ignored leading indicators that were published at the time, hinting to the possibility that a global recession was in the making. In mid 2008, despite the fact that leading indicators were pointing to a turn-around of the cycle since August 2007, Central Banks and policy makers did not act. And indeed, by mid 2008, as figures later published demonstrated, the US was already in recession. Had policy-makers paid more attention to leading indicators, it seems possible that either the recession or its severity could have been averted or mitigated by a more propitious relaxation of the policy stance.

**John Perkins (NIEIR, Melbourne)** presented “Energy Resource Depletion and Carbon Emissions – Global Projections to 2050” where he looked at the impact of energy resource depletion (coal, oil and gas) on supply and whether this would have a role in the mitigation of emissions. He also looked at policy issues that relate to both resource depletion and CO2 emissions mitigation. The study used a new 79 country macro growth model, with exports in current prices determined from import demands via a commodity trade flow matrix. Resource supplies and demand, for oil, coal and gas, are determined by stock adjustment models.

He found that constraints on resource supplies would put sustained upward pressure on resource prices and these pressures would assist effective mitigation. But overall, the global projections of fossil fuel use, given the assumptions made, lead to an emissions scenario inconsistent with environmental requirements. Under the assumptions, data, and model used, total CO2 emissions merely stabilize at a level 60% above 2000 levels. He proposed that a global tax on resource prices, administered at the site of resource origin, may be part of a solution. These could be put into a resource wealth fund that could be used to address emerging imbalances and tensions that would increase the depletion and concentration of resources increases.

### *Discussion*

Robert Shelburne asked about the technology of carbon capture and said that the real binding constraint is emissions.

Robert Kaufman asked about the oil reserves numbers noting that the US Geological survey numbers were much higher. He also pointed out that you cannot sum carbon emissions, due to the ocean absorption effect.

Alex Izurieta asked, why, if energy consumption would increase and there would be supply constraints pushing prices up, Japanese and German current account surplus would decline.

Willy Meyers noted that supply interdiction is hard and not effective, as the attempts in the illicit drug trade have shown

John Perkins answered that emissions were indeed the problem, but he thought that emissions policy might not be effective - trading schemes would have limited effects. He agreed that the reserve figures were not up to date, but the effect of higher initial reserves would only delay the inevitable. He said that the model did allow for absorption, but you would still get accumulation. He said that through the linkages, structural changes in relative prices would affect current account balances.

The attendee from Sudan noted that there would be a big decline in oil, gas and coal reserves, so that overall supply would decline while demand increased but asked about the size of the gap.

Juan Rafael Vargas asked about the price structure of the model and said that small countries could pursue carbon neutrality.

Hans Timmer said that taxing at the source was very logical. It's easier to impose but there would be huge political problems about the revenue. In the case of a consumption tax the money goes to the home country.

John Perkins answered that the gaps come out the trade matrix given import demands. On the price structure he said that the model contains price substitution effects between fuels but not to alternative fuels that could lower GDP intensity. He agreed that who would get the revenue would be a difficult issue, but said that as long as prices would rise there would be pressure to do something.

## **Annexes**



UN DESA



University of Toronto



## ***Agenda***

### **Second Session of the 2009 LINK Project**

(Preliminary as of October 11, 2009)

**United Nations Conference Centre**

**Bangkok, Thailand**

**October 26-28, 2009**

#### **Monday, October 26, 2009**

8:30 – 8:45

#### **Opening and welcome**

Mr. Nagesh Kumar, Director,  
Macroeconomic Policy and Development Division, ESCAP

Rob Vos, Director  
Development Policy and Analysis Division, UN DESA

8:45–10:15

#### **World Economic Outlook**

Chair: Byron Gangnes, University of Hawaii

LINK/UN DESA  
Rob Vos, UN DESA, New York

IMF  
Prakash Kannan, Research Department, IMF, Washington

10:15–10:30

#### **Coffee/tea break**

10:30–12:00

#### **World Economic Outlook (continued)**

Chair: Byron Gangnes, University of Hawaii

Hans Timmer, Development Prospects Group Director  
World Bank, Washington

General discussion

- 12:00 – 13:00            **Lunch**
- 13:15 – 14:45            **Panel discussion on the global financial crisis**  
 Chair: Tom Wilson, University of Toronto
- Participants:
- F. Gerard Adams, Northeastern University
- Nagesh Kumar, Director, Macroeconomic Policy and Development  
 Division, ESCAP
- Eustaquio Reis, IPEA-DIMAC, Rio de Janeiro
- Hans Timmer, The World Bank, Washington
- Jean-Pierre Verbiest, Country Director, ADB, Bangkok/Manila
- 14:45–15:00            **Coffee/tea break**
- 15:00–16:30            **Global Outlook: Commodity Prices and Economic Implications**  
 Chair: Pingfan Hong, UN-DESA , New York
- Agricultural Commodities  
 Willy Meyers, University of Missouri-Columbia
- Oil  
 Robert Kaufmann, Boston University
- Metals and Minerals  
 F. Gerard Adams, Northeastern University
- General Discussion

## **Tuesday October 27, 2009**

- 8:30- 10:30            **Regional Outlook: Developed Regions**  
 Chair: Charlotte Du Toit, University of Pretoria
- Outlook Overview: OECD Countries  
 David Turner, OECD, Paris
- United States  
 Hung-Yi Li, UN DESA, New York
- Japan  
 Kanemi Ban, Osaka University

Europe  
Clive Altshuler, UN DESA, New York

Each lead presentation is followed by comments from  
LINK country experts

10:30–10:45

**Coffee/tea break**

10:45–12:15

**European Economies during the Crisis**

Chair: Roberto Mariano, Singapore Management University

Fiscal Stimulus in Germany During the Current Recession  
György Barabas, Roland Döhrn, and Torsten Schmidt  
(RWI, Essen)

Assessing the Role of Central Banks in the Crisis: FED vs. ECB  
Franjo Stiblar, University of Ljubljana

What Drives Sovereign Risk Premiums?  
An Analysis of Recent Evidence from the Euro Area  
David Haugh, Patrice Ollivaud, and David Turner (OECD, Paris)

12:15–13:15

**Lunch**

13:15–14:45

**Regional Outlook: Developing Countries and EiTs**

Chair: Adolfo Castilla, Universidad Antonio de Nebija

Africa  
Adam Elhiraika, UN-ECA, Addis Ababa

East and South Asia  
Tiziana Bonapace and Amy Wong, MPAS/MPDD, ESCAP

Each lead presentation is followed by comments from  
LINK country experts

14:45–15:00

**Coffee/tea break**

15:00–16:30

**Regional Outlook: Developing and EiTs (cont.)**

Chair: Clive Altshuler, UN-DESA, New York

Latin America and the Caribbean  
Osvaldo Kacef, UN-ECLAC, Santiago

CIS and other EiTs  
Robert Shelburne, UNECE, Geneva

Each lead presentation is followed by comments from  
LINK country experts

### Wednesday, October 28, 2009

8:30- 10:30

#### **Asian Economies after the Crisis**

Chair: Nagesh Kumar, ESCAP

Asia and the Global Economic Crisis: Policy Response and  
Balancing Measures

Malcolm Dowling, University of Hawaii

Emerging South: Drivers of the Global Economic Recovery

Sudip Ranjan Basu, UNCTAD, Geneva

Asia-Pacific as the Emerging Global Growth Pole

Shuvojit Banerjee, MPAS/MPDD, ESCAP

Capital Mobility in Developing Asia: How Does It Respond to the  
Financial Crisis?

Juthathip Jongwanich, Asian Development Bank, Manila

General Discussion

10:30–10:45

#### **Coffee/tea break**

10:45–12:15

#### **The Economic Crisis in Retrospect**

Chair: Alexander Welfe, University of Lodz

Oil prices, Mortgage Payments, and the Financial Crisis

Robert Kaufmann, Boston University

The Impact of the Global Financial Crisis on Forming a Currency Union  
in East Asia

Ji Chou and Ming Huan Liou (Shih Hsin and National Central

Universities)

Alternative Policies for US Economic Recovery

Byron Gangnes, University of Hawaii

12:15–13:15

#### **Lunch**

13:15–14:15

#### **Topics in Applied Econometrics**

Chair: Rob Vos, UN-DESA, New York

Synchronization of Recessions in Major Developed and Emerging  
Economies

Pami Dua (Delhi School of Economics, New Delhi)

Energy Resource Depletion and Carbon Emissions – Global Projections  
to 2050

John Perkins (NIEIR, Melbourne)

14:15–14:30

**Coffee/tea break**

14:30–15:00

**Session Closing**

Rob Vos, UN DESA

Nagesh Kumar, ESCAP

## ***Economic Outlook Reports*** - Provided by Participants

---

Australia  
Austria  
Bangladesh  
Belgium  
Bulgaria  
Canada  
China  
Costa Rica  
Croatia  
Denmark  
Finland  
Ghana  
Greece  
Hong Kong SAR  
Hungary  
India  
Ireland  
Italy  
Korea, Republic of  
Malaysia  
Mexico  
Morocco  
Nepal  
Norway  
Philippines  
Poland  
Russian Federation  
Slovak Republic  
Taiwan Province of China  
Togo  
Turkey  
Ukraine

John Perkins  
National Institute of Economic and Industry Research  
416 Queens Parade  
Clifton Hill, Victoria 3068, AUSTRALIA  
Tel: 613-9488-8444  
Fax: 613-9482-3262  
E-mail: jperkins@nieir.com.au

Stefan Schleicher  
Economics Department  
University of Graz  
Universitaetsstrasse 15/F4  
A-8010 Graz, AUSTRIA  
Tel: 43-676-591-3150  
Fax: 43-316-380-9520  
E-mail: Stefan.Schleicher@wifo.at

Ulrich Schuh  
Department for Economics and Finance  
Institute for Advanced Studies  
Stumpergrasse 56  
A-1060 Vienna, AUSTRIA  
Tel: 43-1-59-991-148  
Fax: 43-1-59-991-148  
E-mail: schuh@ihs.ac.at

Salahuddin Ahmad  
Institute of Business Studies  
Darul Ihsan University  
Dhanmondi, Dhaka, BANGLADESH  
Tel: 880-2-895-0014  
Fax: 880-2-891-3501  
E-mail: l\_d\_p\_i@yahoo.com

Eustaquio Reis  
IPEA/DIMAC  
Av. Pres. Antonio Carlos 51, sala 1703  
Rio de Janeiro - RJ 20.020-010, BRAZIL  
Tel: 55-21-3515-8680  
Fax: 55-21-3515-8615  
E-mail: ejreis@ipea.gov.br

Garabed Minassian  
Institute of Economics  
Bulgarian Academy of Sciences  
3, Aksakov Str.  
1040 Sofia, BULGARIA  
Tel: 359-2-957-2419  
Fax: 359-2-988-2108  
E-mail: minasian@mail.techno-link.com

Erin Bell  
Institute for Policy Analysis  
University of Toronto  
140 St. George Str., Suite 325  
Toronto, Ontario M5S 3G6, CANADA  
Tel: 416-978-5353  
Fax: 416-971-2071  
E-mail: ebell@chass.utoronto.ca

Thomas Wilson  
University of Toronto  
140 St. George St., Suite 325  
Toronto, Ontario M5S 3G6, CANADA  
Tel: 416-978-4458  
Fax: 416-971-2071  
E-mail: twilson@chass.utoronto.ca

Oswaldo Kacef  
Economic Development Division  
ECLAC  
Av/ Dag Hammarskjold 3477  
Santiago, CHILE  
Tel: 56-2-210-2474  
Fax: (56 2) 210 2359  
E-mail: Oswaldo.kacef@cepal.org

Shengjun HAN  
Chief of Division, Office of Research Management and  
Coordinating  
Institute of Quantitative and Technical Economics  
Chinese Academy of Social Sciences  
5, Jianguomennei Street,  
Beijing 100732, CHINA  
Tel: 86-10-6513-7561/8519-5705  
Fax: 86-10-6512-6118  
E-mail: hansj@cass.org.cn

Tongsan WANG  
Director General  
Institute of Quantitative and Technical Economics  
Chinese Academy of Social Sciences  
No. 5 Jianguomennei Street  
Beijing 100732, CHINA  
Tel: 86-10-6513-7561  
Fax: 86-10-6512-6118  
E-mail: tswang@mx.cei.gov.cn

Peng ZHANG  
Department of Economic Forecasting  
State Information Centre  
58, Sanlihe Road  
Xicheng District  
Beijing 100045, CHINA  
Tel: 86-10-6855-8128  
Fax: 86-10-6855-8210  
E-mail: siczp@mx.cei.gov.cn

Tao ZHANG  
Deputy-Director, Division of Economic Modeling  
Institute of Quantitative and Technical Economics  
Chinese Academy of Social Sciences  
5, Jianguomennei Street,  
Beijing 100732, CHINA  
Tel: 86-10-8519-5712  
Fax: 86-10-6512-6118  
E-mail: zhangtao@cass.org.cn

Baoliang ZHU  
Department of Economic Forecasting  
State Information Center  
No. 58, Sanliheli Road  
Xicheng District  
Beijing 100045, CHINA  
Tel: 86-10-6855-8127  
Fax: 86-10-6855-8210  
E-mail: zhubl@mx.cei.gov.cn

Paula Acosta  
Fedesarrollo  
Calle 78 #9-91  
Bogota, D.C., COLOMBIA  
Tel: 57-1-325-9777  
Fax: 57-1-325-9770  
E-mail: pacosta@fedesarrollo.org.co

Juan-Rafael Vargas  
Escuela de Economia  
Universidad de Costa Rica  
Montes de Oca 2060, COSTA RICA  
Tel: 506-25-11-51-86  
Fax: 506-25-11-52-41  
E-mail: jrvargas20@yahoo.com

Grane Høegh  
Statistics Denmark  
Sejrøgade 11  
2100 København Ø, DENMARK  
Tel: 45-39-17-3772  
Fax: no fax  
E-mail: grh@dst.dk

Martin Lindpere  
Economics Department  
Bank of Estonia  
Estonia Pst. 13  
Tallinn 15095, ESTONIA  
Tel: 372-668-0898  
Fax: 372-668-0949  
E-mail: martin.lindpere@epbe.ee

Adam Elhiraika  
United Nations Economic Commission for Africa  
P.O. Box 3001  
Addis Ababa, ETHIOPIA  
Tel: 251-11-544-5442  
Fax: 251-11-551-3038  
E-mail: aelhiraika@uneca.org

Jean-Louis Brillet  
International Cooperation Unit  
INSEE  
timbre D301 room 1032  
18 bd Adolophe Pinard  
75014 Paris Cedex 14, FRANCE  
Tel: 331-41-17-53-16  
Fax: 331-41-17-66-44  
E-mail: jbrillet@yahoo.fr; jean-louis.brillet@insee.fr

David Turner  
Economics Department  
OECD  
2 rue Andre-Pascal  
75775 Paris, CEDEX 16, FRANCE  
Tel: 33 0 1 45 24 87 15  
Fax: 33 0 44 30 63 78  
E-mail: David.TURNER@oecd.org

Gyorgy Barabas  
RWI Essen  
Hohenzollernstr. 1-3  
45128 Essen, GERMANY  
Tel: 49-201-8149-225  
Fax: 49-201-8149-200  
E-mail: barabas@rwi-essen.de

Stella Balfoussias  
Center of Planning & Economic Research  
11, Amerikis str.,  
Athens 106 72, GREECE  
Tel: 30-210-363-0130  
Fax: 30-210-361-1136  
E-mail: stbalf@kepe.gr

Win-Lin Chou  
Department of Economics  
The Chinese University of Hong Kong  
Shatin, N.T., HONG KONG SAR  
Tel: 852-2609-8001  
Fax: 852-2-603-5805  
E-mail: winlinchou@cuhk.edu.hk

Andras Simon  
Corvinus University of Economics  
1125 Trencseni utca 12  
Budapest, HUNGARY  
Tel: 36-1-202-3210  
Fax:  
E-mail: simon.andras@pantelweb.hu

Nagapudi Rangareddy Bhanumurthy  
National Institute of Public Finance and Policy  
18/2, Satsangvihar Marg.,  
Special Institutional Area  
New Delhi 110067, INDIA  
Tel: 91-981-079-4738  
Fax:  
E-mail: nrbmurthy@gmail.com

Pami Dua  
Delhi School of Economics  
Department of Economics  
University of Delhi  
Delhi 110007, INDIA  
Tel: 91-11-2766-6703  
Fax: 91-11-2766-7159  
E-mail: dua@econdse.org; pamidua@airtelmail.in

Ali Hassanzadeh  
Monetary and Banking Research Academy (MBRA)  
No. 56, Reza Shekarabi, Shariati Ave.,  
Tehran 16619, ISLAMIC REPUBLIC OF IRAN  
Tel: 98(21) 8841-7262, 8843-9335  
Fax: 98(21) 8843-9337  
E-mail: info@mbra-cbi.ac.ir

Lorena Vincenzi  
Prometeia  
Via Marconi 43  
40125 Bologna, ITALY  
Tel: 3905-1648-0911  
Fax: 3905-122-0753  
E-mail: lorena.vincenzi@prometeia.it

Kanemi Ban  
Graduate School of Economics  
Osaka University  
1-7, Machikaneyama  
Toyonaka  
Osaka 560-0043, JAPAN  
Tel: 81-6-6850-5221  
Fax: 81-6-6850-5256  
E-mail: ban@econ.osaka-u.ac.jp

Yoshihisa Inada  
Faculty of Economics  
Konan University  
8-9-1, Okamoto Higashinada-ku  
Kobe 658-0072, JAPAN  
Tel: 81-78-431-4341  
Fax: 81-78-435-2541  
E-mail: inada@konan-u.ac.jp

Byung Yoo Kim  
Korea International Trade Association  
#4804 Trade Tower,  
159-1 Samsung-dong, kangnam-gu  
Seoul, KOREA, Republic of  
Tel: 82-2-6000-5342  
Fax: 82-2-6000-6190  
E-mail: beyou@kita.net

Eric Hanjahanja  
Reserve Bank of Malawi  
P.O. Box 30063  
Lilongwe 3, MALAWI  
Tel: 265-999-228-778  
Fax: 265-1-770-593  
E-mail: ehanjahanja@rbm.mw

Y.E.B. Kamphale  
Ministry of Development Planning and Cooperation  
Lilongwe 3, MALAWI  
Tel: 265-1-788-888  
Fax: 265-1-788-131/247  
E-mail: ykamphale@yahoo.com

Andrew Nyirenda  
Ministry of Development Planning and Cooperation  
P.O. Box 30136  
Lilongwe 3, MALAWI  
Tel: 265-1-788-888  
Fax: 265-1-788-131/247  
E-mail: anden4000@yahoo.com

Hyeon-Wook Kim  
Korea Development Institute  
207-41 Cheongnyang, Dongddaemun-gu  
P.O. Box 113, Cheongnyang  
Seoul, 130-012, KOREA  
Tel: 82-2-958-4130  
Fax: 82-2-958-4088  
E-mail: hook@kdi.re.kr

Sang Gyu Lee  
Korea Development Institute  
P.O. Box 113, Cheongnyang  
Seoul, 130-012, KOREA, Republic of  
Tel: 82-2-958-4051  
Fax: 82-2-958-4088  
E-mail: sglee@kdi.re.kr

Daniel Jenya  
Ministry of Economic Planning and Development  
P.O. Box 30049  
Lilongwe 3, MALAWI  
Tel: 265-01-789-355  
Fax: 265-01-789-173  
E-mail: djenyasoko@yahoo.co.uk

Hamilton Kamwana  
Ministry of Economic Planning and Development  
P.O. Box 30136  
Lilongwe 3, MALAWI  
Tel: 265-01-788-888  
Fax: 265-01-788-131/247  
E-mail:  
kamawanah@yahoo.com/hamilton.kamwana@mepd.  
gov.mw

Jamal Bakhti  
Direction of Forecasting and Prospective-Hihg  
Commissariat for Planning of Morocco  
Ollot 31-3, sectuer 16, Hay Riad 10001  
Rabat B.P. 178, MOROCCO  
Tel: 212-537-57-6949  
Fax: 212-537-57-69-44  
E-mail: jamalbakhti@yahoo.fr

Dilli Raj Khanal  
Chairman  
Institute for Policy Research & Development (IPRAD)  
Kalimati, Kathmandu, NEPAL  
Tel: 977-1-427-1840  
Fax: 977-1-467-1597  
E-mail: kxanaldr@yahoo.com; drkxanal@gmail.com

Mette Rolland  
The Financial Supervisory Authority of Norway  
P. O. Box 100 Bryn  
N-0611 Oslo, NORWAY  
Tel: 47-22-93-9833  
Fax: 47-22-65-6022  
E-mail: mette.rolland@kredittilsynet.no

Masood Ahmed Qazi  
Institute of Business Administration  
Social Policy and Development Centre  
15, Maqbool Co-operative Housing Society  
Block 7 & 8, P.O. Box 13037  
Karachi - 75350, PAKISTAN  
Tel: 92-21-111-677-677  
Fax: 92-21-921-5528  
E-mail: masood@spdc-pak.com;  
qmasood@iba.edu.pk  
Juthathip Jongwanich  
Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, PHILIPPINES  
Tel: 632-632-6625/6684  
Fax: 632-636-2342  
E-mail: jjongwanich@adb.org

Dennis Arroyo  
National Planning and Policy Staff  
NEDA  
5th Floor, NEDA Building, #12 Escrava Drive,  
Ortigas Center, Pasig City 1605, PHILIPPINES  
Tel: 632-631-3283  
Fax: 632-631-3721  
E-mail: dmarroyo@neda.gov.ph

Aleksander Welfe  
Institute of Econometrics and Statistics  
University of Lodz  
41, Rewolucji 1905r.  
90214 Lodz, POLAND  
Tel: 48-42-6355-172, 175  
Fax: (48-42) 636 9432  
E-mail: emfalw@uni.lodz.pl

Wladyslaw Welfe  
Institute of Econometrics and Statistics  
University of Lodz  
Poland 41, Rewolucji 1905r  
90-214 Lodz, POLAND  
Tel: 48-42-6355-172  
Fax: 48-42-6355-025  
E-mail: emfiws@uni.lodz.pl

Constantin Ciupagea  
Inst. Of World Economy/Romanian Academy  
13, Calea 13 Septembrie  
Casa Academiei  
Bucharest, sector 5, postal code 050711, ROMANIA  
Tel: 40-73-299-9525  
Fax: 40-21-318-2454  
E-mail: CCIupagea@iem.ro

Kirill Mikhaylenko  
Center for Macroeconomic Analysis and Short-Term  
Forecasting  
Nakhimovskiy Prospect 47  
Office 1310  
117418 Moscow, Russian Federation  
Tel: 7-499-129-1722  
Fax: 7-499-129-0922  
E-mail: kvm@forecast.ru

Roberto Mariano  
School of Economics  
Singapore Management University  
90 Stamford Road,  
178903, Singapore  
Tel: 65-6828-0888  
Fax: 65-6828-0877  
E-mail: rsmariano@smu.edu.sg

Mun Heng Toh  
Department of Business Policy, NUS Business School  
National University of Singapore  
1 Business LINK, BIZ Building #02-01  
117592, SINGAPORE  
Tel: 65-65-16-6386  
Fax: 65-67-79-5059  
E-mail: biztohmh@nus.edu.sg

Michal Olexa  
INFOSTAT, Institute of Informatics & Statistics  
Dúbravská cesta 3  
845 24 Bratislava 42, SLOVAK REPUBLIC  
Tel: 421-2-5937-9277  
Fax: 421-2-5479-1463  
E-mail: olexa@infostat.sk

Charlotte du Toit  
Department of Economics  
Faculty Economic and Management Sciences  
University of Pretoria  
Room 4-46  
Pretoria 0002, SOUTH AFRICA  
Tel: 27-12-420-3522  
Fax: 27-12-362-5207  
E-mail: charlotte.dutoit@up.ac.za

Sudip Ranjan Basu  
DITC, Trade Analysis Branch  
UNCTAD  
Palais des nations  
Office E-8067  
CH-1211 Geneva 10, SWITZERLAND  
Tel: 41-22-917-5553  
Fax: 41-22-917-0044  
E-mail: sudip.ranjan.basu@unctad.org

Robert Shelburne  
United Nations Economic Commission for Europe  
Office 472, Palais des Nations  
Geneva, CH 1211, Switzerland  
Tel: 4122-917-2484  
Fax: 4122-917-0309  
E-mail: robert.shelburne@unece.org

Ján Haluska  
INFOSTAT, Institute of Informatics & Statistics  
Dúbravská cesta 3  
845 24 Bratislava 45, SLOVAK REPUBLIC  
Tel: 421-2-5937-9380  
Fax: 421-2-5479-1463  
E-mail: haluska@infostat.sk

Franjo Stiblar  
Ekonomski Inštitute Pravne Fakultete  
University of Ljubljana  
Presernova 21  
1000 Ljubljana, SLOVENIA  
Tel: 386-1-252-1688  
Fax: 386-1-425-6870  
E-mail: franjo.stiblar@eipf.si

Faiza Awad Mohamed Osman  
Macro-economic Oplicie Directorate  
Ministry of Finance and National Economy  
P.O. Box 298  
Nile Street 1  
Khartoum, SUDAN  
Tel: 249-912-118-049  
Fax: 249-183-780-351  
E-mail: faiza\_amohamed@hotmail.com

Alfredo Calcagno  
Macroeconomic and Development Policies Branch  
Division on Globalization and Development Strategies  
UNCTAD  
Palais des Nations  
CH-1211 Geneva 10, SWITZERLAND  
Tel: 41-22-917-5401  
Fax: 41-22-917-0274  
E-mail: alfredo.calcagno@unctad.org

Ji Chou  
Department of Economics  
Shih Hsin University  
No. 111 Mu-Cha Road, Sec 1  
Taipei 11645, TAIWAN PROVINCE OF CHINA  
Tel: 886-2-2236-8225 #63401  
Fax: 886-2-2236-1658  
E-mail: chouji@cc.shu.edu.tw

Ray Y. Chou  
Institute of Economics  
Academia Sinica  
128 Sec. 2, Academia Rd.  
Nankang, Taipei 11529, TAIWAN PROVINCE OF CHINA  
Tel: 886-2-2782-2791  
Fax: 886-2-2785-3946  
E-mail: rchou@econ.sinica.edu.tw

Kamhon Kan  
The Institute of Economics  
Academia Sinica  
128 Sec. 2, Academia Rd.  
Nankang, Taipei 11529, TAIWAN PROVINCE OF CHINA  
Tel:  
Fax: 886-2-2782-8628  
E-mail: kk@sinica.edu.tw

Ming Huan Liou  
National Central University  
No. 300, Jhongda Rd.,  
Taoyuan County 32001, TAIWAN PROVINCE OF CHINA  
Tel: 886-0932-691-062  
Fax:  
E-mail: ming.huan.liu@gmail.com

Luxmon Attapich  
Asian Development Bank  
23rd Floor, The Offices at Central World  
999/9 Rama 1 Road  
Patumwan 10330, Bangkok, THAILAND  
Tel: 2-263-5352  
Fax: 2-263-5301  
E-mail: lattapich@adb.org

Narin Opamuratawongse  
Bangkok Bank Public Company Limited  
333 Silom, Bangrak  
Bangkok 10500, THAILAND  
Tel: 662-353-5830  
Fax: 662-236-0501  
E-mail: narin.opa@bbl.co.th;  
rungruedee.sae@bbl.co.th

Piyapan Tayanithi  
Bangkok Bank Public Company Limited  
333 Silom, Bangrak  
Bangkok 10500, THAILAND  
Tel: 662-230-1730  
Fax: 662-236-8983  
E-mail: piyapan.tay@bbl.co.th;  
rungruedee.sae@bbl.co.th

Jean-Pierre Verbiest  
Asian Development Bank  
23rd Floor, The Offices at Central World  
999/9 Rama 1 Road  
Patumwan 10330, Bangkok, THAILAND  
Tel: 632-632-6092  
Fax: 632-636-2356  
E-mail: jpverbiest@adb.org

Grace Kasisira  
Research Department  
Bank of Uganda  
37/43 Kampala Road  
P.O. Box 7120  
Kampala, UGANDA  
Tel: 256-41-25-8411  
Fax: 256-41-25-8739  
E-mail: gracekasisira@hotmail.com

Maria Skrypnichenko  
Institute of Economic Forecasting  
National Academy of Sciences of Ukraine  
26, Panas Myrny St.  
Kiev-11, 01011, UKRAINE  
Tel: 380-44-280-0417  
Fax: 380-44-280-88-69  
E-mail: skrypnichenko@mail.ru

F. G. Adams  
39 Stafford Road  
Newton, MA 02459, USA  
Tel: 617-332-2996  
Fax: 617-965-6395  
E-mail: adams@ssc.upenn.edu

Clive Altshuler  
DESA  
United Nations  
2 UN Plaza Room 2056  
New York, Ny 10017, USA  
Tel: 212-963-4707  
Fax: 212-963-4116  
E-mail: altshuler@un.org

Malcolm Dowling  
Department of Economics  
University of Hawaii  
522 North Kainalu Drive  
Kailua, Hawaii 96734, USA  
Tel: 808-262-7470  
Fax:  
E-mail: johnmalcolm\_dowling@yahoo.com

Byron Gangnes  
Department of Economics  
University of Hawaii at Manoa  
2424 Maile Way, Room 542  
Honolulu, HI 96822, USA  
Tel: 808-956-7285  
Fax: 808-956-4347  
E-mail: gangnes@hawaii.edu

Pingfan Hong  
Development Policy Analysis Division  
United Nations  
DC2-2050  
New York, NY 10017, USA  
Tel: 212-963-4701  
Fax: 212-963-1061  
E-mail: hong@un.org

Alex Izurieta  
DESA  
United Nations  
2 UN Plaza - DC2-2016  
New York, New York 10017, USA  
Tel: 917-367-8108  
Fax: 917-963-1061  
E-mail: izurieta@un.org

Prakash Kannan  
International Monetary Fund  
700, 19th Street, N.W.  
Washington DC 20431, USA  
Tel: 202-623-8806  
Fax: 202-623-6334  
E-mail: pkannan@imf.org

Robert Kaufmann  
Center for Energy and Environ. Studies  
Boston University  
675 Commonwealth Ave., Suite 141  
Boston, MA 02215, USA  
Tel: 617-353-3940  
Fax: 617-353-5986  
E-mail: kaufmann@bu.edu

Yuzo Kumasaka  
New Economy Group, Inc.  
150 W. 51st St., Suite 2006  
New York, NY 10019, USA  
Tel: 212-489-1190  
Fax: 212-489-1190  
E-mail: kumasaka@neweconomygrp.com

Hung-Yi Li  
DESA/DPAD  
United Nations  
DC2-2038  
2 UN Plaza  
New York, NY 10017, USA  
Tel: 917-367-9008  
Fax:  
E-mail: lih@un.org

Nicolas Maystre  
Development Policy and Analysis Division  
Department of Economic and Social Affairs  
United Nations  
DC2-2052  
New York, NY 10017, USA  
Tel: 212-963-4739  
Fax: 212-963-1061  
E-mail: maystre@un.org

William Meyers  
Food and Agriculture Policy Research Institute  
University of Missouri-Columbia  
101 Park de Ville Dr., Suite E  
Columbia, MO 65203, USA  
Tel: 573-882-9717  
Fax: 573-882-9717  
E-mail: meyersw@missouri.edu

Oliver Paddison  
Development Policy and Analysis Division  
Department of Economic and Social Affairs  
United Nations  
DC2-2052  
New York, NY 10017, USA  
Tel: 917-367-9268  
Fax: 212-963-1061  
E-mail: paddison@un.org

Ingo Pitterle  
Development Policy and Analysis Division  
Department of Economic and Social Affairs  
United Nations  
2 United Nations Plaza  
Room DC2-2028  
New York, NY 10017, USA  
Tel: 212-367-9552  
Fax: 212-963-1061  
E-mail: pitterle@un.org

Hans Timmer  
Development Prospects Group Director  
The World Bank  
1818 H Street NW  
Washington, DC 20433, USA  
Tel: 202-458-8983  
Fax: 202-522-2578  
E-mail: htimmer@worldbank.org/htimmer@aol.com

Sergio Vieira  
Development Policy and Analysis Division  
Department of Economic and Social Affairs  
United Nations  
2 UN Plaza  
Office DC2 #2136  
New York, NY 10017, USA  
Tel: 917-367-9724  
Fax: 212-963-1061  
E-mail: vieiras@un.org

Robert Vos  
Director of Development Policy and Analysis  
United Nations - DESA  
2 United Nations Plaza  
Room DC2-2020  
New York 10017, USA  
Tel: 212-963-4838  
Fax: 212-963-1061  
E-mail: vos@un.org

Matthias Kempf  
Development Policy and Analysis Division  
Department of Economic and Social Affairs  
United Nations  
2 UN Plaza  
Office DC2-2136  
New York, NY 10017, USA  
Tel: 212-963-4787  
Fax: 212-963-1061  
E-mail : kempf@un.org

Pisut Sampatanukul  
Director  
Government Pension Fund of Thailand  
990 Rama IV Road  
Bangkok, 10500  
THAILAND  
Tel: 662-685-4115  
Fax: 662-636-0595  
E-mail: pisut@gpf.or.th

## ESCAP Participants

Mr. Nagesh Kumar  
Director  
Macroeconomic Policy and Development Division  
UNESCAP  
United Nations Building  
Rajadamnern Nok Avenue  
Bangkok 10200, Thailand  
Tel: (662) 288 1637  
Fax: (662) 288 3007

Ms. Tiziana Bonapace  
Chief, Macroeconomic Policy and Analysis Section  
Macroeconomic Policy and Development Division  
UNESCAP  
United Nations Building  
Rajadamnern Nok Avenue  
Bangkok 10200, Thailand  
Tel: (662) 288 1430  
Fax: (662) 288 3007

Ms. Amy Wong  
Economic Affairs Officer  
Macroeconomic Policy and Analysis Section  
Macroeconomic Policy and Development Division  
UNESCAP  
United Nations Building  
Rajadamnern Nok Avenue  
Bangkok 10200, Thailand  
Tel: (662) 288 1486  
Fax: (662) 288 3007

Mr. Shuvojit Banerjee  
Economic Affairs Officer  
Macroeconomic Policy and Analysis Section  
Macroeconomic Policy and Development Division  
UNESCAP  
United Nations Building  
Rajadamnern Nok Avenue  
Bangkok 10200, Thailand  
Tel: (662) 288 1623  
Fax: (662) 288 3007

## List of Participants, Alphabetical by Surname

Acosta, Paula (COLOMBIA)  
 Adams, F. G. (USA)  
 Ahmad, Salahuddin (BANGLADESH)  
 Altshuler, Clive (USA)  
 Arroyo, Dennis (PHILIPPINES)  
 Attapich, Luxmon (THAILAND)  
 Awad Mohamed Osman, Faiza (SUDAN)  
 Bakhti, Jamal (MOROCCO)  
 Balfoussias, Stella (GREECE)  
 Ban, Kanemi (JAPAN)  
 Banerjee, Shuvojit (THAILAND)  
 Barabas, Gyorgy (GERMANY)  
 Basu, Sudip Ranjan (SWITZERLAND)  
 Bell, Erin (CANADA)  
 Bhanumurthy, Nagapudi Rangareddy (INDIA)  
 Bonapace, Tiziana (THAILAND)  
 Brillet, Jean-Louis (FRANCE)  
 Calcagno, Alfredo (SWITZERLAND)  
 Chou, Ji (TAIWAN PROVINCE OF CHINA)  
 Chou, Ray Y. (TAIWAN PROVINCE OF CHINA)  
 Chou, Win-Lin (HONG KONG SAR)  
 Ciupagea, Constantin (ROMANIA)  
 Dowling, Malcolm (USA)  
 du Toit, Charlotte (SOUTH AFRICA)  
 Dua, Pami (INDIA)  
 Elhiraika, Adam (ETHIOPIA)  
 Gangnes, Byron (USA)  
 Haluska, Ján (SLOVAK REPUBLIC)  
 HAN, Shengjun (CHINA)  
 Hanjahanja, Eric (MALAWI)  
 Hassanzadeh, Ali (ISLAMIC REPUBLIC OF IRAN)  
 Høegh, Grane (DENMARK)  
 Hong, Pingfan (USA)  
 Inada, Yoshihisa (JAPAN)  
 Izurieta, Alex (USA)  
 Jenya, Daniel (MALAWI)  
 Jongwanich, Juthathip (PHILIPPINES)  
 Kacef, Osvaldo (CHILE)  
 Kamphale, Y.E.B. (MALAWI)  
 Kamwana, Hamilton (MALAWI)  
 Kan, Kamhon (TAIWAN PROVINCE OF CHINA)  
 Kannan, Prakash (USA)  
 Kasisira, Grace (UGANDA)  
 Kaufmann, Robert (USA)  
 Kempf, Matthias (USA)  
 Khanal, Dilli Raj (NEPAL)  
 Kim, Byung Yoo (KOREA, Republic of)  
 Kim, Hyeon-Wook (KOREA, Republic of)  
 Kumar, Nagesh (THAILAND)  
 Kumasaka, Yuzo (USA)  
 Lee, Sang Gyu (KOREA, Republic of)  
 Li, Hung-Yi (USA)  
 Lindpere, Martin (ESTONIA)  
 Liou, Ming Huan (TAIWAN PROVINCE OF CHINA)  
 Mariano, Roberto (Singapore)  
 Maystre, Nicolas (USA)  
 Meyers, William (USA)  
 Mikhaylenko, Kirill (Russian Federation)  
 Nyirenda, Andrew (MALAWI)  
 Olexa, Michal (SLOVAK REPUBLIC)  
 Opamuratawongse, Narin (THAILAND)  
 Paddison, Oliver (USA)  
 Perkins, John (AUSTRALIA)  
 Pitterle, Ingo (USA)  
 Qazi, Masood Ahmed (PAKISTAN)  
 Reis, Eustaquio (BRAZIL)  
 Rolland, Mette (NORWAY)  
 Sampatanukul, Pisut (THAILAND)  
 Schleicher, Stefan (AUSTRIA)  
 Schuh, Ulrich (AUSTRIA)  
 Shelburne, Robert (Switzerland)  
 Simon, Andras (HUNGARY)  
 Skrypnychenko, Maria (UKRAINE)  
 Stiblar, Franjo (SLOVENIA)  
 Tayanithi, Piyapan (THAILAND)  
 Timmer, Hans (USA)  
 Toh, Mun Heng (SINGAPORE)  
 Turner, David (FRANCE)  
 Vargas, Juan-Rafael (COSTA RICA)  
 Verbiest, Jean-Pierre (THAILAND)  
 Vieira, Sergio (USA)  
 Vincenzi, Lorena (ITALY)  
 Vos, Robert (USA)  
 WANG, Tongsan (CHINA)  
 Welfe, Aleksander (POLAND)  
 Welfe, Wladyslaw (POLAND)  
 Wilson, Thomas (CANADA)  
 Wong, Amy (THAILAND)  
 ZHANG, Peng (CHINA)  
 ZHANG, Tao (CHINA)  
 ZHU, Baoliang (CHINA)