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1. Introduction and opening of the meeting

The 2011 Project LINK Meeting was held from 24-26 October 2011 in New York, hosted by the United Nations and the University of Toronto. Around 90 participants from 40 countries attended the meeting. The agenda comprised the following main themes: the global and regional economic outlook; the way forward after the global financial crisis and the global debt crisis as well as the outlook for commodity markets and international tourism, macroeconomic challenges for the global economy and policy alternatives, and global modelling issues. 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. Peter Pauly, University of Toronto, welcomed the participants, and thanked DESA and his colleagues at the University of Toronto for helping to arrange the meeting.

Mr. Rob Vos, United Nations Department of Economic and Social Affairs (UN-DESA), also welcomed the participants and in his talk highlighted that although major improvements in global economic conditions occurred in the first half of 2011, the coming year will present some serious challenges and risks for the recovery of the global economy.

2. Aftershocks of the global financial crisis and the way forward

Prof. Joseph E. Stiglitz, Columbia University, made an opening remark praising the LINK network and the value of its core methodological contribution, which consists of uncovering the trade linkages between the many countries of the world in order to assess the prospects of the global economy. He then put forward his main message stressing that the economic challenges are huge, but the responses are either not adequate or counterproductive. Thus, he reckoned to be “pessimistic” about a global recovery.

In reviewing the nature of the crisis, he noted that when the crisis broke out, policy makers believed that the risks were spread and by extension the risks inside each particular country were assumed to be contained. This assessment, however, ignored the fact that in the current global financial system there are no circuit-breakers (capital controls). On this count, lately, even the International Monetary Fund (IMF) had started to recognize the importance of capital controls and capital management.

As the Great Depression unraveled, many central bankers, including Ben Bernanke (Chairman, United States Federal Reserve), believed that increasing the money supply would resolve the problem. In the aftermath of the current crisis, the money supply (in the United States and elsewhere) was multiplied, but this did not revive economic activity. The injections went elsewhere and helped to partially repair the balance sheets of banks; but unemployment remained high. This begs the question of whether the situation of the global economy was structurally deficient before the crisis broke.

Various issues can be raised in this regard. First, in the United States before the crisis, saving rates were down to zero; the household sector was drowning in debt. Only one thing helped to hold the economy on artificial support: the housing bubble. However, excess borrowing by households supported by ever-rising housing prices was unsustainable. Second, this pre-crisis situation calls for a similarity with the period of the 1920s when increases in productivity led to lower employment and demand. In the 90s, nearly 80 per cent of the job losses in the manufacturing industry were due to productivity increases. Like the agricultural productivity in the 1920s, manufacturing productivity in the 90s grew faster than demand and led to higher unemployment and curtailed demand. Third, a further problem of the pre-crisis was the growth of inequality, with lower-income households reaping only a minimal portion of the wealth generated by growing national income. This pattern was common to many countries. Fourth, other failures emerged from the international context. One of the consequences of the failure of IMF, the World Bank (WB) and other institutions that were seeking resolutions to the crisis of the mid-1990s was that countries were forced to prepare by themselves to cope with future external crises. This led to an extraordinary accumulation of reserves by many countries, as a precautionary measure, which represented a massive global drag on aggregate demand. Finally, as oil prices were raising at par with world output growth, there was a shift of global income from global oil consumers to oil producers. That changed the pattern of demand, as oil producers are higher savers.

In view of this diagnosis, policymakers in 2007 should have focused on ways to “replace” the driver of aggregate demand that was partly relying on the build-up of a housing bubble in the United States with more sustainable drivers, and on how to sustain demand based on an improved distribution of global income. Currently, the world economy faces a new problem: the European sovereign debt crisis. This is not a new issue; structural failures existed before the crisis broke out. When the Euro was created, there was no viable fiscal framework, including cohesion, and little attention was paid to the underlying structure of aggregate demand (Spain and Ireland, for example, were doing what everyone else was doing: growing by excessive private debt and housing bubbles).

Prof. Stiglitz then highlighted the main directions of policy action with which policy-makers attempted to deal with the crisis. The solution offered by European policy makers is fiscal austerity. But fiscal austerity is getting things worse. Indeed, Ireland was downgraded after they announced a fiscal austerity package. The United States had been following a similar path during the 1990s. By 2000 the fiscal stance was so heavily leaning towards surpluses that Mr. Greenspan warned that all the public debt will be paid in few years. His recommendation for a change of course found an echo in the policy-mindset of

the Republican administration in the aftermath of the 2000-2001 recessions. The aggressive tax alleviation measures for the rich accompanied by wasteful wars increased the size of public debt, which has grown further due to the cost of coping with the Great Recession. Facing a very high level of public debt, fiscal austerity is now recommended for the United States as well.

The yet unresolved problems prior to the crisis are further complicated by the policy recommendation of fiscal austerity, which is equivalent to economic suicide, as there is no other reliable force of aggregate demand in Europe or the United States. Policy-makers saw the relevance of fiscal stimuli only for a relatively short period as the global crisis broke out in 2008, but the degree and duration of such stimuli were inadequate. Fiscal austerity measures are currently exerting a pressure against income-earners leading to increased inequality. This will continue to exacerbate the problem of inadequate effective demand, as income-earners of the lower deciles of the populations tend to have higher propensity to spend.

Policy-makers are also failing to act in order to improve transparency and regulation in financial markets. Lack of transparency is the tone in dealing with the banking system. Stress tests for banks are not transparent and investors do not trust the results which inhibits credit from being channeled to productive activities. Economic forecasters and experts have also failed to foresee the crisis and then to grasp its severity. In the immediate aftermath of the crisis, they announced green shots of recovery that turned brown pretty quickly, adding to the pervasive lack of trust about what the real situation of banks and economies is. In terms of regulation, the most serious problem of "too big to fail" is not addressed at all. Balance sheets of banks in many developed economies are as big or even bigger than their gross domestic product (GDP). Finally, the global economy is far more interdependent than it has ever been. If Europe and the United States would manage to do better the world economy could improve. In turn this will come together with the combined efforts made by other countries. More than ever before, global policy coordination is required.

In conclusion, Mr. Stiglitz declared to remain pessimistic about the global economic outlook as the underlying causes of the crisis are not addressed and policy-makers are failing by taking the opposite course of action than what is required.

During the discussion, a number of questions and comments were raised from both the delegates and the LINK participants. The main questions and comments are:

Before the crisis; saving rates in the United States were too low. Now, saving rates are too high. What would the correct path be? What can least developed countries (LDCs) do? There is cautious optimism in these countries. Is this justified? The rate of productivity growth has played a role in the rise of unemployment. There seems to be a trade-off between productivity growth, which is necessary, and unemployment, which should be avoided. One hundred fifty three countries support the notion of a global coordination council. How do you envisage it? After the crisis we have seen the creation of the G20. What is the role of this group? How can only 20 countries pretend to coordinate and

represent the world economy? Is there still room for monetary policy? Is fiscal integration the answer to the debt crisis in Europe? We are worried that the world economy may not recover and our economies will not revive. It is worrisome that productive capacities are all concentrated in the developed economies and are not put to good use. There are serious problems with unemployment among the youth in Arab nations. What can be done? The history of international coordination is very discouraging. What makes you more optimistic about coordination?

Mr. Stiglitz responded as follows:

The savings rate in the United States is now about 5 per cent. The consumer is not coming back. The upper 20 per cent of the income share is saving about 15 per cent or more; but the bottom is saving 0 per cent. There is certainly an issue of income distribution, and this has to be addressed. Likewise the global financial markets have wrongly assumed that there is a savings glut in the world economy. Still, there are huge investment needs around the world, and in many countries with high saving rates there are high investment rates as well. The problem is with the allocation of savings into investment, not with savings being too high. The IMF has spotted the link between inequality and volatility and has recognized the need of capital controls. Addressing these issues is a step in the right direction.

If productivity growth exceeds demand for the goods produced, that creates unemployment. Productivity is not the problem. The economies move from one sector to the other and in the process there will be winners and losers. To help sustain a growth of (global) demand that is required to avoid rising unemployment, there should be mechanisms for winners to compensate the losers. The challenge therefore is twofold: sectoral diversification and development, and income re-distribution.

Challenges are huge in LDCs. These countries need investment in infrastructure, diversification, among others. But LDCs remain dependent on capital inflows. In the current context, there is space for further recapitalization of the World Bank and IMF with the mandate of providing LDCs and other countries with the funding that they need. Another problem, spotted already in Bretton Woods, is that as the global economy grows, regional agreements will proliferate; new institutions, like regional banks which had been proven to be very effective in address regional problems will be needed. But these changes are taking place too slowly and the global economy is changing too fast.

This brings in the issue of the Global Economic Council, on top of the fact that the Group of 20 (G20) (Q5) is not representative of all countries. We undoubtedly need a small group to manage complex issues. But the small group should find ways to be truly representative. At the moment of the creation of the G20 all countries were in similar lines, expecting to address the global crisis. But subsequently, countries started to show different patterns and responses, making it more difficult to find a common ground, let alone representing countries not part of the G20. In essence, a new set of institutions should be designed, guided by the UN economic council.

Monetary policy cannot lead the way out; bad monetary policy can make things worse. It is more difficult to resolve current problems with monetary policy (pushing from a string). For example, interest rates in the United States have been kept at near zero for a long time, but this has not been channeled into more credit. Also the financial situation of smaller banks is often left out and it is these small banks that lend to small businesses. Another problem is that true lending institutions operate on the basis of collateral. But most of collateral is real estate. The problem is the narrow theory that states that investment follows low interest rates. In a situation of excess capacity, low interest rates will not lead to investment. Finally, QE2, QE3, etc. need to be looked at from a global perspective. Monetary expansion in a global, open economy can be ineffective at home and even cause problems. Monetary policy is a distraction from fiscal policy where attention should be focused. Indeed, many countries around the world, including the United States and some European countries would do well to engage in fiscal stimuli.

Many European leaders are committed to solve the problems. Theirs is a good list. They understand that they have to deal comprehensively with the problems and recognize that Greece cannot get out of the problem by itself. They refer to a solidarity fund, or something of the kind. But money is not coming through and there is a cascade of shortfalls. One of the problems is that economics and politics are in different phases. Besides, financial markets move too fast. A second problem is the wrong focus on austerity. The Growth and Stability Pact is a wrong framework, but no alternative is coming through. The real solution is fiscal union. But that is a very big deal and whether this is going to happen is a big unknown. The European Central Bank (ECB) has been doing most of what it can, but its inflation-targeting mandate is outdated and out of touch with current realities.

There is lack of jobs but also lack of fairness and equity because only those with connections have access to jobs. The new situation calls for a new model: autocratic systems do not work, capitalism does not work. The social model, based on what was Europe and unfortunately is being wiped out, could be a template.

Coordination is extremely difficult, but lack of coordination is even more difficult. Externalities, beggar-thy-neighbor, etc. cause far more problems. Coordination is required, and that also goes together with the creation of a global economic council.

3. World Economic Outlook

Mr. Rob Vos, UN-DESA, presented the global economic forecast of UN-DESA/LINK, major downside risks and uncertainties, and the key policy challenges (for the details, see LINK Global Economic Outlook, at
http://www.un.org/en/development/desa/policy/proj_link/documents/geo2011_10.pdf).

He outlined how the world economy was at a critical juncture and emphasised that the momentum of the global growth was faltering at an alarming rate. Moreover, heightened

risks for some major developed economies threaten to drag the rest of the world into another dire economic downturn. Prospects for the world economy in 2012 are seriously grim and surrounded by great uncertainties. Premised on a set of relatively optimistic assumptions, including an assumption that the sovereign debt crisis in Europe could be contained within a few small economies, growth of world gross product (WGP) is forecasted to be 2.6 per cent in the baseline outlook for 2012. In comparison, WGP is estimated to have grown by 2.8 estimated for 2011, a significant deceleration from the rebound of 4.0 per cent in 2010.

The presenter highlighted how most threatening risks for the global recovery emanate from the weaknesses in the major developed economies, including in particular the deteriorating sovereign debt crisis in a number of European economies that is aggravating the still fragile banking sector in the region. The fiscal and financial woes, combined with elevated unemployment, widening income inequality and a flagging economic growth, are posing formidable challenges for policy makers in major developed economies. Moreover, a pervasive and deepening political divide in these countries regarding how to tackle these challenges has paralyzed otherwise a much urgently needed policy action and was further eroding the already shattered confidence of businesses and consumers.

Mr. Vos mentioned that world trade continued to recover in 2011, yet at a much slower pace than in 2010. After a strong rebound of more than 14 per cent in 2010, the volume of world exports in goods is estimated to have increased by only 7 per cent in 2011. While the level of world total exports has fully recovered to the pre-crisis peak by the end of 2010, it remains below its long-term trend even by the end of 2011.

Mr. Vos concluded by pointing to several policy challenges. The first challenge pertains to the need for better focused and better coordinated fiscal stimulus, particularly in developed countries that still had ample fiscal space. While this would entail a redesign of fiscal and other policies to ensure focus on jobs creation and investment in sustainable development, it would also include better coordination among surplus and deficit countries and between those with ample and limited fiscal space. A second challenge is the greater resolve needed in dealing with financial fragilities. While a large and orderly sovereign debt workout is required in Europe, mortgage relief and stimulated lending to small and medium enterprises (SMEs) are needed in the United States. Moreover, deeper financial regulation is necessary to stem capital flow volatility, while stronger coordination monetary and exchange rate policies could lead to reform the current reserve system. A third challenge is to ensure that sufficient resource transfers are made available to financing millennium development goals (MDGs) and sustainable development. In particular, compliance with aid commitments and further easing access for low-income countries to external finance for development is needed. The final challenge pertains to the need to strengthen the framework for international policy coordination. Whereas the cooperative spirit is now waning, Mr. Vos noted that there is a need to shift the G20 deliberations towards a more institutionalized multilateral setting.

Ms. Mitali Das, International Monetary Fund (IMF), emphasized the fact that the global recovery has become more vulnerable, with economic weaknesses no longer

constituting only a bump in the road but rather epitomizing structural insufficiencies. The slowdown has been accompanied by falling equity markets, higher financial market volatility, capital outflows from emerging markets and lower global commodity prices. Currently, IMF forecasts a broad-based economic slowdown. In order to reverse this trend and achieve stronger growth, four conditions need to be met: reforms, especially regarding financial regulation; a repair of balance sheets; internal rebalancing; and external rebalancing. So far, progress on these fronts has been slow and insufficient. In the outlook, global growth has been revised downward for 2012, with the main risks being sovereign debt problems and the condition of bank balance sheets.

Mr. Theo Janse van Rensburg, World Bank, presented the World Bank's global economic outlook, emphasizing that the international environment had become much more precarious in recent months. Despite strong macroeconomic fundamentals, developing countries are facing headwinds to growth due to contagion from the crisis in developed economies. Although inflation has started to ease, high food prices continue to be a policy concern. Developing countries are generally more vulnerable than in 2008/2009, especially since some channels of crisis transmission might be hidden.

Market concerns over Europe's sovereign debt crisis have significantly risen since the second quarter of 2011. Since July, there has been an increased contagion to hitherto unaffected countries, including many developing economies. Sovereign credit default swap rates, a measure of risk premium, have risen worldwide. In addition, there was a large-scale asset sell-off in the third quarter, with world stock market capitalization declining by about $6.7 trillion, equivalent to 11 per cent of global GDP. Capital flows to developing countries faltered as risk aversion among global investors soared. This followed strong inflows of foreign direct investment in the first half of 2011.

Mr. van Rensburg then pointed out that the turmoil in financial markets is related to an adjustment in the perception of recent growth performances. This includes data revisions for high-income countries and weaker-than-expected second quarter figures worldwide. Increased uncertainty and shaken confidence will dampen investment and increase precautionary savings. Global industrial production stagnated in August 2011 and the Purchasing Managers Index fell below 50, signaling a slight contraction. At the same time, the global economic downturn and high oil prices have led to lower trade growth. The loss of market confidence in European fiscal sustainability has become a more serious issue. So far, markets have not been convinced by the proposed policy measures. Specifically, the exposure of the European and global banking sector to European sovereign debt is a major concern. More radical policy steps, including bank recapitalization, may be unavoidable.

Mr. van Rensburg then illustrated why developing countries appear to be less well positioned to deal with the current crisis than in 2008. In a majority of developing countries, government deficits have significantly increased. Several Asian and Latin American countries also have significant exposure to the European banking sector. Moreover, many countries in Asia, the Middle East and North Africa and Sub-Saharan Africa have close trade ties with European periphery countries. Resource-rich exporters may come under severe pressure. The World Bank's baseline scenario assumes limited

confidence effects and a moderate slowdown in growth. More pronounced wealth and confidence effects, however, could result in a sharper economic downturn. Earlier concerns about inflation and food prices remained, but are less urgent. Slower global growth and weaker capital flows are likely to dampen inflation in many developing countries that struggled with high rates for most of 2011. However, local food prices are still rising in many economies.

Mr. van Rensburg concluded his presentation by reiterating his main messages. Most importantly, contagion within Europe could result in a serious downturn with severe consequences for global economy.

Mr. Adrian Cooper, Oxford Economics, presented the macroeconomic forecast of Oxford Economics for the global economy. The speaker noted the baseline assumptions on which the forecast is based are similar to those of Project LINK. They include an orderly resolution of the euro area debt crisis, continuing monetary stimulus in the advanced economies, as well as stimulus measures in some emerging markets, slowing inflation and growth in real incomes, and continued growth of the middle class in the emerging economies.

However, there are serious downside risks to the forecast. In case of a disorderly Greek default, contagion may spread to other euro area countries and, as a consequence, oil prices may sharply decline to a level below 60 dollars per barrel. Such developments will have serious implications for oil exporters, affecting the Russian economy in particular. The United States still faces the danger of a political deadlock, and tight fiscal policy in the United States may have negative implications for the manufacturing sector. Another recession in the United States would have a severe impact on many emerging economies, including China. In addition, China faces a number of domestic risks, such as the property price bubble and the high indebtedness of the local governments, and a possible hard landing in China may affect not only emerging Asia, but also other emerging markets and even the advanced economies.

Mr. David Turner, Organization for Economic Cooperation and Development (OECD), presented the OECD outlook for the global economy. He indicated that the likelihood of a “muddling through” scenario for the global economy is becoming smaller and smaller. He illustrated the downside risks associated with the possibility of a sovereign default. At the same time, there are upside risks to the outlook, if policymakers succeed in blocking the contagion effect of a possible sovereign default. According to Mr. Turner, the overall financial conditions in the euro area have tightened, but they are not yet signaling a looming crisis.

Mr. Moazam Mahmood, International Labour Organization (ILO), presented the ILO’s views on the current situation in the world economy, focusing on the relationship between growth and employment. He illustrated that the situation is worse in terms of employment than in terms of GDP. In most developed countries, the recovery of employment has been very slow. Mr. Mahmood then showed that GDP growth can be decomposed into productivity and unemployment effect. According to research at the ILO,

there is a negative relationship between GDP growth and employment growth. In most countries, higher GDP growth has been the result of productivity increasing through higher capital-labour ratios. As developing countries strive for higher growth, they mainly do so by increasing capital, leading to job-poor growth.

A number of questions and comments were raised during the discussion.

Mr. Sam Olofin (Nigeria) indicated that Africa's problem consists not just in shifting expenditures towards domestic consumption, but that the wrong sectors are selected for investment. The sector of choice should be manufacturing. He then noted that Lehman Brothers collapsed because of weak regulatory capacity. This was followed by QE1 and QE2, which have had very little macroeconomic effects. However, bonuses in the financial sector have increased again. He wondered why there still is reliance on markets to regulate the financial sector and suggested a tougher attitude towards CEOs and the financial industry.

Mr. Rob Vos responded that the key answer to job growth in Africa was a structural transformation of the economy. In Asia, the economies are increasing productivity, which supports wage growth. But they are also increasing their market size, and consequently employment. Therefore, higher productivity does not necessary imply that employment is stagnating. In terms of sectors, one should think of green technologies and adaptation to climate change. Mr. Vos then pointed out that improvements in Basel III are not sufficient to stabilize financial sectors. Financial regulation should support counter-cyclical behavior in terms of reserve accumulation, which currently is not the case. In the EU, due to its systemic or institutional failures, it is difficult to harmonize financial legislation.

A participant pointed out that the Great Depression had exactly started 82 years ago. At that time as well as today, economists have failed in forecasting the crisis. And neither has a good explanation of the past has been provided.

Robert Kaufman (Boston) wondered what had caused the huge change in the IMF forecast, compared with the previous one. Mitali Das (IMF) responded that the IMF previously projected an expansion for Japan, which was subsequently revised. Additionally, financial markets were surprised by the developments in July (related to Spain and increasing spreads), and then the political deadlock in the United States occurred and the downgrade of the United States sovereign debt. The confluence of those factors (each one of which has limited influence) affected the forecast.

Massimo Tivegna (Italy) asked why in the case of Italy, the savings rate had increased in 2010-2011, and what could be done to stimulate an economy under such conditions. Another participant drew attention to the multiple debt crises in Latin America in the 1980s and 1990s, which can offer lessons to the euro area. He pointed out that the debt problem is shared between borrowers and lenders and that a haircut is needed. Mitali Das (IMF) responded that there are several differences between Latin American countries then and the euro area today, most importantly that the euro area is a monetary union. Depreciation, which took place in Argentina, for example, is not an option for a country in

the euro area. Regarding the "haircut", she pointed out that such mechanisms are currently under discussion.

Rob Vos indicated that the Greek problem is a shared problem, but that not all policymakers acknowledge it. Funds are used to recapitalize banks, to increase lending to private sector. Regarding the euro, he emphasized that the euro itself is flexible, but that the implications of a devaluation are different across countries. To mitigate the effect of those implications, a stronger union is needed. Regarding the savings rate, he stated that an increase itself is not such a bad thing, but currently the higher savings rate is a consequence of the financial crisis, and therefore savings are not channeled into investment. In the medium-term, an increase in savings is fine, but in the short-term, deleveraging can constrain the economy.

Juan-Rafael Vargas (Costa Rica) suggested that the Greek problem is a problem of politicians, not economists and should have been solved earlier. He pointed to developing countries' experience with restructuring debt according to the Brady plan and also highlighted Costa Rica's success in handling sovereign debt problems. He noted that it is not the right time to press for minimum wages as the ILO advocates.

Moazam Mahmood (ILO) responded that the issue of minimum wages has been addressed during the Asian crisis in 1997/98. In Thailand, the cut in the minimum wage had disastrous consequences for the economy, while also being unfair. One of the reasons, why unemployment is sticky in some European countries, is that the automatic stabilizers worked. In this regard, he emphasized the importance to protect workers during difficult times.

4. Global outlook for commodity markets and international tourism

Mr. Westhoff, University of Missouri, first analyzed recent developments in agricultural markets, including demand and supply as well as prices and use. On this basis he sketched the outlook and the possible impact of policy developments.

He started by observing that food inflation had been rising in the United States. The sharp rise observed since the second half of 2010, especially for US grain exports, is consistent with the patterns of international food prices published by the Food and Agriculture Organization (FAO). The rise of international prices of rice and soybeans have been more moderate than grains. Various factors explain this pattern of food prices. First, in a post-recession market environment, prices tend to rebound. On the supply side, bad weather (clearly in the United States, where crops were far below expectations) put additional pressure on the typically rising pattern that follows a recession. On the demand side, rising consumption in China is another factor, particularly for feed use in the production of meat, which is typical of the development of large farms.

Further, maize and oil prices are correlated, not only because oil and oil-derived products are important inputs to modern agriculture, but also because maize is used for producing biofuels that to a certain extent are substitutes to oil. Ethanol production, after discounting the patch of 2009, has been increasing at fast pace in the United States, in virtue of improved technology and lower unit prices. In fact, ethanol prices in the United States have recently become as cheap as in Brazil. These patterns tend to increase diversion of production of maize towards ethanol and thus putting upward pressure on food prices and the supply for human and feed consumption falls or decelerates.

In the outlook, markets are expected to remain volatile, especially considering that stocks are generally low, supply is subject to weather-related fluctuations, and demand in the short run is very inelastic. Assuming average weather conditions and continued global economic growth, and with the additional assumption that there will be slower growth in the production of ethanol, the pattern for most agricultural products will be a retreat from 2011 peaks, with prices remaining somehow above previous levels.

The next question is whether recent policy developments could have a perceptible effect on agricultural prices. The possible termination of the ethanol subsidy in the United States is not expected to have a significant impact because these have been somehow marginal compared with use mandates and have also become marginal in the formation of end-user prices. Likewise, policy reforms in the European Union may have only a small impact on food prices. Finally, trade agreements, particularly bilateral, such as the agreement between the United States and Korea, may have some impact on small markets but global effects will be very small or negligible.

Mr. Robert Kaufmann, Boston University, presented the current status and outlook for oil prices. He emphasized that although the price of Western Texas Intermediate (WTI) crude had returned to $80 per barrel (pb), oil price had been above that level throughout 2011 mainly as a consequence of the Arab spring. With the financialization and the growing volatility in commodity markets, annual price forecasts have become a very difficult exercise and shorter-run forecasts (e.g. monthly forecasts) might be more appropriate.

Looking at fundamentals of the oil market in 2011, it appears that supply and demand were more or less balanced. Global consumption has risen above the previous peak in line with increasing supply. The spare capacity of the Organization of Petroleum Exporting Countries (OPEC), however, has decreased following the beginning of the Libyan conflict. As Libya returns to the market, OPEC spare capacity might increase, but only progressively as oil exporters will prefer to maintain high prices.

Based on fundamentals, an oil price forecast would not be much different from a forecast a year ago. Annual forecasts, however, have become problematic and have failed to predict oil prices correctly after 2007. Indeed, since then, the cointegration relationship between different crudes started to break down for longer periods leading to a repeated failure of the law of one price in the oil market.

Speculation in the oil market is a possible explanation for these developments. There is no hard evidence, but there are different ways to look for suggestive evidence. First, the correlation between first differences of the Dow Jones index and the West Texas Intermediate (WTI) prices (between 1997 and 2011) shows that changes between these two prices, which should be independent according to theory, have become more synchronized over the last years. Secondly, a Granger-causality test shows that price changes in Dow Jones index indeed drive prices in WTI price. Monte Carlo simulations confirm this finding. Third, it appears that the Brent price is also a determinant of the WTI price, and that the difference between these prices and the difference between the FTSE and Dow Jones indexes are also correlated.

Discussion

A participant expressed his skepticism concerning the role of speculation as a driver of oil price fluctuations arguing that market volatility or common expectations not captured in the model specification could explain the correlation between the Dow Jones index and WTI prices. Mr. Kaufmann replied that this argument is not valid. Indeed, if these factors were behind the correlation between the Dow Jones index and WTI prices, then this correlation would have existed before 2007 already. The fact that this correlation is a historically new phenomenon hints at the role of new factors, including speculation.

A participant asked about the correlation between oil and food prices and whether oil prices had an effect on food prices. Mr. Kaufmann replied that there were different channels through which developments in the oil market may influence food prices. First, due to the existing arbitrage between oil and ethanol, high oil prices positively influence demand for corn. Second, as oil is used as input for food production (in the form of fertilizers), rising oil prices also raise the price of food production. As the higher yields brought about by the “Green Revolution” are mainly based on a more intense use of fertilizers, this link has become stronger over time.

In response to other questions, Mr. Kaufmann said that replacing WTI with Brent price would not change the findings of his research. The choice of WTI was mainly due to the availability of better stocks data for this crude. Mr. Kaufmann also played down the influence that developments in the liquefied natural gas (LNG) market may have on the oil market by pointing to the fact LNG as a source of energy, like nuclear energy, requires a completely different infrastructure, which makes arbitrage between those different sources of energy impossible.

Mr. John Kester, World Tourism Organization (UNWTO), presented the outlook for tourism based on the “UNWTO World Tourism Barometer” of June 2011 and revisions based on new data. International tourism grew in 2010 compared to 2009 and preliminary data of the first months of 2011 indicates this trend is continuing.

International tourism arrivals in 2010 amounted to 940 million, a 6.6 per cent increase compared to 2009. International tourism receipts grew by 4.7 per cent in real terms. Disaggregating per region, the continent with the greatest share continues to be Europe

(including the CIS countries), which absorbed 51 per cent of arrivals and 44 per cent of revenues, followed by Asia and the Pacific, with 22 per cent of arrivals and 27 per cent of revenues. On the other end, Africa only represents 5 per cent of arrivals and 3 per cent of revenues. Among the world regions, Asia and the Pacific showed the fastest rate of growth between the pre-crisis peak of 2008 and 2010, with rates in the range of 9.0 per cent for South Asia and 13.1 per cent for South-East Asia. Preliminary data for 2011, extrapolated from activity in the first eight months, shows an increase of 4.5 per cent of arrivals with respect to 2010. The picture of the last few years shows that the outbound markets that have grown the most are those including mid-size of large emerging economies, like Brazil, China, the Russian Federation, Korea and Hong Kong.

Mr. Kester highlighted the relative importance of tourism among sources of export revenues. In nominal terms, world tourism in 2010 represented about 30 per cent of exports of services and 6 per cent of goods and services together. Compared with export sub-categories, international tourism revenues represent about the same income as the global food market or the global automotive market. Furthermore, tourism as a sector represents about 5 per cent of GDP worldwide, but for some regions like small (island) economies it can be up to 40 per cent of GDP.

Tourism further represents a powerful tool for social and economic development and the reduction of poverty. This sector generates vast amounts of employment and has linkages with investments in infrastructure, aside from being a trigger of increase competitiveness.

5. Regional Outlook

Developed Regions

United States of America

Mr. Hung-Yi Li, UN-DESA presented the economic outlook for the United States of America. He said the US economy will muddle through the coming years and predicted that GDP growth will fall below 2 per cent in 2011 and 2012 and may bounce back somewhat in 2013.

The tepid growth has been and will be constrained by the continuing de-leveraging of the household and government sector. The value of real estates owned by household still remains well below the peak value reached before the Great Recession. Although housing prices tend to stabilize, the outlook for the housing sector is not bright. Foreclosure still has the potential to damage the financial condition of families and banks. Households will need to rebuild the wealth by saving more, hence constraining consumption.

Meanwhile, following a spike in federal government debt as a consequence of the financial crisis, there is a strong pressure for the government to balance the budget and stabilize

public debt. All feasible scenarios point to a reduced federal spending which will not support the growth.

Recovery in the labour market has been slow and, at the current pace, may take another four to five years before returning to the pre-crisis level of employment. As a result, wage rate growth has been slow which help to stabilize the core inflation.

On the other hand, there also exist two positive observations. First, investments in business equipment and software are strong. Secondly, recovery of the manufacturing industry remains solid, and has generated a noticeable increase in the employment by that industry.

Japan

Mr. Kanemi Ban, Osaka University, presented the economic outlook for Japan. He started with an assessment of economic damages caused by the earthquake, tsunami and the subsequent nuclear plant incident in March 2011. The earthquake and tsunami severely damaged the supply chains in automobile production by destroying many parts and components suppliers. The output in a number of industries declined by 10 per cent in the months after the earthquake and had barely recovered by September 2011. Consumption also sharply declined, but has recovered. As a result of the supply-side constraints, real exports declined sharply in the aftermath, but have so far recovered to pre-earthquake levels.

In the outlook, a delay in the recovery of electricity generated by nuclear power is expected. In an optimistic forecast, electricity by nuclear power is projected to recover to the pre-quake level by 2015, but in a pessimistic case, it will remain at a significantly lower level in 2015. As a result, Mr. Ban sees a substitution of nuclear energy by fossil fuel leading to rising imports of fossil fuel in the coming years. By his estimate, the earthquake and the tsunami have dragged Japan’s GDP by 1.4 percentage point during 2011, and the nuclear plant incident dragged it by another 0.5 per cent. In the outlook, the post-quake reconstruction is expected to contribute to 1 percentage point of GDP in 2012 and 0.2 percentage point in 2013, while the delay in the recovery of nuclear power will continue to drag on GDP in 2012-2013. By taking into account these and other factors, he projected a GDP growth of about 2.5 per cent for 2012 and 2.2 per cent for 2013.

During the discussion, a comment was made that the baseline forecast (assuming if the earthquake have not had happened) was probably set too high, and another comment was made on the vulnerability for Japan if the United States and Europe would fall into another recession.

European Union

Ms. Dawn Holland, National Institute of Economic and Social Research (NIESR), presented the outlook for the European Union (EU). The probability of a double dip is high and depends on the assumptions made about the debt crisis. The forecast is multi-modal, with modes corresponding to various possible outcomes of the debt crisis. The deterioration in the forecast compared to earlier in the year can be decomposed into four major factors: the implications of the euro area crisis; rising corporate bond spreads; the fall in equity prices; and the fall in oil prices

Using the model, country specific recession probabilities can be calculated: for Greece the probability of recession is 100 per cent; for Italy and Spain greater than 50 per cent; for the Netherlands, United Kingdom, Finland and Denmark it is close to 50 per cent; while for the euro area as a whole it is close to 30 per cent. This probability is a function of the underlying assumptions which are not stochastic particularly assumptions concerning the evolution of the debt crisis, exchange rates, fiscal policy and the various risk premia in the model.

The situation in Greece requires action that is immediate, decisive, comprehensive and coordinated as the future depends ultimately on agents regaining "faith in policy-makers". The key assumption therefore, is whether or not the crisis has been successfully resolved. In a positive scenario, public finances move to a sustainable path, speculation eases and yield spreads recede, there is no default contagion and vulnerable banks have adequate access to support.

In the case where policy is not successful, the impact of a Greek default is examined. Greek bonds are trading at 50 per cent of their face value, so an immediate 50 per cent haircut is assumed on all debt. This results in the deficit to GDP ratio falling to 3 per cent and interest payments on liabilities as well as the debt to GDP ratio fall substantially. This has two major channels of impact: financial wealth falls feeding through to consumption and bank asset bases deteriorate which leads to a rise in lending rates for 2-4 years, which feeds through to investment. The impact of a Greek default on growth in Greece embodies lower interest liabilities so that the tax rate can be lowered while the decline in the government risk premium more than offsets the rise in lending margins. Greece returns to 2.5 to 3 per cent growth by 2013. It is much worse off without the fall in government risk premium. The effects outside of Greece are small.

The second key assumption concerns corporate bond spreads, which indicates the ease of access to financing. Corporate bond spreads have gone up a lot in the European Union but not as much in the United States. Assuming that future bond spreads follow the path traced in the immediate aftermath of the recession in 2008-2009, there will be a big negative effect on investment in 2012 but a recovery in 2013. This shaves 1.1 percentage points off growth in the euro area in 2012.

A decline in equity prices is another negative factor in the final scenario. Assuming a 20 per cent decline in equity prices in Europe will result in a decline in growth, but this is a short term effect and so there is some rebound is expected in 2013.

Finally lower oil prices yield a positive impulse to growth. The cumulative impact of all of these factors is that the euro area is 1.2 percentage points lower than base in 2012 but is 0.5 percentage points higher in 2013.

Discussion

Roland Dohrn of the RWI institute in Germany said that growth in Germany for 2012 has been revised downwards from the April forecast growth from 2 per cent to the current 0.8 per cent. One issue is that so far the real economy still looks fairly solid. Orders are good, industrial production continues to increase, and there are no problems in construction. But economic sentiment has fallen a lot. There have been times in the past when indicators of sentiment led to the wrong forecast so there may be some upside risk. Other positive factors are that conditions for companies are good, the German labour market is much better than the euro average and the fiscal stance is not that restrictive. But he warned that the euro area is currently in a very fragile state and that there may be non-linear effects. One big problem is that the group of countries that are able to offer financial guarantees to the crisis affected countries is narrowing. For example, Italy needs help; hence, it can no longer be a guarantor. If France were to also get engulfed there would be a big non-linear effect

Massimo Tivegna of the Prometia Institute in Italy said that the probability of recession in Italy is 100 per cent. For 2012 as a whole, growth could be negative or at best very small. There is a regime shift in the political and policy environment, but so far very little agreement on concrete policies, which is hurting confidence. Household savings rates are very high due to uncertainty with the youngest most affected.

Adolfo Castilla of the CEPRED institute in Spain questioned the NIESR forecast for Spain of -1.5 per cent in 2012, saying that the current forecast was considerably higher at 0.9 per cent in 2012. He said that this was due to the improved situation since the new government took over in November and that austerity has begun to work.

Developing Economies and Economies in Transition

Latin America and the Caribbean

Ms. Sandra Manuelito, United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC), presented the economic outlook for Latin America and the Caribbean. Growth in the region appears to be losing momentum although it is still strong in 2011 at 4.4 per cent. There are doubts on the extent of the countries' fiscal space. Domestic demand has supported growth throughout the region, but signs of deceleration are arising and credit to the private sector is stagnating.

From the perspective of economic growth, the region can be divided in two groups: (1) South America, Haiti and Panama, growing at rates above 6.5 per cent, stimulated by domestic demand for consumption and investment; (2) Central America and Brazil, growing at 4 per cent, and more dependent on US demand and remittances.

Inflation has increased under the pressure of rising commodity prices, particularly food and energy. In some cases core inflation has increased pushed by strong domestic demand. Commodity prices stopped growing in the second half of the year. Real effective exchange rates appreciated strongly compared to 1990, except in Argentina, Nicaragua, and Panama. International reserves have grown. The current account balance deteriorated reaching deficit of 1.4 per cent of GDP.

Fiscal deficits have generally decreased, but the fiscal sector has not yet generated savings. Monetary policy has followed different trends in different countries. In inflation targeting countries interest rates have been kept constant or increased. Access to international financial markets has been maintained.

The prospects for 2012 are dominated by a stalling United States economy and European authorities “muddling through” the debt crisis. A new factor is the deceleration of the Chinese economy. Flight to “safety” is likely to continue in financial markets, increasing funding costs for countries in Latin America and possible reversal of capital flows.

Discussion

An expert from Venezuela noted that, oil guarantees a fiscal and external surplus in his country, while inflation is high for food and healthcare: 26.5 per cent, core 27.7 per cent. International reserves have not increased and the country could suffer if oil prices were to decline significantly in 2012. At least 30 per cent of reserves are in gold. Presidential elections will take place in October 2012 amid increased uncertainty. Change is not expected if Chavez is re-elected. Another participant noted that elections are also planned next year in Brazil, Argentina and Mexico. Lack of fiscal discipline is increasingly a problem in these countries and change cannot be expected without a change in administration.

A participant noted that fiscal and external balances have been deteriorating in the Caribbean, but there is a need for social protection too. The expert from Venezuela added that his country is unique since it has external surplus. As for the Caribbean, domestic demand is a stronger driver of growth than external demand. Latin American countries, however, are not immune to international crises, even if Chile, Peru, Colombia, and Brazil would currently have resources to face the crises.

Western Asia

Mr. Abdallah Al Dardari, United Nations Economic and Social Commission for Western Asia (UN-ESCWA), presented the economic situation in Western Asia. He indicated that economic developments in Western Asia have been strongly influenced by the recent political turmoil that has spread across the Middle East. One of the main economic causes of the Arab spring is the poor situation prevailing in many labour markets of the region. Western Asia has the lowest workforce participation rate in the world, especially among women. Unemployment, however, remains high and migrant labour represents in average, 70 per cent of the workforce in Gulf Cooperation Council (GCC) countries. Youth unemployment is a major issue that contributed to political unrest, but democratic transition alone will not create jobs. Furthermore, the workforce is growing at 2.5 per cent annually, much more than the job creation rate. During the last decade, Western Asia has experienced strong growth, but economic growth mostly created low-skill jobs, mostly in the informal sector. Together with the fact that production is oriented towards external demand, this development has created a domestic demand and consumption trap strengthened by unequal income distribution.

In 2011, growth patterns are diverging between net oil-importers and net oil-exporters. Iraq and most GCC countries, especially Qatar, Saudi Arabia and the United Arab Emirates have benefitted from high energy prices. Turkey and Israel registered positive growth as well. Syria and Yemen will contract in 2011 as a consequence of political turmoil, but should grow from the second half of 2012 onwards. As the economies of the Syrian Arab Republic, Jordan and Lebanon are strongly interrelated, the latter will also suffer from political developments in the Syrian Arab Republic. Regional growth prospects for the medium and long-run are good as oil price are expected to remain high and surplus accumulated in the previous years will be invested into economic diversifications projects.

In 2011, price remained stable as food and energy subsidies in many countries and wage increases did not translate into inflationary pressure. Disposable income thus increased as a result of social spending measures. Monetary policy has been accommodative and will remain so in the outlook. The region disposes of excess liquidities and bank lending increased in 2011. However, SMEs in the region only received 8 per cent of loans due to the political economy of rent and cronyism. Public spending increased in all countries, but in contrast to GCC countries, middle-income countries lost much of available fiscal space.

In the outlook, the outcome of political turmoil is not clear. It appears however that job creation represents the most important policy challenge for the region. Over the last decade, only 30 million jobs were generated instead of 100 million jobs that were needed. It is all the more regrettable that required financial resources are available.

During the discussion, Mr. Ozmucur from Turkey asked whether prospects for the diversification of the economies in the region were credible, keeping in mind that this has been discussed since the 1970s and never implemented. Mr. Dardari replied that the difference is that the window of opportunity for implementing diversification policies is shrinking as domestic oil consumption is rising rapidly, decreasing oil exports and revenues in the medium and long-run. Diversification is thus becoming a necessity rather then an option as it was in the past. Additionally, political turmoil is highlighting that a new political economy based on accountability instead of rent is emerging.

Africa

Mr. Oumar Diallo, UN-DESA, presented Africa's economic outlook. He pointed out that Africa's growth had been accelerating and that the recovery had been strengthened by the rebound in primary commodity prices; rising investment in extracting industries, particularly the mining sector; and strong demand from emerging economies.

After a downward blip in 2011, economic growth for Africa is expected to rebound in 2012. The slowdown in 2011 is due to the political unrest in North Africa as well as higher global food and commodity prices. West and East Africa have shown an especially strong performance in light of high public investment and solid performance of the agriculture sector. Unemployment rates remain high and, furthermore, the numbers do not fully reflect the actual situation, with underemployment, the working poor and youth unemployment being some of the major problems. Inflation has moved up, prompting a shift in monetary policy towards a more neutral stand. Fiscal deficits have increased in 2011 due to weaker revenues and higher spending. Current accounts show a small surplus for 2011, but this is almost exclusively driven by oil exporters. For 2012, growth is expected to rebound to 4.3 per cent (excluding Libya), although a more severe slowdown in global growth as well as numerous elections pose significant downside risks. The main challenges are achieving a reduction in the dependence on the primary sector and the creation of a meaningful number of new jobs.

East and South Asia

Mr. Ingo Pitterle, UN-DESA, presented the regional outlook for East and South Asia. He noted that economic growth in the region has slowed considerably since the first quarter of 2011 owing to several factors: (1) weakening export demand from developed economies; (2) supply-chain disruptions following the earthquake in Japan; and (3) a slowdown of domestic demand as a result of policy tightening, most notably in India. While the overall outlook for the region remains positive, risks have increased over the past few months, especially for the more export-oriented economies. Average growth in East and South Asia is forecast at about 7 per cent in 2012. Unemployment rates are close to the levels recorded before the crisis and real wages have risen in most economies. Inflationary pressures were high in 2011, but year-on-year rates have started to slowly decline in recent months.

Mr. Pitterle then explained why the overall outlook for the region continues to be favourable. He first highlighted that the growth momentum is fairly robust, notably in the region's large economies, including China, Indonesia, India and Republic of Korea. Secondly, East Asia's economies continue to have strong macroeconomic fundamentals, such as low fiscal deficits and debt levels and current account surpluses. Thirdly, there is ample policy space (both monetary and fiscal) to support growth if needed. And finally, during and in the aftermath of the financial crisis, policymakers have demonstrated a commitment to growth, for example by tightening monetary conditions cautiously in 2011.

Mr. Pitterle then illustrated that in most Asian economies growth has decelerated since the beginning of 2011. In general, countries with a large domestic demand base such as China, India and Indonesia performed better than the strongly export-oriented economies. The weakness in demand in developed economies has led to a slowdown in East Asia's export sectors. The Philippines has been hit particularly hard as external demand for electronics and semiconductors fell. While import growth has also slowed in recent months, it is likely to outpace export growth in the quarters ahead. Current account surpluses as a share of GDP across the region have declined, with China's 2011 surplus projected at 3.5 per cent of GDP.

In most countries, inflation remained above the comfort zone of central banks in the first half of 2011. Inflation was primarily driven by a sharp upturn in food prices, which reflects the impact of supply disruptions, such as heavy flooding in East China, higher input costs (particularly for fuel) and rapidly growing demand in the wake of rising wages and incomes. One of the major challenges for South Asia's economies is the persistently high inflationary expectations. In the outlook, inflation is expected to decline gradually as pressures associated with high food and commodity prices ease.

With the world economy facing a renewed downturn and price pressures across the region slowly easing, most of East Asia's central banks have moved to a wait-and-see approach, delaying further monetary tightening. Since early July 2011, only the Bank of Thailand and the Reserve Bank of India have increased the policy rate, whereas the Central Banks of Indonesia and Viet Nam cut interest rates. If conditions in Europe or the United States deteriorate further, more Asian economies are expected to ease monetary conditions. Fiscal balances continue to be sound in East Asia, where most countries have ample policy space to stimulate the economy in the case of a renewed external shock. By contrast, South Asia's economies continue to register significant fiscal deficits as government spending increases at a rapid pace.

Mr. Pitterle then illustrated that the magnitude and composition of capital flows to Asian economies could not be compared to what happened before the Asian crisis. In 2011, total inflows were dominated by foreign direct investment, with China capturing the lion's share. Among the region's major currencies, only the Indonesian Rupiah has experienced a significant appreciation in real effective terms since January 2008.

Mr. Pitterle concluded by presenting the major downside risks for the region. These include sell-offs in bond, equity and currency markets due to increased turmoil on financial

markets, negative spill-over effects from prolonged recessions in major developed economies and a sharper-than-expected slowdown in China.

Discussion

Mr. Dilli Raj (Nepal) highlighted that Nepal was stuck in a low growth trajectory with severe supply constraints. He stressed that food prices are the main driver of inflation and that the banking sector continues to face liquidity problems.

Mr. Nagapudi Rangareddy Bhanumurthy (India) pointed out that India's outlook has worsened since the beginning of 2011, with the economy facing serious structural bottlenecks. The Government will likely miss its target to reduce the fiscal deficit to 4.6 per cent in the current fiscal year.

Mr. Tongsan Wang (China) described UN-DESA's forecasts for the Chinese economy as reasonable, although a more pronounced slowdown was possible. In 2011, high inflation, caused mainly by demand-pull factors, is the major challenge for the Government. However, with inflation gradually easing, the Government and central bank may start loosening monetary conditions.

CIS and other Economies in Transition

Mr. Robert Shelburne, United Nations Economic Commission for Europe (UN-ECE), gave a presentation on the Commonwealth of Independent States (CIS) and other economies in transition (EiT). He noted that growth in EiT has rebounded following the global financial and economic crisis, and that it is higher than in developed economies. He also noted that while South-Eastern Europe (SEE) has not been impacted by the crisis as significantly as the CIS, the rebound in the CIS had been more significant than in SEE. However, overall, growth remains almost 50 per cent below pre-crisis rates in the EiT, and it is expected to remain at suppressed levels in the medium-term.

Mr. Shelburne then illustrated the severity of the crisis by comparing annual average growth rates for the periods 2003-2007 and 2007-2011 with the cumulated percentage growth for the latter period showing that the six economies of SEE had lost an average of 3.5 years of growth due to the crisis. In comparison, Russia had lost an equivalent of 3.33 years of growth and the EiT as a group, which account for an estimated 4.6 per cent of world gross product, had lost almost 3 years of growth due to the crisis. While this compares favourably to the estimated 5 years of lost growth for the European Union, it compares unfavourably to the group of developing economies as a whole, which has only lost one year. The presenter went on to point out that the impact of the global economic and financial crisis on the EiT was larger than the 1998 currency crisis, yet it was relatively insignificant compared to transition crisis that these economies went through. Despite the past crises, per capita income in the CIS and SEE is slowly converging to that of the euro area.

Unemployment dynamics have been favourable in the region as the recovery has gained a foothold. However, unemployment remains a particular problem in SEE, registering above 10 per cent. Increases in inflation have been less significant in SEE and most countries have registered rates of less than 5 per cent—with the exception of Serbia where inflation has accelerated to more than 10 per cent. In contrast, inflation has increased in the post-crisis period in the CIS, where it is now ranging between 5 per cent and 10 per cent.

While the external sector has recovered, imbalances in the current accounts of the region have declined, with a smaller surplus registered in the CIS in general, and in the Russian Federation in particular. A smaller deficit was registered in the SEE. While this is positive development, foreign direct investment (FDI), which has registered solid pre-growth, remain more than 50 per cent below the post-crisis level. This hampers the recovery of the EiT as the region relies on external financing. Furthermore, capital flight out of the Russian Federation remains significant. However, in the medium term, policy makers should strive to reduce dependence on foreign capital in the EiT. This could be achieved by promoting export-led growth through supply-side policies (research and development, vocational education) and macroeconomic policies directed at raising domestic private savings, reducing public dis-saving, controlling credit growth and avoiding housing booms.

The euro area debt crisis has not yet infected the EiT. Indeed, while the United States and several euro area economies have recently had sovereign credit rating downgrades, some SEE economies have been upgraded, including Romania and Serbia. Nevertheless, while yield spreads remained moderate so far, SEE is likely to be negatively impacted by developments in Greece.

The banking sector remains fragile in the EiT. In terms of non-performing loans (NPL), little improvement had been made, with NPLs accounting for more than 15 per cent of all loans in a number of countries in the EiT. In Montenegro, NPLs exceeded 20 per cent of loans, while in Kazakhstan the ratio is close to 35 per cent. In SEE it is particularly worrisome that foreign currency loans represent the cast majority of loans (for instance, more than 70 per cent in Serbia and Croatia). The financial sector also remains underdeveloped in central Asia and related party lending (RPL) has been and remains widespread in the CIS. This created problems during the crisis as solvency of the banking system is often uncertain. In the Russian Federation, an estimated 41 per cent of all loans in 2010 were RPL! Although bank lending is gradually rebounding, credit growth remains muted and most SMEs are still not able to obtain credit.

Mr. Shelburne highlighted some of the longer run economic objectives for the EiT, which include the need to i) increase the size of high-technology sectors and innovation; ii) increase foreign investment inflows; iii) freeze conflicts in the Caucasus and central Asia as these limit the investment attractiveness of the regions; iv) increase the size of the tradeables sectors; v) accelerate the pace of economic liberalization and vi) diversify energy exports to Asian markets. The presenter then concluded by drawing some of the main lessons for EiT from the global financial crisis, such as, for instance, the need to limit the overall level of exposure to external capital markets, especially portfolio and bank

loans, the need to limit the domestic growth of credit to reasonable levels and to limit the degree of foreign currency denominated loans. It is important for the region to consider the benefits of exchange rate flexibility and to continue to diversify production and exports as well as develop manufacturing and services sectors. Moreover, the governance of domestic financial systems needs to be further developed and improved upon.

Discussion

Following Mr. Shelburne's presentation, the representative from the Russian Federation emphasized that much lower growth rates are expected in the Russian Federation compared to pre-crisis rates. These rates are insufficient to develop the country's infrastructure and to significantly reduce poverty. He argued that the Russian industry lacks competitiveness. Thus, by the end of 2012 he forecast that the economy's current-account will turn negative, which would have potentially large implications for the exchange rate in the medium-term.

The representative from Ukraine highlighted the risk of high inflation in Ukraine. Furthermore, despite greater fixed investment in 2011, large import substitution is not expected in the near future, such that the current-account will continue to be under pressure.

6. The global debt crisis

Mr. Ian Begg, London School of Economics, made a presentation about the role of a fiscal union in solving the Greek debt. He started by outlining the institutional character of the European Union. The European Union is not a federal entity and lacks central powers, particularly regarding tax and expenditure decisions. It is a union of powerful states. Any approach to resolve economic and other problems of member states must therefore be based on coordination rather than top-down directives.

At this juncture, the European Union first needs to get Greece out of a vicious cycle. Secondly, it must cure and strengthen the financial system, which inevitably entails purging toxic assets from the bank system. This could be done by modifying the European Union constitution to allow the European Central Bank (ECB) to print money, at the expense of credibility. Finally, the European Union should restore economic growth and convince skeptical citizens.

So far, the European Union has done nothing effective to resolve the Euro crisis. Preventative measures have focused on restoring fiscal discipline and deepening reforms of the Growth and Stability Pact. The notion of a fiscal union, which was previously a taboo, has been brought into the current debate. Yet, avenues are still imprecise, particularly regarding budgetary policy, transfers and liquidity provision. Along with the debate, a political-economy question remains: who is holding whom to ransom? Are Greeks holding other member states hostage or is the other way around? Are bankers holding tax payers hostage?

Mr. Begg outlined three possible scenarios: First, a scenario where the European Union muddles through the crisis. Second, a possible fiscal union, including the creation of Euro bonds and a European Finance Ministry. This avenue is however stalled due to the lack of political leadership. Third, a break up and consequently, defaults. This is a scary alternative. Hence efforts will continue towards seeking alternatives. As the situation gets worse, politics may slowly get closer to economic reality, even in Germany, which would lose most if the crisis remains unresolved.

While the political debate continues, a three-pronged approach is emerging based on (i) a new financial arrangement for Greece, including a "hair-cut" (ii) continuing efforts towards bank recapitalizations (iii) financial engineering aimed at ensuring that sufficient financial resources are available to short-circuit the spiral of uncertainty, downgrades, higher financial costs, more uncertainty.

During the discussion, a participant asked whether structural funds or the Common Agrarian Policy could not be viewed as a form of fiscal union. Mr. Begg stressed that despite institutional arrangements in place, a fiscal union remains a far-away target. At present the fiscal size of the union is about 1 per cent of EU GDP, while public spending generally represents 30 to 40 per cent of GDP in every member state. Conviction is also lacking, and many European citizens are unwilling to "finance other countries' social spending." Many other issues are far from being resolved as well: how to apply the ceiling of 3 per cent of GDP for fiscal deficits? Should criteria be applied to countries individually or for the region as a whole? How to reinforce penalties and by how much? What would the rates of the Eurobonds be if they represent different financial soundness (like CDOs)?, etc.

Other questions turned around the real economy and GDP growth. On this Mr. Begg was very clear. Without internal flexibility of exchange rates there are only two possible paths: a recessionary spiral resulting from imposing cuts in the debtor countries, or a deflationary path resulting from raising wages, increased spending and slowing down productivity growth in surplus countries. In the latter path, one can envisage fiscal transfers as automatic stabilizers.

Ms. Dawn Holland, National Institute for Economic and Social Research (NIESR), presented the outcome of a simulation study on the sovereign debt crisis in Europe. The simulation was carried out with the NiGEM model system maintained by NIESR. The incentive for this study is to explore the outcomes given three different scenarios.

The first scenario assumes that the risk premia for the Greek and Portuguese government debt remain at late-2011 peak level during 2012 instead of starting to recede from first quarter of 2012 on. According to model simulation, each quarter of delay before the risk premia start receding will take away 0.2 GDP percentage point in Greece and slightly less in Portugal. If bank solvency in the affected countries is not adequately managed, this could lead to a European-wide tightening of lending conditions. If borrowing costs were to

rise by 5 percentage points gradually over the course of the year, this would reduce growth by about 0.5 percentage point in most of the European economies.

The second scenario envisages a possible default contagion. If a Greek default were to successfully bring down the risk premia and private sector borrowing cost in Greece, other euro area countries might demand similar treatment. If Portugal, Ireland, and Italy would default in addition to Greece, it would wipe out 3.5 to 4 per cent of euro area banking assets and generate a severe banking crisis in Europe.

The last scenario considers the case of a Greek exit from the Economic and Monetary Union (EMU). Ms. Holland emphasized that there are many technical, legal and political obstacles to EMU exit which are abstracted from in the simulation exercise. After the exit, the severe disruptions to financial sector and sharp devaluation of the new currency would be unavoidable. Without any further assumption, the impact on output would be strongly negative. With a default on the external debt, the reduced debt service cost may provide short-term support to output, which can be further enhanced by the assumption of increased inflow of FDI as a response to the higher risk premia. Ms. Holland also mentioned some other risks not included in the EMU-exit simulation like labour outflows, longer freeze on the banking lending, possibility of exit from the European Union, social turmoil and civil unrest. If all these were considered, the exit from EMU would be a very high-risk strategy.

Mr. David Turner, Organization for Economic Cooperation and Development (OECD); made a presentation on interest rate—growth differentials and their implications for long-term debt projections and for the corresponding policy implications. In the long-term, fiscal problems are not confined to the euro area, referring to other advanced economies. Small changes in the differential between the real interest on net government debt and GDP growth strongly affect long-term debt projections. The pre-crisis differential, according to the speaker, was much lower in the 2000s than in the 1980s and in the 1990s. What were the factors behind this? A number of explanations can be provided, such as low and stable inflation, persistently low short-term policy rates, which influence financial market expectations about long-term rates, under-pricing of risk and the global savings glut.

Therefore, if central banks maintain their credibility in keeping inflation low, the differential will be kept low in the long run. This, however, also implies that the attempts to inflate debt away may be risky. Currently, policy rates are low and are expected to remain at a low level for several years, but they will eventually normalize, and at that stage the differential will increase. Risk aversion, by contrast, increased during the crisis, and financial markets became more discriminating about sovereign debt risk, an important signal for the United States and Japan. As for the global savings glut, it is not expected to disappear quickly, but it will diminish as the Asian population is ageing and social expenditures rise.

The speaker presented an econometric study, confirming that all the above-mentioned factors affecting the differential are statistically significant. However, some of the decline

in the differential in the 2000s still remains unexplained, which may be due to the presence of other factors. Over the long-term, the United States and Japan may become vulnerable to financial market sentiment. Therefore, they need credible medium-term plans for debt reduction.

During the discussion, a participant mentioned that as inflation declined, policy rates were likewise reduced. So perhaps there was no mistake in keeping policy rates low, it was just a reaction to low inflation. But why exactly did inflation decline? Can this be explained by the entry of China into the global economy? Mr. Turner replied that the decline in inflation is due to the successful implementation of inflation targeting in the OECD area and the credibility of that strategy.

Another participant asked whether one should take into account that the real interest rate and growth are independent variables, and may be influenced by different factors? Mr. Turner replied that those two variables have to go together while making projections for decades (to take into account the effect of ageing population); in perfect markets the differential should be zero, but these are the practical aspects of modeling.

Mr. Hall, consultant to Bank of Greece, gave a presentation on the Greek financial crisis, looking in particular at the growing imbalances and sovereign spreads that the Greek economy is facing. In the introduction, he emphasized that while the entry of Greece into the euro area in 2001 produced a dividend in the form of a sharp drop in interest rates, the Greek crises starting in 2009 reversed this gain. His presentation aimed at illustrating the extent to which these swings are caused by fundamentals and by speculation.

When Greece joined the Euro in 2001 it benefitted from lower inflation and interest rates, no exchange rate fluctuations and lower risk premia that encouraged longer planning and investment. Yet, the adoption of the new currency has also been accompanied by a widening structural fiscal deficits and persistently higher inflation compared to the euro area average. Nevertheless, at the outset, the global financial crisis had little direct effect on Greece, whose banking sector had not taken part in the sub-prime markets. Spreads rose a little but not to a significant extent. However, following the announcement in October 2009 by the new Greek Government that its fiscal deficit would be 12.7 per cent of GDP, more than double previous predictions, financial markets began scrutinising Greek public finances. As a consequence, Greek spreads started to rise steadily, even after May 2010 when the IMF and the EU pledged their support, the government committed to lower the fiscal deficit and the ECB purchased Greek bonds.

Following a presentation of his econometric analysis, Mr. Hall argued that a large part of the total spread faced by Greece can not be attributed to the downgrading of Greek debt, but that it is caused by ongoing speculation. Using cointegration techniques to investigate the link between economic fundamentals and the equilibrium spread, he focused on the main macro fundamentals, which are widely regarded as determining the spread. He concluded by saying that while entry into the Euro had provided Greece with a number of benefits, the crises and news about the Greek fiscal position had removed this benefit. Nevertheless, his results suggest that markets had overreacted to the Greek situation, which

led to an overshooting of interest rates on sovereign debt that cannot be explained by market fundamentals alone.

During the discussion, a participant asked whether the model should use an average rating given by rating agencies, rather than the changes in ratings of individual agencies, as this may not always be based on new information. The issue of the percentage of Greek bonds that is held by the ECB also elicited some discussion—although the presenter pointed out that this is considered confidential information by the ECB and hence not publicly available. Finally, a participant asked whether a Bayesian framework would not be more appropriate to analyze the issue at hand. The presenter noted that while a Bayesian framework has certain advantages, it is not very good to test hypotheses because subjective distributional assumptions are embedded in the model used to test hypotheses.

7. International economic policy issues

Mr. Basu Sudip Rajan, United Nations Commission on Trade and Development (UNCTAD), presented an approach to measuring policies, institutions and development in a multispeed world. Growth and trade are recovering at different speeds in different countries confirming that growth convergence has not taken place in the world. On the contrary, GDP per capita has polarized with developed and developing countries diverging ever more.

As development outcomes and policies vary, development should be related to policy variability. Failing to make this connection leads to lack of national development. Linking policies to development requires linking policies with productive capacity and with quality of development.

A number of quantitative measures of policies and development exist. An index can be calculated to measure quality of development, policies, and institutions. The index allows comparisons across time and space.

Using UNCTAD data, the presenter proposed estimates covering 175 countries for the period 1995-2007. Results confirm the starting point: policies, institutions and development vary across regions and income groups.

Mr. Robert Kaufmann, Boston University, presented the findings of his research on the relation between trader positions and oil prices. This relation is complex and influenced by many factors. In the long run, however, this relation can be assumed to be in equilibrium. The objective of the research is to investigate which way causality goes in situations of (extended) short-run disequilibrium. One possible approach to examine this question empirically is to use a cointegrating vector autoregression (CVAR) model. In this context, CVAR models allow the implementation of Granger-causality test to observe whether the

oil price is endogenous or exogenous and whether it does error correct other variables included in the CVAR.

For his analysis, Mr. Kaufmann relied on data on the following variables: trader positions (with a distinction between commercial and non-commercial as well as short and long trader positions), oil spot prices of four different crudes, oil future price (only for WTI) and oil inventories (only for WTI, but with different maturities). He then reviewed results from 23 different model specifications.

These results interestingly show the existence of four cointegrating relationships. First, there is a long-run relation between trader positions and oil prices, where oil prices error correct to disequilibrium. Secondly, disequilibrium in trader positions has a short-run effect on oil prices. Thirdly, there is a long-run equilibrium among trader positions, i.e. prices have little or no long-run effect on trader positions. Fourthly, oil prices have a short-run effect on trader positions. Nonetheless, this effect is small such that only a small fraction of the variation in changes in trader categories can be explained by oil prices.

Finally, Mr. Kaufmann performed simulations based on reduced form models to illustrate these cointegrating relationships.

Mr. John L Perkins, National Institute of Economics and Industry Research (NIEIR), presented a paper on “Domestic and foreign debt: global projections to 2050.” The paper is based on a long-term model exercise, which covers government debt to 2050 for 186 countries, and takes into account demographic changes, particularly population ageing. He started with questions such as how much population aging will affect government budgets in 2050, which countries will be most affected, how much fuel resource prices and resource depletion will affect current account balances to 2050, and thus foreign debts, and which countries will be most affected.

In his study, world population is assumed to peak at over 9 billion in 2050, featuring a low to negative growth in developed countries, low to negative growth in China, moderate growth in less developed countries, but moderate to high growth in Africa. Based on this, his dynamic model offers projections for each country’s public debt and government deficit until 2050: a number of large economies will be in high deficit, such as China, Germany, Japan and the United States. His findings indicate that demographic change will worsen debt in countries that are currently already indebted, and substantial increases in tax revenue would require 5-12 per cent of GDP. A few policy implications include more targeted expenditures, more equitable taxation and a carbon tax.

He also discussed his projection for foreign debt, emphasizing the impact of rising energy imports on current account balances in many countries. In conclusion, he remarked that geographical distribution of natural resources was highly inequitable, and an international solution is required, including, for example, the need for a global economic coordinating council, the need for greater transparency in resource transactions, and the need for international carbon tax/resource rent tax, which could be levied by resource exporters, plus a global fund to mitigate climate change.

8. International economic policy issues / global modeling

Ms. Bilge Erten, Columbia University and UN-DESA, presented a paper entitled "The super cycles in commodity prices". The paper examines the evolution of commodity prices and, in particular, the nature of cycles with a duration of 20-30 years, thereby providing a new methodology to evaluate the Prebisch-Singer hypothesis. Commodity price cycles are normally underpinned by three core factors, namely demand expansion, constraints in short-term supply and lagging capacity adjustments. The analysis decomposes commodity markets into sub-markets such as tropical agriculture and then attempts to gain insights from the calculation of the correlation in price movements between individual markets.

Mr. Ernst Ekkehart, International labour Organization (ILO), presented his views on the relationship between finance and jobs, and implications for unemployment dynamics of financial sector development and reform. He mentioned that political economic obstacles may prevent financial reforms that are optimal for jobs from being passed.

Limited growth and job creation are caused by under-investment, which can be seen as an externality coming from dysfunctional financial markets and "animal spirits". Regulation needs to address imperfect and asymmetric information and bring incentives for risk taking in line with lenders' preferences. Reform options include increasing transparency in the markets, aligning risk-taking and risk-aversion and reducing systemic risk.

Financial markets development has ambiguous effects on job creation and job destruction. However, some financial market regulations seem to have positive effects on labor markets.

Across the world, reforms are proposed for the banking sector, financial derivatives and capital account regulations. Actors compete in the international and domestic realms of regulation in order to secure resources and income. Four scenarios emerge out of all combinations of reforming versus not reforming international and domestic capital markets. In the absence of reforms at both levels, employment is forecast to peak in 2015, but a higher peak can only be reached when full regulation is implemented.

In conclusion, Mr. Ekkehart argued that a lender of last resort should be complemented with an investor of last resort and a rating agency of last resort. An end should be put to central bank independence.

Clive Altshuler and Hung-Yi Li, UN-DESA, reported on the progress in building the World Economic Forecasting Model (WEFM). The WEFM has reached the stage of production and has been used to generate the baseline projection for WESP and WESP mid-year update since September 2010.

The prevailing version of WEFM consists of two different types of model. For most OECD countries and selected developing countries, a detailed model with New-Keynesian flavor can be estimated. The model has a neo-classical supply-side specification with Keynesian demand equations to determine the short-run output. It also has an accounting system

linking households, government, firms and the rest-of-world. For estimation, the co-integration/error-correction framework in single equation Engle/Granger approach is adopted. For other countries with more limited data, a smaller model is available. The small model has a simplified supply side specification; it also has enough equations to determine the major demand components of GDP. Pool-estimations are applied to each region to obtain coefficients used in country models.

All models are linked though trade of merchandises and non-factor services. Exports of each country are determined by other countries' imports through the import-coefficient matrix. The import price for each country is also determined by exporting countries' export prices.

In the development process, Mr. Altshuler and Mr. Li also improved the speed of the software by making a minor modification to the traditional linkage algorithm that is not damaging the accuracy of the calculation.

Mr. Adrian Cooper and Ms. Debra D'Agostino, Oxford Economics, presented their large-scale research program "The Web Index", which aims at studying the global impact of the World Wide Web. The starting point of the research is the question what could raise long-term growth. Mr. Cooper showed that, according to a recent poll, mobile technology is expected to have the greatest positive impact on business in the next five years, well ahead of business intelligence, cloud computing and social media. He then illustrated that the ICT capital stock as a share of GDP has risen immensely from 1991 to 2007. The United States and the United Kingdom had the highest rates in 2007, significantly above the rates in several Southern and Northern European countries. At the same time, most European countries lag the United States in the information and communications technology (ICT) impact on labour productivity growth. Mr. Cooper estimated that increasing Europe's ICT capital to US levels could boost productivity by 1.5 per cent. He also noted a sharp contrast between firms in developing and advanced countries. In fact, twice as many firms in developing economies than advanced markets planned to increase spending on the latest digital technologies by over 20 per cent.

Ms. D'Agostino pointed out that the Web Index would be a multi-dimensional measure of the Web, incorporating political, economic, social, and developmental indicators, as well as indicators of Web connectivity and infrastructure. The Web Index will look at several aspects of the Web, including the state and evolution of the Web and its social, economic and political value. A rich set of data sources from national statistical offices and international organizations will be used. The study will also use an online survey in order to try to understand how the Web has affected different countries. In this context, Ms. D'Agostino expressed the hope for support from LINK participants.

Following the presentation, one LINK participant asked about the level of participation in the survey. Ms. D'Agostino pointed out that the participation will take place at the individual level as they are hoping to cover as many countries as possible. She also indicated that a methodological document would be shared with participants. Regarding a question on the importance of property rights transparency for investment, she noted that this aspect would be covered in the study.

ANNEXES

LINK Project

October 24-26, 2011

The Beekman Tower Hotel, New York

PROGRAMME

Monday, October 24, 2011

9:30 – 9:45	Opening and welcome Location: United Nations Headquarters – Conference Room: XX North Lawn Building (1st Avenue and 46th Street, visitors entrance)
9:45 – 11:15	**Keynote address** **Aftershocks of the global financial crisis and the way forward** Chair: Rob Vos Speaker: Joseph E. Stiglitz, Columbia University
	General discussion
11:15 – 12:00 L	Relocate to Beekman Tower Hotel ocation: 3 Mitchell Place (Near 1st Avenue and 49th Street)
12:00 – 13:00	**World Economic Outlook** Chair: Peter Pauly Presentations: Rob Vos, UN-DESA Mitali Das, IMF
13:00 – 14:15	Lunch
14:15 – 16:15	**World Economic Outlook, continued** Chair: Peter Pauly Theo van Rensburg, World Bank Lead Discussants: Adrian Cooper, Oxford Economics David Turner, OECD Moazam Mahmood, ILO
	General discussion

16:15 – 18:00	**Global outlook for commodity markets and international tourism** Chair: Byron Gangnes Agricultural Commodities Patrick Westhoff, University of Missouri-Columbia Oil Robert Kaufmann, Boston University Prospects for international tourism John Kester, UNWTO General Discussion F. Gerard Adams Remembered Byron Gangnes, University of Hawaii

Tuesday October 25, 2011

9:30- 11:15	**Regional Outlook: Developed Regions** Chair: Delia Nilles United States Hung-Yi Li , UN-DESA Japan Kanemi Ban, Osaka University Europe Dawn Holland, NIESR, London Each lead presentation is followed by comments from LINK country experts
11:15–11:30	Coffee/tea break
11:30–13:00	**Regional Outlook (continued): Developing and Economies in Transition** Chair: Pingfan Hong Africa Adam B. Elhiraika, UN-ECA Latin America and the Caribbean Sandra Manuelito, UN-ECLAC Western Asia Abdallah Dardari, UN-ESCWA

Each lead presentation is followed by comments from LINK country experts

13:00–14:15 Lunch

14:15–15:45 **The global debt crisis**

Chair: Manuel Montes

"Can fiscal union resolve the euro crisits?"
Iain Begg, London School of Economics

"Long-term debt issues"
David Turner, OECD, Paris

15:45-16:00 Coffee/tea break

16:00-17:30 **The global debt crisis (cont.)**
Chair : Roberto Mariano

"Modelling the sovereign debt crisis in Europe"
Dawn Holland, Simon Kirby, and Ali Orazgani , NIESR , London

"The Greek financial crisis: growing imbalances and sovereign spreads"
Heather D, Gibson, Stephen G. Hall and George S. Tavlas, Bank of Greece, Athens and University of Leicester

"Finance and jobs: implications for unemployment dynamics of financial sector development and reform"
Ekkehard Ernst, ILO, Geneva

Wednesday, October 26, 2011

9:30-11:15 **International economic policy issues**
Chair: Stephen Hall

"Domestic and foreign debt – global projections to 2050"
John Perkins, NIEIR , Melbourne

"Measuring policies, institutions and development in a multispeed world"
Sudip Ranjan Basu, UNCTAD, Geneva

"The relation among trader positions and oil prices: going beyond causal order"
Robert Kaufmann, Boston University

11:15–11:30 Coffee/tea break

11:30–13:00 **Regional Outlook (continued): Developing and Economies in Transition**

Chair: Eustaquio Reis

East Asia and South Asia
Ingo Pitterle, UN-DESA

CIS and other economies in transition
Robert C. Shelburne, UN-ECE

Each lead presentation is followed by comments from
LINK country experts

13:00-14:15 Lunch

14:15-15:45 **International economic policy issues / global modelling**
Chair: Charlotte Du Toit

"The super cycles in commodity prices since the mid-nineteenth century"
Jose Antonio Ocampo and Bilge Erten, Columbia University and UN-DESA, New York

"Finance and jobs: implications for unemployment dynamics of financial sector development and reform"
Ekkehard Ernst, ILO , Geneva

"The latest development in the UN World Economic Forecasting Modelling"
Hung-Yi Li and Clive Altshuler, UN-DESA

"The impact of the Internet on economic growth and productivity: a research proposal"
Adrian Cooper, Oxford Economics

16:00 Closing

Economic Outlook Reports- **Provided by Participants**

Australia
Austria
Bangladesh
Brazil
Canada
China
Costa Rica
Croatia
Finland
Germany
China, Hong Kong Special Administrative Region
Israel
Italy
Korea, Republic of
Mexico (CKF)
Mexico (UNAM)
Morocco
Nepal
Norway
Poland
Slovakia
Slovenia
Spain
Taiwan, Province of China
Turkey
Ukraine

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24- 26 October 2011, New York, NY

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