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Explanatory notes

Classification by country or commodity group

The classification of countries in this *Report* has been adopted solely for the purposes of statistical or analytical convenience and does not necessarily imply any judgement concerning the stage of development of a particular country or area.

The major country groupings used in this *Report* follow the classification by the United Nations Statistical Office (UNSO). They are distinguished as:

- » Developed or industrial(ized) countries: the countries members of the OECD (other than Mexico, the Republic of Korea and Turkey) plus the new EU member countries and Israel.
- » Transition economies refers to South-East Europe and the Commonwealth of Independent States (CIS).
- » Developing countries: all countries, territories or areas not specified above.

The terms “country” / “economy” refer, as appropriate, also to territories or areas.

References to “Latin America” in the text or tables include the Caribbean countries unless otherwise indicated.

References to “sub-Saharan Africa” in the text or tables include South Africa unless otherwise indicated.

For statistical purposes, regional groupings and classifications by commodity group used in this *Report* follow generally those employed in the *UNCTAD Handbook of Statistics 2008* (United Nations publication, sales no. E/F.08.II.D.18) unless otherwise stated. The data for China do not include those for Hong Kong Special Administrative Region (Hong Kong SAR), Macao Special Administrative Region (Macao SAR) and Taiwan Province of China.

Other notes

References in the text to *TDR* are to the *Trade and Development Report* (of a particular year). For example, *TDR 2008* refers to *Trade and Development Report, 2008* (United Nations publication, sales no. E.08.II.D.21).

The term “dollar” (\$) refers to United States dollars, unless otherwise stated.

The term “billion” signifies 1,000 million.

The term “tons” refers to metric tons.

Annual rates of growth and change refer to compound rates.

Exports are valued FOB and imports CIF, unless otherwise specified.

Use of a dash (–) between dates representing years, e.g. 1988–1990, signifies the full period involved, including the initial and final years.

An oblique stroke (/) between two years, e.g. 2000/01, signifies a fiscal or crop year.

A dot (.) indicates that the item is not applicable.

Two dots (..) indicate that the data are not available, or are not separately reported.

A dash (-) or a zero (0) indicates that the amount is nil or negligible.

Decimals and percentages do not necessarily add up to totals because of rounding.

Abbreviations

BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
c.i.f.	cost, insurance and freight
CDM	Clean Development Mechanism
CDO	collateralized debt obligation
CDS	credit default swap
CEA	Commodity Exchange Act
CER	certified emission reduction
CFTC	Commodity Futures Trading Commission (United States)
CIS	Commonwealth of Independent States
CME	Chicago Mercantile Exchange
CO ₂	carbon dioxide
COP	Conference of the Parties
COT	Commitments of Traders
DJ-UBSCI	Dow Jones-UBS Commodity Index
ECB	European Central Bank
ECLAC	Economic Commission for Latin America and the Caribbean
EIU	Economist Intelligence Unit
EU	European Union
EU ETS	European Union Greenhouse Gas Emission Trading System
f.o.b.	free on board
FAO	Food and Agriculture Organization of the United Nations
FDI	foreign direct investment
FDIC	Federal Deposit Insurance Corporation (United States)
FSA	Financial Services Authority (United Kingdom)
FSB	Financial Stability Board
FSF	Financial Stability Forum
GDP	gross domestic product
GEF	Global Environment Facility
GFCF	gross fixed capital formation
GHG	greenhouse gas
GNI	gross national income
GNP	gross national product
HIPC	heavily indebted poor country (also HIPC Initiative of the IMF and World Bank)
ICAC	International Cotton Advisory Committee

ICC	International Chamber of Commerce
ICE	Intercontinental Exchange (London, United Kingdom)
IEA	International Energy Agency
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPR	intellectual property right
LDC	least developed country
LME	London Metal Exchange
LTCM	Long Term Capital Management
MDG	Millennium Development Goal
NYMEX	New York Mercantile Exchange
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
OTC	over the counter
R&D	research and development
RER	real exchange rate
S&P GSCI	Standard & Poor's Goldman Sachs Commodity Index
SDR	Special Drawing Right
SNLT	sectoral no-lose target
SPV	special purpose vehicle
TARP	Troubled Assets Relief Program (United States)
TDR	Trade and Development Report
TRIPS	trade-related aspects of intellectual property rights (also WTO TRIPS Agreement)
UNCTAD	United Nations Conference on Trade and Development
UN/DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	World Tourism Organization
USDA	United States Department of Agriculture
WESP	World Economic Situation and Prospects
WFP	World Food Programme
WTO	World Trade Organization

OVERVIEW

Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of *laissez-faire* capitalism – which is not surprising, if I am right in thinking that the best brains of Wall Street have been in fact directed towards a different object.

J.M. Keynes, *The General Theory of Employment, Interest and Money* (1936: 159)

A gloomy global outlook

Even before the financial turmoil turned into a full-blown crisis in September 2008, growth of gross domestic product (GDP) had ground to a halt in most developed countries. Subsequently the slowdown turned into a fully-fledged recession, and in 2009 global GDP is expected to fall by more than 2.5 per cent. The crisis is unprecedented in depth and breadth, with virtually no economy left unscathed. Even economies that are expected to grow this year, such as those of China and India, are slowing down significantly compared to previous years.

Starting in the United States subprime mortgage market, the financial crisis spread quickly, infecting the entire United States financial system and, almost simultaneously, the financial markets of other developed countries. No market was spared, from the stock markets and real estate markets of a large number of developed and emerging-market economies, to currency markets and primary commodity markets. The credit crunch following the collapse or near collapse of major financial institutions affected activity in the real economy, which accelerated the fall in private demand, causing the greatest recession since the Great Depression. The crisis has affected most strongly companies, incomes and employment in the financial sector itself, but also in the construction, capital goods and durable consumer goods industries where demand depends largely on credit. In the first quarter of 2009 gross fixed capital formation and manufacturing output in most of the world's major economies fell at double digit rates. Meanwhile problems with solvency in the non-financial sector in many countries fed back into the financial system.

The likelihood of a recovery in the major developed countries that would be strong enough to bring the world economy back to its pre-crisis growth path in the coming years is quite low. This is because neither consumption nor investment growth can be expected to revive significantly due to very low capacity utilization and rising unemployment. In addition, banks need to be recapitalized and their balance sheets cleaned of toxic assets before they can be guided back to their traditional role as providers of credit to investors in fixed capital. Until this is achieved, and in order to halt the contraction of GDP, it will be necessary to maintain, or even further strengthen, the expansionary stance of monetary and fiscal policies. Against this background, global GDP growth may turn positive again in 2010, but it is unlikely to exceed 1.6 per cent.

The crisis has reached developing countries

Almost all developing countries have experienced a sharp slowdown of economic growth since mid-2008, and many have also slipped into recession. The channels through which the financial and economic crisis spread to developing countries have varied, depending on factors such as their initial current account and net foreign asset positions, degree of exposure to private international capital flows, composition and direction of international trade in manufactures and services, dependence on primary commodity exports and inflows of migrants' remittances.

Some developing and emerging-market economies that had managed to avoid large current-account deficits, or even posted surpluses, for several years before the current crisis erupted have proved less vulnerable than in previous crises. This is particularly true for several Asian and Latin American developing countries that were hit by financial and currency crises between 1997 and 2001. This time, due to better managed exchange-rate policies in the years leading up to the crisis, they were not only able to prevent substantial currency overvaluation, but also to accumulate foreign exchange reserves. This put them on a solid financial footing and helped them to prevent excessive exchange-rate depreciations when the crisis began. Their domestic banking systems have also remained resilient, because, in drawing lessons from previous financial crises, their financial policies sought to keep private sector indebtedness and the degree of leverage of the banking sector relatively low.

Other countries, including many in Eastern Europe, felt the impact of the crisis through the general loss of confidence of the financial markets in their ability to cope with their specific exposure to the crisis. This led to the unwinding of carry-trade positions and a flight of capital to safety. As a result, several currencies came under heavy depreciation pressure and many countries had serious difficulties in rolling over their short-term external debts.

In *Africa* output growth is expected to slow down sharply in 2009, particularly in sub-Saharan Africa, where per capita GDP will actually fall. This will render it virtually impossible to achieve the United Nations Millennium Development Goals. In *Latin America and the Caribbean*, GDP growth is likely to fall by around 2 per cent in 2009, with Mexico undergoing a particularly deep recession. Overall, the Caribbean countries will probably avoid negative GDP growth. Most Latin American countries were in a relatively strong macroeconomic position at the onset of the global crisis, which has given them greater resilience to withstand a balance of payments or banking crisis so far.

While GDP in *East* and *South Asia* should continue to grow at 3–4 per cent in 2009, it is expected to fall in *West Asia*, where several economies have been hurt by tumbling prices of financial assets, real estate and oil. A similar downturn is forecast for many economies in *South-East Asia*, which rely heavily on exports of manufactures. The countries that have resisted recessionary forces better than others are those where the domestic market plays a more important – and increasingly growing – role in total demand, such as China, India and Indonesia. Moreover, the rebound in China in the second quarter of 2009 proves the efficiency of government deficit spending if applied quickly and forcefully.

Green shoots, but spring is far away

The improvement of certain financial indicators from their lows reached in the first quarter of 2009 and falling interest rate spreads on emerging-market debt and corporate bonds, combined with the rebound of securities, commodity prices and the exchange rates of several emerging-market currencies by mid-2009, were quickly seen as “green shoots” of economic recovery. But the economic winter is far from over: tumbling profits in the real economy, previous overinvestment in real estate and rising unemployment will continue to constrain private consumption and investment for the foreseeable future. As the crisis is global, reliance on exports offers no easy way out, since trade is expected to decline by about 11 per cent in real terms and any new trade expansion requires a recovery of consumption and investment somewhere in the world.

Given the weakness in macroeconomic fundamentals, an upturn in financial indicators in the first half of 2009 is more likely to signal a temporary rebound from abnormally low levels of prices of financial assets and commodities following a downward overshooting that was as irrational as the previously bullish exuberance. They are not a reflection of strengthened macroeconomic fundamentals but of a restored “risk appetite” among financial agents. Consequently, they could be reversed at short notice, depending on the pace of recovery and financial market sentiment.

The crisis was predictable

The present economic crisis was not a bolt from the blue; it broke out following years of huge disequilibria within and among major national economies. The most visible evidence of imbalances were the large current-account deficits in the United States, the United Kingdom, Spain and several East European economies, on the one hand, and large and growing surpluses in China, Japan, Germany and the oil-exporting countries on the other. In the United States and the other booming economies, growth was driven to a large extent by debt-financed household consumption, made possible by reckless lending and growing bubbles in the housing and stock markets.

It was clear that such disequilibria could not continue indefinitely. A globally coordinated adjustment, whereby surplus countries would expand domestic demand to compensate for slower growth in the deficit countries, had been consistently advocated by many observers and institutions, including UNCTAD in several of its *Trade and Development Reports (TDRs)*. In 2004, for example, the *TDR* on its very first page stated: “Large disparities in the strength of domestic demand persist among the major industrial countries, and increasing trade imbalances between the major economic blocks could . . . increase instability in currency and financial markets”. However, policymakers failed to acknowledge the need for an internationally balanced macroeconomic management of demand, and in several cases greatly overestimated inflationary risk. A hard-landing scenario was thus predictable.

Policymakers also failed to draw lessons from the experiences of earlier financial crises. Like previous ones, the current crisis follows the classical sequence of expansion, euphoria, financial distress and panic. In the build-up to the present crisis, a large proportion of the credit expansion in the United States and other developed economies financed real estate acquisitions, fuelled asset price inflation and spurred debt-financed private consumption rather than investment in productive capacity that could have generated higher real income and employment in a sustainable manner. After 2000, household debt increased rapidly in many countries, particularly in those economies where current-account deficits had widened, leading to an accumulation of external liabilities. What makes this crisis exceptionally widespread and deep is the fact that financial deregulation, “innovation” of many opaque products and a total ineptitude of credit rating agencies raised credit leverage to unprecedented levels. Blind faith in the “efficiency” of deregulated financial markets led authorities to allow the emergence of a shadow financial system and several global “casinos” with little or no supervision and inadequate capital requirements.

Speculative forces predominate over fundamentals in determining market outcomes

In the course of the crisis, financial distress spread directly across stock and bond markets and primary commodity markets, and put pressure on the exchange rates of some emerging-market currencies. The uniform behaviour of so many different markets that are not linked by economic fundamentals can be attributed to one common factor: the strong speculative forces operating in all these markets.

As participants in financial markets often seek speculative gains by moving before others do, these markets are always “ready for take-off”, and eventually interpret any “news” from this perspective. Indeed,

they often tend to misread a situation as being driven by economic fundamentals when these are just mirages, such as perceived signs of economic recovery in certain economies or fears of forthcoming inflation. As long as prices are strongly influenced by speculative flows – with correlated positions moving in and out of risk – markets cannot function efficiently.

Recognizing the lack of economic logic of these markets is key to understanding the roots of the current crisis, and should be the basis for further policies and reforms aimed at stabilizing the financial system. However, so far an appropriate appraisal by policymakers has not been forthcoming. The policy approach to tackling the crisis is focused on better regulation of actors and markets at the national level, but does not address its impacts on currency and commodity markets and on the future of an open trading system.

Excessive “financialization” of primary commodity markets

The impact of the financial crisis on developing and transition economies through the slowdown of trade was amplified by the sharp fall in international prices for primary commodities in the second half of 2008. To a large extent this is a symptom of the financial crisis itself. Commodity prices, stock prices and the exchange rates of currencies affected by carry trade speculation moved in parallel during much of the period of the commodity price hike in 2005–2008, during the subsequent sharp correction in the second half of 2008 and again during the rebound phase in the second quarter of 2009.

It is true that deteriorating global economic prospects after September 2008 dampened demand for commodities; but the downturn in international commodity prices was first triggered by financial investors who started to unwind their relatively liquid positions in commodities when the value of other assets began to fall or became uncertain. And the herd behaviour of many market participants reinforced such impulses.

Financial investors in commodity futures exchanges have been treating commodities increasingly as an alternative asset class to optimize the risk-return profile of their portfolios. In doing so, they have paid little attention to fundamental supply and demand relationships in the markets for specific commodities. A particular concern with respect to this financialization of commodity trading is the growing influence of so-called index traders, who tend to take only long positions that exert upward pressure on prices. The average size of their positions has become so large that they can significantly influence prices and create speculative bubbles, with extremely detrimental effects on normal trading activities and market efficiency.

Under these conditions, hedging against commodity price risk becomes more complex, more expensive, and perhaps unaffordable for developing-country users. Moreover, the signals emanating from commodity exchanges are getting to be less reliable as a basis for investment decisions and for supply and demand management by producers and consumers.

In order to improve the functioning of commodity futures exchanges in the interests of producers and consumers, and to keep pace with the participation of new trader categories such as index funds, closer and stronger supervision and regulation of these markets is indispensable. The financialization of commodity futures trading also confronts the international community with the issue of how supply-side measures can address excessive commodity price volatility. This issue is of particular importance for food commodities, because, despite some recent improvements, current grain and oilseed inventories remain very low. This means that any sudden increase in demand or major shortfall in production, or both, will rapidly trigger significant price increases. Hence, physical stocks of food commodities need to be rebuilt urgently to a level adequate enough to be able to moderate temporary shortages and buffer sharp price movements.

In 2009, food emergencies persist in 31 countries, and it is estimated that between 109 million and 126 million people, most of them in sub-Saharan Africa and South Asia, may have fallen below the poverty line since 2006 due to higher food prices. Despite plummeting international food prices in the second half of

2008, domestic food prices generally have remained very high, and in some cases at record highs. It appears that while the pass-through of commodity prices on international exchanges to consumer prices was high in the phase of increasing prices, it was low during the subsequent months of falling prices, which proves that the markets are not functioning in an orderly manner. In addition, forecasts by specialized agencies expect food prices to remain high in the longer run, mainly as a result of continuously rising biofuel demand and structural factors related to population and income growth.

In the first half of 2009, commodity prices rose again, reflecting the return of financial speculators to commodity markets, which appears to have amplified the effects of small changes in market fundamentals. Also, demand from China for current consumption and stockpiling will continue to influence commodity prices. Given the growth dynamics of China and a number of other large emerging-market economies, commodity prices could rise further once a global recovery sets in. However, based on prospects for the evolution of market fundamentals, those prices are not expected to return to the peaks registered in the first half of 2008 any time soon.

The monetary policy response and financial rescue operations in developed countries

Most policymakers took a while to realize the full magnitude of the financial and economic crisis. United States authorities were the first to take measures to counter the effects of the crisis. This is mainly because the bursting of the real estate bubble, financial difficulties of large financial firms, as well as signs of a looming outright recession, all emerged first in the United States economy. When other governments joined in rescue operations, these were mostly in reaction to pressing problems rather than pre-emptive in nature. In some cases, their macroeconomic policies were even procyclical, repeating the policy mistakes that aggravated the crises in several Asian and Latin American countries in the late 1990s and early 2000s.

The symptoms of the financial crisis were first treated by the provision of additional liquidity to banks in the major financial markets. This was followed by cuts in interest rates to lower the cost of credit, again with the Federal Reserve taking the lead; other central banks followed with a considerable time lag. The European Central Bank (ECB) moved in the opposite direction to begin with, considering it appropriate to raise its policy rate as late as July 2008 to counter a wrongly perceived risk of inflation – a move that clearly reflected a lack of understanding of the gravity of the unfolding situation.

In the United States and other developed countries, it soon became clear that influencing the monetary and credit conditions and providing traditional financing to depository institutions would not be sufficient to restore confidence in the financial markets and a normal functioning of credit supply. Governments and central banks undertook rescue operations of systemically important companies, mainly in the financial sector, on an unprecedented scale. They injected capital, provided guarantees, and helped banks “clean” their balance sheets by transferring their so-called “toxic” assets to publicly sponsored “bad banks”. However, policy intervention to rescue banks with large amounts of assets of uncertain value is not without problems, because it may imply subsidizing shareholders and provide a form of insurance for banks without appropriate recompense by the beneficiaries. Rigorous monetary easing and large bailout operations may have prevented a meltdown of the financial system, but they were insufficient to revive aggregate demand and halt rising unemployment.

Unprecedented fiscal stimulus packages

As the crisis spilled over into the real sector, governments in many developed countries reacted with debt-financed increases in public spending and tax cuts. These were intended to counter the increasingly dramatic downturn in final demand, output and employment. Fiscal stimuli were first introduced in early 2008, but more forcefully after the slowdown in the United States had turned into an outright recession in the third quarter of that year.

The public resources deployed in such “fiscal packages” represent an average of some 3.7 per cent of GDP in the developed countries. In most countries they are stretched over a period of two years. But it is not only the size of such fiscal programmes that matters; different forms of spending and revenue cuts have different effects on demand and income. For example, an increase in public investment typically has a stronger impact than tax abates, and measures aimed at raising the disposable income of low-income groups generates more demand than tax reductions on high incomes. Moreover, most of these interventions have distributional effects and lasting consequences, most notably when they include investment in infrastructure. Consequently, a fiscal stimulus plan should be designed to maximize its impact on the economy, while at the same time aiming at long-term structural objectives.

The policy response in developing and transition economies

In developing countries, the scope for easing monetary policy varied greatly, depending mainly on their initial current-account position and the degree of openness of their capital account. Many Asian countries, including China, India and the Republic of Korea, began to move towards a more expansionary monetary policy from September 2008 onwards. By contrast, in other countries whose currencies came under (sometimes intense) pressure in the third quarter of 2008, the monetary authorities were even induced to temporarily tighten their policy stance before shifting to monetary easing in the first months of 2009.

A number of developing and transition economies also launched sizeable fiscal stimulus packages. On average, their size was even larger than those of developed countries: 4.7 per cent of GDP in developing countries and 5.8 per cent in transition economies, extending over a period of one to three years. The authorities in China were quick to announce a particularly large fiscal stimulus plan, amounting to more than 13 per cent of GDP. A number of other countries in Asia and Latin America also responded to the crisis with very expansionary macroeconomic policies, using the greater fiscal flexibility and policy space available to them because of their healthy current accounts and reserves.

By contrast, some developing and transition economies have had to turn to the International Monetary Fund (IMF) for financial support to stabilize their exchange rates and prevent a collapse of their banking systems. IMF lending has surged since the outbreak of the current crisis, extending to nearly 50 countries by the end of May 2009. However, the scope for expansionary policies to counter the impact of the crisis on domestic demand and employment has been severely constrained by the conditionality attached to IMF lending.

The international policy dimension

The unfolding of the global crisis did not receive attention in international decision-making bodies until October 2008, when the central banks of the major economies engaged in coordinated monetary easing. A novelty was that the United States Federal Reserve, for the first time since the end of the Bretton Woods system, provided four emerging-market economies with bilateral swaps to help them defend their currencies. Since November 2008, the G-20 has taken the lead in launching and coordinating international action to address the financial and economic crisis, although the question has been raised as to whether it is sufficiently inclusive.

In April 2009, the G-20 acknowledged the need for coordination of the fiscal stimulus programmes of different countries in order to enhance their overall impact on global demand and reduce the risk of protectionist reflex actions against “free-riders”. However, not all countries have the same fiscal space: many developing economies need international support for their countercyclical policies. This was acknowledged by the G-20 in adopting the Global Plan for Recovery and Reform. In particular it was decided to significantly increase the IMF’s resources, to provide additional lending through multilateral development banks and to

support trade finance. Some of the proposed measures were not entirely new, while others reflected intentions rather than being concrete pledges.

Moreover, the effectiveness of the announced international support could have been greatly increased if it had been linked to a reform of the IMF itself, including changes to its governance structure, the system of allocation of Special Drawing Rights (SDRs) and the principles underlying the conditionality of its lending. Several announcements were made to the effect that the IMF would recognize countercyclical policies and large fiscal stimulus packages as the most effective means to compensate for the fall in aggregate demand induced by debt deflation. However, in reality, the conditions attached to recent lending operations have remained quite similar to those of the past. Indeed, in almost all its recent lending arrangements, the Fund has continued to impose procyclical macroeconomic tightening, including the requirement for a reduction in public spending and an increase in interest rates.

The need for financial support to low-income countries

Current debt servicing and debt sustainability have become more problematic, not only for countries whose liabilities to commercial lenders have increased rapidly in recent years, but also for a number of low-income developing countries, including several heavily indebted poor countries (HIPC) which depend on borrowing from official sources. Despite the debt relief provided to them, the sustainability of their external debt situation remains highly vulnerable to shocks, and the fallout of the global economic crisis is impairing their ability to service their external debt without compromising their imports.

Low-income countries with balance-of-payments problems and limited fiscal flexibility require additional support that can best be mobilized in a concerted multilateral effort. Increases in bilateral aid flows that are integrated into fiscal stimulus packages in an internationally coordinated manner would also have expansionary effects in donor countries. In addition, a temporary moratorium on official debt repayments would allow low-income countries to counter, to some extent, the impact of lower export earnings on their import capacity and government budgets. Such a moratorium would be in the spirit of the countercyclical policies undertaken in most developed and emerging-market economies. It would not only constitute an important element in efforts to attenuate the impact of the global crisis on growth, poverty alleviation and investment in the debtor countries, but it would also contribute to stabilizing global demand. Compared to the size of the stimulus packages for developed countries, the total amount of such a temporary debt moratorium would be modest, amounting to about \$26 billion for 49 low-income countries for 2009 and 2010 combined.

The problem is not inflation, but deflation

Growing budget deficits as a consequence of fiscal stimulus packages have prompted concerns that governments will burden future generations if they do not raise tax rates as soon as the crisis is over. However, in a growing economy, government revenue will normally rise sufficiently at constant tax rates to reduce the deficit if government spending is not on a permanent growth path. If governments were to remain passive in a situation of severe crisis, relying exclusively on automatic stabilizers, the fiscal balance would deteriorate as a result of lower tax revenues. On the other hand, a discretionary increase in public spending, especially when it boosts investment, may enhance production capacity and job creation, which in turn will enlarge the future tax base and thereby improve public revenues at given tax rates. Nevertheless, the size of the domestic public debt does matter, since it may compromise budget flexibility in the future. This is why, in order to be truly countercyclical, an expansionary fiscal policy in a recession needs to be combined with fiscal consolidation when recovery sets in and output growth accelerates.

There are also widespread concerns that the large injections of central bank money and the sharply rising budget deficits in many countries will sooner or later lead to inflation if governments and central banks do

not react early to contain that risk. This fear is based on the monetarist view that “too much money chasing too few goods” inevitably creates inflation. However, “too much money” needs a channel through which to inject the virus of inflation into an economy. There are only two channels for this to happen: if demand growth exceeds potential supply growth (“demand-pull inflation”), or if increases in the costs of production, particularly labour costs, exceed productivity growth (“cost-push inflation”). In the present situation, with capacity utilization at historic lows and unemployment rising at a dramatic rate, there is little danger of either overheating or wage inflation for several years to come. It is a matter of years, not months, before economies that are now in deep crisis can be restored to a level of capacity utilization where supply cannot keep up with demand, or to a level of employment that could trigger demand for higher wages. This will allow central banks to gradually withdraw excess liquidity by selling revalued assets and absorbing excess money supply.

Indeed, deflation – not inflation – is the real danger. Wage deflation is the imminent and most dangerous threat in many countries today, because governments will find it much more difficult to stabilize a tumbling economy when there is a large-scale fall in wages and consumption. However, deflation will not cure itself. Therefore, the most important task is to break the spiral of falling wages, prices and demand as early as possible, and to revive the financial sector’s ability to provide credit for productive investment to stimulate real economic growth. Governments and central banks need to take rapid and strong proactive measures to boost demand and avert the risk of deflation.

Rethinking monetary and financial policies

In many countries, Governments and central banks have set new precedents for supporting ailing financial institutions that had ended up in trouble on account of mismanagement. The need for such rescue operations has revealed that the huge profits and incomes earned from the financial activities of some market participants and managers over the past few years have been disproportional to the macroeconomic and social usefulness of the financial sector. The heavy involvement of governments and central banks therefore justifies a thorough review of the functioning of the financial sector, and a redefinition of the role of central banks and public financial institutions in supporting real economic activity. Large segments of the financial sector cannot be left to function like giant casinos without doing great harm to the real sector of the economy. As a logical consequence of the various efforts to rescue individual financial institutions, and in the interests of greater stability and reliability of the financial system, the balance between private activity and State involvement in the financial sector beyond the crisis may need to be revised fundamentally.

The need for more stringent financial regulation

One aspect of financial policy reform is the generally accepted need for strengthening financial regulation and supervision. In order to draw the right lessons for improving financial regulation, it is important to recognize that the collapse of the subprime mortgage market in the United States, while sparking the crisis, was not its fundamental cause. The current crisis is due to the predominance of finance over those productive sectors of the economy where real wealth is created, a predominance that was made possible by the euphoria over the efficiency of free markets. This euphoria led to excessive deregulation, an underestimation of risk and excessive leveraging in the years before the crisis. The build-up of risk could have been avoided if policies concerning the financial sector had been guided less by ideology and more by pragmatism.

Many now blame greed for the crisis, but greed has always existed and will always exist. Greed should therefore have been taken into account when evaluating the risks of financial deregulation, because today’s predicament is the result of financial innovation in an environment of insufficient regulation and supervision. In the United States, the share of the financial industry in GDP grew from 5 per cent to 8 per cent between 1983 and 2007, while its share in total corporate profits rose from 7.5 per cent to 40 per cent. Policymakers

should have been wary of an industry that constantly aims at generating double-digit returns in an economy that is growing at a much slower rate, especially if that industry needs to be bailed out every decade or so. Since herd behaviour can cause much greater damage in financial markets than in goods markets, the former need to be subject to stricter regulations.

Developing a more sophisticated financial system should not be an objective per se; more finance and more financial products are not always better than less. Large parts of the financial markets have come to be entirely detached from real sector activities. Securitization and other financial “innovations” have broken the traditional relationship between lenders, particularly banks, and borrowers. They have weakened the capacity and willingness of financial institutions to manage risk, and favour the development of a non-transparent, poorly regulated and undercapitalized shadow financial system. The contribution of those financial markets to social welfare is highly questionable. Indeed, several innovative financial products have negative social returns. Therefore, financial regulation should aim at reducing the proliferation of such instruments.

There is a fundamental flaw with a regulatory apparatus that is based on the assumption that protecting individual institutions will automatically protect the entire system. Actions that are good and prudent for an individual financial institution can have negative implications for the system as a whole. It is thus necessary to develop a new regulatory system that systematically discriminates between financial services for productive investment and betting or gambling in zero sum games.

The crisis offers important lessons for developing countries that seek to limit possible negative effects of external financial shocks on their own financial systems. They should aim at avoiding excessive currency and maturity mismatches in their balance sheets and real exchange rate appreciation, if necessary by comprehensive and countercyclical capital-account management. The crisis also shows that deeper financial systems can bring substantial benefits, but they can also cause considerable harm. Therefore, the process of financial development needs to go hand in hand with better and broader financial regulation and supervision. As regulatory reforms cannot be implemented overnight, developing countries should proceed with caution and avoid “big-bang” processes of financial reform.

The imperative need for reform of the international monetary and financial system

Financial market participants act on the basis of centralized information that is quite different from the disparate sources of information on normal goods markets. The large majority react to the same set of “information” or “news” with very similar patterns of taking on or unwinding of their exposure to risk. Speculation of this kind leads to upward and downward overshooting of prices, or even to price movement in a direction that is not justified by fundamentals. This causes lasting damage to the real economy and to the international trading system.

The realization that in a globalized world “shocks” emanating in one segment of the financial sector of one country can be transmitted rapidly to other parts of the interconnected system raises some fundamental questions about the wisdom of global financial integration of developing countries in general. The experience with the current financial crisis calls into question the conventional wisdom that dismantling all obstacles to cross-border private capital flows is the best recipe for countries to advance their economic development. While it is agreed that global finance has caused the current crisis, surprisingly little attention is being given to the management of global finance, and in particular speculative capital flows. Debates about reform focus primarily on improving national prudential regulation and supervision of financial players of systemic importance. These are important issues. But the experience of this financial crisis also supports the case for a more fundamental rethinking of global financial governance with a view to stabilizing trade and financial relations by reducing the potential for gains from speculative capital flows.

Reducing vulnerability to external financial shocks at the country level

Promoting proactive capital-account management may be one element in a revised governance structure that could give countries sufficient flexibility to manage their domestic macroeconomic policies and improve their prospects for economic stability. Effective capital-account management not only helps prevent volatile private capital flows from causing exchange-rate volatility and misalignment, and thereby destabilizing the domestic financial system; it also helps improve the reliability of price signals in domestic markets and the conditions for efficient resource allocation and dynamic investment.

Assertions that capital controls are ineffective or harmful have been disproved by the actual experiences of emerging-market economies. These experiences show that different types of capital flows can be limited effectively by a variety of instruments. These instruments range from outright bans or minimum-stay requirements to tax-based instruments like mandatory reserve requirements or taxes on foreign loans that are designed to offset interest rate differentials. Several instruments can be combined and flexibly handled to match specific local requirements. In many cases, instruments directly targeting private capital flows may be appropriately combined with and complemented by prudential domestic financial regulations. The capital account can also be managed in a countercyclical manner, by restricting the build-up of excessive foreign liabilities in good times and restraining capital flight during crises. In any case, it would certainly be a step forward if surging capital inflows were no longer perceived as a sign of strength, but as a potential source of disequilibrium, with grave repercussions for macroeconomic stability and trade. Thus, in pursuing its surveillance function, the IMF should more actively encourage countries to use, whenever necessary, the introduction of capital controls as provided for in its Articles of Agreement.

The dollar-based reserve system is increasingly challenged

In the discussion about necessary reforms of the international monetary and financial system, the problem of the United States dollar serving as the main international reserve asset has received renewed attention. Central banks, motivated by the desire to reduce exchange-rate risk in a world of financial and currency instability, have been increasingly diversifying their reserve holdings into other currencies, in particular the euro. Against this background, a proposal first discussed in the late 1970s has recently resurfaced. It argues for facilitating reserve diversification away from dollars without the risk of a major dollar crisis by giving central banks the possibility to deposit dollar reserves in a special “substitution account” at the IMF denominated in SDRs. These SDRs could also be used to settle international payments. Since the SDR is valued as the weighted average of the major currencies, its value is more stable than that of each of the constituent currencies. However, the problem of exchange-rate determination of the currencies of member States would remain. The exchange-rate risk would, at least partly, be shifted to the IMF, as it would imply a currency mismatch between the Fund’s assets and liabilities. The risk would have to be covered either through the generation of higher revenues by the IMF or by guarantees from member States.

An international reserve system that uses one or several national currencies as a reserve asset and as a means of international payments also has the disadvantage of being dependent on monetary policy decisions by the central banks issuing those currencies. However, their decisions are not taken in response to the needs of the international payments system and the world economy, but in response to national policy needs and preferences. Moreover, an economy whose currency is used as a reserve currency is not under the same obligation as others to make the necessary macroeconomic or exchange-rate adjustments for avoiding continuing current-account deficits. Thus, the dominance of the dollar as the main means of international payments also played an important role in the build-up of the global imbalances in the run-up to the financial crisis.

Another disadvantage of the current international reserve system is that it imposes a greater adjustment burden on deficit countries (except if it is a country issuing a reserve currency) than on surplus countries.

This is because the former are compelled to reduce imports when their ability to obtain external financing reaches its limits, whereas surplus countries are under no systemic obligation to raise their imports in order to balance their payments. Similarly, central banks can easily counter pressure on their currency to appreciate by buying foreign currency against their own, but their possibilities to counter pressure for currency depreciation is circumscribed by the amount of their foreign exchange reserves. The IMF supports this bias by imposing restrictive policies on deficit countries as part of its loan conditions, rather than pressing surplus countries for more expansionary policies as part of its surveillance activities. Thus, as long as there is no multilaterally agreed rule for countries to support each others' economies through coordinated demand management and symmetric intervention in the foreign exchange market, the system has a deflationary bias.

Strengthening the role of SDRs

There has also been a suggestion to reduce the need for reserve holdings as protection against the volatility of financial markets by strengthening the role of SDRs. Indeed, in response to the increased needs for international liquidity in the current financial and economic crisis, the G-20 at its London Summit in April 2009 announced its support for a new general SDR allocation, which would inject \$250 billion into the world economy and increase global liquidity. This proposal was supported by the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System.

However, the new SDRs would be distributed according to member countries' quotas in the Fund. This would mean that the G-7 countries, which have no real need for SDRs because they themselves issue reserve currencies or have easy access to international capital markets, would receive more than 45 per cent of the newly allocated SDRs. Less than 37 per cent would be allocated to developing and transition economies and less than 8 per cent to low-income countries. Thus the countries most in need of international liquidity from official sources would receive the smallest shares. This raises the more general issue of the geographical and time dimensions of SDR allocation.

From the point of view of criteria for geographical distribution, it has been suggested that in order for the SDR to become the main form of international liquidity and means of reserve holding, new SDR allocations should be made according to the needs of countries. Appropriate criteria for determining those needs would have to be worked out, but there can be no doubt that an allocation according to the current structure of IMF quotas is entirely out of line with needs. One approach would be to allow all countries unconditional access to IMF resources by an amount necessary to stabilize their exchange rates at a multilaterally agreed level. Another approach could be to link the issuance of SDRs with the needs of developing economies for development finance by allowing the IMF to invest some of the funds made available through issuance of SDRs in the bonds of multilateral development banks. Such a proposal was made by an UNCTAD panel of experts in the 1960s, before international liberalization of financial markets began, and when access to capital market financing by developing-country borrowers was very limited.

With regard to the time dimension, the question of frequency and cyclicity arises. If the purpose of SDR allocation is to stabilize global output growth, it would be appropriate to issue additional SDRs when global growth is below potential or during crisis periods, and to issue smaller amounts or retire SDRs in periods of fast global output growth. One of the advantages of using SDRs in such a countercyclical manner is that it would, in principle, facilitate the task of preventing excessive currency depreciations for countries in crisis. However, the rules and conditions for access would need to be elaborated carefully, including a determination of the level of exchange rates that should be stabilized. Therefore neither a substitution account, nor a central role for the SDR in the provision of international liquidity would solve the main problem underlying the need for the accumulation of large reserves, i.e. exchange-rate instability and the possibility of currency attacks.

Whatever form an enhanced scheme of SDR allocation may take, it will only be acceptable to all countries if the terms on which SDRs can be used as international liquidity are absolutely clear-cut, particularly the parity of the SDR vis-à-vis all national currencies. The Bretton Woods system and the European Monetary System provide precedents for what could be an appropriate solution for determining exchange rates within a multilateral framework. In these systems the implicit rule was that the exchange rate of a national currency with the international currency was determined by the purchasing power of that currency expressed in all other currencies. This rule may be difficult to introduce at the time the system starts, because of the problem of determining the initial purchasing power parities of each currency, but it would be straightforward and simple once the system was on track. It may also be necessary to apply some additional criteria that reflect structural features related to the level of development of different countries.

In the current global monetary (non-)system many countries, in particular emerging-market economies with open capital accounts, are faced with serious problems of exchange-rate management. Economies with an open capital account cannot absorb external shocks efficiently by adopting either entirely flexible exchange rates or by their rigid fixing. Under a system of freely floating rates, introduced on the assumption that market forces will efficiently determine the correct exchange rate, there is scope for huge fluctuations, as currency speculation drives exchange rates systematically away from the fundamentals and tends to lead to overvaluation and current-account deficits. Hard pegs, like currency boards, undermine price-led adjustments of trade and provoke speculation against the peg if the anchoring country is unable to strictly abide by the inflationary regime that prevails in the anchor country. Again, real appreciation and loss of competitiveness due to higher inflation in the anchoring country – reflected in huge current-account deficits – invite speculation, as they tend to cause a loss of confidence by the markets that the regime can be sustained. A viable solution to the exchange-rate problem would be a system of managed flexible exchange rates targeting a rate that is consistent with a sustainable current-account position, which is preferable to any “corner solution”. But since the exchange rate is a variable that involves more than one currency, there is a much better chance of achieving a stable pattern of exchange rates in a multilaterally agreed framework for exchange-rate management.

Multiple benefits of a reformed international exchange-rate system

Therefore, what kind of system would be appropriate for the future globalized economy and for countries in crisis?

An internationally agreed exchange-rate system based on the principle of constant and sustainable real exchange rates of all countries would go a long way towards reducing the scope for speculative capital flows that generate volatility in the international financial system and distort the pattern of exchange rates. Since the real exchange rate is defined as the nominal exchange rate adjusted by the inflation differentials between countries, a constant real exchange rate results from nominal exchange rates strictly following inflation differentials. A constant real exchange rate (RER) at a competitive level would achieve the following:

- Curb speculation, because the main trigger for currency speculation is the inflation and interest rate differential. Higher inflation and higher interest rates would be compensated by the devaluation of nominal exchange rates, thereby reducing the scope for gains from carry trade.
- Prevent currency crises, because the main incentive for speculating in currencies of high-inflation countries would disappear, and overvaluation, one of the main destabilizing factors for developing countries in the past 20 years, would not occur.
- Prevent fundamental and long-lasting global imbalances, because all countries with relatively diversified economies would maintain their level of competitiveness in global trade relations.
- Avoid debt traps for developing countries, because unsustainable current-account deficits triggered by a loss in international competitiveness cannot build up.

- Avoid procyclical conditionality in case of crisis, because, if the system were to have symmetric intervention obligations, the assistance needed for countries under pressure to depreciate their currencies would come automatically from the partners in the system whose currencies would appreciate correspondingly.
- Reduce the need to hold international reserves, because with symmetric intervention obligations under the “constant RER” rule, reserves would only be needed to compensate for volatility of export earnings but no longer to defend the exchange rate.

Such a multilateral system would tackle the problem of destabilizing capital flows at its source. It would remove a major incentive for speculation and ensure that monetary factors do not stand in the way of achieving a level playing field for international trade. It would also get rid of debt traps and counterproductive conditionality. The last point is perhaps the most important one: countries facing strong depreciation pressure would automatically receive the required assistance once a sustainable level of the exchange rate had been reached in the form of swap agreements or direct intervention by the counterparty.

Establishing such a system would take some time, not least because it requires international consensus and multilateral institution building. Meanwhile, at the national level proactive capital account management could provide protection against destabilizing capital flows, and at the regional level greater monetary and financial cooperation, including reserve pooling, regional payments clearance mechanisms that function without using the dollar, and regional exchange-rate systems could help countries in the region to avert financial and currency crises, or manage them better if they occurred.

* * *

While the ongoing global financial and economic crisis, its impact on developing countries and the policy responses to that crisis have been at the centre of economic concerns since mid-2008, another pressing preoccupation for peoples and governments around the world continues to be the threat of global warming that implies considerable risks for living conditions and developmental progress. Against this background, TDR 2009 is also addressing the question of how increased efforts aimed at climate change mitigation can be combined with forward-looking development strategies and rapid growth in developing countries.

Global warming requires global action for adaptation and mitigation

Most scientific research suggests that the consequences of unabated climate change could be dramatic. There is broad agreement that a sizeable reduction of greenhouse gas (GHG) emissions is needed to reduce global warming to more acceptable levels, which would also significantly improve the prospects for human and economic development and poverty reduction compared to a scenario of unabated climate change.

Even if global warming can be limited to a generally accepted tolerable level, it is still expected to have adverse consequences for many countries, for example in terms of rising global mean sea levels, increased intensity and frequency of extreme weather events and lower agricultural output. This will require adequate adaptation measures, especially in developing countries, which are feeling the negative effects of climate change the most. This necessitates the mobilization of substantial financial and technical support by the international community for the poorer countries affected. But limiting global warming to tolerable levels also requires a shift of production and consumption patterns towards the use of those primary commodities, means of production and consumer goods that place a lower burden on the earth’s atmosphere than the current GHG-intensive ones.

The scale of emission reductions needed to achieve meaningful mitigation of climate change can only be achieved through global action, and there is general agreement that developed countries need to lead such action. They are responsible for the bulk of emissions that have led to the current level of GHG concentrations in the atmosphere as result of past economic activity, and their per capita GHG emissions continue to be higher than those of other countries. They also have greater economic, technological and administrative capacity to shift rapidly to a low-carbon economy. But in developing and transition economies, especially in the largest and fastest growing among them, GHG emissions are on a steeply rising trend. This trend will continue unless they too take vigorous actions to change the energy mix and modes of production and consumption.

In the debate on climate change mitigation, the question of costs has received a great deal of attention. However, it is virtually impossible to base any rational decision on estimates of costs and benefits, because of their considerable uncertainty and the highly subjective judgements involved. What seems to be clear, however, is that an increase of global temperatures above a certain level implies incalculable risks of a serious deterioration of the natural environment and living conditions for the world's population in general, and for the population of developing countries in particular. Global warming and climate change mitigation may therefore best be approached from a risk-management perspective. From this perspective, the shift to more climate-friendly modes of production and consumption becomes a new public preference. And the policy task is to guide economic activities by introducing appropriate incentives, disincentives and regulations that impose or prohibit certain forms of production in line with this public preference.

Climate change mitigation and structural change

Historically, growth has been associated with increasing emissions, which gives the impression that there is a trade-off between growth and development and climate change mitigation. However, this does not have to be the case. Experiences from both developed and developing countries show that many synergies are possible between GHG emission reductions and development objectives.

In order to make climate change mitigation compatible with growth, particularly in developing countries, emissions regulation and control have to be made more stringent. The wider dissemination of existing technologies and the development of new technologies and more climate-friendly modes of production and consumption cannot be left to market forces alone; they also require strong and internationally coordinated government action.

Climate change mitigation is best understood as a process of global structural change. In the course of this process, economic activity will shift from GHG-intensive modes of production and consumption to more climate-friendly ones, causing losses and adjustment costs for many economic agents at the microeconomic level, but also generating new income and gains for others. In this sense, climate change mitigation has much in common with other processes of structural change in which new economic opportunities arise in both developed and developing countries, especially as a result of the rapid growth of new markets. From this macroeconomic perspective, climate change mitigation may even have a growth stimulating effect in many countries.

Generating new growth opportunities through structural change

There is considerable scope for developing economies in the years and decades ahead to gain from the opportunities that will emerge from the structural change towards renewable sources of energy, climate-friendly technologies, low-carbon equipment and appliances, and more sustainable modes of consumption. Successful participation in the new markets could help developing and transition economies to combine

climate change mitigation policies with faster growth. It requires industrial policies that foster the creation of capabilities to produce or participate in the production of such goods and their subsequent upgrading.

At present, the global market for what is sometimes called “environmental goods” is clearly dominated by developed countries, but several developing economies already account for an increasing share of this market. For some countries, climate change mitigation offers new possibilities to exploit natural comparative advantages, particularly in the production of low-carbon energy, which so far have been of minor economic importance; for others it may offer opportunities to build new dynamic comparative advantages.

One way developing countries could participate in the markets for “environmental goods” is by integrating into international production chains, as many of them have successfully done in other sectors of manufacturing industry. Furthermore, they themselves could contribute to innovation in climate protection processes and environmental goods adapted to specific local circumstances and comparative advantages. The development of “clean technologies” and early participation in the production of equipment embodying such technologies in the context of a rapidly expanding international market confers “first-mover advantages”, given that other countries will eventually need to adopt these technologies as well.

Integrating climate change mitigation in industrial strategies

Seizing opportunities offered by fast growing new markets and strategic integration into such markets are not entirely new challenges. They have been key elements in the design of successful development strategies that have focused on diversification away from a reliance on only a few export commodities and towards building comparative advantages in other areas of economic activity. Each developing and transition economy will need to devise its own strategy for integrating into the emerging markets for new products that help achieve GHG abatement objectives. Those strategies will have to take into account both the local needs for specific “environmental goods” and the possibilities of producing such goods locally, including for regional and global markets.

Experience from developed countries and several emerging-market economies shows that a successful industrial policy may comprise, among other elements, public sector engagement in R&D, simplifying access to patents, fiscal and financial support for new production activities, information dissemination, and FDI policies that favour integration into international production chains. Government procurement and temporary protection of specific subsectors can also have an important impact. A proactive industrial policy with a special focus on using existing comparative advantages and creating new ones in the production of environmental goods is of particular relevance in the context of forward-looking development strategies, because the policy space for support measures in this area is less narrowly circumscribed by multilateral agreements than in other areas.

Structural change requires targeted public support measures

There appears to be a huge potential for greater energy efficiency that could be exploited by wider dissemination of already existing technologies in both developed and developing countries. However, the creation and application of new technologies and the development of alternative energy sources also need to be accelerated. Putting a price on emissions in the form of taxes or tradable emission permits, and thereby changing the incentive structure for producers and consumers, could help set in motion a process towards establishing low-carbon economies. But such measures need to be accompanied by intervention on the supply side of other sources of energy. Managing supply adjustments and price formation for different sources of energy is necessary in order to prevent prices of non-fossil, renewable energy from increasing – relative to

the prices of the more carbon-intensive types of energy – as demand for them grows. Therefore, producers of different fuels need to be involved in the formulation and implementation of an international climate change mitigation policy.

In many respects, introducing technologies that support climate change mitigation is not particularly different from other innovation activities: in a dynamic economy, they emerge from entrepreneurial spirit and the search for competitive gains. But unlike many other areas, technological progress and innovation for more climate-friendly modes of production and consumption cannot be left to changes in the incentive structure based on the market mechanism alone. The important public-good nature of low-carbon technologies and the urgent need to reduce GHG emissions in light of the risks of unabated climate change for future generations call for direct government intervention through the introduction of emission performance standards and strict regulations for GHG reductions. Until today, there has been insufficient investment in public and private research for the development of alternative sources of energy and cleaner production methods, which has led to “carbon lock-in” in current modes of production and consumption. Proactive policies are therefore needed, including subsidies and public acquisition of patents, to advance technological progress and accelerate the process of catching up from past underinvestment. Moreover, experience shows that technological change often advances faster when it also benefits from R&D in public institutions, and when the public sector takes the lead in the practical application of new technologies.

Promoting climate change mitigation through appropriate international agreements

The international community can support industrial development in this direction by allowing developing countries sufficient policy space in the context of relevant international agreements on climate change, trade, FDI and intellectual property rights. Given the global public-good character of climate change mitigation, consideration could be given to interpreting the flexibilities of the WTO Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS Agreement) in a way that would allow compulsory licensing for the production of equipment and goods that embed climate-friendly technologies, and for related processes, similar to the exemptions accorded for medicines in support of public health.

In strengthening the international framework for a climate policy, there is scope for many of its existing elements to contribute to more effective global GHG abatement efforts, and for greater participation of developing countries in those efforts. These elements include, inter alia, the promotion of carbon trading, and the two project-based mechanisms of the Kyoto Protocol – the Clean Development Mechanism and Joint Implementation – as well as the prevention of deforestation. The imperative of climate change mitigation requires a commitment to GHG reductions not only by developed countries, but also by emerging-market economies, which in recent years have drastically increased their GHG emissions. A promising approach to reducing GHG emissions would be to extend the coverage of existing cap-and-trade systems and increase their effectiveness.

In order to achieve a new climate agreement, it will be necessary that the distribution of responsibilities be viewed by all parties as sufficiently fair and equitable. On the one hand, an international emissions trading scheme would need to take into account the responsibility of the industrialized countries for the bulk of existing GHG concentrations in the atmosphere; on the other hand, it would need to recognize that the contribution of developing countries to GHG abatement critically depends on their having the appropriate financial resources and access to clean technologies, and the ability to develop their own environmental goods industries. Depending on the initial allocation of emission permits, an emission trading scheme could allow developing countries to sell emission rights that they do not require to cover domestically produced emissions, thereby providing some of the financial resources they would need for technology imports. Such an emissions trading scheme could complement official development assistance aimed at building greener

economies in developing countries, as well as FDI policies that support technological upgrading and structural change in developing countries.

The large fiscal stimulus packages launched in response to the financial and economic crisis offer an ideal opportunity to accelerate structural change towards a low-carbon economy through additional public investment in activities and infrastructure in support of climate change mitigation, and through the provision of subsidies for acquisition of climate-friendly capital goods and durable consumer goods.

A handwritten signature in black ink, appearing to read 'S. Panitchpakdi', is centered on the page. The signature is fluid and cursive, with a large initial 'S' and a long, sweeping tail.

Supachai Panitchpakdi
Secretary-General of UNCTAD

