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Chapter I

CURRENT TRENDS AND CHALLENGES IN THE WORLD ECONOMY

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Chapter I

CURRENT TRENDS AND CHALLENGES IN THE WORLD ECONOMY

A. Recent trends in the world economy

1. Global growth

Following the 2008–2009 financial crisis and the rebound in 2010, the global economy has been growing at an average annual rate of 2.5 per cent. Growth is expected to remain at around the same level in 2015 (table 1.1). This will result from a slight acceleration of growth in developed economies, a moderate deceleration in developing economies and a contraction of gross domestic product (GDP) in transition economies. Therefore, global output growth will remain significantly below the 4 per cent rate posted in the pre-crisis years.

Developed countries are expected to grow at around 1.9 per cent in 2015 compared with 1.6 per cent in 2014. The eurozone and Japan, in particular, are experiencing a moderate acceleration of growth, although from very low rates in 2014. Developing countries as a whole will continue to expand at a rate of more than 4 per cent, mainly owing to the resilience of most countries in the Asian region. However, other regions are experiencing a significant slowdown due to lower commodity prices and capital outflows, which have prompted tighter macroeconomic policies in some countries. The worst hit by all these developments are Latin America, the transition economies and West Asia, while the African subregions present a more mixed picture.

In developed countries, recent improvements in economic activity reflect a pick-up of domestic demand, owing to greater household consumption and to a less stringent fiscal stance. The increase in household consumption is largely due to lower energy prices and improvements in some labour markets, with lower unemployment rates in countries such as Germany, Japan, the United Kingdom and the United States. Monetary policies remain expansionary, with very low interest rates in all developed regions and "quantitative easing" (QE) programmes in the eurozone and Japan.

In Europe, the QE programme of the European Central Bank (ECB) helped to further reduce yields on sovereign debt, but so far this has had little impact on credit flows to the private sector. Nevertheless, household deleveraging has already eased in recent months, fiscal austerity has been moderated or slightly reversed, and real wages have improved on account of the fall in commodity prices. However, fragilities persist: in many countries higher rates of employment have not been matched by better quality jobs, and some banks are showing signs of weakness, while downside risks have increased with the

Table 1.1

WORLD OUTPUT GROWTH, 2007–2015

(Annual percentage change)

Region/country	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*[a]
World	**4.0**	**1.5**	**-2.1**	**4.1**	**2.8**	**2.2**	**2.4**	**2.5**	**2.5**
Developed countries	**2.5**	**0.1**	**-3.7**	**2.6**	**1.5**	**1.1**	**1.3**	**1.6**	**1.9**
of which:									
Japan	2.2	-1.0	-5.5	4.7	-0.5	1.7	1.6	-0.1	0.9
United States	1.8	-0.3	-2.8	2.5	1.6	2.3	2.2	2.4	2.3
European Union (EU-28)	3.0	0.5	-4.4	2.1	1.8	-0.5	0.1	1.3	1.7
of which:									
Eurozone[b]	3.0	0.5	-4.5	2.0	1.8	-0.8	-0.4	0.8	1.5
France	2.4	0.2	-2.9	2.0	2.1	0.2	0.7	0.2	1.2
Germany	3.3	1.1	-5.6	4.1	3.6	0.4	0.1	1.6	1.5
Italy	1.5	-1.0	-5.5	1.7	0.6	-2.8	-1.7	-0.4	0.7
United Kingdom	2.6	-0.3	-4.3	1.9	1.6	0.7	1.7	3.0	2.3
EU member States after 2004	6.2	3.5	-3.5	2.0	3.1	0.6	1.2	2.6	3.0
South-East Europe and CIS	**8.7**	**5.4**	**-6.6**	**4.7**	**4.6**	**3.3**	**2.0**	**0.9**	**-2.6**
South-East Europe[c]	6.2	5.8	-1.8	1.5	1.7	-0.6	2.4	0.7	1.5
CIS, incl. Georgia	8.9	5.3	-6.8	4.9	4.7	3.5	2.0	0.9	-2.8
of which:									
Russian Federation	8.5	5.2	-7.8	4.5	4.3	3.4	1.3	0.6	-3.5
Developing countries	**8.0**	**5.3**	**2.6**	**7.8**	**5.8**	**4.7**	**4.8**	**4.5**	**4.1**
Africa	6.1	5.5	3.0	5.1	0.9	5.1	3.8	3.4	3.2
North Africa, excl. Sudan	4.8	6.2	2.9	4.1	-6.8	8.9	1.0	1.3	2.0
Sub-Saharan Africa, excl. South Africa	7.4	6.1	5.3	6.7	4.6	4.3	6.0	5.4	4.3
South Africa	5.4	3.2	-1.5	3.0	3.2	2.2	2.2	1.5	1.9
Latin America and the Caribbean	5.6	3.6	-1.6	5.8	4.7	3.2	2.8	1.4	0.8
Caribbean	7.1	2.5	-1.0	2.7	1.9	2.0	2.7	3.0	3.3
Central America, excl. Mexico	7.0	3.9	-0.3	3.7	5.2	5.0	4.3	4.2	3.7
Mexico	3.2	1.4	-4.7	5.2	3.9	4.0	1.4	2.1	2.1
South America	6.6	4.8	-0.2	6.5	5.2	2.8	3.3	0.8	-0.2
of which:									
Brazil	6.0	5.0	-0.2	7.6	3.9	1.8	2.7	0.1	-1.5
Asia	9.2	5.9	4.1	8.8	6.9	5.1	5.6	5.6	5.2
East Asia	11.1	7.0	6.0	9.5	7.6	6.0	6.3	6.3	5.7
of which:									
China	14.2	9.6	9.2	10.4	9.3	7.7	7.7	7.4	6.9
South Asia	9.1	5.1	4.8	9.0	5.5	3.0	5.2	6.2	6.7
of which:									
India	10.1	6.2	5.0	11.0	6.2	4.4	6.4	7.1	7.5
South-East Asia	6.7	4.2	1.6	8.1	4.7	5.8	4.9	4.3	3.9
West Asia	5.5	4.6	-1.0	6.7	7.5	4.0	4.1	3.3	2.5
Oceania	4.1	2.1	1.0	3.5	4.4	3.2	2.8	3.3	5.3

Source: UNCTAD secretariat calculations, based on United Nations, Department of Economic and Social Affairs (UN-DESA), *National Accounts Main Aggregates* database, and *World Economic Situation and Prospects (WESP): Update as of mid-2015;* ECLAC, 2015; Organisation for Economic Co-operation and Development (OECD), 2015; International Monetary Fund (IMF), *World Economic Outlook*, April 2015; Economist Intelligence Unit, *EIU CountryData* database; JP Morgan, *Global Data Watch*; and national sources.

Note: Calculations for country aggregates are based on GDP at constant 2005 dollars.

a Forecasts.

b Excluding Lithuania.

c Albania, Bosnia and Herzegovina, Montenegro, Serbia and the former Yugoslav Republic of Macedonia.

uncertainty over the sustainability of debt in Greece. The latter represents the most immediate threat to the sovereign debt yields of Portugal, Spain and other European countries which had recently started to recover from the depths of the crisis (see box 1.1).

In Japan, following the recession in 2014, economic activity is starting to improve, aided by consumer and investment spending. Lower energy prices will have a positive influence on the balance of trade and on consumption expenditure, as will exports to the United States which rose in the first months of 2015. The United States is expected to continue its post-crisis growth trajectory with a 2−2.5 per cent growth rate, which is below previous recoveries but allows steady job creation. Fiscal austerity is easing at the federal and state levels, and residential investment is recovering from a low base. However, with scant evidence of nominal wage increases, there are concerns that households' balance sheets will remain fragile. Even if the expected very gradual increases in the policy interest rate do not represent a significant tightening of monetary conditions, they have already impacted international capital movements and led to a dollar appreciation. This in turn may result in net exports having a negative impact on GDP growth.

Growth in Australia and especially in Canada is slowing down on account of their deteriorating terms of trade and lower investments in the extractive industries. Fiscal austerity policies in Canada have also affected its economic activity, although higher exports to the United States may attenuate their negative impact.

Economic trends in developing economies have followed a different pattern since the crisis. In response to the initial shock in 2008−2009, many of them applied ambitious countercyclical policies, including increased fiscal spending and incomes policy measures that were sustained long enough to encourage a continuing rise of household expenditure and, by extension, private investment. Some of these countries are now scaling back or even reversing their policy stimuli as they face capital outflows or lower export prices. By contrast, for oil importers, the recent improvements in their terms of trade enlarge the room for manoeuvre.

Among those most affected by lower commodity prices and capital outflows have been the transition economies, whose GDP is expected to decline in 2015. In the Russian Federation and Ukraine, balance-of-payments problems were aggravated by political conflicts. Steep currency depreciation and inflation dampened domestic demand and deepened economic recession. This in turn affected neighbouring countries for which the Russian Federation is a major market and source of remittances.

In Latin America and the Caribbean, the economic slowdown which started in 2011 is forecast to continue, with an estimated growth rate of less than 1 per cent in 2015. In particular, South America and Mexico have continued to experience losses in their terms of trade and reversals of portfolio investment inflows since the second half of 2014. Lower export prices have affected tax receipts and have also led to the paralysis of several investment projects, particularly some linked to oil exploitation and mining, and to a fall in gross fixed capital formation. Governments have generally sought to sustain real wages and keep unemployment in check despite the slowdown of economic growth. As a result, private consumption is still the main engine of growth for the region, though its rate of expansion was less dynamic in 2014 and early 2015 (ECLAC, 2015). The more stringent external environment, and in some cases the inability to maintain countercyclical policies and credit expansion resulted in less supportive policies in the first months of 2015, and even austerity measures in the case of Brazil. By contrast, most Central American and Caribbean countries benefited from lower oil prices and were also less vulnerable to speculative capital outflows. The linkages of their manufacturing sector with United States markets, together with the increase in remittances from abroad, should contribute to significant growth of these subregions, which is likely to be well above the regional average.

The picture in the African region is also varied. In the last decade, growth in sub-Saharan countries has been mostly driven by rising private consumption and infrastructure spending, linked in many countries to commodity production, with a positive impact mainly on the construction and service sectors. Recently, however, some large oil-exporting countries such as Angola and Nigeria have announced cuts in public spending, notably capital investment and subsidies. The Nigerian naira has been subject to speculative attacks that led to the adoption of tighter monetary and fiscal policies, which will have a further negative impact on growth prospects. Meanwhile, growth in most East African countries, whose terms

Box 1.1

THE EURO ZONE CRISIS, A CASE OF DÉJÀ VU

The eurozone crisis resembles earlier balance-of-payments crises in developing countries in terms of the origins and policy responses; but it also reveals some specific and in part unique problems in the design of eurozone rules, institutions and adjustment mechanisms.

The origins of the eurozone crisis do not reflect fiscal mismanagement, but rather lie in macroeconomic imbalances generated by excessive foreign capital inflows into the so-called periphery countries of the eurozone, as was highlighted in *TDR 2011*. Essentially, in the years prior to the 2008 global financial crisis, the recycling through the banking system of the growing surpluses in the eurozone centre to the periphery (and which in part were due to the asymmetric impact on relative prices of traded goods in the core and periphery following the introduction of a common currency), helped finance a massive surge in private sector consumption and housing investment in the latter, at historically low interest rates, but at the expense of growing financial fragilities. However, there were no major policy reactions on either side to stop rising imbalances. As the slowdown in the eurozone persisted after 2010, capital flight forced deficit countries to cut domestic spending to bring it in line with domestic incomes. This resulted in a severe recessionary adjustment and, ultimately, a rise of public sector debt.

The traditional response to balance-of-payments crises is to devaluate the currency. But within the eurozone, nominal devaluation is not an option. Therefore, policies in the deficit countries sought an internal devaluation through wage compression and reduced government spending, but without any adjustment on the part of the surplus countries through faster wage increases and a more expansionary fiscal stance. However, such an approach to achieving a real depreciation is likely to involve high economic and social costs and, even if feasible, would take considerable time, especially when the productivity gap with trade partners is high and inflation is very low. Moreover, deflationary policies dampen domestic consumption and investment, adding to unemployment and increasing the debt burden. In addition, declining prices and falling domestic activity reduce tax revenues, forcing governments to seek liquidity from external sources in order to service their debt in the short term.

Lacking the institutional arrangements to provide financial assistance, the eurozone designed a series of bilateral loans in 2010, coupled with IMF assistance to Greece to enable that country to cope with its debt repayments. This saved the original private creditors from incurring major losses, despite their irresponsible lending practices. Bailing in creditors was ruled out as an option until major lenders (or bondholders) had removed substantial portions of their troubled assets from the balance sheet. Those assets were acquired by supranational bodies (such as the Securities Markets Programme established by the ECB in 2010, the coordinated lending by the eurozone countries to Greece and the eurozone rescue programmes for Portugal and Ireland) or by other financial institutions in the countries involved (such as Italian and Spanish banks, which increased their holdings of national government debt). The Spanish and Portuguese governments also borrowed from European funds in order to recapitalize some of their domestic banks, making good the losses caused by bubble-induced lending.

From late 2009, lending to peripheral eurozone countries (Greece, Ireland, Portugal and Spain) was suddenly reversed as "core" eurozone banks sought to reduce their exposure without incurring significant losses (see chart). The first restructuring of Greece's external debt was only implemented in March 2012, while a voluntary debt buyback was introduced in December of that same year.

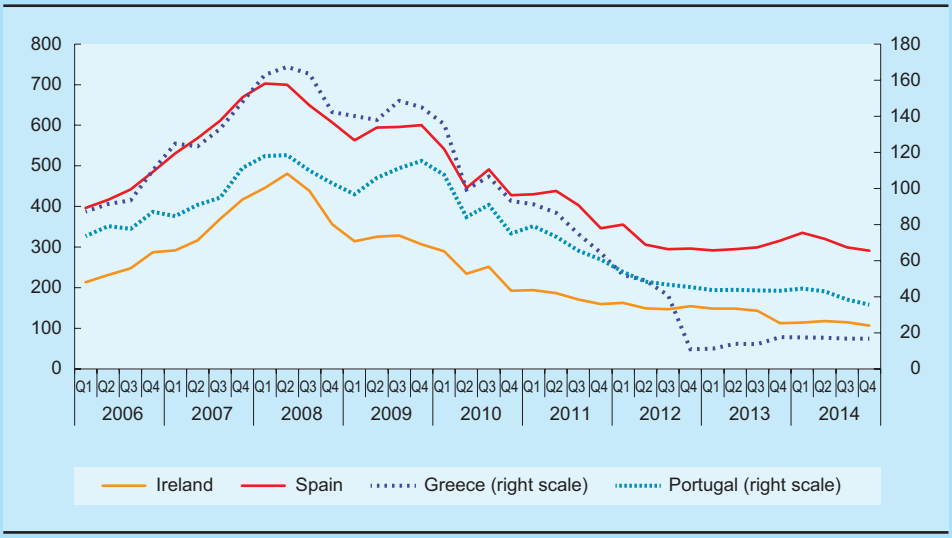
Eventually, the eurozone established a number of funds – initially the European Financial Stability Facility in June 2010, which was later absorbed by the European Stability Mechanism in 2012 – in order to provide financial assistance not only to Greece, but also to Ireland and Portugal. Such assistance was, however, often attached to unrealistic growth predictions and came with excessive policy conditionalities, in some cases with IMF involvement, which neither allowed for a measured recovery nor facilitated a clean-up of the private sector's balance sheets. Meanwhile, government debt rose in all the periphery countries, with sovereign yields moving upwards until the announcement by the ECB of its Outright Monetary Transaction (OMT) Programme. The immediate effect of OMT in reducing interest spreads on sovereign debt showed that reliance on a lender of last resort is much more effective for creating confidence in financial markets than fiscal austerity.

Subdued growth in the 2010s, caused by a set of restrictive policies similar to those implemented in emerging market economies in the 1980s and 1990s, clearly demands a change in the approach to resolving financial crises triggered by private and public debt denominated in currencies over which

Box 1.1 (concluded)

EXPOSURE OF "CORE" EUROZONE BANKS TO SELECTED PERIPHERAL EUROZONE COUNTRIES, 2006 Q1–2014 Q4

(Billions of dollars)



Source: UNCTAD secretariat calculations, based on BIS, *Consolidated Banking Statistics* database.
Note: Exposure of "core" eurozone banks reflects the consolidated claims of Austrian, Belgian, French, German and Dutch banks vis-à-vis the selected countries on an ultimate risk basis. This indicator excludes "other potential exposures" consisting of derivatives, credit commitments and guarantees extended.

domestic monetary authorities have no control; all the more so as the solvency of foreign creditors may be at risk. A different distribution of the costs of adjustments, shared not only by the domestic sector but also by external creditors through bail-ins, could provide the conditions for a faster and more sustainable recovery. This alternative resolution proposal is not just a matter of counterfactual thinking, but can draw on actual experiences such as that of Iceland.

In response to the dramatic financial crisis in Iceland in 2008, the IMF provided a $2.1 billion conditional loan aimed partly at stabilizing the domestic currency, supplemented by additional loans from the Nordic countries. Iceland's central bank, with strong IMF support, introduced "capital flow management" to stop capital flight and boost exporters' repatriation of foreign exchange. In addition, the Government let its banks collapse rather than be bailed out by taxpayers. In short, it partially nationalized the big banks, and transferred their foreign assets and liabilities to insolvent "old" banks and their domestic assets and liabilities to solvent "new" banks. It also provided a guarantee for deposits in the new banks. Implicitly, it declined to protect depositors in branches of Icelandic banks abroad. The new banks continued to fulfil basic domestic banking functions. In parallel, the Government set up a "Welfare Watch" task force, comprised of representatives from a wide range of stakeholders and operating at arm's length from the Ministry of Welfare. Separately, it established a debtor's ombudsman to facilitate household debt restructuring, as a sizeable number of households were in trouble, with their mortgage debt worth much more than the sharply depreciated prices of their houses. Lastly, the Government changed the tax code so as to shift more of the burden on higher income groups and reduce it on lower income groups.

Capital controls in Iceland – which were limited to capital account transactions after the initial crash – coupled with timely bail-ins of foreign creditors were a key component of the recovery strategy. The Government and the IMF considered it more important to prevent a further decline in the value of the currency and to share the costs more equitably between non-resident capital owners and Icelandic taxpayers than to safeguard the liberal commitment to freedom of choice and the property rights of capital. In addition to capital controls and the rejection of bailouts for foreign investors, in order to provide a faster, more sustainable and broad-based recovery, there is an ongoing need for a mix of countercyclical policies that protect the weakest groups of the domestic economy together with measures aiming to solve lingering indebtedness obstacles and to revitalize productive credit (such as differentiating old loans and new loans, which would be payable in full).

of trade have improved, is expected to continue at a relatively fast pace. By contrast, West African countries are likely to continue to suffer from the consequences of the Ebola epidemic. Economic growth is forecast to remain subdued in South Africa due to supply-side constraints in the energy sector, coupled with restrictive fiscal and monetary policies. Added to this, though the widespread fall in commodity prices over the past year will have a mixed impact on the terms of trade of net oil importers, it may also delay investment spending and projects, particularly those relating to the extractive industries and construction sectors. Finally, conflicts and security concerns will have an impact on national incomes in a number of economies throughout the continent.

As in previous years, Asia is the most dynamic region, and is estimated to account for almost half of total global growth in 2015. The projected growth rate for East, South and South-East Asia combined is between 5.5 and 6 per cent in 2015. Growth is being driven essentially by domestic demand, with an increasing contribution of consumption, both public and private. Hence, even though investment rates have been very high in comparison with other regions (and should remain so, given the region's infrastructure needs), most Asian countries (particularly China) seem to be rebalancing the structure of their demand. In the past few years, the contribution of domestic demand to growth has exceeded that of net exports, and the share of consumption (private and public) in GDP has tended to increase. However, the bursting of the stock market bubble in China has created economic uncertainty, as it could affect domestic demand. Nevertheless, the growth of private consumption is essentially based on rising incomes rather than on credit or an appreciation of asset values, which should ensure sustainability. Furthermore, expansionary fiscal and monetary policies seem set to compensate for these negative shocks. Meanwhile, lower oil prices have eased current account deficits in several countries, such as India and Pakistan, and the former economy is forecast to expand by more than 7 per cent. In West Asia, Turkey also benefited from lower oil prices, but most of the oil-exporting economies in the subregion face deteriorating terms of trade. In addition, military conflicts have reduced growth prospects in parts of this subregion.

2. International trade

(a) Goods

Like global economic activity, international trade remains subdued. Between 2012 and 2014, the rate of growth of world merchandise trade (by volume) oscillated between 2 and 2.6 per cent (table 1.2). These growth rates are significantly below the average annual rate of 7.2 per cent recorded during the 2003–2007 pre-crisis period. In 2014, world merchandise trade at current prices grew at even lower rates (only 0.3 per cent, to reach $19 trillion)[1] due to the significant fall in the prices of major commodities. Preliminary estimates for 2015 indicate that merchandise trade volume could grow at a rate close to that of global output. This remains largely insufficient to provide, by itself, a significant stimulus to economic growth.

Aggregate figures hide some diversity across countries and products. In developed countries, trade – especially imports – accelerated in 2014, albeit from a low base. Positive (although slow) GDP growth rates in the European Union (EU) and Japan helped boost their import volumes by around 2.8 per cent in 2014. But because imports of the EU-28 had contracted during the two previous years, real imports still remained below their level of 2011 at the end of 2014. In the United States, imports rose faster, by 4.7 per cent, partly due to dollar appreciation. All these factors, combined with the fact that import volume growth in developing and transition economies continued to fall short of that achieved in earlier years, made developed countries the country group with the highest annual growth of imports for the first time since the late 1990s.

Data for the first five months of 2015 indicate that growth in world merchandise trade in 2015 may be slightly weaker than in 2014. During these five months, the volume of international trade grew by a year-on-year average of less than 2 per cent (chart 1.1). Among the developed countries, import growth in the EU showed signs of deceleration, while its exports continued to pick up. In addition, bilateral monthly trade receipts indicate that EU exports to the United States kept increasing on account of faster

Table 1.2

EXPORT AND IMPORT VOLUMES OF GOODS, SELECTED REGIONS AND COUNTRIES, 2011–2014

(Annual percentage change)

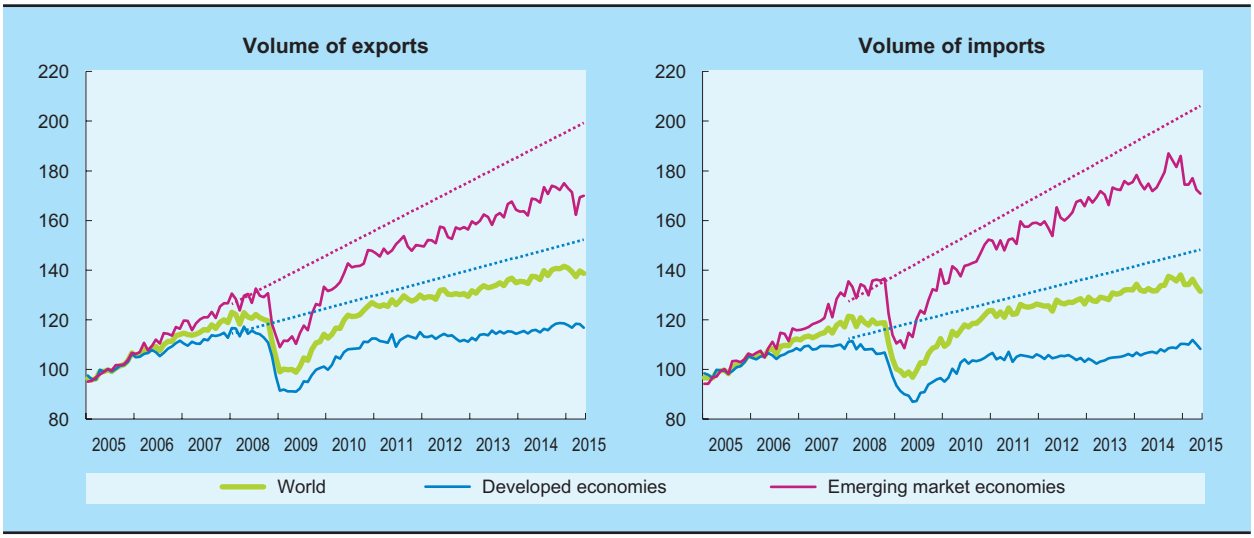
	Volume of exports				Volume of imports			
Region/country	*2011*	*2012*	*2013*	*2014*	*2011*	*2012*	*2013*	*2014*
World	**5.1**	**2.0**	**2.6**	**2.3**	**5.4**	**2.0**	**2.3**	**2.3**
Developed countries	**4.8**	**0.6**	**1.4**	**2.0**	**3.3**	**-0.4**	**-0.3**	**3.2**
of which:								
Japan	-0.6	-1.0	-1.9	0.6	4.2	3.8	0.5	2.8
United States	7.3	3.9	2.6	3.1	3.8	2.8	0.8	4.7
European Union	5.4	-0.1	1.7	1.5	2.6	-2.5	-0.9	2.8
Transition economies	**1.8**	**0.7**	**1.8**	**0.2**	**15.9**	**5.6**	**-0.8**	**-8.5**
of which:								
CIS	1.6	0.8	1.1	0.1	16.8	6.4	-1.4	-9.8
Developing countries	**6.2**	**4.0**	**4.2**	**2.9**	**7.9**	**5.1**	**6.1**	**2.0**
Africa	-7.2	5.5	-2.0	-3.6	4.2	13.2	5.2	3.3
Sub-Saharan Africa	0.1	0.2	2.0	-0.9	9.9	8.2	7.5	2.8
Latin America and the Caribbean	4.6	3.2	2.1	2.4	9.7	3.3	4.0	0.6
East Asia	8.7	4.7	6.6	4.7	7.8	3.5	8.3	2.7
of which:								
China	8.8	6.2	7.7	6.8	8.8	3.6	9.9	3.9
South Asia	9.4	-7.0	2.7	4.8	5.4	3.8	-0.6	4.4
of which:								
India	14.9	-1.8	8.5	3.2	9.6	5.9	-0.2	3.2
South-East Asia	7.8	1.4	4.3	3.4	9.5	5.2	3.8	1.0
West Asia	8.3	9.6	3.1	0.3	8.4	9.2	9.6	0.2

Source: UNCTAD secretariat calculations, based on *UNCTADstat*.

Chart 1.1

WORLD TRADE BY VOLUME, JANUARY 2005–MAY 2015

(Index numbers, 2005 = 100)



Source: UNCTAD secretariat calculations, based on the CPB Netherlands Bureau of Economic Policy Analysis, *World Trade* database.
Note: Emerging market economies are those of the source, excluding Central and Eastern Europe. Line in dashes corresponds to the January 2002−December 2007 trend.

output growth in the latter country and the appreciation of the dollar. Meanwhile, Europe's exports to China showed some resilience. In the United States, imports continue to increase at a faster rate than its exports, which are showing signs of a slight deceleration, while Japan's exports are also recovering. Exports from emerging market economies plunged in early 2015 before rebounding, partly owing to a gradual output recovery in developing Asia.

More generally, the growth of exports by volume in emerging market economies has remained below their pre-crisis trend by a substantial margin, with the shortfall even increasing during the first half of 2015 (chart 1.1). This is partly due to sluggish import demand growth for their goods in developed countries, in spite of the slight acceleration in the latter's growth of imports in 2014. As discussed in some detail in *TDR 2013*, this poses a challenge to the emerging market economies that aim to revert to export-oriented growth policy used before the crisis.

Regarding the transition economies, exports were virtually stagnant in 2014, while import volumes plunged by 8.5 per cent and further contracted in early 2015, mostly on account of economic and financial difficulties in the Russian Federation and Ukraine. In developing countries, most trade figures pointed to a bleaker picture than the previous years. In particular, Africa's real exports showed a contraction as a result of shrinking oil exports in Libya and to a lesser extent in some other major oil-exporting sub-Saharan countries. Notably, Nigeria's oil exports to the United States stopped completely in 2014, as the shale revolution in the latter country reduced its need for oil imports. Nigeria was therefore forced to reorient its exports towards China, India, Japan and the Republic of Korea. Other African oil exporters may follow Nigeria's example.[2] Meanwhile, South Africa's exports to East, South and South-East Asia – comprising largely primary commodities – fell by 13.4 per cent in 2014. By contrast, export receipts from manufactured products of several African countries registered significant growth – in particular those with close trading connections to Europe, like some North African countries such as Morocco and Tunisia.

In Latin America and the Caribbean, international trade measured in current values practically ground to a halt, largely due to the fall in export unit values. Weaker demand from China and the slowdown of intraregional trade affected mostly South American countries. In particular, their exports, especially machinery and transport equipment, were strongly affected by a decline of imports by Brazil, the largest regional economy. Indeed, South American exports to Brazil fell by 7.9 per cent in 2014. Plunging prices of two of its key exports, iron ore and soybeans, pushed Brazil's trade balance into negative territory, despite a significant reduction of its imports. This contrasts with Mexico, whose exports to the United States increased significantly. In addition, Mexican auto exports to most regions of the world, in particular Asia, increased markedly, with the exception of exports to Europe, which declined.

In West Asia, oil-exporting economies faced adverse terms of trade, which sharply reduced their export receipts, but also their import demand – despite some of them having large international reserves. Armed conflicts in several countries of the subregion further affected intraregional trade, with spillover effects in some North African countries' exports, including from Egypt. Meanwhile, Turkish export receipts increased by close to 4 per cent in 2014, falling short of the Government's target. This disappointing result was due to political and economic turmoil, which took a heavy toll on Turkey's exports to Iraq and the Russian Federation. Nevertheless, lower oil prices eased current account deficits in Turkey and in other oil-importing economies of the subregion.

In East Asia, the growth rate of trade, by volume, was unusually low for the region, at less than 4 per cent in 2014. To a large extent, this reflects the slowdown of China's international trade. Its exports, by volume, grew by 6.8 per cent in 2014, which was a slower rate than that of its GDP. Meanwhile, the growth of China's imports by volume decelerated even more, to 3.9 per cent. As a result, developing and transition economies which export primary commodities experienced a significant slowdown in demand from China in 2014. By contrast, developing countries' exports to China that are related to manufacturing supply chains, with the finished products ultimately ending up in developed economies, fared better. In 2014, China's exports to the eurozone and the United States saw a rebound from the declining and sometimes negative growth rates that had occurred between 2010 and 2013, but they did not return to their pre-crisis dynamism.

In South-East Asia, export growth by volume also decelerated, to 3.4 per cent in 2014, while import growth slowed even further to 1 per cent; both these rates were lower than the subregional economic growth rate. Indonesia has been consistently running monthly trade surpluses since late 2014 until mid-2015, as its import bill decreased more than its export receipts in the context of significant currency depreciation. South Asian trade departs from the downward trends registered in all other developing-country groups. Within this group, the Islamic Republic of Iran registered a significant rise in its oil export volumes in 2014, although they remained roughly half of what they had been prior to the strengthening of economic sanctions in 2011. Meanwhile, buoyant garment sectors supported exports (mainly to developed economies) from Bangladesh, the most populous of the least developed countries (LDCs), and from post-conflict Sri Lanka. By contrast, India's export growth (by volume) slowed down from 8.5 per cent in 2013 to 3.2 per cent in 2014.

Overall, global trade has displayed little dynamism. The moderate trade growth mainly reflects an improvement in North-North trade, with only limited positive effects on exports from developing to developed countries.

(b) Services

Trade in services maintained its growth, to reach $4.9 trillion in 2014 − a year-on-year increase of 5.1 per cent (at current prices), which was higher than the growth of merchandise trade. Transport services grew by 2.7 per cent while travel and goods-related services increased by 6 and 2.8 per cent respectively. Transport and tourism represent 55 per cent of services exports from developing countries and 62 per cent from LDCs, compared with only 39 per cent from developed economies.[3]

International tourism remains the largest component of trade in services, with export earnings totalling $1.4 trillion in 2014. Tourist arrivals continue to be robust: they increased by 4.3 per cent in 2014 (similar to 2012 and 2013), reaching 1.1 billion arrivals. Receipts earned from international visitors grew 3.7 per cent in real terms (taking into account exchange-rate fluctuations and inflation). Preliminary data confirm this tendency for 2015: during the first four months of 2015, tourist arrivals grew 4 per cent year-on-year, while international air travel reservations were forecast to expand by about 5 per cent in May–August 2015 (World Tourism Organization (UNWTO), 2015a and 2015b).

At the regional level, the European Union remains the world's most visited region, and also a very dynamic one, as the growth in tourist arrivals accelerated to 4.9 per cent, compared with 3 per cent and 4 per cent in 2012 and 2013 respectively. Growth of tourist arrivals more than doubled in North America to 9.2 per cent in 2014. By contrast, tourist arrivals fell in the transition economies due to the conflict in Ukraine and the slowdown of the Russian economy. All other regions and subregions registered positive growth rates in 2014, although demand weakened in Africa after years of solid growth, affected mainly by the Ebola epidemic.

In 2015, preliminary data by region show positive figures everywhere except in Africa. In particular, tourist activities expanded rapidly in North and South America, the Caribbean and Oceania during the first four months of 2015. They also rebounded by 7 per cent in the transition economies after shrinking last year. By contrast, in Africa limited data currently available for January−April 2015 point to a 6 per cent decline, due to recent health or security concerns in a number of countries (UNWTO, 2015a).

Regarding *international transport services* – the second largest category of commercial services – preliminary estimates indicate that the volume of world seaborne shipments expanded by 3.4 per cent in 2014 − the same rate as in 2013.[4] Dry cargo shipments, which accounted for over two thirds of total cargo shipments, increased by 5 per cent, mainly on account of the continued rapid expansion of global iron ore volumes. This was partly driven by sustained import demand from China. Containerized trade expanded by 5.6 per cent while tanker trade contracted by 1.6 per cent.

Developing countries continued to be the main source and destination for international seaborne trade: in terms of loading, they accounted for 60 per cent of world tonnage in 2014, a figure that has remained rather flat over the past decade. Their contribution to unloading continued to grow, reaching an estimated 61 per cent of the world total in 2014.

The expanding production of shale oil in the United States and the drop in oil prices since June 2014 have affected shipping and seaborne trade, particularly tanker trade. As mentioned above, the former has altered the destination of African oil, a growing share of which is reorienting from the United States to Asia. In addition, lower oil prices have contributed to lower fuel and transport costs; for instance, the 380-centistoke bunker prices in Rotterdam fell by 46 per cent (Clarkson Research Services, 2015). Lower fuel costs reduced ship operators' expenditures and the rates paid by shippers, which in turn is expected to stimulate the demand for maritime transport services and increase seaborne cargo.

B. Recent developments in commodity markets

Commodity markets witnessed turbulent times in 2014 and the first half of 2015. Most commodity prices fell significantly during the course of 2014, continuing the downward trend from their peaks of 2011−2012. The most dramatic fall was that of crude oil prices since mid-2014 (chart 1.2), which had widespread influence. All commodity groups, except for tropical beverages,[5] saw average prices decline in 2014 (table 1.3), with the pace accelerating in comparison with 2013 for those commodity groups whose demand is more closely linked to global economic activity, such as minerals, ores and metals, agricultural raw materials and oil. Nevertheless, on average, in 2014 and up to June 2015 commodity prices have been higher than the average of the 2003–2008 price boom.

The main reason for the recent fall in most commodity prices has been an abundant supply, as the investment response to the price boom of the 2000s has significantly increased production over the past few years. The resulting tendency towards oversupply has been reinforced by weakening demand due to sluggish growth in the world economy more generally, and the recent slowdown in a number of large developing economies in particular. Apart from supply and demand fundamentals, the financialization of commodity markets continued to influence price developments, as financial investors have been reducing their commodity positions in conjunction with the downturn in prices and returns from commodity derivatives. Another important factor in the commodity price decline has been the strong appreciation of the dollar over the past year.

1. Evolution of main commodity prices

The market for crude oil took the lead in commodity price developments in 2014. After having remained at a relatively stable level since April 2011, with oscillations within a $100−$120 band, crude oil prices plummeted in the second half of 2014. For example, the price of Brent crude fell from a monthly average of $112 in June 2014 to a low of $48 in January 2015. This decline of 56.7 per cent pushed the price of crude oil to its lowest level since 2009 (*UNCTADstat*).

The plunge in oil prices was mainly caused by greater global production, particularly of shale oil in the United States. In 2014, global oil production increased by 2.3 per cent, while in the United States it grew by 15.9 per cent. Indeed, in the short period between 2011 and 2014, United States oil production increased by 50.6 per cent, reaching levels not achieved since the early 1970s (BP, 2015). This led to significant increases in inventories. Substantially higher oil production in the United States contributed to the relative stability of oil prices between 2011 and mid-2014, as it compensated for production disruptions in other producing countries (*TDR 2014*). When

these disruptions became less of a problem and the oversupply more evident, prices started to fall in mid-2014. However, the price decline accelerated after the November meeting of the Organization of the Petroleum Exporting Countries (OPEC) where it was decided not to change production quotas, a decision upheld at the subsequent meeting of OPEC in June 2015. This has been widely interpreted as an attempt by OPEC to defend its market share and to undercut higher cost producers, such as shale oil, tar sands and deepwater oil producers, so as to drive them out of the market.

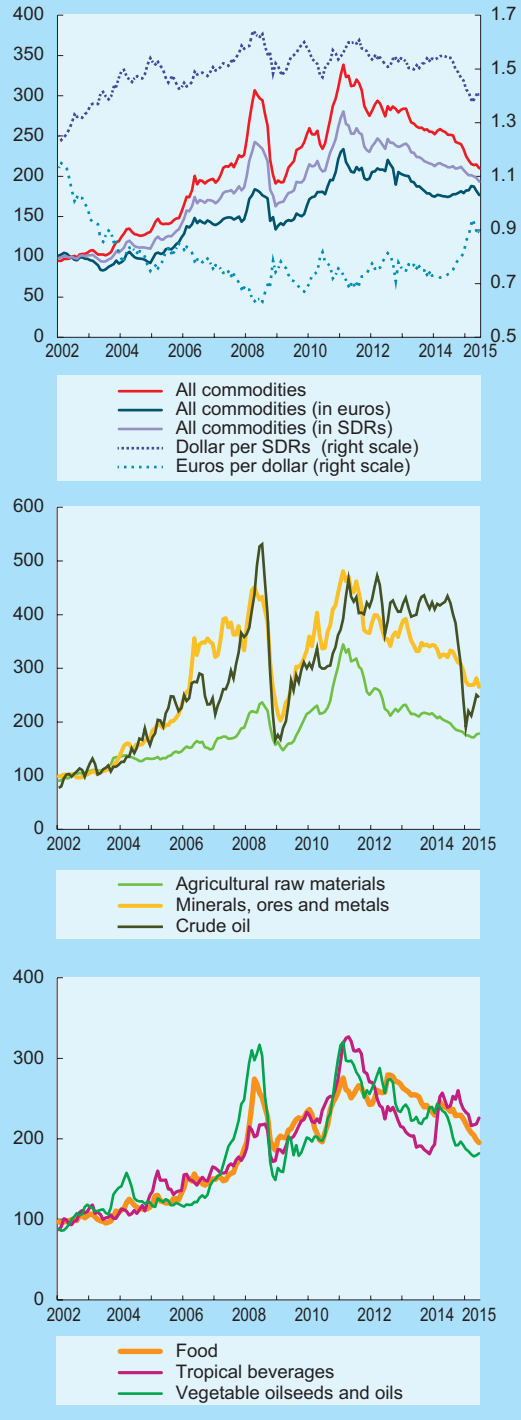
As a result of the lower prices, a number of oil-producing companies announced investment cuts, which should result in a downward supply adjustment (IMF, 2015). In July 2015, the number of oil rigs in the United States had fallen by 60 per cent compared with October 2014, to reach their lowest count in about five years (EIA, 2015). Following expectations that the decline in investment would quickly translate into lower supplies (see below), the price of Brent crude increased from under $50 in January 2015 and stabilized at around $65 between end April and end June.[6] However, it fell again at the end of June and in July. This is partly attributable to the resilience of shale oil producers, who managed to increase productivity and reduce costs.[7] The United States Energy Information Administration (EIA, 2015) estimates that in the first half of the year crude oil production in the United States increased by 0.3 million barrels per day, up from the average production of the fourth quarter of 2014. Nevertheless, the EIA notes a decline in onshore production since April 2015. The July fall in prices was also related to expectations of an agreement with the Islamic Republic of Iran on its nuclear programme, which was reached on 14 July. The consequent eventual lifting of sanctions will mean an additional source of oil entering international oil markets, which would exert downward pressure on an already oversupplied market. However, the timing of this return of Iranian oil will depend on the time required to rehabilitate that country's oil production and transport facilities. Meanwhile, by June 2015 Saudi Arabia had increased its own crude oil output to record levels.[8]

Overall, international crude oil markets present a new landscape, with the increasing importance of production in the United States and an abandonment of OPEC's price-targeting policy. As long as this persists, the United States could replace Saudi

Chart 1.2

MONTHLY COMMODITY PRICE INDICES BY COMMODITY GROUP, JAN. 2002–JUNE 2015

(Index numbers, 2002 = 100)



Source: UNCTAD secretariat calculations, based on *UNCTADstat*.
Note: All commodities exclude crude oil. Crude oil price is the average of Brent, Dubai and West Texas Intermediate, equally weighted. Index numbers are based on prices in current dollars, unless otherwise specified.

Table 1.3

WORLD PRIMARY COMMODITY PRICES, 2009–2015

(Percentage change over previous year, unless otherwise indicated)

Commodity groups	2009	2010	2011	2012	2013	2014	2015[a]	2014–2015 versus 2003–2008[b]
All commodities[c]	**-16.9**	**20.4**	**17.9**	**-8.3**	**-6.7**	**-6.1**	**-13.1**	**36.9**
All commodities (in SDRs)[c]	**-14.5**	**21.7**	**14.1**	**-5.5**	**-6.0**	**-6.1**	**-5.9**	**39.1**
All food	**-8.5**	**7.4**	**17.8**	**-1.4**	**-7.4**	**-4.1**	**-12.2**	**51.1**
Food and tropical beverages	**-5.4**	**5.6**	**16.5**	**-0.4**	**-6.7**	**-3.8**	**-11.7**	**54.2**
Tropical beverages	1.9	17.5	26.8	-21.5	-18.3	23.5	-7.5	60.7
Coffee	-6.9	27.3	42.9	-25.7	-23.6	29.9	-14.8	66.7
Cocoa	11.9	8.5	-4.9	-19.7	2.0	25.6	-2.3	66.3
Tea	16.5	-1.0	11.4	0.8	-23.9	-10.4	28.5	17.3
Food	-6.0	4.4	15.4	2.0	-5.7	-5.9	-12.1	53.6
Sugar	41.8	17.3	22.2	-17.1	-17.9	-3.9	-19.6	54.3
Beef	-1.2	27.5	20.0	2.6	-2.3	22.1	-6.4	92.2
Maize	-24.4	13.2	50.1	2.6	-12.1	-22.2	-14.2	40.1
Wheat	-31.4	3.3	35.1	-0.1	-1.9	-6.1	-18.7	32.6
Rice	-15.8	-11.5	5.9	5.1	-10.6	-17.8	-7.6	20.6
Bananas	0.7	3.7	10.8	0.9	-5.9	0.6	4.8	54.4
Vegetable oilseeds and oils	**-28.4**	**22.7**	**27.2**	**-7.6**	**-12.6**	**-5.8**	**-16.0**	**30.2**
Soybeans	-16.6	3.1	20.2	9.4	-7.9	-9.7	-18.2	37.2
Agricultural raw materials	**-17.5**	**38.3**	**28.1**	**-23.0**	**-7.4**	**-9.9**	**-11.2**	**22.8**
Hides and skins	-30.0	60.5	14.0	1.4	13.9	16.5	-8.2	58.4
Cotton	-12.2	65.3	47.5	-41.8	1.5	-8.8	-14.5	26.9
Tobacco	18.0	1.8	3.8	-3.9	6.3	9.1	-0.4	65.7
Rubber	-27.0	90.3	32.0	-30.5	-16.7	-30.0	-10.0	6.1
Tropical logs	-20.6	1.8	13.4	-7.1	2.6	0.4	-16.0	21.4
Minerals, ores and metals	-30.3	41.3	14.7	-14.1	-5.1	-8.5	-15.8	19.5
Aluminium	-35.3	30.5	10.4	-15.8	-8.6	1.1	-4.3	-14.0
Phosphate rock	-64.8	1.1	50.3	0.5	-20.3	-25.6	4.3	15.4
Iron ore	-48.7	82.4	15.0	-23.4	5.3	-28.4	-37.4	5.4
Tin	-26.7	50.4	28.0	-19.2	5.7	-1.8	-22.4	94.4
Copper	-26.3	47.0	17.1	-9.9	-7.8	-6.4	-13.5	35.0
Nickel	-30.6	48.9	5.0	-23.4	-14.3	12.3	-18.9	-21.5
Lead	-17.7	25.0	11.8	-14.2	3.9	-2.2	-10.4	45.6
Zinc	-11.7	30.5	1.5	-11.2	-1.9	13.2	-1.1	10.9
Gold	11.6	26.1	27.8	6.4	-15.4	-10.3	-4.8	120.5
Crude oil[d]	-36.3	28.0	31.4	1.0	-0.9	-7.5	-41.7	41.1
Memo item:								
Manufactures[e]	-5.6	1.9	10.3	-2.2	4.0	-1.8	..	..

Source: UNCTAD secretariat calculations, based on *UNCTADstat*; and United Nations Statistics Division (UNSD), *Monthly Bulletin of Statistics*, various issues.

Note: In current dollars unless otherwise specified.

a Percentage change between the average for the period January to June 2015 and the average for 2014.

b Percentage change between the 2003–2008 average and the 2014–2015 average.

c Excluding crude oil. SDRs = special drawing rights.

d Average of Brent, Dubai and West Texas Intermediate, equally weighted.

e Unit value of exports of manufactured goods of developed countries.

Arabia as the key swing producer. This would mean that when prices fall to very low levels, investment and production in the United States could be cut, pushing prices up; and once prices reached a certain level, United States oil production could rise, thereby exerting a downward pressure on prices. Indeed, a significant characteristic of shale oil drilling is its flexibility. As a result, there would be an upper cap on oil prices which would depend on the break-even price of profitability for shale oil producers. However, there appears to be little agreement on what that price is.[9] In sum, it is not likely that prices will approach $100 per barrel any time soon. As shale oil production has a short life span, this will depend on how long the shale oil boom lasts. However, there is considerable uncertainty as to when shale oil production will reach its peak.

On the demand side, expectations of lower economic growth also played a role in the collapse of oil prices. Indeed, specialized agencies made continuous downward adjustments to their projections for demand growth. In 2014, global oil demand grew by a mere 0.8 per cent, down from an average growth of 1.1 per cent during the previous three years. Non-OECD countries accounted for all the demand growth, at 2.7 per cent, with oil demand in China increasing by 3.3 per cent, but these were lower rates than the averages for the previous three-year period, of 3.3 per cent and 4.8 per cent respectively. By contrast, oil demand in OECD countries declined by 1.2 per cent (BP, 2015).

A decline in crude oil prices has an influence on the price developments of other commodities. It leads to a reduction in production costs, for instance through lower transport costs, or to lower fertilizer prices in the case of agricultural production. There is also a link through the biofuel channel, as depressed oil prices make biofuels less competitive as an energy source and can reduce demand for food crops. However, some other factors can also influence biofuel production, particularly official mandates. Another channel through which oil prices influence other commodity prices is financialization, as oil prices are a large component of commodity price indices (see below). Nevertheless, prices in agricultural markets have been mainly determined by their own supply situation, which is affected in particular by meteorological conditions. In the case of *food commodities*, bumper harvests, thanks to good weather, and ample levels of inventories, were the key factors contributing to the continued fall in cereal and soybean prices in 2014 and early 2015. However, those prices saw a reversal in June and July 2015 due to adverse weather conditions in the United States, which affected planting. Wheat prices also rose in June due to the adverse impacts of the rains on harvesting in the United States and to dry weather in other producing areas in the world. Uncertainties also arose concerning the potential effects of the El Niño phenomenon.[10] The sugar market was also characterized by oversupply and declining prices, as production in 2014 exceeded consumption for the fifth consecutive season (OECD-FAO, 2015).

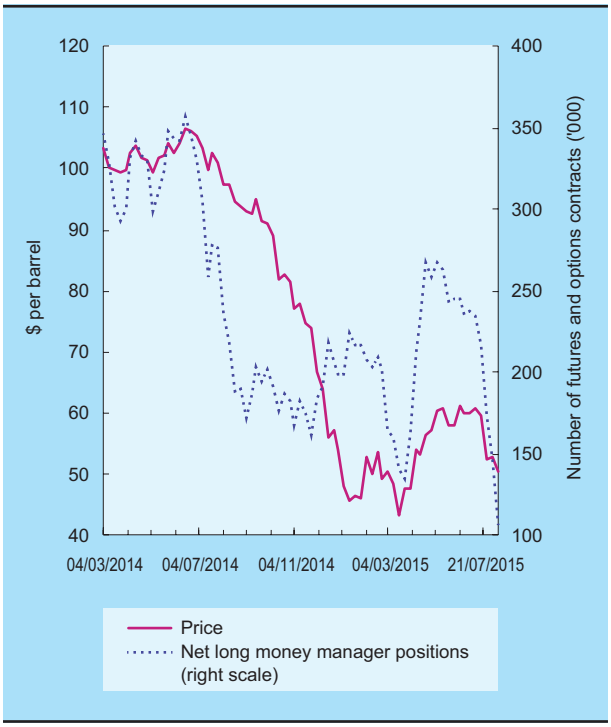
Price developments in the *tropical beverages* markets in 2014 and early 2015 were more erratic. Prices of coffee and cocoa rose in the first half of 2014 as a result of unfavourable crop conditions for coffee in Brazil and for cocoa in West African countries. They fell later in the year following improvements in those conditions. Cocoa prices increased in the second quarter of 2015 due to a shortfall in Ghana's harvest.

In the *agricultural raw materials* markets, plentiful supply was a major issue. Global cotton production exceeded consumption, and excess stocks pushed prices downwards. Announcements by China that import quotas were to be reduced and the end of its inventory policy also had an influence on prices. Natural rubber prices experienced a substantial decrease of 30 per cent in 2014 resulting from oversupply and high stocks. Weak demand for cotton and natural rubber is also related to the slump in oil prices. This leads to lower prices of synthetic rubber and synthetic fibres, putting downward pressure on the prices of natural rubber and cotton.

Minerals, ores and metals markets also experienced a supply glut. The main example is iron ore, the oversupply of which led to a price reduction of 28.4 per cent in 2014 (table 1.3). Aluminium, nickel and zinc performed relatively better, recording price increases in 2014. For nickel, this was related to the export ban of unprocessed ores in Indonesia; for aluminium and zinc price increases were the result of production cuts. However, these rising prices saw a reversal after mid-2014.[11] Sluggish demand stemming from subdued global economic growth has played a role, as metal prices tend to be strongly linked to the evolution of global industrial production. In particular, prospects for growth of demand for metals in China will depend on the balance between

Chart 1.3

MONEY MANAGER POSITIONS AND CRUDE OIL PRICES, MARCH 2014–JULY 2015



Source: UNCTAD secretariat calculations, based on Thomson Reuters datastream.
Note: The data shown refer to WTI and positions on NYMEX.

high investment in infrastructure and urbanization that will still be needed in the coming years, on the one hand, and its transition towards an economy with an expanding share of demand for services, on the other.[12] However, this has generally translated into reduced consumption growth rates rather than declining demand. Moreover, since the current levels of consumption are greater than in the past, lower growth rates may still mean substantial amounts of additional demand for metals. There are also some exceptions; for instance, consumption of copper increased by around 15 per cent in 2014. Since the market for this metal appeared to be balanced, or even in deficit, the sharp price drop in 2014 "looks overdone compared to the fundamentals" (AIECE, 2015). This can most probably be attributed to financial factors (see below). The decline in gold prices is also strongly linked to financial factors and monetary policy: expectations of an increase in interest rates in the United States as well as the appreciation of the dollar tend to reduce demand for gold as a safe haven.

2. The continuing influence of financial factors

Commodity prices continue to be influenced by the close linkages between commodity and financial markets, as further discussed in the annex to this chapter. These linkages may be illustrated by the recent movements in oil prices. Their decline during the second half of 2014 was accompanied by a much more rapid drop in the net long positions of money managers, such as hedge funds, which is likely to have accelerated the fall (chart 1.3). Similarly, the rebound in the price of West Texas Intermediate (WTI) crude oil from a six-year low of $44 per barrel in March 2015 to $61 in early May was partly stoked by a substantial increase in the net long positions of money managers who, betting that low oil prices would rapidly reduce supply, doubled their net long positions between mid-March and early May on the New York Mercantile Exchange (NYMEX); this was accompanied by similar movements on the Intercontinental Exchange (ICE). In July, they strongly reduced their positions, having realized that both the cuts in oil supply and the global economic recovery were proving to be less rapid than anticipated, which made prices plunge considerably once again.

The use of commodities as collateral constitutes another linkage between commodity and financial markets. A positive differential between domestic and foreign interest rates provides an incentive to borrow money on international financial markets using letters of credit from domestic banks to import commodities. The acquired physical commodity is placed in a warehouse, while the borrowed money is invested in high-yielding domestic assets such as real estate or financial products (Tang and Zhu, 2015).

Copper has probably been the commodity most frequently used for this type of carry trade, and the resulting increased demand for physical copper has helped boost the price of this metal. Taking the example of China, the world's leading consumer of copper, Zhang and Balding (2015) find that copper inventory in Shanghai grew from 4 per cent of global stocks in 2009 to 38 per cent in 2014, and that during the same period the interest rate differential between China and the rest of the world averaged 358 basis points. More recently, however, the decline in China's interest rates led to an unwinding of such copper carry trade.

According to media reports, the resulting decline in copper prices was accelerated by the substantial net short copper positions that hedge funds had built up in parallel with net long equity positions. This was based on expectations that slower growth of the Chinese economy would cause a decline in copper prices, while a subsequent loosening of monetary policy would boost equity market valuations.[13] But in July 2015, the hedge funds needed to buy back their bearish bets in order to meet rising margin calls from China's equity markets, which experienced a sharp decline.

Furthermore, the strong appreciation of the dollar contributes significantly to falling commodity prices. Typically, as commodity prices are denominated in dollars, they tend to be inversely related to the dollar exchange rate. This factor influences prices both on the physical markets and through the financialization channel. On the one hand, as the dollar appreciates commodities become more expensive in non-dollar areas, putting downward pressure on demand. Similarly, with an appreciating dollar, producers in non-dollar areas who normally receive their revenues in dollars but pay for most of their costs in local currency have an incentive to increase supply. For example, Brazilian farmers have increased their production of coffee and sugar as a result of the depreciation of their currency, the real, against the dollar.[14] On the other hand, a higher value of the dollar may provide more incentives to increase financial investment in dollars in the foreign-exchange market to the detriment of investment in commodity markets. For example, for non-oil commodities, price declines are not so pronounced in special drawing rights (SDRs), and in euros they have even increased in parallel with the appreciation of the dollar (chart 1.2).[15]

3. *Impact and prospects*

The impact of lower commodity prices on different countries varies according to their production and trade structure. Developing countries (and also some developed countries) that are highly dependent on their exports of commodities tend to be the most adversely affected. These include mostly countries in Africa, Latin America, the Commonwealth of Independent States (CIS) and West Asia. Declining commodity prices frequently translate into lower terms of trade, pressures on the current account balance and the fiscal accounts, and eventually lead to a slowdown of economic growth. Some countries which have well-functioning commodity stabilization funds, such as Chile with copper, or which have healthy levels of foreign-exchange reserves, such as the oil-exporting countries in West Asia, may have more policy space to buffer these impacts better than others.

In any case, the reversal of the upward trend in commodity prices is a new reminder of the challenges faced by developing countries that depend on only a few commodities, as they are exposed to boom and bust cycles resulting from price changes. Therefore, to achieve and maintain sustained growth, it is crucial for them to implement policies that facilitate economic diversification and structural change. On the other hand, as the commodity price decline amounts to a transfer of income from commodity-producing to commodity-importing countries, the countries that benefit the most are many developed countries and some emerging market economies, such as China. To the extent that lower prices for commodity-consuming countries could help global economic recovery, and particularly recovery in developed countries which have been dragging down growth in the past few years, the net global effect could be positive, though unevenly distributed. However, all this remains unclear, and largely depends on the duration of the price downturn.

Prospects for commodity prices are highly uncertain. The reversal of their rising trend, which took place around 2011, has been widely considered to mark the end of the upward phase of the commodity super cycle. If this is indeed the case, then commodity prices[16] could continue to fall for quite some time. However, there is another possibility. Until 2014, most of the price corrections took place by way of increasing supply, while commodity demand was growing at healthy levels. Only in 2014 and early 2015 did demand show some signs of easing, but nevertheless registered positive growth rates for most commodities. This slowdown in demand is related to disappointing economic growth in many commodity-consuming areas. However, the current lower levels of commodity prices are already leading to some downward adjustments of investment and production capacities. This is particularly the case for minerals and metals. For example, worldwide, non-ferrous metals exploration budgets fell by 26 per cent in 2014, after an even sharper reduction in 2013

(SNL Metals & Mining, 2015). This should result in lower production in the medium term.

If growth of the global economy − mainly developed countries − manages to return to reasonable levels, and the lower prices stimulate demand, this could maintain demand growth despite a declining supply outlook. Much will also depend on developments in China. Moreover, other emerging and developing countries may intensify their commodity consumption as they enter more advanced phases in their development. In this case, it is quite possible that, after a short-term correction, commodity prices could increase again in a few years' time. However, they are unlikely to grow as rapidly as they did in the first decade of the 2000s. This would imply that the level of commodity prices is likely to stay at a higher plateau than at the beginning of the millennium. Moreover, as long as commodity markets remain financialized, price volatility could be higher and price changes more pronounced than warranted by supply and demand fundamentals.

C. Stagnation: Secular or temporary?

The observation that the growth trajectories of many developed countries have remained at substantially lower levels than before the crisis, despite several years of accommodative monetary policy, somewhat improved financial conditions and some relaxation of fiscal consolidation, has created a sense of a "new normal" that now defines the future evolution of incomes in developed countries.

The concern is that the crisis that erupted in 2008 may have had a long-lasting effect on the growth potential of these economies (Oulton and Sebastiá-Barriel, 2013). This could be for a variety of reasons. One is that a financial crisis of this magnitude has necessarily affected the balance sheets of a wide range of economic actors − including private and public agents, financial and non-financial sectors − and it has generated significant spare production capacities. Normally, these negative impacts are eventually overcome, although it may take several years, especially in the absence of appropriate countercyclical policies. However, this time there is a concern that the abnormally prolonged period of low investment and high unemployment will become self-sustaining because of their lasting repercussions in terms of reduced production capacities and productivity. Prolonged unemployment leads to the erosion of skills and specialization among some segments of the workforce; and with insufficient investment, the diffusion of new technologies largely embodied in plant and equipment may also be affected.

Another impact of the crisis may be more subtle: to the extent that it brought to a sudden end an extraordinary period of credit expansion that had supported asset bubbles and artificially boosted consumption and growth, it may have released a number of underlying factors that tend to hamper growth in the long term. These pre-existing long-term factors, and not the financial crisis per se, would be the true cause of protracted slow growth. And rather than a cyclical downturn, developed economies could be entering into a period of "secular stagnation".

This has revived the debate on the drivers of economic growth dating back to classical economists such as Adam Smith, David Ricardo, John Stuart Mill and Karl Marx, which received a further twist in "the secular stagnation thesis" presented in the late 1930s by Alvin Hansen. The thesis refers to "sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment". In his original analysis, Hansen stressed the problems of "inadequate private investment outlets" (Hansen, 1939: 4)[17] in the context of declining population growth, the relative ineffectiveness of monetary policy, and technological change that failed to stimulate

substantial capital disbursement. All these factors were eventually reversed in the post-war period, not least because of massive public intervention − including deficit spending − which was a possible solution proposed by Hansen himself. However, the sluggish recovery from the 2008 crisis, in which it is possible to identify traces of those very same elements, has led to a reappearance of "stagnationist" analyses in the public debate.

The modern twist on the "secular stagnation hypothesis" suggests that, since the crisis, the traditional macroeconomic toolkit, and especially monetary policy, has lost much of its effectiveness. With the deleveraging processes after the crisis, and nominal interest rates already close to zero, monetary expansion has not translated into increasing credit to finance private sector expenditures; instead it has been directed to investment in financial assets. High levels of indebtedness that adversely affect investment demand have been identified as an explanation for the sluggish growth rates in developed countries, which would also affect future performance. Koo (2014) emphasizes that the deterioration in the balance sheets of the private sector after the bursting of a debt-financed bubble has constrained the ability to foster productive investment. Lo and Rogoff (2015) blame sluggish growth performance on the contractionary fiscal stance adopted by highly indebted governments who have pursued sustained primary budget surpluses in order to reduce public indebtedness, even though alternative policies have been available. As a further explanation of secular stagnation, Summers (2014a and 2014b) notes the limited space for further monetary easing − given that the zero lower bound rate has already been reached − in particular since its main transmission channel to real activity (affecting asset prices and relative yields of financial products) has had only indirect effects on economic agents' propensity to invest.

In the academic debate on the secular stagnation hypothesis, agreement has yet to be reached on whether in fact secular stagnation exists, and if so, which are its long-term or structural determinants. Some hold that the deceleration of growth has been due to a combination of supply-side factors. According to them, the size of the labour force has diminished due to developed countries' shrinking and ageing populations, and a hypothesized reduced speed of technological innovation is holding back productivity growth. Gordon (2012), in particular, stresses the different kinds of technological innovations which were adopted at a faster speed in the last four decades than previous breakthrough technical advances (such as the steam engine, combustion engine or electricity), with an emphasis on short-lived capital equipment. From a more policy-oriented perspective, Dabla-Norris et al. (2015) have listed policy distortions as factors in developed countries that have hindered productivity growth over the past few decades, particularly in the agricultural and services sectors. The authors argue for the need for structural reform measures to reduce product market rigidities. Also, especially in most severely crisis-hit countries in Europe, some governments have taken measures to increase the flexibility of labour markets and to reduce social benefits, aimed at addressing "supply-side constraints" in order to boost competitiveness, while maintaining contractionary fiscal policies for prolonged periods.

Other observers argue that secular stagnation reflects a decade-long tendency of inadequate aggregate demand growth. They attribute the major cause of secular stagnation to the lack of growth of labour incomes. From this perspective, the decline in the wage share in developed countries by about 10 percentage points since the 1980s has considerably constrained income-based consumer demand with attendant adverse effects on private investment (*TDR 2012*). These adverse demand effects resulting from worsening functional income distribution have been reinforced by widening gaps in the distribution of personal income, as the share in total income of the richest households has strongly increased, and these households tend to spend less and save more of their incomes than other households. These trends have been strengthened by policies that seek to address the demand shortfall essentially through monetary expansion. However, instead of inducing firms to invest in productive activities, such a policy has resulted in firms investing in financial assets, which spurs asset price bubbles and worsens wealth distribution, without addressing income stagnation for the majority of the population.

The related policy debate has been mainly concerned with whether private investment and aggregate demand growth can be best spurred by supply-side-oriented structural reforms or by demand-side-oriented fiscal and incomes policies. The former approach is based on the belief that product and labour markets that are not sufficiently

flexible discourage enterprises from increasing their fixed investments.[18] However, to the extent that secular stagnation results mainly from weak demand, such a policy approach will tend to worsen rather than resolve the problem. An alternative approach gives a prominent role to incomes policy (e.g. minimum wage legislation, reinforcement of collective bargaining institutions and social transfers) and to public expenditure to address weaknesses both on the demand and the supply sides.[19] This is obviously the case for public investment in infrastructure.

Koo (2014) stresses that an expansionary fiscal policy in a context of high private indebtedness need not be detrimental; on the contrary, as also discussed in *TDR 2011*, the positive multiplier effects of government spending in a stagnating or recessionary economy would increase output and tax revenues, and consequently stabilize the ratio of public debt to GDP. This kind of public investment complements private investment and tends to "crowd in" the latter.

Moreover, a progressive incomes policy increases demand, as it strengthens the purchasing power of social segments with a high propensity to consume. This in turn creates outlets for private investment, with multiple benefits: higher wage incomes and improvements in formal employment reduce the financial pressure on pension schemes and allow households to increase their consumption spending without adding to household debt (Palley, 2015). And higher levels of activity and employment are known to foster productivity as well, creating virtuous circles of demand and supply expansion (McCombie et al., 2002). Thus, fiscal expansion and income growth will increase output and at the same time accelerate potential output growth, thereby animating a virtuous feedback relationship that lays the basis for future sustained, non-inflationary growth. International coordination would multiply these invigorating effects while preserving balance-of-payments sustainability (Onaran and Galanis, 2012; *TDR 2013*).

The implications of this debate for developing countries are significant (Mayer, 2015). A protracted period of stagnation in developed countries would weaken demand for exports from developing countries, affecting both output growth and productivity, and eventually generate balance-of-payments problems in these latter countries. Furthermore, the choice of monetary expansion as the main instrument for fostering demand, coupled with prevailing unregulated capital movements, generates volatile financial flows to emerging economies of magnitudes that are well above the latters' absorptive capacities. Unless developing countries are able to apply macroeconomic and prudential policies to check such financial shocks, they will enter into a sequence of asset price bubbles and debt-fuelled consumption sprees. The subsequent financial collapse and economic retrenchment could eventually lead to secular stagnation worldwide. ■

Notes

1 Data from *UNCTADstat* as on July 2015.

2 *Financial Times*, "Victim of shale revolution, Nigeria stops exporting oil to US", 2 October 2014.

3 See also *UNCTAD News*, "In 2014, world merchandise exports grew by 0.6%, while trade in services recorded a 4.2% global increase", 14 April 2015.

4 Unless otherwise specified, data on seaborne trade are from UNCTAD, 2015.

5 The prices of tropical beverages increased sharply in early 2014, then stabilized up to October 2014 only to fall in the first months of 2015. Therefore, since 2011, prices for this group have experienced an overall downward trend.

6 In fact oil prices were quite volatile in the first quarter of 2015. This was most likely related to the uncertainty about how far they could fall.

7 Bloomberg, "U.S. oil drillers add rigs for second straight week", 10 July 2015.
8 See *Financial Times*, "Iran's return to oil market to weigh on crude prices", 14 July 2015; and *Financial Times*, "Saudi Arabia's crude oil output hits 10.6m b/d record in June", 13 July 2015.
9 See, for instance, *Forbes*, "U.S. oil production forecasts continue to increase", 7 May 2015.
10 See, for instance, *Financial Times*, "Grain prices rise as tighter supply looms", 30 June 2015; *Financial Times*, "El Niño hits Asian and African cereal production", 9 July 2015.
11 This price decline was due to increased production of aluminium and zinc in China and an increased supply of nickel from the Philippines, as well as high inventory levels of nickel (AIECE, 2015).
12 China accounts for more than half of world metals demand (World Bank, 2015).
13 *Financial Times*, "Chinese fund doubles down on copper short", 12 May 2015; *Financial Times*, "Copper benefits from equity margin calls", 29 June 2015; *Financial Times*, "China's low rates sound death knell for copper carry trade", 3 July 2015; *Financial Times*, "Copper hit by China equity swings", 6 July 2015. It is also noteworthy that going short on copper and long on Chinese equities was one of Goldman Sachs' six top trade ideas for 2014 (see: http://www.businessinsider.com/goldman-sachs-top-trades-for-2014-2013-12?op=1).
14 See, for instance, *Financial Times*, "Weak Brazilian real drags down coffee and sugar", 30 March 2015.
15 A replication of this exercise for different representative commodities, such as oil, copper, wheat or coffee, also confirms that the declines in prices are not so pronounced in SDRs or euros as the dollar appreciates.
16 This discussion does not refer to oil, as its prospects in the current production environment have been discussed earlier.
17 See Backhouse and Boianovsky (2015) for a review of the origin and development of the secular stagnation thesis.
18 On the contrary, it has been found that measures aimed at increasing labour market flexibility actually lower labour productivity (Vergeer and Kleinknecht, 2010; Pessoa and van Reenen, 2013).
19 See Mukhisa Kituyi (2015). Statement by the Secretary-General of UNCTAD for the thirty-first meeting of the International Monetary and Financial Committee. 18 April. Available at https://www.imf.org/external/spring/2015/imfc/index.asp.

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Annex to chapter I

HAVE COMMODITY MARKETS DE-FINANCIALIZED?

Financialization of commodity markets refers to the observation that commodities have become an asset class for portfolio investors, just like equities and bonds. While the debate on financialization is ongoing, a significant body of analysis suggests that commodity price dynamics have changed substantially since the early 2000s, and that these changes have been associated with a sizeable increase in financial investors' positions on commodity markets, as well as with changes in the composition of these positions (*TDRs 2009* and *2011*; UNCTAD, 2011).

Regarding financial positions on commodity markets, evidence for the period since 2006 shows that total commodity assets under management (AUM) increased dramatically prior to the global financial crisis and during the period 2009–2011. They reached a peak of almost $450 billion in the first half of 2011 and declined from a level that was still over $420 billion in January 2013, to about $270 billion in May 2015. While this is a sizeable drop, the level of AUM is still close to its pre-crisis peak of mid-2008 (chart 1.A.1).

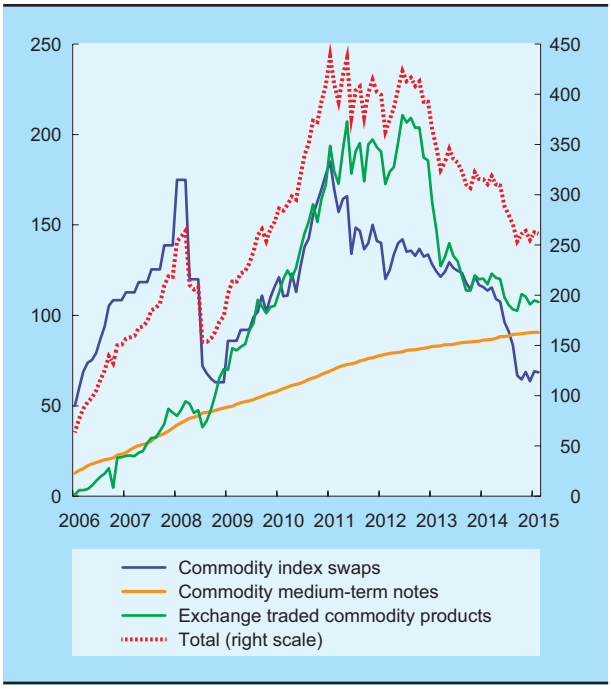
The fall in overall AUM positions between early 2013 and mid-2015 is the combination of two elements. First is the sharp decline in positions of exchange-traded commodity products, such as futures and options contracts held by hedge funds, which slumped by almost 40 per cent between January and June 2013. This is also the period spanning the third round of quantitative easing by the United States Federal Reserve, which was adopted in September 2012, and the announcement in June 2013 that a "tapering" of the Federal Reserve's quantitative easing policy could begin later that year. The last quarter of 2012 also marks the time when the S&P 500 equity market index started to rally, rising beyond its previous peaks, which may have been supported by a re-composition of financial portfolios away from commodities towards equities. Second, there was an equally sharp decline in passive index investment positions in the second half of 2014, followed by a bottoming out of these positions at a level of roughly $70 billion during the first half of 2015. Given that energy products have a sizeable weight in most commodity indexes, this movement was associated with that of the oil price and probably reflected continuous growth of oil supplies in the context of tepid global demand growth and the decision by OPEC not to cut output to stem the price decline.[1]

It is also noteworthy that since mid-2011, positions in exchange-traded commodity products have almost continuously exceeded those in commodity index swaps, often by a significant margin. This may indicate that commodities are now seen more as opportunistic short-term investments rather than as long-term investments as was likely the case before the onset of the financial crisis in 2008 when index investments accounted for most of AUM. Indeed, the profitability of index investments mainly relies on the absence of a close correlation with that of other financial assets. But it also depends on a trend increase in the spot prices of commodities, such as through rapid growth in countries with sizeable commodity consumption, and/or a situation of backwardation, i.e. a downward sloping futures curve where index investors experience positive roll yields and realize a profit on their positions even when spot prices do not rise (*TDRs 2009* and *2011*).[2] A rapid rise in commodity spot prices accompanied the strong increase in index investment positions between 2006 and the onset of the crisis in mid-2008. Commodity spot

Chart 1.A.1

COMMODITY ASSETS UNDER MANAGEMENT, APRIL 2006–MAY 2015

(Billions of dollars)



Source: UNCTAD secretariat calculations, based on Barclays Research.

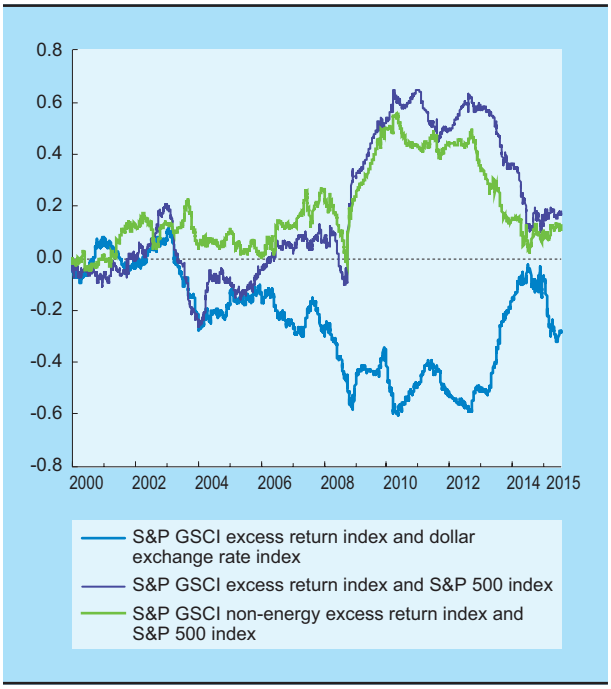
prices also strongly increased between mid-2009 and mid-2011, when economic growth in large developing countries, especially China, continued unabated. Since then, however, developing-country growth has declined, commodities have proved to be strongly correlated with other asset classes (see below), and commodity prices have fallen. This change of fortunes has caused index investors to suffer significant negative roll yields, and probably explains most of the decline in commodity index investments since 2011, and especially the acceleration of this decline during the second half of 2014.[3]

Another factor that is likely to have caused the decline in AUM, and especially that of index investments, is the increased correlation between commodities and other financial assets. These correlations were trending upwards between the early 2000s and 2008, and were particularly pronounced during the period 2008–2013. While the correlation between returns on commodities and other financial assets declined between about mid-2013 and mid-2014, the correlation with equity markets has stabilized roughly at pre-crisis levels and that with the dollar has gone up again since the beginning of 2015 (see chart 1.A.2). The latter may mainly reflect stabilization of the dollar exchange rate amid fading expectations of an imminent increase in interest rates by the United States Federal Reserve that had driven its appreciation between mid-2014 and early 2015.

The increased correlations between commodities and other financial assets that started in the early 2000s and were accentuated during the period 2008–2013 may be attributed to the change in commodity futures' price dynamics. As discussed in detail in *TDRs 2009* and *2011*, there are mainly two economic mechanisms that underlie the financialization of commodity markets.[4] First, according to the theory of risk-sharing, financial investors that take long positions on commodity markets provide liquidity, accommodate hedging needs and improve

Chart 1.A.2

CORRELATIONS BETWEEN COMMODITY INDEXES, EQUITY INDEXES AND THE DOLLAR EXCHANGE RATE, 2000–2015



Source: UNCTAD secretariat calculations, based on Thomson Reuters datastream.

Note: The data reflect one-year rolling correlations of returns on the respective indexes on a daily basis.

risk-sharing. However, they base their trading strategies on their own needs, which are determined on the financial markets. This means that they tend to build and unwind positions on commodity markets according to price developments or changes in perceived risk on other asset markets. When they do so, for example when they need cash to honour margin calls on equity markets, they consume liquidity and adversely affect risk-sharing on commodity markets.[5]

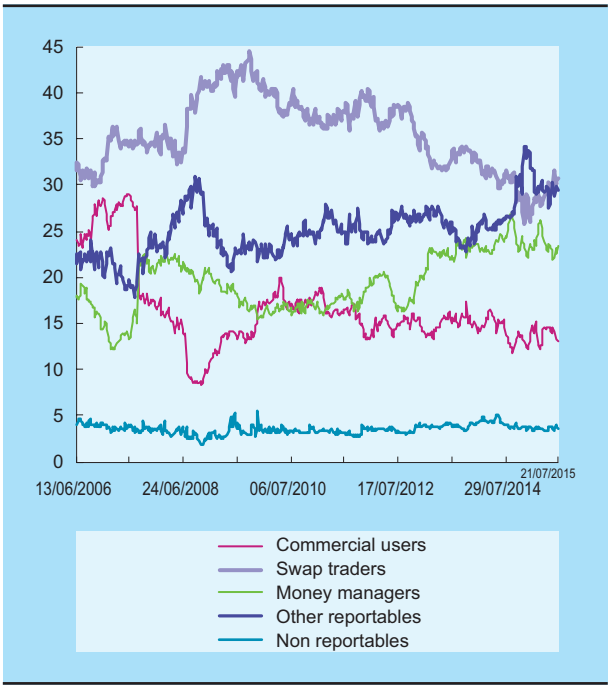
Second, financial investors tend to trade in response to information signals emanating from financial markets, thereby introducing "noise" in commodity trading (i.e. trading unrelated to fundamentals). Such noise trading is reinforced when financial investors' expectations differ among them, which makes them engage in speculative trading against each other. It is also reinforced when the most profitable activities arise from herd behaviour (i.e. when market participants follow the price trend for some time and disinvest just before the rest of the crowd does), and when acting against the majority, even if justified by accurate information about fundamentals, may result in large losses. Most importantly, market participants interested in physical commodities often act on incomplete information[6] on global demand and supply shocks, as well as on changes in inventories, which often lack transparency. Therefore, they cannot differentiate between prices that move due to financial investors' trading or to changes in fundamentals. This causes the "herd" to acquire market power and move prices in the desired direction, which tends to make them overshoot.

The increased correlation between commodity and other financial markets has undermined the view that commodity investment is a suitable portfolio diversification strategy. This view was based on evidence for the period 1959–2004 indicating that commodity investment offered returns similar to those from other asset classes but had a low or negative correlation with returns from equity and bond markets (Gorton and Rouwenhorst, 2004). This finding received considerable media coverage, and is usually considered as having provided the intellectual underpinning for the investment boom in commodity derivatives, and especially of index investment positions for diversification purposes. Following an update of this analysis, it has recently been argued that the diversification characteristics of commodity investments are still present, and that the financialization hypothesis was never valid, mainly

Chart 1.A.3

THE COMPOSITION OF TOTAL OPEN INTEREST IN WTI CRUDE OIL ON NYMEX, BY TRADER CATEGORY, 2006–2015

(Per cent)



Source: UNCTAD secretariat calculations, based on the United States Commodity Futures Trading Commission (CFTC), *Commitment of Traders Reports*.

Note: The CFTC provides disaggregated data on long and short positions for commercial users, swap dealers, money managers and other reportables, as well as spread positions of the latter three categories. Total open interest is the sum of all these positions and the positions of non-reportables. Following Bhardwaj et al. (2015), the data shown reports each category's total gross position (long plus short plus twice the spread position) as a share of twice the open interest.

for two reasons (Bhardwaj et al., 2015). First, the authors argue that the composition of open interest on commodities markets has remained relatively stable despite the doubling of that interest between 2004 and 2014. They base this observation on an aggregation of positions in 27 commodities. However, this aggregation may well have introduced a bias. Evidence for oil, which is the most traded commodity and whose price movements are widely acknowledged as having considerable impacts on prices of agricultural commodities (chart 1.A.3), indicates that the share of swap traders (who are usually considered a proxy for index investors) sizeably increased between

mid-2008 and early 2010, after which it embarked on a decline until end 2014, and that the share of money managers (such as hedge funds) has increased since mid-2012. The chart also shows that the share of other reportables spiked when oil prices moved particularly sharply (i.e. in 2008 and between the third quarter of 2014 and the first quarter of 2015), and that the share of commercial users (including producers, merchants and users) sharply dropped in 2007–2008 and, following a rebound, has trended downwards since 2010. Hence, there is little evidence to suggest stable market shares of different categories of market users. What is more, it is difficult to clearly slot market participants into these categories, as individual traders may not always adopt the same trading strategy. In particular, the line between commercial users and financial investors has been increasingly blurred, partly because trading houses have progressively engaged in financial activities (for further discussion, see United Nations, 2013: box II.2). This issue raises more general queries as to how meaningful the evidence cited by Bhardwaj et al. (2015) could actually be, even if it were unbiased.[7]

A second argument against the financialization hypothesis holds that the increase in return correlations between commodities and other asset classes was merely a temporary phenomenon related to the financial crisis (Bhardwaj et al., 2015). However, as shown above, and also argued in *TDR 2011,* the crisis-related temporarily strong increase in correlations can largely be attributed to successive rounds of monetary easing by the United States Federal Reserve, which accentuated the cross-market correlations and added a second shift to the one that had occurred already in the early 2000s. Accordingly as noted by UNCTAD (*TDR 2011*: 132–133), "a tightening of monetary conditions [in the United States] would merely have eliminated the source of the second shift in the cross-market correlations, but it is unlikely to have eliminated the financialization of commodity markets altogether and brought cross-market correlations back to where they were at the end of the 1990s".

Taken together, there is no reason to presume that the economic mechanisms that have driven the financialization of commodity markets, and made these markets follow more the logic of financial markets than that of a typical goods market, have disappeared. Nor does the empirical evidence related to financial investment in commodity markets or the development of return correlations across different asset markets suggest that commodity markets have de-financialized.

Notes

1 The evidence also shows there was a steady increase in commodity medium-term notes (i.e. corporate debt financing instruments collateralized through commodities). This may at least partly reflect increased debt exposure in the energy sector where the debt burden increased from $1 trillion in 2006 to $2.5 trillion in 2014 (Domanski et al., 2015). The issuers of these notes generally hedge their liabilities by taking long positions in the futures markets. The finding that the prices of the underlying commodities increase when such notes are issued, and decrease on their termination date (Henderson et al., forthcoming) suggests that these notes are a determinant of commodity price volatility which is unrelated to changes in market fundamentals.

2 The hedging pressure theory considers such a situation of backwardation "normal", because commodity producers need to offer a premium to speculators for them to assume the price risk in hedging operations. This situation is also a key characteristic of the traditional partial segmentation of commodity futures markets from the broader financial markets, due to the fact that commodity consumers are often unwilling to engage in direct hedging operations with individual producers. This is because consumers face risks on multiple commodities, and are not prepared to assume the fixed costs of hedging on multiple commodity markets. However, empirical evidence strongly suggests that commodity markets are not always in backwardation, and hence

capturing phases of backwardation is crucial for the profitability of commodity index investments (Basu and Miffre, 2013).

3 For example, the value of the S&P's Total Return Commodity Index in April 2013 stood at only 90 per cent of its value in 2011, before declining to barely 50 per cent by the beginning of 2015; this was followed by a slight rebound during the first half of 2015. The total return on a commodity futures contract is the sum of changes in the spot price, the roll yield and the collateral yield. Given that the level of the latter is a function of interest rates, it is not surprising that periods of quantitative easing are characterized by low yields on total return indices. The excess return indices used in chart 1.A.2 include only the first two types of return, but not the collateral yield.

4 A third mechanism emphasizes the theory of storage. It holds that inventory must rise if financial investors drive futures prices upwards, as such price increases give rise to a convenience yield for physical commodity holdings and induce more commodity holdings, which in turn reduce the supply available for immediate consumption and increase spot prices. The convenience yield depends on the costs of warehousing and financing, and is therefore strongly affected by the level of nominal interest rates. As discussed in *TDR 2009*, this view assumes that physical markets are perfectly transparent and that information on inventory holdings is fully available worldwide, which is generally not the case.

5 The direct impact of financial investment on commodity prices related to the theory of risk-sharing has often been examined on the basis of Granger causality tests spanning long time periods. These tests usually find little evidence of a direct impact of financial investment on commodity prices (Sanders and Irwin, 2011). However, this identification strategy assumes that financial-market signals make financial investors act contrary to commodity-market signals and consume liquidity all the time. This is not the case, especially in periods when financial investors' risk-return profiles on other asset markets cause their trading behaviour on commodity markets to add liquidity and improve risk-sharing. As a result, Granger causality tests on specific sub-periods tend to find more evidence of such direct price impacts of financial investors (Mayer, 2012).

6 Indeed, the very function of centralized commodity exchanges is to aggregate dispersed information and facilitate price discovery.

7 Regarding these authors' argument that index investment is still a valid portfolio diversification strategy, it is worth noting that Bhardwaj is "a researcher at SummerHaven, a $1.4bn commodity fund manager where Prof. Rouwenhorst is also a partner" (see, *Financial Times,* "Investment: revaluing commodities", 4 June 2015).

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