The past twelve months have not been particularly good for the air-cargo sector worldwide. The sharp economic downturn in the US, the financial crisis in Europe, the catastrophic consequences of a strong earthquake in Japan and floods in Thailand, and the resulting reduction of exports from Asia have all triggered a significant global decline in demand for air-cargo services.

Airfreight carried by freighters declined by 12%, from 1.7 to 1.5 billion freight-ton kilometers (FTK), and belly-hold freight declined by 10%, from 9.4 to 8.5 billion FTK. Overall demand for air cargo remains weak, despite the growth in world trade (albeit at a slower pace during 2011) since the sharp downturn in 2008. The main reason is that business inventories have remained stable due to depressed demand in the major consumer markets of the US and Europe.

The depressed demand resulted in an important reduction in air cargo-asset utilization, measured both in lower load factors and in lower aircraft utilization. The resulting effect on the sector’s profitability remains a challenge, as yields have fallen 8% since their last peak in mid-2011. A reduction of 180 aircraft in the freighter fleet since 2009 seems to have leveled off the decline in asset utilization; however, new capacity set to enter the market in the next two years will create new competitive pressure. New twin isle-aircraft deliveries with belly-hold capacity will increase by 40% in 2012 and 20% in 2013.

The competitive environment has been further tightened by the fact that sea freight has been performing more strongly than air freight. This indicates that some goods have shifted mode of transportation and that global trade included more durable and bulk commodities and fewer high-value products such as electronic components.

Given the current global situation of the air-cargo sector, business confidence among operators remains depressed. A trend reversal or improvement in the sector depends primarily on restoring economic growth by generating stronger consumption in the US and Europe, which will improve global trade. Currently, parts of Europe are still in recession, but there are some signs of recovery in the US and Japan.

However, strong gross domestic product (GDP) growth for 2012 is forecast only in the Asia Pacific area (GDP growth of 6%, excluding Japan), the Middle East (4%), and Latin America (3.6%). In contrast, Western Europe’s economy is expected to slide into recession in 2012 by contracting half a percent. The first signs of recovery in the US are expected to result in a 1.8% GDP growth for 2012. Nevertheless, the overall economic outlook relevant to air cargo remains sluggish, and yields, given the expected increase in capacity, will most likely remain under pressure.

A further improvement in the global economic situation will depend on several factors. A key issue in Europe and the US is the current priority given to reducing deficit spending and lowering the high level of public debt. However, economic growth in these regions depends to a large extent on increasing consumer spending, which in many countries has been fueled in the past by high public spending. This policy, in turn, increased the public deficit, which has become a major roadblock to economic recovery in several developed countries.

Another potentially more serious factor is the rise in the cost of oil, which in the past has triggered recessions and economic downturns. The cost of a barrel of oil has risen steadily over the past decade from US$15 per barrel of Brent Crude to about US$120 in 2012. During that period, the rapid increase in 2008 to a peak of US$147 and the subsequent decline to US$40 must be seen as a temporary phenomenon. Nevertheless, the price of oil seems to have settled at a new high well above US$100. This high oil price has surprised many observers, as fuel consumption in some major economies that were affected by the economic downturn has been declining during the past years.

High oil prices affect air transportation more than any other mode of transportation. First, there are the direct operating costs of an aircraft. At current oil prices about 40% of these direct operating expenses are for jet fuel. Any increase in fuel cost has a direct impact on the bottom line. For example, a 10% increase in cost of fuel reduces operational profit by 4%, which in many cases wipes out any profit margin.

The second effect of an increase in fuel cost concerns various direct and indirect operational costs such as energy used in loading aircraft or general maintenance costs. In general, most activities of any air carrier will bear the increased cost of energy when the oil price rises.

Finally, and most important, an increase in energy cost will hamper demand for goods to be transported, as well as resulting in a decline
in passenger carriage. On some routes, where about half of all air cargo is transported in the belly hold of passenger aircraft, a majority of passengers are travelling to visit friends and relatives (VFR). Because many VFR travelers are price sensitive, air travel in terms of passenger-kilometers flown experienced a significant reduction during the spike in oil price of 2008. A reduction in passenger flights negatively affects capacity, which increases the cost of belly-hold air cargo.

The reasons for the rise in the price of oil are complex. The world, incontestably, still disposes of large oil reserves. But, according to International Energy Agency data, conventional oil production (defined as surface-to-500-meter-deep off-shore production) has leveled off at a daily production rate of about 70 million barrels a day (b/d), having stayed in a narrow band of +/- 6% since 2004. The production of the remaining liquid fuels (natural-gas liquids, deep-water, biofuels, etc.) has been growing with increased global demand and stands today at about 16 million b/d.

Nevertheless, the increased production of non-conventional oil is more costly and struggles to keep up with demand. At the same time, available export quotas from oil-producing nations have dropped from 45 million b/d in 2005 to 42 million b/d in 2011 due to higher internal consumption in many of these countries. Non-conventional oil production has recently experienced substantial new investments (e.g., shale oil production of the Bakken formation), but it will take several years to provide relief for stagnating conventional oil production. Furthermore, expected future increased demand in many emerging countries such as China and India will continue to push the price of oil upward.

The airline industry, and the world economy at large, must face the reality of higher energy costs in the future. Continued improvements in energy efficiency are becoming a key factor in competitiveness for all operators. However, rising oil prices may stall the economic recovery again, which happened in the past when global oil spending reached 4% of GDP and triggered a series of recessions. At today's oil prices, global oil spending is expected to be close to 5% of GDP. In case of another oil price-induced downturn, air-cargo operators need to be ready to swiftly adjust to lower demand for cargo services, as well as to lower haul capacity at regular passenger carriers.