AP Moller-Maersk tackles logistics carbon emissions

AP Moller-Maersk’s transport operations, including terminals and logistics, emitted over 41 million tonnes of CO2 in 2007. The Group aims to improve energy and supply efficiency through measures including a waste heat recovery system that allows heat to be used for propulsion on 23 new ships. However, not all of the company’s new vessels are equipped with the system due to lack of capacity in shipyards to install the systems “at a cost justifying implementation”. The only Maersk vessels with waste heat recovery systems are built on the company’s own Linde shipyard. Maersk says that the technology is not feasible on existing tanker and supply vessels, as the service speed does not provide enough excess exhaust gas.

As well as addressing its direct emissions from operations, the Group is helping customers to reduce carbon emissions in their transport & logistics supply chains. Maersk Logistics has developed a SupplyChain CarbonCheck to map product emissions from the factory-gate to delivery at the point of sale, including shipping emissions. It then simulates alternative scenarios to recommend opportunities to reduce emissions and exposure to carbon costs. Recommendations could include a shift in transport modes from air freight to more carbon-efficient shipping, for instance. Strategic issues and supply chain costs are factored in to identify the most appropriate actions to cut emissions, and Maersk helps to implement changes.

Maersk says that up to 15 global clients currently use the tool, which has led to approximately 10% cuts in both carbon emissions and costs.

To find out more visit http://about.maersk.com

Nippon Yusen rises to solar challenge

Japan’s largest shipping company, Nippon Yusen Kaisha, is positioning itself to grow revenues from companies seeking to reduce their transport & logistics emissions. In 2008, Nippon Yusen launched the world’s first solar-powered cargo ship, in partnership with Nippon Oil. The ship, Aurora Leader, is using solar-powered electricity to help transport up to 6,200 cars for Toyota Motor Corporation. By reducing CO2 emissions from the ocean transportation of cars, the initiative supports Toyota’s strategy to reduce environmental impacts caused by the life cycle of vehicles.

The solar power generator consists of 328 solar panels and can produce 40 kilowatts of power. Although it only generates 0.2% of the 6,020-tonne Aurora Leader’s ship’s energy needs, it can supply 65% of electricity used and reduce carbon emissions by up to 2%. Nippon Yusen aims to develop large solar-powered vessels and plans to install a generator that could contribute up to 2% of a ship’s power by 2010.

Nippon Yusen is also developing carriers that would have algae energy and carbon emissions per ton-mile compared with existing vessels. The new ships are expected to be ready in 2010. Meanwhile, Nippon Yusen is also increasing the efficiency of propulsion and fuel injection using technologies developed together with the company’s think tank, the Monohokabi Technology Institute. Nippon Yusen has set a goal to cut carbon dioxide emissions by at least 10% per ton-mile on 2006 levels by 2013. However, fuel consumption and carbon dioxide emissions from the company’s fleet increased annually between 2004 and 2007.

To find out more visit www.nyk.com

Shipping overview

The shipping industry transports more than 90% of global and European external trade. There are more than 94,000 merchant ships globally, most of which are dry bulk carriers and oil tankers. Sea transport accounts for some €83 billion in annual revenues in the EU27. Companies in 13 European countries control more than one-third of the world’s fleet; however, three-quarters of the fleet fly the flags of developing countries.

Some 50,000 cargo ships transported 7.7 billion tonnes of cargo in 2007. Europe is the world’s largest dry cargo market, importing over 1.5 billion tonnes of commodities such as coal, iron ore and grain. Some 466,000 officers and 721,000 sailors serve on merchant ships worldwide. The majority of sailors are recruited from developing countries, especially South East Asia (Philippines, Indonesia, China, India).

Pollution can present a risk to investors largely due to the exposure of merchant shipping companies to potential financial liabilities under regulatory regimes. Treaties including the International Convention for the Prevention of Pollution from ships (Marpol), the International Maritime Organization (IMO), aim to control discharges of harmful substances to sea and set limits on air emissions.

The European Commission aims to internalise environmental and health-related costs, known as negative externalities or damage costs, into transport pricing to help make the sector more sustainable. The environmental damage costs of air pollution, including CO2 emissions, from the transport sector in Europe could total €210 billion by 2020.

Trucost has calculated emissions to air from the shipping segments of 11 companies in the MSCI All World Developed (AWD) Index. Just four of the companies, including one of six based in the EU, report their emissions to air, reflecting the industry’s general lack of transparency on environmental impacts. To compare the environmental performance of companies of different sizes, Trucost has calculated their “Impact Ratios”, by measuring environmental damages costs as a percentage of revenue (Graph 1). For the four companies that report shipping emissions to air, a breakdown of Impact Ratios by each air pollutant is illustrated in Graph 2.

In response to the global economic slowdown and lower demand, some shipping companies are reducing capacity in container services and cancelling orders for new, more fuel-efficient ships.

Acts of piracy and armed robbery against ships off the coast of Somalia, particularly in the Gulf of Aden - a strategic corridor between the Indian Ocean and the Red Sea, have recently increased dramatically. More than 120 attacks were reported in 2008 and as of November 2008, 14 ships and some 280 seafarers were held hostage off Somalia. Widespread diversions around the Cape of Good Hope would increase fuel consumption, emissions and transport costs. The IMO has issued guidance on measures to prevent piracy and armed robbery, including advice on minimising danger to crew and ships.

Environmental issues are rising up corporate agendas due to strengthening regulatory controls on environmental impacts from shipping fleets. These could help shift consumption from highly polluting heavy-fuel oil resins to_dataset from oil refineries (bunker fuel) to lower-emission, more expensive marine distillate fuel. Carbon intensity is a proxy for fuel efficiency, which reflects exposure to volatile fuel costs. Companies that operate cleaner, more efficient fleets stand to gain competitive advantage.
Shipping companies are exposed to transport, largely due to fuel use. Merchant shipping CO2 emissions is significantly exposed to transport, largely due to fuel use. Merchant shipping CO2 emissions is significantly by 30% to 1.5 billion tonnes by 2020.16

CO2 is the main greenhouse gas (GHG) emitted by maritime transport, largely due to fuel use. Merchant shipping CO2 emissions is significantly by 30% to 1.5 billion tonnes by 2020.16

Global CO2 emissions from shipping are projected to rise to 3.5 billion tonnes by 2030. Since 1990, CO2 emissions from ships have increased by 21% to 1.5 billion tonnes. This is almost twice the amount emitted by all the coal plants in China and India combined.1

The IMO, which must, under the Kyoto Protocol, address GHG emissions from shipping, plans to propose measures during the 17th session in December 2009 to agree global GHG reduction targets post-2012.

In October 2008, the IMO’s Marine Environment Protection Committee (MEPC) failed to agree meaningful measures such as a new global cap on fuel sulfur content.

The IMO and European Commission plan to set new emission caps on particulates, as well as SOx and NOx.

As shown in Graph 2, there are various exposed to potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.

Ships that transport goods may be exposed to risk of potential carbon costs. Invers can use an understanding of variations in carbon prices across the sector to identify which companies are the greatest risks to portfolio returns, as well as opportunities presented by those that are carbon-efficient relative to peers.

Traffic congestion is an increasing environmental concern. Traffic emissions trading is a means to reduce GHG emissions from the sector. Progress was limited to voluntary measures to improve fuel efficiency.

If the IMO fails to agree concrete measures to reduce GHG emissions by 2011, the European Commission (EC) plans to introduce measures to internalise cost associated with shipping’s carbon emissions.
The shipping industry transports more than 90% of global and European external trade. There are more than 94,000 merchant ships globally, most of which are dry bulk carriers and oil tankers. Sea transport accounts for some €83 billion in annual revenues in the EU27. Companies in 13 European countries control more than one-third of the world’s fleet, however, three-quarters of the fleet fly the flags of developing countries.

Some 50,000 cargo ships transported 7.7 billion tonnes of cargo in 2007. Europe is the world’s largest dry cargo market, importing over 1.5 billion tonnes of commodities such as coal, iron ore and grain. Some 446,000 officers and 721,000 sailors serve on merchant ships worldwide. The majority of sailors are recruited from developing countries, especially South East Asia (Philippines, Indonesia, China, India).

Pollution can present a risk to investors largely due to the exposure of merchant shipping companies to potential financial liabilities under regulatory regimes. Treaties including the International Convention for the Prevention of Pollution from ships (Marpol), under the International Maritime Organisation (IMO), aim to control discharges of harmful substances to sea and set limits on air emissions.

The European Commission aims to internalise environmental and health-related costs, known as negative externalities or damage costs, into transport pricing to help make the sector more sustainable. The environmental damage costs of air pollution, including CO2 emissions, from the transport sector in Europe could total €210 billion by 2020.

Trucost has calculated emissions to air from the shipping segments of 11 companies in the MSCI All World Developed (AWD) Index. Just four of the companies, including one of six based in the EU, report their emissions to air, reflecting the industry’s general lack of transparency on environmental impacts. To compare the environmental performance of companies of different sizes, Trucost has calculated their “Impact Ratios”, by measuring environmental damage costs as a percentage of revenue (Graph 2). For the four companies that report shipping emissions to air, a breakdown of Impact Ratios by each air pollutant is illustrated in Graph 2.

Pollution from ships (Marpol), under the International Maritime Organisation (IMO), aim to control discharges of harmful substances to sea and set limits on air emissions. The IMO has issued guidance on measures to prevent piracy and armed robbery, including advice on minimising danger to crew and ships.

Environmental issues are rising up corporate agendas due to strengthening regulatory controls on environmental impacts from shipping fleets. These could help shift consumption from highly polluting heavy-fuel oil residues from oil refiners (Bunker fuel) to lower-emission, more expensive marine distillate fuel. Carbon intensity is a proxy for fuel efficiency, which represents exposure to volatile fuel costs. Companies that operate cleaner, more efficient fleets stand to gain competitive advantage.