

Transport and Logistics Barometer


2020 full-year analysis


M&A deals, joint ventures and strategic alliances in the transport and logistics industry





pwc


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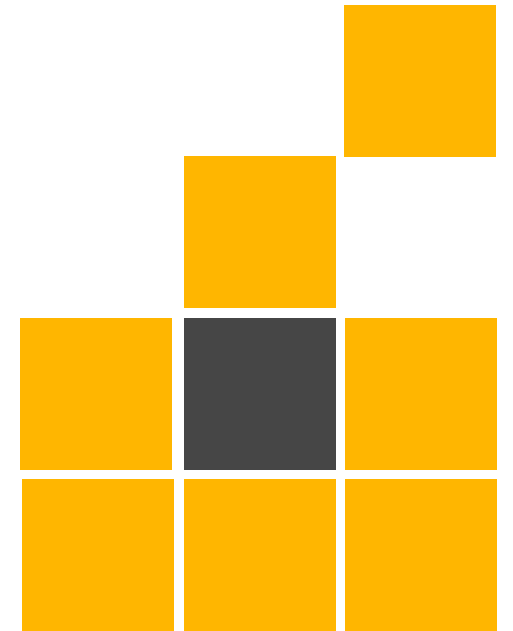
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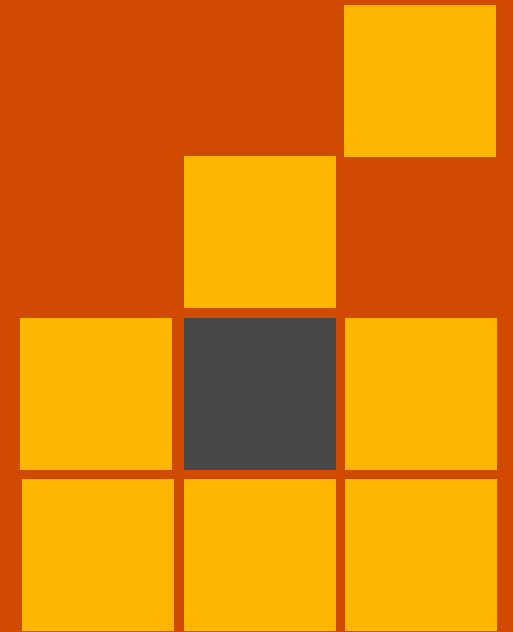
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1 Highlights



Highlights

244

deals were announced in the transport and logistics (T&L) industry in 2020. M&A activity has thus caught up since the weak first half of the year, and even surpassed the level of 2018. Total deal value (\$84.3bn), though, has dropped by 42% compared to the very strong M&A year of 2019. Despite serious impacts of the pandemic on individual subsectors, deal activity has not significantly slumped. Overall, industry dynamics have been surprisingly robust and defied the severe disruption and uncertainty.

46%

of all deals in Logistics & Trucking related to warehousing operations and assets, including two cold-storage megadeals in the US. Retail logistics, warehousing and parcel delivery have been the key area of industry dynamics. Courier, express and parcel (CEP) services experienced a real boom due to online trade.

Vaccine distribution

is the litmus test for the (pharma and cold chain) logistics industry. With an estimated 271 million vaccine doses to be distributed monthly, major challenges include securing transport and storage capacity and refrigeration of the vaccines, continuous traceability, protection against tampering and theft and, finally, disposal of medical equipment.

H1 2020

H2 2020

H1 2021

H2 2021

1.0

The pandemic has led to a new low in M&A valuation, mainly driven by a strong decline in prices for passenger-related targets. The overall sales multiple fell to 1.0, the lowest value since the financial crisis.

Passenger transport

continues to be the most-affected sector due to the COVID-19 containment measures. Even in our 'effective vaccination' scenario, full recovery is not expected before 2023/2024. The number of deals dropped to 67 (from 95 in 2019). The average deal value, however, is significantly higher than in freight transport, indicating that even large passenger transport companies such as airlines are facing financial constraints and need financial aid from governments or private investors.

2021

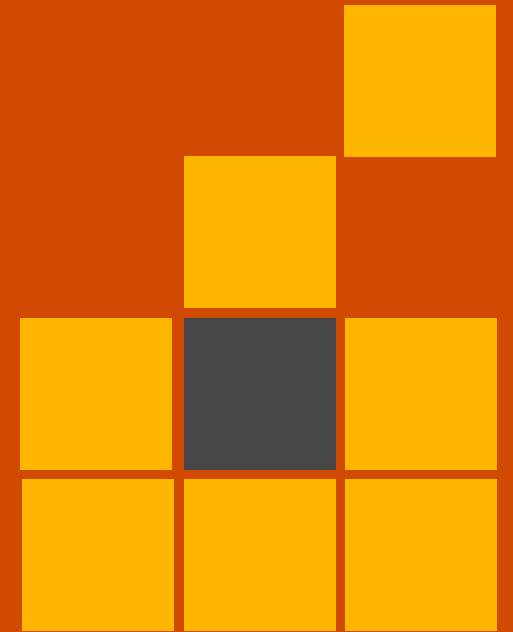
will be another tough year for the T&L industry. Key challenges for companies include stabilising the business, digitalising core logistics operations, responding smartly to new mobility habits and securing the supply of vaccines worldwide. Companies need to repair, rethink and reconfigure their organisations and business models.

5.4%

is the projected increase of gross value added (GVA) in the European freight transport and logistics industry in 2021, according to our scenario analysis (in scenario 1, 'effective vaccination'). With a 9.0% contraction in 2020 and 4.0% growth in 2022, this may lead to full recovery to pre-crisis levels by the end of 2022. Scenario 2 ('ineffective vaccination') suggests a lower recovery rate of 3.9% in 2021.



2 Key issues for the industry



The two sides of the T&L industry

The COVID-19 pandemic has spread rapidly across the globe, creating an unprecedented situation for more than a year. It has not only put many lives at risk, but has also disrupted the global economy and has changed the way people work and live. Besides a health crisis, COVID-19 is an economic crisis that is affecting both the demand side and the supply side, and may develop into a financial crisis with companies unable to repay their debts. Moreover, COVID-19 has severely challenged the resilience and ability of companies to ensure business continuity.

This global crisis is likely to be one of the most severe ever recorded, but its impact differs by industry. There are some that appear to have only been marginally affected or have even profited from the pandemic, such as food, healthcare, technology and software, or telecommunications. However, most other industries have suffered significant slumps. Therefore, particularly in Europe, governments have launched short-term financial support programmes to limit the economic damage and stimulate demand in certain segments.

The T&L industry – due to its nature as a downstream industry dependent on other industries – mirrors global economic activity. However, two ‘faces’ can be seen, as the dynamics of the pandemic have impacted the subsectors of T&L to varying degrees. Freight transport and logistics have been comparatively robust on average, yet there are major differences within its subsectors. Passenger transport, in contrast, has suffered huge declines in all subsectors and is possibly one of the hardest-hit industries.

This dichotomy can, in some cases, even be observed within individual diversified logistics companies, depending on the different segments they serve. For companies in this position, the opportunity has arisen to cushion losses incurred in the passenger business with revenues from the freight business.



Passenger transport

With the persistence of the COVID-19 pandemic and the associated new lockdowns, travel restrictions and border closures in some countries, the passenger transport sector is still in survival mode. The measures taken led to a total collapse in demand for passenger transport, putting many companies in this sector under operational pressure and in financial distress. Alongside rail and bus companies, airlines, airports and the entire travel industry have been particularly affected. We expect to see an ongoing, structural impact due to changed mobility habits.

Declining numbers of business and leisure travellers led to very low capacity utilisation for rail and bus companies. Most rail companies continued to operate as far as possible to maintain mobility. After a brief increase in demand with the temporary easing of restrictions in Q3, passenger numbers fell again towards the end of the year due to the second wave of infections, new restrictions and accompanying safety concerns in the use of public transport – particularly in Europe.

Passenger airlines largely suspended flight operations for several months. In 2020, the number of flights dropped by 58% to 16.4 million, and hence to a 1990s level.¹ This situation led to many airlines struggling to avoid insolvency, and for some, government bailouts were inevitable.

The number of passengers on cruise lines started to decrease in March, leading to departures being suspended and an increased number of anchored cruise ships as the virus spread, with direct effects on cruise terminals as well.

In Europe and Asia, some cruise lines returned to operation with reduced capacity in Q3, but the numbers of passengers on board have remained low.

Freight transport and logistics

Freight transport and logistics wasn't hit as hard as passenger transport and seems to be recovering faster. Still, the picture is rather mixed. As an example, automotive logistics services contracted significantly upstream and downstream, including supply to production plants, transshipment terminals, and distribution via road or rail. Air cargo volumes collapsed due to lack of belly freight capacity. Maritime shipping was impacted by the contraction of cargo volumes and is currently facing container shortages. In contrast, logistics services for industries such as food and healthcare were able to grow, while CEP companies experienced an all-time high following record sales in online trade.

After border closures and factory closures in some manufacturing industries temporarily disrupted supply chains, the recovery of some economic indicators gives cause for optimism.

The WTO Goods Trade Barometer released on 20 November 2020 points to a recovery of trade in the third quarter of the year, driven by an increase in export orders. The barometer currently stands at 100.7, much higher than the 87.6 recorded in May. The RWI/ISL Container Throughput Index, which rose to an all-time high of 122.6 in October, dropped slightly in November.² Throughput decreased in Chinese ports in particular.

The truck toll mileage index for Germany also recovered to its pre-COVID level, and the express and small parcel market is recording the highest growth rate globally since 2010.³

World trade seems to have largely recovered from its slump in the spring, driven by the re-opening of production plants, significant rise of e-commerce and the quick economic recovery in China.

Nevertheless, uncertainty remains high and the second wave of COVID-19 infections and the current spread of COVID-19 mutations could put trade under pressure again. It remains to be seen whether predictions about normalisation will prove to be correct. At the same time, freight forwarders, carriers and contract logistics providers still face the risks of customers defaulting and operational obstacles.

¹ Source: IATA – International Air Transport Association | Industry Statistics | November 2020

² Source: RWI – Leibniz Institute for Economic Research

³ Source: Transport Intelligence

Difference in default risk

The split in the T&L industry becomes apparent through our analysis of actual and expected quarterly revenue development of more than 200 listed T&L companies in 2020. It can be observed that both the passenger-related subsectors and the freight-related subsectors were below the 2019 average throughout 2020, with the exception of Logistics & Trucking in Q4.

However, passenger-related operations experienced more significant declines, and quarterly revenues were in some cases (e.g. airlines) up to 80% lower than the 2019 average. Recovery started in Q2, but at a slow pace, so that pre-crisis levels are not expected to be reached in 2021.

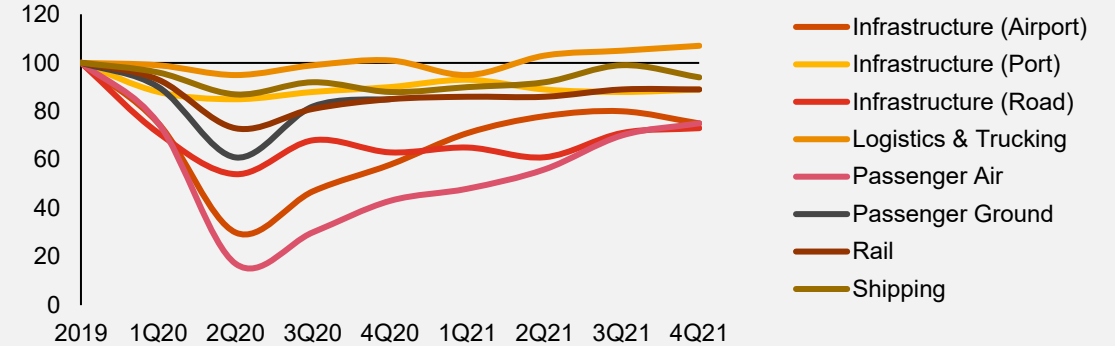
The freight-related subsectors have been less affected in comparison: their quarterly revenues were often no more than 20% below the 2019 average and are expected to further approach pre-crisis levels in the coming months. Freight transport has profited from supply chains starting to stabilise in Q3 2020 and the associated increase in demand as enterprises started restocking their inventories and consumers stimulated e-commerce by increasingly shifting their consumption to the internet.

Looking at the development of CDS (credit default swap) spreads, investors' perceived risk of default was highest in all subsectors of the T&L industry in the second quarter. Since then, the situation has eased somewhat, and the default risk recognised at the end of the year is in some cases even lower than pre-crisis levels, in both passenger transport and freight transport.

Only airlines stand out from other subsectors, with a median 5-year CDS spread in early October six times higher than the 2019 average. The further increase throughout the year is a result of the almost complete halt in air traffic and the associated worsening situation at airlines. It appears that investors no longer trust most airlines' abilities to service their debts on the capital market. The CDS spread situation for airlines improved slightly in the last two months of the year, but the level of uncertainty is still much higher than in the rest of the industry.

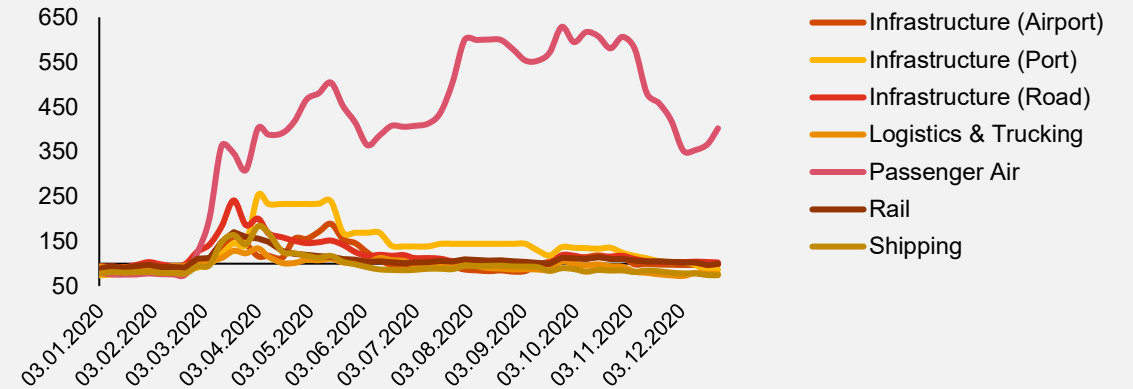
However, the default risk, which was perceived overall as average, encouraged investors to enter into M&A deals despite the severe losses in revenue in some subsectors.

Quarterly revenues including analyst estimates (2019 average = 100)



Source: PwC analysis based on S&P Global Capital IQ

Median 5-year CDS spread (2019 average = 100)



Source: PwC analysis based on S&P Global Capital IQ

Deal activity surpasses 2018 level

Since the T&L industry's subsectors are being affected differently by the COVID-19 pandemic, the associated uncertainty has led to slightly weaker M&A activity overall compared to 2019. However, contrary to expectations, the number of deals in T&L has not plummeted. A total of 244 deals worth at least \$50 million were announced in 2020, compared to a 5-year average of 250 deals per year, implying that investors are still entering into acquisitions, but they are focusing on smaller transactions with less risk in terms of value. This is reflected in the total deal value (\$84.3 billion) and average deal value (\$345.6 million), which shrank by 30% and 28% respectively in 2020 compared to the 5-year average.

Similarly, fewer megadeals (17) were announced for 2020 (2019: 21), which also had a much lower deal value than the year before. Only one megadeal reached the \$4 billion mark, while in 2019, the exceptional Blackstone deal (US logistics assets, \$18.7 billion) and other major deals drove up the total deal value.

The biggest deal announced in 2020 is in passenger transport; more specifically, the aviation industry. Blackstone agreed to acquire Signature Aviation PLC, a London-based provider of air transportation support services for the global business and general aviation market, for a total of \$4.29 billion. This is one example of an airlines and airports deal; deals in this subsector made up approximately 40% of the 67 total mergers and acquisitions in the passenger transport segment. The share of announcements involving airlines and airports is thus stable, but the rationale of many transactions has shifted towards cost reduction or short-term liquidity.

Targets in Logistics & Trucking and infrastructure assets seem to be appealing, with ten megadeals announced in total. In freight transport, the largest transaction announced involved port infrastructure: Dalian Port Co Ltd agreed to merge with Yingkou Port Liability Co Ltd, a Yingkou-based provider of marine cargo handling services, through a stock swap transaction valued at \$2.84 billion. Besides this, the freight segment witnessed a total of 177 deal announcements, which, as in previous years, were dominated by a high number of deals in Logistics & Trucking. Of these Logistics & Trucking deals, 46% relate to warehousing operations and assets, reflecting the key role of retail logistics, warehousing and parcel delivery in industry dynamics.

	2015		2016		2017			2018			2019		2020	
	Total	Total	1H17	2H17	Total	1H18	2H18	Total	1H19	2H19	Total	1H20	2H20	Total
Number of deals	239	237	146	137	283	127	100	227	138	123	261	103	141	244
Total deal value (\$bn)	183.8	119.9	62.9	71.3	134.2	74.6	41.6	116.2	68.4	76.7	145.1	36.7	47.6	84.3
Average deal value (\$m)	769.2	506.1	430.7	520.4	474.1	587.1	416.5	511.9	495.5	623.5	556.0	356.7	337.5	345.6

Source: PwC analysis based on Refinitiv

T&L deals defy GDP development

Based on historical data, we have identified a correlation between global GDP and M&A activity in the T&L industry in terms of number of deals. However, this correlation did not prove true in 2020, because although real GDP in 2020 recorded an even sharper decline than during the financial crisis in 2008/09, the number of T&L deals announced only fell slightly compared to 2019.

The year 2020 started with a negative real GDP growth rate of -2.6% , but after the steep drop in Q2 to -8.6% it has recovered somewhat over the course of the year to stand at 3.4% year-on-year in Q4. T&L deal announcements also fell slightly in the first half of the year, but returned to 2019 levels by the third quarter.

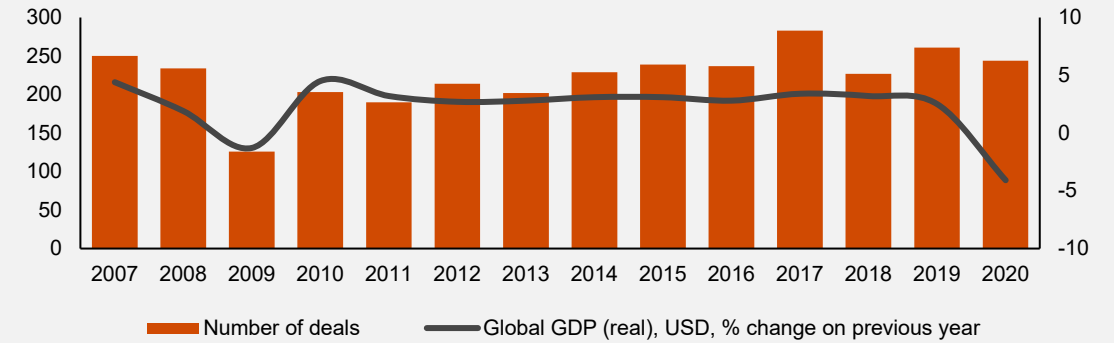
It seems that the crisis has not had much of a negative impact on M&A deal activity in the T&L industry and that the bottom has been passed. The industry has benefitted from the already high level of dry powder, which has risen further after a brief lull in the summer months, leading to a backlog situation and encouraging investors to engage in mergers and acquisitions.

In contrast, strategic alliances do not reveal such consistency. While their number has steadily decreased since 2007, a new low was reached in 2020, far below the level during the financial crisis, when the number of strategic alliances was rather high. In the first quarter of 2020, strategic alliances were still at the level of the previous year and then fell significantly with the increasing impact of the crisis. This is partly because codeshare agreements accounted for a considerable share of strategic alliances in previous years and have now almost completely disappeared due to the collapse of aviation. However, joint ventures and other forms of collaboration are also at their lowest point in the past 15 years.

The reasons behind this may be ongoing uncertainty and some companies – especially passenger-serving companies – still struggling to survive, putting all their efforts into stabilisation, liquidity and restructuring.

T&L deals per year

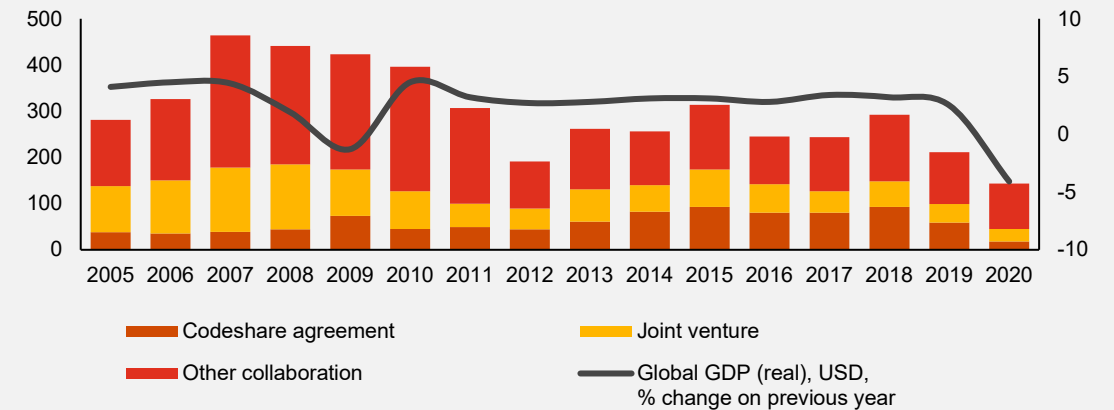
(no. of deals and change in real global GDP)



Source: PwC analysis based on Refinitiv and IHS

T&L strategic alliances per year

(no. of announcements and change in real global GDP)



Source: PwC analysis based on S&P Global Capital IQ and IHS

Passenger vs. freight: on different tracks

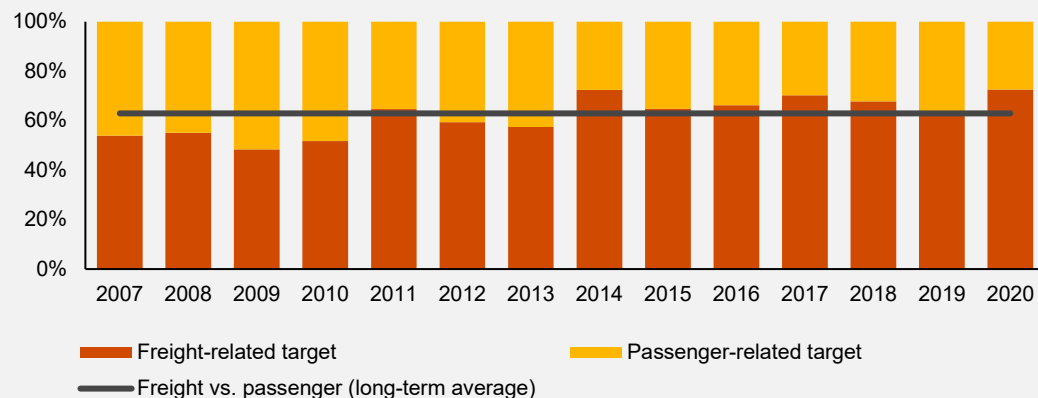
Historically, the ratio of freight-related targets to passengers-related targets was, on average, about 60/40 – both in terms of number of deals and in terms of total deal value. In 2020, a shift towards freight can be observed in the total deal number, reflecting the different extent to which the two sectors were affected by the crisis. While the freight transport and logistics sector saw an 11% increase, 29% fewer deals were announced in the passenger transport sector, which led to the overall decrease in the total number of deals compared to 2019.

It appears that the COVID-19 crisis has resulted in passenger-related targets being less attractive for investors due to the highly deteriorated market and corresponding uncertainty, which has increased risk aversion and subdued willingness to strike such deals.

However, although there were fewer deals announced with passenger-related targets, these tended to be the larger deals. The average deal value, which in the past was usually similar for both types of targets, is now about 1.5 times higher for passenger-related transactions than for freight-related deals. The crisis has put even the larger passenger transport companies – such as airlines – into distress, causing them to need financial aid from governments or private investors and thus favouring deals.

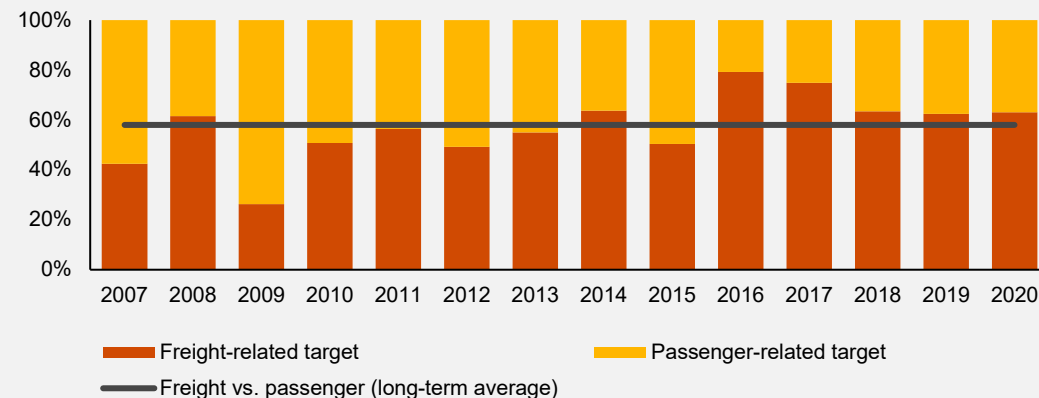
The pandemic has led to a new low in M&A valuation, with the median value/sales multiple for T&L targets decreasing to 1.0, far below the 10-year average of 1.8. This is mainly being driven by a strong decline in prices for passenger-related targets, from 1.3 to 0.7 in 2020. The prices for freight-related targets, in contrast, have not changed. It must be taken into account that the multiples are calculated on the basis of previous year's revenues, while investors value their targets according to revenue expectations for the coming years, which are likely to be significantly below 2019 levels in the passenger transport sector.

T&L deals per year (no. of deals)



Source: PwC analysis based on Refinitiv and IHS

T&L deals per year (total deal value)



Source: PwC analysis based on S&P Global Capital IQ and IHS



3 Passenger transport



Deep dive: a shaky year for air transport

The COVID-19 pandemic has been the defining topic of the past year and will most likely continue to be for at least the coming year. The failure to control the spread of the virus led to second or third waves of COVID-19, hampering air travel recovery in many markets in H2 2020.

Across travel segments, airlines suffered most significantly, alongside tour operators, shared apartment providers and cruise lines. TNMT analysis shows that the number of commercial airline tickets sold since April has constantly lain more than 90% below the level of the previous year.¹

In detail, worldwide passenger numbers fell 60% to 1.8 billion, from 4.5 billion in 2019. Revenue passenger kilometres (RPK) were down by over 66%.² The number of passengers travelled last year is the lowest in over 16 years. Global passenger load factor (PLF) fell to 65.5% on average.³ Interestingly, and in contrast to international travel, a very different picture was visible across domestic air transport markets: whereas North America and Europe are still suffering heavily, domestic air travel in China and Russia began to recover early, and catch up to pre-crisis levels towards Q4 2020.

The air cargo segment, on the other hand, has fallen little after an initial dip and showed strong performance towards the end of the year. Due to a slight economic rebound following the lockdown period, cargo tonne-kilometres (CTK) were down by just 12%.⁴ As air cargo traffic remains essential for global supply chains, the prevailing challenge remains the (belly) capacity shortage.

Airports harmed by dependence on air traffic

The business situation of airports is closely linked to the passenger volume of airlines. Airports internationally have been affected by a dramatic decline in passenger numbers, putting them in distress. Europe and the Middle East are projected to be the hardest hit, with declines of more than 70% compared to the predicted baseline in 2020.⁵

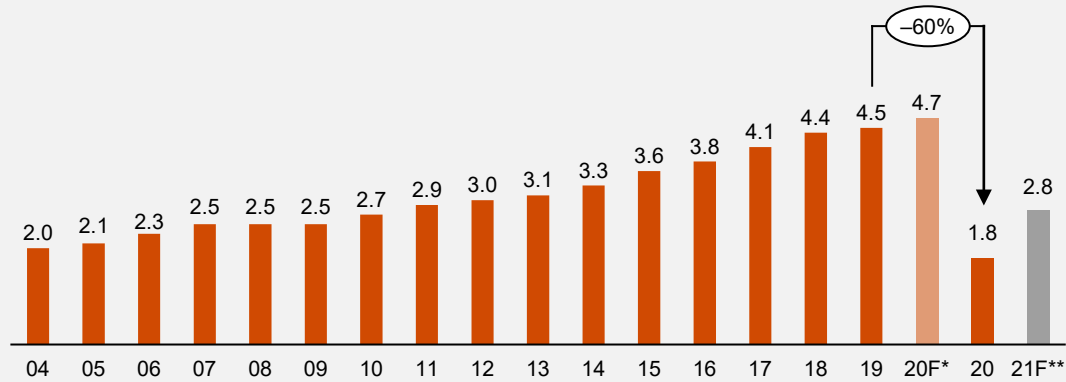
In line with airlines, passenger numbers fell significantly in April. The situation seemed to ease during summer, but from the autumn onwards the number of passengers decreased again in the wake of the deteriorating situation of the pandemic. In addition, new restrictions affecting air travel were imposed in December with the emergence of the first mutations of the virus. For example, over 40 countries in Europe, Asia, South America, the Caribbean and Middle East have suspended all travel links to and from the UK. While some countries imposed the flight ban only temporarily, others – like Germany or India – have extended it until at least the end of January.

Throughout the year, the cargo business has to some extent served as a stabiliser at some airports, but the unprecedented situation led to an overall loss of \$112 billion (65%) of airport revenues compared to pre-crisis estimates.⁶ This corresponds to a negative impact on the liquidity of airport operators and will require extensive restructuring and recapitalisation measures. In addition to equity contributions from (public) shareholders, bank loans are being taken out or bonds issued.



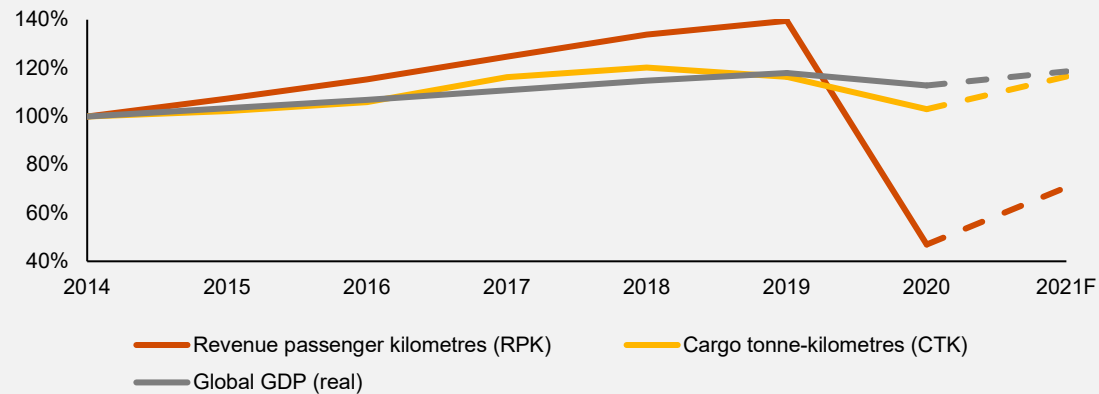
¹ Source: TNMT – Travel & Mobility Tech
² Source: IATA | Annual Review 2020
³ Source: IATA | Economic Performance of the airline industry | November 2020
⁴ Source: IATA | Air cargo market analysis | November 2020
⁵ Source: Airport Council International (ACI) World | The impact of COVID-19 on the airport business | December 2020
⁶ Source: ibid.

Development of passenger traffic (billion passengers)



Source: IATA December 2020; * forecast before COVID-19; ** forecast with COVID-19

Development of global GDP and RPK/CTK (2014 = 100%)



Sources: IATA, IMF, World Bank, PwC analysis

The most significant decline in air travel since World War 2

From an economic perspective, 2020 has been the most devastating year in air transport history since WW2, with COVID-19 causing a total net loss to the airline industry of almost \$119 billion.¹ Despite some travel restrictions being lifted in Q3 2020, a widespread rebound in economic activity has not yet occurred: airlines' profitability remains negative in all regions, but slightly improved compared to the lockdown period of Q2. North America is expected to report the largest net loss in 2020 (\$45.8bn), while Asia & Pacific was able to make some recovery in large domestic markets, reducing its losses to an estimated \$31.7 billion.²

IATA estimates that around 43 million jobs are at risk from the dramatic fall in demand for travel.³ Mainly for this reason, airlines are being supported by governments in the form of equity investments, state-backed loans, tax concessions or wage subsidies, amounting to \$173 billion as of the end of November 2020.⁴

For example, the United States provided over \$50 billion to support domestic airlines. In Europe, Lufthansa Group was backed with €9 billion, Air France received €7 billion in guarantees/loans, and Italy even nationalised its flag carrier, Alitalia.

¹ Source: IATA | Annual Review 2020

² Source: IATA | Economic Performance of the airline industry | November 2020

³ Source: ibid.

Economic outlook for recovery

For 2021, the availability of a vaccine is anticipated to be a turning point for the industry. According to IATA, global RPKs are forecast to improve by 50% in 2021, matching 2013 levels.⁵ In the cargo segment, CTKs are even expected to return to pre-crisis levels in the next year (+25%), especially spurred by the e-commerce and medical consumables sectors.

But economic recovery will happen gradually, as the distribution of a vaccine will take time. Airlines may continue to suffer from low demand and COVID-related travel restrictions, and thus recover more slowly than other sectors. Whereas global GDP is expected to exceed 2019 figures as soon as next year, air transport will most likely take until 2023/24 to return to normal.

In addition, PwC's consumer survey from October 2020 shows that airlines will experience a shift between leisure and business travel: whereas 44% of travellers indicate they will travel less for leisure after COVID-19, 61% say they will do so for business.⁶ On top of stimulating demand in general, airlines will therefore face the challenge of accommodating changing B2C customer needs.

⁴ Source: IATA | Annual Review 2020

⁵ Source: IATA | Economic Performance of the airline industry | November 2020

⁶ Source: PwC consumer survey | October 2020

Economic downturn is changing investment patterns

The current situation and outlook have changed investment rationales in the aviation industry. This is also mirrored in M&A data for this year. While the share of deals announced with targets in the industry is stable at 11% of 244 T&L deals announced in 2020 (2019: 12% of 261 deals), we are seeing a shift away from strategic deals towards financial deals aimed at reducing costs, enhancing short-term liquidity and even bankruptcy sales. Consequently, the share of deals with financial investors including government-backed stabilisation funds like the German Economic Stabilisation Fund (Wirtschaftsstabilisierungsfonds, or WSF) rose from 45% in 2019 to 66% in 2020.

With Blackstone's bid for the world's biggest service provider for private aviation and business jets, Signature Aviation PLC, the industry's largest deal announced sheds some light on the business and general aviation sector, which recovered more quickly from the impact of COVID-19 than commercial airlines.

Other deals, however, reflect the need for airlines to secure liquidity by attracting investors like Bain Capital, which agreed to acquire the entire share capital of bankrupt Virgin Australia Holdings Ltd – a Bowen Hills, Queensland-based passenger airline – for an estimated AU\$3.5 billion (US\$2.5bn) in a leveraged buyout transaction. Another example is the sale of the catering business of Korean Air to a financial investor. The deal was part of a larger government-led

consolidation effort in the Korean aviation industry, including the takeover of Asiana Airlines by Korean Air and a capital injection into Korean Air by the state-owned Korea Development Bank.

Reflecting other recent government bailouts – the Republic of Latvia raised its interest to 91% by acquiring a 10.95% stake in Air Baltic – the German WSF will also acquire a 20% stake in Lufthansa Group (\$0.27bn) as part of a state aid programme totalling \$9.0 billion that also includes mezzanine capital and guaranteed loans. Portugal raised its stake in TAP by nearly 30% at the price of about \$200 million in two separate transactions as part of a rescue plan totalling \$2.46 billion. While European airlines are seeming to rely more on government support, we are seeing that airlines in North America are leaning heavily into the debt market: airlines from the US and Canada have issued about \$50 billion in bonds and loans throughout 2020, nearly ten times as much as their European counterparts.

Other means of collaboration between airlines have abated: in the past, codeshare agreements between airlines made up a significant proportion of strategic alliances in the overall T&L industry but have come to a halt during the pandemic in 2020. However, 34 joint ventures and other collaborative ventures were announced such as between Delta and LATAM, or Wizz Air and ADDH establishing Wizz Air Abu.

The outlook for further consolidation in the airline sector is fairly positive. While most airlines are focused on surviving during the crisis, there are still markets that were ripe for consolidation even before the crisis hit and where the need to consolidate remains.

Top 10 M&A deals in aviation

Announcement	Target	Target nation	Buyer	Buyer nation	Deal status	Deal value (\$bn)
Dec 20	Signature Aviation PLC	UK	Blackstone	US	Pending	2.51
Jun 20	Virgin Australia Holdings Ltd	AU	Bain Capital LP	US	Completed	2.51
Nov 20	Asiana Airlines Inc	KR	Korean Air Lines Co Ltd	KR	Pending	1.35
Feb 20	Etihad Airways (38 aircraft)	AE	Altavair LP	US	Pending	1.00
Jul 20	Korean Air (airline catering unit)	KR	Hahn & Co	KR	Completed	0.83
Dec 20	BLADE Urban Air Mobility Inc	US	Experience Investment Corp	US	Pending	0.36
Nov 20	Corsair SA	FR	Investor group of Air Caraïbes founder Eric Kourry and Patrick Vial-Collet	FR	Pending	0.35
Dec 20	Shaanxi Chang'an Airlines	CN	Hainan Airlines Holding Co Ltd	CN	Pending	0.31
Nov 20	Asiana Airlines Inc	KR	Korean Air Lines Co Ltd	KR	Completed	0.27
Nov 20	Korean Air Lines Co Ltd	KR	Korea Development Bank	KR	Completed	0.27

Sources: Refinitiv, S&P Global Capital IQ, PwC analysis

A new trio of challenges and pivoting customer expectations for airlines

As the COVID-19 pandemic has been the prominent topic of the year, many short-term challenges for airlines have become more clear over time. In addition to the medium-term requirements on carriers from the last PwC Transport and Logistics Barometer – compliance with CO2 regulations, competition between full-service carriers (FSCs) and low-cost carriers (LCCs), pivoting of business models –

we expect the following topics to be key in 2021.

- **Change in customer needs and mobility habits**

According to the latest PwC consumer survey, over 70% of people will book fewer short- and long-haul flights in the future. This will affect both leisure and business travel, but will have a more profound impact on the latter: due to substitute services, such as video conferencing, six out of every ten business travellers say they are going to reduce their number of trips permanently. As a consequence, airlines will have to review their offerings and capacity to re-target their customers.

- **Ensuring health and safety when travelling**

As passengers become more cautious about air travel, the demand for additional safety measures will increase. Those measures may include support for a contactless journey, such as biometric identification or an electronic health passport; preventative measures such as pre-flight testing or remote symptom detection; and hygiene on the plane, including safe seats, travel kits and on-board assistance. Only 7% of passengers would resume travelling without further ado. Hence, it will become

crucial for carriers to ensure a safe but unrestricted passenger experience for travelling in comfort again.

- **Cost pressure and efficiency through automation**

Due to the drop in demand, many market players are currently focusing on cash flow management and on leveraging potential cost savings. Investments have become few and far between. At the same time, the state of the industry has created new momentum to drive digital transformation. As the willingness of passengers to use self-service increases, it opens up opportunities for carriers to foster automation and address efficiency gains. Such services may include passenger handling during irregularities, automated claims management, chatbot interaction or kiosk services. By driving these initiatives, airlines may be able to improve passenger experience while stepping ahead in optimising their operations at the same time.

Beyond those short- and medium-term challenges, however, 2021 is based on the hope of taking another big step towards normality. The cargo segment in particular, which will face an additional demand of around 8,000 cargo flights to distribute the COVID-19 vaccines globally, is expected to contribute significantly to that recovery.

While the current pain points and challenges are certainly being acknowledged and understood in the industry, many players still lack the resources and capacity to address them properly in time. Once the industry moves back towards an operational level that generates stable cash flows, we might see a substantial expedition of those initiatives.



Deep dive: cruise lines and ferries

After several positive years and a steady increase in revenues and profits, the cruise business faced an almost complete standstill in worldwide business activities due to the effects of the pandemic.

Several cruise companies were forced to stop cruise operations as result of travel restrictions and measures taken to contain the spread of the virus. They worked on implementing hygiene plans to restart operations and to attract passengers, but the worldwide development of the pandemic led to the failure of this aim.

Containing the virus is a necessity for the recovery of the cruise market. The market itself is fundamentally attractive

with significant potential – especially in Asia – but the current focus of cruise companies is surviving the COVID-19 crisis to be able to profit from the subsequent upswing.

Therefore, companies are looking for mergers within the industry to combine strengths, optimise cost structures or extend cooperation with travel agencies. For example, TUI Cruises bought Hapag-Lloyd Cruises to strengthen their position in an ailing cruise market.

In addition, many cruise companies are seeking financial support from investors or state funding to make it through the crisis.

Ferry companies have been severely affected by a significant volume decrease. Passenger transport declined sharply by up to 90% or even more; cargo transport also

dropped by more than 60% in some cases, but this was still less than the drop in passenger volume. Therefore, ferry companies have been affected by the pandemic less severely than cruise companies.

Despite the COVID-related challenges, important issues remain for ferry companies. To be compliant with increasing environmental regulations, investments in new environmentally friendly technologies are required.

Moreover, customer demands are forcing cruise companies and ferry companies to reinvest earlier in their vessels and entertainment equipment than in the past. Financing this transformation will be a challenge, which might offer opportunities for investors to invest in these companies.

M&A deals in shipping (passenger)

Announcement	Target	Target nation	Buyer	Buyer nation	Deal status	Deal value (\$bn)
Dec 20	Torghatten ASA (excluding airline unit)	NO	HATI BidCo (EQT AB)	NO	Pending	0.89
Feb 20	Hapag-Lloyd Cruises GmbH	DE	TUI Cruises AG	DE	Completed	0.69
May 20	NCL Corp Ltd (unit of Norwegian Cruise Line Holdings)	US	L Catterton Management Ltd	US	Pending	0.40
Dec 20	Beihai Xinyi Travel Ship Co	CN	ENN Investment Holdings Co Ltd	CN	Completed	0.21
Mar 20	Shun Tak-China Travel Shipping	HK	Dalmore Investments Ltd	HK	Pending	0.06

Sources: Refinitiv, PwC analysis



4 Freight transport and logistics



Freight transport and logistics coping with the pressure

The COVID-19 crisis has revealed both the vulnerability and resilience of the freight transport and logistics industry.

There were losses of logistics capacity, such as belly capacity in air freight. Nevertheless, it was largely possible to maintain supply chains. CEP services were also able to handle the e-commerce boom without any significant impairment of delivery quality or punctuality.

The crisis has impacted logistics players in different ways depending on industry focus, region, service focus and company size. While the food, pharmaceutical and health-care sectors are surging at capacity limits, the logistics capacity of industrial and automotive companies is standing idle. Selected forwarders with diversified product and

industry portfolios were able to compensate for the volume decrease, e.g. through rate increases in air freight. Small players are being hit hard, and are in a constant fight for survival in a fragmented logistics industry with low margins. They often don't have any recovery plan or alternative operations plan.

Global vaccine supply – litmus test for pharma and cold chain logistics

The challenge of distributing vaccines worldwide is causing some to speak of the systemic importance of logistics. With an estimated 271 million vaccine doses¹ per month, the global vaccination campaign is an unprecedented, mammoth task – not only for national health systems, but also for the logistics industry. The major challenges include securing transport and storage capacity and refrigeration of the vaccines, continuous traceability, protection against

tampering and theft and, finally, disposal of medical equipment. Many companies have already made corresponding investments. The global vaccination campaign is becoming a litmus test for pharmaceutical and cold chain logistics.

Robust industry dynamics – T&L is defying the crisis

Retail logistics, warehousing and parcel delivery have been the key areas of industry dynamics. The level of M&A deals has been surprisingly robust, despite the disruptions and uncertainties throughout 2020.

In 2020, 119 M&A deals took place in the freight transport and logistics sector, accounting for 49% of all deals announced and 33% of total deal value. While deal numbers surpassed those of 2019 and 2018, total deal value remains significantly below the previous year's figure.

¹ Source: ABI Research

Top 10 M&A deals in freight transport and logistics

Announcement	Target	Target nation	Buyer	Buyer nation	Deal status	Deal value (\$bn)
Oct 20	AGRO Merchants North America Holding	US	Americold Realty Trust	US	Completed	1.74
Sep 20	Lineage Logistics Holdings LLC	US	Investor Group	CA	Completed	1.60
Mar 20	Li & Fung Ltd	HK	Golden Lincoln Holdings I Ltd	HK	Completed	1.38
Mar 20	Innovel Solutions Inc	US	Costco Wholesale Corp	US	Completed	1.00
Sep 20	YTO Express Group Co Ltd	CN	Alibaba (China) Network Technology Co Ltd	CN	Completed	0.97
Sep 20	Sagawa Express Co Ltd	JP	SG Holdings Co Ltd	JP	Completed	0.83
Nov 20	Air China Cargo Co Ltd	CN	Investor group led by Cainiao	CN	Pending	0.73
Feb 20	Pure Industrial (portfolio)	US	WPT Industrial Real Estate Investment Trust	CA	Completed	0.73
Jul 20	YRC Worldwide Inc	US	United States Department of Treasury	US	Pending	0.70
Sep 20	Guangzhou Intl Airport R&F	CN	Sonic Holdings I (Blackstone Group)	CN	Pending	0.67

Sources: Refinitiv, PwC analysis

Online shopping fuels the CEP market

The COVID-induced lockdown measures and temporary store closures – as well as safety concerns – stimulated the use of e-commerce and thus boosted the CEP market considerably. Despite regional differences, the rapid surge in private customer business even compensated for the slump in B2B parcels caused by shutdowns.

An impressive 46% of all deals in Logistics & Trucking were in warehousing assets and operations, underpinning this situation.

E-commerce players are continuing to expand their logistics networks. In August, JD.com announced it would acquire a controlling stake in Kuayue-Express Group, after having acquired a minority stake in supply chain management specialist Li & Fung earlier in the year. Alibaba increased its stakes in YTO Express (by acquiring another 12% for \$967m) and BEST, a Hangzhou-based provider of logistics consulting services (5% stake/\$150m). Alibaba also signed a strategic collaboration agreement with Israel-based container shipping line ZIM for the direct purchase of sea freight capacity, improving logistics services to Alibaba.com sellers.

The cold storage market is being driven by a growing online food market and demand for chilled and frozen foods, as well as the rising demand for cold storage space for COVID-19 vaccines. This is underpinned by several transactions in various geographies including North America, China, Japan and Australia. As an example, cold storage warehouse operator and owner Americold Realty Trust is planning to acquire privately held AGRO Merchants North America Holding at a price of \$1.74 billion in order to expand its existing

global network, especially in Europe. AGRO is the fourth-largest temperature-controlled warehouse company globally and serves customers across a diverse spectrum.

Capacity as a key issue for freight forwarding

Freight forwarders had to tackle a decline in shipping volumes and operational issues from trade imbalances.

In the second half of 2020 sea freight carriers reinstated blank sailings and increased capacity, especially due to strong cargo demand in China. But port congestion and equipment imbalances are aggravating the business. In particular, lack of space and delays in vessel scheduling are increasing the demand for air cargo space.

Air cargo demand has continuously recovered since its low point in March 2020. However, capacity shortages following the lack of passenger flights and the resulting reduction of belly freight capacity are an obstacle to an even stronger recovery. Industry-wide CTKs available decreased by 24.5% year-on-year in October. This led to sharp increases in freight rates (73% higher in November 2020 than 2019)¹ and to some extent forced shippers to use other modes of transport. Air cargo volumes are expected to fall by 12% in 2020 as a whole and recover to pre-crisis levels in 2021, according to IATA.

Road freight was impacted by the effects of the lockdown particularly early in the year with an estimated loss of \$679 billion globally in 2020, according to IRU. An increase of empty running was witnessed, as transport of certain goods (e.g. automotive parts, clothing, construction materials) fell significantly. Driver shortages in this sector were aggravated, especially due to cross-border movement restrictions.



¹ Source: DHL Airfreight state of the industry | December 2020

It goes without saying that digitalisation is the key to addressing these new circumstances. The COVID-19 crisis is catalysing the digitalisation of logistics backend processes as well as the customer frontend. New digital forwarders and marketplaces (e.g. Forto, Freightos) are leading the way in user-friendliness and increased shipment visibility.

In 2020, Berlin-based digital freight forwarder Sennder made several strategic moves underpinning its aspiration to extend its geographical reach, gain further market share and further digitalise the forwarding process. Sennder's merger with French competitor Everoad was followed by the acquisition of UBER's European freight business. Sennder and Poste Italiane set up a joint venture to digitalise the Italian road freight market. Finally, Sennder entered into a strategic partnership with JITpay to accelerate the billing and payment processes in freight transport.

Other examples include C.H. Robinson, which announced a strategic partnership with Microsoft to enable real-time visibility in supply chains, and Instafreight launching its own transport management system.

Core capabilities are key in contract logistics

In contract logistics, service providers had to adapt quickly to changing requirements for supply chain services. Throughout the phases of the pandemic they have been exposed to disruption on both the supply and the demand side. Those with a strong customer base in automotive, oil and petroleum, industrials and other heavier manufacturing industries had to tackle declining volumes.

In contrast, the sector is benefitting from the rise in e-commerce, offering growth opportunities to logistics service providers, for example in fulfilment services. Furthermore, customers are moving to more resilient supply chains, which require higher stock levels and additional warehousing capacity.

These changes will trigger some strategic moves. But many companies have implemented strategies during the year through M&As, joint ventures and strategic alliances that already existed before the COVID-19 crisis.

For example, Kuehne + Nagel sold parts of its contract logistics division to XPO (drinks logistics, food services, and retail and technology businesses) in order to focus more on the e-commerce and pharmaceutical segments. This step, which was announced in March 2020 and completed at the turn of 2020/21, followed a strategic review at the beginning of 2019.

XPO in turn announced a plan to spin-off 100% of its (contract) logistics business, creating two pure play companies. After separation, XPO will be a provider of freight transportation, primarily less-than-truckload services and non-asset truck brokerage, while the NewCo will be one of the world's leading contract logistics providers.

German logistics service provider Fiege is another example of focusing on core capabilities. Fiege sold its international freight forwarding business to US-based AIT Worldwide Logistics, which is backed by private equity firm Quad-C. AIT will gain more scale for its global network in a market which is undergoing a process of accelerated consolidation and is increasingly being shaped by large, globally active players. Likewise, Fiege will be able to focus on and invest more in its contract logistics business, and continue to benefit from its strategic partnership with AIT.



Shipping and ports

The shipping industry managed the effects of the pandemic quite well. It was impacted by the contraction of cargo volumes, and reacted by reducing capacity and costs to maintain profitability.

On many important routes, measures such as additional blank sailings, suspended services and the re-routing of vessels were taken. In the last few months of 2020, the subsector had to deal with container shortages, resulting from uneven demand and causing increased freight rates.

Handling procedures in ports and terminals were less affected than expected, and shipping lines optimised traffic.

Deal activity in the shipping segment remained on a stable level despite the current crisis. Major equity deals have been conducted with different focuses.

Stakes in HMM were bought by an investor group around Korean Development Bank as part of the strategy to support and strengthen Korean shipping companies. In addition to these specific deals, several deals were conducted by equity investment companies which restructured their portfolios.

Looking at activities on the debt market, several of the larger investment companies such as Cerberus and Blackstone – which have bought significant debt portfolios from the former largest ship financing banks during the last two years – sold considerable parts of the debt portfolios to other investors.

Private equity companies buying debt portfolios from banks normally attracts a lot of market attention, but the restructuring itself or the resale of parts of the portfolios is usually kept confidential. Nevertheless, it is known in the market that significant transactions between private equity investment groups and other investors have been conducted on the debt market over the last year.

Top 10 M&A deals in shipping (freight)

Announcement	Target	Target nation	Buyer	Buyer nation	Deal status	Deal value (\$bn)
May 20	H-Line Shipping Co Ltd	KR	Investor group	KR	Completed	1.45
Dec 20	SEACOR Holdings Inc	US	American Industrial Partners LP	US	Pending	1.00
Mar 20	COSCO SHIPPING Energy Transportation Co Ltd (12.6% stake)	CN	China COSCO Shipping Corp Ltd	CN	Completed	0.60
Apr 20	HMM Co Ltd (31.3% stake)	KR	Investor group	KR	Completed	0.59
Jul 20	Sinokor Pcl Co Ltd (certain shipping business)	KR	SK Shipping Co Ltd	KR	Completed	0.36
Jan 20	Savage Inland Marine LLC (inland tank barge fleet)	US	Kirby Corp	US	Completed	0.28
Feb 20	American Steamship Co	US	Rand Logistics Inc	US	Completed	0.26
Jun 20	Tr Energy Resources Pte Ltd (shipping assets)	SG	Oldendorff Carriers GmbH & Co KG	DE	Completed	0.21
Dec 20	Navigator Holdings Ltd (31.9% stake)	UK	BW Group Ltd	BM	Pending	0.20
May 20	Imperial Logistic (European shipping business)	DE	Häfen und Güterverkehr Köln AG	DE	Completed	0.19

Sources: Refinitiv, PwC analysis



Container shipping

After a temporary decline during the first lockdown, demand for container freight capacity increased significantly due to the catch-up effect and the usual strong third and fourth quarters in sea transport. The combination of increased demand and low fuel prices led to a significant increase in profit for container shipping lines in the third and fourth quarters of 2020.

The increasing shortage of boxes has caused spot rates for Chinese exports to rise continuously over the last few months, and these are expected to grow further or remain high at least until Chinese New Year 2021.

Tanker shipping

The first lockdown caused a decreased oil demand and put the tanker segment under pressure. Despite oil demand recovering and positively influencing spot prices in the fourth quarter, 2020 remains a lost year for the tanker segment.

The dirty tanker segment in particular remains under pressure due to oversupply of capacity. Due to the increase in storage demand, several very large crude carriers are being chartered as floating storage, but these attempts are not significantly affecting the oversupply in transport capacity.

The ballast water regulations might have had a significant effect on the current fleet, but several ship owners were able to postpone installation on older vessels. These certificates will be expiring in the near future and may cause scrapping activities, which will – combined with a

small order book in the tanker segment – lead to increasing charter rates over the next few years.

Nevertheless, uncertainties like the conflict in Venezuela or the unstable political situation in Lybia may have a negative impact on the recovery of the oil and gas transport segment.

Bulk shipping

After a significant decrease to June 2020, the bulk market recovered, reaching its peak by the end of October 2020.

The market is still highly volatile and is being driven by spot market prices. A global recovery after the effects of the pandemic may drive infrastructure investments. Demand for dry bulk may increase again, especially in the Asia region.

Combined with a small order book compared to the last few years, an increase in freight and charter rates in the bulk business seems likely.

Tensions between Asian countries and trade conflicts will affect the recovery of the segment and slow it down.

Specialised segments like heavy lift transport will be driven by the overall recovery after the pandemic. Therefore, it is uncertain when investment in infrastructure and necessary facilities will return to its pre-pandemic level.

Offshore shipping, especially in the deep-sea exploration and supply segment, will remain under pressure due to the availability of (low-cost) shale gas and oil. Increasing environmental regulations will put additional pressure on this segment.

Ports and terminal operations

Ports and terminal operations were significantly affected by the reduction in trade volume and passenger traffic due to the pandemic. Ports which specialised in specific cargo types, such as cars or passengers, suffered most.

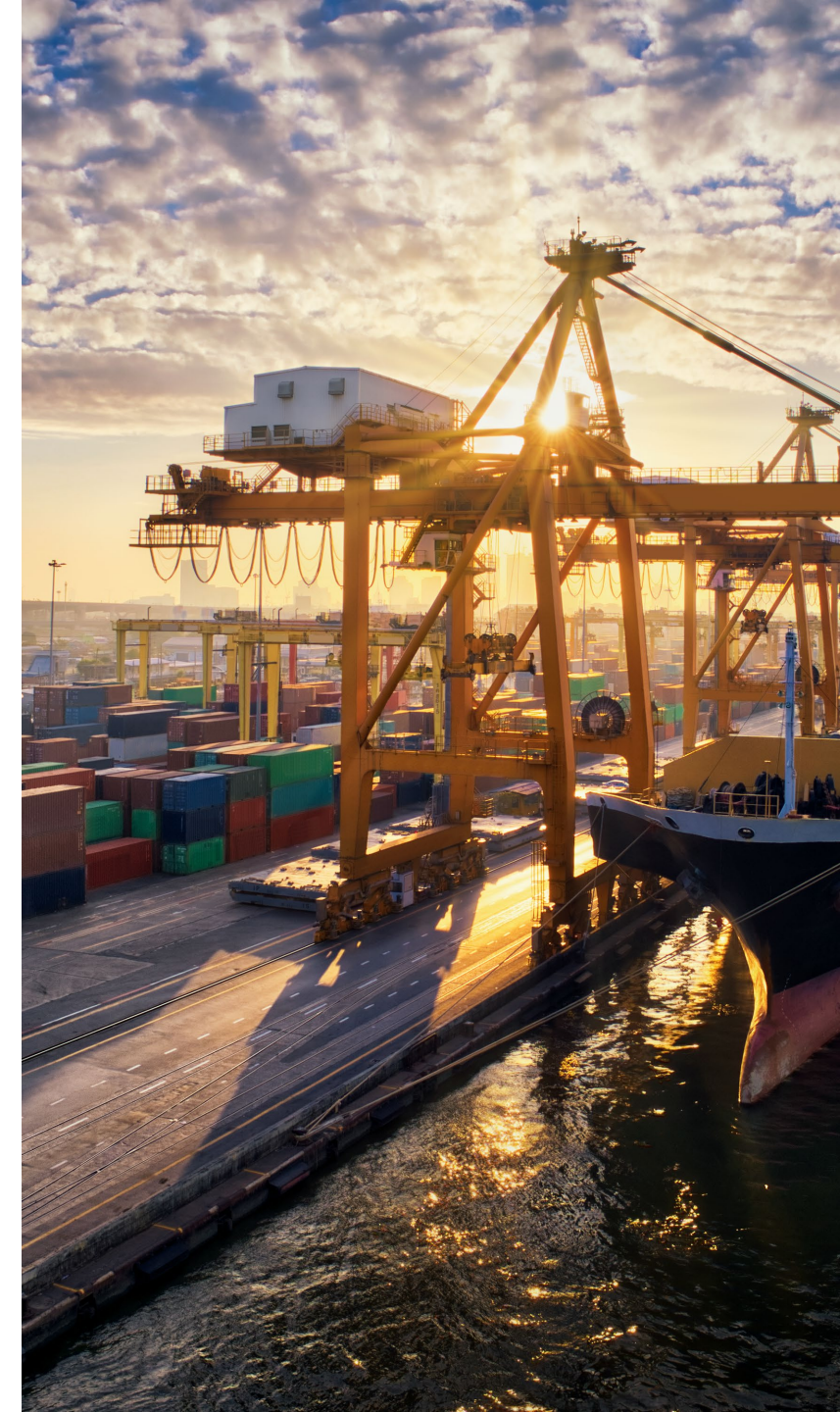
In contrast, ports with a broader range of cargo types were able to maintain operations despite the immediate effects of the pandemic, but have also been affected by the overall reduction of cargo volume.

Nevertheless, the pandemic proved the importance of ports and terminals and their specific roles as cargo hubs in globalised logistics chains.

Ports are in ongoing competition with each other, and therefore need to invest in physical and digital infrastructure to become more efficient and to reduce costs and handling times.

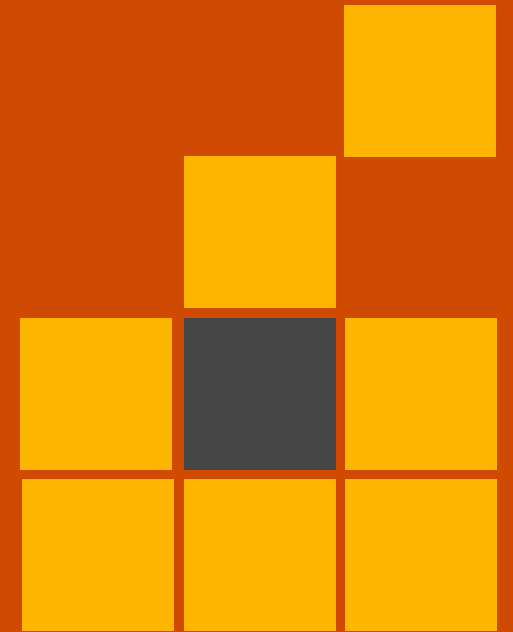
An additional challenge is a significant increase in – especially environmental – regulations. Reducing carbon footprints and other kinds of emissions will be a key challenge for the port community, considering that most well-established European ports are near a large city, or part of it.

Overall, several countries (together with investors) reacted by supporting companies in the maritime economy in order to stabilise the segment, maintain specific knowhow, and benefit from the positive medium- and long-term perspective of ports and terminals being crucial for the functioning of worldwide trade.





5 Outlook



Outlook

The macroeconomic view

World trade is showing signs that it is beginning to recover from the severe collapse caused by COVID-19. The IMF October 2020 World Economic Outlook report projects that the global economy will grow by 5.2% in 2021 after shrinking by 4.4% in 2020.¹ The more recent OECD GDP estimates are slightly lower, at 4.2% on a global level and 3.6% in the Euro area respectively in 2021.² Following the recovery in 2021, global economic growth is projected to slow to around 3.5% in the medium term. This indicates that advanced, emerging and developing economies will make limited progress towards reaching the projected pre-pandemic path of economic activity for 2020–25.

A high level of uncertainty remains. On the one hand, it is not yet known how quickly and efficiently the vaccination campaign that is being launched worldwide can be carried out. This will depend on the availability of sufficient quantities of the vaccines and robust supply chains. Furthermore, it remains to be seen whether the vaccines developed will effectively protect people against the virus and any mutations that may emerge.

Therefore, since the beginning of the pandemic, we've been carrying out and continuously re-evaluating our own scenario analysis, which is based on a consensus of analyses that incorporates more than 180 sources and predictions (from sources including research institutes,

universities, public authorities, investment banks, and other market players), as well as financial data on 40 million corporations globally.

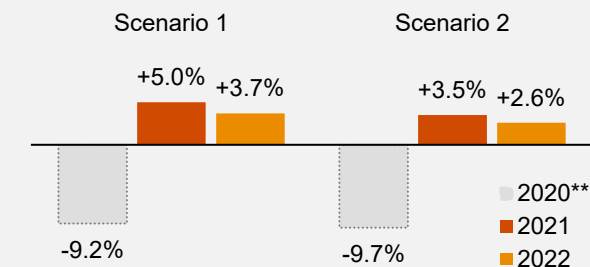
To reflect the new underlying conditions with mass vaccination having been initiated at the end of 2020, we have adjusted our assessment to accommodate two options:

- **Scenario 1 – effective vaccination:** vaccination with stable supply chain; sharp decline in infections after initial social distancing
- **Scenario 2 – mutations and measures:** ineffective vaccination due to mutations and imperfect supply chain; new measures in 2021

In both scenarios, we expect a recovery of GDP for the most important economies, e.g. 5.0% in the EU in scenario 1 and 3.5% in scenario 2 in 2021.³ In the following, we limit our consideration to selected EU territories (see right). The projected growth rates put the EU in the mid range, while China, for example, will rebound much faster with an expected GDP growth of 11% (scenario 1) or 4.1% (scenario 2), and will thus lead global economic recovery in 2021. In the EU, growth will be constrained by continued uncertainty, repeated containment measures and subdued confidence until the vaccination takes effect on a large scale. Investment and private consumption are also expected to remain at low levels due to unemployment or modest wage growth.

What does this mean for the T&L industry? As the backbone of our global economy, it is directly dependent on its ups and downs. In the COVID-19 crisis, structural effects such as changes in mobility habits and the impetus to localise operations came into play and have made forecasting more difficult.

Market view Projected GDP in the EU*



Source: PwC scenario analysis, November 2020

* **Based on selected territories:** Austria, Germany, France, Italy, the Netherlands, Greece, Portugal, Spain

** **Disclaimer:** projection wherever actuals are not yet available

¹ Source: IMF | World Economic Outlook | October 2020

² Source: OECD | Economic Outlook | December 2020

³ Source: PwC scenario analysis

Freight transport and logistics

According to our scenario analysis, GVA of the European freight transport and logistics industry is projected to increase by 5.4% in 2021 and 4.0% in 2022 in an effective vaccination scenario. With a 9.0% drop in 2020, this may lead to a full recovery to pre-crisis levels by the end of 2022. Scenario 2 suggests lower recovery rates (3.9% and 2.9%).

The initial slump of the COVID-19 crisis has been overcome, but the recent restrictions and the winter period in Europe may affect international trade again. The performance of the manufacturing and automotive industries is important for the recovery of freight transport and logistics, especially since many products and parts are sourced from other world regions. Based on our latest scenario analysis, we expect GVA in the automotive sector to increase by up to 8% in 2021, while manufacturing is expected to recover moderately (4.6%) and the food industry will remain stable.

The COVID-19 crisis has fuelled discussions about the usefulness of global supply networks. If countries in Europe are seen as economically viable alternatives to source markets in other world regions, stronger diversification in supply chains, repatriation and nearshoring could create new opportunities to design altered supply chains. We believe, though, that globalisation as such is not up for discussion. Many products and parts will still be sourced in China and other upcoming Asian economies, such as India, Thailand or Vietnam. Rail connections on the New Silk Road may benefit on a longer-term basis from acute capacity bottlenecks in air or sea freight. Increasing complexity in trade relationships and higher demands for flexibility in crisis situations will reinforce the role of freight forwarders as strong partners and complexity managers.

Passenger transport

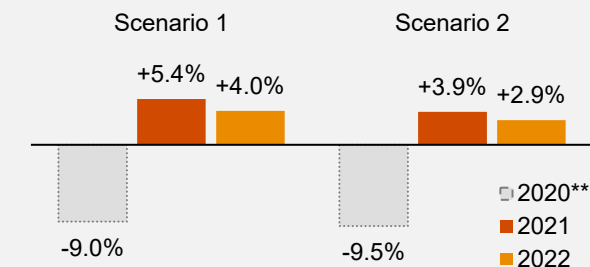
A much slower recovery is expected in the passenger transport segment, after a significantly larger slump in 2020. GVA in Europe could improve by 6.6% (2021) and 4.8% (2022) in the effective vaccination scenario, or 4.5% and 3.1% in the ineffective scenario. With GVA expected to be 10.3% or 18.5% below pre-crisis level at the end of 2022, full recovery will not be achieved before 2023 or 2024.

Which of the two scenarios prevails will not only depend on how quickly and how effectively the global vaccination campaign can be advanced; the situation in passenger transport is much more complex. Holiday and leisure travel, business travel and daily commuting have their own dynamics. The first influencing factor is the global economic recovery, which gives companies, but also individuals, the opportunities and the need for mobility. But the traditional correlation between economic development and mobility will no longer exist in its familiar form. People's mobility habits will change permanently. Companies have found that working remotely works better than they had thought. Working from home schemes will reduce commuting, and business trips will also be reduced for cost reasons. People are also likely to be cautious about holiday travel, especially long-distance travel, for years to come. So we will see a structural, lasting effect, beyond a crisis-related slump in demand.

The future of passenger transport will ultimately also depend on how the mobility industry – with airlines, rail companies, bus companies and other new mobility providers, but also associated segments such as hotels – can meet these new mobility needs and regain consumer trust in safe travel.

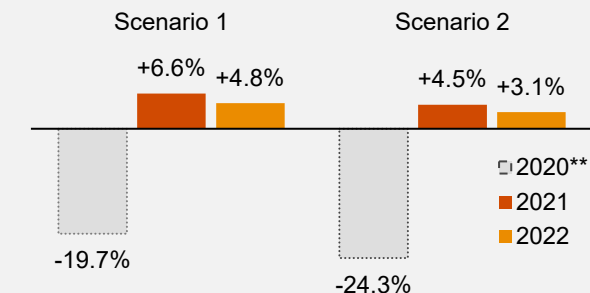
Source: PwC scenario analysis

Freight transport and logistics Projected GVA in the EU*



Source: PwC scenario analysis, November 2020

Passenger transport Projected GVA in the EU*



Source: PwC scenario analysis, November 2020

* **Based on selected territories:** Austria, Germany, France, Italy, the Netherlands, Greece, Portugal, Spain

** **Disclaimer:** projection wherever actuals are not yet available

Outlook for M&A and investments

After deal activity in the T&L industry did not plummet in the crisis year of 2020 but remained stable, we expect further development at a similar level for 2021. The uncertain environment, in particular, makes investments in transport infrastructure with secure returns attractive for market participants and investors. Likewise, we expect assets in warehousing and cold storage to remain attractive for investors, which will result in continued M&A activity in this field. Furthermore, the current low prices in combination with low interest rates are creating an appealing environment for long-term investments, and also for strategic investors, for whom price levels were too high for this type of transaction in the past.

Looking at the performance of T&L companies, most have managed to overcome operational challenges on their own. Although catch-up demand may occur in some cases, we do not expect a structural issue or a significantly increased level of insolvencies and restructurings in the industry, given the expected recovery of many industry sectors. Restructuring specialists in private equity firms could, however, become active in the event of liquidity shortages and trigger investments in the industry.

How to build resilience: repair, rethink, reconfigure

The scenarios presented above show positive growth rates for 2021, but most businesses – particularly in passenger transport – will continue to face far-reaching challenges and high uncertainty. To build resilience, it is crucial for companies not only to master the short-term preservation of their operations, but to be agile and flexible in order to be

able to react and adapt quickly to changes. For some companies that have been seriously affected by the crisis, it may be necessary to start rethinking and reconfiguring business models.

1. Repair: some organisations are still in survival mode, trying to tackle the loss of revenue caused by the impact of the crisis. To secure and stabilise T&L businesses in the short term, the focus should be on cost optimisation programmes and working capital management. In terms of revenue generation, intensive customer contacts will help to identify possible new expectations and requirements. Moreover, the situation requires a search for substitutes and new solutions (e.g. modal shift, new collaboration, transforming existing expertise to new needs).

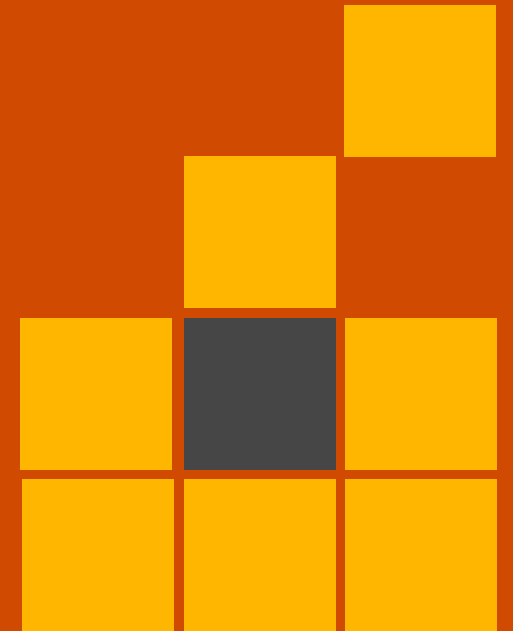
2. Rethink: organisations should think about preserving value and creating new value, meaning concrete action how on planning and accelerating a realignment to become more resilient in the short and medium term. In addition to cost base transformation – which includes, for example, assessing the number and equipment of locations, expanding automation of administration, or reviewing insourcing and outsourcing – operational excellence is becoming increasingly important. Growing unpredictability and customer expectations require high efficiency and reliability as well as a high level of service (e.g. small batch sizes) with a high level of agility at the same time. The aim is thus to increase the customer's dependence and minimise interchangeability as a service provider. This can be achieved, for example, in the course of digitalisation, a process in which there is a need to catch up in many areas and often no digital standards have been established.

These deficiencies lead to uncertainty. The particular challenge with regard to interfaces and connectivity in logistics will help to unlock optimisation potential – e.g. flexible design of routes, or tracking shipments in order to be able to react if supply chains break – but requires building up knowhow. The aim is therefore to keep up with or make technological progress and to set standards in order to achieve efficiency. In this context, maintaining and expanding access to freight is an important factor for the *raison d'être* and competitive advantage of T&L organisations. In times of change in the way people live and work and of a shift from B2B to B2C in many areas, it's all about securing the core asset (access to freight).

3. Reconfigure: organisations must not waste the opportunities arising from the current crisis to reconfigure their strategies and operations. Therefore, structural levers need to be defined to create long-term value and kick-start restructuring (in terms of transformation, resilience, changing consumption patterns, divestments, acquisitions, etc.). To make reconfiguration sustainable, a holistic approach will be essential. This includes staff development and dialogue with external R&D capacity – e.g. universities, research institutes – but also rethinking technology strategies, geographic and ecological footprints, and business models to make them more resilient. Moreover, companies need to prepare for an ecosystem and platform-based economy in which collaboration or M&A could be beneficial.



6 Appendix: M&A deals in figures, methodology, contacts



Megadeals = deals with a value of \$1 billion or more

Total: 17 deals, \$32.7bn
H1 2020: 8 deals, \$13.1bn

Megadeals in 2020

Announcement	Target	Target nation	Buyer	Buyer nation	Deal status	Deal value (\$bn)	Sector
Dec 20	Signature Aviation PLC	UK	Blackstone	US	Pending	4.29	Passenger Air
Jun 20	Yingkou Port Liability Co Ltd	CN	Dalian Port (PDA) Co Ltd	CN	Pending	2.84	Shipping (infrastructure)
Feb 20	DP World PLC	UAE	Port & Free Zone World FZE	UAE	Completed	2.72	Shipping (infrastructure)
Apr 20	Auto-Estradas de Portugal SA (81% stake)	PT	Investor group of APG Groep NV, Korean National Pension Service and Swiss Life AM	KR	Completed	2.63	Passenger Ground (infrastructure)
Jun 20	Virgin Australia Holdings Ltd	AU	Bain Capital LP	US	Completed	2.51	Passenger Air
Dec 20	Transurban Group (US toll operations)	US	Investor group	AU	Pending	2.19	Passenger Ground (infrastructure)
Sep 20	Cia de Locacao das Americas	BR	Localiza Rent a Car SA	BR	Pending	2.15	Other
Oct 20	AGRO Merchants North America Holding	US	Americold Realty Trust	US	Completed	1.74	Logistics & Trucking
Jan 20	Krishnapatnam Port Co Ltd	IN	Adani Ports & Special Economic Zone Ltd	IN	Completed	1.64	Shipping (infrastructure)
Sep 20	Lineage Logistics Holdings LLC	US	Group of seven financial investors	CA	Completed	1.60	Logistics & Trucking
May 20	H-Line Shipping Co Ltd	KR	Investor group of Hana Financial Group and Hahn & Co	KR	Completed	1.45	Shipping
Mar 20	Li & Fung Ltd	HK	Golden Lincoln Holdings I Ltd	HK	Completed	1.38	Logistics & Trucking
Nov 20	Asiana Airlines Inc	KR	Korean Air Lines Co Ltd	KR	Pending	1.35	Passenger Air
Nov 20	Elizabeth River Crossings OpCo	US	Investor group of Abertis and John Hancock Life Insurance	ES	Completed	1.19	Passenger Ground (infrastructure)
Dec 20	SEACOR Holdings Inc	US	American Industrial Partners LP	US	Pending	1.00	Shipping
Mar 20	Innovel Solutions Inc	US	Costco Wholesale Corp	US	Completed	1.00	Logistics & Trucking
Feb 20	Etihad Airways (portfolio of 38 aircraft)	UAE	Altavair LP	US	Pending	1.00	Passenger Air

Sources: PwC analysis, Refinitiv

Regional distribution of deals

Although the total number of deals has decreased by approx. 7% since last year, Asia & Pacific is again the region with the most mergers and acquisitions and the highest total deal value (\$48.9 billion). As in previous years, M&A activity in China is the highest in the region, with 61 deals (excluding Hong Kong: 10 deals). Chinese deal activity is mostly local, but there was one mainland China inbound deal and one outbound deal in 2020. With the acquisition of a 70% interest in Lekki Port in Nigeria, China again invested in infrastructure in a developing country. In addition to this acquisition, five outbound deals via Hong Kong were announced.

In Europe, deal activity has increased compared to 2019, and the region is therefore in second place in terms of total number of deals. It is also the region with most outbound deals. However, the average deal value is the second lowest, as European companies have focused on smaller deals.

North American M&A activity remains low with 21% fewer deals compared to 2019. This region is being severely affected by the COVID-19 pandemic, which has greatly impaired the US economy.

In line with previous years, South America and Africa were the least active regions in 2020.

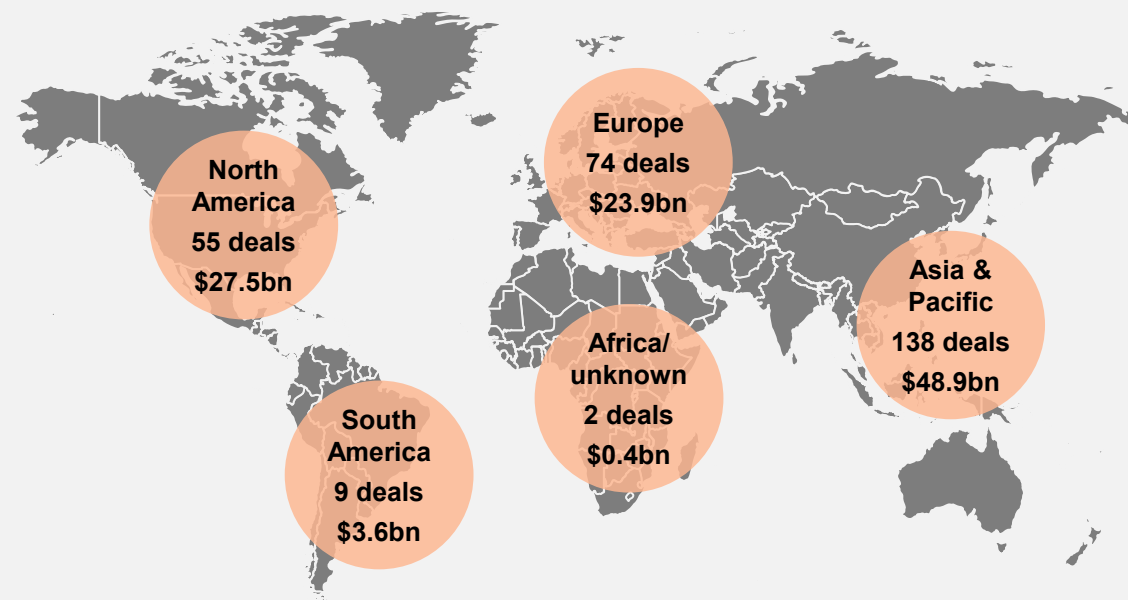
	No. of deals	Value (\$bn)	Ø value (\$m)
Europe			
Local	50	10.9	218.0
Inbound	11	8.4	763.5
Outbound	13	4.6	357.5
Total	74	23.9	323.6

	No. of deals	Value (\$bn)	Ø value (\$m)
Asia & Pacific			
Local	115	36.2	314.9
Inbound	14	6.7	481.9
Outbound	9	5.9	654.5
Total	138	48.9	354.0

	No. of deals	Value (\$bn)	Ø value (\$m)
North America			
Local	38	13.8	362.8
Inbound	6	4.4	732.1
Outbound	11	9.4	851.5
Total	55	27.5	500.9

	No. of deals	Value (\$bn)	Ø value (\$m)
South America			
Local	7	3.3	472.2
Inbound	2	0.3	171.0
Outbound	0	0.0	-
Total	9	3.6	405.3

	No. of deals	Value (\$bn)	Ø value (\$m)
Africa/ unknown			
Local	0	0.0	-
Inbound	1	0.2	233.7
Outbound	1	0.2	208.4
Total	2	0.4	221.0



Local = target and buyer in the region
 Inbound = target in the region, but buyer outside the region
 Outbound = target outside the region, but buyer in the region

An inbound deal in one region is also an outbound deal in another. Inbound and outbound deals are, therefore, recorded twice in the list.

Source: PwC analysis, based on Refinitiv

T&L sectors – Logistics & Trucking dominant once again

While all other subsectors experienced a decrease in the total number of deals in 2020, Logistics & Trucking saw a 20% increase and is thus, in line with previous years, the subsector with the most deals announced (49% of all deals) and the highest deal value (33% of total deal value). Of the 17 megadeals, four were this subsector; however, the largest number of megadeals (6) involved infrastructure-related targets, with a focus on port and road assets.

While the total number of deals in Infrastructure (Road) and Infrastructure (Airports) experienced a decline, the number of port-related transactions has been steady compared to the previous year. This indicates the continued high attractiveness for investors to engage in this kind of bottleneck position.

The steepest decrease was observed in the Rail subsector, which has been quite inactive in recent years. As already indicated in the first half of 2020, the Passenger Ground sector also suffered a severe decline of 40% in the number of deals and 62% in total deal value.

Among the 244 mergers and acquisitions announced, 72.5% were freight related and accounted for 65% of the total deal volume.

Sources: Refinitiv, PwC analysis

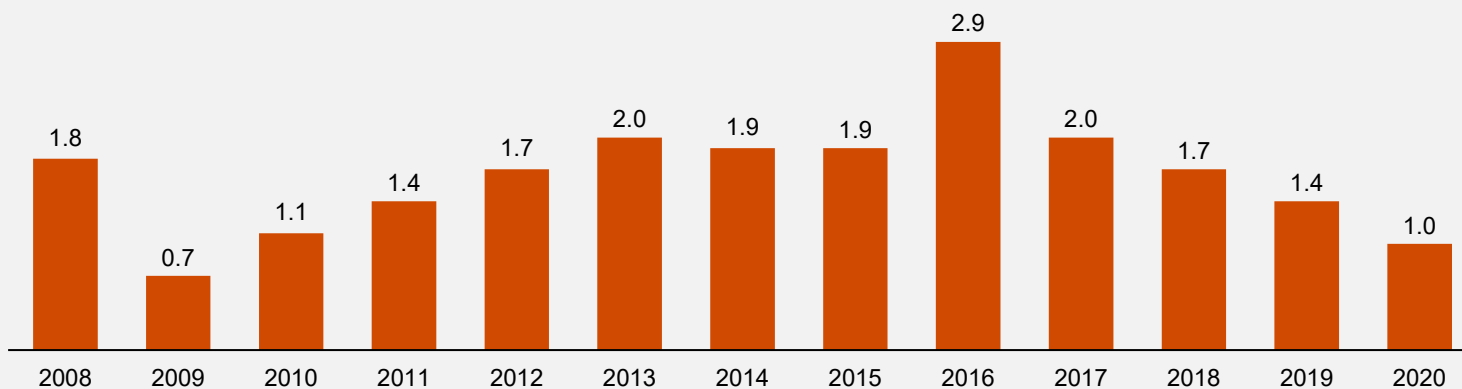
All deals (incl. infrastructure)	1H2018		2H2018		1H2019		2H2019		1H2020		2H2020	
	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value
Total value (in \$bn)												
Passenger Air	24	13.6	15	8.7	21	10.1	10	10.1	12	6.9	15	8.9
Passenger Ground	17	27.4	20	11.1	22	8.6	31	34.7	12	4.4	19	8.7
Rail	3	3.8	3	0.9	8	2.1	8	11.4	2	1.2	5	1.3
Logistics & Trucking	50	14.3	45	16.0	50	37.1	46	12.9	51	10.2	68	17.6
Shipping	29	14.3	14	4.0	30	8.8	19	6.4	24	13.7	23	5.8
Other	4	1.1	3	0.8	7	1.7	9	1.3	2	0.3	11	5.2
Total	127	74.6	100	41.6	138	68.4	123	76.7	103	36.7	141	47.6

Infrastructure	1H2018		2H2018		1H2019		2H2019		1H2020		2H2020	
	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value
Total value (in \$bn)												
Infrastructure (Airports)	8	8.7	3	3.9	9	4.2	4	1.0	5	2.1	1	0.4
Infrastructure (Road)	9	25.6	9	9.1	13	8.0	24	32.8	6	4.0	16	8.0
Infrastructure (Ports)	6	6.7	6	0.8	12	5.3	9	1.1	10	8.6	12	2.3
Total (infrastructure)	23	41.0	18	13.7	34	17.5	37	35.0	21	14.7	29	10.7

Freight vs. passenger	1H2018		2H2018		1H2019		2H2019		1H2020		2H2020	
	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value
Total value (in \$bn)												
Freight	87	51.7	67	22.0	89	48.7	77	41.9	76	25.9	101	27.2
Passenger	40	22.9	33	19.6	49	19.7	46	34.8	27	10.8	40	20.4
Total	127	74.6	100	41.6	138	68.4	123	76.7	103	36.7	141	47.6

Deals with a volume greater than \$50 million

Median of value/sales multiples



Prices tumble

In the crisis-ridden year of 2020, the prices for T&L targets dropped to their lowest level since 2009, with the median value/sales multiple decreasing to 1.0, far below the 10-year average of 1.8. This development was mainly driven by transactions in the Logistics & Trucking and Airline sectors, where sales multiples were significantly below previous years, showing the severe impact of the crisis and the bleak outlook for the Passenger Air subsector. We observe that most subsectors are below the multiple of last year, but prices in Infrastructure (Roads) and Passenger Ground in particular have risen and even exceeded the 10-year average. This may be due to the fact that toll road traffic has not been hit as hard as other passenger transport-related assets such as airports.

Looking at EBITDA multiples, we can see an even stronger reaction to the crisis: the overall multiple has dropped from 6.5 in 2019 to only 4.9 in 2020, the lowest ever recorded in the course of this study series and also significantly below the 10-year average of 7.8. Passenger Air is again the sector with the lowest valuation, reaching an EBITDA multiple of only 3.0 – 50% less than the 10-year average for this sector.

It must be taken into account that the multiples are calculated on the basis of previous year's revenues, while investors value their targets according to revenue expectations for the coming years, which are likely to be significantly below the level of 2019 in the passenger transport sector.

Sources: Refinitiv, PwC analysis

Financial investors with smaller deals

Deal activity by financial investors is largely on par with 2019. However, in 2020 they have focused on smaller deals and spent less money: the average deal size has been cut in half from \$646 million in 2019 to \$339 million in 2020, due to private equity investors focusing on smaller bolt-on transactions for their portfolio companies during 2020.

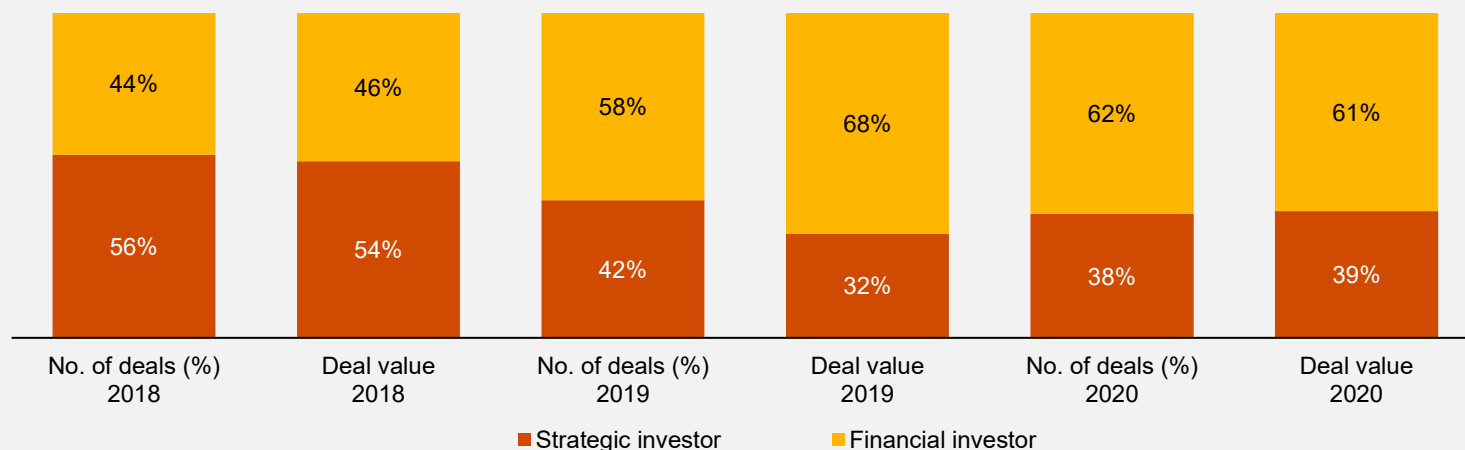
The most attractive subsector remains Logistics & Trucking, accounting for more than half of the deals announced in 2020. Of these 85 deals, 45 relate to warehousing and storage targets. Targets in passenger transportation are less attractive and make up less than 30% of deal announcements by financial investors. These deals also include investments made by government-backed economic stabilisation funds used to route state aid into airlines and other companies that have been heavily impacted by the current crisis.

Our outlook for financial investor involvement in the T&L industry is positive. From a cross-sector perspective, financial investors will continue to play a vital role as there is a lot of money in the market waiting to be invested. Turnaround specialists, which have mostly been on the sidelines in 2020, may also play a larger role in the future if corporates face liquidity issues stemming from a prolonged crisis.

Sources: Refinitiv, PwC analysis

Deals with a volume greater than \$50 million

Number and total value of deals involving financial investors



Total value (\$bn)	2018		2019		2020	
	No. of deals	Total value	No. of deals	Total value	No. of deals	Total value
Passenger Air	15	12.9	14	11.1	18	11.8
Passenger Ground	15	10.1	29	17.6	18	9.8
Rail	3	2.9	7	11.0	5	1.3
Logistics & Trucking	48	19.3	71	38.9	85	19.6
Shipping	14	6.4	19	16.2	14	5.5
Other	4	1.4	10	2.1	11	3.3
Total	99	53.0	150	96.9	151	51.2

Methodology

This report is an analysis of the current industry environment and of global transaction and strategic collaboration activities in the T&L industry.

The analysis covers all mergers, acquisitions, sales, leveraged buyouts, privatisations and acquisitions of minority interests with a transaction value greater than \$50 million. All transactions announced between 1 January 2020 and 31 December 2020 have been included. Project transactions, such as public-private partnerships – which are more common than corporate transactions, especially in the field of infrastructure – do not fall within the scope of the analysis.

The data for the transaction analysis are derived from Refinitiv and include all deals announced where the target company comes from one of the NAICS industries listed below. Historical data is continuously updated.

The analysis included all transactions whose status at the time of analysis was ‘completed’, ‘not yet completed because of antitrust approval procedures’, ‘unconditional’ (buyer-side conditions have been met but the deal has not yet been completed) or ‘withdrawn’.

The data for the strategic collaboration analysis is based on information from S&P Global Capital IQ, covering key strategic alliance-related developments disclosed by listed companies related to the T&L industry.

The macroeconomic and industry-specific COVID-19 scenarios are based on a consensus of analyses that incorporates more than 180 sources and predictions (including from global research institutes, universities, investment banks, national governmental and supranational bodies, and ratings agencies), as well as financial data on 40 million corporations globally from 35 countries and 16 industries. The scenarios have been updated monthly since March 2020.

Sectors and assigned NAICS industries

Passenger Air: scheduled passenger air transportation; non-scheduled chartered passenger air transportation; air traffic control; other airport operations; other support activities for air transportation

Passenger Ground: highway, street, and bridge construction; all other specialty trade contractors; commuter rail systems; bus and other motor vehicle transit systems; other urban transit systems; inter-urban and rural bus transportation; taxi service; limousine service; school and employee bus transportation; charter bus industry; special needs transportation; all other transit and ground passenger transportation; other support activities for road transportation

Rail: line-haul railroads; short-line railroads; support activities for rail transportation

Logistics: gas distribution; freight transportation arrangement; packing and crating; all other support activities for transportation; postal service; couriers; local messengers and local delivery; general warehousing and storage; refrigerated warehousing and storage; farm product warehousing and storage; other warehousing and storage; process, physical distribution and logistics consulting services

Trucking: general freight trucking, local; general freight trucking, long distance, truckload; general freight trucking, long distance, less than truckload; used household and office goods moving; specialised freight (except used goods) trucking, local; specialised freight (except used goods) trucking, long distance

Shipping: deep-sea freight transportation; deep-sea passenger transportation; coastal and great lakes freight transportation; coastal and great lakes passenger transportation; inland water freight transportation; inland water passenger transportation; port and harbour operations; marine cargo handling; navigational services to shipping; other support activities for water transportation; regulation and administration of transportation programmes

Other: scheduled freight air transportation; non-scheduled chartered freight air transportation; other non-scheduled air transportation; mixed-mode transit systems; commercial air, rail and water transportation equipment rental and leasing; passenger car rental; passenger car leasing; truck, utility trailer and RV rental and leasing

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