Recharging working capital performance

Automotive sector working capital report 2022

Table of contents

Rob Kortman
Partner
Working Capital Management
PwC Germany

Foreword

Time to recharge working capital performance to fund operational supply chain challenges and further investments in technology

Since the beginning of 2020, the automotive industry has been facing ongoing supply chain disruptions resulting from COVID-19 lockdowns, issues in logistics hubs, and material / component shortages. Recently, this has been compounded by geo-political developments and further associated economic restrictions, causing additional stress for the supply chains. Having faced these challenges, many automotive companies, in particular suppliers, now operate in a constant firefighting mode with the full focus on ensuring continuation of production and availability for fluctuating demand.

Our study has looked at the cash opportunity tied up in working capital in companies along the global automotive value chain and provides valuable insights into how companies are managing and using working capital. But it’s at the industry level that we often find the data is most useful to management in formulating and executing their working capital strategies.

Our analysis shows that their overall net working capital performance has improved year-on-year by four days. However, this relative outcome masks a sharp divergence between OEMs and non-OEMs, with non-OEMs suffering deteriorating performance over the past year driven by increasing DSO and DIO, while OEMs’ performance has improved. There are also wide variations within the two segments across different measures of working capital, with – for example – top non-OEM companies being the industry-wide leaders in DPO.

What do these figures tell us? They point to a clear opportunity for finance teams to help business functions understand the cash impacts of commercial and operational decisions.

- Future disruptions can be overcome with a strong pressure on cash management
- Unlocking working capital is a ‘free’ source of capital (to support rejuvenating growth, supporting investments, acquisitions, changing business operations, etc.)
- Strong cash and working capital discipline supported by enhanced visibility and transparency enables better operational and financial performance
- Improved working capital management increases enterprise value
- Focus on working capital can reduce debt capital in times of increasing interest rates

If there’s one message that shines through in this report, it’s that automotive companies should not regard their working capital simply as an overdraft, but should focus on it as the first option for funding investments in their business. This approach will be especially useful at a time when companies across the sector still need to continue to invest in new technologies to sustain their long-term competitiveness.

For automotive organisations, the cash to fund these investments is already sitting in their business as working capital. It’s time to recharge it!

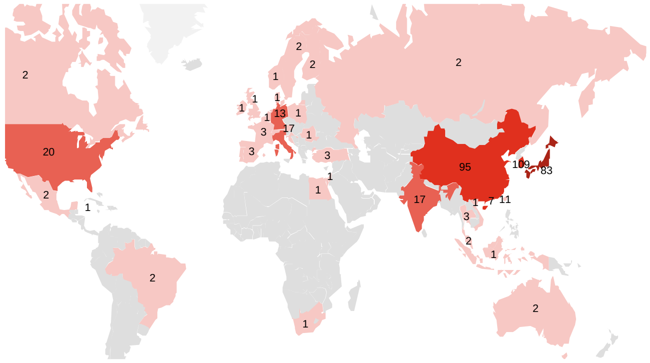
Source: PwC analysis. Analysis uses data from 572 globally listed companies from January 2017 to December 2021

1

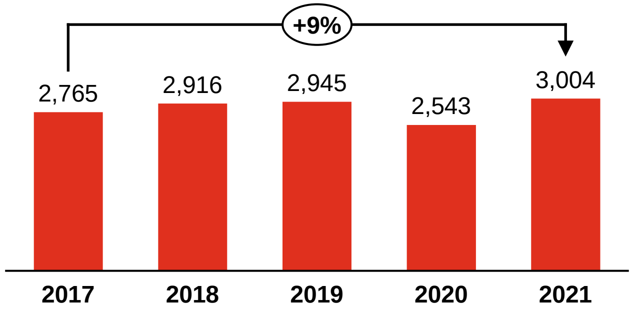
Overall net working capital performance

Across the automotive sector, days working capital (DWC) improved by 1 day from 2017 to 2021, mainly driven by the working capital performance of automotive manufacturers (OEMs)

OEMs and suppliers (572 companies)

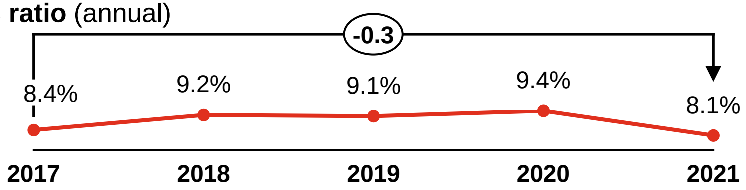


Revenues (in €bn)

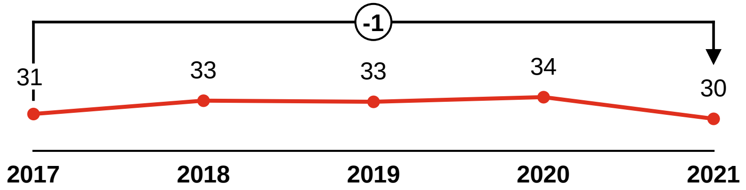


Overall working capital performance

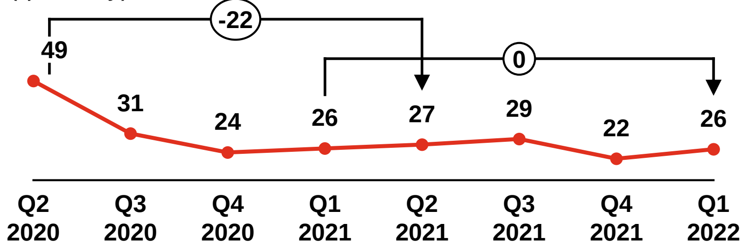
NWC ratio (annual)



DWC (annual)



DWC (quarterly)



Source: PwC analysis. Analysis uses data from 572 globally listed companies from January 2017 to Q1 2022

Supply chain disruptions and COVID-19 recovery

Working capital performance: 2017–2021

Between 2017 and 2021, revenues grew by 9%, with a dip in 2020 due to COVID-19. Across the entire industry the net working capital (NWC) ratio improved by 0.3 percentage points and DWC by 1 day over the five-year period.

Impact of supply chain disruptions and COVID-19 recovery

The automotive sector experienced major challenges in 2021: interrupted supply chains, severe fluctuations in demand, ongoing lockdowns due to COVID-19, and shortage of key materials and components (e.g. microchips).

However, looking at the entire industry, the working capital impact is not easily detected in the 2021 data due to the strong performance of OEMs.

DWC in Q2 2020 was 22 days higher than in Q2 2021, showing a strong improvement after COVID-19. Nevertheless, comparing Q1 2021 with the following quarters shows a strong fluctuation driven by ongoing supply chain disruptions and the year-end cash focus in Q4 2021.

The ongoing disruptions of the supply chains due to the geo-political situation will likely impact working capital performance from Q2 2022, put further pressure on OEMs and in particular the automotive suppliers.

Supply chain disruptions impacted the entire value stream of suppliers and OEMs: Balance sheet effects are visible along the end-to-end product and cash flow

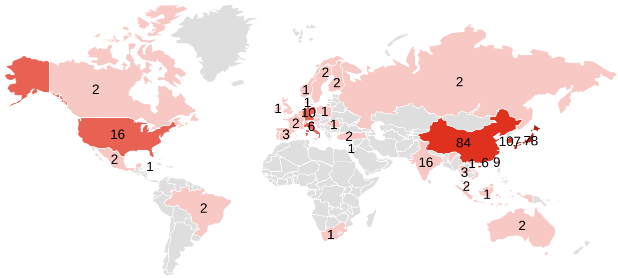
Suppliers (535 suppliers with revenues > €100m)

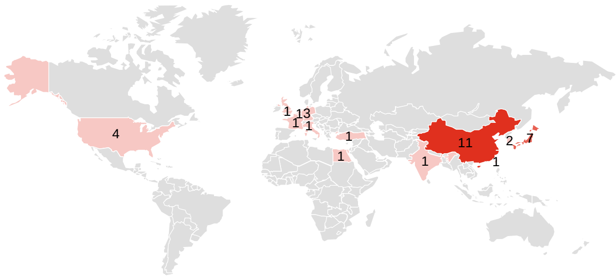
OEMs (37 companies with revenues > €1bn)

Raw Materials → Trade Payables → Stock → Trade Receivables → Trade Payables → Stock → Trade Receivables → **End Customer**

Product Flow →

← **Cash Flow**





€170bn of cash are tied up the in the balance sheets of selected automotive supplier companies

Suppliers' performance deteriorated
Revenues increased by 8% from 2017 to 2021 while **DWC deteriorated by 6 days** over the same period.

DIO performance has deteriorated by **14 days** over a five-year horizon.

Revenues are largely driven by the APAC region with a revenue share of 56% of global revenues in 2021.

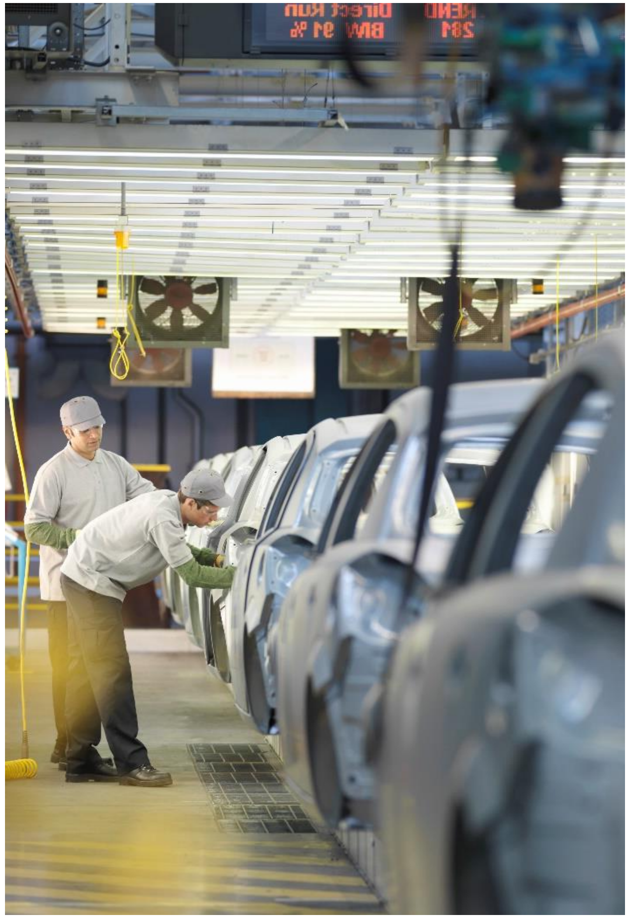
€74bn of cash are tied up the in the balance sheets of selected automotive OEMs

OEM performance improved
Revenues increased by 9% and DWC improved by 5 days over the five-year period.

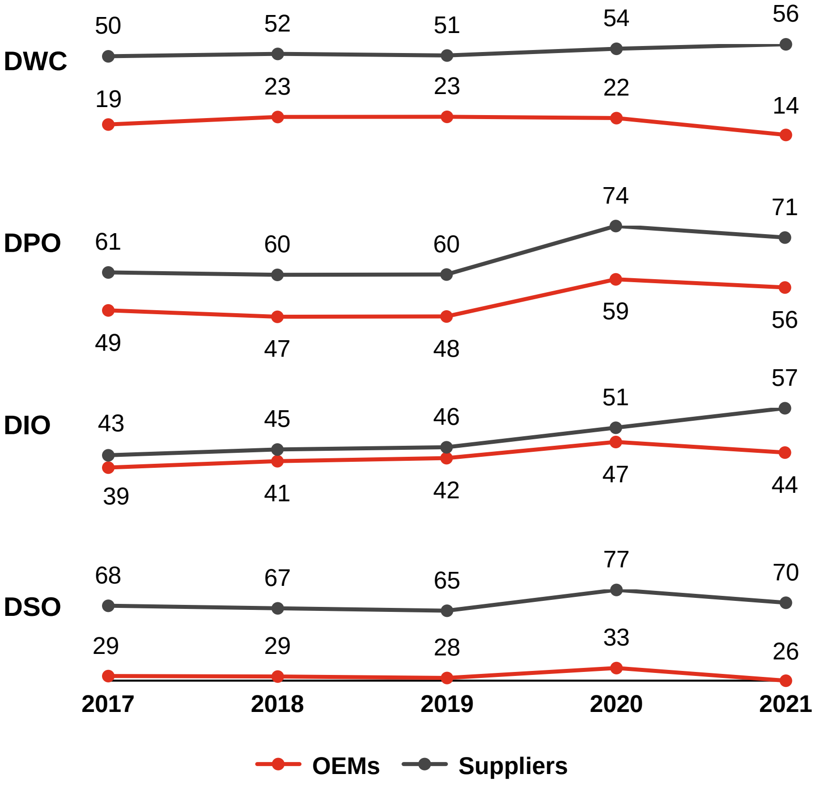
DIO performance deteriorated by 5 days from 2017 to 2021.

DSO decreased slightly by 3 days when comparing 2017 with 2021.
DPO improved by 7 days when comparing 2017 with 2021.

While days working capital (DWC) has improved for automotive OEMs, suppliers faced a deterioration of working capital performance over the last 5 years



Comparison OEMs' and suppliers' working capital performance (2017–2021)



Comparison of OEMs' and suppliers' working capital performance post COVID-19

While DWC performance improved for OEMs in the past five years by 5 days, suppliers' performance deteriorated by 6 days. This is mainly driven by an increase of DIO and DSO at suppliers, while the OEMs managed to maintain a low level of inventory and even improve outstanding receivables.

Key reasons

The nearly stable DIO level of OEMs in comparison to 2019 is driven by high demand and low availability of finished cars while using just-in-time or just-in-sequence supply models to keep inventory levels of components and materials low.

DIO increase at suppliers is a result of high uncertainty in the supply chains causing higher safety stocks. Fluctuating call-offs from OEMs further increased the inventory of finished goods at the suppliers.

Deterioration of DSO at suppliers from 2019 to 2021 is driven by later payments of OEMs (see DPO development of OEMs).

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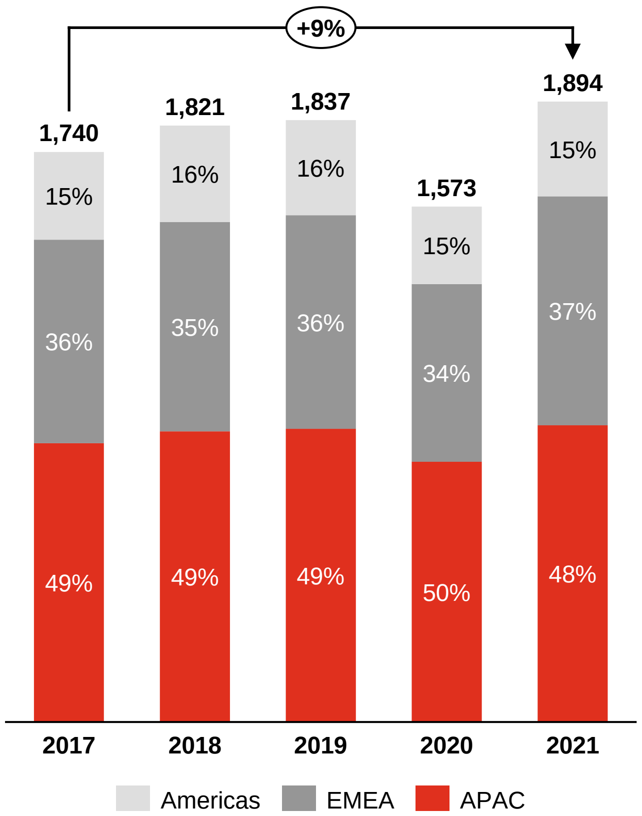
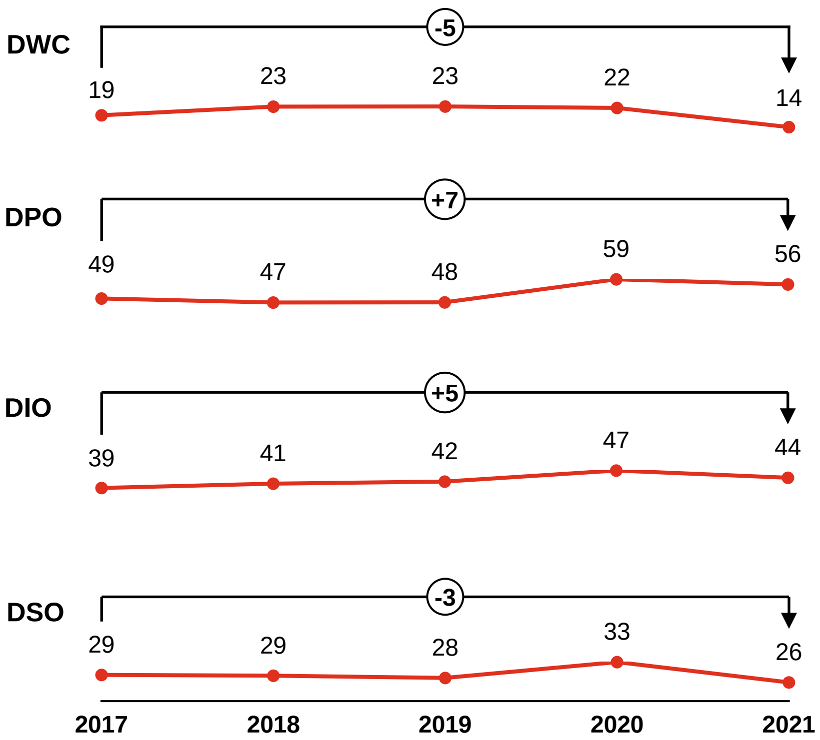
OEM working capital performance

OEMs' working capital performance improved, mainly driven by improved DPO and DSO. DIO deteriorated by 5 days compared to 2017 but improved by 3 days compared to 2020

Revenues by region (€bn)



Overall working capital performance (2017–2021)



Key challenges for OEMs post COVID-19

Having faced significant challenges before COVID-19, such as changes in technology, consumer habits and international trade relations, OEMs are now facing volatile supply chains and material shortages in a changing industry. However, high customer demand and a strong focus on working capital have enabled the OEMs to improve their DWC overall. This includes the supply model just-in-time (JIT) as well as the fulfillment model build-to-order.

Working capital performance

Between 2017 and 2021, revenues grew by 9% driven by revenue increases in all regions.

DWC decreased by 5 days between 2017 and 2021, and decreased by 8 days from 2020 to 2021.

DPO positively increased by 7 days between 2017 and 2021, and decreased by 3 days from 2020 to 2021.

DIO increased by 5 days between 2017 and 2021, and increased by 2 days from 2019 to 2021. Due to the established supply models (JIT, JIS), the automotive OEMs managed to keep their inventory levels rather low.

DSO decreased by 3 days between 2017 and 2021, and by 7 days from 2020 to 2021.

Overall OEMs improved their working capital performance quickly following COVID-19. This trend continued until Q4-2021 with improved DSO, low DIO and improved DPO

Post COVID-19 and 2021 performance

Following the pandemic, OEMs quickly improved their working capital performance and have even managed to further improve this in the following quarters.

The supply chain disruptions have created a variety of operational challenges for automotive companies, however these challenges are only partially reflected in the working capital performance of OEMs across 2021.

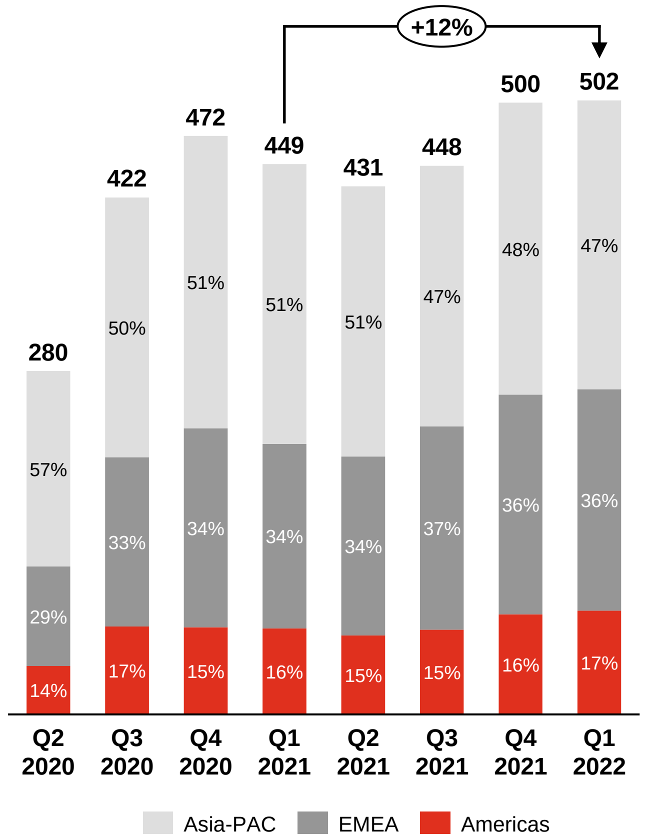
Working capital performance

DWC was 3 days lower in Q3 2020 than in Q3 2021, mainly driven by a 6 days increase of DPO.

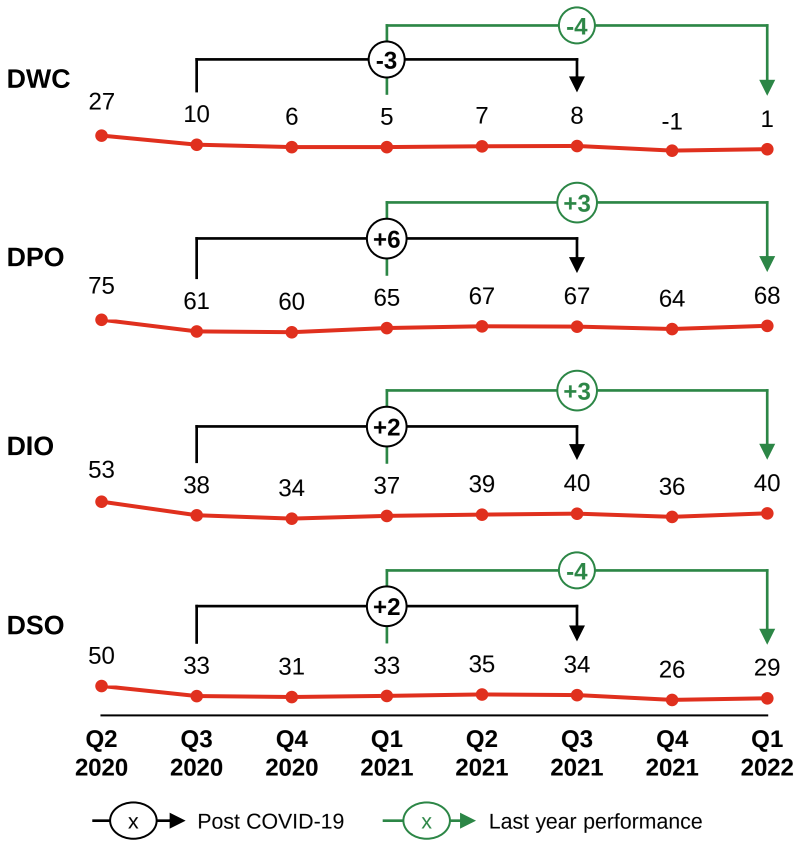
DIO increased by 2 days from Q3 2020 to Q3 2021. While DPO increased by 6 days and DIO increased by 2 days from Q1 2021 to Q1 2022. OEMs managed to further reduce DSO by 4 days in this period.

From Q1 2021 to Q1 2022, OEMs managed to improve their performance even further and have decreased their DWC by 4 days. This is driven mainly by strong revenues in Q4 2021 and Q1 2022 while keeping working capital low.

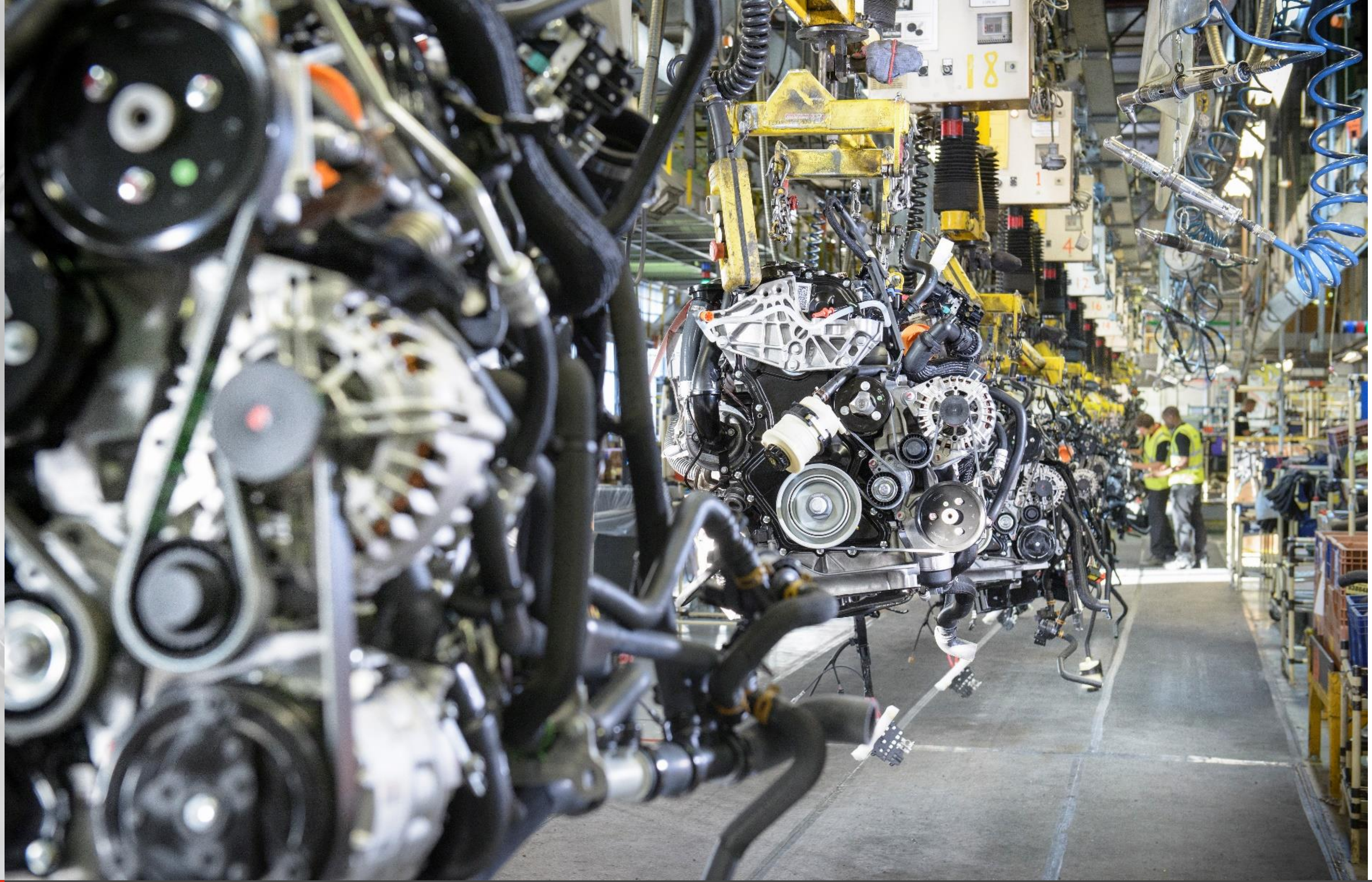
Revenues by region (€bn)



Quarterly working capital performance (2020–2021)



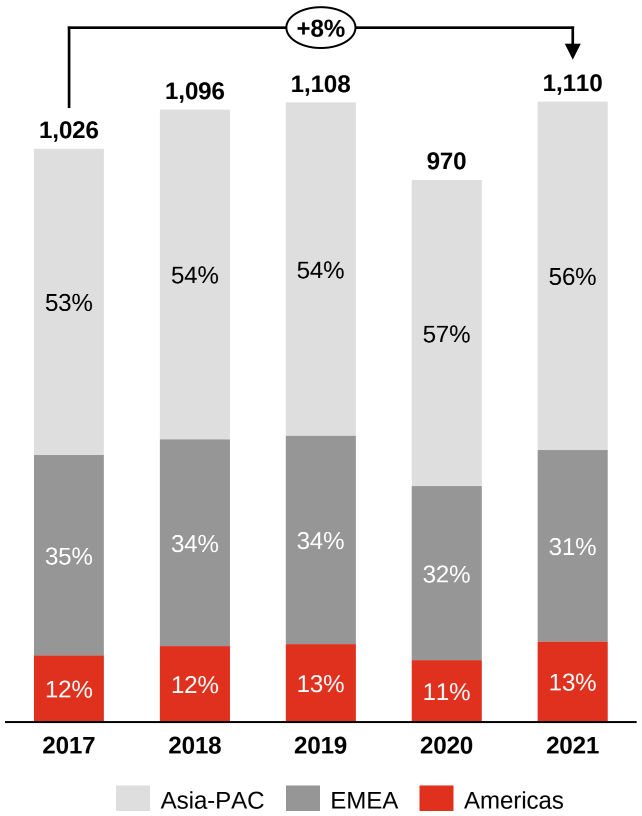
*Quarterly numbers of 444 companies are used in this study



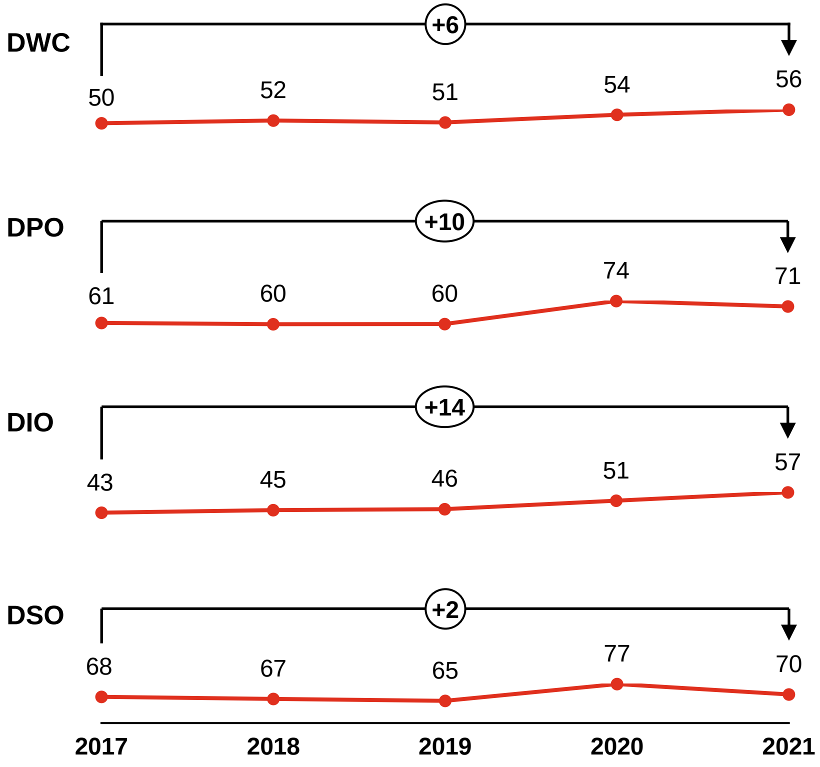
3 Non-OEM/supplier working capital performance

Accounts receivable (DSO) and inventory (DIO) performance of automotive suppliers deteriorated from 2017 to 2019, while accounts payable (DPO) improved. DWC deteriorated by 6 days

Revenues by region (€bn)



Annual working capital performance (2017–2021)



Key challenges for suppliers following COVID-19

While automotive OEMs managed to improve their working capital, automotive suppliers' performance has deteriorated. This is mainly driven by ongoing disruptions of their supply chains. This includes material shortages and high fluctuations and cancelations of delivery call-offs from the OEMs, resulting in a strong increase of DWC, mainly driven by an increase of DIO.

Working capital performance

Between 2017 and 2021, revenues grew by 8%, driven by the regions Asia-PAC and Americas.

DWC increased by 6 days between 2017 and 2021, and increased by 2 days from 2020 to 2021.

DPO increased by 10 days between 2017 and 2021, and decreased by 3 days from 2020 to 2021.

DIO increased by 14 days between 2017 and 2021. 2020 to 2021 alone shows an increase of 6 days.

DSO increased by 2 days between 2017 and 2021, and increased by 5 days from 2019 to 2021. This trend is directly related to the increase of payables on the OEM side.

Suppliers working capital performance improved quickly after COVID-19 but deteriorated again from Q4-2020 onwards with increasing DIO and DPO

Key challenges for suppliers

The automotive industry has demonstrated resilience and rebounded at a surprising pace following the global halt in production in March-May 2020. However, the ongoing disruptions are causing a deteriorating working capital performance in particular for automotive suppliers.

The quarterly trend shows a steady increase of DWC since Q4-2020 with only a short break in Q4-2021. The following increase of 3 days to Q1-2022 reveals that this positive development could not be continued.

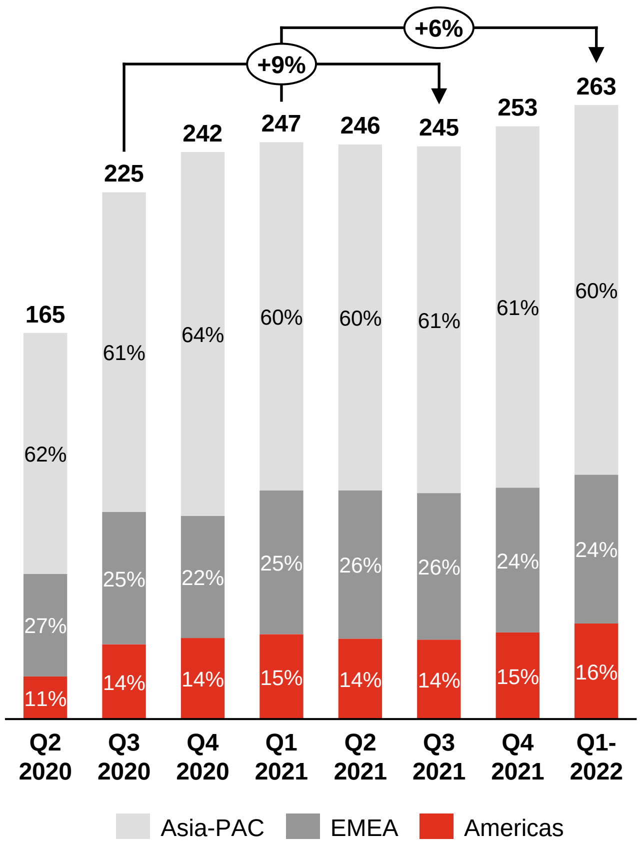
Working capital performance

DWC was 23 days higher in Q2 2020 than in Q2 2021, showing the recovery after COVID-19. However, following Q4-2020, DWC steadily increased by 8 days until Q1-2022.

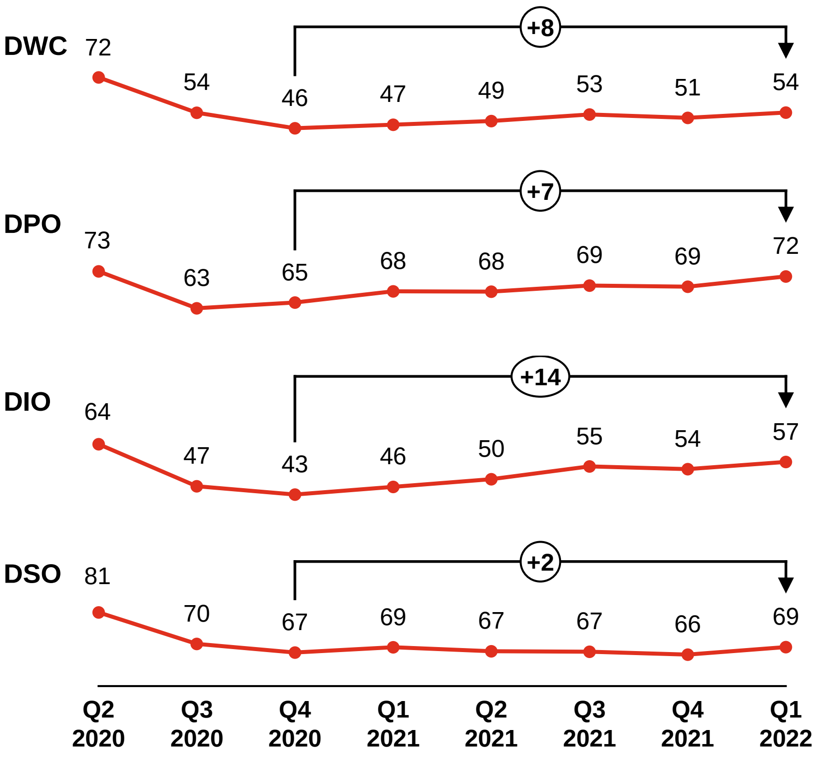
DPO positively increased by 7 days, while DSO increased by 2 days from Q4-2020 to Q1-2022.

DIO has deteriorated significantly by 14 days since Q4-2020.

Revenues by region (€bn)

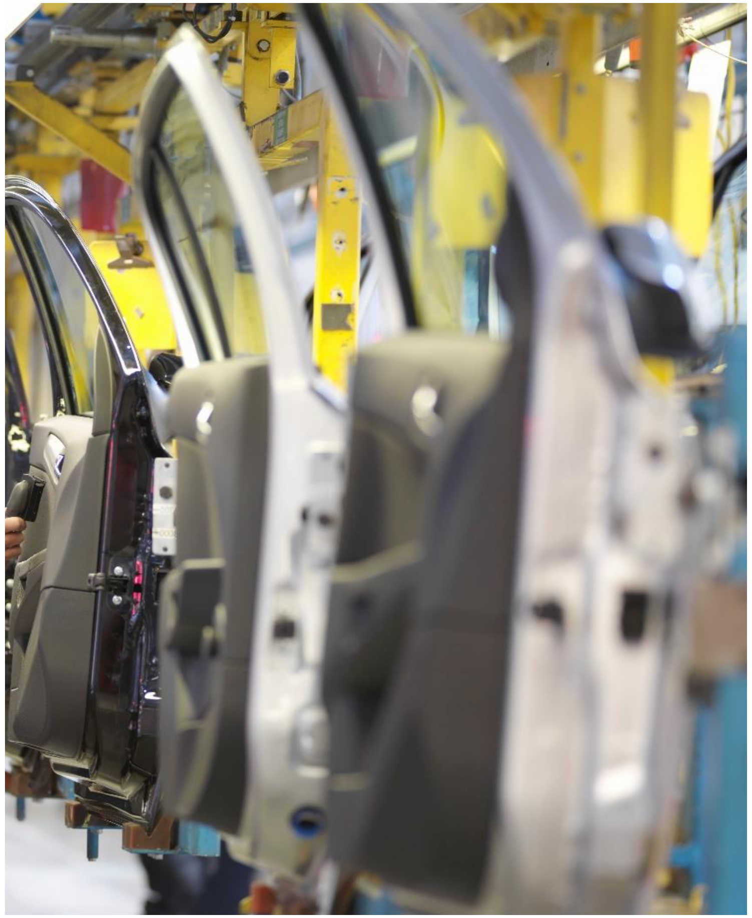


Quarterly working capital performance* (2020–2021)



*Quarterly KPIs are calculated on quarterly revenues and therefore deviate from full year KPIs

There are significant differences in working capital performance between and even within the different automotive supplier segments



Electrical components

Audio and telematics

Company	DWC
Continental	82
Foryou Corporation	125
ASTI	34
Visteon	76

Electronics and electrical

Company	DWC
Continental	82
Hyundai Mobis	74
Denso	88
Sumitomo Elec.	58

Climate control and engine cooling

Company	DWC
Sogefi	75
Hanon	53
Denso	88
Valeo	119
Dometic	77

Body and interior

Vehicle glass

Company	DWC
Fuyao Glass	76
Vuteq Corporation	43
Nippon Seiki	78
Asahi India Glass	56
Magna	76

Passenger restraints

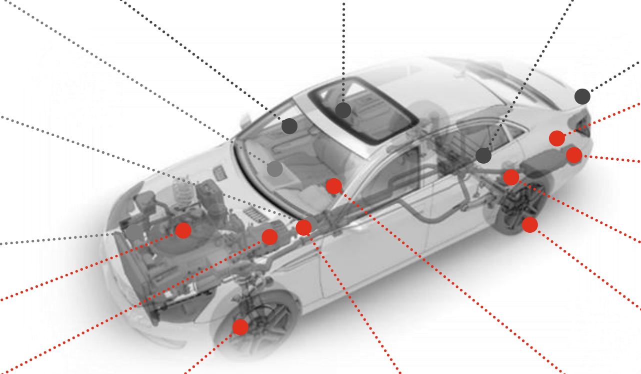
Company	DWC
Autoliv	61
Hyundai Sungwoo	41
KYB Corp	96
Toyoda Gosei	74
Kongsberg Automotive	135

Interior

Company	DWC
Faurecia	178
Johnson Controls	64
Lear	58
Magna	76
Autoliv	61

Body and structural

Company	DWC
Aisin Seiki	87
F-tech Inc.	48
Magna	76
HUAYU	160
Martinrea	125



Power train

Fuel system

Company	DWC
Continental	82
Valeo SE	50
Denso	88
Robert Bosch	69
TI Automotive	

Exhaust

Company	DWC
Wanxiang Qianchao	55
CIE Automotive	30
Faurecia	178
Futaba	52
Tenneco	69

Suspension

Company	DWC
Benteler	9
Aisin Seiki	87
KYB Corp	96
Tenneco	69
ZF Friedrichshafen	67

Engine

Company	DWC
BorgWarner	69
Continental	82
Wuling Motors	176
Denso	88
Mahle	50

Transmission

Company	DWC
Aisin Seiki	87
American Axle	51
Magna	76
Schaeffler	76
Valeo	119

Braking

Company	DWC
Akebono Brake	54
Continental	82
Hyundai Mobis	54
Cie Automotive	149
Brembo	146

Axles, driveshafts and related components

Company	DWC
American Axle	51
Dana	71
Gestamp Automoción	117
Magna	76
ZF Friedrichshafen	67

Steering

Company	DWC
SAIC	106
Nexteer Automotive	81
Hyundai Mobis	54
KYB Corp	93
Robert Bosch	69

Wheels and tyres

Company	DWC
Bridgestone	98
Continental	82
Goodyear	111
Michelin	82
Pirelli	346

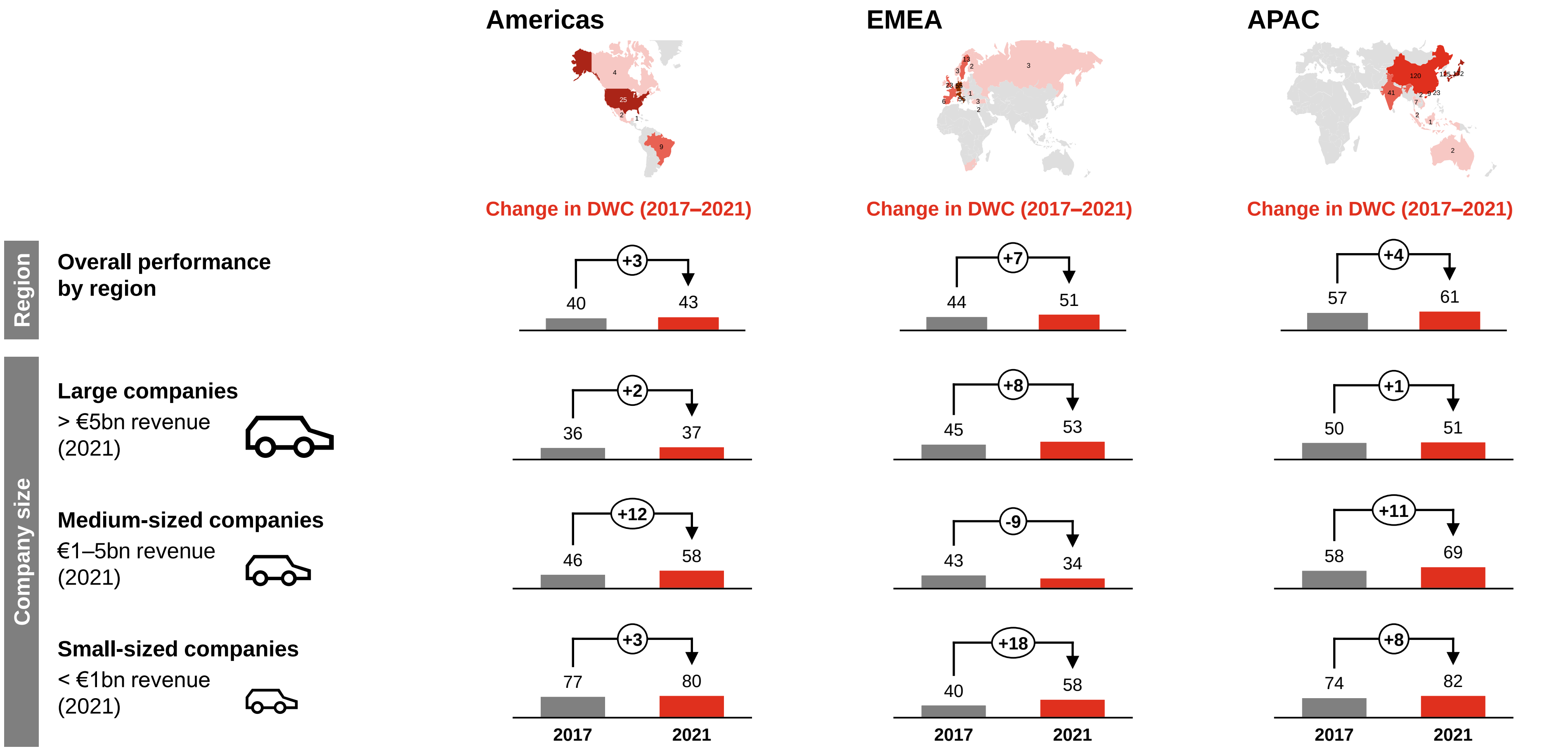
The cash conversion cycle (CCC) trend within automotive supplier segments shows a negative trend from 2020 to 2021. Only steering, body and structural and exhaust suppliers improved their performance

	CCC trend				DSO	DPO	DIO
Segment	**2018**	**2019**	**2020**	**2021**	**2020–21**	**2020–21**	**2020–21**
Steering	2% to -2%	> 10%	> 10%	> 10%	↗	→	↘
Electronics and electrical	-2% to -10%	2% to -2%	< -10%	< -10%	↗	→	↓
Audio and telematics	2% to -2%	-2% to -10%	< -10%	< -10%	↗	↘	↓
Axles	< -10%	2% to -2%	< -10%	< -10%	↑	↘	↘
Transmission	10% to 2%	2% to -2%	< -10%	< -10%	↗	↘	↓
Braking	-2% to -10%	-2% to -10%	-2% to -10%	< -10%	↗	↘	↓
Wheels and tyres	< -10%	2% to -2%	10% to 2%	-2% to -10%	→	↑	↓
Body and structural	> 10%	< -10%	> 10%	> 10%	↘	↗	↘
Exhaust	> 10%	> 10%	> 10%	> 10%	↑	↘	→
Interior	10% to 2%	2% to -2%	< -10%	< -10%	↑	↓	→
Engine	-2% to -10%	< -10%	-2% to -10%	< -10%	↑	↓	↗
Suspension	10% to 2%	> 10%	< -10%	< -10%	↓	↑	↓
Passenger restraints	10% to 2%	10% to 2%	< -10%	< -10%	→	↘	↘
Climate control and engine cooling	2% to -2%	10% to 2%	10% to 2%	< -10%	↑	↘	↓
Vehicle glass	10% to 2%	2% to -2%	< -10%	< -10%	↗	↗	↓

Performance score

↑	> 10%	Improved
↗	10% to 2%	Improved
→	2% to -2%	Stable
↘	-2% to -10%	Decreased
↓	< -10%	Decreased

Across all regions, working capital of suppliers deteriorated from 2017 to 2021, especially in EMEA. Performance only improved for medium-sized companies in EMEA due to a strong improvement of DSO



Supply chain disruptions, ongoing COVID-19 lockdowns and microchip shortages have caused an increase in DWC for suppliers of nearly all company sizes across all regions.

The highest regional increase can be observed in EMEA with a 7 days increase from 2017 to 2021. Driven by a strong increase of DIO.

The strong impact of these trends is particularly visible in small-sized companies in EMEA, with a DWC increase of 18 days from 2022, and medium sized companies in the Americas and APAC.

While many major automotive OEMs have managed to maintain their working capital performance, suppliers have struggled with the volatility of the markets and ongoing disruptions.

4

Areas for improvement and how we can help

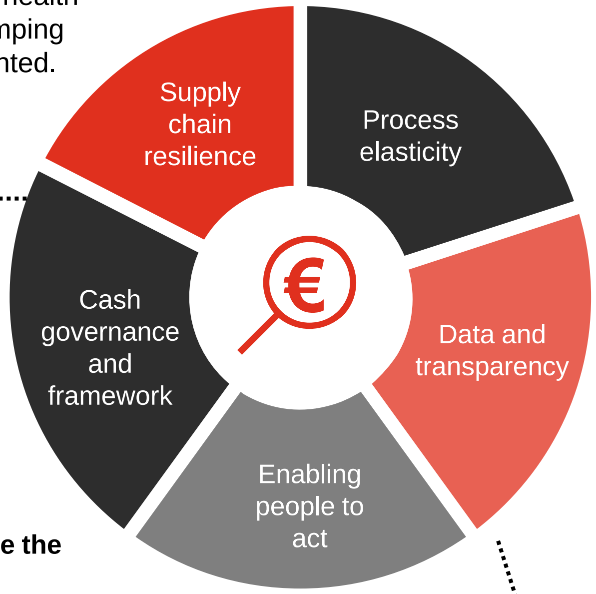
Focus areas to enhance and enable resilient cash & working capital performance

Key considerations to ensure that working capital is fit for purpose in these uncertain times:

How resilient is my supply chain?
The supply performance situation and financial health of critical suppliers needs to be clear before ramping up, and contingency plans need to be implemented.

Do policies, targets and incentives drive the right decisions?
Governance frameworks will need to be aligned to ensure that the right trade-offs are made and that the organisation has the right guidance to operate.

Do people have the guidance and skills to take the right action?
Operational functions will need guidance to enable staff to take the right steps and to prevent “business-as-usual” behaviour.



Are processes still fit for purpose?
Operational working capital processes need to be adjusted to the current challenges and cash impact.

Payables
- Increase payment controls
- Manage change requests for credit terms
- Understand supplier stability and health
- Supply chain financing options

Inventory
- Reconfigure demand forecasting model
- Update replenishment triggers and lead times
- Reconfigure safety stock calculations
- Align production campaigns and plans
- Product portfolio contribution alignment

Receivables
- Realign and focus collections
- Credit limits, insurance, ability to trade
- Renegotiate/alter terms
- Availability of factoring capacity
- Focused resolution of disputes and claims

Is the right operational data transparent so as to facilitate insights and enable focus?
Operational, bottom-up transparency is necessary for informed action and needs to be supported by meaningful actionable metrics and reporting

How we can help ...

Enablers to enhance working capital performance:

- Identify and realise cash and cost benefits across end-to-end value chains
- Optimise operational processes that underpin the working capital cycle
- Use data analytics and digital working capital solutions to enhance transparency and performance
- Ensure rapid cash conservation in crisis situations
- Develop resilient supply chains to guard against unexpected risk events and disruption
- Create a "cash culture" and upskill your organisation through our working capital academy
- Roll out trade and supply chain financing solutions

Examples of areas where PwC could help you to release cash from working capital

Accounts receivable

- Tailored, proactive collections
- Credit risk policies
- Aligned and optimised customer terms
- Billing timeliness and quality
- Contract and milestone management
- Systematic dispute resolution
- Dispute root cause elimination

Inventory

- Lean and agile supply chain strategies
- Global coordination
- Forecasting techniques
- Production planning
- Inventory tracking
- Balancing of cost, cash and service level considerations
- Inventory parameters and controls defining target stock

Accounts payable

- Consolidated spending
- Increased control with centre-led procurement
- Avoidance of leakage with purchasing channels
- Payment terms
- Supply chain finance benefits assessment and implementation
- Eradication of early payments
- Payment methods and frequency

Our Approach

1. Scoping
2. Transparency
3. Quick win & roll-out
4. Sustainable performance

Authors and working capital contacts

Rob Kortman

Partner, Working Capital Management & Solutions
PwC Germany

+49 170 9879253

Rob.Kortman@pwc.com

Co-authors

Christoph Schieck

Senior Manager, Working Capital Management & Solutions
PwC Germany

Christoph.S.Schieck@pwc.com

Johannes Korber

Manager, Working Capital Management & Solutions
PwC Germany

Johannes.Korber@pwc.com

pwc.com

Methodology

This study provides a view of the top 572 globally listed companies from January 2017 to December 2021, following PwC analysis and sectorisation. All calculations are based on publicly available data. The division of sub-sectors is based on the Capital IQ Primary Industry Classification system.

Metrics		Definition	Calculation
NWC ratio	Net working capital ratio	NWC represents the difference between a company’s current assets and current liabilities.	(Accounts receivable + inventories – accounts payable) /sales
DWC:	Days working capital	DWC days offers an indication of the total days to complete the full cash conversion cycle.	(Accounts receivable + inventories – accounts payable) ÷ sales x 365
DSO:	Days sales outstanding	DSO is a measure of the average number of days that a company takes to collect cash after the sale of goods.	Accounts receivable ÷ sales x 365
DIO:	Days inventory outstanding	DIO gives an indication of how long it takes a company to convert its inventory into sales.	Inventories ÷ cost of goods sold x 365
DPO:	Days payables outstanding	DPO is an indicator of how long a company takes to pay its trade creditors.	Accounts payable ÷ cost of goods sold x 365
CCC:	Cash conversion cycle	The CCC expresses the time it takes for a company to convert its working capital into sales.	DIO + DSO – DPO