

# Working Capital Study 23/24

The Return of 'Cash is King'



# Contents

The background features a large pink triangle on the left side. On the right side, there are overlapping geometric shapes: a white triangle, a brown triangle, and an orange triangle, all pointing towards the bottom right corner.

# Executive Summary

Cash is king once again. As persistently high inflation and interest rates force up borrowing costs, making the most efficient use of available cash is now more critical than ever. Large corporations are harnessing their tech-enabled management capabilities to optimise working capital. But most small and mid-sized companies are still behind the curve. And while there are glimmers of economic recovery ahead, a still fragile outlook demands care and caution from a WCM perspective.

The working capital management (WCM) landscape has seen a marked shift in recent months. After a challenging few years, supply chains are now stabilising, with the Global Supply Chain Pressure Index reaching an all-time low in May 2023<sup>1</sup>.

In last year's [PwC Working Capital Study](#), there were tentative signs of recovery and stabilisation in working capital positions. However, the subsequent impact of further rises in inflation and interest rates have reinforced the importance of cash and working capital optimisation. The analysis of 17,000 global corporations we carried out for this year's report also highlights the growing focus on working capital as a key financial performance indicator.



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<sup>1</sup> Global Supply Chain Pressure Index (GSCPI) –  
FEDERAL RESERVE BANK of NEW YORK ([newyorkfed.org](https://www.newyorkfed.org))



### Cashing-in

The results are encouraging, albeit with important caveats. Overall working capital days (the level of net operating working capital held by businesses relative to their sales) have improved across most major economies in our study. This improvement is especially pronounced in the EU, which normally shows higher relative levels of working capital.

In previous years, companies tended to manage working capital by stretching supplier payments and terms. But the latest improvements mainly stem from the asset side of working capital through better management of customer collections and closer control of inventories. Between receivables and inventories, we've seen an estimated €600bn reduction in nominal working capital requirements on the asset side, relative to what we would have seen on prior year trends. More than €250bn of this has come from the EU alone.



### Reduced supply chain pressure

The general reduction in supply chain disruption has allowed companies to manage inventories more efficiently, rather than falling back on a 'just in case' stocking approach, which eases uncertainty over availability, but creates excessive amounts of working capital. The change of tack in inventory management is especially evident in the EU and Asia.



### Uncertain economic prospects call for caution

Even if the rises in inflation and interest rates may be tailing off, they are likely to remain high for some time to come. This underlines the continuing need for careful WCM in bolstering liquidity and cushioning any further shocks ahead. In particular, the still fragile and uncertain economic outlook increases the need to consider forward investment in inventories to cover future sales, tighten up the management of outstanding payment exposure and guarantee surety of supply.



### Improvements are still driven by large companies

Moreover, behind the overall improvements, the picture is more mixed. The positive developments in working capital ratios, and the gains made in receivables and inventories, are concentrated in larger and more mature companies. When looking at the mid-cap and smaller organisations, there remains a clear disparity between the key ratios and improvements realised.



### Technology steps into the workforce gap

Although the improved efficiency of WCM is encouraging, the challenge of attracting and retaining enough staff to run key processes continues. Experienced professionals are in short supply in most developed markets. The digitisation of working capital processes is therefore increasingly important. But technology isn't a silver bullet. With so much choice, selecting the right tools and defining a solid business case can be challenging. In turn, implementation impacts on a wide range of stakeholders, underlining the importance of organisation-wide understanding, buy-in and change management.



### Rich dividends

With WCM challenges come further opportunities. Our analysis shows a potential €1.5tn of excess working capital available, highlighting the rich dividends that a renewed focus on cash and WCM can bring.

# At a glance

## Net Working Capital



# 2.6%

decrease in  
NWC days

Net Working Capital (NWC) has continued to decline relative to revenue growth as supply chain disruption eases and pressure on payment practices begins to move the dial.

## High interest rates are prompting an increased focus on cash



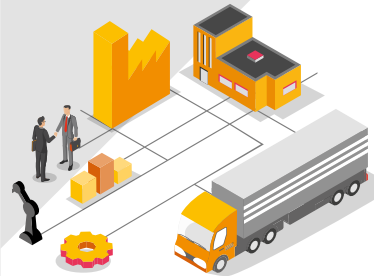
# 3-6.7x

higher western  
market interest rates\*

High interest rates are having a significant impact on costs of capital, meaning that working capital will not come as cheap as in prior years.

\*compared to January 2020

## Early signs of economic recovery



# 1.4%

growth projection  
in OECD countries

There are indications that global economies have seen the worst of inflation, and interest rates are expected to stabilise, leading to a fragile but optimistic view on economic growth. But while the outlook remains uncertain, working capital needs to be closely managed.

## Cash reserves



# 11%

decline in  
cash days

Cash reserves decline for a consecutive year relative to operating costs, as companies look to return to pre-2020 cash levels to combat interest rate rises.

## EU leading the way



# 2.6

day improvement  
in NWC days

The EU saw the most significant decrease in NWC days (2.6 days), seeing large reductions in DSO (6.7 days) and DPO (11.5 days) as governments continue to roll out payment terms regulation.

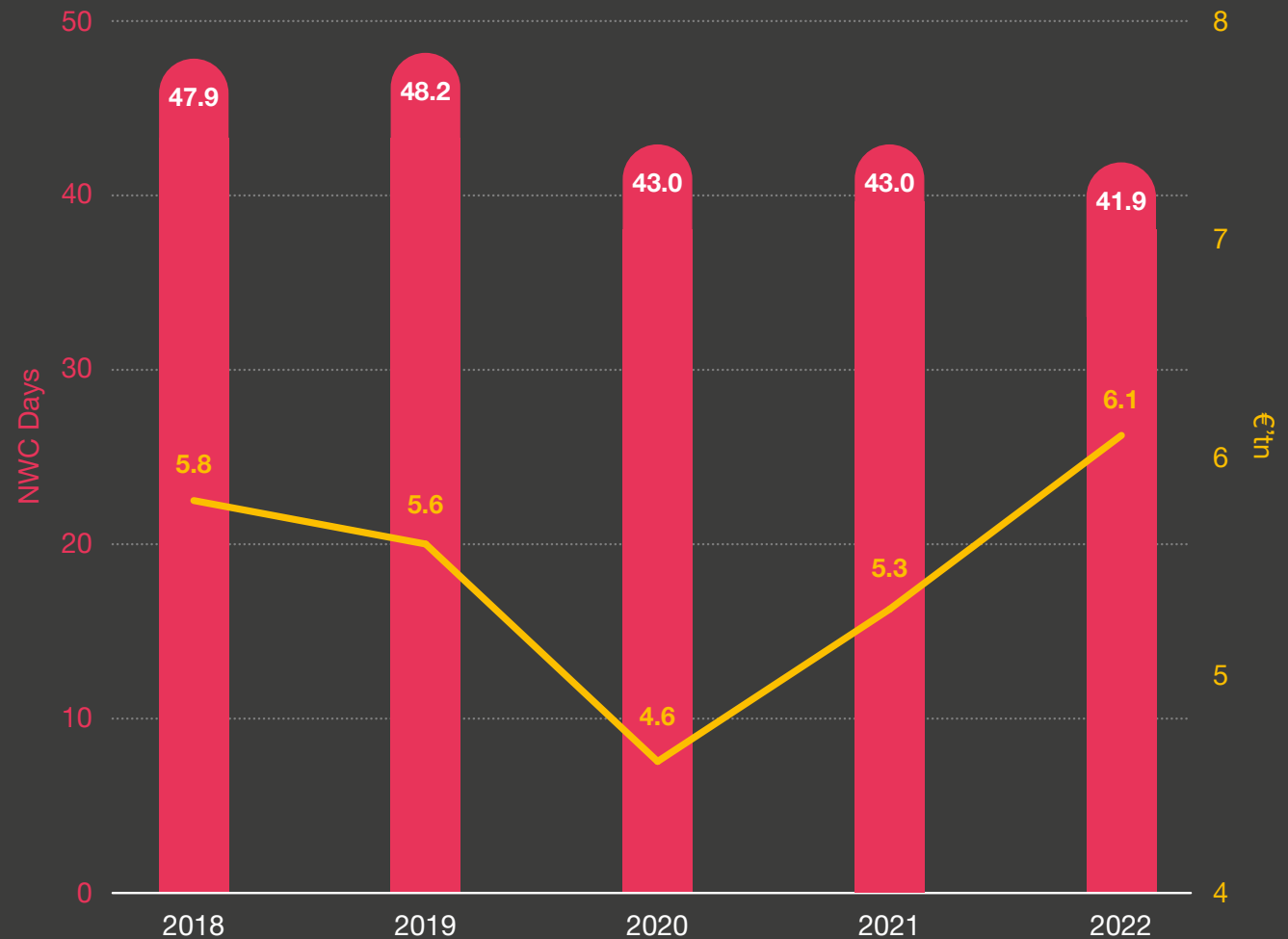
# Improvement in the face of challenging conditions



Against a backdrop of increasing inflation, global revenues have continued to grow, adding to the recovery seen in 2021. Largely in line with this revenue growth, we've seen a continued build-up of nominal working capital, though input costs are also increasing. Companies have managed to keep this parallel growth in their favour, resulting in a decrease of 1.1 days of cash tied up in net working capital (NWC). But looking below the surface, we see different stories within the finance and supply chain dynamics which drive working capital.

Both days sales outstanding (DSO) and days payables outstanding (DPO) have fallen, with DSO dropping by 6.0%, down 3.1 days, and DPO decreasing by 6.2%, down 4.5 days. These movements are influenced by a number of factors, most notably the continued trend in the EU (and other regions to a lesser extent) of payment terms regulation, which is limiting the ability of large buyers and sellers to dictate favourable terms from their suppliers and customers. Along with these regulatory restrictions, concerns over credit risk and input cost increases have led to a tightening of credit from suppliers.

Figure 1: Net working capital and working capital days



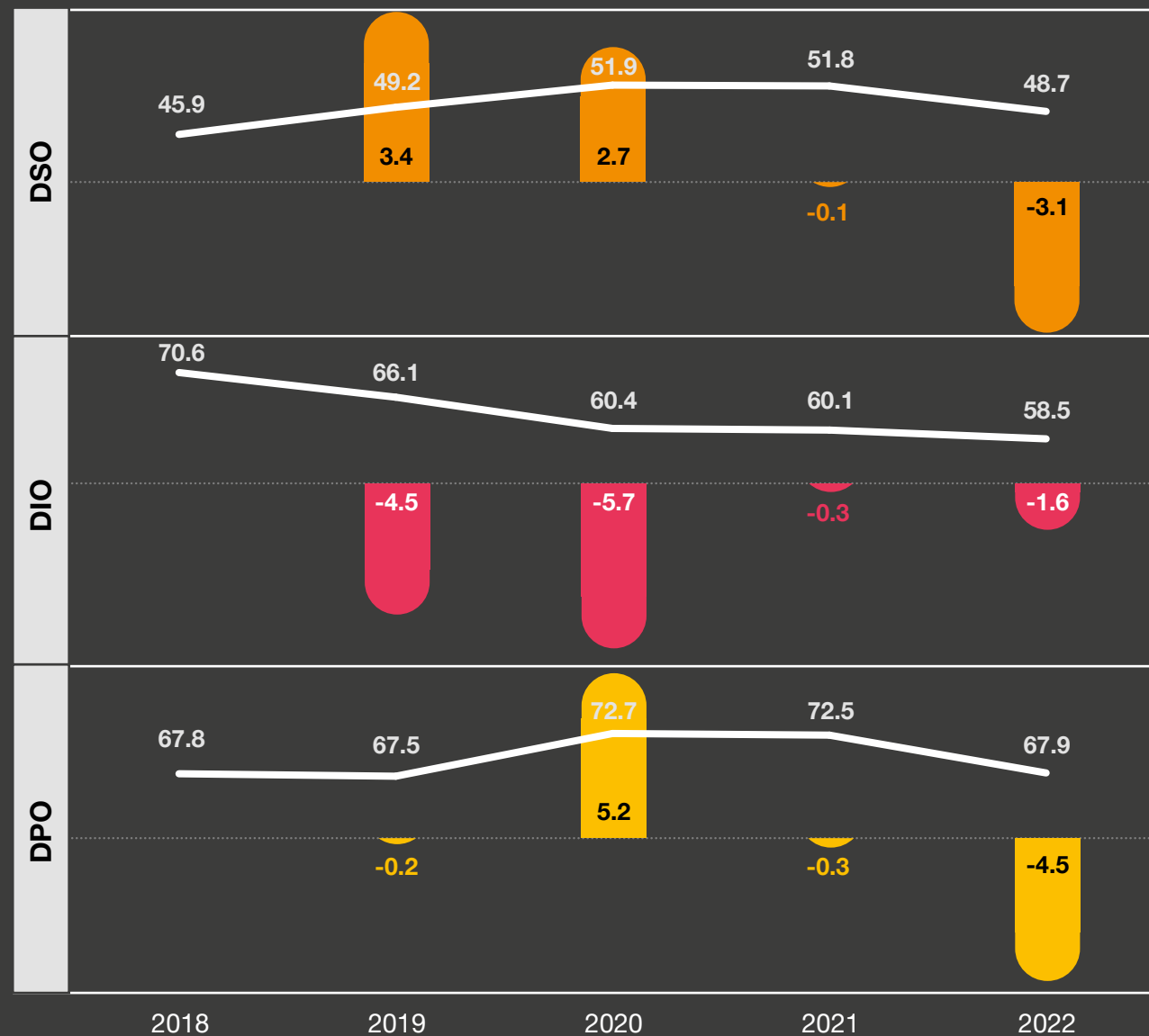
Source: PwC analysis



Days inventory outstanding (DIO) has seen a marginal fall of 2.7%, down 1.6 days, as global supply chains continue to become more predictable. While some industry-specific supply chain issues remain, by-and-large companies are now better able to forecast and manage supply and demand factors, having equipped themselves to handle the volatile environment of the past few years.

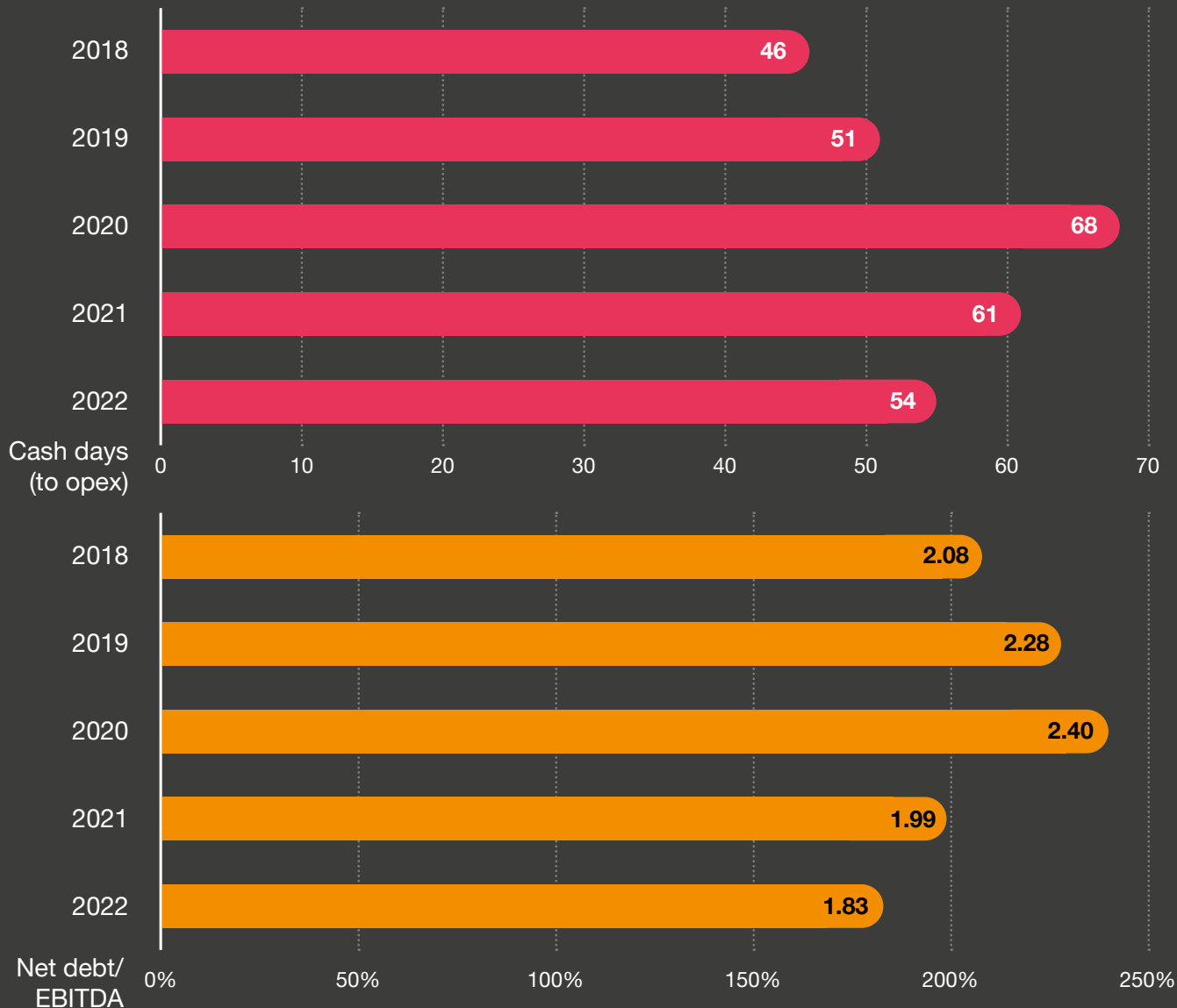
These movements have come together to improve working capital performance. But while many companies are rising to the economic challenge of improving NWC, the pressure to cut working capital requirements will continue. Equity markets want to see profitable growth and return on capital, with WCM one of the keys to achieving this.

Figure 2: DSO, DIO and DPO trend



Source: PwC analysis

**Figure 3:** Cash days (to cover operating expenses) and net debt to EBITDA trends



Businesses have continued to reduce the cash cushions built up over 2020-21. But cash days still exceed pre-pandemic levels. Many of the traditionally capital-intensive industries – such as industrial manufacturing, aerospace & defence, and engineering & construction – have also seen a reduction in their normally high cash days. In fact, chemicals is the only sector that has posted an increase.

In line with this trend, net debt levels are declining relative to EBITDA, reaching a five-year low of 1.83. Under the surface, however, many sectors increased their relative net debt levels – not just in defensive sectors like healthcare – but also retail, technology and entertainment & media. The overall decline was mirrored in all regions with the exception of Asia, which saw a marginal increase.

# Economic trends shaping priorities ahead



As the global economy begins to emerge from the turbulence of recent years, there are three key macroeconomic trends that could impact the performance of working capital.



### Improved growth prospects

The global economic outlook has improved significantly since our last report. The OECD now expects that the UK, the Eurozone and the US will grow in 2023 by 0.3%, 0.9%, and 1.6%, respectively – and 1.4% across the OECD<sup>1</sup>. Economic growth is expected to then gradually pick-up from 2024 onwards as inflation returns to more normal levels and the squeeze on consumer incomes eases. However, the projected growth is fragile.

The UK economy has largely recovered from COVID-19, with real GDP estimated to be around 0.2% above pre-pandemic levels. Recently, however, the UK economy has essentially flatlined, with no economic growth in the three months to May 2023. The main reason is that consumer-facing sectors remain just under 9% below pre-pandemic levels<sup>2</sup>.

1 OECD Economic Outlook, June 2023  
 2 ONS  
 3 ONS  
 4 OECD Stat



### Headline inflation coming down, but core inflation is proving persistent

Headline inflation has fallen in most of the world's major economies. UK CPI inflation was 7.9% in June 2023, down from a high of 11.1% in October 2022<sup>3</sup>, while inflation sits around 3% in the US and 5.5% in the Eurozone. Core inflation rates have come down too, but to a lesser extent, while the pace of the decline has slowed. Even in the US, where headline inflation has fallen back the fastest, core inflation remains at 4.8%<sup>4</sup>. The historical evidence suggests that core inflation tends to lag behind headline inflation. The latter includes short-term movements in energy and food, so we expect that it will trend downwards, but it may take longer than initially anticipated.

In the coming months, we expect CPI inflation to fall back further in the UK. The 17% cut to the household energy price cap should reduce inflation by another percentage point, while our modelling indicates that the price cap could fall by a further 5% in October. There is also good reason to suggest that food inflation has peaked. The combination of these factors should see CPI inflation get closer to 5% by the end of 2023. Though inflation is unlikely to return to target until 2025 as services and core goods inflation persist.

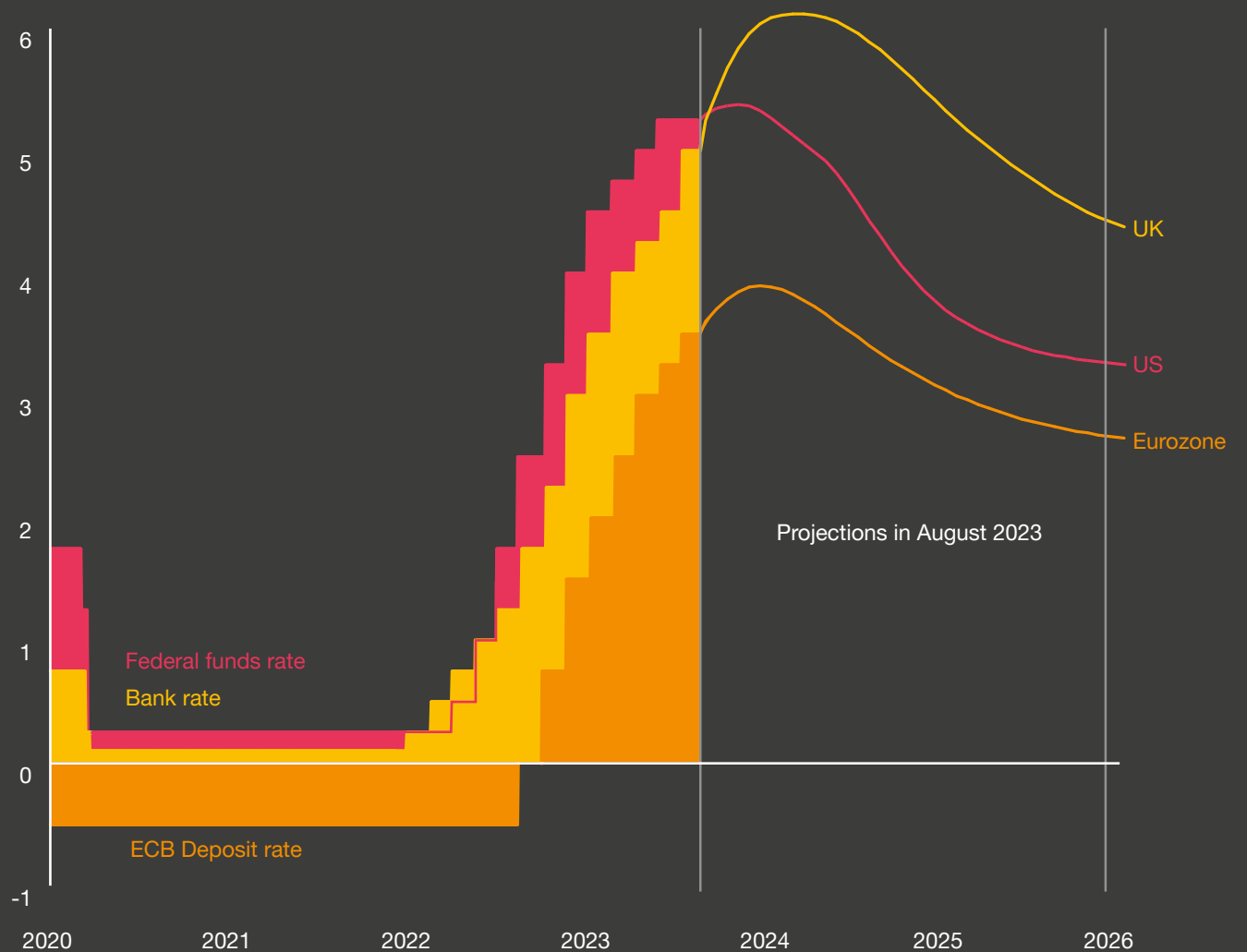
### Interest rates still rising but nearing the peak

Central banks across the world have continued to tighten monetary policy and roll back quantitative easing. The Bank of England base rate now stands at 5.25%, following fourteen consecutive rate rises. While the US federal funds rate target range now stands at 5.25% to 5.50%, and the ECB deposit facility at 3.75%<sup>5</sup>.

Although headline inflation has fallen back, central banks will need clearer signals that domestic sources of inflation have moderated before they are able to stop increasing interest rates. The Bank of England Monetary Policy Committee has made it clear that it will pay close attention to the latest developments in labour market conditions, wage growth and services price inflation. Signs of more persistent pressures will mean that further tightening in monetary policy is required.

<sup>5</sup> Bank of England MPR - Aug 2023

Figure 4: International forward interest rates, %



Source: Bloomberg Finance, BoE Monetary Policy Report – August 2023

Note: All data as of 25 July 2023. The forward curves are estimated using the instantaneous forward overnight swap rates in the 15 working days to 25 July 2023. Federal funds rate is the upper bound of the target range.

# Spotlights on regions, sectors and company sizes



## Regions

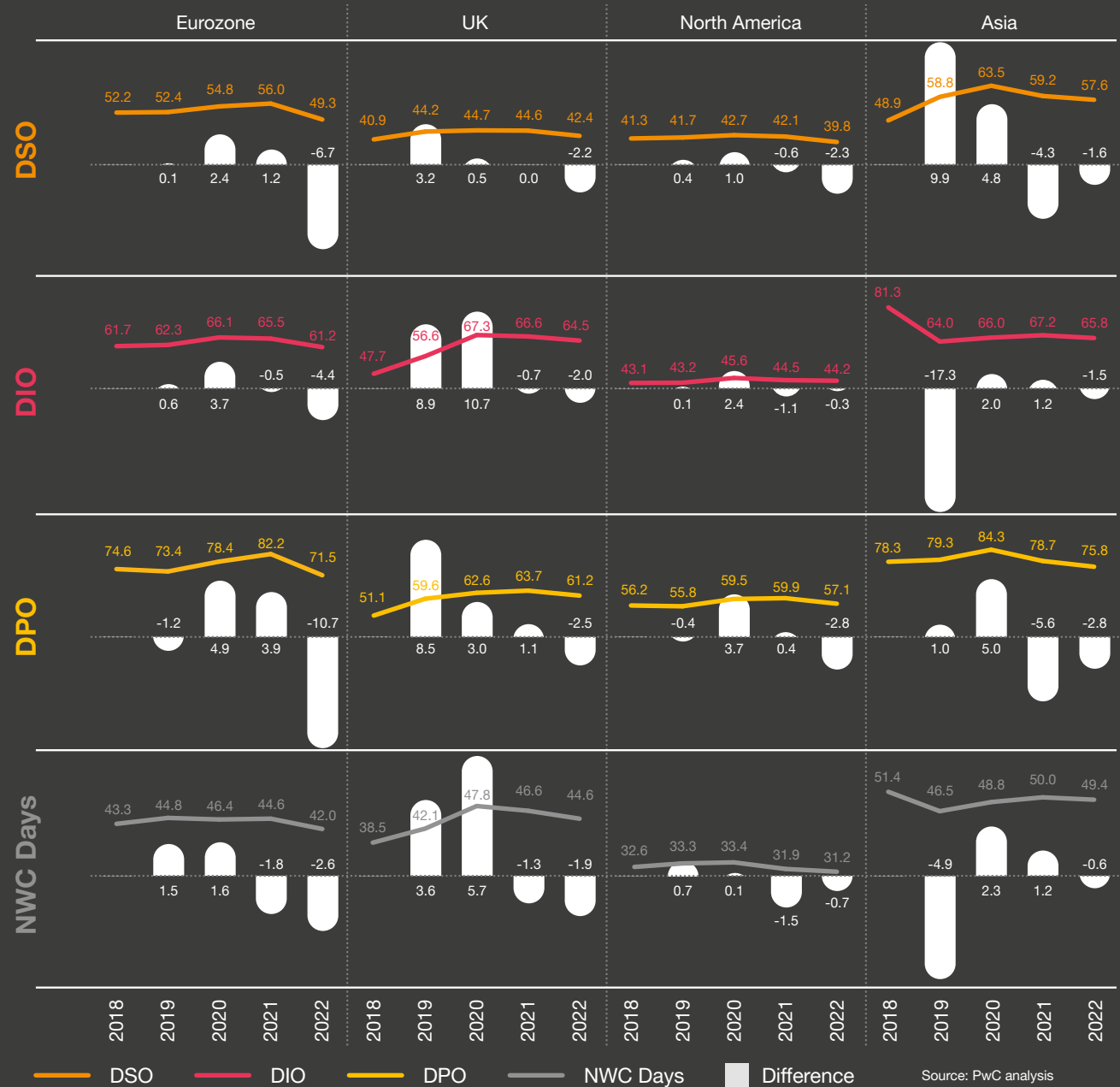
While all leading economic regions saw a decline in the three areas of NWC, the impact has been uneven.

The most significant movement in NWC and its underlying DSO and DPO metrics has been in the EU (2.6 days reduction). The continued rollout of payment terms directives is driving a major reduction in both DSO (6.7 days) and DPO (10.7 days), taking both to five-year lows. This pressure is being seen more in DPO, with many of the smallest businesses outside of the scope of this study having additional protections (e.g. independent agricultural suppliers). The trend is likely to continue as EU states bring in legislation which takes the directives further. In addition to DSO and DPO improvement, the EU also saw a 4.4-day reduction in DIO, reaching a five-year low.

While not a part of the EU payment terms directives, the UK has also seen notable reduction in DSO (2.2 days) and DPO (2.5 days) in the wake of similar pressures on payment terms. Along with these reductions, the UK saw a fall in DIO of 2 days, all building toward a 1.9 day decrease in NWC days. While generally trending downwards, the contraction of NWC requirements in the UK has not been as pronounced as the EU, with performance still 2.5 days higher than in 2019 and all metrics above 2018 levels.

The margins of improvement in the US and Canada have not been as substantial. However, the region has always operated with lower working capital requirements when compared to other major regions. NWC saw a reduction of 0.7 days, with a small improvement in DIO of 0.3 days and larger movements in DSO (2.3 days) and DPO (2.8 days). On the other end of the scale, Asia has traditionally run at higher levels of NWC on all fronts, and saw a similar marginal reduction in NWC days (0.6 days), with a noted improvement in DIO of 1.5 days.

Figure 5: NWC, DSO, DPO and DIO trends by region



Source: PwC analysis

**Sectors**

At a sector level, a number of working capital winners and losers have emerged this year.

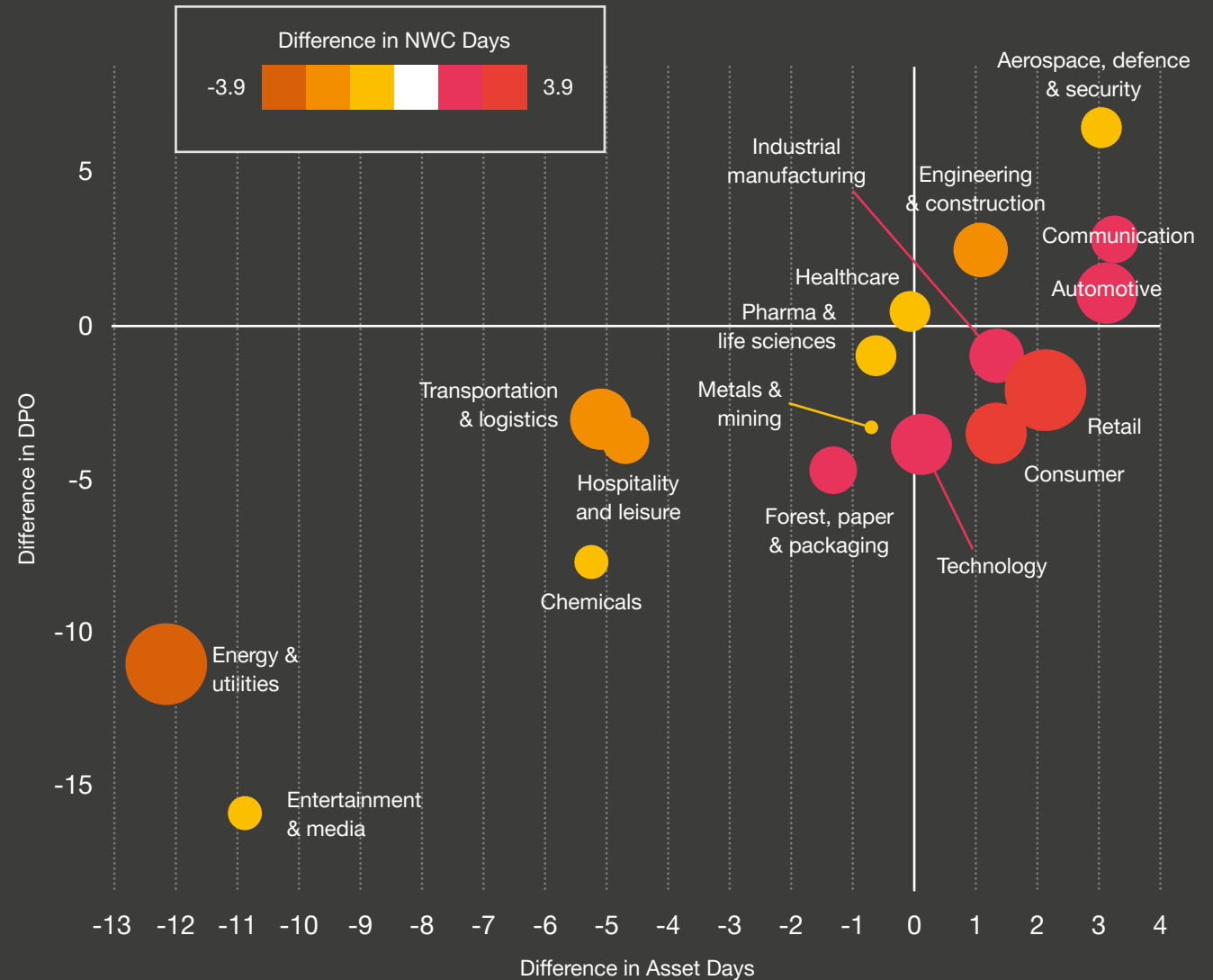
While overall NWC fell by 2.6%, the improvements were largely driven by a handful of sectors with substantial boosts (energy & utilities and transportation & logistics most prominently). The gains were offset by dips in a number of sectors (especially retail), rather than an impact that was felt evenly across sectors.

As disruption to supply created a seller's market and prices increased in energy & utilities, both asset days and payables days decreased substantially (12.2 and 11.9 days respectively), driven primarily by oil & gas related industries. The sector has continued to maintain tight control on receivables during these price increases, with reduced volatility in demand allowing the sector to operate on a more stable inventory position.

Transportation & logistics has seen similar gains as it exits from a period of significant volatility, which is reflected in decreases in both asset days and payables days (5.1 and 3.0 respectively). With the industry having invested heavily in streamlining services to customers, the asset day improvement has outstripped the DPO decline, while the already slim inventory requirements have remained the same.

While performance varied substantially across the sectors, NWC improvement has generally correlated with movements in Return on Invested Capital (ROIC). Large increases in ROIC across three of the five sectors has resulted in a higher NWC improvement than the average.

**Figure 6:** Year on year change in asset days & DPO by sector

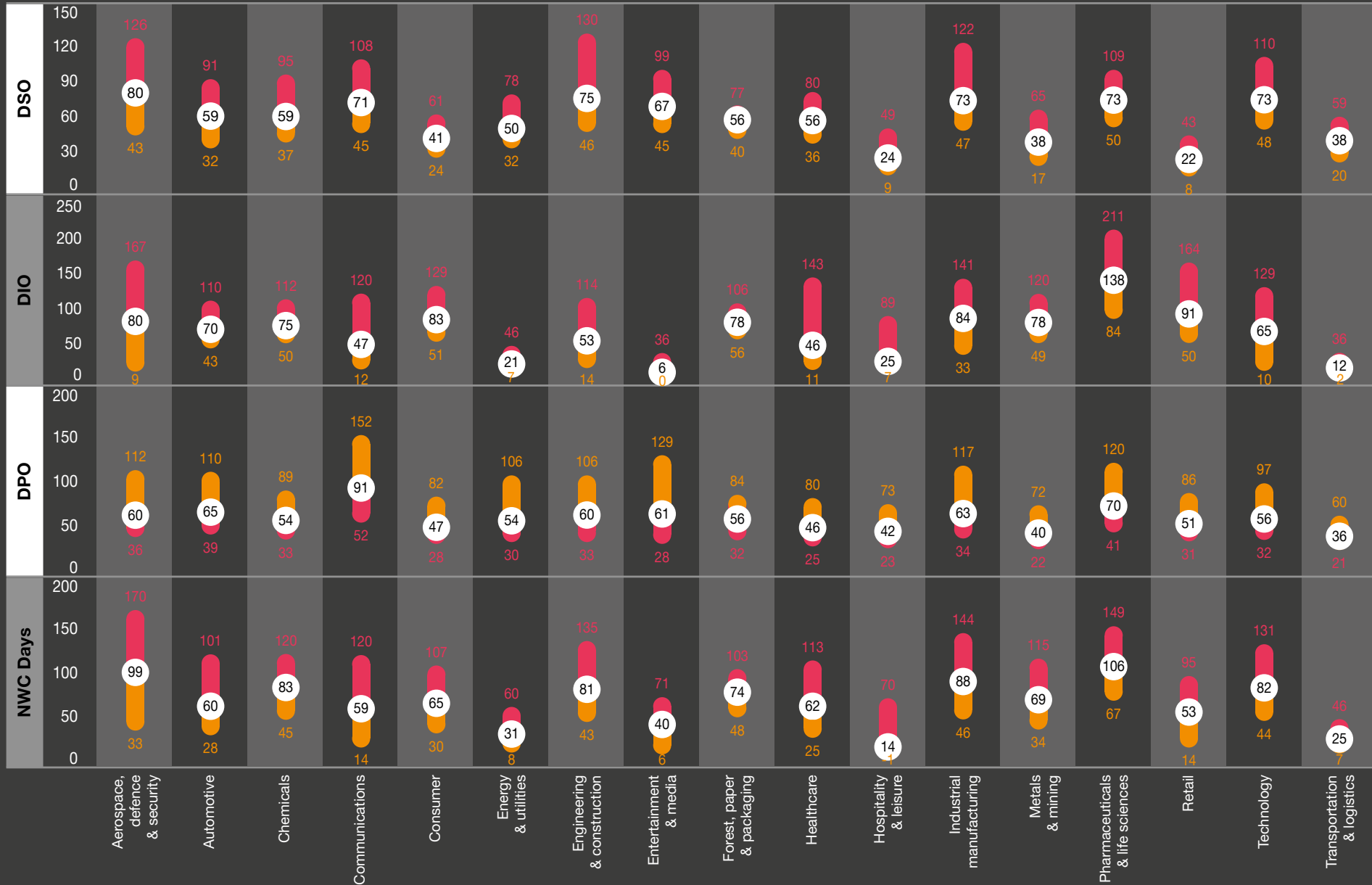


Source: PwC analysis



Figure 7: Net Working Capital quartile spread by sector

Upper quartile Median performance Lower quartile



Source: PwC analysis

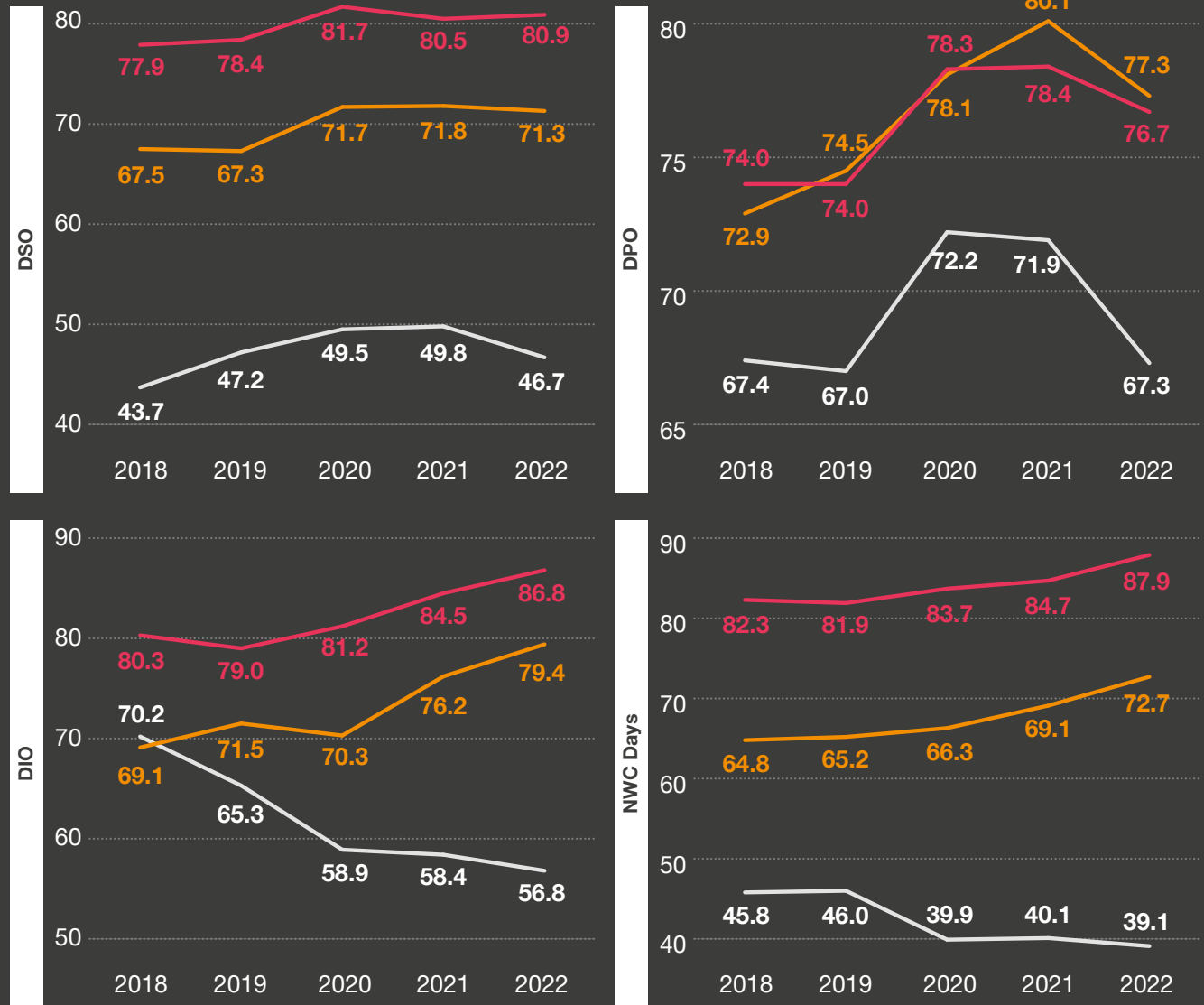
**Company size**

Improvements in NWC have been primarily driven by large companies. Both medium- and small-sized companies actually saw a deterioration in NWC days, 3.6 and 3.2 days respectively.

Whilst there was an overall decrease in DPO, however, it's more pronounced in large companies (4.6 days), as much of the prompt payment legislation is targeted towards larger buyers who can use their power to influence payment term negotiations. However, small and mid-sized companies did see a decrease as well (2.8 days and 1.7 days respectively).

Small and mid-sized companies experienced relatively little movement in DSO, which has remained higher than pre-2020 levels. Large companies saw a 3.1 day decrease and an improvement to below 2019 levels. In DIO, the trends for large companies and small and mid-sized companies vary even more. While large companies noted an improvement of 1.6 days, both small and mid-sized companies saw a deterioration - 3.2 and 2.3 days respectively.

**Figure 9: DSO, DIO and DPO trend**



Source: PwC analysis

— Large company (>€1bn turnover)    
 — Medium company (€500m – €1bn turnover)    
 — Small company (€50m – €500m turnover)

# Digitising working capital



## Working Capital Study 23/24

The Return of "Cash is King"



**The shortage of skilled labour, including fewer Working Capital professionals, is also a factor impeding the effectiveness of WCM, especially in developed economies.**

The digitisation of working capital processes to optimise performance has therefore taken on even more importance, both in managing capacity through automation and in simplifying complex decisions with the support of real-time data analysis and insights. As the solution graphic highlights, however, the scale and breadth of available workflow and ancillary technologies that now exist to complement underlying ERPs is large and complex. This makes selection of suitable solutions a significant challenge for most companies, especially when factoring in the ever-increasing security, data, integration and governance requirements.

**Figure 10:** Solution landscape



## Order to Cash

### State of play

Some level of automation such as order processing, invoicing and cash allocation has long been the standard for businesses, traditionally relying on heavy system configuration. This has generally left a number of exceptions to be manually managed, while creating the need for additional configuration to keep pace with internal or external changes.

Companies that are embracing the latest technology are able to achieve significantly higher levels of automation with close to no manual intervention, while also maintaining flexibility and scope for change. The largest challenge faced by businesses across the order to cash (O2C) cycle remains the ability to efficiently collect on invoices. Technology is not only being used to automate customer interactions – for example dunning – but also to help collection teams pinpoint the contacts where their limited time can be most valuably used.

### Disruptive technologies

Several disruptive technologies are reshaping the O2C domain, fundamentally altering how businesses handle credit management and collections efficiency. Artificial intelligence (AI) and machine learning are being deployed to predict customer behaviour and identify potential delays in payment, allowing companies to react rapidly to potential credit risk issues, and influence decision-making in collections.

Machine learning is becoming increasingly adept at a variety of internal processes as well, in particular cash application, where the matching of remittance to payments had previously relied on a human eye. Instead, transactions can now be fed through an automated process to ingest various data streams and continually improve accuracy and efficiency.

AI can now be deployed in deduction and dispute management, with the ability to read natural language and automatically categorise, allocate and suggest resolutions. In some controlled cases, AI can entirely resolve the issue without intervention.

## Source to pay

### State of play

Procurement has become crucial in managing market and supply risks, with technology playing a vital role in cost control, supply chain transparency and resilience. Procurement leaders are increasingly being challenged to sharpen efficiency, optimise procurement processes and meet expanding sustainability targets.

### Disruptive technologies

In the drive for efficiency, large best-in-class providers and agile entrants are disrupting the source to pay (S2P) landscape through highly tactical source-to-contract processes, as well as transactional and volume-based purchase-to-pay processes. Demand is increasing for solutions which are fully integrated and interoperable with upstream and downstream processes such as supplier relationship management, contract lifecycle management and third-party risk.

The combination of AI, machine learning and natural language processing is playing a key role in contract and tender authoring, as well as accelerating sourcing decision-making. These developments are also being harnessed to generate insight into spend, including duplicative payments and monitoring risk and controls across payment authorisation processes.

Large parts of the S2P cycle are also moving over to the cloud, allowing users to engage with processes in a far more agile way, while also reducing the burden on IT teams to maintain and scale the technology foundation through business growth or transformation.

A number of emerging technologies are focusing on sustainability, covering supply chain transparency, renewable energy adoption and carbon and waste reduction control, as well as ethical labour practices.

## Forecast to fulfil

### State of play

Established technology has typically aimed to automate or facilitate supply chain planning decision-making, or through the use of predictive analytics to improve forecast accuracy. Manufacturers are increasingly embracing the integration of cloud computing and advanced AI technologies to do this.

The supply chain disruptions of recent years have put these technologies further under the spotlight and heightened the focus on agility and resilience. Inflationary pressures may spur some industries to revert to pre-pandemic 'just-in-time' strategies to better balance inventory investments against service. Overall, however, the use of technology to increase supply chain agility and responsiveness remains a key priority.

### Disruptive technologies

Disruption to the supply chain planning solution landscape is primarily focused on an increased integration of AI and machine learning in the end-to-end planning cycle in combination with other technologies. Examples include using internet of things (IoT) enabled-devices to capture real-time data on customer demand. When combined with AI and machine learning for advanced analytics, the IoT tracking can lead to improved forecast accuracy, allowing organisations to respond to changing marketplace dynamics earlier and with greater confidence. As these solutions come together, they can help to intelligently automate processes and speed up the planning decision-making process.

Further developments include the increasing use of 'digital twin' technology to manage risk through scenario modelling. Taking this one step further, companies that are able to synchronise and execute planning processes beyond their own four walls and across the entire supply chain will reap the greatest rewards. The increasing importance of environmental, social and governance (ESG) factors globally means that the use of supply chain technology to facilitate transparency and reporting on sustainability will also become a key differentiator.



### Making the most of technology

Deploying technology can deliver a number of key benefits, including better transparency, evidence based decision making, process agility, and reduced error rates. All of which ultimately improved working capital performance and process efficiency. However, technology will not deliver performance in isolation and also brings its own challenges.

The primary challenge to overcome is the upfront investment required to implement these advanced technologies. This demands a clear and compelling business case to secure investment from executives and the necessary buy-in from the wider stakeholder community.

Assembling the data needed to develop a robust business case can be challenging, especially where data in legacy systems and processes is of poor quality or unavailable. The challenges can be compounded by the complex landscape of business solutions and the integration of data and security and governance requirements, along with the need to attract and retain a workforce who have the necessary skills to operate and maintain these digital technologies.

Even once these initial hurdles have been successfully navigated, implementation can be problematic. These kinds of technologies affect a wide range of stakeholders rather than just the teams most directly involved in the decision-making. This means that full transformation is required. The big risk is believing that new systems are a silver bullet. In reality, realising the benefits requires effective buy-in, skills and change management to solve issues and transform operations.

# How we can help



# How we can help

PwC's operational and specialist Working Capital team supports company management to realise cash improvements at pace, improve operational processes, deploy supporting technology, and drive organisational transformation.

Where and how we could help you to release cash from Working Capital?

## Data analytics and insights



## Working capital operating model design



## Cash culture implementation and training



## Operational process improvements



## Commercial negotiation and terms optimisation



## Select and integrate enabling technologies



## Cash forecasting process and reporting



## Short term cash sprints



## Provide surge capacity and managed service





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