J.P.Morgan

Strategies for Resiliency: Working Capital Index Report 2023

August 2023

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Introduction

After a sharp revival in the global economy in 2021, 2022 was a stark contrast, marked by geopolitical and economic disruptions, including the reversal of quantitative easing and monetary stimulus.

Headwinds included the highest inflation in 40 years, hitting a peak of 9.1% in the U.S.[1] and 11.5% in Europe[2]. China saw a near-record slowdown with GDP growth falling from 8.4% to 2.99% from 2021 to 2022.[3] Additionally, the Fed funds effective rate rose by more than 425 basis points, the fastest central bank tightening in decades, and the war in Ukraine negatively impacted fragile global supply chains, which introduced unprecedented sanctions and friend-shoring. All these disruptions took a toll on the working capital of corporates as demand plummeted and supply chains were disrupted.

Despite these challenges, 2023 started with optimism regarding the global economy, until the collapse of Silicon Valley Bank and Signature Bank as well as the failure of Credit Suisse. Equally, market volatility and funding stress is going to create macroeconomic uncertainty with global growth predicted to fall below historic averages at 2.8% in 2023.[4]

With the onset of conservative bank lending and the continued high cost of borrowing, there will be persistent stress on corporates' cash flow. With rapid digitization, changing customer expectations and capital expenditure requirements to combat supply chain inefficiencies, corporates also need to carefully balance growth and resiliency. Therefore, it is imperative for corporates to evaluate internal resource utilization and prioritize working capital and liquidity optimization.

Companies need to make every dollar of capital count as they brace for a possible slowdown while leveraging learnings from past economic crises with regards to deleveraging and capital expenditure. Both these goals can be achieved via effective working capital management.

Through insights derived from this working capital analysis, the report will help corporates benchmark and optimize their working capital performance.

In this report, we will:

- → Examine the performance of Working Capital Index, Cash Index and Cash Conversion Cycles (CCC) of S&P 1500 companies in the past year
- → Provide industry insights and performance in 2022
- → Analyze and identify key focus areas for various industries based on current performance and forecasts
- → Identify the metrics that helped companies recover after the 2008 Great Recession

Calculation methodology

There are three sets of data points analyzed in this report:

i The **Working Capital Index** tracks the average net working capital/sales values across the S&P 1500 and is calculated as follows:

$$\text{Average NWC} = \frac{\sum_{K=1}^{n} \text{Net Working Capital}_k / \text{Sales}_k}{n}$$

ii The **Cash Index tracks** the average cash/sales values across the S&P 1500 and is calculated as follows:

$$\text{Average Cash} = \frac{\sum_{K=1}^{n} \text{Cash}_k/\text{Sales}_k}{n}$$

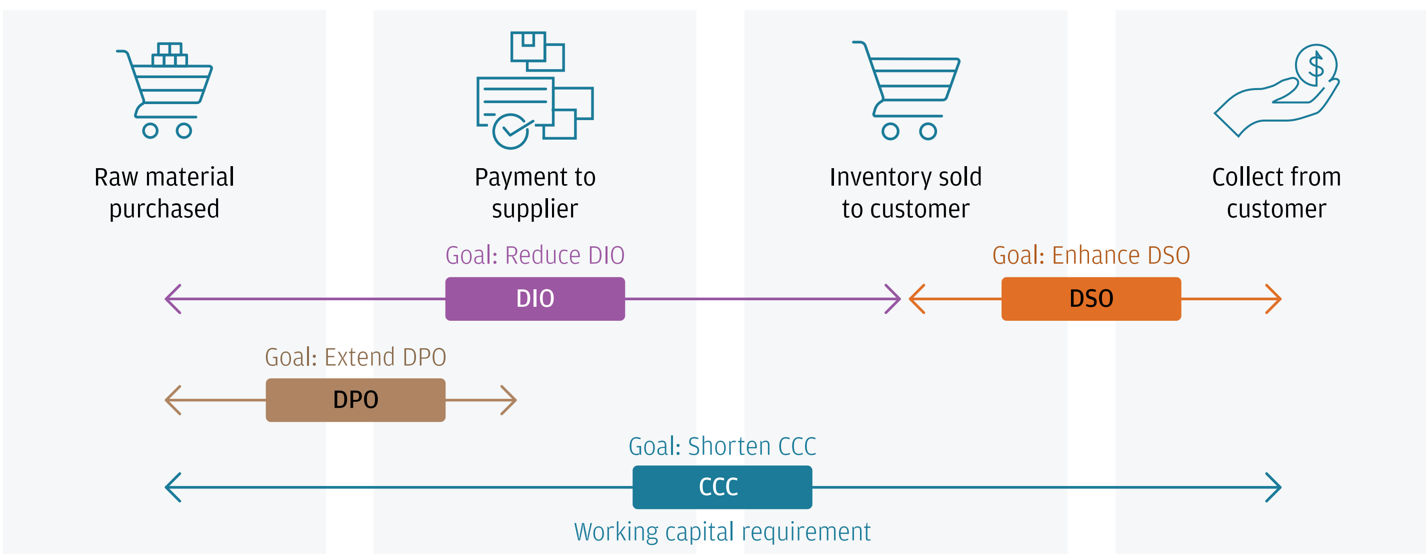
where:

Net Working Capital = Trade Receivables + Inventory – Trade Payables; n = total number of companies

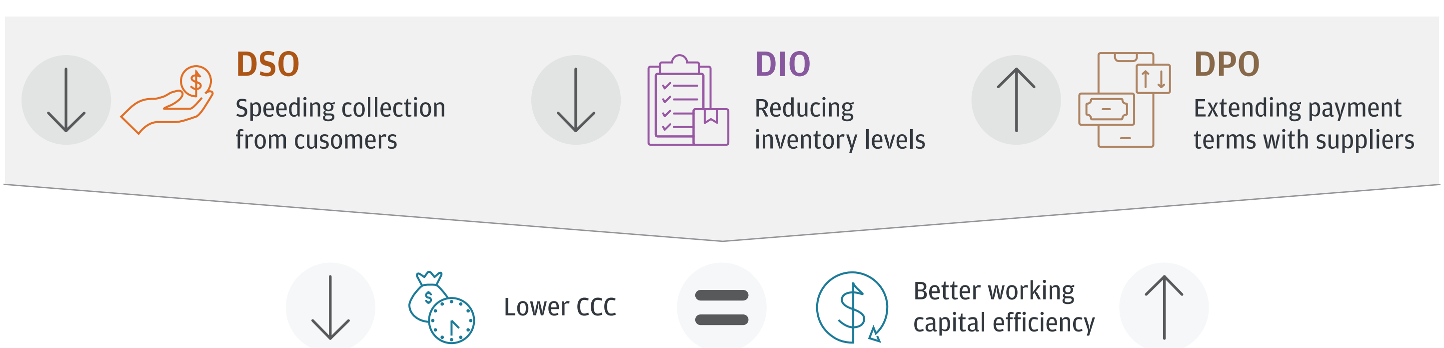
We have established the base levels of 100 for both the Working Capital Index and the Cash Index, using 2011 as the base year.

iii The **Cash Conversion Cycle (CCC)** is the number of days it takes to convert inventory purchases into cash flows from sales. The CCC helps quantify the working capital efficiency of a company and is derived from three components:

- → Days Sales Outstanding (DSO) or the number of days taken to collect cash from customers
- → Days Inventory Outstanding (DIO) or the number of days the company holds its inventory before selling it
- → Days Payable Outstanding (DPO) or the number of days from the time a company procures raw materials to payment of suppliers



Companies can improve their working capital by effectively managing the individual components of their CCC. They can do so by reducing inventory levels (decreasing DIO), extending payment terms with suppliers (increasing DPO) or speeding up collections from customers (shortening DSO). As a general rule, the lower the CCC, the better the working capital efficiency.



Note:

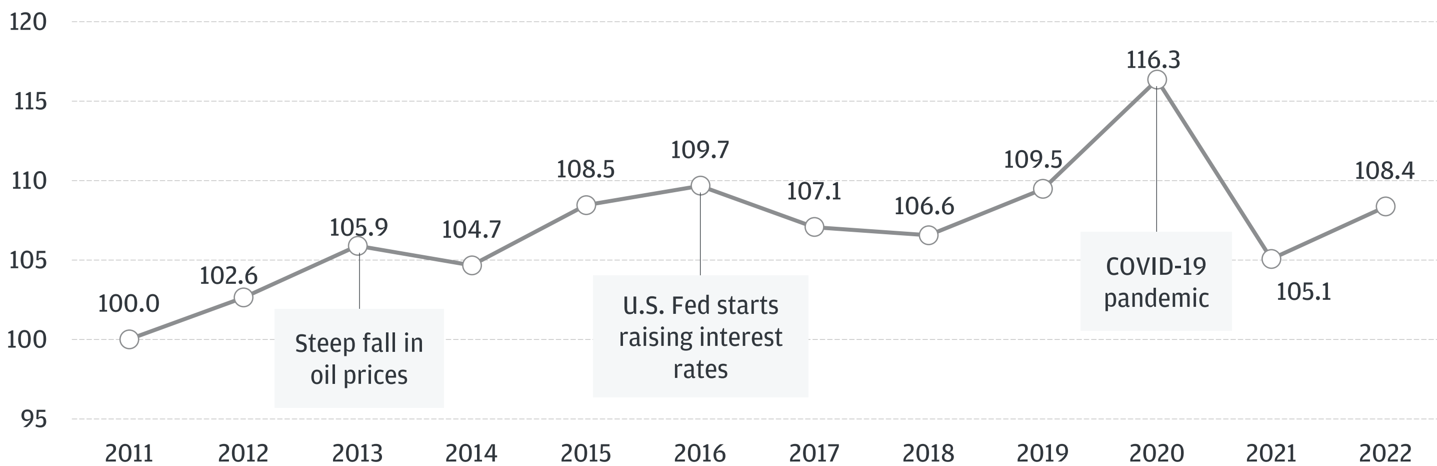
To avoid the distortion of data, financial services and real estate firms in the S&P 1500 were excluded from the calculations due to their distinct business models and unique working capital metrics in comparison to other industries. Companies with high volatility in working capital and those with incomplete data were also removed, bringing the total number of companies used for this analysis to over 944.

All numbered data have been gathered from Capital IQ for the purpose of calculations.

The trends extracted from our analysis were validated against insights from J.P. Morgan's research team.

02
Key Findings

I. Working Capital Index reverses direction



Source: Capital IQ

After the sharp reversal reported in the J.P. Morgan Working Capital Index in 2021 from its 2020 peak, working capital has moved up by 3.3 points in 2022. This is closer to pre-pandemic levels with S&P 1500 companies taking on average 3 days more than 2021 to convert inventory purchases or net input dollar into cash receipts. The spike in working capital was primarily driven by higher inventory levels.

In 2022, economic activity declined and demand growth slowed down in many industries, narrowing the supply and demand gap. While supply chain pressure eased in 2022, with the Global Supply Chain Pressure Index (GSCPI) falling to 1.2 by December 2022[5] (from 3.6 at the start of the year), there were continued spikes due to lockdowns in China and the Russia-Ukraine war. In order to de-risk supply chains, many corporates shifted from just-in-time to just-in-case inventory models, leading to higher working capital in 2022.

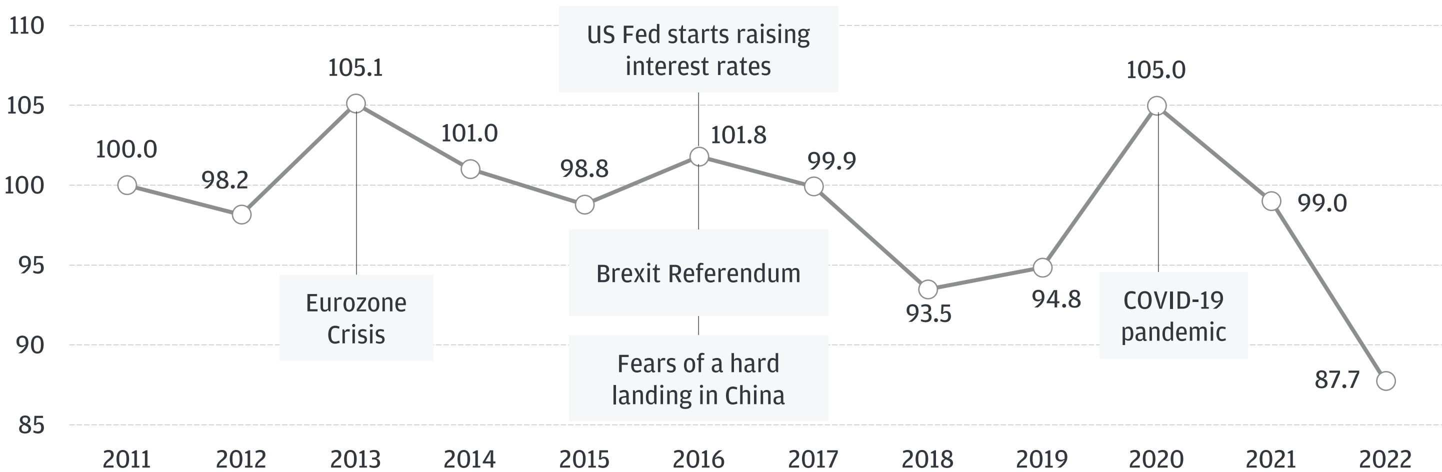
While it is difficult to forecast the long-term, it is notable that there are proliferating industrial policies across nations to safeguard certain sectors for national security interests, which may impact working capital levels further.

Takeaway:

With macroeconomic uncertainty in the near term, external pressure on working capital will likely continue through 2023 as contractions in demand impact inventory turnover, including potential delays in customer collections if credit profiles deteriorate.

Additionally, the carrying cost of money trapped in working capital is significantly more expensive than years past in light of higher interest costs and by extension, higher internal hurdle rates. Given the enhanced focus on operational efficiency, treasurers and CFOs will likely need to take a more pro-active role in partnering with internal business partners – from procurement to sales – to optimize working capital across the balance sheet.

II. Cash index falls to all time low



Source: Capital IQ

The Cash Index reduced by 11.3 points in 2022 as a majority of companies in the S&P 1500 index reallocated capital by reducing cash build, increasing debt repayment, executing share repurchases, and paying dividends. The drop in cash levels can also be attributed to the increase in inventory buffers, as just-in-case models drained cash.

The historically high cash level during 2020 can be attributed in part to government stimulus and buffers created by corporates to protect themselves against the pandemic. This cash was channeled towards growth in 2021 and 2022 – both organic and inorganic. The rise in inflation also meant that the companies had to utilize more cash in supporting their working capital needs.

In 2022 companies made decisions to increase the buyback of shares to increase the earnings per share by reducing the outstanding shares floating in the market. Companies bought $780 billion worth of their own shares, up $122 billion from 2021. Share buybacks also accelerated during the fourth quarter as companies advanced repurchase plans from early 2023 ahead of a 1% tax on net corporate share repurchases that took effect on Jan. 1 2023. Increased pressure from investors also saw companies increasing dividend payout to the tune of $457 billion, up $35 billion from 2021.

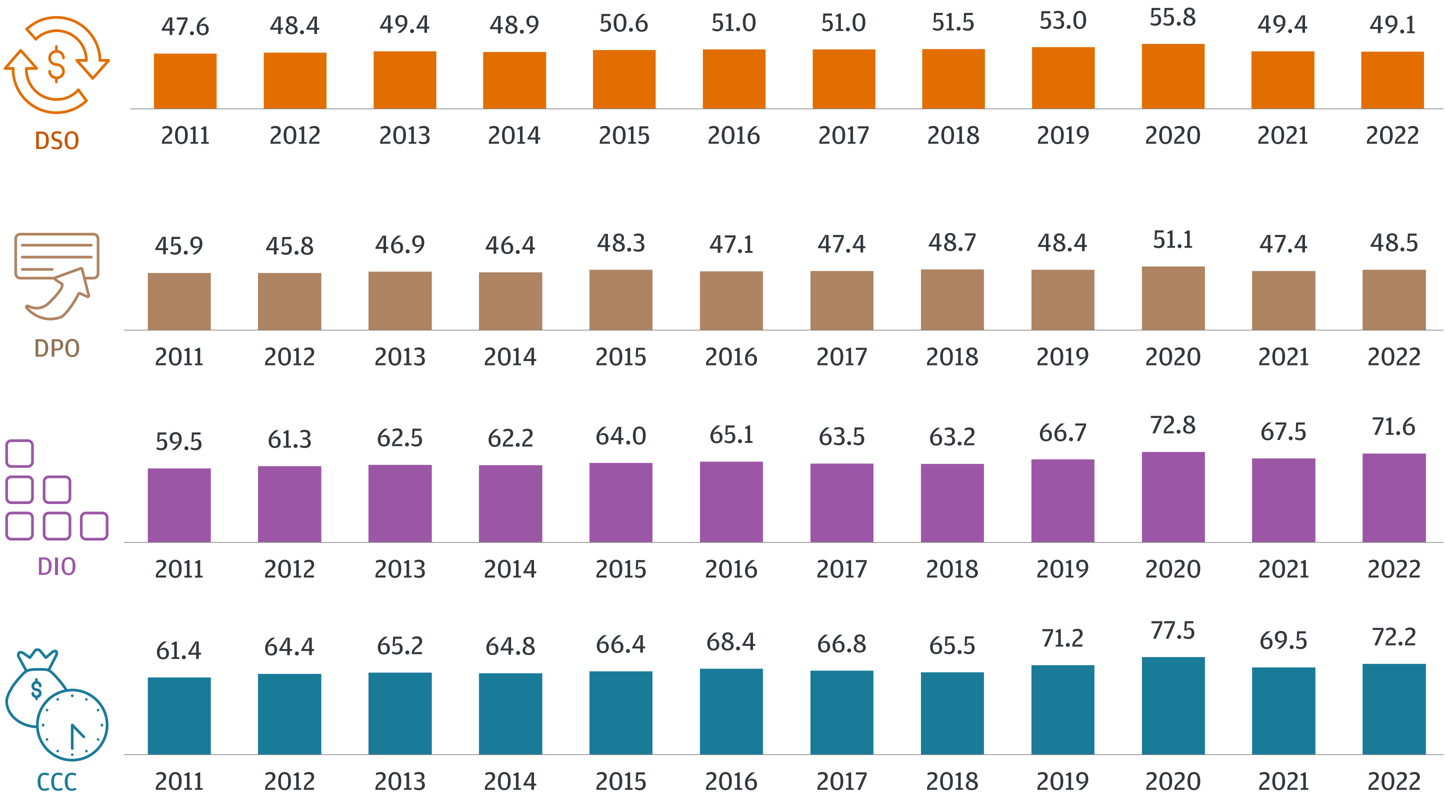
Capital expenditure also saw a notable 19% jump during the year i.e. from $762 billion in 2021 to $906 billion in 2022, impacting the cash levels, as corporates strengthened and diversified supply chains and invested in boosting output capacities.

Takeaway:

Economic uncertainty, stubborn inflation, and elevated costs of capital will force many corporates to focus on liquidity and working capital management. In this new environment, cash becomes a more valuable resource and treasurers will need centralized visibility and control on enterprise liquidity to ensure its optimized utilization.

III. Cash Conversion Cycles Lengthened Post Recovery

Average working capital performance parameters across the S&P 1500 companies 2011-2022 (in average number of days)



Source: Capital IQ

In 2022 corporates saw a deterioration in their cash conversion cycle (CCC) by 2.7 days post the recovery observed in 2021. This can be attributed to demand normalization as the pent-up post pandemic demand faded during the year. The change in CCC was largely driven by higher inventory levels.

The days sales outstanding (DSO) improved marginally by 0.3 days to 49.1 days. Continued adoption of online sales and direct-to-consumer channels contributed to the decrease in collection days.

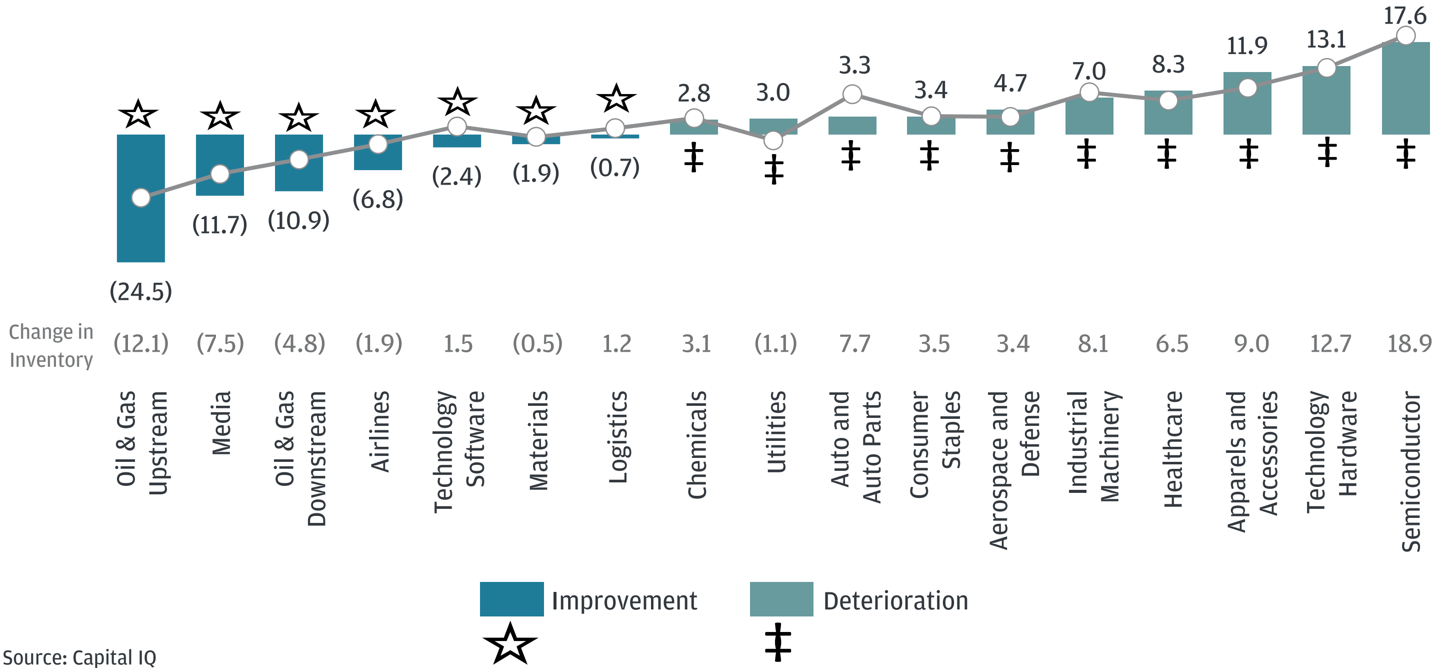
The days payable outstanding (DPO) improved by 1.1 days to 48.5 days, normalizing to pre-pandemic levels. Inventory levels were up for a majority of S&P 1500 companies with days inventory outstanding (DIO) increasing to 71.6 days. Supply chain challenges over 2022, including pandemic restrictions in China and the Russia-Ukraine war, contributed to the rise in inventory as corporates held more inventory buffers to manage disruptions.

Takeaway:

Whether it is geopolitical tensions, changing business models, supply chain diversification, ESG focused shifts, or infrastructure investment, the breadth of changes in the global supply chain are accelerating at a pace not seen in the last three decades. This will have an impact on how goods flow and ultimately, on working capital requirements. Corporates need to review vulnerabilities in their supply chains together with macro-level policy changes to ensure they are prepared, efficient, and agile to withstand these shifts.

IV. Majority of industries experienced deterioration of CCC

Changes in Cash Conversion Cycle by sector 2021-2022



Source: Capital IQ

In terms of cash conversion cycle (CCC) performance, 10 of 17 industries experienced longer CCCs in 2022. This is in contrast to 2021 when a majority of analyzed industries saw an improvement in CCC. One of the key contributors to the deterioration in 2022 is higher inventory levels as corporates built inventory buffers to manage supply chain disruptions. Some industries also saw demand decrease as pent-up demand from COVID shortages abated, narrowing the supply and demand gap over the past year.

Notably, semiconductor, technology hardware, and apparels and accessories industries experienced a significant increase in their CCC in 2022, after benefiting from uptick in demand in 2021. However, as this demand waned, these industries faced an increase in inventory, resulting in slower inventory turnover. For some industries like semiconductors and healthcare the companies consciously and purposefully increased inventory to plan for potential supply disruptions . Some of these sectors also expanded their capacities, exacerbating the imbalance between supply and demand, further contributing to increase in CCC. Semiconductor industry lengthened the most with an average increase of 17.6 days.

On the other extreme, the oil and gas upstream sector improved its CCC by 24.5 days on average. This was largely due to the supply chain disruption caused by the Russia-Ukraine war. Russia, the world's largest exporter of oil and gas to global markets, faced numerous sanctions, leading to overall inventory and CCC reduction for companies in the oil and gas industry.

Industries like airlines benefitted from the surge in travel demand returning to pre-pandemic levels mid-2022, and continuous investments in digital transformation helped decrease the sales cycle. There was also a push towards personalization via products like loyalty programs which further benefited the collection cycle, leading to an overall industry decline in CCC.

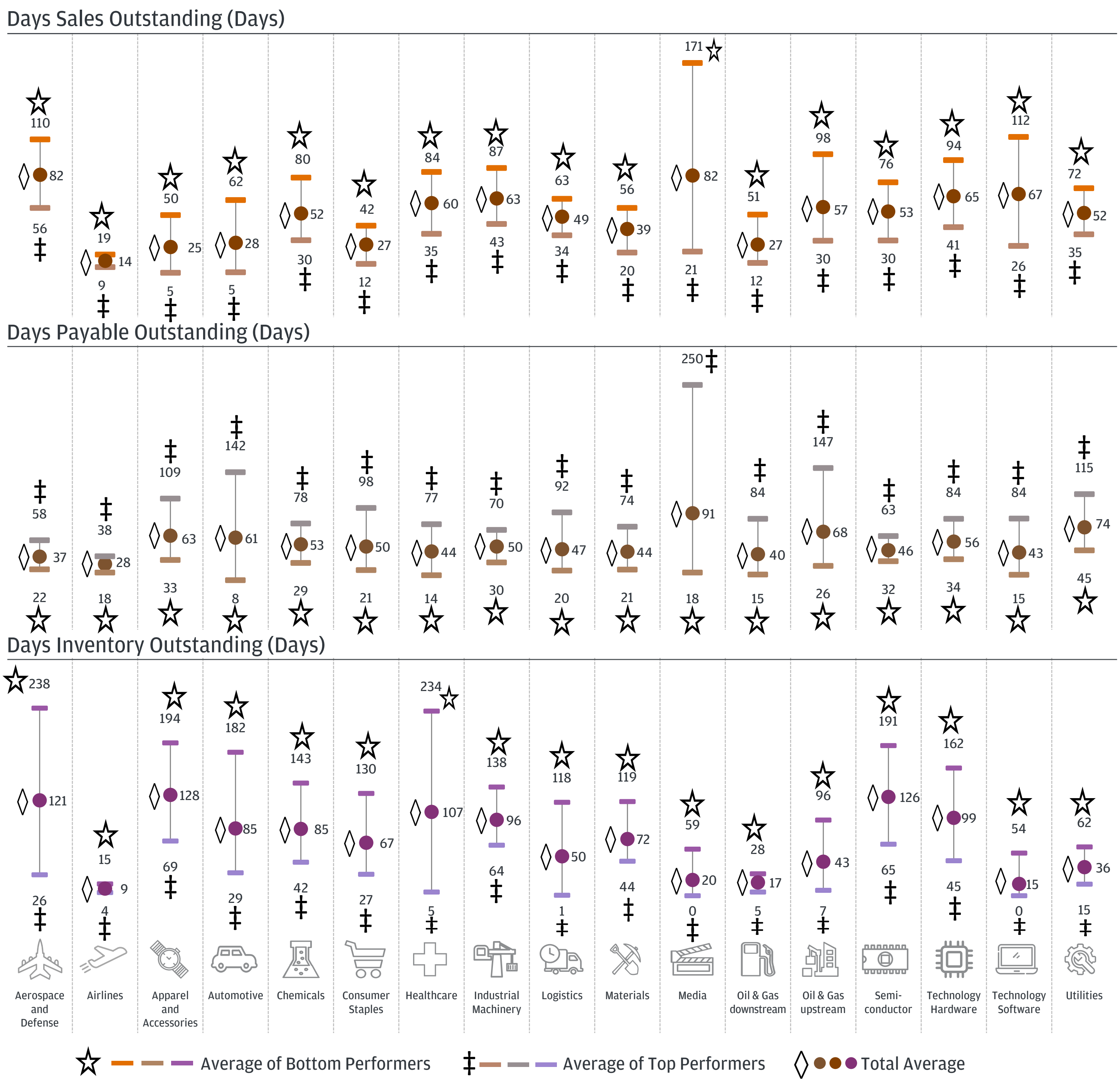
Takeaway:

With flat or decreased customer demand on the horizon, working capital optimization can help protect the balance sheet in a time of higher inflation, interest rates, and uncertainty. Benchmarking key process metrics across payables, receivables and inventory can serve as a starting point to identify bottlenecks and baseline opportunities for internal improvements. Applying data analytics to drive insights about supplier and customer behaviors, and thus devising specific action plans for target segments, can help corporates initiate a journey of improvement from within.

V. Potential to unlock $633 billion of liquidity through working capital optimization

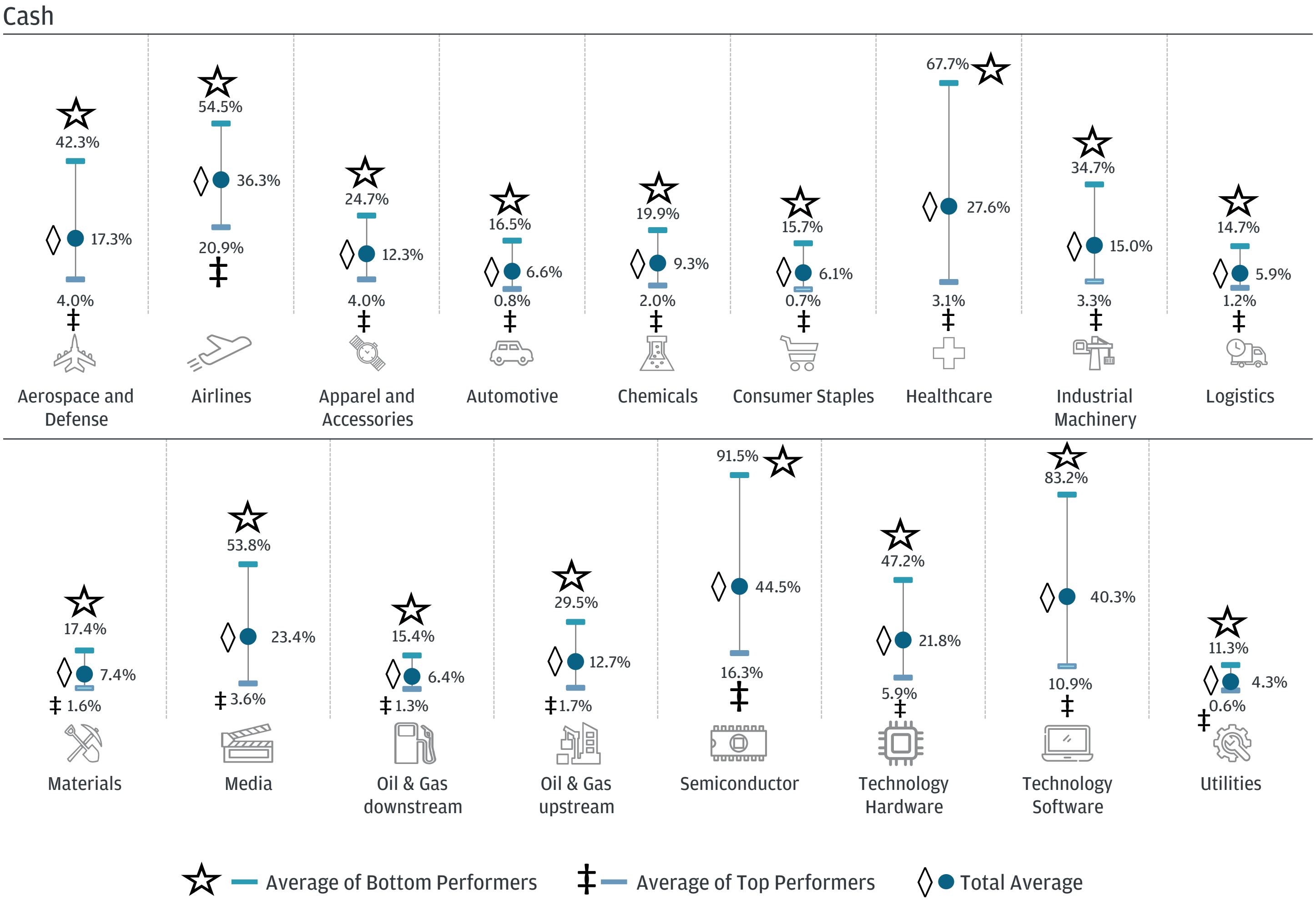
There remains significant liquidity tied up in supply chains across the S&P 1500 companies observed in the DSO, DIO and DPO metrics, as well as the cash levels within industries (see chart below).

Snapshot of the average working capital performances between the top and bottom performers across 17 industries in 2022 (in number of days)



Source: Capital IQ

Snapshot of the average cash levels between top and bottom performers across 17 industries in 2022 (in percentage of revenue)



Source: Capital IQ

Assuming every organization improved its working capital and moved into the next performance quartile[1] in their respective industries across the DSO, DPO and DIO metrics, an estimated $633 billion in working capital could have been released as of year-end 2022, up from $523 billion in 2021.

[1] For every working capital parameter we have split the companies within each industry into four performance quartiles (with the first quartile representing the performance of the top 25 percent companies within the industry and the fourth quartile corresponding to the bottom 25 percent). The free cash flow release calculation assumes that a company moves from its existing performance quartile to the next best performance quartile and quartile one companies remain at their current levels

Takeaway:

The $100 BN+ YoY rise in trapped liquidity suggests companies need to prioritize better working capital policies, particularly considering rising interest rates and inflation. With increasing uncertainties surrounding global economic outlook, companies should consider adopting industry best practices to release trapped capital where needed. Possible strategies include liquidity centralization, common payment term policies, disciplined customer credit strategies, payment digitization tools, and off balance sheet working capital solutions.

03
Outlook

I. Key industry insights

To understand working capital trends and drivers, the report further examines four key industries that experienced significant change in their working capital levels in 2022.

Technology, Media and Telecom Industry: Semiconductors

Consumer and Retail Industry: Apparels and Accessories

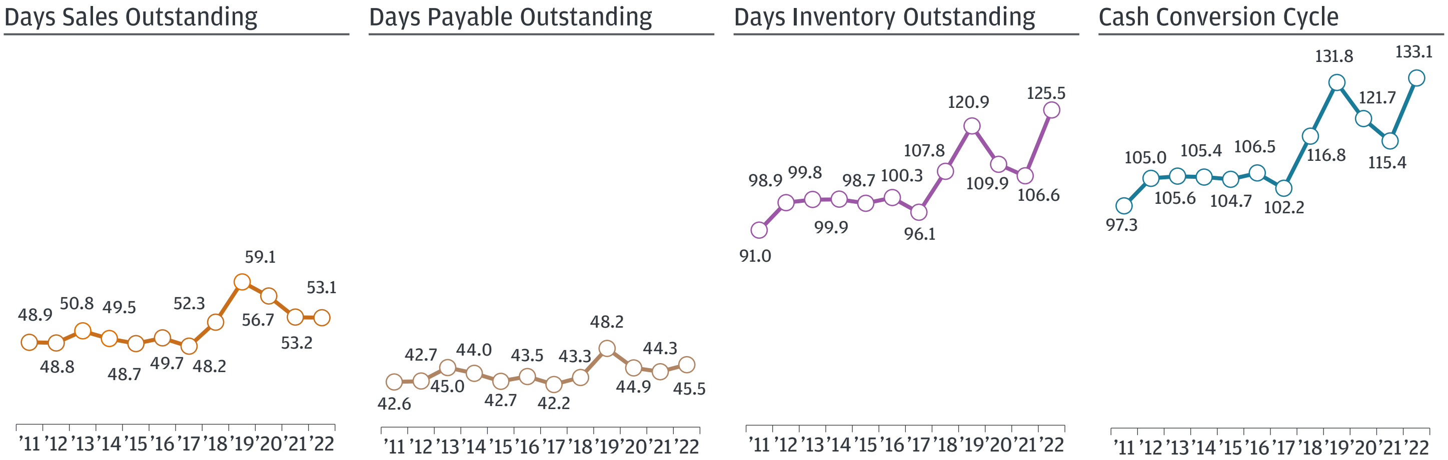
Healthcare Industry

Energy Industry: Oil and Gas Upstream

The analysis also breaks down the working capital parameters into four performance quartiles, with the first quartile representing the performance of the top 25 percent companies within the industry and the fourth quartile corresponding to the bottom 25 percent. This enables businesses to identify industry averages and benchmark their organizations' working capital performances against peers.

A. Technology, Media and Telecom Industry Analysis: Semiconductors

Comparison of working capital parameters within the Semiconductors industry 2011–2022 (in average number of days)

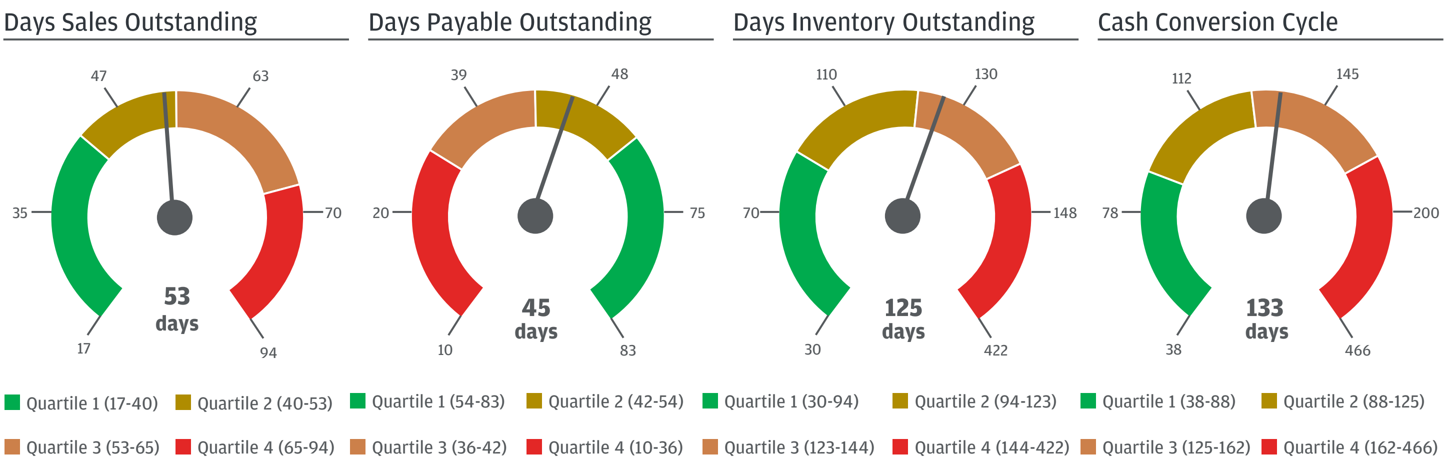


Source: Capital IQ

Semiconductor companies saw their overall CCC deteriorate by an average of 18 days. The increase was primarily driven by increased inventory levels which could be attributed to reduced demand.

Semiconductor industry was negatively impacted in 2022 as the demand slowed down and it faced supply chain disruptions and delays in obtaining tools and components. Additionally, semiconductor companies faced challenges due to high inventories among end consumer industries which maintained buffer stocks after experiencing shortages in the previous year. This, combined with slower demand for end products consuming semiconductors (e.g. smartphones, consumer electronics, etc.), resulted in lower inventory turnover for semiconductor companies. Cloud and AI related infrastructure build out requires vast sums of capital and inventory of advanced chips, putting pressure on balance sheets of semiconductor companies. Meanwhile, semiconductor producers over corrected for the past shortage of low value chips needed in some manufacturing sectors. Normalization of inventory levels may take a few quarters as inventory drawdown is expected to happen slowly, necessitating proactive measures by treasurers to optimize their working capital.

Working capital parameters within the semiconductors industry 2022 (in average number of days)

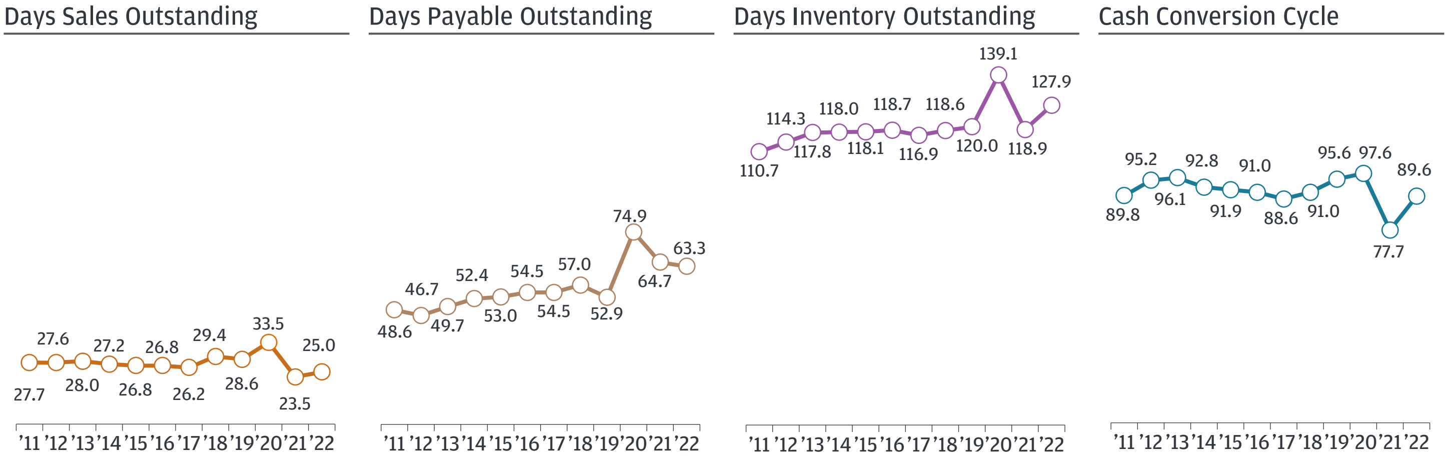


Source: Capital IQ

In 2022, companies within the semiconductors industry took an average of 45 days to pay their suppliers while cash from sales was realized in 53 days. On average, companies maintained 125 days' worth of inventory.

B. Consumer and Retail Industry Analysis: Apparels and Accessories

Comparison of working capital parameters within the apparels and accessories sector 2011–2022 (in average number of days)

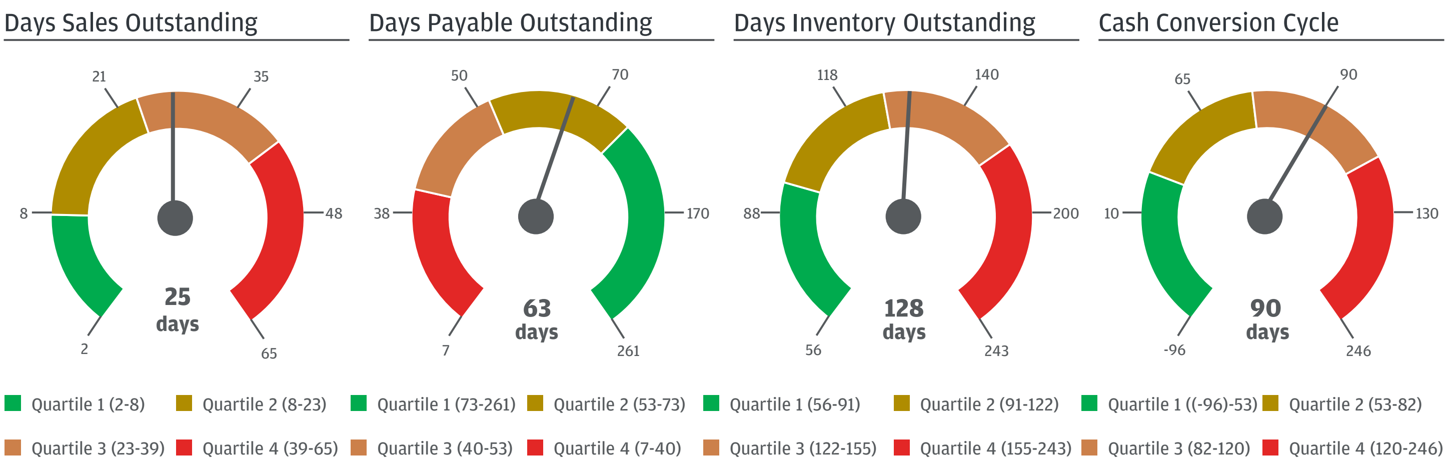


Source: Capital IQ

CCC for the industry went up in 2022 by 12 days, on average, and the overall industry saw a buildup in inventory levels as demand normalized relative to 2021 and high inflation negatively impacted the discretionary spend by consumers.

At the height of the global supply chain disruption in early 2022, labor, vessel and container shortages as well as US port congestion resulted in delayed deliveries, and forced companies to pre-order their inventory. However, transit time improved sooner than anticipated, leaving companies with excess inventory. Both supply chain disruption and mismatch in demand and supply levels resulted in CCC increase in 2022 for apparels and accessories companies.

Working capital parameters within the apparels and accessories industry 2022 (in average number of days)



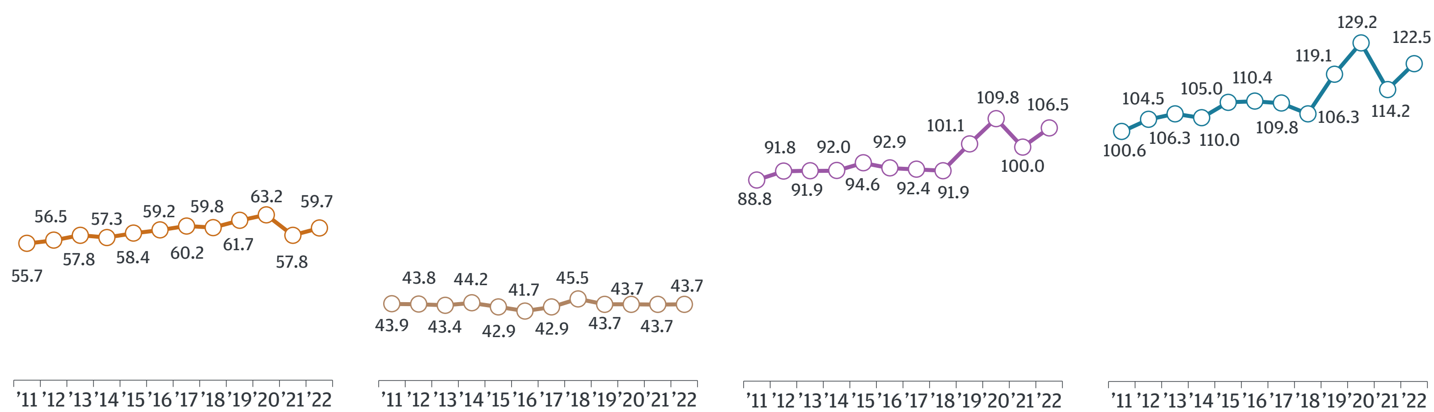
Source: Capital IQ

In 2022, companies within the apparels and accessories industry took an average of 25 days to turn sales into cash proceeds. The sector held 128 days' worth of inventory, and payments to suppliers were generally made within an average of 63 days.

C. Healthcare Industry Analysis

Comparison of working capital parameters within the healthcare sector 2011–2022 (in average number of days)

Days Sales Outstanding | Days Payable Outstanding | Days Inventory Outstanding | Cash Conversion Cycle



Source: Capital IQ

Healthcare industry (inclusive of pharmaceuticals, medical device manufacturers, distributors, etc.) saw its average CCC days go up 8 days and experienced high inventory levels driving up the working capital requirement.

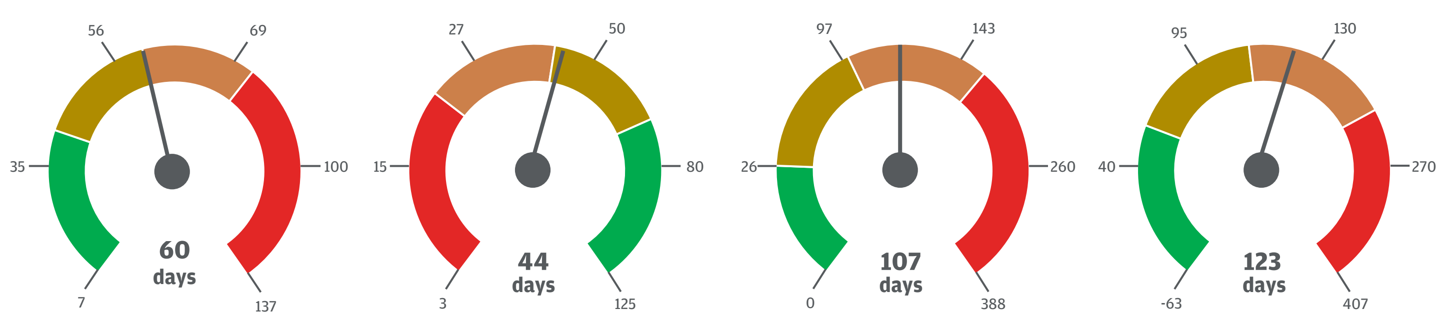
Healthcare companies faced multiple supply chain headwinds in 2022 including cost inflation, rise in raw material costs due to China-led shortages, global strain on transportation and a tighter labor market. These disruptions resulted in healthcare companies keeping additional inventory buffers to guard against supply shortages.

Additionally, in 2021, the push to manufacture COVID-related drugs and vaccines created a significant tailwind for the healthcare industry, resulting in a sudden surge in demand for these drugs. This increased demand led to a rapid decline of inventory levels.

However, with the tailwind of COVID-related drug demand subsiding in 2022, inventory levels have once again risen for healthcare companies, especially the ones which were actively involved in producing COVID related drugs. We also observed the impact of this on DSO which jumped up by 1.9 days from 2021.

Working capital parameters within the healthcare industry 2022 (in average number of days)

Days Sales Outstanding | Days Payable Outstanding | Days Inventory Outstanding | Cash Conversion Cycle



Quartile 1 (7-50) Quartile 2 (50-60) Quartile 3 (60-69) Quartile 4 (69-137)

Quartile 1 (59-125) Quartile 2 (43-59) Quartile 3 (24-43) Quartile 4 (3-24)

Quartile 1 (0-24) Quartile 2 (24-98) Quartile 3 (98-147) Quartile 4 (147-388)

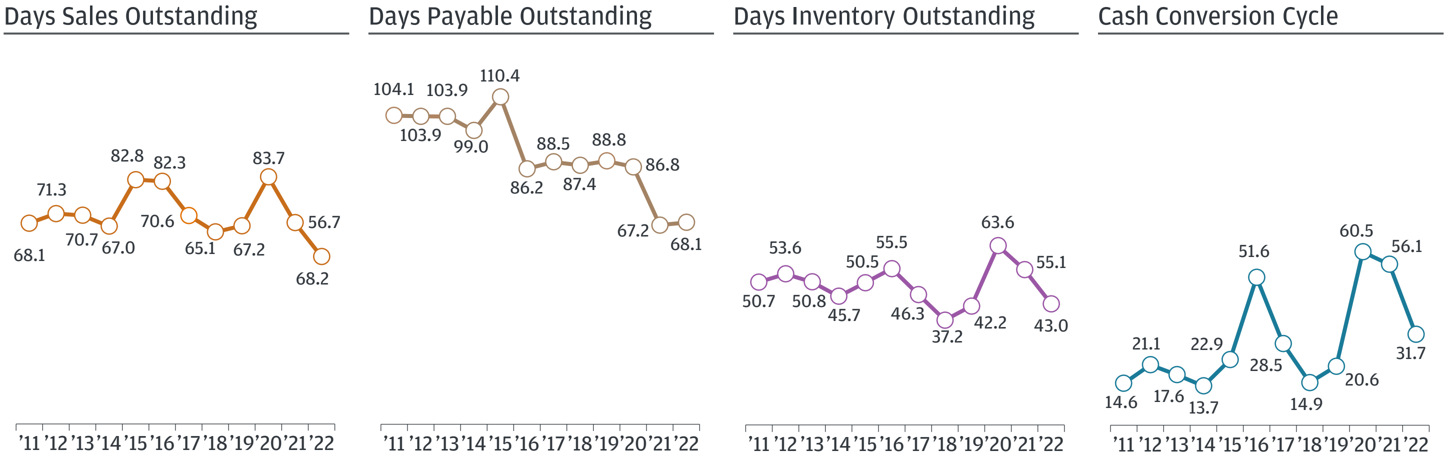
Quartile 1 ((-63)-45) Quartile 2 (45-108) Quartile 3 (108-174) Quartile 4 (174-407)

Source: Capital IQ

In 2022, healthcare companies took an average of 44 days to pay off supplier invoices. They maintained an average of 107 days' worth of inventory and took 60 days to convert sales into cash proceeds.

D. Energy Industry Analysis: Oil and Gas Upstream

Comparison of working capital parameters within the oil and gas upstream sector 2011–2022 (in average number of days)

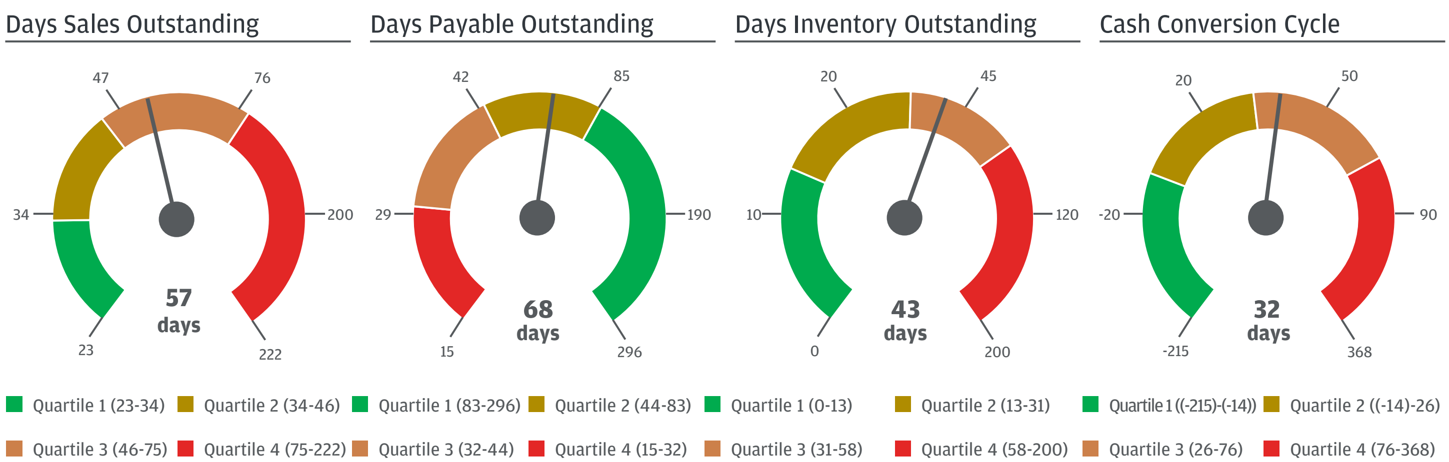


Source: Capital IQ

The CCC for Oil and Gas Upstream industry decreased by 24 days, showing a stark improvement compared to other industries. This was caused by drawdown on inventory levels and faster collection from customers due to high global demand amidst a supply shortage of oil and gas due to production constraints and the Russia-Ukraine war.

Oil and gas upstream companies were affected by macroeconomic and geopolitical trends, causing supply shortages. This was primarily due to decreased exports of Russian oil and natural gas due to western sanctions and plans by OPEC to curtail oil supplies in the market.

Working capital parameters within the oil and gas upstream industry 2022 (in average number of days)

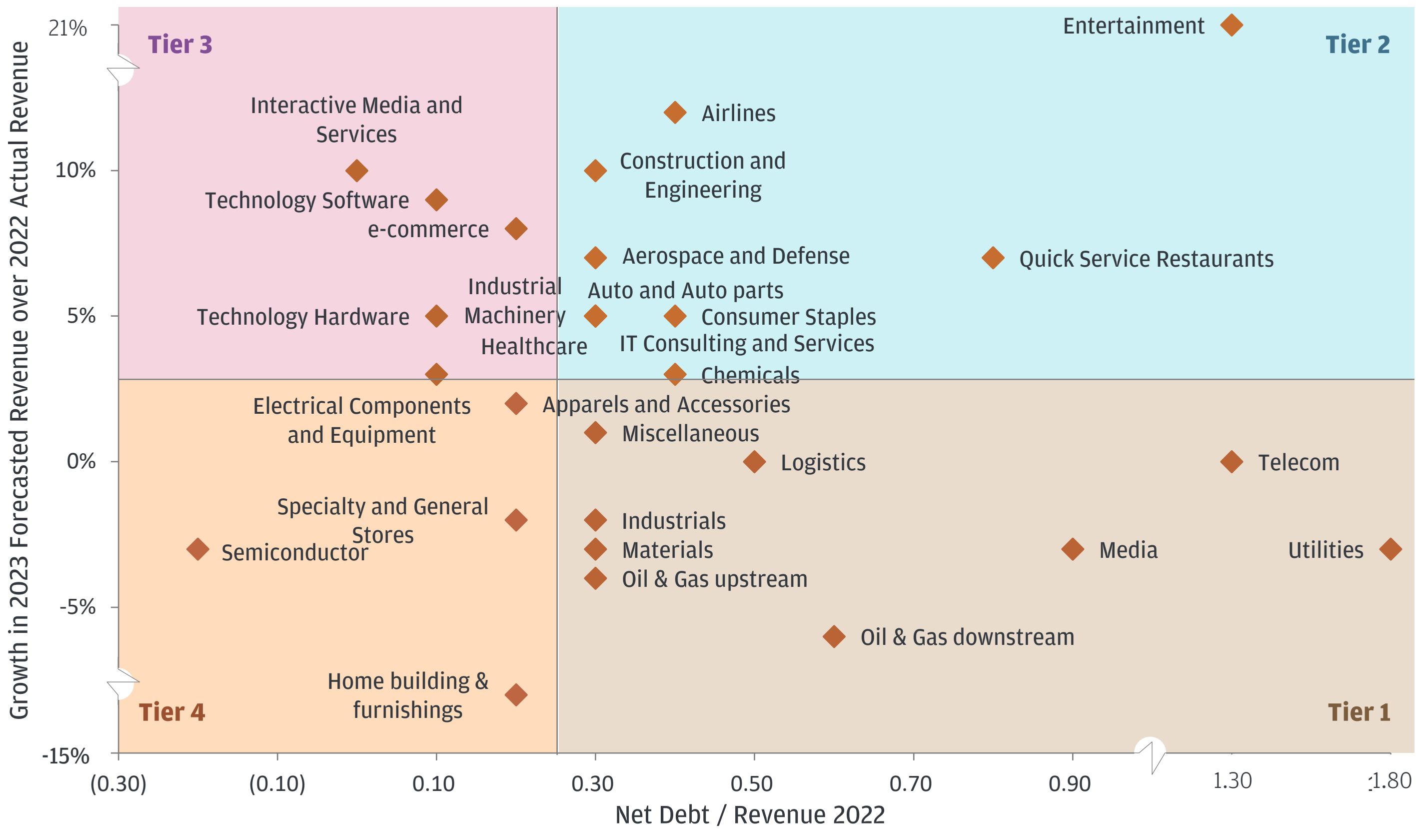


Source: Capital IQ

In 2022, the oil and gas upstream industry took an average of 68 days to pay off suppliers, maintained 43 days of inventory and took 57 days to turn sales into cash proceeds.

II. Outlook analysis

High inflation, expected economic uncertainty, a high interest rate environment and financial sector turmoil will likely have an impact on corporates across various industries. The magnitude and nature of impact may not be equal across all sectors, which will determine the key priorities for corporates in 2023.



Source: Capital IQ

We analyzed the industries based on two parameters: leverage ratio and expected revenue growth for 2023. We've categorized these industries in to 4 zones:

- **Tier 1-** Industries with high debt levels and low revenue growth
- **Tier 2-** Industries with high debt levels and high revenue growth
- **Tier 3-** Industries with low debt levels and high revenue growth
- **Tier 4-** Industries with low debt levels and low revenue growth

Tier 1 industries like oil & gas and materials are expected to be impacted the most, with cash flows from operations under pressure due to economic slowdown. At the same time, highly leveraged balance sheets would limit their ability to access external debt. Focus for these corporates should be on protecting and optimizing their core business operations to ensure business continuity.

Treasurers can play a significant role in navigating these challenges by focusing on internal resource optimization, including working capital and liquidity management. This can help release trapped cash, providing companies with additional liquidity to manage through the slowdown period. Furthermore, any excess cash can be strategically utilized to deleverage, reducing the burden of high leverage on cash flows. This may involve paying down debt, refinancing high-cost debt with lower-cost alternatives, or exploring other deleveraging strategies.

Tier 2 companies like entertainment and healthcare companies are in a relatively comfortable spot with regards to revenue growth expectations, but exhibit a high leverage level. Their primary focus should be to utilize funds towards debt repayments to reduce the impact of high interest costs on net margins. Furthermore, any excess cash can be preserved and utilized to manage the slowdown period and start investing in growth when the economy starts to recover.

Tier 3 industries like technology software are in a sweet spot on the spectrum. They are low on debt and expect high growth in 2023. These companies will be in a position to utilize their cash flows towards investments and expansions if a good opportunity arises. They can look to target strategic acquisitions in their industry. These companies may also look to increase their investments early in the recovery cycle to position themselves for growth once industry and macro headwinds subside.

Tier 4 companies including semiconductor companies have healthy balance sheets with low leverage but low expected revenue growth. These companies may prioritize building cash buffers to withstand potential cash flow shocks. While external debt may be accessible, it may not be ideal given the high interest rate environment. Instead, focusing on internal sources of funding, such as liquidity and working capital optimization, can be a better strategy to reduce cash flow stress.

Takeaway:

Companies need prudent enterprise-wide control of cash flow and capital management. Corporates can deploy rigorous cash inflow and outflow monitoring and forecasting, prioritize essential expenses, and evaluate capital expenditures carefully. Additionally, working capital and liquidity optimization policies established by the office of the CFO can help unlock cheaper sources of internal funding to tide over economic stress and deploy capital towards growth during recovery.

04
Lessons from the past

As businesses gear up for macroeconomic uncertainty, we analyzed the lessons learned from the previous economic downturn during the 2008 Great Recession.

The current economic situation differs from great recession in many ways including the fact that while the economy is slowing, it is still growing and unemployment is at unprecedented low levels. Market shock has only impacted a handful of banks, rather than the whole sector. Equally there have been substantial reforms which means banks hold more capital to endure potential stresses.

Nonetheless, there are still lessons to be learned, as businesses prepare for potential economic challenges in the present.

The Great Recession can be loosely divided into 3 phases. The first phase stretched from 2008–2009, when recessionary pressures grew, peaking in 2009. Phase two, early recovery, ran from July 2009–June 2010. Finally, from 2010-2011 the economy moved towards normalization.

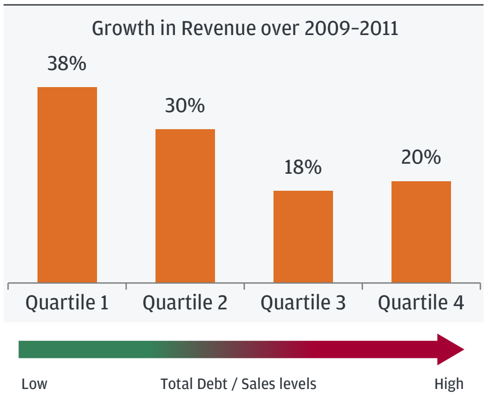
We evaluated various metrics during these periods to find correlations with growth during the recovery phase (2009–2011) to extract insights on how companies can prepare to ride the growth wave when it happens.

For the purpose of this analysis, using the data of S&P 1500 companies, we calculated the following metrics:

- → Change in debt amounts from 2008–2009
- → Total debt / revenue levels as of 2009
- → Net working capital / revenue as of 2009
- → Cash flow from investing activities / revenue levels during initial phase of recovery from July 2009–June 2010
- → Growth in revenue during the recovery period between 2009 and 2011

Lesson 1: Lower leverage supports higher growth in recovery

Lower debt levels are a key to success



Source: Capital IQ

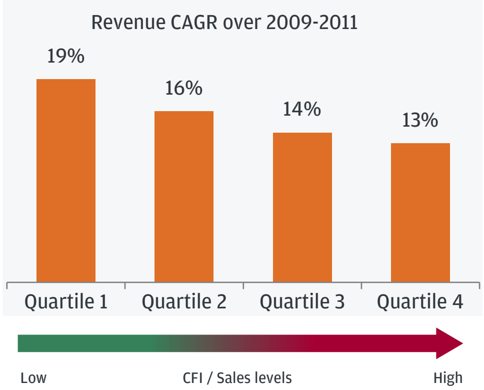
For the analysis, we segmented companies into 4 quartiles, with quartile 1 being the top 25% of companies with the lowest leverage ratio, and quartile 4 being the 25% of companies with highest leverage ratio. Quartile 1 and quartile 2 companies that stayed low on balance sheet leverage exhibited high growth (>30%) in revenue during the recovery phase, while quartile 3 and quartile 4 companies showed lower growth.

There is a clear correlation between debt levels at the peak of the recession in 2009 and the revenue growth companies experienced during the recovery period of 2009–2011. Companies with lower indebtedness have balance sheet flexibility. This gives them better protection against risks and provides flexibility to invest into growth during recovery.

Corporates with high debt should look to bring in more capital discipline and rationalize their debt levels over the next year.

Lesson 2: Higher capital expenditure in early recovery period translate into higher revenue growth

Early capital spendings give advantage



Source: Capital IQ

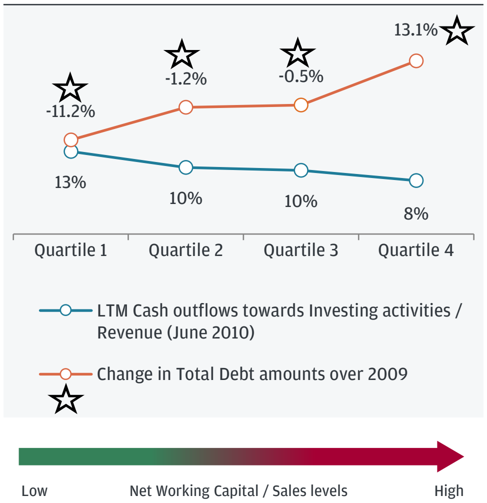
For this analysis, we segmented the S&P 1500 companies into 4 quartiles based on their cashflow from investing (CFI) as a percentage of sales during the early recovery period from July 2009 to June 2010. Quartile 1 are the companies with highest ratio of CFI to Sales, and quartile 4 are the lowest.

We again observed a direct correlation between CFI and revenue growth during the recovery period (2009–2011). Quartile 1 companies with the highest ratio of CFI to sales on average outperformed their peers with the highest revenue growth. As we shift from quartile 1 to quartile 4 the growth rate declined.

In the present scenario, companies can aim to shore up funds, to utilize on capital spending to increase CFI. As the economy starts to show early signs of recovery, this can help companies maximize sales growth.

Lesson 3: Efficient working capital management provides flexibility to invest in growth and strengthen balance sheet

Efficient working capital management gains importance



Source: Capital IQ

We analyzed correlation between working capital efficiency and the ability of corporates to reduce debt during the 2008–2009 period when recessionary pressures were on the rise. Separately, we also analyzed the correlation between working capital efficiency and CFI/Sales during the early recovery phase of the great recession (July 2010–June 2011).

To complete this analysis, we segmented companies into 4 quartiles based on the working capital/ sales ratio. Quartile 1 is the average of the most efficient 25% companies with lowest WC/sales ratio, and quartile 4 being the least efficient 25% with highest WC/sales ratio.

Companies with lower net working capital levels were able to deleverage the most during the 2008–2009 period when the recession was worsening. Quartile 1 companies were able to reduce debt by 11% on average while quartile 4 companies had to take on additional debt during the same period. Similarly, the companies in quartile 1 had higher CFI/sales as managing working capital efficiently allowed them to access cheap internal source of funding and providing flexibility to deploy cash early in the recovery phase.

Takeaway:

Maintaining capital discipline and building balance sheet strength should become a top priority for corporate CFOs and treasurers ahead of economic uncertainty. Companies with robust balance sheets are better equipped to mitigate the risks associated with economic slowdowns, while also having the resources to pursue growth opportunities during the recovery phase. Prudent financial management strategies, including optimizing working capital, can provide corporations with the resilience and agility needed to navigate uncertain economic conditions and capitalize on emerging opportunities.

05
Conclusion

With a high interest rate environment and macroeconomic uncertainty, businesses should focus on strong balance sheet management and maintain access to liquidity. Companies can look to target Net Working Capital Management by establishing a Cash Management Office, that can effectively make decisions across AR, AP and Inventory functions to survive economic uncertainty.

	Receivables	Payables	Inventory
High	• Stress on adherence to payment periods with aggressive follow ups • Eliminate any sort of grace extensions • Closely monitor O2C Process KPIs and eliminate inefficiencies	• Utilize the full credit limit available from suppliers • Eliminate any sort of early payments • Closely monitor P2P Process KPIs and eliminate inefficiencies	• Correlate product demand with macro factors and improve inventory forecasts • Closely monitor Inventory Management KPIs and eliminate inefficiencies
Ease	• Renegotiate credit terms with noncore customers • Levy interests and late payment fees in case of noncompliance with payment terms • Conduct credit checks across customer base to highlight adverse credit ratings	• Renegotiate credit terms with noncore suppliers • Deploy SCF Solutions to reduce the burden on liquidity • Establish alternate supply chains to ensure business continuity	• Shift to just in time inventory model from just in case inventory in times of cash crunch • Discuss with suppliers and reduce lead times thereby reducing warehousing • Utilize financial support from inventory financing options
Low	• Renegotiate credit terms with core customers • Establish automation to remove process inefficiencies in O2C Process • Redefine customer credit limits	• Renegotiate credit terms with core suppliers • Establish automation to remove process inefficiencies in P2P Process • Forecast cash flows by planning ahead	• Source locally to eliminate geographic lead times • Invest in automating inventory management for greater visibility • Schemes to offload slow moving inventory
Solutions	• Integrated Receivables • Virtual accounts • Receivable financing	• SCF solution • Single use accounts • Real time payments • Card Solutions	• Inventory financing

Cash Management Office

Across the receivables function, the causes of concern are the rising risk of defaults by customers and unfavorable credit terms. By renegotiating credit terms, companies can enhance the availability of liquidity for other purposes. Likewise, by re-evaluating credit worthiness of customers, companies can safeguard themselves from losses. Automation and intelligence could help companies in planning collection cycles and eliminate any processing delays in the Order to Cash process.

Account payables are the cheapest sources of funding for any company. By renegotiating their credit terms from suppliers, companies can easily fund their operations. For suppliers with higher borrowing costs, companies could leverage financial tools like Supply Chain Finance. Companies should also make use of analytics and AI to eliminate procure to pay process inefficiencies.

Companies also need to reconsider just-in-case inventory strategies to reduce funds blocked in inventory. Companies could also reduce the required buffer stock or opt for financial support through inventory financing.

All these steps require enhanced visibility, cross function coordination and policy decisions. Our analysis suggests ~US$633 billion of potential liquidity currently trapped in working capital for S&P1500 companies.

In light of the challenges and opportunities that are ahead in 2023-24, we expect working capital optimization to be a key focus area for treasurers and CFOs, as it offers a cost-effective funding source for companies to optimize capital structure and also support investments in other strategic priorities like digitization, sustainability and capital expenditure.

06
Summary of findings

$633 BILLION

Estimated working capital that can be released across the S&P 1500 companies

Top industries showing improvement in CCC in 2022 (Number of days the CCC shortened by)

24
O&G upstream

12
Media

11
O&G downstream

Top industries showing deterioration in CCC in 2022 (Number of days the CCC lengthened by)

12
Apparels and Accessories

13
Technology Hardware

18
Semi-conductor

11 Points

Decline in cash Index

87 days

Difference between CCC of leaders and laggards

3 Points

Raise in WC index

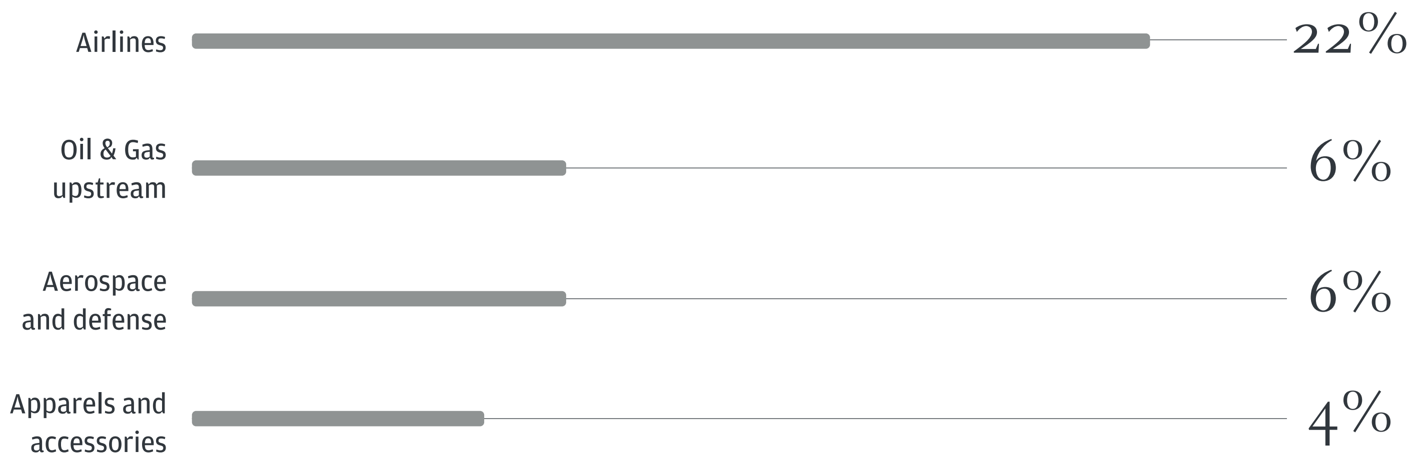
61%

of companies in the S&P 1500 saw a deterioration in CCC of which:

- **55%** showed lengthening of DSO
- **66%** showed increase in DIO

Overall, 3 days rise in CCC and 4 days deterioration in DIO

Top four industries with the highest decline in cash levels in 2022



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End notes

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