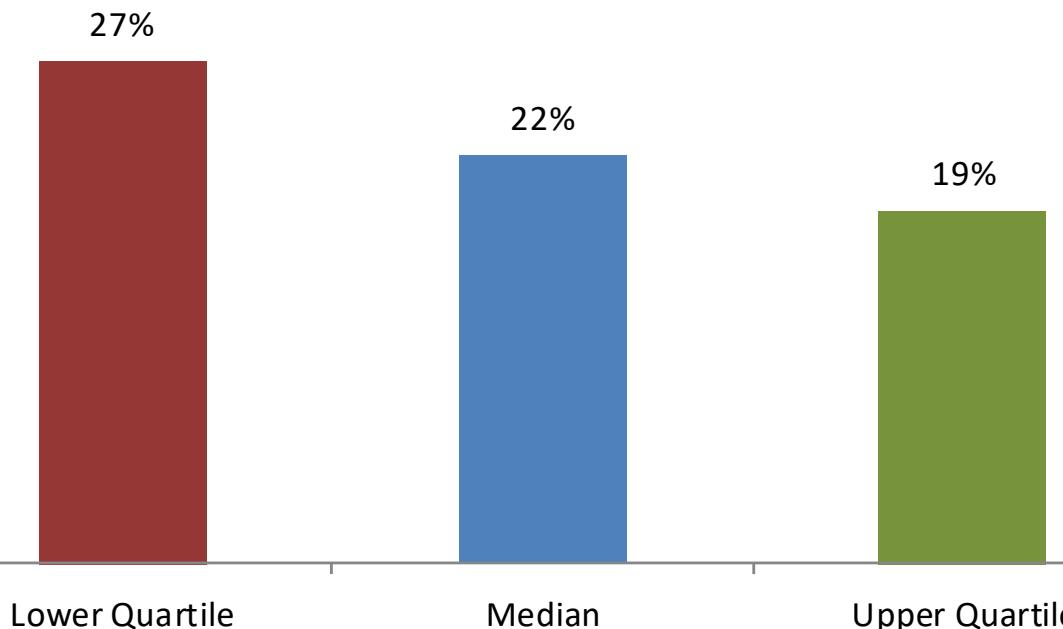


Excess Working Capital has risen 33% to €68 Billion since 2015

The first of these surveys came out in April 2012 and suggested that there was excess working capital across the industry of €51 billion. That dropped in 2014 to €41 billion and returned to the €51 billion level in 2016. This steep increase seems to have continued and 2017 results would suggest that excess working capital has risen a further 33% to €68 billion. That would be the result if all companies equalled the first quartile performance of their peers. That would buy Pfizer's Consumer Healthcare business three times over. If all working capital opportunities were realised the average working capital to sales ratio would be 11% and not the actual of 23%. This would give the impression that the industry has taken its eye off the working capital ball. But this does not seem to be true. Of the 32 corporations in our survey 15 improved working capital performance while 17 declined. Even though average performance has improved by 6%, the gap between the leaders and the bottom of the table has widened. So although the opportunity to optimise working capital is larger than ever, there have been a very mixed bag of performances. Those who still focus on working capital management have seen healthy improvements in receivables, payables and inventories but only 2 corporations made improvement in all three areas over the last two years. But we should not be fooled that all of these improvements have happened because of real and sustained process improvements. Pharma are still some of the biggest players in customer invoice factoring and supply chain finance. So many of the improvements noted on numerous balance sheets are exercises in flattery facilitated by cheap and available finance.

Working Capital to Sales

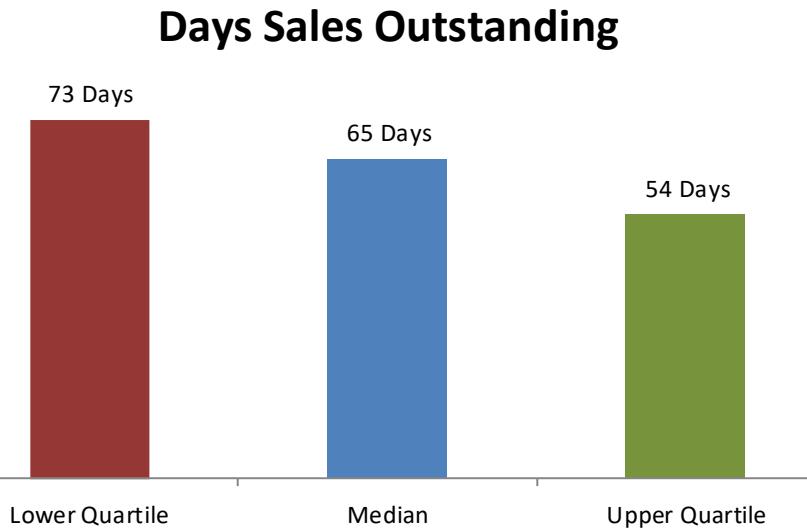


Receivables

The good, the bad and the window dressers

Looking at our top 10 performers there have been some really stellar performances in managing receivables. But for every improvement in one company and other has slipped back. The average improvement in trade receivables was zero. Of the 32 companies in the survey there were 14 improvers and 18 decliners. Of the decliners, many of these firms have made big improvements in the past but those improvements have not been sustained. The only good news is that both the lower quartile and upper quartile limit dropped by 2 days each

but the median level increased by 3 days. Most companies have had very similar problems. In Southern Europe, the improvements seen as a result of the various bailouts in Greece, Portugal, Spain and Italy have been maintained but not improved upon in the last 2 years. The US market continues to be buoyant and the payment performance has continued to be stable due to the strong influence of the big 3 distributors in that country. Sales growth areas continue to be in Asia, South America and the Gulf states but all have a working capital story to match. In Central Asia and



the Gulf, pharmaceutical companies continue to be confronted with trading houses that buy and sell everything from toasters to tablets and have always been known for late and erratic payment practices. With the oil price well under \$80 a barrel many Middle Eastern customers are still affected by late payment themselves from state entities that depend on oil revenues for funding. The pharmaceutical sales mantra continues to be about capturing market share and margins and while these are both very healthy there has been a big price to pay in longer payment terms and larger values of overdue receivables. Most Asian and South American markets are also a continuing challenge. Many of these markets traditionally have longer payment terms and some very old fashioned collection practices do not make it easy to optimise trade receivables performance. A continuing theme seems to be the lack of consistency of performance. Since 2012 we have seen numerous big improvements that have slipped back at a later stage, often to a worse condition than the original starting point. Equally we are not so sure that those companies that improved should be patting themselves on the back. We have seen very little evidence of terms being reduced or of significant improvements in collection performance. What we have seen is big banks falling over themselves to offering invoice factoring facilities or securitisations. In most cases the banks initiate the approach and the argument is often successful given that credit continues to be cheap and readily available for pharmaceutical companies. The biggest problem with this type of financing will be sustainability. What will happen when interest rates finally return to their historic norms or if the banks involved find a better return elsewhere? Outsourcing also seems to be a continuing difficulty for those trying to improve collection performance. There is a long track record of outsourced pharmaceutical collections making no difference to overdue percentages. The usual reason is that many collection processes outside the US can be chaotic and focused on the administrative side of the process. Overall the most worrying element of our analysis is the volatility in performance right across the industry.

Top 10 DSO Improvers

Endo Pharmaceuticals Holdings Inc.	51%
AstraZeneca PLC	33%
Grifols, S.A.	28%
Laboratorios Almirall SA	24%
Galenica Ltd.	18%
Perrigo Co.	18%
Gilead Sciences Inc.	18%
Merck KGaA	9%
Pfizer Inc.	7%
UCB SA	5%

Top 10 DSO Decliners

-12%	Recordati SpA
-13%	Eli Lilly & Co.
-14%	Bayer AG
-14%	Allergan Inc.
-15%	Johnson & Johnson
-17%	Bristol-Myers Squibb Company
-18%	Abbott Laboratories
-21%	GlaxoSmithKline plc
-26%	Novo Nordisk A/S
-28%	Biogen Inc.

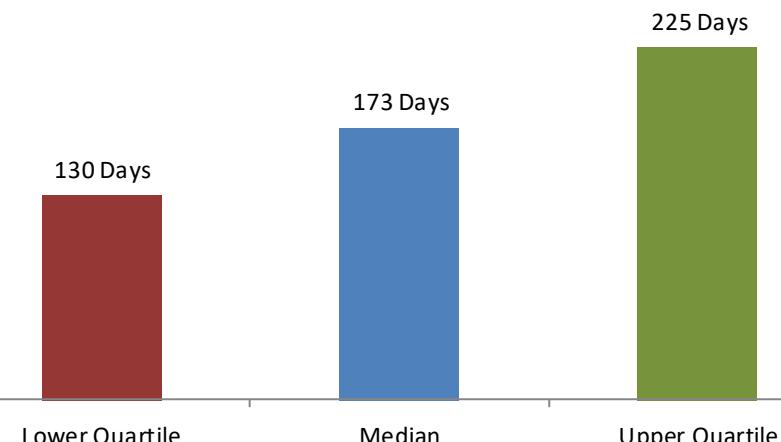
Payables

Big SCF driven improvements

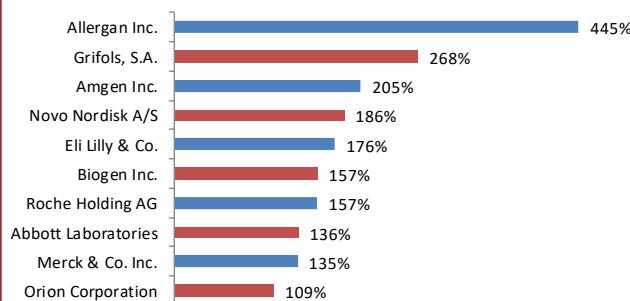
Payables has been the one area of working capital where there have been continued and steady improvements up to our last survey in 2016. In the last 2 years there has been a dramatic 78% improvement in payables balances. Upper quartile DPO has jumped 88 days, the lower quartile has increased by 48 days and median DPO has risen by 64 days. Of the 32 companies in the survey there were 26 improvers and only 7 decliners. Of those 7, 3 were also decliners in the last survey in 2016. We would love to believe that the procurement functions of all these organisations have had an enormous wave of success with payment term negotiations, but that would not match with our experiences in this area. Procurement functions continue to be wary of extended payment terms and many still believe that longer payment terms drives up supplier prices. Unfortunately this belief continues to have little truth. In our 25 years of promoting payment term extensions we have seen no correlation at all between longer payment terms and increased supplier prices. We have also heard the same argument from procurement functions about supply chain finance, i.e. if suppliers have to pay a charge to receive early payment that it will be passed on in the supplier's prices. Again we have never seen this happen and it doesn't make any sense since it is a financing

cost paid by the supplier's treasury department and not an operating cost that hits manufacturing cost. That is why supply chain finance schemes that have not been strictly mandated by the corporation's leadership team rarely get a lot of traction. When these schemes do get that level of mandate they tend to be very successful. Pharmaceutical companies have an added advantage that every bank on the planet wants to lend them money in any manner they can devise. And for the pharmaceutical companies such credit is very cheap and effectively off balance sheet. The problem will be if the schemes come to an end due to increased interest rates or banks not having sufficient liquidity to continue the scheme. This is a big risk for the supplier as they will find themselves on 90 or 120 day payment terms. We have seen this happen where one firm is taken over by another and the acquiring firm has terminated the supply chain finance scheme. If these schemes exist a long way into the future and interest rates stay at historic lows there should be little to worry about. But what if that does not happen? We might never know but it is something to think about. All we can say is congratulations to the finance professionals, bankers and SCF platforms that have successfully implemented these schemes in recent years. But please do not rest on your laurels. If it all goes wrong, it will go badly wrong and cost billions in lost cash flows and weakened supply chains. Then it will be necessary to go back to the traditional methods of looking for procurement to extend payment terms as part of a regular negotiation and seeking payables process efficiencies to preserve cash flow.

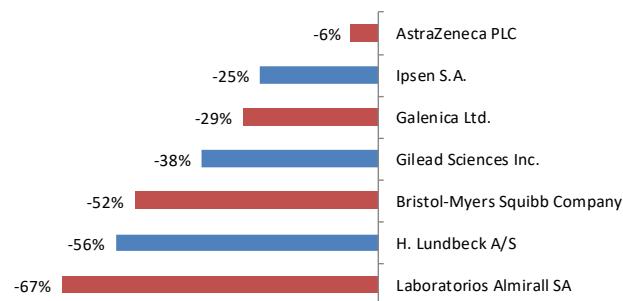
Days Payable Outstanding



Top 10 DPO Improvers



DPO Decliners

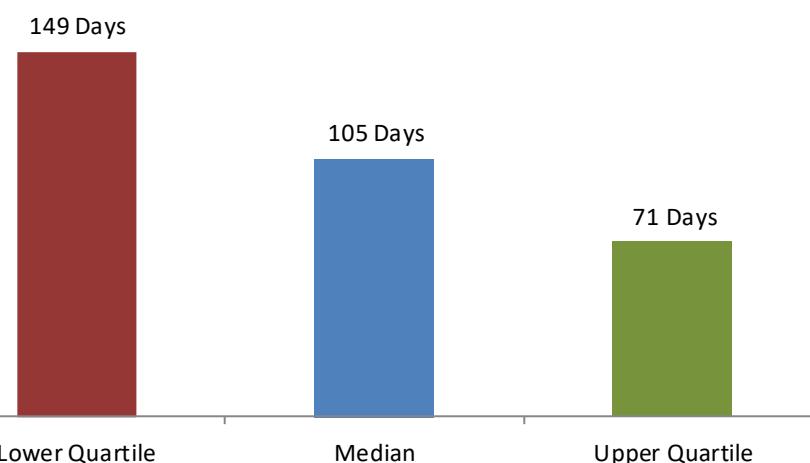


Supply chain success

In our last survey we bemoaned the fact that inventories had only improved by 1% on the previous measurement in 2014. This time there is very good news to report. Inventory levels have dropped by a massive 24%. Of the 32 corporations in the peer group, 26 were improvers and only 6 were decliners. Of the 6 decliners, 2 were also decliners in the last survey. Upper quartile DIO has dropped by 58 days, lower quartile DIO by 69 days and the median DIO by 61 days. So it looks as if supply chain professionals across the industry have been working hard to introduce supply chain efficiencies that have resulted in reduced levels of inventory. Does this mean that big pharmaceutical companies have abandoned the highly centralised manufacturing models that have been adopted over many decades? We have seen little evidence of that but we have seen some companies take radical steps to restructure their asset base. One example of this is the move to contract manufacturing. If you have a product that has a very long manufacturing cycle, selling the plant to a contract manufacturer

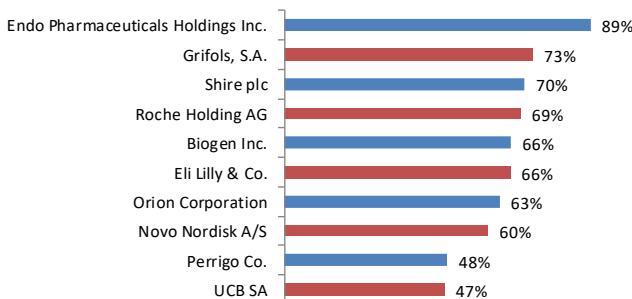
instantly takes the inventory off your books. There is also considerable pressure on product pricing from emerging markets who cannot afford the prices paid for increasing complex treatments in mature markets. In the mature markets governments are under huge pressure to contain healthcare costs fuelling the growth of generic alternatives. All these factors would imply that the average value of pharmaceutical inventories should be on a downward trend simply due to price containment and price reductions. We know of numerous supply chain programmes

Days Inventory Outstanding

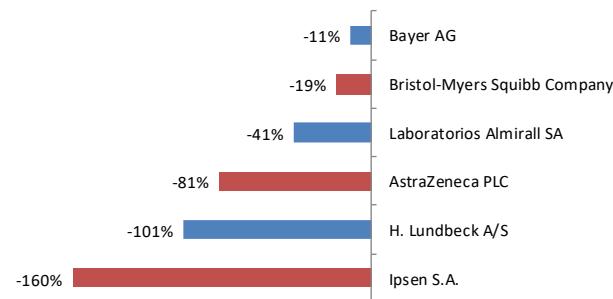


going on across the industry and most of those are not focused on optimising inventory levels. Pharmaceuticals is one of those few industries where if product is unavailable people might die. Therefore there has always been strong pressure to make sure that stock is available at the point of patient use all the time. This will always be a factor that will drive up inventory levels compared to other industries. One of the main problems we have seen in the past is that manufacturing batch sizes are designed to serve the bigger mature markets. This will mean that smaller geographic markets have to order these same batch sizes and as a result will have massive amounts of expensive finished goods inventory sitting on the books. In any centralised manufacturing model, this will always be a problem to some extent and there are only two solutions. The first is to be flexible about the batch size at the manufacturing centre. But this has the disadvantage of driving up unit costs. The second is to create a more distributed manufacturing model. The down side of that proposal is that the investment cost would be massive and depress profits for several years while these investments were being executed. At the end of the day there is much to celebrate in this survey but we have seen in the past that better DIO performances have not been sustained. We hope to be wrong on this occasion.

Top 10 DIO Improvers



DIO Decliners



Conclusions

Yo-yo performance continues

It is ironic that after years of effort across the industry that the value of working capital opportunity continues to rise. What is deeply troubling is that many of those companies that have spent large amounts on external help tend to see improvement for a couple of years and then it all slips back to where it was before any change effort was made. But maybe the situation would be far worse if no-one had made any effort. The pharmaceuticals industry is a very difficult one to initiate and sustain change of any kind. At the heart of the working capital problem is that the cash culture required to sustain change over the long term largely doesn't exist. Many in the non-financial parts of these organisations simply don't understand why good working capital management is central to a positive future for the whole industry. As price pressures continue in most major markets, as market shares drop in the face of generic competition, as the demands of shareholders for bigger revenues, profits, dividends and buybacks, the importance of releasing cash from working capital will continue. But there is also a warning in the numbers. If you are at the bottom of the pile the mountain to climb keeps getting steeper.

Methodology

Informita has compiled information from the following companies published accounts for the year ended 2017:

Abbott Laboratories, Allergan Inc., Amgen Inc., AstraZeneca PLC, Bayer AG, Biogen Inc., Bristol-Myers Squibb Company, Celgene Corporation, Eli Lilly & Co., Endo Pharmaceuticals Holdings Inc., Galenica Ltd., Gilead Sciences Inc., GlaxoSmithKline plc, Grifols, S.A., H. Lundbeck A/S, Ipsen S.A., Johnson & Johnson, Laboratorios Almirall SA, Mylan NV, Merck & Co. Inc., Merck KGaA, Novartis AG, Novo Nordisk A/S, Orion Corporation, Perrigo Co., Pfizer Inc., Recordati SpA, Roche Holding AG, Sanofi, Shire plc, Stada-Arzneimittel AG, UCB SA.

The measurements utilised have been calculated according the following methods:

Net Working Capital to Sales Ratio - Revenue / Working Capital * 100;

Days Sales Outstanding – Trade Accounts Receivables / Revenue * 365;

Days Payable Outstanding – Trade Accounts Payable / Cost of Goods Sold * 365; and,

Days Inventory Outstanding – Total Inventory / Cost of Goods Sold * 365.

The logo for Informita features the word "Informita" in a large, lowercase, sans-serif font. A single horizontal red line runs under the letter "i".

Informita

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