

# *Working Capital: opportunities knock*

How companies can tap the cheapest source of cash in the 'new normal'

*Global Working Capital  
Annual Review 2013*



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# *Contents*





## *Executive summary*

On 15 September 2008, Lehman Brothers filed for chapter 11 bankruptcy protection. This event started an unparalleled global financial crisis that has caused businesses, lenders, insurers and governments to re-evaluate their situations, taking steps to protect themselves for now and the years to come.



**Robert Smid**  
Head of Working Capital  
Management



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Management Specialist

Since this time, there have been reports of 'green shoots'. Equally, there have been double dip recessions in many parts of the world and even an unprecedented triple dip recession for some. These factors are directly affecting the availability of debt finance and businesses' ability to secure it. If they are to survive and grow, they need to be more innovative in their approach to their financing activities. For many, a deep delve into their working capital is likely to be the cheapest and easiest way to release cash. In this uncertain economy, one thing that is clear is that the current turbulent economic conditions are likely to remain for some time and with the limited availability of debt finance, the need to maintain low levels of working capital is becoming ever more important. What was

seen by some as an unusual, temporary period of hardship may actually be the 'new normal' and is likely to remain so for several years to come.

Over the last few years we have seen ongoing growth in the Far East and other emerging markets. This phenomenon has started to drive a change to a more global supply chain model as more and more products are manufactured in these territories. The result is increased transit and buffer stocks due to the long and variable delivery lead times and shorter payment terms, especially when buying from China. Consequently, there is increased pressure on working capital in the West and working capital is rising fast up the corporate agenda. During this

period we have seen some businesses try to ride out the storm, relying on the good will of suppliers and lenders, whilst others have taken the opportunity to take decisive action to reduce working capital. But how many of these companies have viewed these actions as a long term solution?

Those businesses that have taken short term measures to shore up their balance sheets must now explore ways of providing sustainable changes to business practices that will make them leaner and fitter to weather this ongoing period of uncertainty.



# Overview of key findings

Overall, working capital levels have deteriorated year on year by almost **2%** globally, a trend that is reflected across all industry sectors.

However, **13 out of 21** country clusters have actually shown a reduction in working capital.

## 1. The global trends:

Whilst American and Asian companies saw their working capital increase (a deterioration), African and European countries have shown an improving trend.

## 2. GDP and working capital correlation:

There is a correlation between GDP and working capital; countries experiencing the highest increases in GDP have also seen the greatest increases in their working capital. This could indicate that in a growth market, banks are more willing to finance these higher levels of working capital. As a result, companies in these regions are under less pressure to maintain low levels of working capital.

## 3. The opportunities:

Based upon the survey, if all companies achieved upper quartile performance, €3.7 Tn could be released; that is an average of 11% of turnover.

- African, Asian and Australasian companies showed the greatest disparity amounting to a cash generation opportunity of €1.5 Tn or 12% of turnover.
- For Europe, the cash generation opportunity is €1 Tn, equivalent to 10% of turnover.
- For American companies the opportunity is €1.2 Tn, equivalent to 11% of turnover.

### Potential Working Capital Opportunities (% of company turnover)





## *Working capital improvement opportunities globally*

**€1,248**<sup>Bn</sup>  
*Americas*

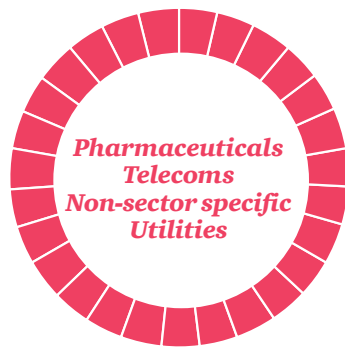
**€997**<sup>Bn</sup>  
*Europe*

**€1,511**<sup>Bn</sup>  
*Africa, Asia and Australasia*



# Working capital improvement opportunities by sector

Consumer goods, Manufacturing, Oil and Gas and Services companies show the greatest opportunity for improvement



**Small: <€150bn**



**Medium: €150-250bn**



**Large: >€250bn**

A world map is shown in a light, textured style, centered on the Atlantic Ocean. A white circle is positioned in the top right corner of the slide. A white line starts from the left edge, goes up, then right, then down, framing the title text.

# *Part 1 – A global view*



## Working capital in the ‘new normal’ economy

Since the financial crisis, growth rates across the major economies of the western world have been disappointing. This is not just a product of the ‘euro crisis’. The US economy has struggled to grow at more than 2% a year, which is low by comparison with previous economic recoveries.



**Andrew Sentance CBE**  
Senior Economic Adviser

In the West, the tailwinds which supported growth for over two decades prior to the financial crisis – easy money, cheap imports and strong confidence – are no longer available to provide momentum to growth. Western economies are going through a prolonged period of structural adjustment and relatively low growth, and volatility is likely to persist through the mid-2010s.

Emerging and developing economies, by contrast, have been performing much more strongly. Even though growth has slowed down in some of the emerging superpowers like China and India, the IMF is still projecting growth of 5-6% in the emerging and developing world this year and next.

Across most of the western world, this ‘new normal’ economic climate appears to be adding to the pressure on businesses to use working capital more efficiently. This appears to be particularly true in the troubled economies of southern Europe where economic prospects are weakest. The economies which are bucking this trend – US and Canada, Germany and Scandinavia are those which have performed more strongly since the financial crisis and are therefore feeling less pressure to squeeze their working capital further.

In the Asia-Pacific region, continuing strong growth means the pressure to conserve working capital is also less apparent. So China, India, Hong Kong and

Taiwan have seen their working capital ratios rise. The picture in other emerging economies is more mixed, however.

The ‘new normal’ of slow growth and more restricted access to finance in the West appears to be adding to the pressure on businesses to seek cheaper sources of cash and to tighten up on working capital. But with growth rates very uneven across the world economy, this trend is not apparent in all countries and in all regions.





# The regions that have shown the greatest increases in working capital are those that have experienced the greatest growth in GDP

**+ 2%** **2.2%**

The Americas show a **2%** deterioration in working capital. A notable exception is Brazil which shows a **4%** improvement.

**- 2%** **0.2%**



Europe has seen a **2%** fall in working capital. But it is the Southern European countries together with Russia and Ukraine that have shown the greatest improvement. While The Nordics and Finland have shown a year on year deterioration.

**+ 3%** **4.8%**


Africa, Asia and Australasia shows a **3%** increase in working capital driven by deteriorations across the key clusters in the region; India, Japan, Hong Kong and Taiwan, and China. While the Middle Eastern countries have shown a **14.6%** improvement.

**Key:**

**Working capital performance:**

Deterioration +  Average change in WC as % of Sales 2012  
 Improvement - 

**GDP performance:**

 Average of % change in GDP 2012



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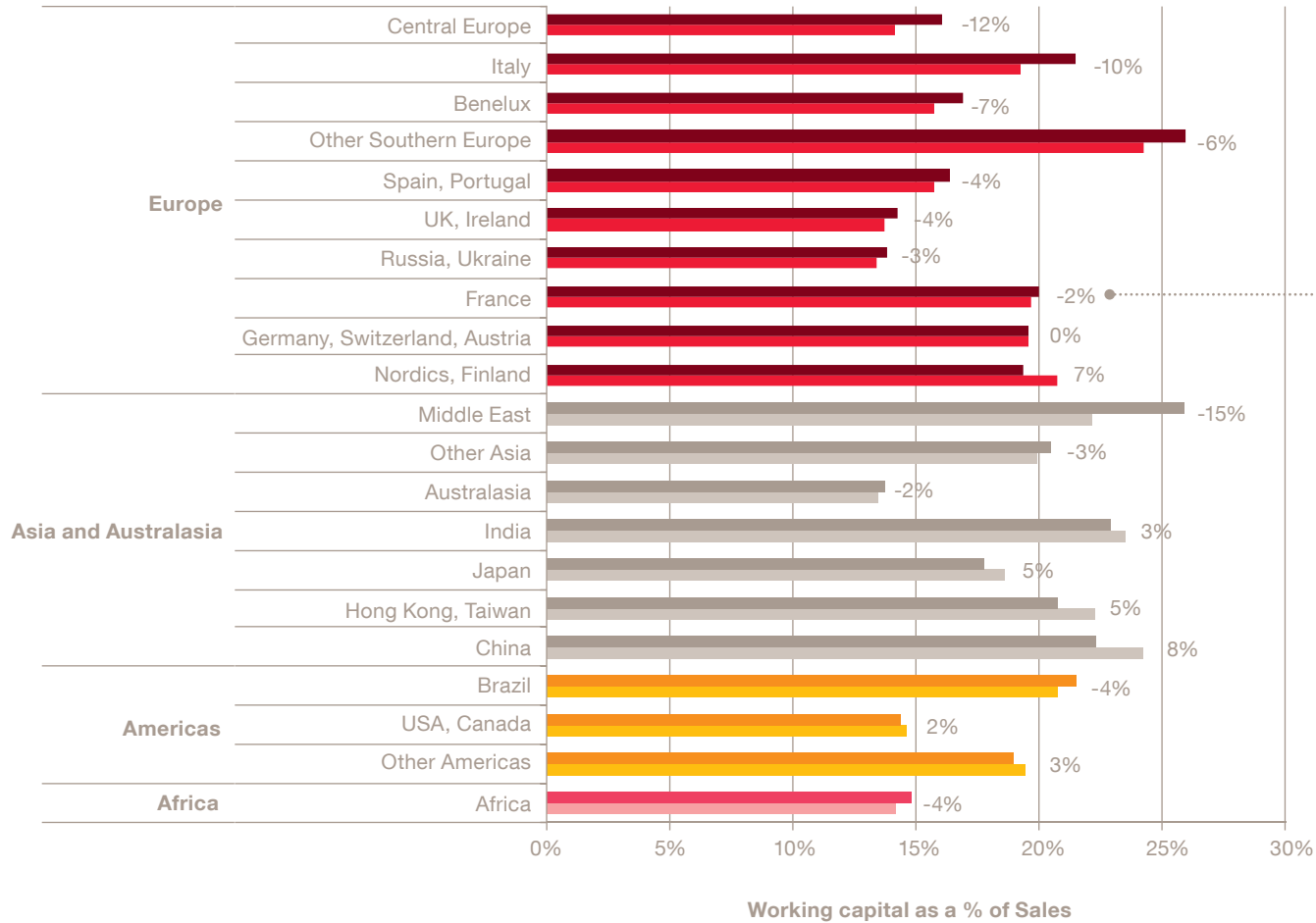
## *Global working capital performance*

Working capital as a percentage of turnover has shown a **2%** deterioration globally. However, it's not a consistent story in all geographies.

African and European countries showed an improvement while the performance of the rest of the world deteriorated.



### Average working capital ratio: A global view



country clusters have shown a reduction in working capital

#### Key: Average working capital ratio

Europe:

2011

2012

Asia and Australasia:

2011

2012

Americas:

2011

2012

Africa:

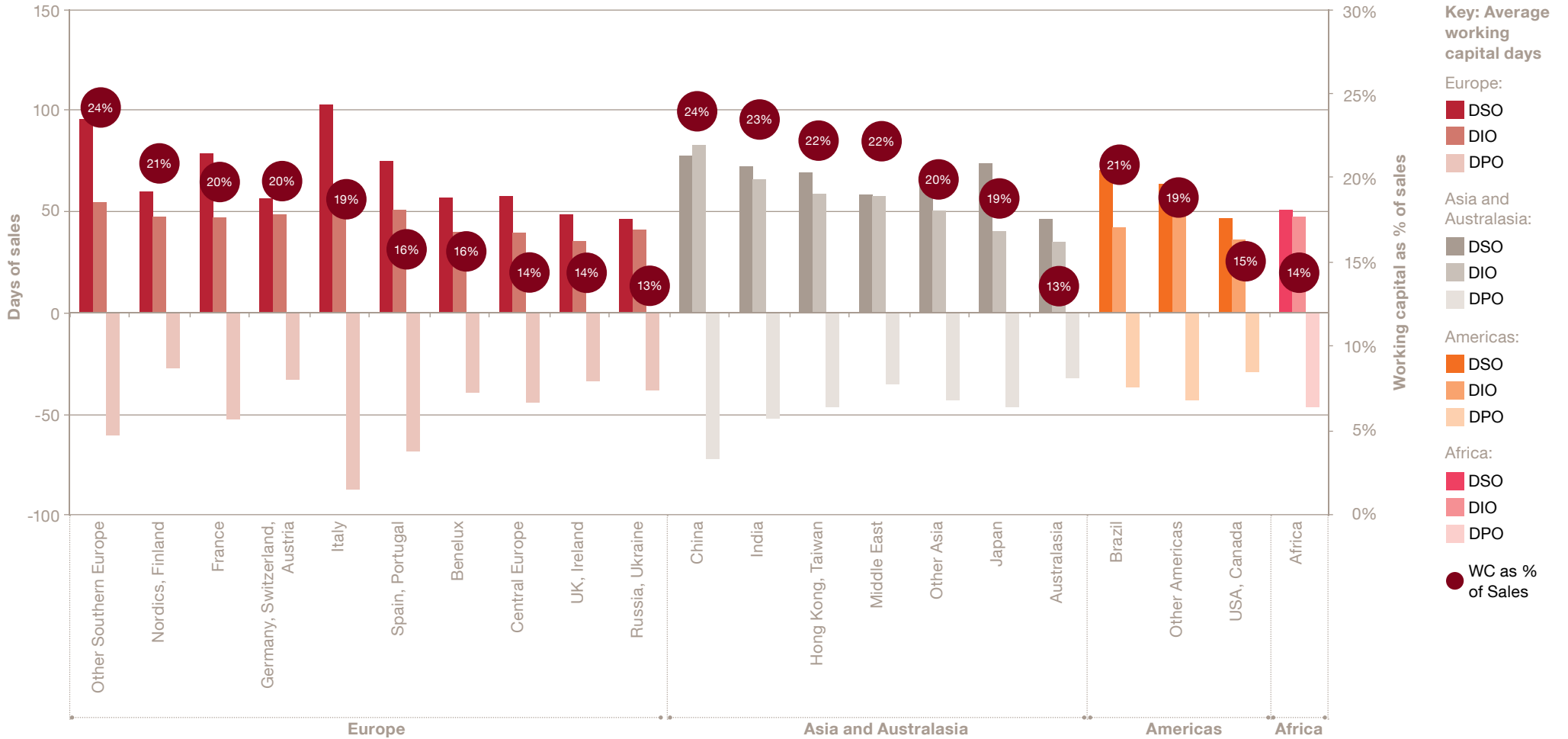
2011

2012

● % year on year improvement (-) / deterioration (+)



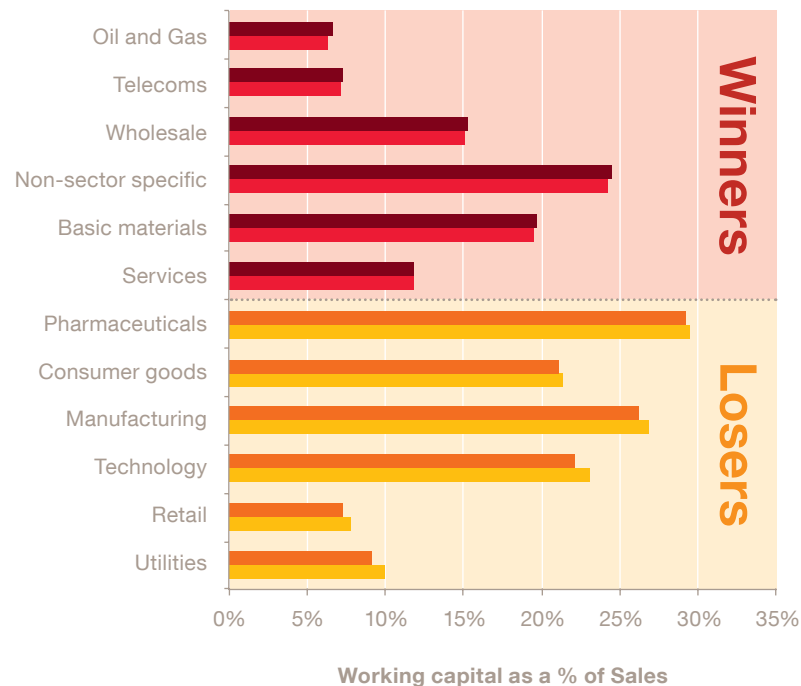
### Average working capital days 2012: A global view





# The winners and losers across industries

Average working capital ratio by sector: A global view



Globally, the highest levels of working capital are seen in Pharmaceuticals and Manufacturing driven by both high levels of inventory and debtors.

At the other end of the scale, Retail, Telecoms and Oil and Gas show the lowest levels of working capital. The latter two sectors have high levels of debtors but these are offset by high levels of payables.

The sectors that have experienced the greatest deterioration year on year are Utilities, Retail and Technology. Whilst the greatest improvement was seen in Oil and Gas with an already low level of working capital.

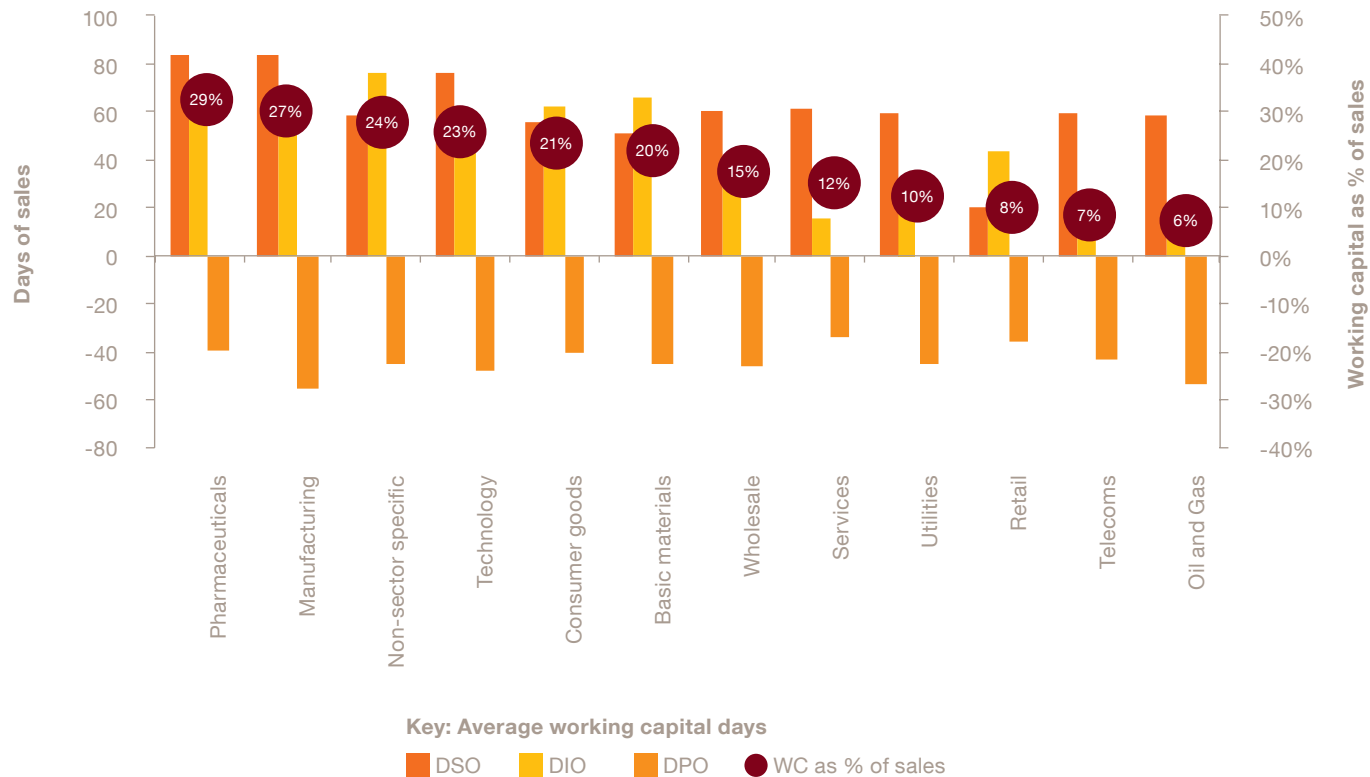
Key: Average working capital ratio

Winners: 2011 (dark red), 2012 (red)  
Losers: 2011 (orange), 2012 (yellow)



# Oil and Gas lead the way

Working capital days 2012 by sector: A global view



*Globally, the highest levels of working capital are seen in Pharmaceuticals and Manufacturing driven by both high levels of inventory and debtors.*

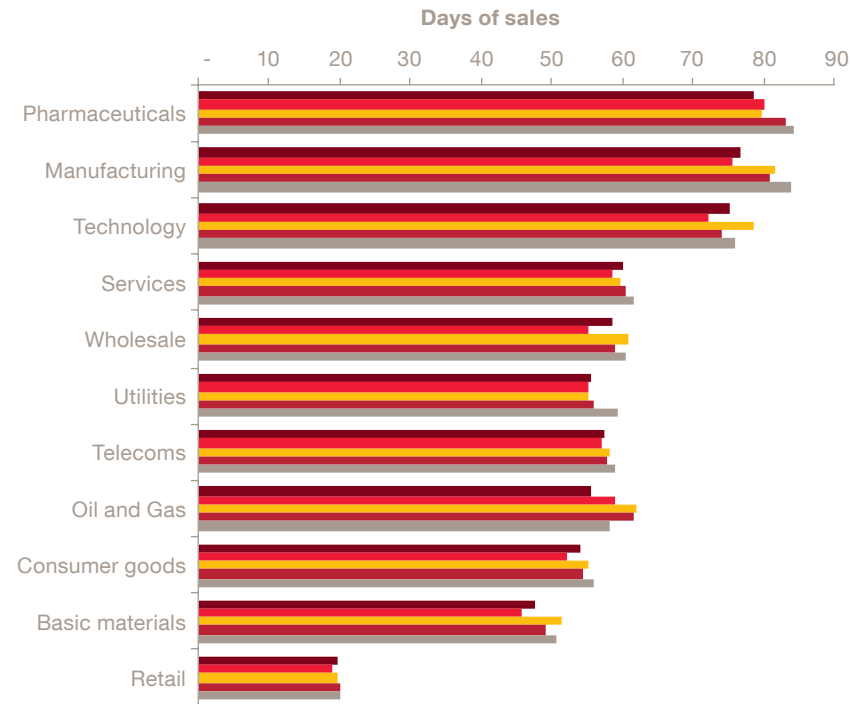


# Receivables deteriorate across the majority of sectors...

From a global perspective, DSO deteriorated slightly year on year by 2 days (1.4%) to 64 days.

All sectors have recorded year-on-year increases in DSO except Oil and Gas which has shown a fall back to 2009 levels. Retail companies have seen no significant change from their leading position. Manufacturing and Pharmaceuticals companies have seen DSO increasing, averaging 84 days for 2012.

Average DSO by Region: Global



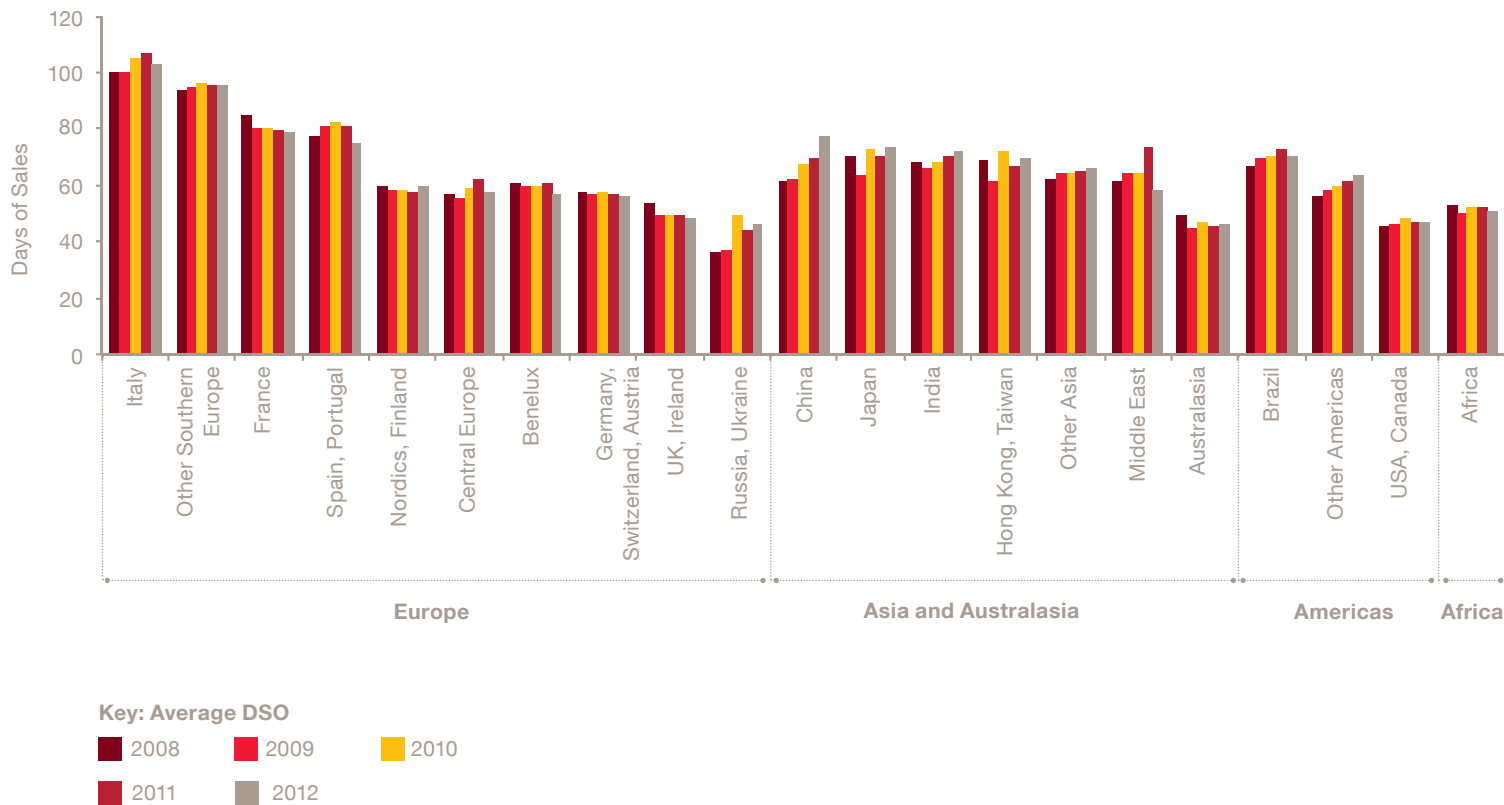
Key: Average Days Sales Outstanding (DSO)

2008 2009 2010  
2011 2012



# ...customers are taking longer to pay

Average DSO by Region: Global



In 2012, European countries are seeing improvements in DSO, with the exception of the Nordics and Finland. There is a marked improvement from last year for Spain and Portugal, which could be attributed in part to the Spanish Government's "Pago a Proveedores" scheme which released funds to enable government departments to settle their overdue debts.

In Asia, the picture is reversed with most countries experiencing an increase in DSO. Chinese firms have seen the strongest increase with an 11% (8 days) increase. Asia's outliers are Middle Eastern companies that were able to improve by 15 days to 58 days.

Overall, companies in USA and Canada, Australasia and Africa have seen very minor variances in their DSO over the last two years, with fluctuations below 2 days.



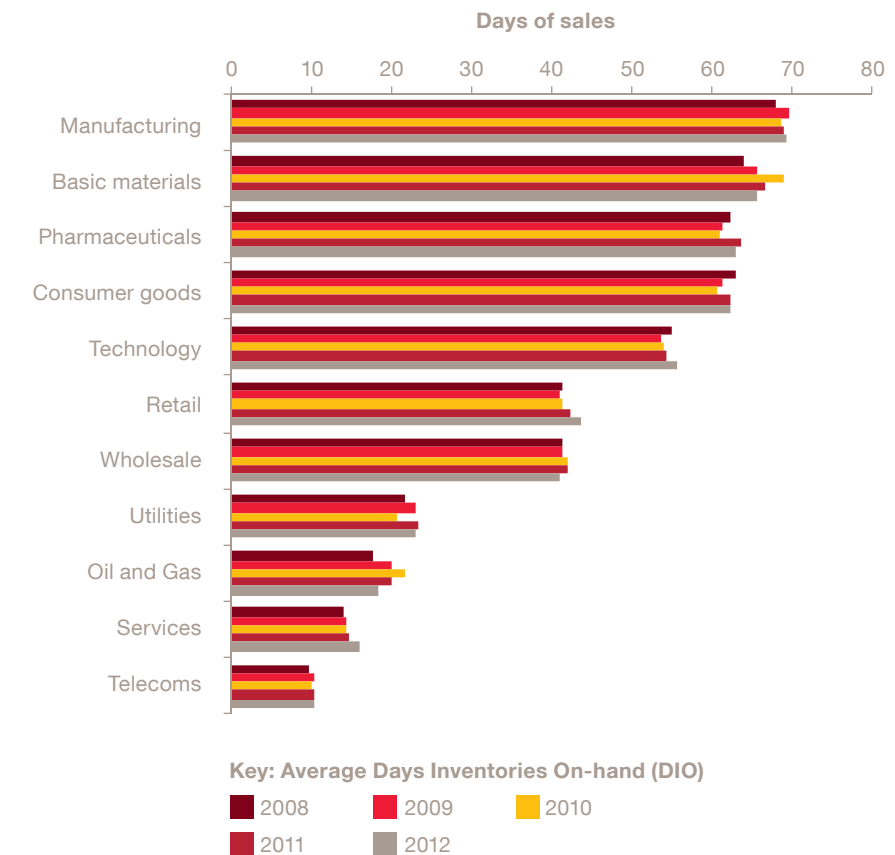
# Inventory is increasing across the majority of sectors...



sectors have seen an increase of 2 days or more over the last five years

Three out of 11 sectors have seen an increase of 2 days or more over the last five years: Basic Materials, Retail and Services. Reasons for this may be linked to the higher prices of raw materials, increased proportion of finished goods coming from the Far East and Work In Progress piling up in Professional Services.

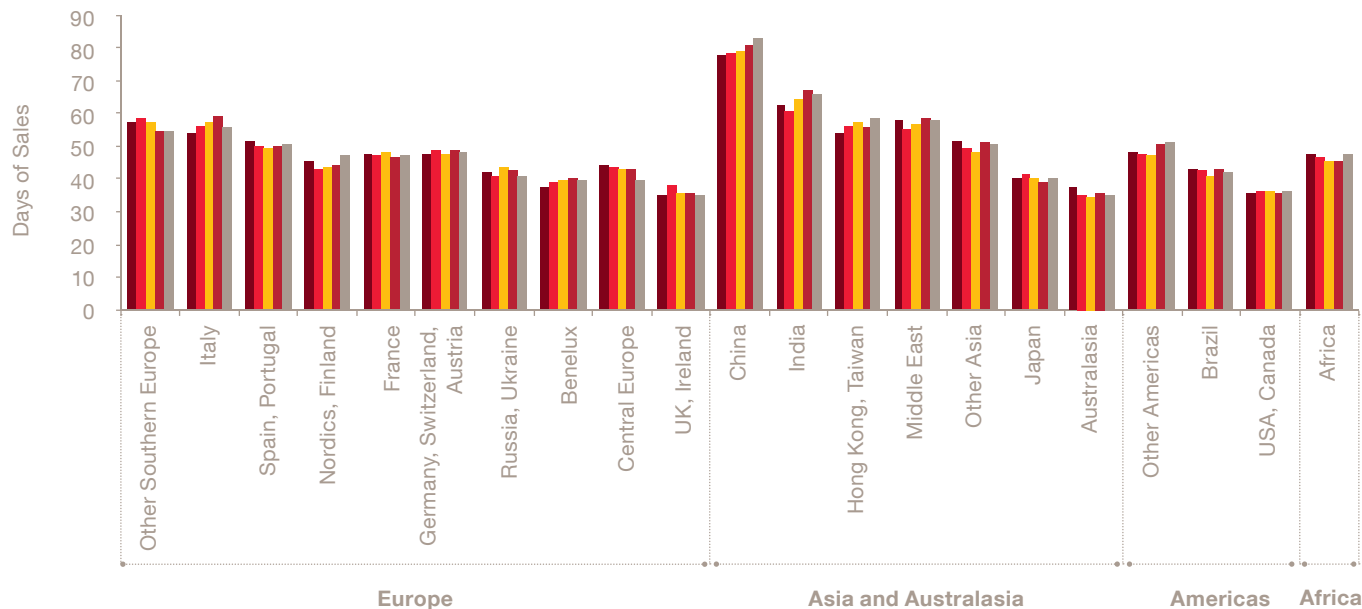
Average DIO by sector: Global





# ...companies are seeing more cash tied up in stock

Average DIO by region: Global



Inventory days for Brazil, China, India and Russia have significantly increased over the last five years (4 days) and is likely to be a reflection of the increased role of these countries in the global industrial landscape.

Reasons for higher numbers in Other Americas look less obvious but are likely to represent the increased contribution of Mexico (among others) as a supplier of USA.

Inventory numbers in Europe are higher than in other developed regions such as America and Australasia. Whilst this may reflect a performance gap it is also likely to be the result of the different mix of industry sectors in each region and a more complex supply chain in Europe.

Key: Average DIO

- 2008
- 2009
- 2010
- 2011
- 2012



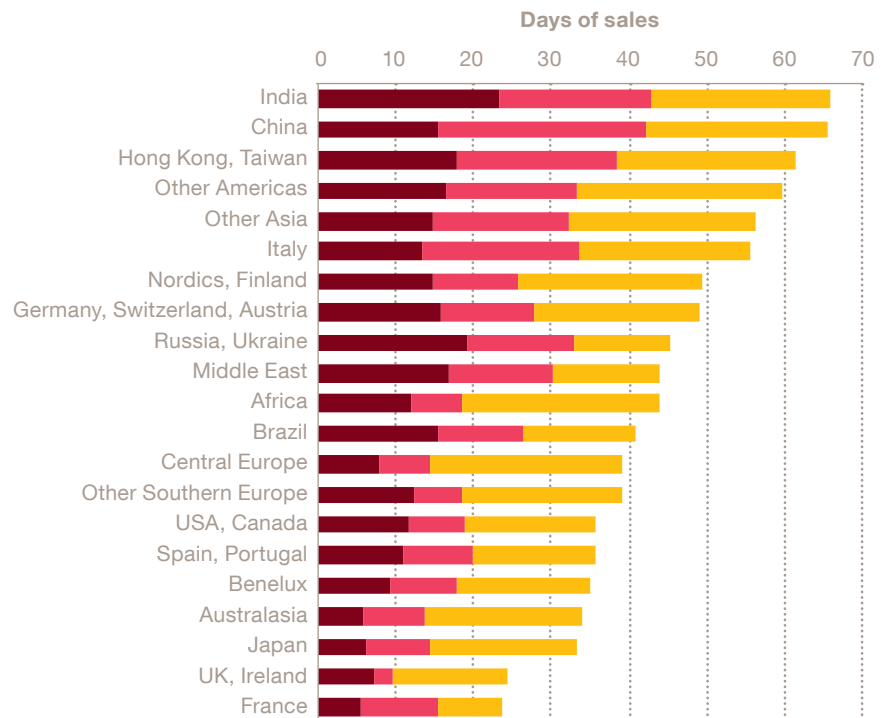
# Globalisation of the supply chain is driving inventory levels in all territories

By comparing the breakdown of inventory across country clusters, we get an interesting view of globalization, especially via the Work In Progress (WIP) contribution in each region's inventory numbers. Asia and Other Americas have the most significant levels of WIP, which demonstrate their role in the global industrial landscape. On the other hand, Australasia, USA and Canada have lower WIP levels, possibly due to "buy" rather "make" options or improved supply chain performances. Africa also shows low levels of WIP but potentially due to a less significant presence in the global supply chain.

Generally, the highest proportion of inventory in each region is finished goods, typically amounting to more than 20 days of inventory. Despite progress in supply chains, we still see considerable volumes and associated values of products waiting at the last stage of the supply chain. Due to the time involved with transportation, it may well be that the increasing role played by the Far East in many sectors results in increased levels of finished goods in that region. The present economic climate may also drive this, showing that global supply chains may have not yet been fully adapted to reduced demand.

The analysis is based only on companies that have a clear inventory classification. Therefore, the numbers are not skewed by sectors reporting low levels of inventory such as Services.

Average DIO 2012/13: Global



Note: Only includes companies with 5 years history of classified stock

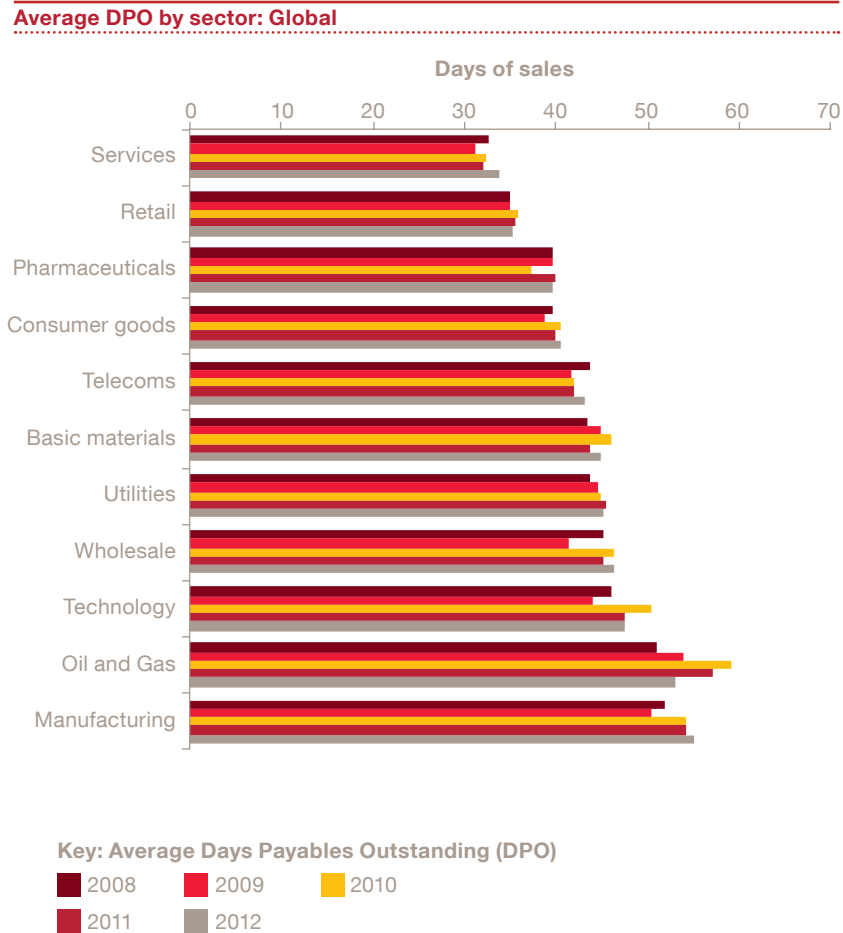
Key: Average DIO by type

- Raw materials
- Work In Progress (WIP)
- Finished goods



## *Payables have increased across all territories...*

Since the onset of the global recession in 2008, overall DPO performance improved as companies offered customers longer payment terms in tight markets to increase market share. During this period all sectors with the exception of telecoms showed DPO improvements.

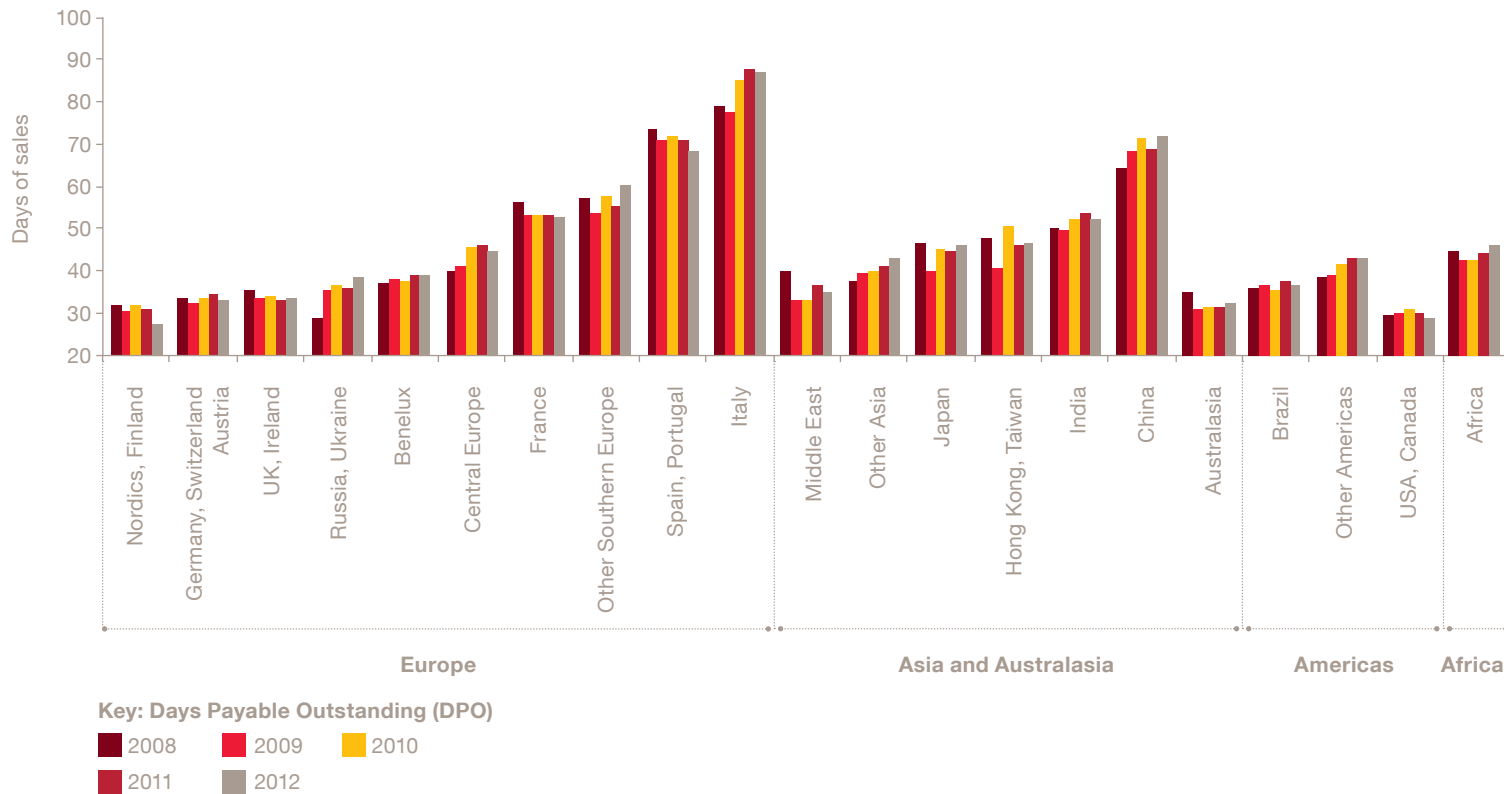




# ...customers are paying suppliers later

Year on year, DPO improved marginally by 0.6 days (1.4%), recovering from a deterioration of 0.5 days from the previous year that had been fuelled, in part, by lower levels of capital expenditure. Removing the traditionally volatile Oil and Gas sector, overall performance improved by 0.7 days (1.7%) year on year.

Average DPO by sector: Global



African and Asian businesses recently showed good improvements in DPO while Europe and Americas saw a decline. Both Australasia, USA and Canada, who traditionally trade on lower terms, have continued to face downward pressure on DPO, although the former has shown signs of reversing this trend this year.

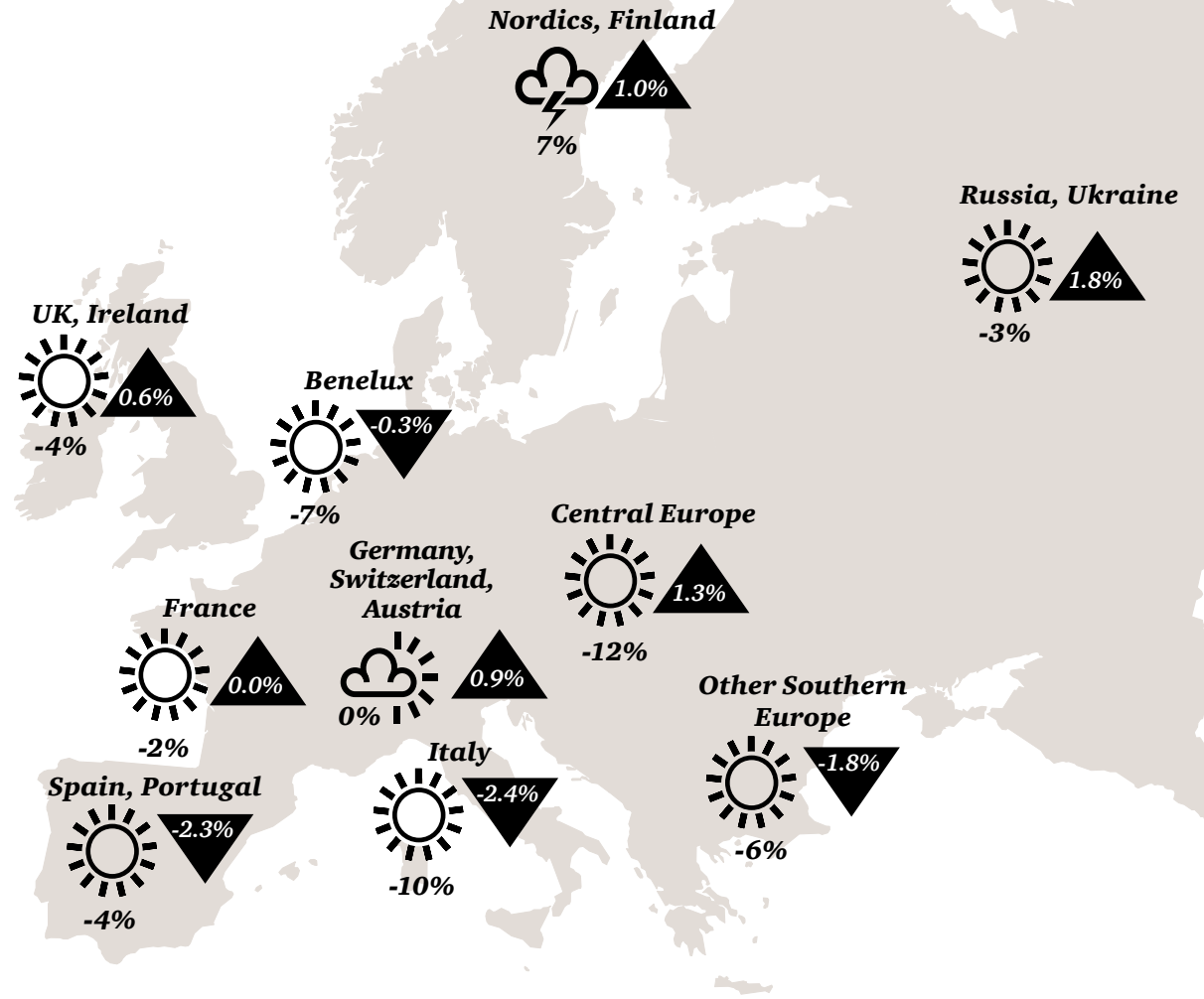
A key factor contributing to the downward pressure on DPO in the western developed economies is the increasing spend with companies in the Far East and in particular China; often these purchases are on very short payment terms.

The most significant improvements are seen in Africa and Asia driven by sizeable improvements in Basic Materials, Pharma and Telecoms sectors. In Europe, DPO fell across Basic Materials, Technology, Manufacturing and Utilities sectors while Pharma, Telecoms and Wholesale showed improvements.

## *Part 2 – A focus on Europe*



# Working capital and GDP performance Europe



**Key:**

Working capital performance:

- > + 4% Deterioration
- + 0.5% to +4%
- 0.5% to +0.5%
- < -0.5% Improvement

GDP performance:

Average of % change in GDP 2012

Average change in WC as % of Sales 2012



# A focus on Europe

## The winners and losers

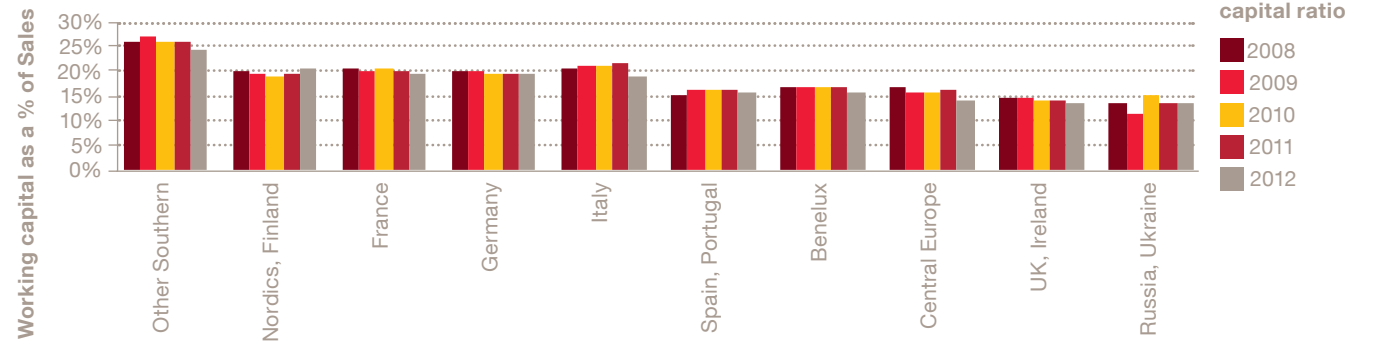
Generally, working capital levels in Europe are some of the lowest globally, bettered only by USA and Canada.

Within the region though there are some country clusters that maintain comparatively low levels of working capital, such as Russia, Ukraine, UK and Ireland. Whilst performance in France and Germany has shown a slow improvement year on year, companies in these regions are operating with around 40% more working capital than their competitors in Russia and Ukraine, UK and Ireland, and Central Europe.

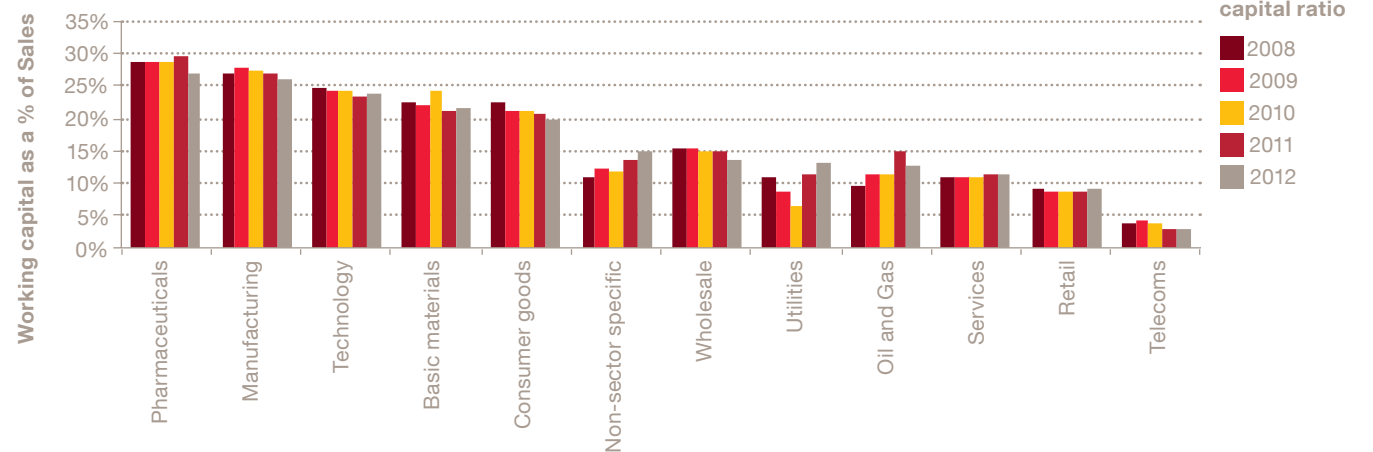
Some sectors like Consumer Goods, Wholesale and Telecoms have shown consistent improvement during the last 5 years. While others have shown a deteriorating trend during the same period; Utilities and Oil and Gas in particular. Services and Retail sectors have remained fairly flat.

Despite recent improvements, Italian, French and German companies hold around 40% more working capital than their competitors in Russia, Ukraine, UK and Ireland.

Average working capital ratio by cluster: Europe



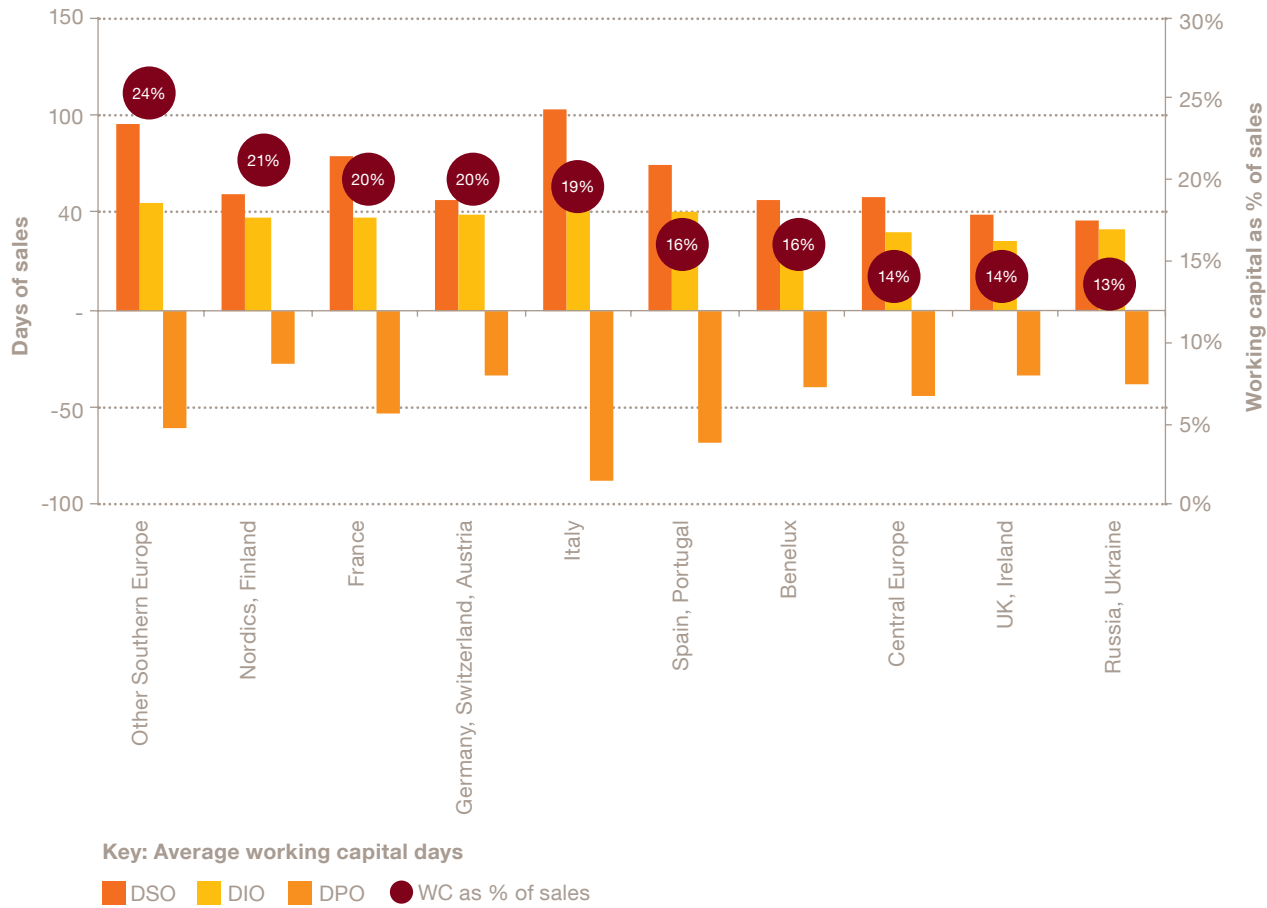
Average working capital ratio by sector: Europe







### Average working capital days 2012: Europe





***European companies could release a total of €997bn of cash from working capital if they match upper quartile performance in their sector; €370m for each company***

Europe	Number of Companies	Working Capital as a Percentage of Sales			Working Capital Improvement €bn	Average Opportunity per Company €bn	Impact on ROCE (%)
		Lower Quartile	Median	Upper Quartile			
Basic materials	118	38%	20%	7%	48	0.41	2%
Consumer goods	488	34%	18%	5%	112	0.23	3%
Manufacturing	646	42%	24%	10%	339	0.53	7%
Oil and Gas	92	25%	10%	1%	141	1.54	4%
Pharmaceuticals	50	39%	24%	11%	27	0.55	3%
Retail	161	20%	8%	-3%	48	0.30	3%
Services	675	25%	9%	-2%	147	0.22	2%
Technology	140	36%	23%	11%	16	0.11	1%
Telecoms	94	12%	3%	-6%	34	0.36	1%
Unknown	26	26%	13%	0%	53	2.02	5%
Utilities	50	26%	9%	1%	16	0.31	1%
Wholesale	120	25%	11%	2%	17	0.14	2%
<b>Total</b>	<b>2,660</b>	<b>34%</b>	<b>16%</b>	<b>1%</b>	<b>997</b>	<b>0.37</b>	<b>3%</b>

# *EU Payment Term Directive*

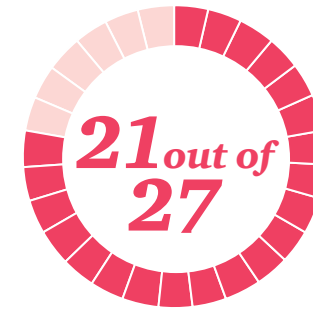
With effect from 16 March 2013, all EU member states were required to adopt the Directive and establish the laws and legal frameworks to ensure that it was enforceable.

This has presented a number of challenges for countries across the European Union not least for those countries whose governments are experiencing significant cash constraints. It would be understandable if these countries had delayed the introduction of the directive, as Governments short on cash would be required by law to pay suppliers 2 to 3 months earlier than they previously did.

But surprisingly, it is not only the most obvious countries that had yet to implement the directive; Germany, Belgium, Greece, Portugal, Czech Republic and Latvia are the six remaining countries out of the 27 member states that were reported to have not implemented the Directive by Mid April 2013.

Time will tell how this Directive will be applied across the European Union. It has the potential to provide some good protection for financially vulnerable vendors but it also requires a willingness on the part of the vendor to stand up to powerful buyers and demand fairness. The secret to the success of this Directive is likely to depend upon the extent to which business culture changes.





EU member states have already implemented the Directive

## EU Payment Term Directive – our market insight

### The European Late Payment Directive 2011/7/EU dated 16 February 2011

It is designed to combat late payment in commercial transactions to ensure the proper functioning of the internal market by:

- Harmonising and limiting payment terms
- Entitling suppliers to automatically claim compensation and interest in the event of late payment

Member states were required to bring into force the necessary laws, regulations and administrative provisions by 16 March 2013.

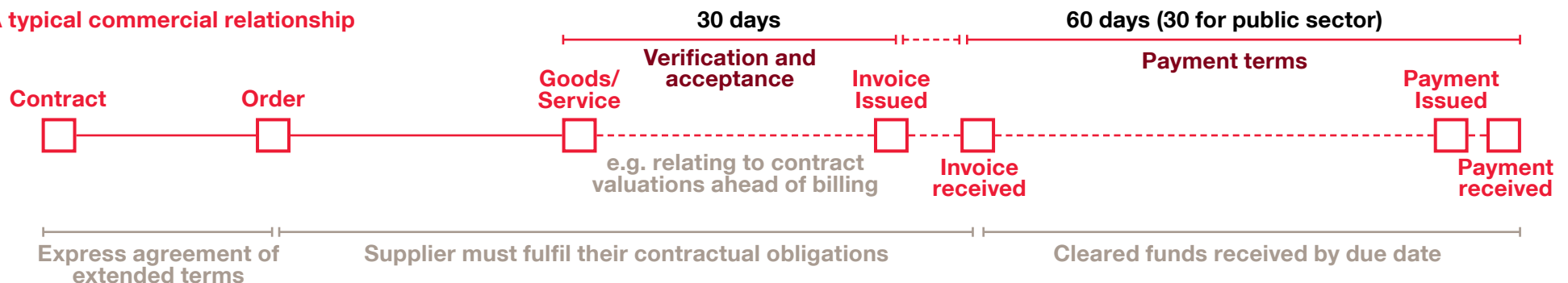
Key considerations are:

- It relates only to commercial transactions between private sector bodies and between public and private sector bodies
- There is flexibility that can be agreed between contracting parties

*In our experience, this does not have to be a straight choice between cost and cash. Businesses that are well prepared for the legislation are likely to reap the rewards in reduced costs and increased cash flow.*

*High performing companies are likely to have the good practices in place that will mitigate the risks associated with the new Directive*

### A typical commercial relationship



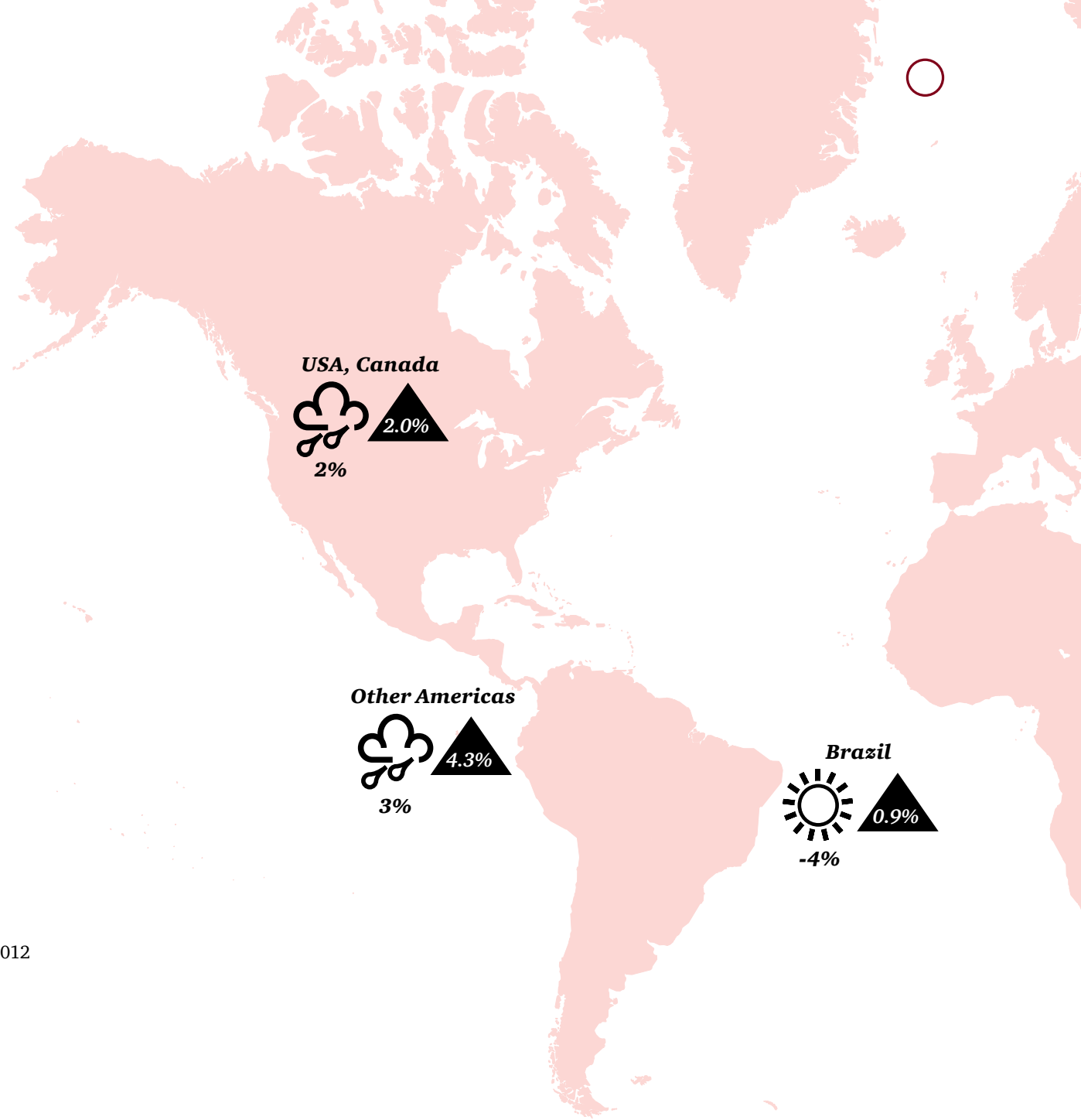


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## *Part 3 – A focus on the Americas*







# Working capital and GDP performance Americas




**Key:**

**Working capital performance:**

-  > + 4% **Deterioration**
-  + 0.5% to +4%
-  -0.5% to +0.5%
-  < -0.5% **Improvement**

**GDP performance:**

 Average of % change in GDP 2012

Average change in WC as % of Sales 2012



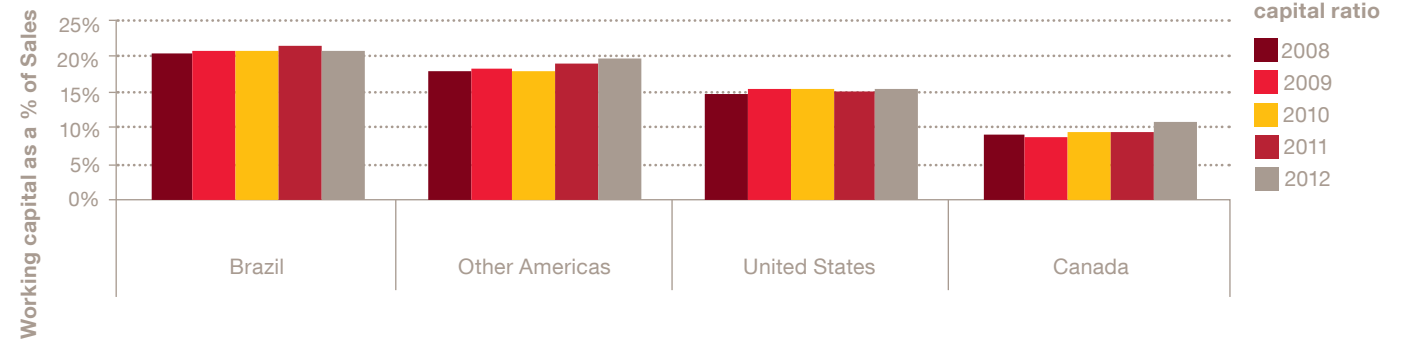
# A focus on the Americas

## The winners and losers

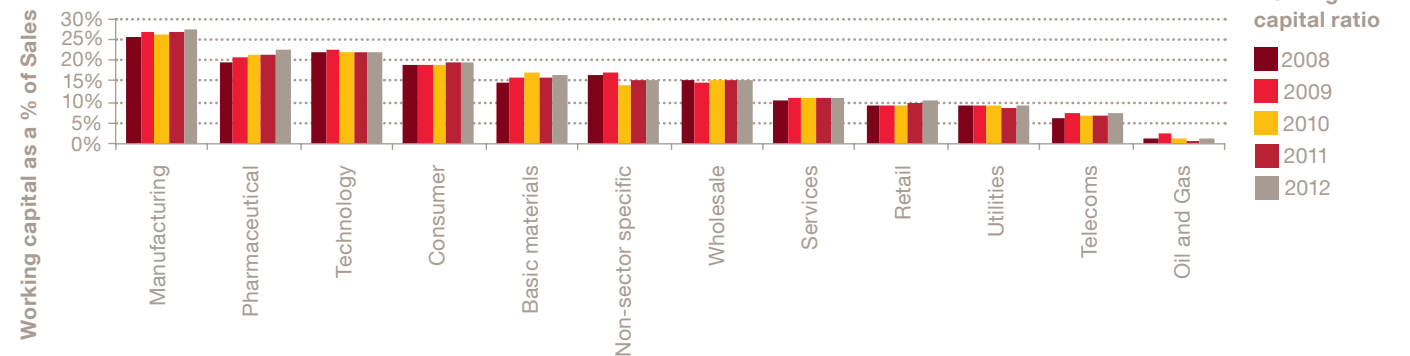
The United States has maintained steady levels of working capital over the past 5 years whilst those around them have seen increasing levels of working capital. But despite an upward trend, Brazilian companies have managed a year on year fall.

The Manufacturing, Pharmaceuticals, Basic Materials, Services, Retail and Telecoms sectors have all experienced increases in working capital. While Technology and Oil and Gas have seen improvements.

Average working capital ratio by cluster: Americas

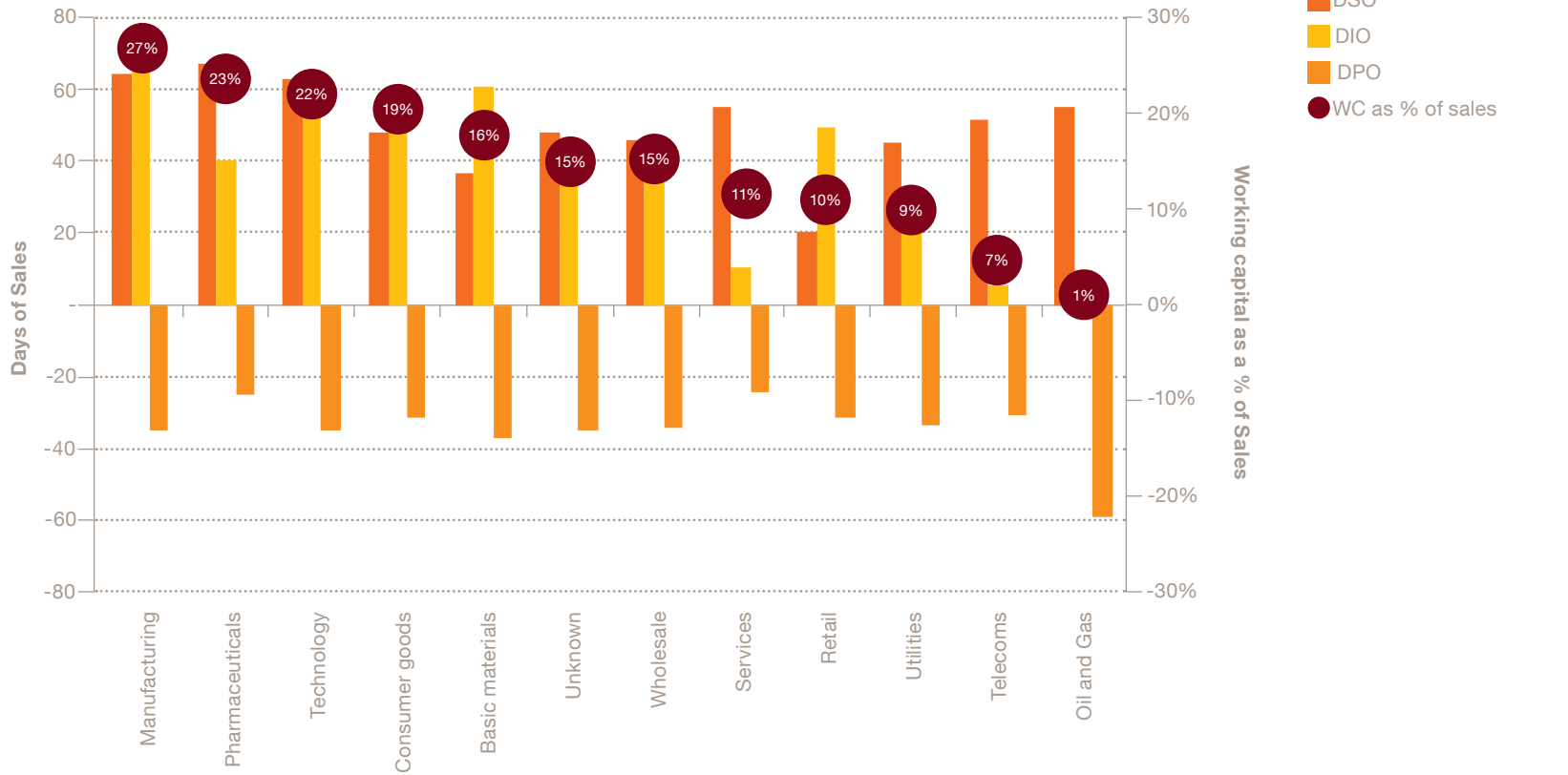


Average working capital ratio by sector: Americas





### Average working capital days 2012 by sector: Americas







***American companies could release a total of €1,248bn of cash from working capital if they match upper quartile performance in their sector; €300m for each company***

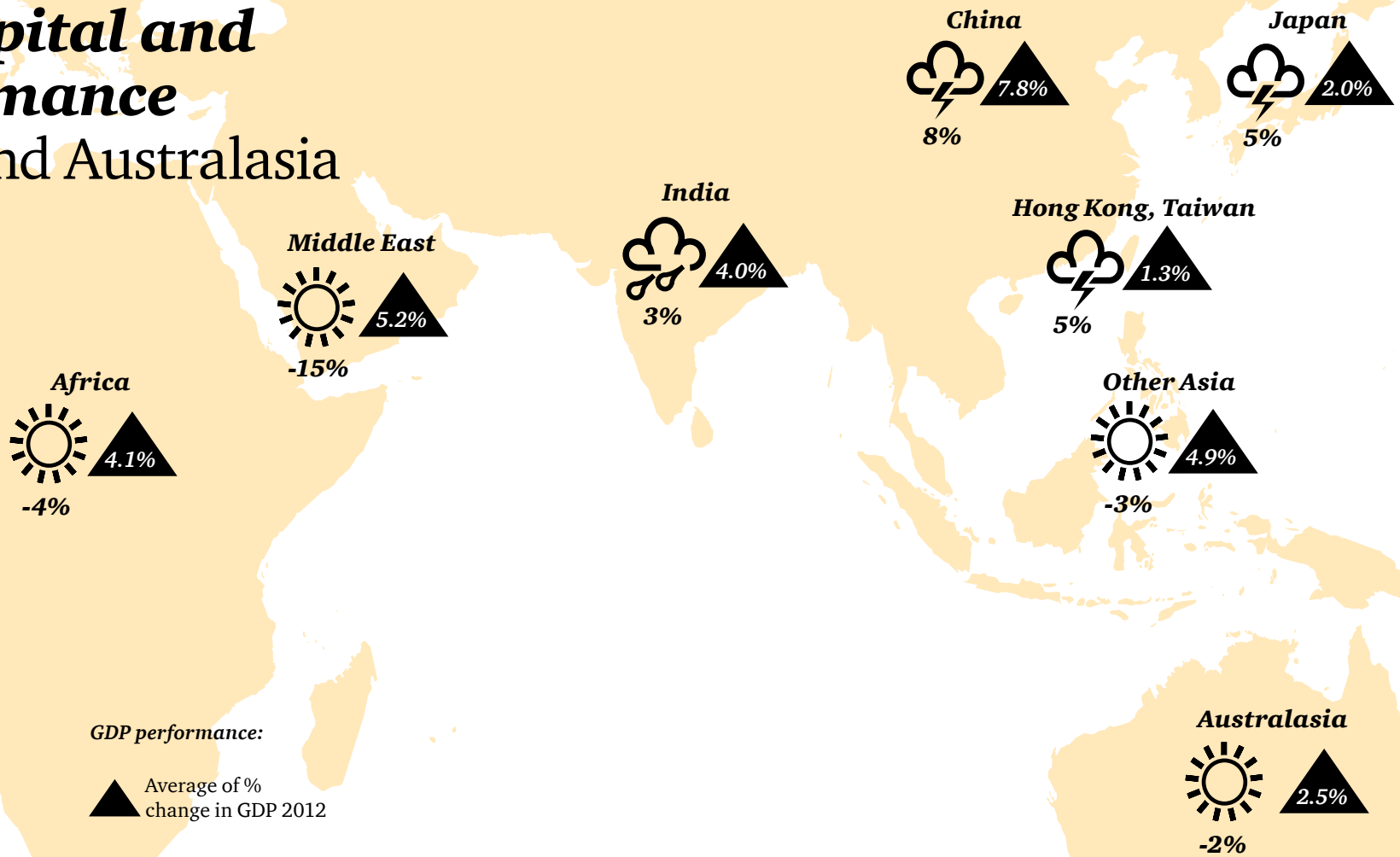
Americas	Number of Companies	Working Capital as a Percentage of Sales			Working Capital Improvement €bn	Average Opportunity per Company €bn	Impact on ROCE (%)
		Lower Quartile	Median	Upper Quartile			
Basic materials	209	33%	15%	2%	49	0.23	2%
Consumer goods	619	33%	16%	6%	119	0.19	3%
Manufacturing	717	43%	23%	11%	223	0.31	5%
Oil and Gas	249	17%	3%	-15%	304	1.22	8%
Pharmaceuticals	88	37%	22%	8%	39	0.44	4%
Retail	368	22%	7%	-1%	140	0.38	11%
Services	1,002	23%	10%	0%	181	0.18	3%
Technology	366	34%	21%	10%	41	0.11	3%
Telecoms	156	18%	6%	-3%	59	0.38	2%
Unknown	16	26%	14%	1%	13	0.83	1%
Utilities	183	17%	8%	0%	37	0.20	2%
Wholesale	199	29%	13%	3%	44	0.22	6%
<b>Total</b>	<b>4,172</b>	<b>31%</b>	<b>14%</b>	<b>1%</b>	<b>1,248</b>	<b>0.30</b>	<b>8%</b>

A night cityscape of Hong Kong, featuring the skyline of skyscrapers illuminated with various colors. The sky is dark blue and purple, with several bright white lightning bolts striking across it. The buildings are lit up, with some signs visible, including 'HITACHI' and 'OLYMPUS'. The water in the foreground reflects the city lights.

## *Part 4 – A focus on Africa, Asia and Australasia*





# Working capital and GDP performance

## Africa, Asia and Australasia




**Key:**

Working capital performance:

-  > + 4% **Deterioration**
-  + 0.5% to +4%
-  -0.5% to +0.5%
-  < -0.5% **Improvement**

GDP performance:

 Average of % change in GDP 2012

Average change in WC as % of Sales 2012



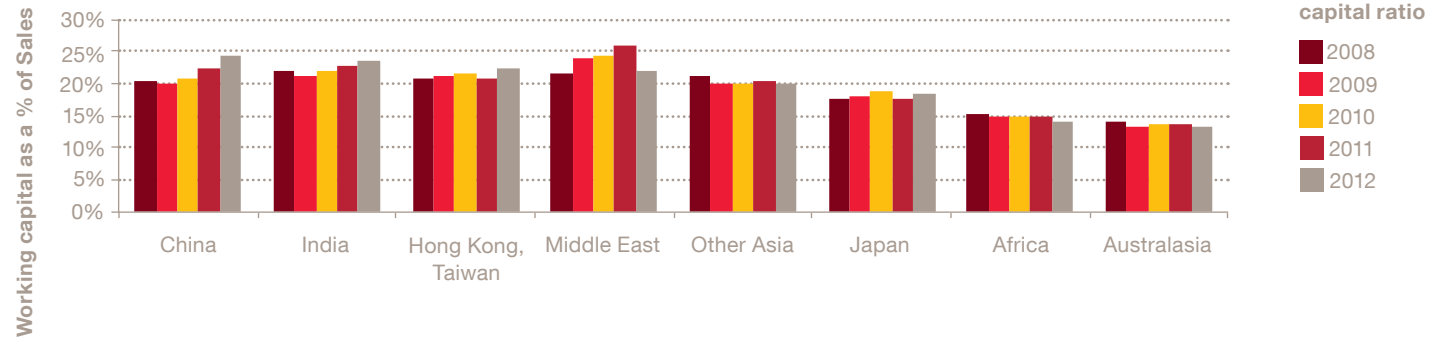
# A focus on Africa, Asia and Australasia

## The winners and losers

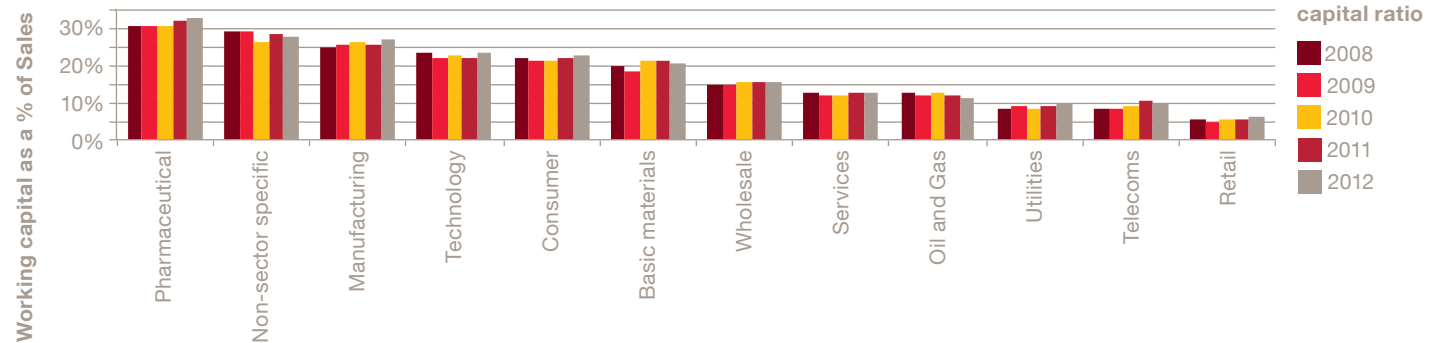
The country clusters with the highest levels of working capital are also the ones that have experienced increasing levels over the past 5 years. While the better performing areas, Africa and Australasia, have seen improving trends in the same period.

The one cluster that stands out is the Middle East. After 4 successive years of sizeable increases in working capital, there has been a significant year on year decrease in 2012. Within this cluster Bahrain, Saudi Arabia and United Arab Emirates have shown sizeable falls, while Kuwait and Qatar have both experienced increases.

Average working capital ratio by cluster: Africa, Asia and Australasia

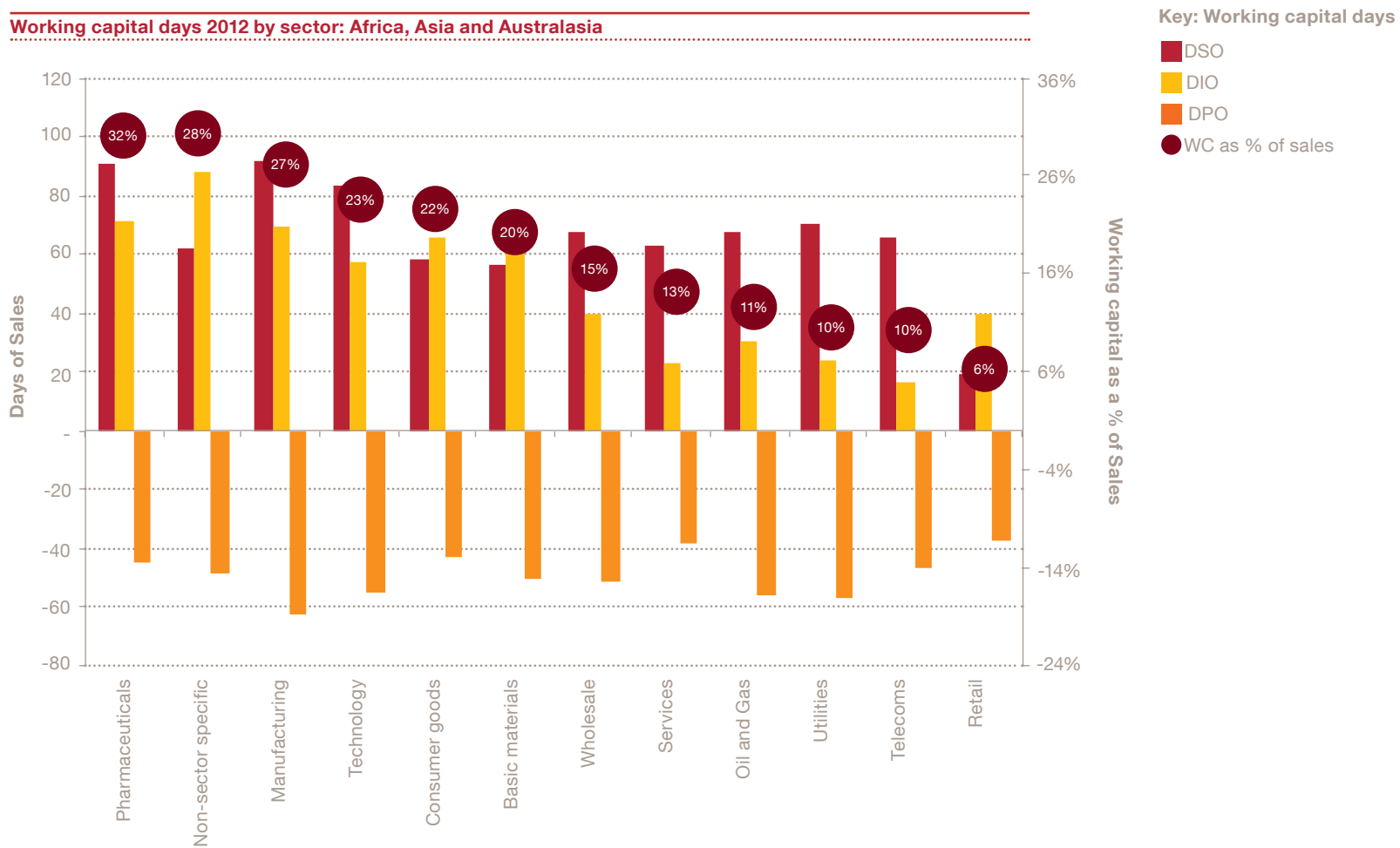


Average working capital ratio by sector: Africa, Asia and Australasia





### Working capital days 2012 by sector: Africa, Asia and Australasia





***African, Asian and Australasian companies could release a total of €1,511bn of cash from working capital if they match upper quartile performance in their sector; €170m for each company***

Africa, Asia and Australasia	Number of Companies	Working Capital as a Percentage of Sales			Working Capital Improvement €bn	Average Opportunity per Company €bn	Impact on ROCE (%)
		Lower Quartile	Median	Upper Quartile			
Basic materials	540	37%	19%	4%	119	0.22	6%
Consumer goods	1,845	38%	20%	7%	194	0.10	6%
Manufacturing	2,529	47%	24%	8%	427	0.17	9%
Oil and Gas	129	30%	9%	0%	130	1.01	3%
Pharmaceuticals	251	51%	30%	13%	32	0.13	3%
Retail	600	19%	3%	-5%	78	0.13	6%
Services	1,297	26%	10%	0%	154	0.12	2%
Technology	800	41%	21%	7%	105	0.13	8%
Telecoms	169	26%	10%	-7%	79	0.47	3%
Unknown	110	54%	19%	5%	59	0.53	6%
Utilities	121	26%	6%	-5%	28	0.23	2%
Wholesale	540	30%	13%	2%	107	0.20	16%
<b>Total</b>	<b>8,931</b>	<b>40%</b>	<b>17%</b>	<b>2%</b>	<b>1,511</b>	<b>0.17</b>	<b>5%</b>



# Working capital rises to the top of the agenda...

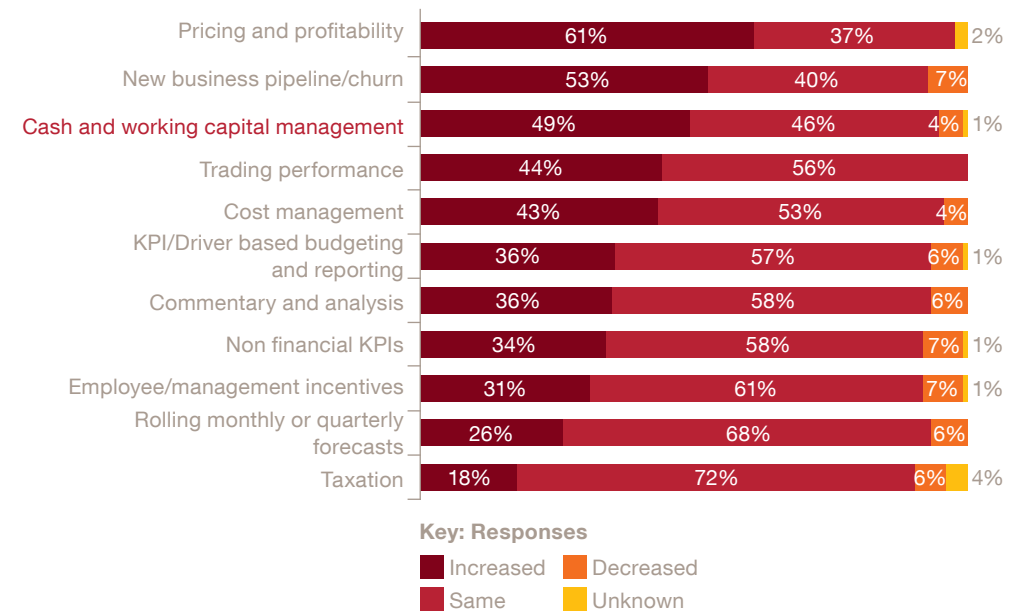
Company directors tell us that, whilst the pursuit of growth remains vital for companies, the most marked increase in focus over the last year has been in relation to working capital and cash flow management. This reflects the difficult economic environment putting companies under pressure to manage their liquidity as effectively as possible.

This is consistent with the increased pressure being placed on finance teams to provide analysis and management information to support cash flow and working capital management.

With availability of debt funding still tight and banks under continual pressure to protect their assets, it is likely that funding will continue to be difficult to obtain for the foreseeable future. This highlights the need for working capital management to be higher up the agenda so that companies can tap the cheapest source of cash: working capital.

**Key outputs from a survey conducted with CEOs of businesses trading globally:**

Has there been a change in the Board's area of focus over the past year?



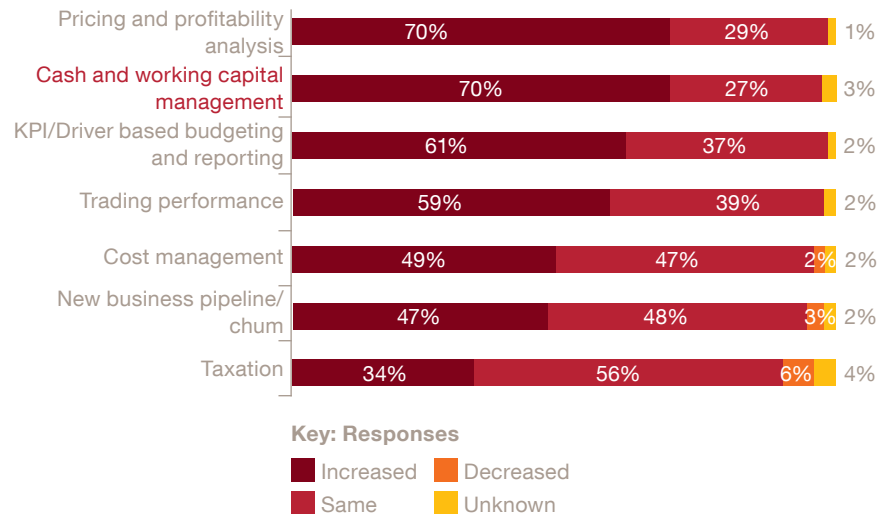
**49%** of company boards have a higher focus on cash and working capital than before.

Source: The Private equity backed company survey 2013 (published April 2013), presents the findings from in-depth face-to-face interviews with the CEOs of 94 PE backed businesses that trade globally.



# ...as companies look for cheaper sources of cash

Has the requirements for and capabilities of the finance team in the following areas increased, decreased or stayed the same under PE ownership?



**70%** of companies recognise the need to increase finance function capabilities to address cash and working capital management

How important were the following to the company's three year growth strategy in 2012



**Key: Responses**  
Mean importance scores (1 = low importance: 5 = high importance)

Cash and working capital is rated as a top priority for corporate growth strategy



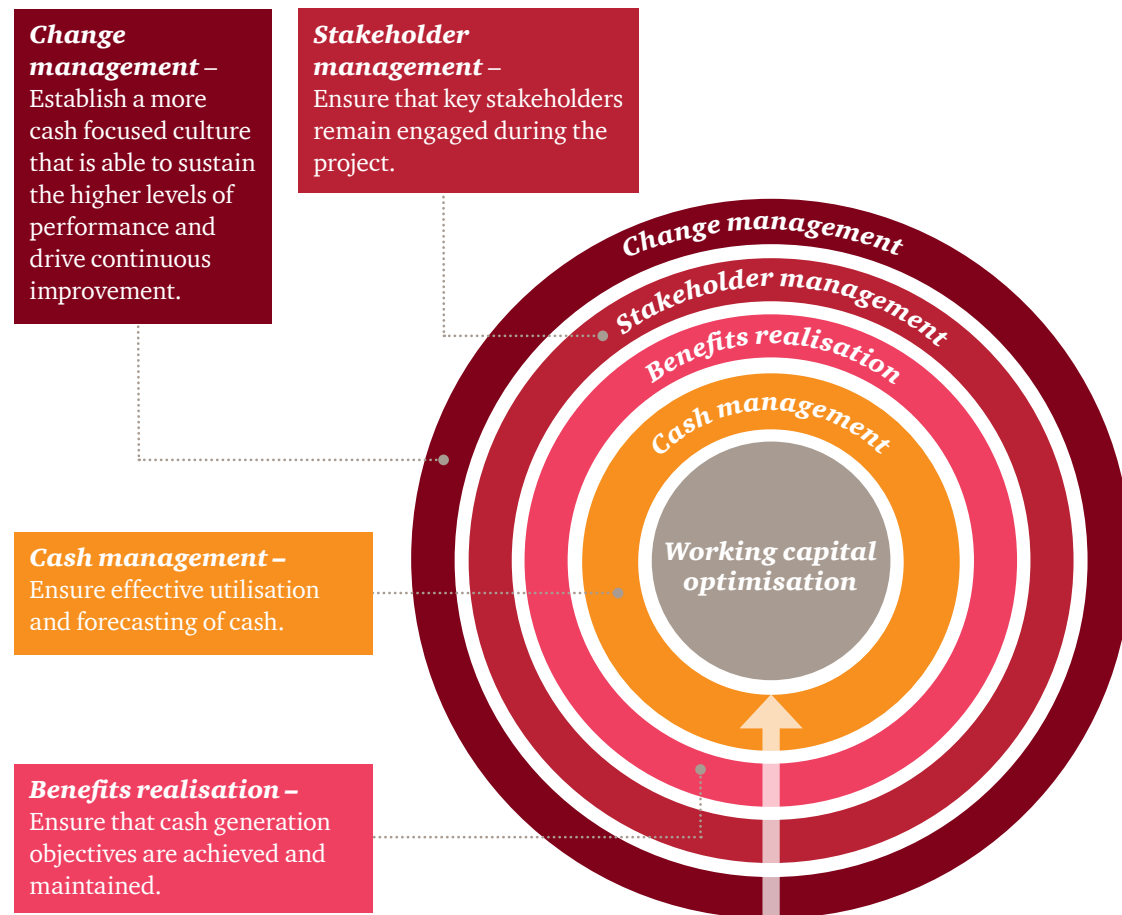


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## *Part 5 – Creating sustainable working capital*



# Our holistic approach to sustainable working capital



We supplement our working capital and cash management methodologies with core consulting approaches to ensure that improvements are tangible and sustainable.

## Working capital optimisation in a travel business

### The key issue

- Changing market dynamics meant that our client needed to generate additional cash in order to fund its day to day activities. They recognised that they could release cash tied up in working capital as an alternative to costly bank financing.

### How we helped

- We undertook reviews of the businesses in the five largest countries and the in house airline.
- Significant opportunities were identified in all areas of working capital and recommendations to realise them were made.
- Working at group level we established a top down cash culture to drive through working capital improvements across the business.
- We established improved cash reporting and forecasting mechanisms to give the business greater visibility and control over cash.
- A team of specialists was deployed on site in their key markets to provide training, establish best practice processes, facilitate the adoption of the cash culture on the ground and ensure the realisation of benefits.

### The result

- Just four months after the start of implementation, the company had already generated €70m from working capital.



## *How can we support you?*

**1.** Complete a working capital benchmarking exercise to compare performance against peers and identify potential improvement opportunities.

**2.** Perform a diagnostic review to identify 'quick wins' and longer-term working capital improvement opportunities.

**3.** Develop detailed action plans for implementation to generate cash and make sustainable improvements.

**4.** Assist the realisation of sustainable working capital reduction by implementing robust, efficient and collaborative processes.

### ***Addressing the key levers:***

- Identification, harmonisation and improvement of commercial terms.
- Process optimisation throughout the end-to-end working capital cycles.
- Process compliance and monitoring.
- Creating and embedding a 'cash culture' within the organisation, optimising the trade-offs between cash, cost and service.

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

### ***Accounts receivable***

- Credit risk policies.
- Aligned and optimised customer terms.
- Billing timeliness and quality.
- Contract and milestone management.
- Prioritised and proactive collection procedures.
- Systems-based dispute resolution.
- Dispute root cause elimination.

### ***Accounts payable***

- “Centre Led” procurement.
- Consolidated spending.
- Aligned and optimised supplier terms.
- Supply Chain Finance.
- Purchasing channels (to avoid contract leakage).
- Payment method and frequency.
- Early payment prevention.

### ***Inventory***

- Lean and agile supply chain strategies.
- Global coordination.
- Forecasting techniques.
- Production planning.
- Accurate tracking of inventory quantities.
- Differentiated inventory levels for different goods.
- Balanced cash, cost and service.



# Appendices – Basis of calculations and limitations



## **Basis of calculations**

This study provides a view of global working capital performance and is based on the research of the largest 15,763 companies in the world. The Financial Services, Real Estate and Insurance sectors are excluded. For consistency reasons and to be able to add the individual ratios together we have calculated DSO, DPO and DIO based on sales.

**DSO (Days Sales Outstanding) is a measure of the average number of days that a company takes to collect cash after the sale of goods or services have been delivered.**

= (trade receivables/sales \* 365).

**DPO (Days Payables Outstanding) is an indicator of how long a company takes to pay its trade creditors.**

= (trade payables/sales \* 365).

**DIO (Days Inventories On-hand) gives an idea of how long it takes for a company to convert its inventory into sales. Generally, the lower (shorter) the DIO, the better.**

= (total inventories/sales \* 365).

**DWC (Days Working Capital)**

= DSO + DIO – DPO.

**NWC as % of Sales**

= (receivables + inventories – payables)/sales.

**Calculation of improvement potential**

The potential improvement opportunity is calculated using the performance of the upper quartile performers (i.e. the top 25%) as a benchmark, and moving, on a sector basis, all companies outside upper quartile performers to the performance of the upper quartile.

**ROCE (Return on Capital Employed)**

Establishes the relationship between the profit and the capital employed. It indicates the percentage of return on capital employed in the business and it can be used to show the overall profitability and efficiency of the business.

= (operating profit – tax)/(total assets – current liabilities).

**Limitations of this study**

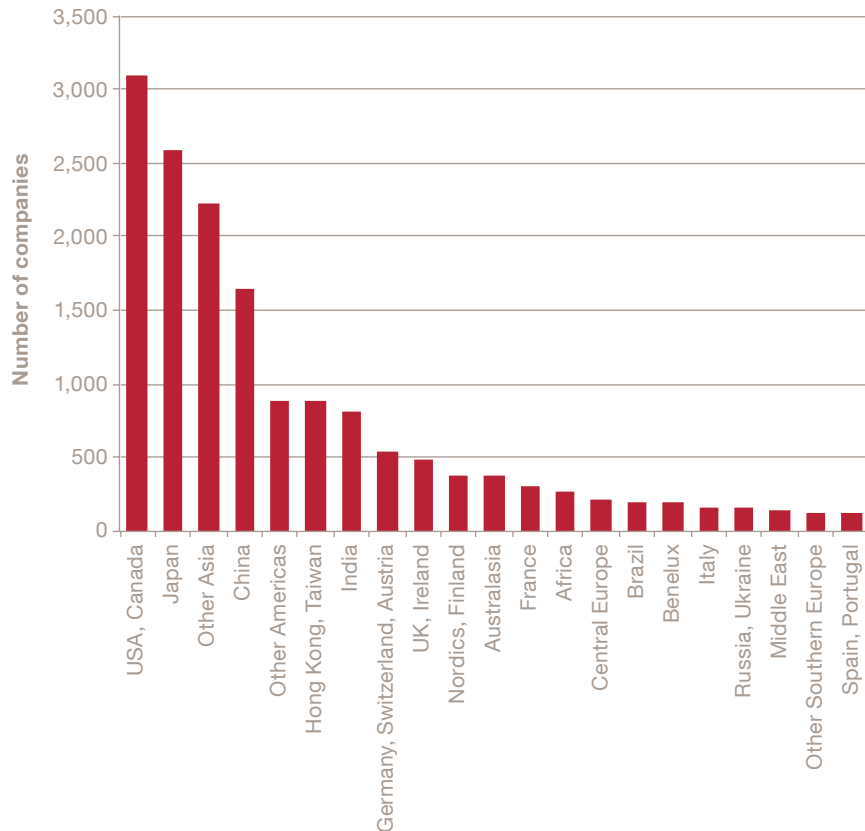
Companies have been assigned to countries based on the location of their headquarters. Although a significant part of sales and purchases might be realised in that country, it does not necessarily reflect typical payment terms or behaviour in that country.

As the research is based on publicly available information, all figures are financial year-end figures. Due to disproportionate management efforts to improve working capital performance towards year-end (also referred to as ‘window dressing’) the real underlying working capital requirement within reporting periods might be higher. Also off-balance-sheet financing or the effects of asset securitisation (e.g. receivables) have not been taken into account.

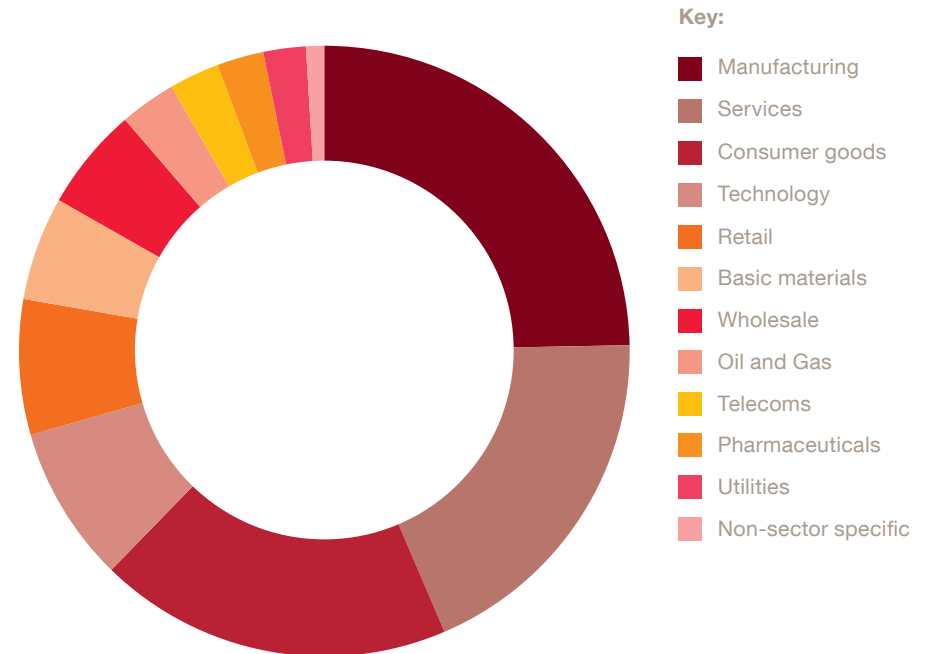


***This study shows the drivers and barriers to success in the management of working capital performance. The survey is compiled from annual reports from 15,763 publicly listed companies across the world***

Population distribution by country cluster



Population distribution by country sector



# Industry classifications



Sector	SIC description
Consumer goods	<p>Adhesives &amp; Sealants</p> <p>Agricultural Chemicals</p> <p>Agricultural Prod-Livestock &amp; Animal Specialties</p> <p>Agricultural Production-Crops</p> <p>Agricultural Services</p> <p>Apparel &amp; Other Finished Prods of Fabrics &amp; Similar Mat</p> <p>Bakery Products</p> <p>Beverages</p> <p>Blankbooks, Looseleaf Binders &amp; Bookbinding &amp; Related Work</p> <p>Book Printing</p> <p>Books: Publishing or Publishing &amp; Printing</p> <p>Bottled &amp; Canned Soft Drinks &amp; Carbonated Waters</p> <p>Broadwoven Fabric Mills, Cotton</p> <p>Broadwoven Fabric Mills, Man Made Fiber &amp; Silk</p> <p>Canned, Frozen &amp; Preserved Fruit, Veg &amp; Food Specialties</p> <p>Canned, Fruits, Veg, Preserves, Jams &amp; Jellies</p> <p>Carpets &amp; Rugs</p> <p>Chemicals &amp; Allied Products</p> <p>Cigarettes</p> <p>Commercial Printing</p> <p>Converted Paper &amp; Paperboard Prods (No Containers/Boxes)</p> <p>Cookies &amp; Crackers</p> <p>Dairy Products</p> <p>Distilled And Blended Liquors</p> <p>Fats &amp; Oils</p> <p>Fishing, Hunting and Trapping</p> <p>Food and Kindred Products</p> <p>Forestry</p> <p>Grain Mill Products</p> <p>Greeting Cards</p> <p>Household Furniture</p> <p>Ice Cream &amp; Frozen Desserts</p> <p>Industrial Inorganic Chemicals</p> <p>Industrial Organic Chemicals</p> <p>Knit Outerwear Mills</p> <p>Knitting Mills</p> <p>Lumber &amp; Wood Products (No Furniture)</p> <p>Malt Beverages</p> <p>Manifold Business Forms</p> <p>Meat Packing Plants</p>
	<p>Men's &amp; Boys' Furnishings, Work Clothing, &amp; Allied Garments</p> <p>Millwood, Veneer, Plywood, &amp; Structural Wood Members</p> <p>Miscellaneous Chemical Products</p> <p>Miscellaneous Fabricated Textile Products</p> <p>Miscellaneous Food Preparations &amp; Kindred Products</p> <p>Miscellaneous Furniture &amp; Fixtures</p> <p>Miscellaneous Publishing</p> <p>Mobile Homes</p> <p>Newspapers: Publishing or Publishing &amp; Printing</p> <p>Office Furniture</p> <p>Office Furniture (No Wood)</p> <p>Paints, Varnishes, Lacquers, Enamels &amp; Allied Prods</p> <p>Paper Mills</p> <p>Paperboard Containers &amp; Boxes</p> <p>Paperboard Mills</p> <p>Papers &amp; Allied Products</p> <p>Partitions, Shelvg, Lockers, &amp; office &amp; Store Fixtures</p> <p>Perfumes, Cosmetics &amp; Other Toilet Preparations</p> <p>Periodicals: Publishing or Publishing &amp; Printing</p> <p>Plastic Material, Synth Resin/Rubber, Cellulos (No Glass)</p> <p>Plastic Materials, Synth Resins &amp; Nonvulcan Elastomers</p> <p>Plastics, Foil &amp; Coated Paper Bags</p> <p>Poultry Slaughtering and Processing</p> <p>Prefabricated Wood Bldgs &amp; Components</p> <p>Prepared Fresh or Frozen Fish &amp; Seafood</p> <p>Printing, Publishing, And Allied Industries</p> <p>Public Bldg &amp; Related Furniture</p> <p>Pulp Mills</p> <p>Sausages &amp; Other Prepared Meat Products</p> <p>Sawmills &amp; Planing Mills, General</p> <p>Service Industries For The Printing Trade</p> <p>Soap, Detergents, Cleaning Preparations, Perfumes, Cosmetics</p> <p>Specialty Cleaning, Polishing and Sanitation Preparations</p> <p>Sugar &amp; Confectionery Products</p> <p>Textile Mill Products</p> <p>Tobacco Products</p> <p>Wines, Brandy And Brandy Spirits</p> <p>Women's, Misses', and Juniors Outerwear</p> <p>Women's, Misses', Children's &amp; Infant's Undergarments</p> <p>Wood Household Furniture, (No Upholstered)</p>

Sector	SIC description
Technology	<p>Auto Controls For Regulating Residential &amp; Comm Environments</p> <p>Calculating &amp; Accounting Machines (No Electronic Computers)</p> <p>Communications Equipment, NEC</p> <p>Computer &amp; office Equipment</p> <p>Computer Communications Equipment</p> <p>Computer Peripheral Equipment, NEC</p> <p>Computer Storage Devices</p> <p>Computer Terminals</p> <p>Dental Equipment &amp; Supplies</p> <p>Electromedical &amp; Electrotherapeutic Apparatus</p> <p>Electronic Components &amp; Accessories</p> <p>Electronic Components, NEC</p> <p>Electronic Computers</p> <p>Electronic Connectors</p> <p>Industrial Instruments For Measurement, Display, and Control</p> <p>Instruments For Meas &amp; Testing of Electricity &amp; Elec Signals</p> <p>Laboratory Analytical Instruments</p> <p>Laboratory Apparatus &amp; Furniture</p> <p>Magnetic &amp; Optical Recording Media</p> <p>Measuring &amp; Controlling Devices, NEC</p> <p>Office Machines, NEC</p> <p>Optical Instruments &amp; Lenses</p> <p>Printed Circuit Boards</p> <p>Radio &amp; TV Broadcasting &amp; Communications Equipment</p> <p>Semiconductors &amp; Related Devices</p> <p>Telephone &amp; Telegraph Apparatus</p> <p>Totalizing Fluid Meters &amp; Counting Devices</p> <p>X-Ray Apparatus &amp; Tubes &amp; Related Irradiation Apparatus</p>
Basic Materials	<p>Abrasive, Asbestos &amp; Misc Nonmetallic Mineral Prods</p> <p>Bituminous Coal &amp; Lignite Mining</p> <p>Bituminous Coal &amp; Lignite Surface Mining</p> <p>Concrete Products, Except Block &amp; Brick</p> <p>Concrete, Gypsum &amp; Plaster Products</p> <p>Cut Stone &amp; Stone Products</p> <p>Gold and Silver Ores</p> <p>Iron &amp; Steel Foundries</p> <p>Metal Mining</p> <p>Mining &amp; Quarrying of Nonmetallic Minerals (No Fuels)</p> <p>Miscellaneous Metal Ores</p> <p>Primary Metal Industries</p> <p>Primary Production of Aluminum</p> <p>Primary Smelting &amp; Refining of Nonferrous Metals</p> <p>Silver Ores</p> <p>Steel Works, Blast Furnaces &amp; Rolling &amp; Finishing Mills</p>
Pharmaceuticals	<p>Steel Works, Blast Furnaces &amp; Rolling Mills (Coke Ovens)</p> <p>In Vitro &amp; In Vivo Diagnostic Substances</p> <p>Medicinal Chemicals &amp; Botanical Products</p> <p>Pharmaceutical Preparations</p>

# Industry classifications



Sector	SIC description			
Manufacturing	Air-Cond & Warm Air Heatg Equip & Comm & Indl Refrig Equip Aircraft Aircraft & Parts Aircraft Engines & Engine Parts Aircraft Parts & Auxiliary Equipment, NEC Asphalt Paving & Roofing Materials Ball & Roller Bearings Biological Products, (No Diagnostic Substances) Bolts, Nuts, Screws, Rivets & Washers Building Construction – General Contractors & Operative Builders Cement, Hydraulic Coating, Engraving & Allied Services Construction – Special Trade Contractors Construction Machinery & Equip Construction, Mining & Materials Handling Machinery & Equip Costume Jewelry & Novelties Cutlery, Handtools & General Hardware Dolls & Stuffed Toys Drawing & Insulating of Nonferrous Wire Electric Housewares & Fans Electric Lighting & Wiring Equipment Electrical Industrial Apparatus Electrical Work Electronic & Other Electrical Equipment (No Computer Equip) Electronic Coils, Transformers & Other Inductors Engines & Turbines Fabricated Plate Work (Boiler Shops) Fabricated Rubber Products, NEC Fabricated Structural Metal Products Farm Machinery & Equipment Flat Glass Footwear, (No Rubber) Games, Toys & Children’s Vehicles (No Dolls & Bicycles) Gaskets, Packg & Sealg Devices & Rubber & Plastics Hose General Bldg Contractors – Nonresidential Bldgs General Bldg Contractors – Residential Bldgs General Industrial Machinery & Equipment General Industrial Machinery & Equipment, NEC Glass & Glassware, Pressed or Blown Glass Containers Glass Products, Made of Purchased Glass Guided Missiles & Space Vehicles & Parts Heating Equip, Except Elec & Warm Air; & Plumbing Fixtures Heating Equipment, Except Electric & Warm Air Furnaces	Heavy Construction Other Than Bldg Const – Contractors Household Appliances Household Audio & Video Equipment Industrial & Commercial Fans & Blowers & Air Purifying Equip Industrial And Commercial Machinery And Computer Equipment Industrial Process Furnaces & Ovens Industrial Trucks, Tractors, Trailers & Stackers Jewelry, Precious Metal Jewelry, Silverware & Plated Ware Lawn & Garden Tractors & Home Lawn & Gardens Equip Leather & Leather Products Machine Tools, Metal Cutting Types Metal Cans Metal Doors, Sash, Frames, Moldings & Trim Metal Forgings & Stampings Metal Shipping Barrels, Drums, Kegs & Pails Metalworkg Machinery & Equipment Mining Machinery & Equip (No Oil & Gas Field Mach & Equip) Misc Industrial & Commercial Machinery & Equipment Miscellaneous Electrical Machinery, Equipment & Supplies Miscellaneous Fabricated Metal Products Miscellaneous Manufacturing Industries Miscellaneous Plastics Products Miscellaneous Primary Metal Products Miscellaneous Products of Petroleum & Coal Miscellaneous Transportation Equipment Motor Homes Motor Vehicle Parts & Accessories Motor Vehicles & Passenger Car Bodies Motorcycles, Bicycles & Parts Motors & Generators Musical Instruments Nonferrous Foundries (Castings) Oil & Gas Field Machinery & Equipment Operative Builders Ophthalmic Goods Ordnance & Accessories, (No Vehicles/Guided Missiles) Orthopedic, Prosthetic & Surgical Appliances & Supplies Pens, Pencils & Other Artists’ Materials Phonograph Records & Prerecorded Audio Tapes & Disks Photographic Equipment & Supplies Plastics Foam Products Plastics Products, NEC Pottery & Related Products	Power, Distribution & Specialty Transformers Prefabricated Metal Buildings & Components Printing Trades Machinery & Equipment Pumps & Pumping Equipment Railroad Equipment Refrigeration & Service Industry Machinery Rolling Drawing & Extruding of Nonferrous Metals Rubber & Plastics Footwear Screw Machine Products Search, Detection, Navigation, Guidance, Aeronautical Sys Secondary Smelting & Refining of Nonferrous Metals Sheet Metal Work Ship & Boat Building & Repairing Special Industry Machinery (No Metalworking Machinery) Special Industry Machinery, NEC Sporting & Athletic Goods, NEC Steel Pipe & Tubes Structural Clay Products Surgical & Medical Instruments & Apparatus Switchgear & Switchboard Apparatus Tires & Inner Tubes Transportation Equipment Truck & Bus Bodies Truck Trailers Unsupported Plastics Film & Sheet Watches, Clocks, Clockwork Operated Devices/Parts Water, Sewer, Pipeline, Comm & Power Line Construction	



# Industry classifications



Sector	SIC description			
Telecoms	Cable & Other Pay Television Services Communications Services, NEC Diversified multi-media Radio Broadcasting Stations Radiotelephone Communications Telegraph & Other Message Communications Telephone Communications Telephone Communications (No Radiotelephone) Television Broadcasting Stations	Services	Accounting, Auditing, And Bookkeeping Services Air Courier Services Air Transportation, Nonscheduled Air Transportation, Scheduled Airports, Flying Fields & Airport Terminal Services Arrangement of Transportation of Freight & Cargo Business Consulting Services, Not Elsewhere Classified Deep Sea Foreign Transportation of Freight Electric Services Electric, Gas & Sanitary Services Hazardous Waste Management Hotels & Motels Hotels, Rooming Houses, Camps & Other Lodging Places Local & Suburban Transit & Interurban Hwy Passenger Trans Motor Freight Transportation And Warehousing Pipe Lines (No Natural Gas) Professional Sports Clubs And Promoters Public Warehousing & Storage Railroad Switching & Terminal Establishments Railroads, Line-Haul Operating Refuse Systems Sanitary Services Services-Advertising Services-Advertising Agencies Services-Allied To Motion Picture Distribution Services-Allied To Motion Picture Production Services-Amusement & Recreation Services Services-Amusement Parks Services-Auto Rental & Leasing (No Drivers) Services-Automotive Repair, Services & Parking Services-Business Services, NEC Services-Child Day Care Services Services-Commercial Physical & Biological Research Services-Computer Integrated Systems Design Services-Computer Processing & Data Preparation Services-Computer Programming Services Services-Computer Programming, Data Processing, Etc. Services-Computer Rental & Leasing Services-Consumer Credit Reporting, Collection Agencies Services-Detective, Guard & Armored Car Services Services-Direct Mail Advertising Services Services-Educational Services Services-Employment Agencies Services-Engineering Services Services-Engineering, Accounting, Research, Management	Services-Equipment Rental & Leasing, NEC Services-Facilities Support Management Services Services-Gambling Transactions Services-General Medical & Surgical Hospitals, NEC Services-Health Services Services-Help Supply Services Services-Home Health Care Services Services-Hospitals Services-Legal Services Services-Mailing, Reproduction, Commercial Art & Photography Services-Management Consulting Services Services-Management Services Services-Medical Laboratories Services-Membership organizations Services-Membership Sports & Recreation Clubs Services-Misc Health & Allied Services, NEC Services-Miscellaneous Amusement & Recreation Services-Miscellaneous Business Services Services-Miscellaneous Equipment Rental & Leasing Services-Miscellaneous Repair Services Services-Motion Picture & Video Tape Distribution Services-Motion Picture & Video Tape Production Services-Motion Picture Theaters Services-Nursing & Personal Care Facilities Services-Offices & Clinics of Doctors of Medicine Services-Personal Services Services-Photocopying and Duplicating Services Services-Photofinishing Laboratories Services-Prepackaged Software Services-Racing, Including Track Operation Services-Services, NEC Services-Skilled Nursing Care Facilities Services-Social Services Services-Specialty Outpatient Facilities, NEC Services-Telephone Interconnect Systems Services-Testing Laboratories Services-To Dwellings & Other Buildings Services-Video Game Arcades Services-Video Tape Rental Steam & Air-Conditioning Supply Terminal Maintenance Facilities For Motor Freight Transport Transportation Services Trucking & Courier Services (No Air) Trucking (No Local) Water Transportation
Non-sector specific	Conglomerates Foreign Governments International Affairs Multi-Sector Holdings Non-Operating Establishments Crude Petroleum & Natural Gas Drilling Oil & Gas Wells			
Oil and Gas	Oil & Gas Field Exploration Services Oil & Gas Field Services, NEC Petroleum Refining Retail-Apparel & Accessory Stores Retail-Auto & Home Supply Stores			
Retail	Retail-Auto Dealers & Gasoline Stations Retail-Building Materials, Hardware, Garden Supply Retail-Catalog & Mail-Order Houses Retail-Computer & Computer Software Stores Retail-Convenience Stores Retail-Department Stores Retail-Drug Stores and Proprietary Stores Retail-Eating & Drinking Places Retail-Eating Places Retail-Family Clothing Stores Retail-Food Stores Retail-Furniture Stores Retail-Grocery Stores Retail-Hobby, Toy & Game Shops Retail-Home Furniture, Furnishings & Equipment Stores Retail-Jewelry Stores Retail-Lumber & Other Building Materials Dealers Retail-Misc General Merchandise Stores Retail-Miscellaneous Retail Retail-Miscellaneous Shopping Goods Stores Retail-Mobile Home Dealers Retail-Nonstore Retailers Retail-Radio, TV & Consumer Electronics Stores Retail-Record & Prerecorded Tape Stores Retail-Retail Stores, NEC Retail-Shoe Stores Retail-Variety Stores Retail-Women's Clothing Stores			



## Sampled companies vs sector and region

Row Labels	Basic materials	Consumer goods	Manufacturing	Oil and Gas	Pharmaceuticals	Retail	Services	Technology	Telecoms	Non-sector specific	Utilities	Wholesale	Grand Total
Africa	26	60	43	7	5	28	42	3	12	10	1	26	263
Australasia	52	48	52	13	1	28	130	5	12	3	9	21	374
Benelux	8	49	40	6	1	9	42	12	12	2	2	8	191
Brazil	10	48	41	3	2	11	57	3	9	1	7	5	197
Central Europe	10	50	48	7	7	13	36	3	9	1	7	19	210
China	124	385	542	12	93	70	195	126	14	14	30	47	1,652
France	4	53	69	6	6	21	99	19	8		3	13	301
Germany, Switzerland, Austria	16	88	182	5	9	23	113	55	16	5	8	18	538
Hong Kong, Taiwan	41	140	215	3	12	28	70	307	12	5	10	39	882
India	69	232	285	15	45	9	98	8	16	8	9	17	811
Italy	3	32	56	4	2	3	31	8	5	2	10	5	161
Japan	84	426	742	15	41	327	469	176	24	17	13	261	2,595
Middle East	5	25	38	4	2	11	25		10	4	4	8	136
Nordics, Finland	8	77	98	28	7	19	91	20	7	4	3	17	379
Other Americas	59	197	162	22	21	76	167	71	30	12	21	49	887
Other Asia	139	529	612	60	52	99	268	175	69	49	45	121	2,218
Other Southern Europe	10	24	28	3	2	6	31	1	6	2	1	14	128
Russia, Ukraine	24	16	20	14	3	7	57		8		5		154
Spain, Portugal	3	28	29	3	3	7	28	1	8	1	4	2	117
UK, Ireland	32	71	76	16	10	53	147	21	15	9	7	24	481
USA, Canada	140	374	514	224	65	281	778	292	117	3	155	145	3,088
<b>Grand Total</b>	<b>867</b>	<b>2,952</b>	<b>3,892</b>	<b>470</b>	<b>389</b>	<b>1,129</b>	<b>2,974</b>	<b>1,306</b>	<b>419</b>	<b>152</b>	<b>354</b>	<b>859</b>	<b>15,763</b>



## *DSO averages by sector by country cluster*

Sectors	Basic materials	Consumer goods	Manufacturing	Oil and Gas	Pharmaceuticals	Retail	Services	Technology	Telecoms	Non-sector specific	Utilities	Wholesale	All clusters
Africa	42	39	69	42	94	56	45	72	51	44	100	52	51
Australasia	33	55	63	50	75	22	45	69	46	36	56	48	46
Benelux	40	48	75	92	78	11	67	59	47	13	35	39	57
Brazil	44	65	100	39	61	60	68	83	70	50	45	42	70
Central Europe	41	54	75	25	115	21	56	69	58	61	50	53	58
China	56	53	107	72	86	7	67	118	76	52	62	37	78
France	46	68	82	57	76	32	98	82	78		73	49	79
Germany, Switzerland, Austria	40	51	61	72	66	17	63	60	49	46	74	42	56
Hong Kong, Taiwan	46	55	86	31	98	17	50	74	87	36	103	76	69
India	49	55	80	44	75	42	112	81	88	50	74	58	72
Italy	98	108	98	64	82	23	113	90	115	100	150	68	103
Japan	88	80	99	58	109	17	56	95	63	43	34	79	74
Middle East	57	27	81	60	115	14	71		33	63	133	47	58
Nordics, Finland	35	48	69	71	52	16	64	80	61	67	71	57	60
Other Americas	51	59	82	62	92	41	65	81	62	54	46	47	64
Other Asia	57	52	82	83	97	24	67	63	66	82	75	63	66
Other Southern Europe	119	90	128	25	79	55	78	202	104	111	328	65	95
Russia, Ukraine	43	37	80	40	155	14	38		32		74		46
Spain, Portugal	74	55	110	36	68	24	73	158	81	0	70	122	75
UK, Ireland	34	45	59	42	63	23	58	65	35	26	47	47	49
USA, Canada	30	40	56	54	59	13	52	58	48	23	45	45	47
<b>All clusters</b>	<b>51</b>	<b>56</b>	<b>84</b>	<b>58</b>	<b>84</b>	<b>20</b>	<b>61</b>	<b>76</b>	<b>59</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>64</b>

Please note that sector/country combinations containing a lower number of companies could be subject to a degree distortion.



## *DIO averages by sector by country cluster*

Sectors	Basic materials	Consumer goods	Manufacturing	Oil and Gas	Pharmaceuticals	Retail	Services	Technology	Telecoms	Non-sector specific	Utilities	Wholesale	All clusters
Africa	53	62	51	30	79	53	17	65	11	60	4	54	47
Australasia	55	62	52	12	44	49	12	47	11	30	6	43	35
Benelux	65	51	62	17	52	37	8	61	3	12	18	51	40
Brazil	78	62	80	19	27	52	3	65	4	8	3	18	42
Central Europe	47	50	53	38	67	38	11	23	6	25	29	44	40
China	71	89	98	46	71	66	57	87	60	171	40	56	83
France	73	90	66	31	61	48	8	54	16		21	50	47
Germany, Switzerland, Austria	71	54	63	44	95	47	18	59	6	53	10	43	48
Hong Kong, Taiwan	83	61	77	26	86	53	27	51	21	149	14	46	59
India	75	79	76	37	84	66	18	39	9	59	21	27	66
Italy	57	60	85	26	63	87	20	62	4	38	22	26	56
Japan	67	47	55	36	64	30	13	59	14	54	12	28	40
Middle East	81	79	89	25	94	28	15		5	128	30	54	58
Nordics, Finland	77	58	66	13	47	59	15	45	11	43	80	53	47
Other Americas	67	64	78	21	38	61	16	55	9	47	19	38	51
Other Asia	64	61	56	28	63	42	22	47	12	81	23	53	50
Other Southern Europe	95	101	58	36	44	97	12	26	16	42	17	36	55
Russia, Ukraine	73	56	90	27	57	42	15		9		28		41
Spain, Portugal	68	71	80	36	71	25	14	36	10	285	6	48	51
UK, Ireland	50	41	84	30	38	39	5	45	12	33	14	37	35
USA, Canada	56	47	67	9	41	46	10	52	5	40	24	47	36
<b>All clusters</b>	<b>66</b>	<b>62</b>	<b>69</b>	<b>19</b>	<b>63</b>	<b>44</b>	<b>16</b>	<b>56</b>	<b>11</b>	<b>76</b>	<b>23</b>	<b>41</b>	<b>49</b>

Please note that sector/country combinations containing a lower number of companies could be subject to a degree of distortion.



## *DPO averages by sector by country cluster*

Sectors	Basic materials	Consumer goods	Manufacturing	Oil and Gas	Pharmaceuticals	Retail	Services	Technology	Telecoms	Non-sector specific	Utilities	Wholesale	All clusters
Africa	48	44	42	46	68	48	40	53	50	45	119	59	46
Australasia	35	39	35	43	20	27	24	34	38	37	37	47	32
Benelux	41	43	44	18	95	28	33	36	48	45	28	36	39
Brazil	56	33	36	23	27	52	36	33	53	6	23	22	37
Central Europe	53	41	57	45	50	44	33	15	49	39	34	44	44
China	62	56	91	91	53	61	67	87	98	61	54	46	72
France	48	58	56	57	38	45	49	48	75		59	52	53
Germany, Switzerland, Austria	27	35	32	41	31	25	36	31	41	24	44	35	33
Hong Kong, Taiwan	30	29	52	20	47	56	42	52	66	37	42	52	47
India	63	45	58	41	49	55	50	49	57	48	56	40	52
Italy	115	75	89	49	39	67	101	55	131	89	106	78	87
Japan	59	48	62	36	35	29	25	49	24	34	28	58	46
Middle East	44	26	29	108	9	31	39		32	48	62	37	35
Nordics, Finland	37	28	25	27	29	24	22	31	44	40	47	50	27
Other Americas	41	41	46	42	33	57	33	59	50	36	44	36	43
Other Asia	40	32	49	60	33	43	43	44	42	52	74	41	43
Other Southern Europe	36	77	65	38	22	45	55	59	116	43	32	48	60
Russia, Ukraine	26	25	62	32	96	57	36		23		50		38
Spain, Portugal	56	59	88	31	63	67	55	150	100	0	82	29	68
UK, Ireland	25	38	41	29	27	31	28	36	36	42	48	42	34
USA, Canada	34	26	31	61	22	23	21	29	24	39	32	34	29
<b>All clusters</b>	<b>45</b>	<b>40</b>	<b>55</b>	<b>53</b>	<b>40</b>	<b>35</b>	<b>34</b>	<b>47</b>	<b>43</b>	<b>45</b>	<b>45</b>	<b>46</b>	<b>44</b>

Please note that sector/country combinations containing a lower number of companies could be subject to a degree distortion.



## *DWC averages by sector by country cluster*

Sectors	Basic materials	Consumer goods	Manufacturing	Oil and Gas	Pharmaceuticals	Retail	Services	Technology	Telecoms	Non-sector specific	Utilities	Wholesale	All clusters
Africa	47	57	78	26	104	61	23	85	13	59	-15	47	52
Australasia	52	77	79	19	99	43	34	82	19	29	25	44	49
Benelux	64	56	93	91	34	20	41	84	2	-20	26	54	58
Brazil	66	94	144	34	61	59	35	115	20	52	25	38	76
Central Europe	34	63	71	17	132	15	33	77	15	47	45	52	53
China	65	85	113	27	104	13	57	118	38	163	48	48	88
France	72	100	92	31	99	35	57	89	18	0	36	46	73
Germany, Switzerland, Austria	85	71	92	75	130	40	46	88	14	74	41	50	72
Hong Kong, Taiwan	99	87	111	37	136	14	35	73	43	147	75	70	81
India	62	89	98	39	110	52	79	71	41	61	39	44	86
Italy	40	94	94	40	106	42	32	97	-12	49	66	16	71
Japan	96	79	91	59	138	18	43	105	53	62	18	49	68
Middle East	95	80	140	-24	200	11	48	0	5	143	101	65	81
Nordics, Finland	75	77	110	57	70	51	57	94	29	71	104	59	80
Other Americas	77	82	114	41	98	45	48	77	21	65	21	49	72
Other Asia	80	80	89	51	128	23	46	66	36	110	25	75	73
Other Southern Europe	178	114	121	23	101	107	35	169	4	110	313	53	90
Russia, Ukraine	90	68	107	34	116	-1	16	0	18	0	51	0	49
Spain, Portugal	86	67	102	40	76	-17	32	44	-9	285	-6	141	58
UK, Ireland	58	48	102	43	75	31	36	74	11	17	13	41	50
USA, Canada	53	61	91	2	78	36	40	81	29	24	36	58	54
<b>All clusters</b>	<b>71</b>	<b>78</b>	<b>98</b>	<b>24</b>	<b>107</b>	<b>29</b>	<b>44</b>	<b>84</b>	<b>26</b>	<b>89</b>	<b>37</b>	<b>55</b>	<b>69</b>

Please note that sector/country combinations containing a lower number of companies could be subject to a degree distortion.



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