

Bridging the Gap

2015 Annual Global Working Capital Survey
of the Engineering and Construction sector



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Foreword



Jonathan Hook
Global Engineering and
Construction Leader, PwC

Welcome to PwC's working capital survey of the engineering and construction sector. Working capital is crucial to every company, but is particularly important for engineering and construction companies who typically operate in a low margin, highly competitive sector and often without significant tangible asset bases.

Historically well managed contractors have enjoyed a level of advance cash from their clients and have delayed paying their supply chain. However, there is evidence from our survey that those opportunities are becoming increasingly rare.

The global survey of over 10,000 companies included 746 companies across the global engineering and construction sector. At 4.5% the sector has shown the greatest level of net working capital decline over the last four years across all industry sectors. This is likely to be a reflection of the pressure the industry's clients have felt, in particular governments around the world who are the owners of the largest capital projects. It may also reflect an increased level of exposure being carried in

contractor balance sheets where recoveries of variations, claims and overruns are proving harder to collect.

The industry suffers from its fragmented nature, and the fact that control is decentralised, often down to a project level. This makes working capital control harder to influence from a central finance perspective and forecasting of working capital more challenging than many other sectors.

We work with many engineering and construction clients to improve their working capital and help them implement the necessary disciplines in a challenging sector and current environment.



Executive summary

Companies in the engineering and construction (E&C) sector have amongst the highest capital consumption of any industry. That's why effective working capital management (WCM) is such a top priority. Cash underpins every area of their operations – from keeping projects running smoothly on schedule to paying sub-contractors and procuring new materials. If WCM processes break down, businesses are at risk.

The sector is split in to three distinct sub-sectors, each with its own unique performance drivers, but there are some commonalities that drive performance.

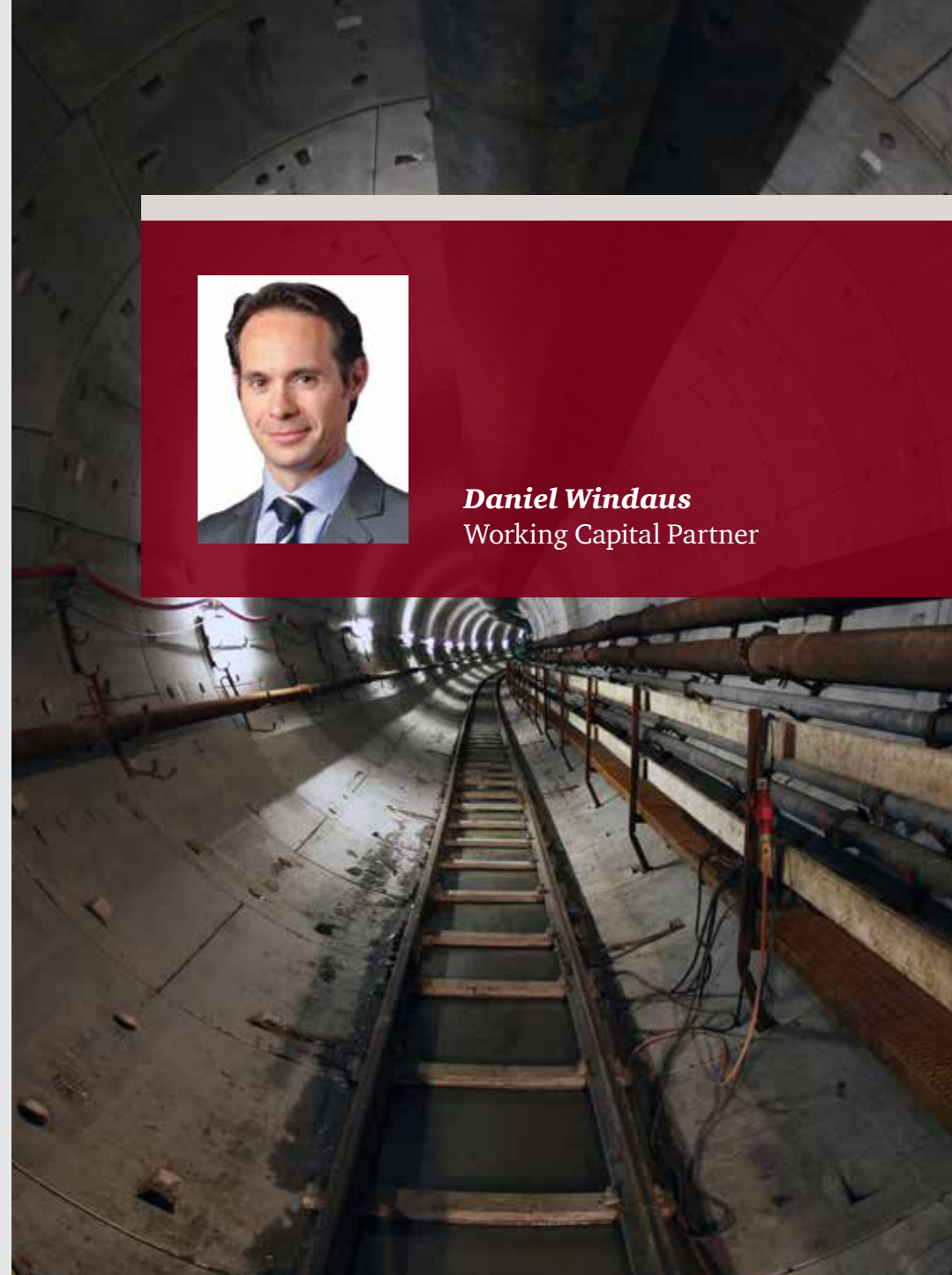
The conversion of consumed costs and effort into bills is a particular challenge for the engineering and homebuilding sub-sectors. This is a process that requires good discipline and focus on minimising working capital. Whilst there is often a good focus on cash in such businesses, we find that there are still good opportunities to improve working capital and, as a result, release even more cash. Typically this comes down to focusing in on the detail and ignoring some of the distorting factors such as advance payments and managing each milestone and bill on its own merits.

In the homebuilding sub-sector we can see very high levels of inventory which may be skewed by stocks of development land. This is land that may have been bought speculatively in advance while the price was attractive or may simply have remained undeveloped as the market contracted. But even in a buoyant economy, this sector is likely to have high investments in land simply because of the delay between the purchase of land and the completion of a development.

Whilst our analysis has shown that net working capital (NWC) has increased across the sector, there is a prevailing trend of improvement at an individual company level with average levels of working capital showing improvements in most regions and across two of the three sub-sectors.

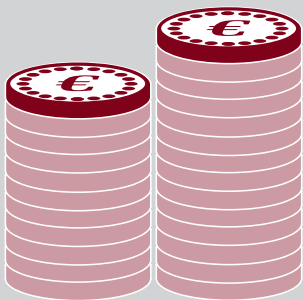


Daniel Windaus
Working Capital Partner



10%

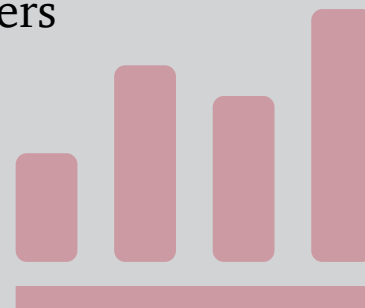
The sector experienced a jump in revenue of 10% year-on-year



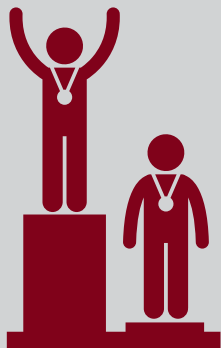
European, African and Australasian companies have some of the world's lowest levels of working capital



Widening gap between the top and bottom performers



Companies in the E&C sector have amongst the highest capital consumption of any industry



746 companies €1.52 Trillion

We've looked at 746 companies in the E&C sector with revenues above €1.52 Trillion

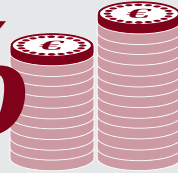
Homebuilding is dominated by high levels of inventory





Construction and Engineering

10%

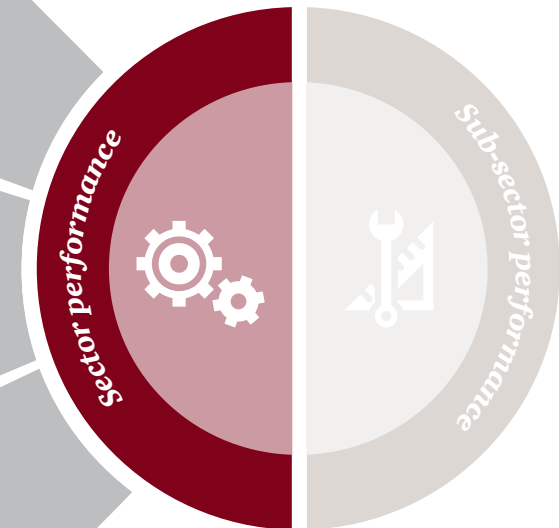


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European, African and Australasian companies have some of the world's lowest levels of working capital

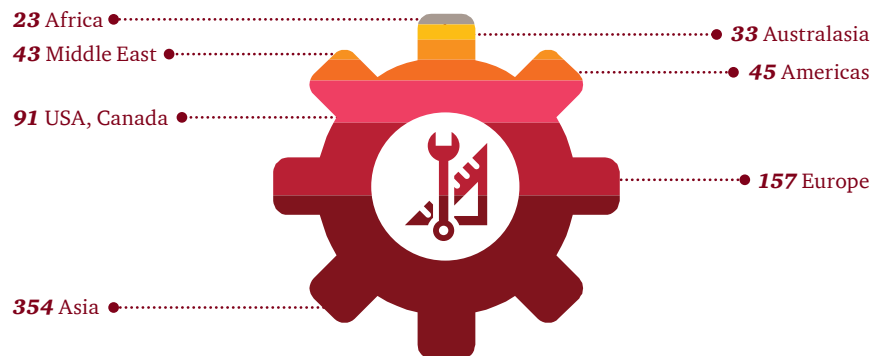


Companies in the E&C sector have amongst the highest capital consumption of any industry

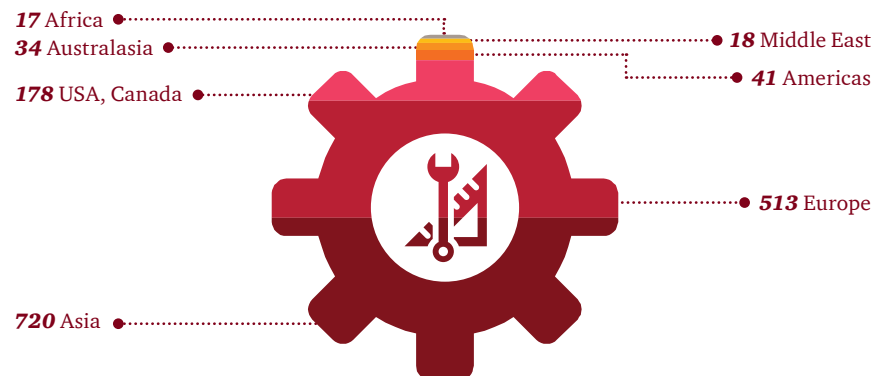


Our study looks at 746 companies in the engineering & construction sector with revenues above €1.52 Trillion

Number of engineering & construction companies in the study by region

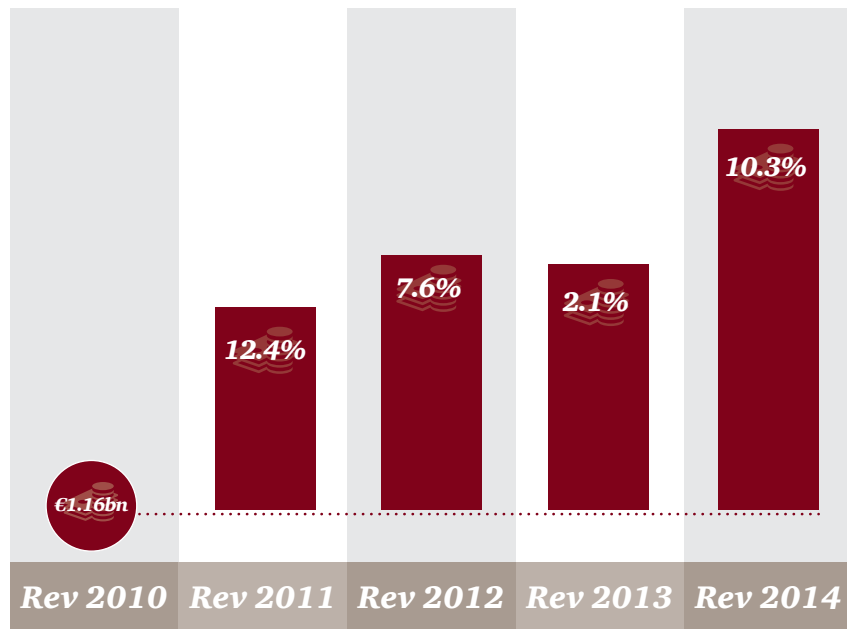


Revenue of engineering & construction companies in the study by region (€ billion)



The sector experienced a jump in revenues of 10.3% year-on-year, increasing the need for cash

Engineering and construction revenue trend



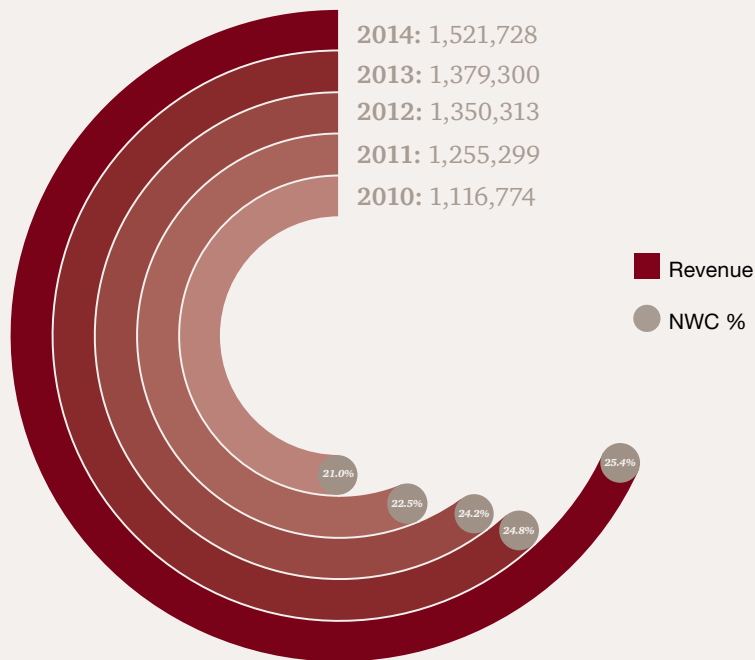
■ Revenue

% Percentage increase / decrease



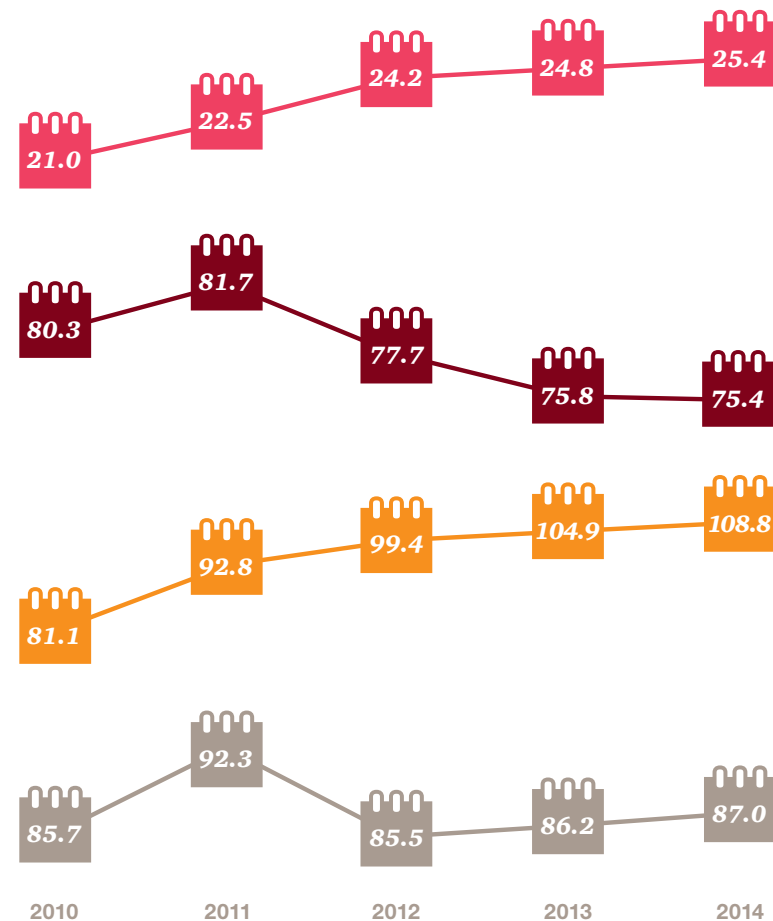
Engineering & construction companies have struggled to cope with increasing levels of inventory over the last five years

Sector NWC as a % of revenue (€ million)



2014 saw strong growth compared to the previous 5 years, but at the cost of higher levels of working capital.

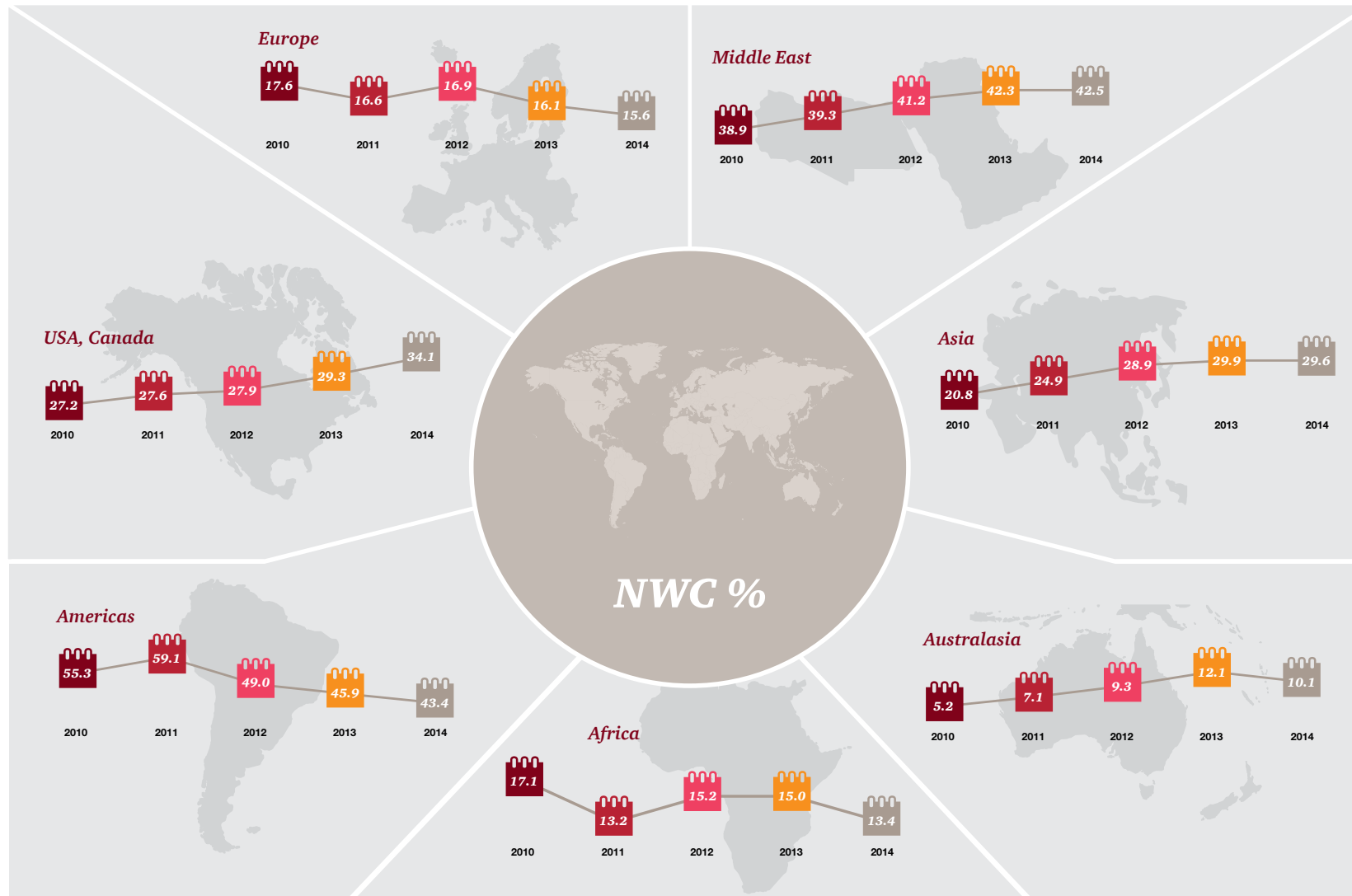
Engineering & construction working capital performance



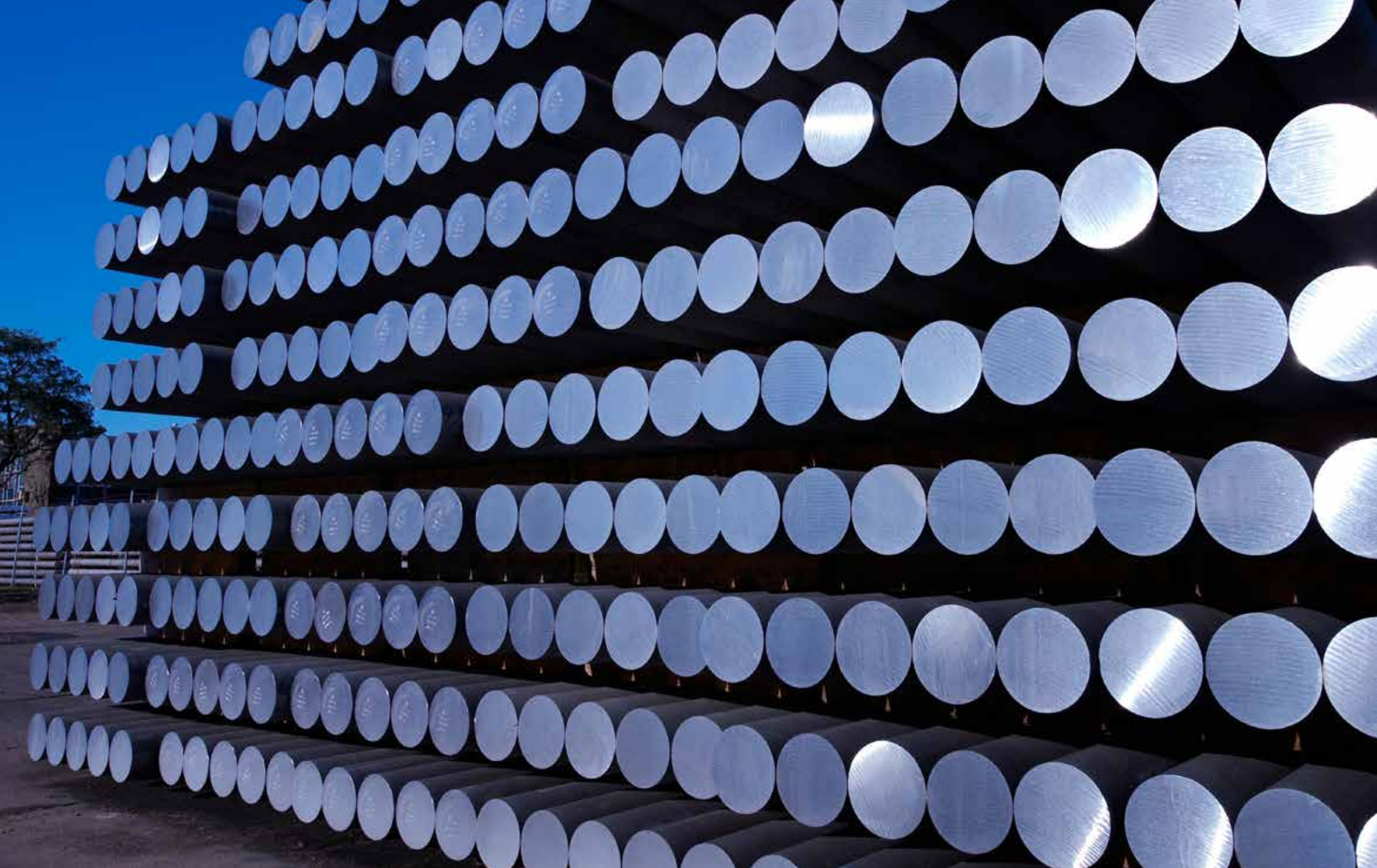
Improvements in DSO and DPO were not sufficient to offset the latest increase in DIO.

■ NWC %
■ DSO
■ DIO
■ DPO

European, African and Australasian companies have some of the world's lowest levels of working capital, but have seen an improving trend in recent years



The contrast between the two largest regions from an E&C perspective (Europe and Asia) could not be more stark.



Construction and Engineering Sub-sectors

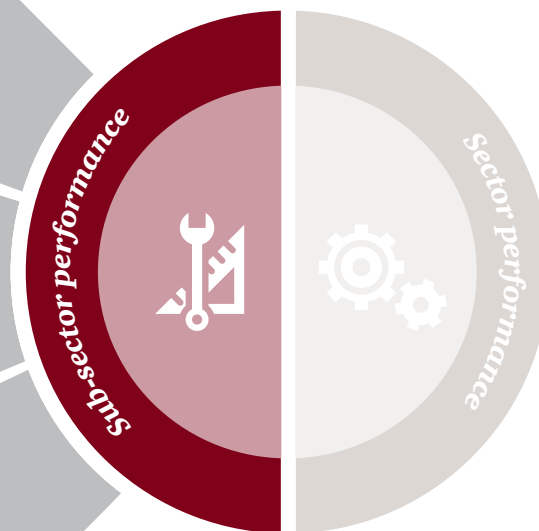
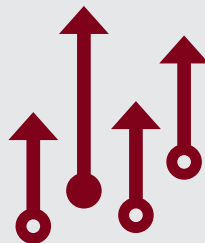
Widening gap
between the top and
bottom performers



Homebuilding
dominated by high
levels of inventory

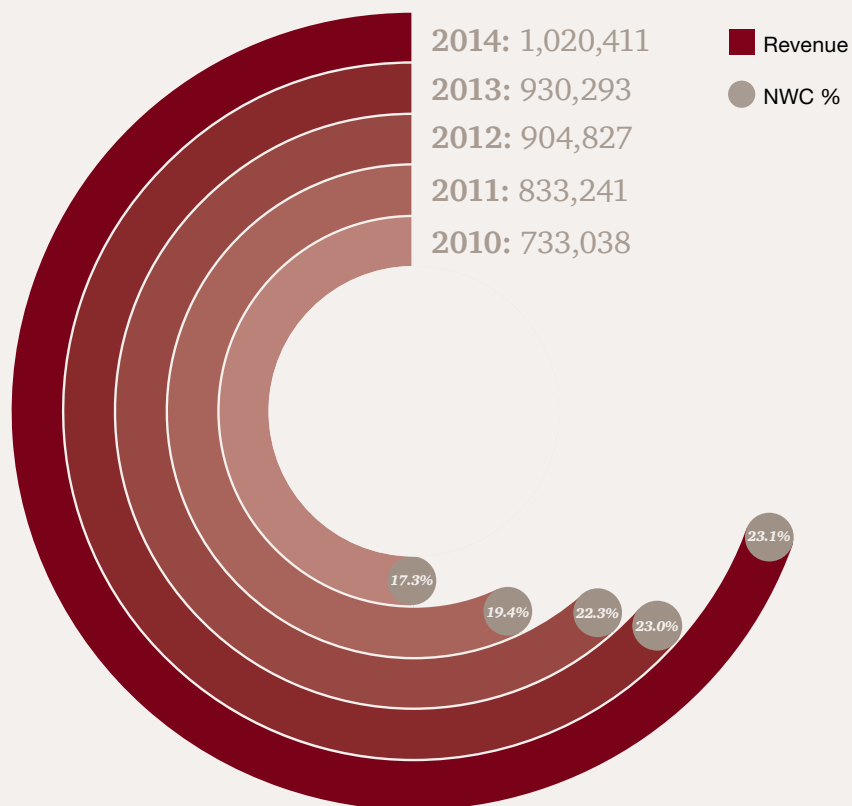


Engineering has
shown a marginal
increase in NWC



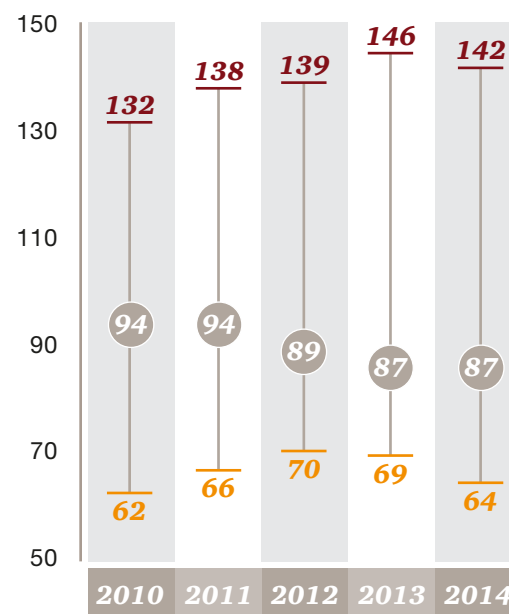
Engineering

Engineering revenue and NWC % (€ million)

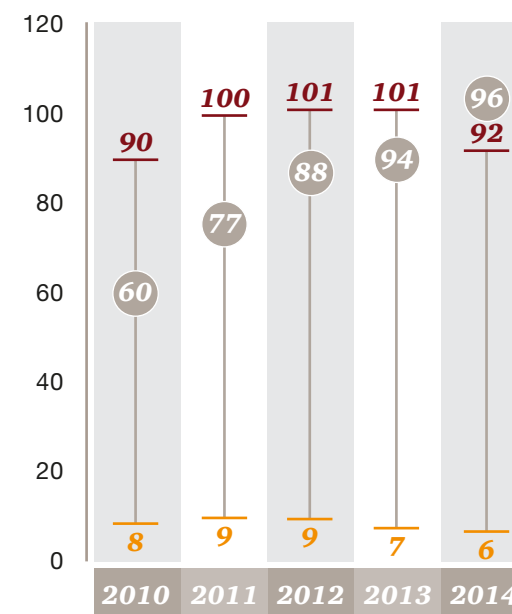


In addition to the 10% increase in revenues from 2013 to 2014, NWC% showed a marginal increase. The weighted average DSO improved by seven days over the five year period. Companies at either end of the performance curve have been able to deliver improvements with the best performers achieving the greatest improvements. DIO has shown a consistent downward trend over the five year period; deteriorating by 36 days. As shown by the relatively stable top and bottom performance levels, this is mainly driven by larger companies. Conversely, although the weighted average DPO has remained relatively flat over the period, the gap between the best and worst performers is growing bigger each year as the best get better and the bottom performers continue to see DPOs reduce each year.

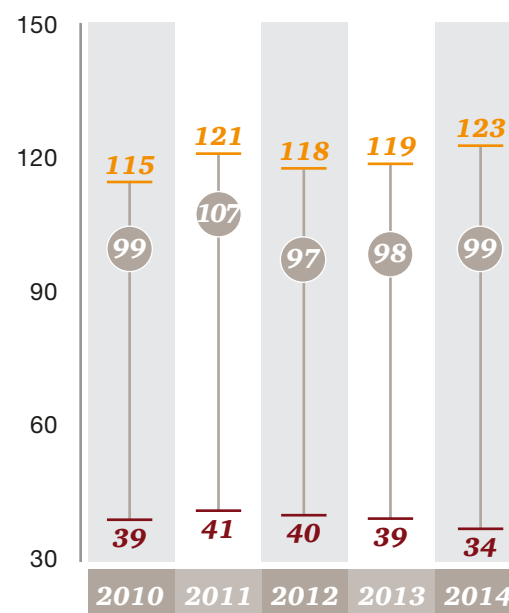
DSO



DIO



DPO

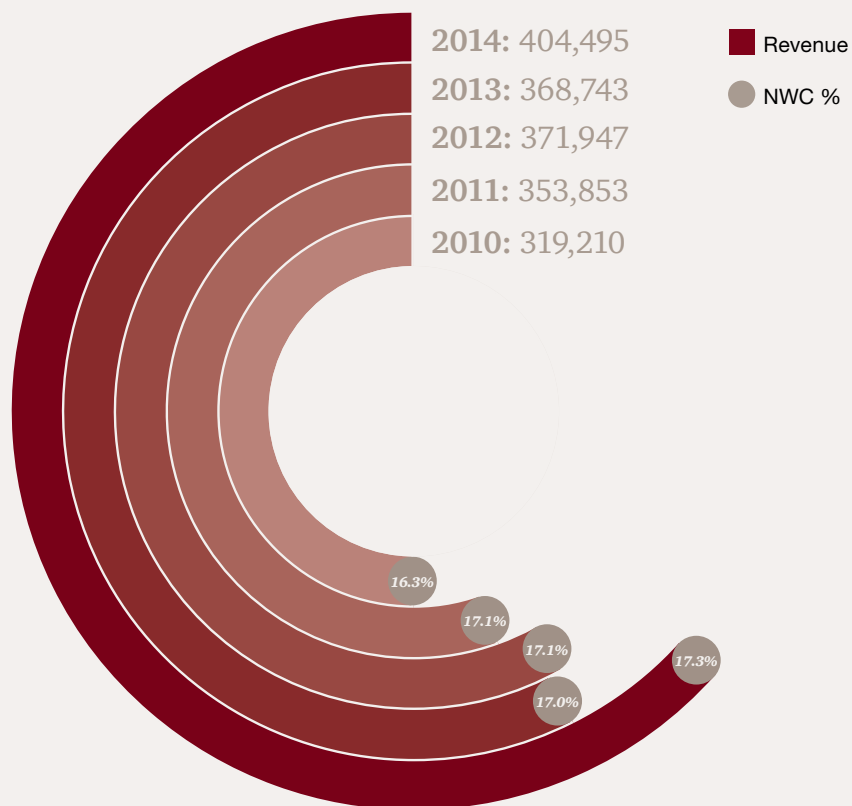


Key

- Top performers
- Weighted average performance
- Bottom performers

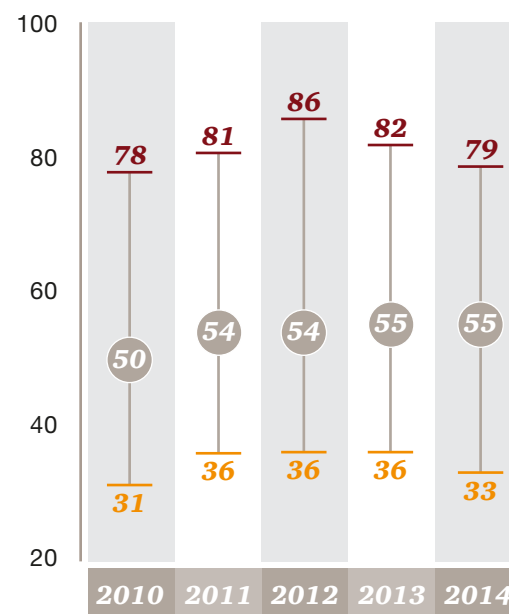
Construction Materials

Construction materials revenue and NWC % (€ million)

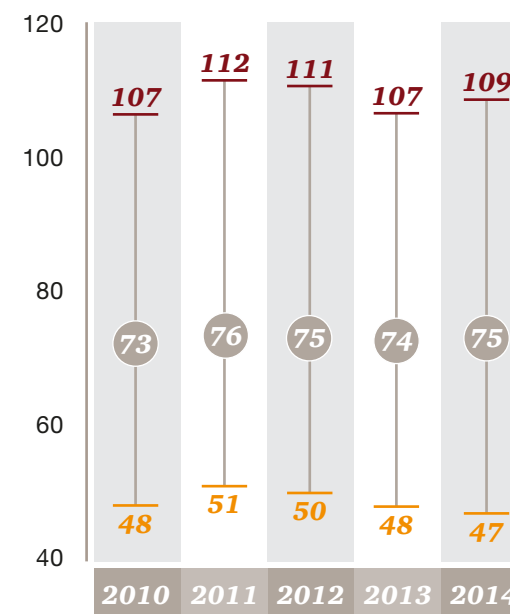


Despite a healthy 9% growth in revenues, the construction materials sub-sector has only seen a marginal increase in working capital of around 2%. Both DSO and DIO have shown marginal deteriorations in the weighted average performance. But the most striking observation is the deterioration in inventories for bottom performers in the sector whilst the best performers are improving, thus widening the gap between the best and worst performers. Both top and bottom DPO performers witnessed deterioration in performance, as shown by the slightly increased weighted average performance.

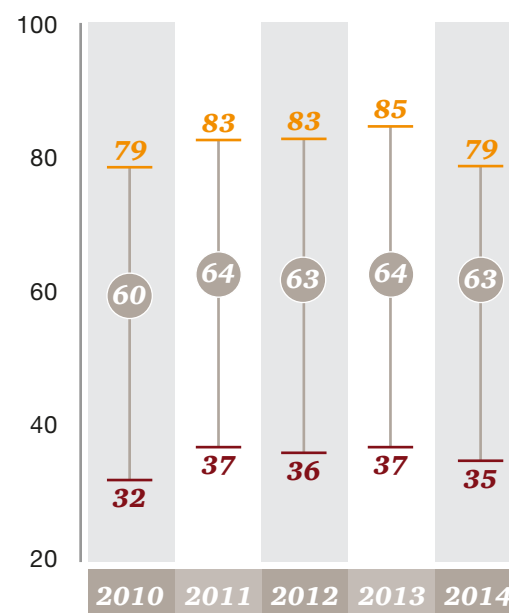
DSO



DIO



DPO

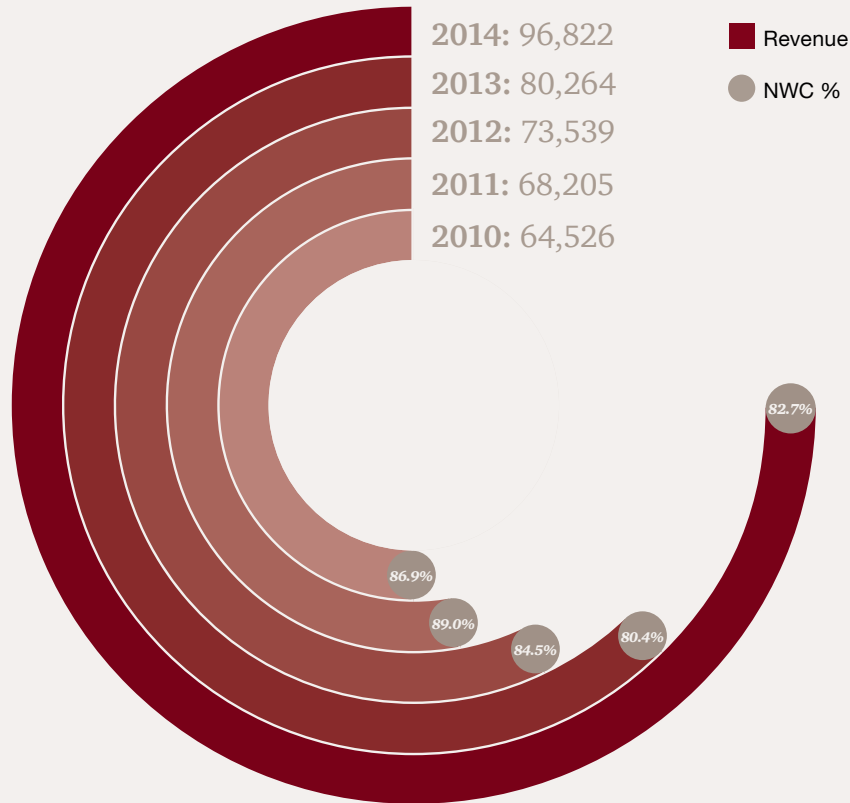


Key

- Top performers
- Weighted average performance
- Bottom performers

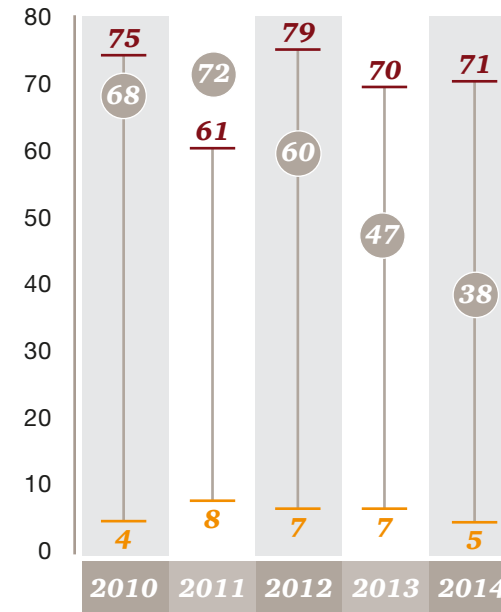
Homebuilding

Homebuilding revenue and NWC % (€ million)

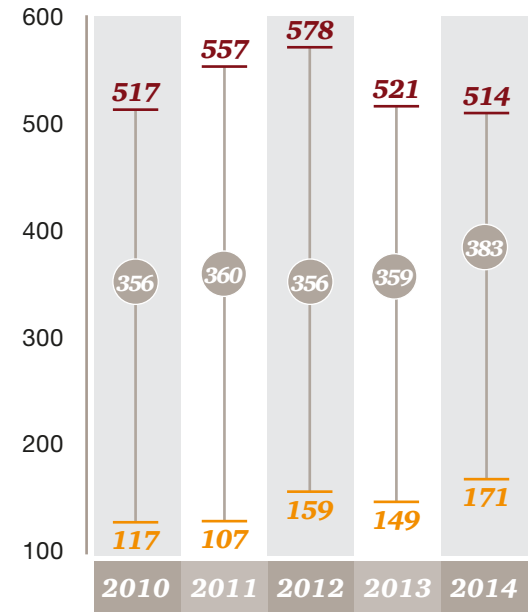


The homebuilding sub-sector has seen revenues increase by around 21% year-on-year, while working capital has increased by less than 3%. The homebuilding sub-sector is dominated by high levels of inventory which can be distorted by the speculative purchase of land stocks for future development. Whilst DSOs are already typically low in this sector, and driven mainly by practices of commercial and bespoke homebuilders, this area has seen a further improvement of 30 days across the five year period. DPO for the top performers has seen a deteriorating trend over the last five years while the weighted average DPO for the sub-sector has remained fairly steady, fluctuating between 44 and 41 days over the five year period.

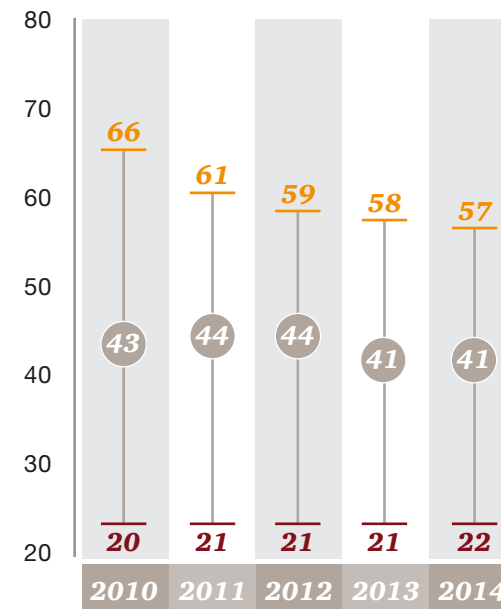
DSO



DIO



DPO



Key

- Top performers
- Weighted average performance
- Bottom performers





How can we support you



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
- Asset based lending / securitisation

Accounts payable

- Consolidated spending
- Increased control with centre-led procurement
- Purchasing channels to avoid leakage
- Aligned and optimised payment terms
- Supply chain finance
- Payment methods and frequency
- Eradicated early payments

Inventory

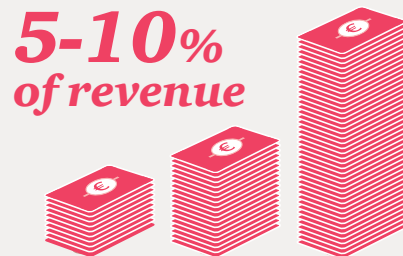
- Lean and agile supply chain strategies
- Global coordination
- Forecasting techniques
- Production planning
- Accurate tracking of inventory quantities
- Differentiated inventory levels for different goods
- Balanced cash, cost and service
- Asset based lending

Our team has helped deliver significant working capital benefits around the world

We have helped to deliver over



We deliver substantial benefits,
typically between



We deliver results fast,
typically 5 - 15% of
improvements
are quick wins

Typical project results

Range of improvement

Receivables reductions	20% – 40%
Payables improvements	20% – 80%
Inventory reductions	15% – 50%
Net working capital improvements	30% – 70%
Quick wins as % of total opportunity	5% – 15%
Working capital as % of sales	5% – 10%

Challenges in working capital optimisation:

Perception:

Working capital is an operational issue, but is often perceived to sit with finance

Complexity:

Improvements require structural changes for many interrelated processes



1



2

Cross functional:

Sustainable improvements are complex, requiring an operational and cross functional approach



3

4



Driven by people:

Needs hands-on approach 'on the shop floor' to change operational behaviour



Appendices



Basis of calculations and limitations

Basis of calculations

This study provides a view of global working capital performance in the engineering and construction sector and is based on the research of 746 companies in the world. For consistency reasons, and to be able to add the individual ratios together, we have calculated DSO based on sales, DPO and DIO based on Cost of Goods Sold (COGS).

Metric	Basis of calculation	
NWC % (Net working capital %)	NWC % measures working capital requirements relative to the size of the company.	(Accounts receivable + inventories – accounts payable)/Sales
DSO (Days sales outstanding)	DSO is a measure of the average number of days that a company takes to collect cash after the sale of goods or services have been delivered.	Accounts receivable/Sales x 365
DIO (Days inventories on-hand)	DIO 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.	Inventory/COGS x 365
DPO (Days payables outstanding)	DPO is an indicator of how long a company takes to pay its trade creditors.	Accounts payable/COGS x 365
CCE (Cash conversion efficiency)	CCE is an indicator of how efficiently a company is able to convert profits into cash.	Cash flow from operations/EBITDA

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.

Summary data

Number of companies

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	8	13	198	26	84	17	34	380
Construction Materials	15	19	139	5	59	26	34	297
Homebuilding		13	17	2	14		23	69
Grand total	23	45	354	33	157	43	91	746

NWC % 2014

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	16.5%	25.8%	32.0%	6.7%	10.8%	44.1%	14.9%	23.1%
Construction Materials	8.4%	15.7%	20.8%	17.7%	14.6%	39.9%	15.2%	17.3%
Homebuilding		129.1%	29.6%	12.0%	97.6%		93.0%	82.7%
Grand total	13.4%	43.4%	29.6%	10.1%	15.6%	42.5%	34.1%	25.4%

DSO 2014

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	71	103	88	64	84	170	85	87
Construction Materials	24	54	71	51	45	75	43	55
Homebuilding		268	14	23	22		8	38
Grand total	53	112	83	60	69	134	55	75

DIO 2014

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	13	54	141	25	39	69	5	96
Construction Materials	83	64	80	75	75	169	56	75
Homebuilding		324	152	59	514		454	383
Grand total	34	120	131	41	73	99	121	109

DPO 2014

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	25	65	109	81	104	79	40	99
Construction Materials	72	58	72	57	63	57	40	63
Homebuilding		30	34	31	84		25	41
Grand total	39	53	101	73	90	72	36	87

Total cash opportunity
from working capital
(€ million)

Primary industry	Africa	Americas	Asia	Australasia	Europe	Middle East	USA, Canada	Total
Construction and Engineering	572	382	45,921	414	6,910	1,795	2,691	58,684
Construction Materials	118	404	10,120	208	3,899	1,034	1,670	17,454
Homebuilding		2,590	534		4,512		11,235	18,871
Grand total	689	3,377	56,576	623	15,321	2,829	15,595	95,010

Highest opportunity

Low opportunity



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Niall has thirty years of experience advising clients on the design and implementation of world class working capital solutions. He has a broad range of industry experience in both the private and public sectors throughout the UK, Europe and the USA.



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Robert leads our working capital practice and brings over twenty years of working capital advisory experience. He has made an instrumental difference to the free cash flow and balance sheet structure of many companies.



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