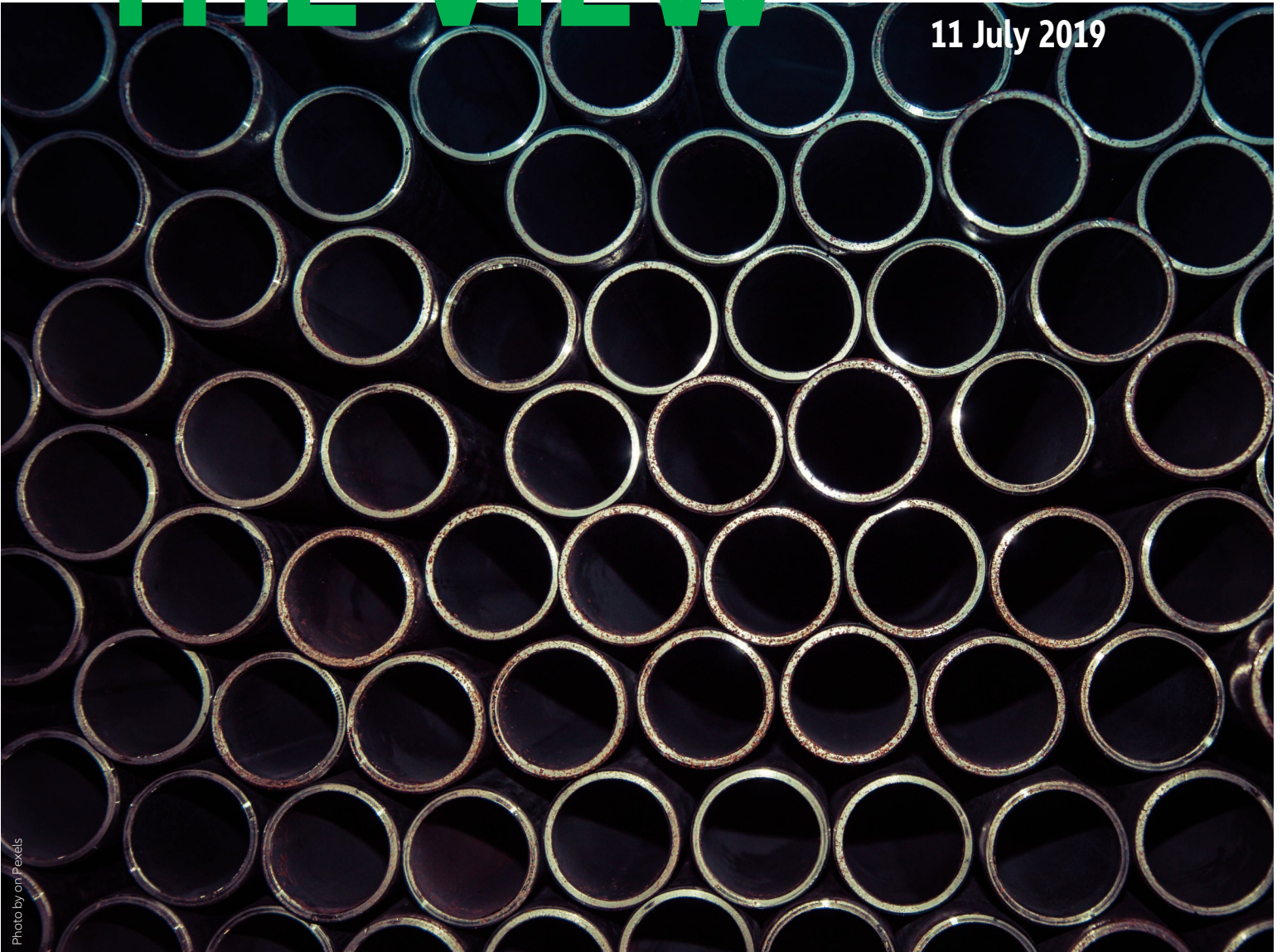


THE VIEW

Economic Research

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BIG COMPANIES IN EMERGING MARKETS AND SMEs IN EUROPE TIGHTEN THE NOOSE ON THEIR SUPPLIERS AND INVENTORIES

04 Global Working Capital Requirement (WCR) of large companies increased by +USD820bn in 2018

07 WCR is one month longer for European SMEs compared to large companies

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- At a global level, the Working Capital Requirement¹ (WCR) of large companies² - a measure of financial resources that companies consume to cover operating costs and expenses, and run their businesses efficiently – has deteriorated by +1 to 70 days in 2018, back to the highest (worst) level since 2012. In value terms, this represents a +12% rise i.e. +USD820bn of additional financial resources were consumed by working capital in 2018 - instead of supporting new product development, modernization, geographical expansion, acquisitions or debt reduction. For 2019, we expect a correction in inventories and a stronger discipline in payment in reaction to lower global growth and higher global uncertainty: this would support a decline in large companies' WCR (-2 to 68 days).
- Most increases in large companies' WCR were recorded in emerging markets, notably Brazil (+9 days), South Africa (+8) and Russia (+2), - with China as the main exception and the surge in inventories as the key reason. This was accompanied by a strong increase in debt at end 2018: +1pp of GDP in emerging markets in Q4 2018 from the previous quarter. However, advanced economies were not immune, notably the U.S. (+1) and within Europe (+4 days for the Nordics on average, +3 in Germany and Spain). However, several other advanced economies stabilized or decreased their large companies' WCR through a decrease in Days Sales Outstanding³ (Japan, the UK) or an increase in Days Payable Outstanding (Italy, France, Portugal). At a global level, the rise in WCR was concentrated in six sectors: agrifood, automotive, household equipment, paper, utilities and business services.
- Looking at Western Europe, Small and Medium Enterprises (SMEs⁴) posted better performance in terms of changes in WCR than large companies in 2018. In Italy, SMEs reduced their WCR by -14 days (compared to -4 days for large companies). In Spain, SMEs recorded a -7 days decrease in WCR, while large companies posted a +3 days rebound. WCR slightly improved for French SMEs (-1 day), though it remained stable for large companies. In Germany, WCR for SMEs increased by 2 days and by 3 days for large companies. The highest increases in WCR were registered mainly in sectors which are dependent on external trade (in Germany: electronics, transport equipment, machinery and equipment, paper and agrifood; in France: electronics, textiles, pharmaceuticals and automotive suppliers).
- However, overall SMEs' WCR remains one month longer compared to large companies. This is notably visible in Southern European countries, with a spread of 37 days and 22 days in Italy and Spain, respectively, against 23 in Germany and 15 in France. In those four countries, six sectors experienced higher than average WCR for their SMEs (105 days in Italy, 89 in Germany, 81 in France and Spain): textiles, transport equipment, machinery, metals, and, to a lower extent, chemicals and electronics.

¹ The Working Capital Requirement (WCR) of a company is a financial metric whose components are accounts receivable (also known as DSO for Days Sales Outstanding), inventory (aka DIO for Days Inventory Outstanding) and accounts payable (aka DPO for Days Payable Outstanding). It is calculated according to the following formula: $WCR = DSO + DIO - DPO$. By definition, a rise (drop) in WCR comes either from a higher (lower) DSO, a higher (lower) DIO or from a lower (higher) DPO. In practice, changes in WCR most often result from a mix of the above reasons and ultimately indicate a worst (better) capacity to maintain operating cash flow and internal funding for investment.

² Companies with a turnover above 50 million EUR; data from Bloomberg

³ A measure of how long it takes companies to collect cash from customers

⁴ Companies with a turnover below 50 million EUR; data from TRIBRating database



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70 days

**Global Working Capital Requirement
rose by +1 day for large companies in 2018.**

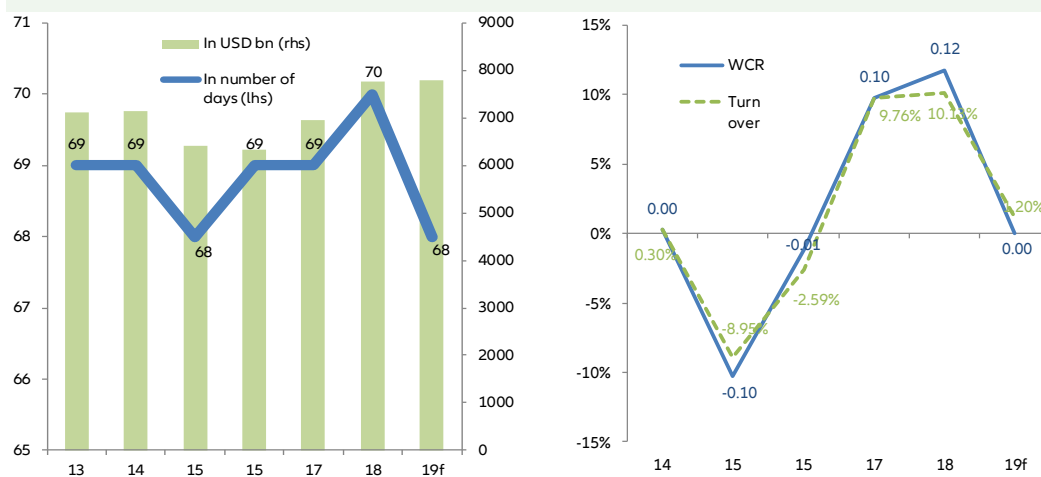
GLOBAL WCR OF LARGE COMPANIES INCREASED BY +USD820BN IN 2018

At a global level, the Working Capital Requirement (WCR) of large companies deteriorated by +1 day to 70 days in 2018, coming back to its highest (worst) level since 2012 and pointing to a lower operating cash flow, higher (debt) capital needs and lower profitability of companies. This rise in WCR mainly comes from inventories, which recorded an unusual accumulation (+3 days to 52 days in 2018), reaching a record high over the last 10 years. In the same period, large companies adjusted their payment behaviors by raising supplier terms of payment (DPO increased by +1 day to 47 days) and

decreasing customer terms of payment (DSO declined by -1 day to 65 days), a double sign of “self-discipline”, alongside a weakening and uncertain economic outlook. Yet, those adjustments were insufficient to fully offset the accumulation of inventories. While their combined turnover rose by +10% in USD terms, large companies’ WCR reached USD7.8tn, which represents a +12% increase, i.e. +USD820bn of additional financial resources were consumed by working capital in 2018, instead of supporting major objectives such as new product development, modernization, geographical expansion,

acquisitions or debt reduction. For 2019, we expect a correction in inventories both in real terms (volume) and in book value (depreciation), as well as still stronger discipline in payment in reaction to lower global growth and higher global uncertainty, notably on the DSO side (-1 day). This would support a decline in large companies’ WCR by -2 days to 68 in 2019, leading to a stabilization of their combined WCR in value terms (at USD7.8bn) due to the expected increase in global turnover (+3% in USD terms).

Figure 1: Large companies’ WCR in number of days and USDbn (left chart) and yearly change (right chart)

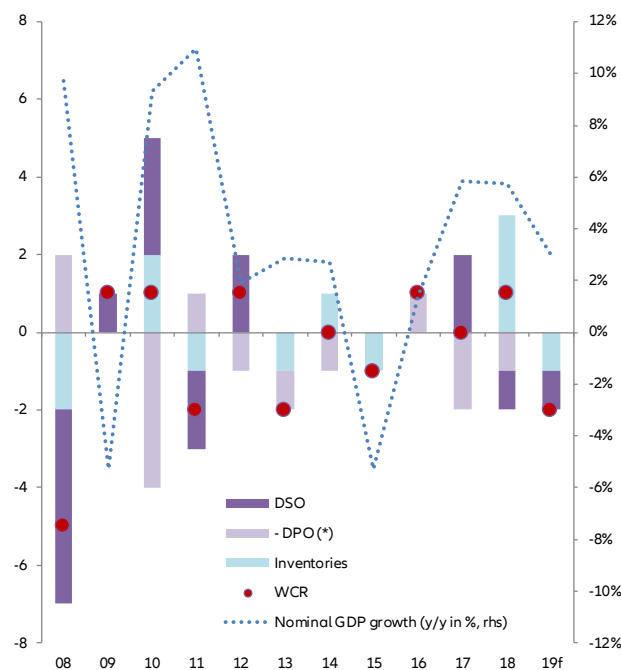


Sources: Bloomberg, Euler Hermes, Allianz Research

⁵ See our report on [inventories in European corporates](#) (June 2019)

⁶ See our report on [DSO](#) (May 2019) and the historical data available on the website app [Mind Your Receivables](#) and our [Open Data](#) platform

Figure 2: Changes in large companies' WCR and sub-components, in number of days



(* Changes in DPO are represented in negative terms to reflect their contribution to changes in WCR

Sources: Bloomberg, Euler Hermes, Allianz Research

Emerging markets posted the most severe rise in large companies' WCR

Large companies' WCR rose in three out of five countries in 2018, each time with a noticeable inventory accumulation (+4 days in average) as the key trigger for the increase in WCR - except for three export-driven countries: the Netherlands, South Korea and Hong Kong.

Emerging markets recorded the top increases in WCR, especially in Latam (+9 days in Brazil, +5 in Chile) and Africa/Middle East (+8 in South Africa, +3 in Morocco). There were also noticeable deteriorations in Central and Eastern Europe (+2 in Russia, +3 in Bulgaria) and in Asia (+2 in India, +1 in both South Korea and Hong Kong). In terms of regional averages, this represents significant increases in Latam (+7days) and Africa/Middle East (+5), but a more limited rise in Asia (+1). In this context, China is the main exception with a stabilized WCR, but the latter, along with Saudi

Arabia (116 days), still exhibits the largest WCR (94 days) in the world. Globally, the highest WCR are also observed in emerging markets (i.e. Brazil, India, Taiwan, Hong Kong, Russia, Romania, Bulgaria). In 2018, the rise in WCR in emerging markets was accompanied by a strong increase in debt at end- 2018: +1pp of GDP to 96% in Q4 2018 compared to the previous quarter.

Several advanced economies also registered an increase in large companies' WCR: the Nordics (+4 days in average), Greece (+4), Germany (+3), the Netherlands (+3), Spain (+3), Australia (+2) and the US (+1). Yet, all of them maintained WCR levels below the global average (70 days). Importantly, they proved to be more efficient than emerging markets in adjusting their payment behavior to limit the negative impact of the rise in inventories. De facto, the increase in WCR is due to a significant surge in inventories in the Nordics (+6 days on average), Ger-

Figure 3 Large companies' WCR – Summary Heat map by countries and sectors (1)

	Telecom	Other services	Transport	Utilities	Retail	Oil & gas	Business services	Food	Technology	Paper	Construction	Auto	Metals	Chemicals	Household goods	Personal & recreational goods	Pharma	Electronics	Machinery & eq	Aero	Country average
Belgium	-12	11	23	85	42	61	76	49	61	-	64	-	53	62	53	57	65	92	46	111	50
Spain	-8	30	51	1	24	58	11	100	55	56	79	-4	62	1	136	108	82	-	93	-	50
Netherlands	-11	30	21	-	37	23	27	52	82	-	24	-	58	68	92	47	52	72	68	-	55
Austria	18	26	28	33	-	113	56	89	-	-	19	41	104	75	-	94	48	53	93	82	56
Portugal	70	-5	18	32	2	27	52	66	47	47	60	95	163	-	126	-	-	-	177	-	57
Norway	1	27	27	47	76	55	70	91	41	-	13	56	49	112	-	29	55	61	71	-	57
Canada	33	24	34	42	48	47	71	75	71	48	61	20	54	99	52	72	81	76	89	82	57
New Zealand	25	32	27	20	54	30	23	94	62	-	77	-	123	-	68	41	103	89	99	-	57
United Kingdom	-1	26	28	30	29	38	47	58	57	89	48	91	56	88	52	95	72	89	79	58	58
U.S.	24	31	23	31	40	41	61	60	68	73	69	63	58	66	72	70	65	85	75	102	60
South Africa	9	38	18	-	49	16	72	68	52	103	48	81	67	83	132	53	86	67	81	-	61
Denmark	-	27	18	40	46	64	38	35	60	-	52	95	-	80	50	87	78	68	79	-	61
Australia	14	19	33	23	48	32	56	82	57	91	59	91	56	82	95	77	62	107	64	97	61
Poland	-3	36	15	25	33	46	57	75	53	55	67	66	58	53	69	84	85	98	89	150	62
Singapore	-2	20	38	58	44	38	59	69	70	70	67	103	105	101	85	81	43	85	101	97	62
Switzerland	31	5	9	47	23	-	56	57	66	118	67	32	68	124	79	84	117	94	100	86	64
Germany	14	27	42	36	26	62	56	71	71	-117	70	83	69	71	83	78	92	114	83	121	65
France	3	36	23	34	28	81	66	42	67	77	64	47	70	70	87	72	53	94	102	120	66
Turkey	65	50	10	20	-16	-2	69	65	114	80	97	91	76	87	88	91	125	73	131	-	67
Finland	50	21	21	90	42	35	55	61	73	52	102	153	73	58	59	120	126	77	97	-	70
Morocco	-56	15	49	38	60	-8	113	53	121	246	73	-	92	160	-	-	100	81	-	-	70
Italy	-20	30	11	32	30	29	61	52	58	74	79	6	170	115	109	98	49	104	92	119	70
Chile	8	12	34	44	69	35	29	108	-	105	71	-	82	132	101	115	-	-	103	-	71
Sweden	35	42	14	63	46	56	67	85	74	75	75	84	47	60	95	76	57	97	83	131	72
Hong Kong	1	29	32	41	51	73	74	68	68	70	64	83	74	82	67	94	129	87	113	461	72
India	-4	38	34	38	63	44	65	63	82	51	83	60	84	83	84	85	92	108	94	236	73
Japan	52	29	29	35	33	44	50	59	69	72	76	66	104	102	89	87	127	108	108	188	73
Russia	21	4	33	46	62	48	49	66	91	76	70	95	47	64	129	175	145	131	116	175	76
South Korea	39	51	25	33	38	52	45	73	76	79	69	68	105	83	71	107	132	87	101	115	77
Brazil	41	-21	18	33	47	73	89	63	59	80	109	77	71	63	117	151	152	124	79	151	79
Romania	-62	2	69	42	14	51	133	105	-	48	109	113	80	47	114	114	107	134	143	80	80
Greece	-33	17	9	123	78	12	73	83	105	-	102	-	131	93	113	153	153	-	140	-	87
Taiwan	26	26	30	32	52	62	70	87	88	70	84	124	118	103	79	97	126	106	139	172	88
Bulgaria	-	5	27	29	82	98	76	95	96	90	86	164	134	108	170	109	115	65	117	-	93
China	48	37	32	23	23	55	92	83	114	94	118	111	91	91	74	103	133	141	151	190	94
Saudi Arabia	32	25	85	85	51	-8	105	80	127	135	169	-	171	95	208	275	-	190	159	-	116
Sector Average	15	27	29	35	45	46	63	71	71	80	82	84	86	90	91	101	104	106	107	138	70

(1) Reading notes: A darker green indicates a lower average country or sector WCR; Conversely, a darker red color indicates a lengthening country or sector WCR.

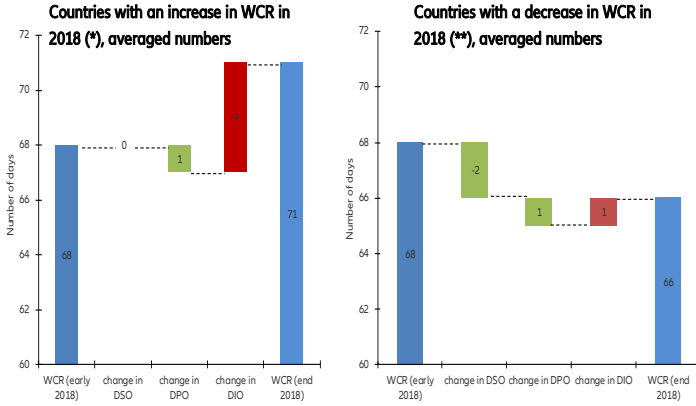
Methodology: Our calculations are made out of a sample of 25,000 listed companies across 20 non-financial sectors and 36 countries extracted from the Bloomberg database. All numbers are simple and unweighted average.

Sources: Bloomberg, Euler Hermes, Allianz Research

many (+4), Spain (+3), Australia (+3) and the US (+1). But payment behaviors most often had a favorable impact, with a decrease in the spread between DSO and DPO (-3 days in Sweden, -2 days in the other Nordics and -1 day in Germany). The Netherlands, where the rise in WCR comes only from a lengthening in payment behavior on both the DSO and DPO sides, is an exception.

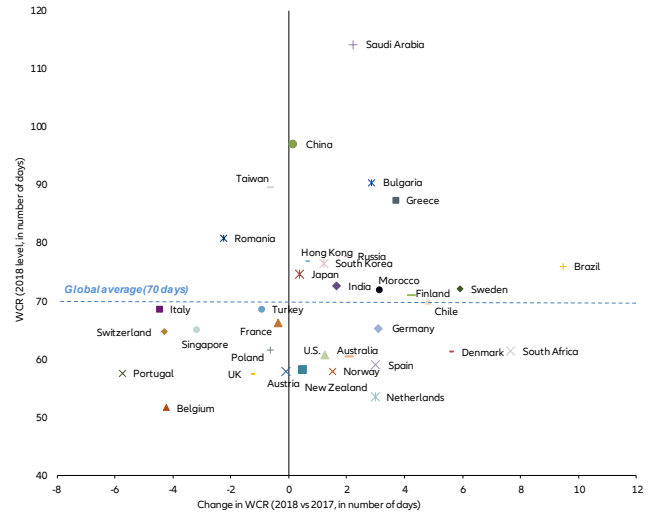
Conversely, in two out of five countries, large companies succeeded in stabilizing and even decreasing their WCR despite the rise in inventories (+1 day in average). This performance was registered most often in advanced economies, with a noticeable decrease in the WCR in European countries like Portugal (-6 days), Italy (-4), Switzerland (-4), Belgium (-3), the UK (-1) and Canada (-3). The key trigger was a decrease in their DSO, but three countries in Europe stand out with a large increase in DPO – Portugal (+8 days), Italy (+7) and France (+5).

Figure 4: Changes in WCR and sub-components



(*) Australia, Brazil, Bulgaria, Chile, Denmark, Finland, Germany, Greece, Hong-Kong, India, Morocco, the Netherlands, Norway, Russia, Saudi Arabia, South Africa, South Korea, Spain, Sweden, US
 (**) Belgium, Canada, Italy, Poland, Portugal, Romania, Singapore, Switzerland, Taiwan, Turkey, UK
 NB: Austria, China, France, Japan, New-Zealand are not included in these charts (unchanged WCR)
 Sources: Bloomberg, Euler Hermes, Allianz Research

Figure 5: Large companies' WCR by country (2018 level and change versus 2017)



Sources: European Commission, Allianz Research

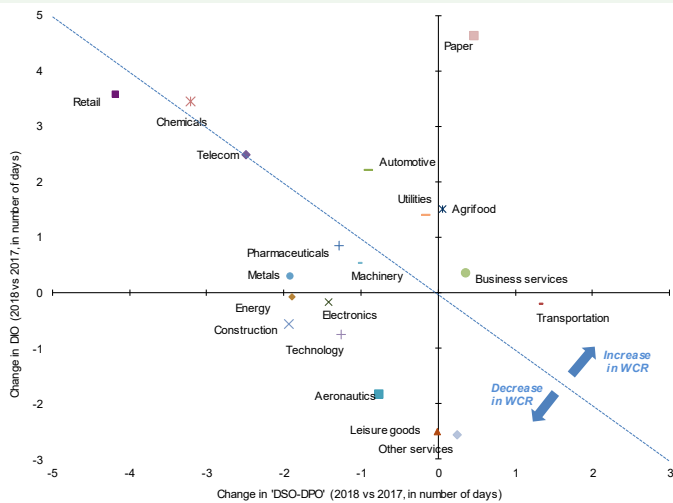
The rise in large companies' WCR is concentrated in six sectors: agrifood, automotive, household equipment, paper, utilities and business services

For large companies, the rise in global WCR is much less widespread in terms of sectors than in terms of countries. One reason is that "only" half of them suffered from a surge in inventories in 2018. This has been the case in particular for consumer-related sectors like retail (+4), automotive (+2), food (+2) and household goods (which posted a strong upside correction from its "abnormal"

drop in 2017), as well as for industry-related sectors like paper (+5), chemicals and telecom (+3). This reveals the challenges of supply to adapt to a lower than expected level of demand. The second reason is that all sectors reduced the spread between DSO and DPO - excepting the transportation and household equipment sectors. Noticeable drops in the DSO-DPO spread (i.e. by -4 days in retail, -3 days in telecom) enabled several sectors to compensate for the rising inventories. De facto, and unlike last year, large companies succeeded in stabilizing or even

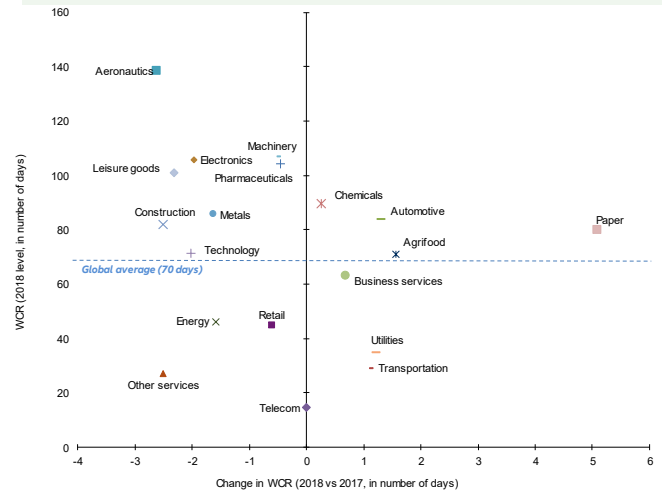
decreasing their WCR in the majority of sectors (13 out of 20). This is especially the case for the top five sectors experiencing the highest level of WCR: aeronautics (138 days in 2018), machinery (107), electronics (106), pharmaceuticals (104) and leisure goods (101). In contrast, six sectors stand out with a major deterioration in WCR, each time in relation to an increase in inventories and a limited net adjustment in payment behavior. These are paper (+5 days in WCR to 80), agrifood (+2 to 71) and automotive (+1 to 84), along with utilities, business services and household equipment.

Figure 6: Change in DIO and DSO-DPO by sector (2018 versus 2017)



Sources: Bloomberg, Euler Hermes, Allianz Research

Figure 7: WCR by sector (2018 level and change versus 2017)



Sources: Bloomberg, Euler Hermes, Allianz Research

WCR IS ONE MONTH LONGER FOR EUROPEAN SMEs COMPARED TO LARGE COMPANIES

Figure 8: SME WCR by sector, level vs variation

2018, level	Italy	Germany	France	Spain	2018 vs 2017, variation	Italy	Germany	France	Spain
Electronics	83	118	105	71	Electronics	-41	12	3	-50
Textiles	135	120	117	102	Textiles	-5	-2	5	-9
Metals	133	90	97	102	Metals	-12	-2	-3	4
Machinery & Equipment	127	112	113	81	Machinery & Equipment	-24	1	3	-34
Transport Equipment	113	121	108	99	Transport Equipment	-12	37	-20	-16
Services	110	85	66	58	Services	12	6	5	11
Household Equipment	106	86	105	88	Household Equipment	-24	-10	2	-11
Construction	104	85	86	94	Construction	-32	-5	-5	-24
Paper	103	82	87	77	Paper	-10	8	2	-8
Agrifood	103	81	68	75	Agrifood	9	9	0	-6
Chemicals	102	96	99	95	Chemicals	-19	4	0	-1
Pharmaceuticals	97	102	98	97	Pharmaceuticals	-27	50	6	-3
Automotive suppliers	95	92	104	87	Automotive suppliers	-19	-38	6	2
Computers & Telecom	92	58	67	62	Computers & Telecom	-10	-12	-9	-11
Retail	80	85	67	99	Retail	-8	1	2	9
Transport	77	42	42	63	Transport	-9	-13	-4	9
Commodities	77	63	86	81	Commodities	-13	-11	3	-3
Automotive manufacturers	76	83	97	56	Automotive manufacturers	-29	-16	-14	-22
Software & IT services	62	45	52	78	Software & IT services	-18	-21	-9	20
Energy	59	52	58	32	Energy	-7	-3	-5	-24
Total	105	89	81	81	Total	-14	2	-1	-7

Sources: : TRIBRating, Allianz Research

Looking at Western Europe, SMEs⁷ posted better performance in WCR than large companies in 2018. In Italy, SMEs reduced their WCR by -14 days (compared to -4 days for large companies). In Spain, SMEs recorded a -7 days decrease in WCR while large companies posted a +3 days rebound. WCR slightly improved for French SMEs (-1 day) while it remained stable for large companies. In Germany, WCR for SMEs increased by 2 days and by 3 days for large companies.

However, overall SMEs' WCR remains one month longer compared to large companies. This is notably visible in Southern European countries, with a spread of 37 days and 22 days respectively in Italy and Spain, against 23 in Germany and 15 in France. In those four countries, six sectors experienced higher than average WCR for their SMEs (105 days in Italy, 89 in Germany, 81 in France and Spain): textiles, transport equipment, machinery, metals, and, to a lower extent, chemicals and electronics.

In terms of variation, the highest increases in WCR were registered mainly in sectors which are dependent on external trade (in Germany: electronics, transport equipment, machinery and equipment, paper and agrifood; in France: electronics, textiles, pharmaceuticals and automotive suppliers).

⁷ Companies with a turnover below 50 million EUR, data from TRIBRating database.

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