

Telecommunications Benchmarking series:

# Cash generation

Performance in working capital management





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# Cash generation

## Performance in working capital management

### Introduction and study context

In recent years, the European telecommunications services industry has achieved considerable progress in developing new sources of revenues while improving operational and financial performance, resulting in enhanced sales growth, stronger balance sheets, and positive free cash flow generation.

This study considers an important element of this change – the active management of working capital. We look at the types of improvements made and analyze, in considerable depth, the current performance of the 15 leading operators in Europe.

Our study shows a very large disparity in performance across operators. While part of this gap may be explained by

differences in business models and country behavioral norms, we believe that there are still significant cash benefits and cost savings available for most operators.

Finally, we set out some key questions telecom operators should be asking to realize this cash and cost opportunity.

### Study methodology

This report contains the findings of a review of the working capital performance of the 15 largest European telecom operators by sales, identifying some of the key working capital trends, challenges, and opportunities affecting this industry.

The review is European operator specific, with metrics provided to give a clear picture of overall working capital management, pinpointing the root cause of performance problems, and identifying the level of cash and cost opportunities.

The study contains findings with regard to both the overall industry and individual operator performance. While all our findings are based on publicly available data, the performance of individual operators is not revealed by name, but by number ranked by total sales.

- ▶ Belgacom
- ▶ BT
- ▶ Deutsche Telekom
- ▶ France Telecom
- ▶ KPN
- ▶ OTE
- ▶ Portugal Telecom
- ▶ Swisscom
- ▶ TDC
- ▶ Telecom Italia
- ▶ Telefonica
- ▶ Telekom Austria
- ▶ Telenor
- ▶ TeliaSonera
- ▶ Vodafone

“Managing working capital is not a financial exercise alone. It requires a holistic approach across many different business models, including product design, sales, billing and collection, procurement, and transaction processes.”

*Heine Stenholt Winther,  
TDC Vice President*

1 The working capital cash and cost performance metrics are calculated from the latest publicly available company financial statements. Adjustments and assumptions have been made to the data in order to improve the comparability and consistency of the figures.

“Realizing significant benefits from our working capital program has helped finance the group’s transformation over the past few years.”

**Andrew Kemp,**  
Director of Reporting, Planning & Analysis, BT Group

## Summary of key findings

Our analysis of financial performance reveals the extent to which telecom operators in Europe have been paying more attention to working capital management.

The level of net trade working capital across the industry has fallen significantly over the 2000-2006 period. This improvement was driven by a reduction in the level of receivables, partly offset by a deterioration in payables, while inventories fell significantly.

Several common drivers have been behind the overall working capital improvement for each component, including:

- ▶ Stronger focus on cash management
- ▶ Reduction in time to collect, consolidation of billing processes, and increased direct debit penetration
- ▶ Spend consolidation, supplier payment terms extension, and closer collaboration with equipment suppliers
- ▶ Improved forecasting processes, working with suppliers to reduce material stock levels
- ▶ Realized synergies from mergers and acquisitions

## The working capital opportunity for telecom operators

Despite the efforts made to date, there is still a massive improvement opportunity available.

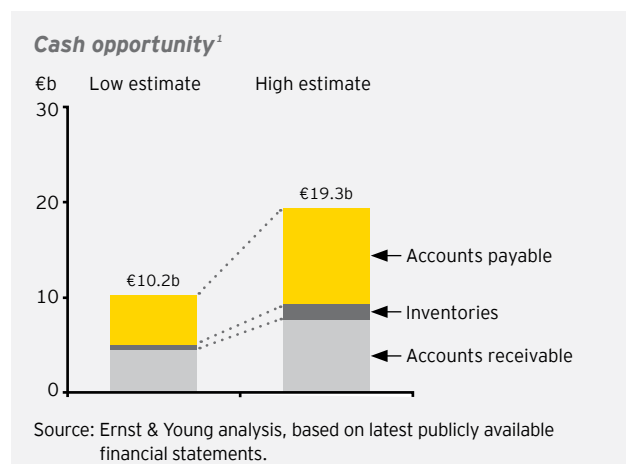
In our survey of the top 15 operators, we found that between €10.2b and €19.3b of cash was unnecessarily tied up in working capital, equivalent to between 3.0% and 5.6% of sales (see chart below).

The cash potential analysis also reveals that the opportunity lies within each component of the working capital, half

of it coming from payables, 40-45% from receivables, and 5-10% from inventories.

In addition, operating cost benefits of between €0.5b and €1.7b (equivalent to between 0.15% and 0.5% of sales) may arise from process optimization. Additional capex, however, may be required to deliver those savings. Also, looking at working capital performance from a revenue assurance perspective can help identify areas of potential revenue leakage.

Typically, we would expect the full cash and cost benefits to be realized within 12-24 months after the launch of a working capital program.



1 Sum of the working capital cash opportunity for each operator when comparing its performance with that of the average (low estimate) and the upper quartile (high estimate) of its industry peer group.

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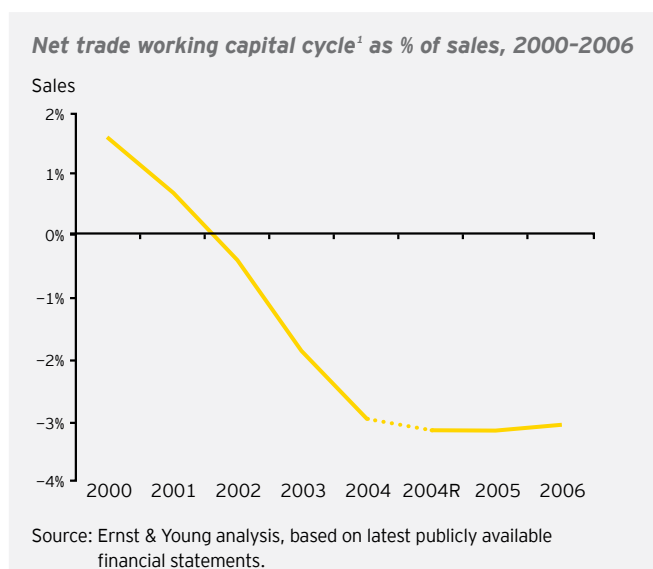
## Performance in working capital management

### Overall working capital performance since 2000

The first part of our study looks in detail at the industry performance of the operators from 2000 to 2006.

Over this period, there has been a significant reduction in the level of working capital as telecom operators in Europe have been looking to:

- ▶ Improve overstretched balance sheets
- ▶ Increase efficiency
- ▶ Enhance customer service
- ▶ Fund new infrastructure and outsourcing requirements
- ▶ Respond to shareholder pressure on performance, driven by institutional investors and a greater involvement of private equity



1 Receivables cycle + inventories cycle – payables cycle (see Glossary for definition). Ratios are sales-weighted and 2004R corresponds to the restated 2004 figures under IFRS.

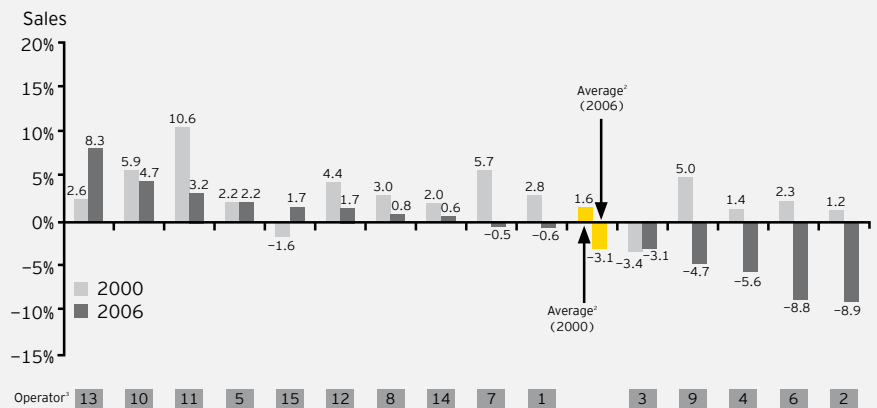
On a sales-weighted basis, the industry net trade working capital cycle fell sharply from 1.6% of sales in 2000 to a negative 3.2% in 2005, then rising slightly to a negative 3.1% in 2006.

11 out of 15 operators showed an improvement in both net trade working capital cycle and cash-to-cash (C2C) performance (see charts).

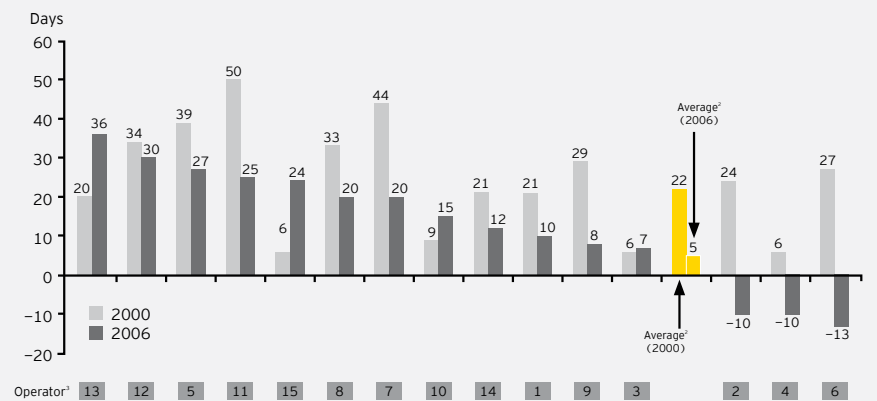
For the operators showing improved performance, the average level of C2C reduction was close to 5% of turnover.

Our analysis also suggests that larger operators managed to achieve more progress in reaching an improved overall trade working capital position in 2006.

**Net trade working capital cycle performance per operator, as % of sales, 2000- 2006<sup>1</sup>**



**C2C performance per operator, 2000-2006<sup>1</sup>**



Sources: Ernst & Young analysis, based on latest publicly available financial statements

1 Ranked by 2006 performance.  
 2 Sales-weighted.  
 3 Numbers based on 2006 revenues by rank; 1 is the highest, 15 the lowest.

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## Performance in working capital management

### What lies behind this improved position in working capital?

We now turn to the reasons underlying these trends.

#### Management performance

- ▶ Stronger corporate focus on cash management
- ▶ Enhanced terms discipline
- ▶ Segmented approach to customers, suppliers and stocks
- ▶ Deployment of more integrated systems

#### Payables

- ▶ Supplier payment terms extended or changed
- ▶ Consolidation and control of spend
- ▶ Joint payables/procurement approach
- ▶ Closer collaboration with telecom equipment suppliers and, increasingly, with content providers

#### Receivables

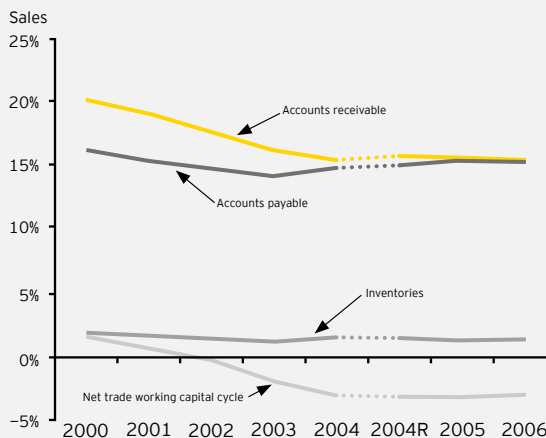
- ▶ More effective organizational structure of collections management
- ▶ Enhancement of dispute management processes
- ▶ Increased direct debit penetration
- ▶ Unification and harmonization of billing processes
- ▶ Reduced unbilled receivables
- ▶ Change in advance billing

#### Inventories

- ▶ Improved forecasting processes, working with suppliers to reduce excess material stock levels
- ▶ Introduction of vendor-managed inventory and other advanced techniques

Sources: Ernst & Young analysis, based on latest publicly available financial statements.

Chart 1: *working capital components*<sup>1</sup> as % of sales<sup>2</sup>, 2000-2006



1 Other trade working capital items were flat over the period at -4.4% of sales.

2 Weighted.

### Detailed working capital performance<sup>1</sup>

Overall improvement in working capital performance was first driven by a 24% reduction in the level of receivables between 2000 and 2006 (see chart 1). Inventories also fell significantly by 27%, but from a relatively low base, due to the nature of the business. As a counter to these, payables fell by 5% between 2000 and 2006.

For each component, there have been some common drivers. Part of the receivables performance can also be attributed to the increasing contribution of mobile to total revenues, while a more accurate measure of payables performance, based on total opex and capex, would show a slight improvement. We now examine these two factors in a little more detail.

### Impact of changing business mix on receivables performance

Looking firstly at the impact of mobile, its contribution has increased from 36% of overall revenues in 2000 to 47% in 2006, with fixed-line revenue falling from 57% to 45% (see chart 2). As mobile services carry lower receivables requirements than fixed, this change in service mix would have contributed to a reduction of up to 5% of the relative level of receivables over the period.

### Impact of capex on payables performance

As we have said, a more accurate measure of payables performance would be against total opex and capex rather than sales, as operators' level of capital expenditure has fluctuated significantly over the 2000-2006 period (see chart 3). On this basis, the payables performance would have been up slightly between 2000 and 2006 (see chart 3).

Analysis also reveals that, over the period, larger operators achieved better payables performance, probably through leveraging buying power and realizing synergies from mergers and acquisitions.

Chart 2: *industry sales breakdown per service<sup>2</sup>, 2000-2006*

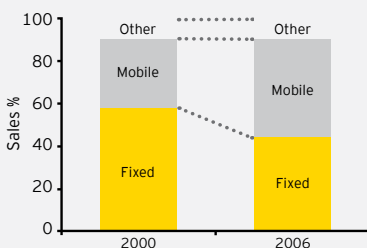
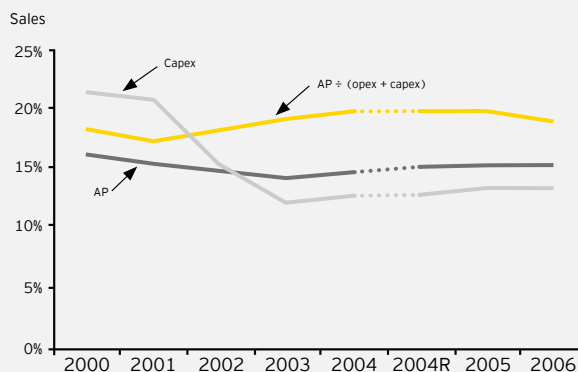


Chart 3: *accounts payable performance<sup>2</sup> as % of sales, 2000-2006*



1 All calculations are based on sales.  
2 Sales-weighted.

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## Performance in working capital management

### Working capital situation and opportunities

This section now turns to focus on more current performance (in 2006) and illustrates that there is still a wide range of working capital performance across the industry, suggesting significant potential for operator improvement.

Average net trade working capital cycle as a proportion of sales was -3.1% with a range of between -8.9% for Operator 2 and 8.3% for Operator 13 (see Chart 1).

Average C2C was five days, with a range of between -13 days for Operator 6 and 36 days for Operator 13 (see Chart 2).

There are many factors that explain these sets of differences, including:

- ▶ Management focus and process efficiency
- ▶ Local payment practices
- ▶ Customer and service line revenues breakdown
- ▶ Regulatory guidelines and market conditions

Chart 1: *net trade working capital cycle as % of sales, 2000-2006*

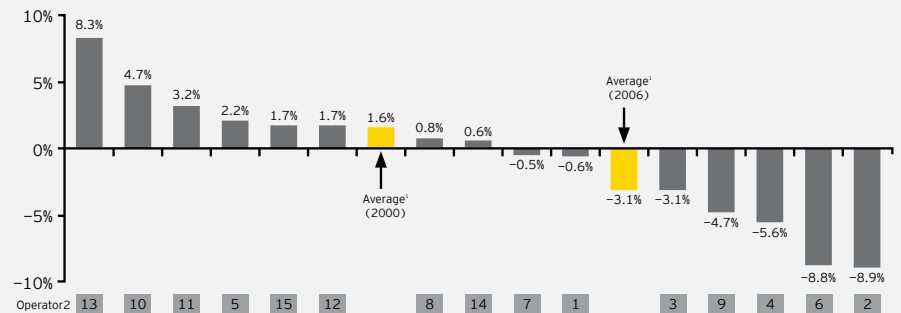
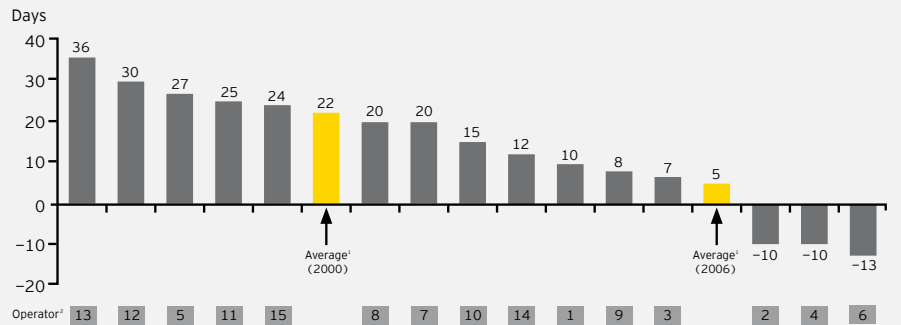


Chart 2: *C2C performance per operator, 2006*



Sources: Ernst & Young analysis, based on latest publicly available financial statements.

1 Sales-weighted.

2 Numbers based on the 2006 revenues by rank; 1 is the highest, 15 the lowest.

### Receivables and payables distribution per operator

There is a large distribution of days sales outstanding (DSO) and days payable outstanding (DPO) performance, reflecting also differences in local payment practices (see Chart 3).

### Receivables performance by operator

Given the wide range of receivables performance, there is still significant opportunity for reduction across operators (see Chart 4).

The overall level of receivables has fallen dramatically from 74 days in 2000 to 56 days in 2006. Analysis still shows a large distribution of receivables performance across operators, with a range of between 43 for Operator 3 and 104 days for Operator 5.

Aligning the receivables performance (including changing terms and billing frequency) of each operator on the industry average and on the upper quartile would suggest a potential industry cash opportunity of between €4.5b and €7.2b respectively.

Chart 3: DSO vs DPO performance per operator, 2006

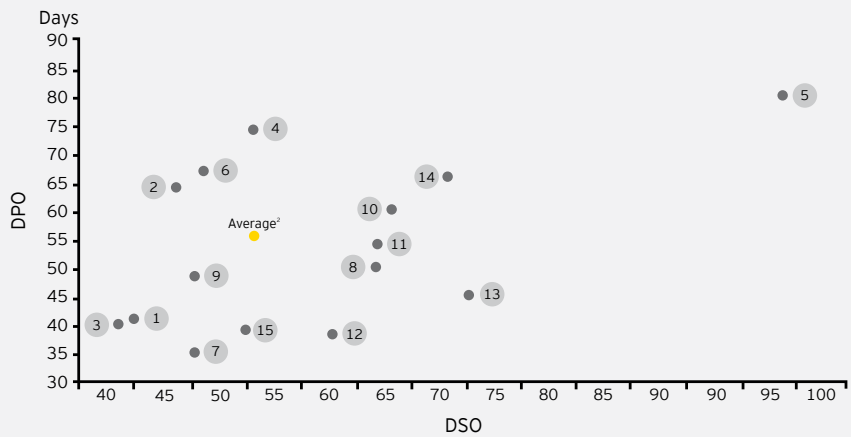
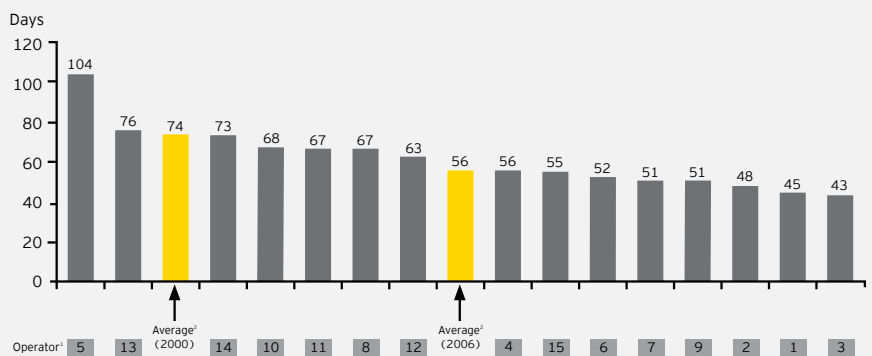


Chart 4: DSO<sup>3</sup> performance per operator, 2006



Sources: Ernst & Young analysis, based on latest publicly available financial statements.

1 Numbers based on the 2006 revenues by rank; 1 is the highest, 15 the lowest.  
 2 Sales-weighted.  
 3 The DSO metric has been based on year-end reported trade receivables net of provisions, including VAT, added-back unbilled/trade-accrued income and securitized receivables, and work in progress, ÷ by full-year pro forma sales, and × by 365.

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### Factors influencing receivables performance

There are several factors influencing receivables performance that need to be considered:

- ▶ Local payment practices (large variation in contractual terms and billing frequency)
- ▶ Payment terms in advance/arrears (large range of payment terms from quarterly in advance to monthly in arrears across operators and within each operator on type of services offered and customer served, with a majority of them offering terms of monthly in advance)
- ▶ Prepay/post-pay mix (significant differences across countries with prepay accounting for over 90% of subscriptions in Italy, 66% in the UK and only 36% in France, for example)
- ▶ Regulatory guidelines (impacting on advance billing, collection, write-offs and line disconnection)
- ▶ Banking practices (different direct debit penetration rates from below 10% to well over 50% and payment processing times varying from one to two days to up to five days for a local bank)
- ▶ Credit management processes (from lax to strict payment reminder cycles).

### Learning to enhance billing solutions

More attention has been paid to billing solutions, but evidence suggests that there are still many challenges associated with them:

- ▶ Most telecom operators have dedicated considerable resource and effort toward harmonizing, integrating and consolidating billing systems to allow multi-services, data accuracy, cost-effectiveness, speed and simplification of delivery, while driving up customer satisfaction.
- ▶ Evidence, however, suggests that operators are faced with challenges in meeting these objectives in many ways:
  - Billing requirements for content being delivered over multiple channels are growing increasingly complicated
  - Technological options have been proliferating
  - The regulatory environment has been shifting
  - There are still many legacy systems compounded by acquisitions activity
  - The services need to be delivered in a rapid and cost-effective way.

### Payables performance by operator

There is a broad distribution of payables performance, suggesting a high level of cash opportunity that should not be materially hindered by local payment practices.

The average level of payables has deteriorated from 60 days in 2000 to 56 days in 2006. Analysis still shows a large distribution of payables performance across operators, with a range of between 35 days for Operator 7 and 80 days for Operator 5.

Aligning the payables performance of each operator on the industry average and on the upper quartile would suggest a potential industry cash opportunity of between €5.2b and €10.5b respectively. With most operators across Europe now relying on the same limited number of global equipment suppliers, the realization of this potential should not be materially hindered by local payment practices (See chart).

### Redefining relationships with suppliers

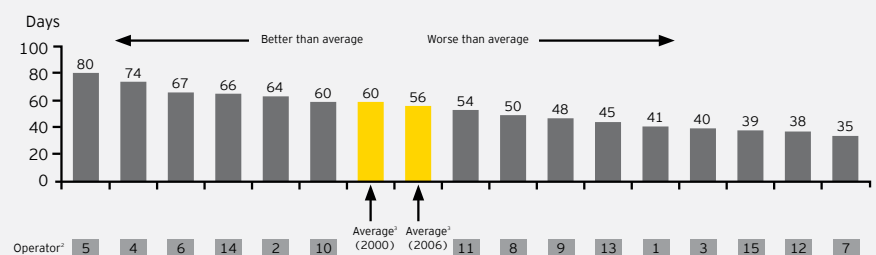
Purchasing has made a significant contribution to improving performance in a number of ways. This includes consolidating and controlling spend, extending and changing payment terms, intensifying global procurement, standardizing processes and collaborating more closely with suppliers.

In future, we will increasingly see:

- ▶ Ongoing telecommunications industry consolidation and a reduction in the supplier base that will make it even more critical for operators to develop stronger relationships with suppliers

- ▶ Suppliers as partners for innovation and support, implying the need for operators to develop relationships with technology leaders and including them in the supply chain to ensure access to their market and product expertise
- ▶ New partnership models, meaning operators will need to define strategies aiming to embrace revenue-sharing, provisioning, pricing and billing
- ▶ Increased complexity and risk in managing businesses that will require the need to have partners with the scale, scope and credibility who can respond quickly, and with agility, to the changing market dynamics.

DPO<sup>1</sup> performance per operator, 2006



Sources: Ernst & Young analysis, based on latest publicly available financial statements.

1 The DPO metric has been based on year-end reported trade payables, including VAT and added-back trade-accrued expenses, ÷ by full-year pro forma sales, and × by 365.  
 2 Numbers based on the 2006 revenues by rank; 1 is the highest, 15 the lowest.  
 3 Sales-weighted.

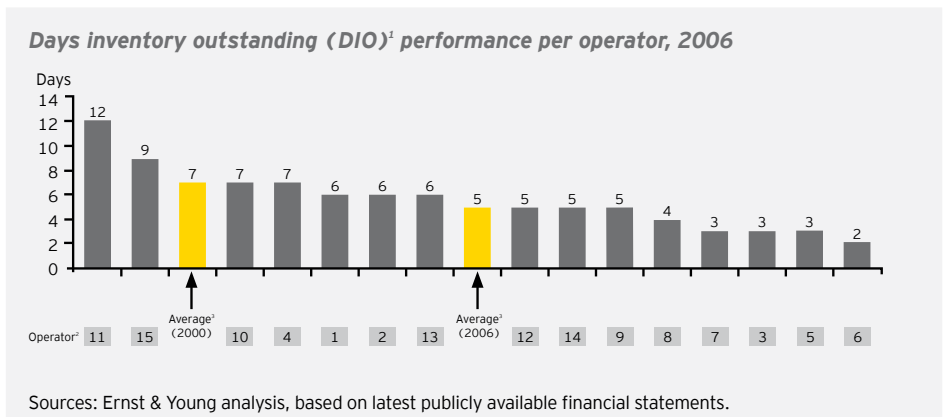
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### Inventory performance by operator

There is still some potential for further inventory reduction.

The level of inventories has fallen significantly from seven days in 2000 to five days in 2006. Analysis still shows a large distribution of inventories performance across operators, with a range of between two days for Operator 6 and 12 days for Operator 11. There is no apparent correlation between the number of countries served and the inventory performance. Aligning the inventories performance of each operator on the industry average and on the upper quartile would suggest a potential industry cash opportunity of between €0.5b and €1.6b respectively.



- 1 The DIO metric has been based on year-end reported inventories net of provisions minus work in progress, ÷ by full-year pro forma sales, and × by 365.
- 2 Numbers based on the 2006 revenues by rank; 1 is the highest, 15 the lowest.
- 3 Sales-weighted.

### Additional operating cost and revenue benefits

Additional operating cost and revenue benefits may also arise from process optimization (see table).

Additional operating cost benefits may also arise from process optimization, impacting on purchasing, related finance function, and working capital provisions and write-offs. We would estimate that an operator could save between 0.5% and 1.0% in purchasing costs (without changing supplier payment terms), between 20% and 40% in related finance function costs, and between 10% and 20% in provisions and write-offs.

In total, these cost benefits may represent between 0.15% and 0.50% of sales (equivalent to between €0.5b and €1.7b). Of this, we would estimate

60-65% coming from provisions and write-offs, 20-25% from purchasing, and 15-20% from the finance function. Additional capex, however, may be required to deliver those savings.

Also, looking at working capital performance from a revenue assurance perspective can help identify areas of potential revenue leakage, resulting, for example, from inaccurate billing, fraud, debt write-offs, incorrect pricing plans and incomplete customer records.

#### Typical operating cost benefits

	% sales <sup>1</sup>	% reduction
Purchasing	7-10	0.5-1.0
Related finance function	0.12-0.24	20-40
Provisions and write-offs	1.0-1.5	10-20
Overall cost benefits	0.15-0.50	

Source: Ernst & Young analysis

1 Estimated cost to sales ranges.

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## Performance in working capital management

“We found that the need for accurate forecasting and KPI tools were just as important as the improvement and management on daily performance.”

*Heine Stenholt Winther,  
TDC Vice President*

### Looking ahead

Looking ahead, a number of diverging trends can be expected across the different working capital components:

- ▶ A further reduction in trade receivables arising from ongoing initiatives (including increased direct debit penetration, harmonization of billing processes, and reduction in time to collect), and the rising contribution of mobile to total revenues.
- ▶ A mixed payables performance with potential for further enhancement, but against a background of increased capital expenditure (a new cycle of network transformation taking place), with some possible trade-offs with purchasing costs (larger operators being likely to reap further benefits through leveraging buying power)
- ▶ A mixed inventory performance given the progress already achieved, and the need to develop new services and bundled products.
- ▶ At the same time, significant opportunities for working capital optimization still exist and will continue to develop due to the adoption of new best practices, process thinking, technologies and innovations.

In the longer term, working capital performance will increasingly depend on operators creating the right balance between, on the one hand, operational and cash excellence, and, on the other hand, the need to improve customer service and strengthen relationships with suppliers.

### Realizing and prioritizing benefits

To realize the full benefits of a comprehensive approach to working capital management requires:

- ▶ The implementation of best practices across the main trade working capital areas (with the associated challenge of identifying, adapting, and improving best-practice solutions)
- ▶ A full management commitment
- ▶ Changing behaviors and growing competencies within the organization.

An effective working capital management strategy will focus on billing, terms and collections within receivables, and payment timeliness within payables, where the potential for opportunity is typically the highest, including:

- ▶ Incentivizing cash performance
- ▶ Renegotiating customer and supplier payment terms
- ▶ Reducing time and cost to collect
- ▶ Improving data provision for billing
- ▶ Reducing unbilled revenues, including the time to issue interconnect invoices
- ▶ Improving customer payment methods (direct debit) and reducing supplier payment runs
- ▶ Consolidating billing processes

## How truly effective is your working capital management strategy?

### Some typical questions you should be asking:

- ▶ Does working capital performance account for a significant proportion of management bonuses?
- ▶ Have appropriate measures been established for monitoring cash and working capital?
- ▶ Are a majority of customers on direct debit?
- ▶ Do you invoice all revenues on a monthly basis?
- ▶ Do you invoice non-usage charges in advance?
- ▶ Do you raise and collect invoices in less than 30 days?
- ▶ Do you raise and collect interconnect billing in the same month?
- ▶ Is the level of overdues below 10%?
- ▶ Are all suppliers on terms of 60 days or greater?
- ▶ Is greater than 90% of supplier spend controlled through a purchase order process?
- ▶ Are most purchasers incentivized around cash terms?



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### Glossary

- ▶ Net trade working capital cycle = receivables cycle + inventories cycle – payables cycle
- ▶ Receivables cycle = trade receivables + unbilled/trade-accrued income + work in progress – deferred income – advances from customers – customer prepayments
  - DSO (days sales outstanding): year-end trade receivables net of provisions, including VAT, added-back unbilled/trade-accrued income and securitized receivables, and work in progress, ÷ by full-year pro forma sales, and × by 365 (expressed as a number of days of sales, unless stated otherwise)
  - Unbilled/trade-accrued income: subscriptions, usage and installations which have not been billed and should have been billed. Unbilled receivables when reported separately have been added back to the trade receivables
  - Deferred income: amounts billed in advance for line rentals and subscriptions
- ▶ Payables cycle = trade payables + trade-accrued expenses – supplier prepayments
  - DPO (days payable outstanding): year-end trade payables, including VAT and added-back trade-accrued expenses, ÷ by full-year pro forma sales, and × by 365 (expressed as a number of days of sales, unless stated otherwise)
  - Trade-accrued expenses: accrued payables to suppliers, interconnect and roaming charges and retailer commissions
- ▶ Inventories cycle = inventories net of provisions – work in progress
  - DIO (days inventory outstanding): year-end inventories net of provisions – work in progress, ÷ by full-year pro forma sales, and × by 365 (expressed as a number of days of sales, unless stated otherwise)
- ▶ C2C = DSO + DIO – DPO (expressed as a number of days of sales)
- ▶ Pro forma sales: reported sales adjusted from acquisitions and disposals when this information is available



## Contacts

### Vincent de La Bachelerie

Global Telecommunications  
Leader

+33 1 4693 6205  
[vincent.de.la.bachelerie@fr.ey.com](mailto:vincent.de.la.bachelerie@fr.ey.com)

### Jon Morris

Working Capital  
Practice Leader

+44 20 7951 9869  
[jmorris10@uk.ey.com](mailto:jmorris10@uk.ey.com)

### Olivier Lemaire

Telecommunications Leader -  
Continental Western Europe

+352 42 124 8356  
[olivier.lemaire@lu.ey.com](mailto:olivier.lemaire@lu.ey.com)

### Marc Chaya

Global Telecommunications  
Markets Leader

+33 1 4693 8515  
[marc.chaya@fr.ey.com](mailto:marc.chaya@fr.ey.com)

### Marc Loneux

Working Capital  
Research Director

+44 20 7951 3784  
[mloneux@uk.ey.com](mailto:mloneux@uk.ey.com)

### Lisa Friel

Telecommunications Leader -  
Americas/USA

+1 210 242 7143  
[lisa.friel@ey.com](mailto:lisa.friel@ey.com)

### Jonathan Dharmapalan

Global Telecommunications Center -  
Beijing

+86 10 5815 2821  
[jonathan.dharmapalan@cn.ey.com](mailto:jonathan.dharmapalan@cn.ey.com)

### Holger Forst

Telecommunications Leader -  
Central Europe

+49 221 2779 20171  
[holger.forst@de.ey.com](mailto:holger.forst@de.ey.com)

### Craig Boyhan

Telecommunications Leader -  
Oceania

+61 3 9288 8452  
[craig.boyhan@au.ey.com](mailto:craig.boyhan@au.ey.com)

### Prashant Singhal

Global Telecommunications Center -  
Delhi

+91 124 464 4746  
[prashant.singhal@in.ey.com](mailto:prashant.singhal@in.ey.com)

### Mark Gregory

Telecommunications Leader -  
Northern Europe, Middle East, India & Africa

+44 20 7951 5890  
[mgregory@uk.ey.com](mailto:mgregory@uk.ey.com)

### Richard Ireland

Telecommunications Leader -  
China & Far East

+86 10 5815 3285  
[richard.ireland@cn.ey.com](mailto:richard.ireland@cn.ey.com)



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