Financial performance and trends in telecommunications

Applied Value

Q2 2019

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Applied Value Telecommunications Practice

Telecommunications has been a core practice area for Applied Value since our inception in 1997. Over the last 20 plus years, we have supported a wide range of clients across the telecommunications value chain and across continents.

We create client value and tangible results by applying an unbiased perspective, having a hands-on approach and by recognizing the importance of delivering value fast.

About this report

The purpose of this report is to track the financial performance of major players in the telecommunications industry, from operators to infrastructure OEMs and mobile device makers.

We hope that you will this report insightful and we welcome feedback or opportunities for further discussions.

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Applied Value's telecom report tracks the financial performance of major players in the industry

Operators

Telkom Indonesia, VEON, AT&T, telenor

BCE, NTT, ooredoo, airtel

etisalat, kt, kpn, SK telecom

STC, verizon, américa móvil, elisa

swisscom, ROGERS, TELE2, proximus

Telia Company, MILLICOM THE DIGITAL LIFESTYLE, tigo, Telefónica

Infrastructure OEMs

NOKIA, ERICSSON

HUAWEI, ZTE中兴

Device OEMs

SAMSUNG

Xiaomi, LG

HUAWEI, Lenovo

Contents

Executive summary

Key takeaways per segment

Operators	› In Q2 2019 revenues developed positively compared to the previous quarter and is further strengthening the longer-term growth trend › Profitability continued to show stability with a longer-term EBITDA trend of 33%-35% › ROIC continues to vary significantly across companies, in Q2 2019 VEON, NTT and Proximus displayed the strongest uplift in performance
Infrastructure OEMs	› Huawei continues to dominate in terms of value creation with return on invested capital above 33% since 2013 › Ericsson and Nokia have shown significant ROIC improvements over the last years › Huawei continues to show the strongest capital efficiency while Ericsson started showing upwards momentum during LTM
Device OEMs	› Smartphone shipments are continuing to decline with a clear trend in the device maker segment where the business mix gradually is shifting away from smartphones towards higher growth segments such as wearables, smart speakers and services › Despite a steep decline in performance during the last twelve months Apple continues to be the segment's undisputed top performer in terms of ROIC

Roundup of telecommunication forecasts

Mobile subscriptions grew at 2 percent YoY in Q1 2019 and now totals 7.9 billion. During Q1 2019 China had the highest number of net additions (+30 million), followed by Nigeria (+5 million) and the Philippines (+4 million). APAC excluding China and India had an addition of 12 million mobile subscriptions. The 5G momentum continues to be strong and the forecast for 5G subscriptions has increased to 1.9 billion by the end of 2024.

Source: Ericsson Mobility Report June 2019

In 2024, 35% of global mobile data traffic is forecasted to be carried by 5G networks. Mobile traffic is furthermore expected to grow 30% annually between 2018 and 2024. Between Q1 2018 and Q1 2019 mobile traffic grew 82%, which is attributed to the increased number of smartphones subscriptions in India and increased smartphone data traffic in China.

Source: Ericsson Mobility Report June 2019

With limited growth in mobile subscriptions there is a clear trend in operators acquiring new revenue streams within media and adtech. Digital applications and services have removed the users' dependencies on the fundamental services provided by telecom providers, which has resulted in lost revenues for these. As an effect of this, Telcos have begun to invest in activities that can aid them to monetize on the services or content their networks are built to support. E.g. AT&T's merger with Time Warner in 2018, Verizon's acquisition of Yahoo in 2017 and Tele2's acquisition of Com Hem.

Source: Press & News reporting

In Q2 2019 smartphone shipments declined 2% year on year, making it the seventh consecutive quarter of declining shipments. The identified main growth challenges will remain the same; **longer replacement cycles, a challenging Chinese market, and geopolitical headwinds**. The Chinese device makers Huawei, OPPO, Vivo, Xiaomi and Realme reached the highest combined smartphone market share it has ever been with 42% in Q2 2019.

Source: IDC Mobile Phone Forecast 2019-2023 & Counterpoint Research 2019

Financial overview (1/2): Yearly performance

	Segment	2015	2016	2017	2018	LTM
Return on invested capital (ROIC)	Operators	9.2%	8.7%	8.9%	8.6%	8.6%
	Infrastructure OEMs	20.1%	12.2%	10.4%	15.1%	N/A
	Device OEMs	55.7%	48.0%	56.5%	57.8%	42.8%
Net operating profit after tax (NOPAT)	Operators	12.9%	12.5%	13.1%	13.0%	12.8%
	Infrastructure OEMs	8.9%	6.0%	4.9%	7.5%	N/A
	Device OEMs	12.9%	12.1%	13.7%	14.6%	13.3%
Invested capital turnover	Operators	0.75	0.73	0.71	0.67	0.68
	Infrastructure OEMs	2.4	2.3	2.2	2.3	N/A
	Device OEMs	4.3	4.0	4.1	3.9	3.2

Financial overview (2/2): Quarterly performance

	Segment	18 Q3	18 Q4	19 Q1	19 Q2
Sales Y-o-Y % change	Operators	1.9%	1.7%	6.9%	3.8%
	Infrastructure OEMs	5.4%	4.1%	0.7%	N/A
	Device OEMs	13.8%	-4.1%	-2.4%	+0.5%
Net operating profit after tax (NOPAT) Y-o-Y change	Operators	+0.4 p.p.	-1.0 p.p.	+0.5 p.p.	-1.1 p.p.
	Infrastructure OEMs	+3.5 p.p.	+2.1 p.p.	+1.3 p.p.	N/A
	Device OEMs	+1.0 p.p.	-1.9 p.p.	-5.7 p.p.	-5.0 p.p.
EBITDA Y-o-Y change	Operators	+1.2 p.p.	+1.0 p.p.	+1.3 p.p.	+0.8 p.p.
	Infrastructure OEMs	+2.3 p.p.	+0.1 p.p.	-0.5 p.p.	N/A
	Device OEMs	+1.5 p.p.	-1.6 p.p.	-6.7 p.p.	-11.2 p.p.

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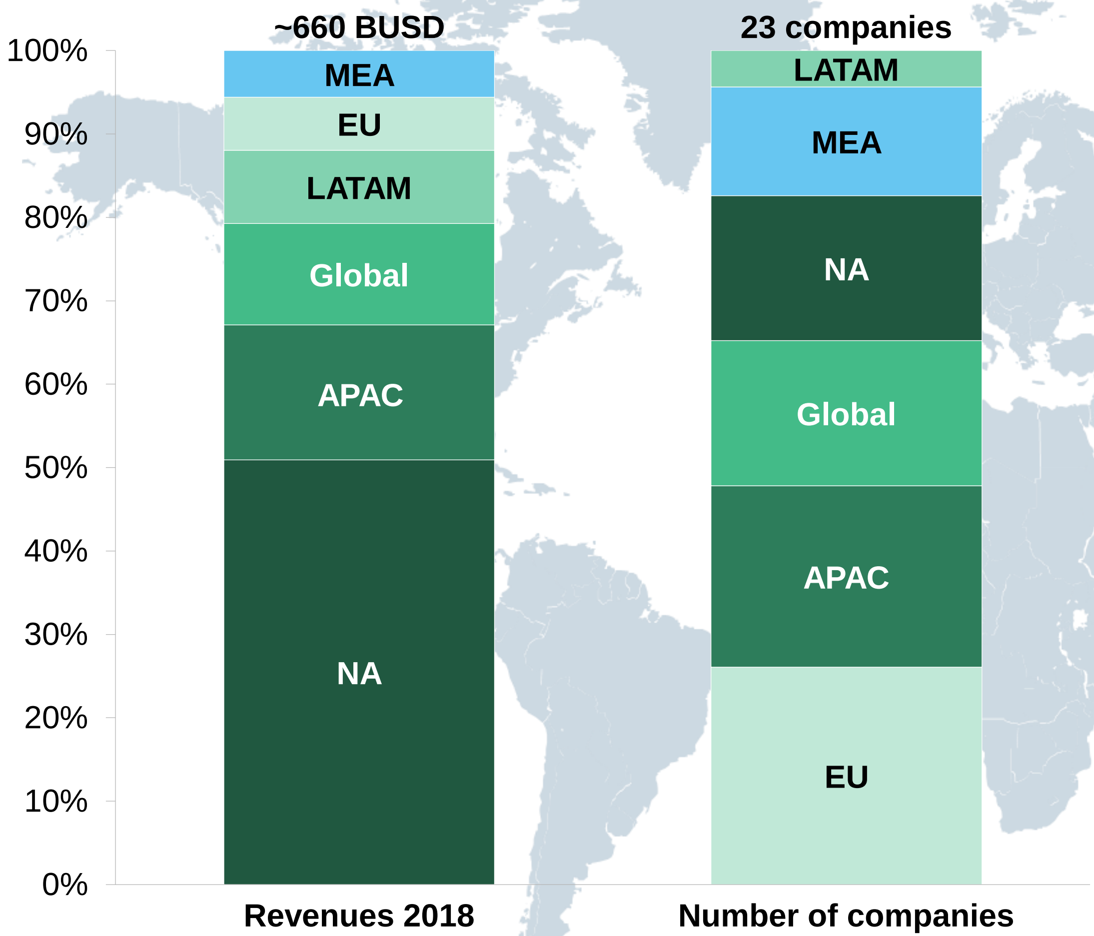
Key takeaways from the operator segment

Key takeaways

Creating Shareholder Value	› During the second quarter of 2019, operator return on invested capital (ROIC) varied between 3% and 18% › Large variance in ROIC performance across analyzed companies, biggest uplift compared to previous 12 months by VEON, NTT and Proximus
Revenue Performance	› Revenues recover in Q2 2019 compared to Q1 2019 and are still up year-on-year › The revenue growth trend continues
Margin Performance	› EBITDA continues to be stable between 33% and 35% › All regions except Global displayed increased EBITDA margins this quarter year on year
Capital Expenditure	› The global long-term CAPEX continues to increase › Global quarterly CAPEX/sales has varied between 15% and 23% in the interval Q2 2018 and Q2 2019

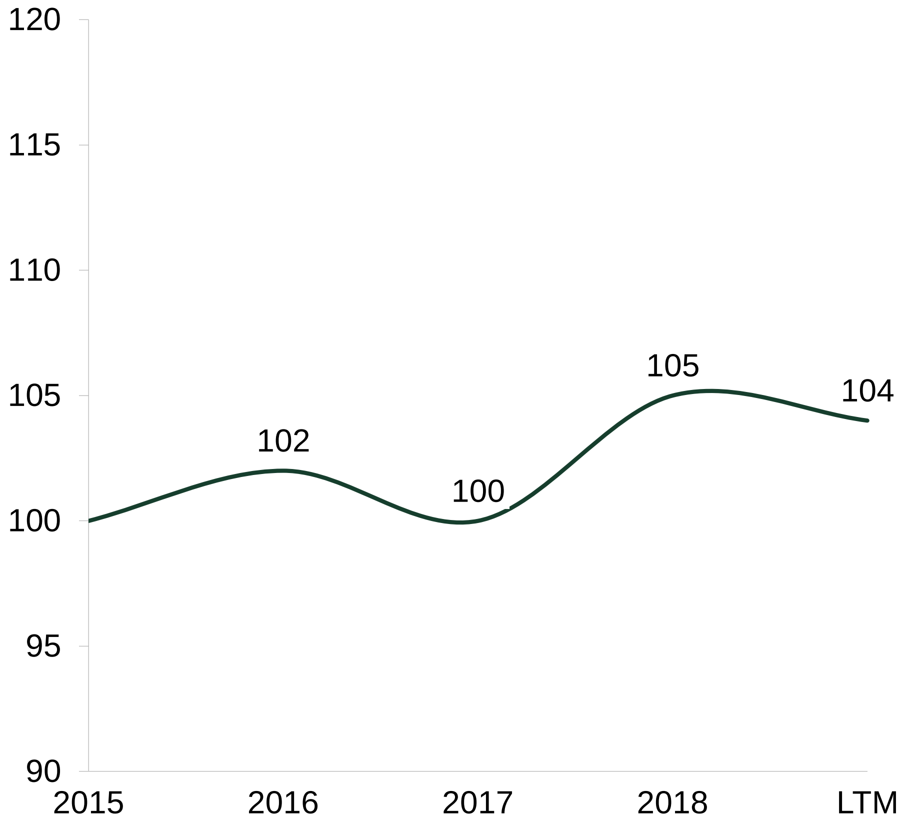
The Q2 2019 report includes 23 of the largest operators accounting for ~660 BUSD in annual revenues, giving an overview of industry performance

Report overview, *revenue in BUSD*



Q2 19 revenues showed a positive development compared to the previous quarter while the yearly development is up 4% in the LTM compared to 2015

Revenues
2015-LTM (index 2015=100)



Revenues
18 Q2-19 Q2 (index 18 Q2=100)

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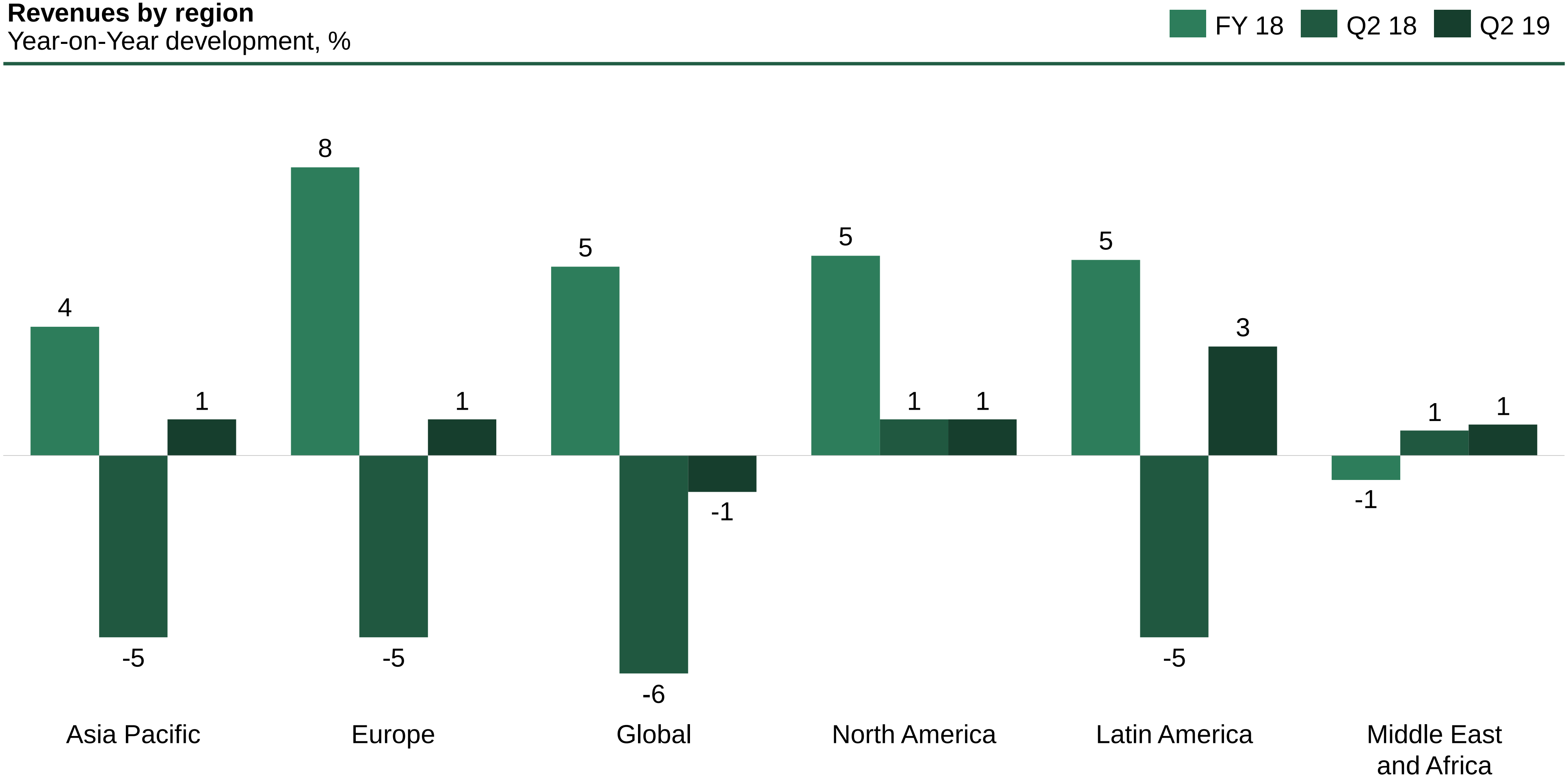
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

All regions except Global reported positive revenue development year on year in Q2 2019 compared to Q2 2018

Revenues by region
Year-on-Year development, %



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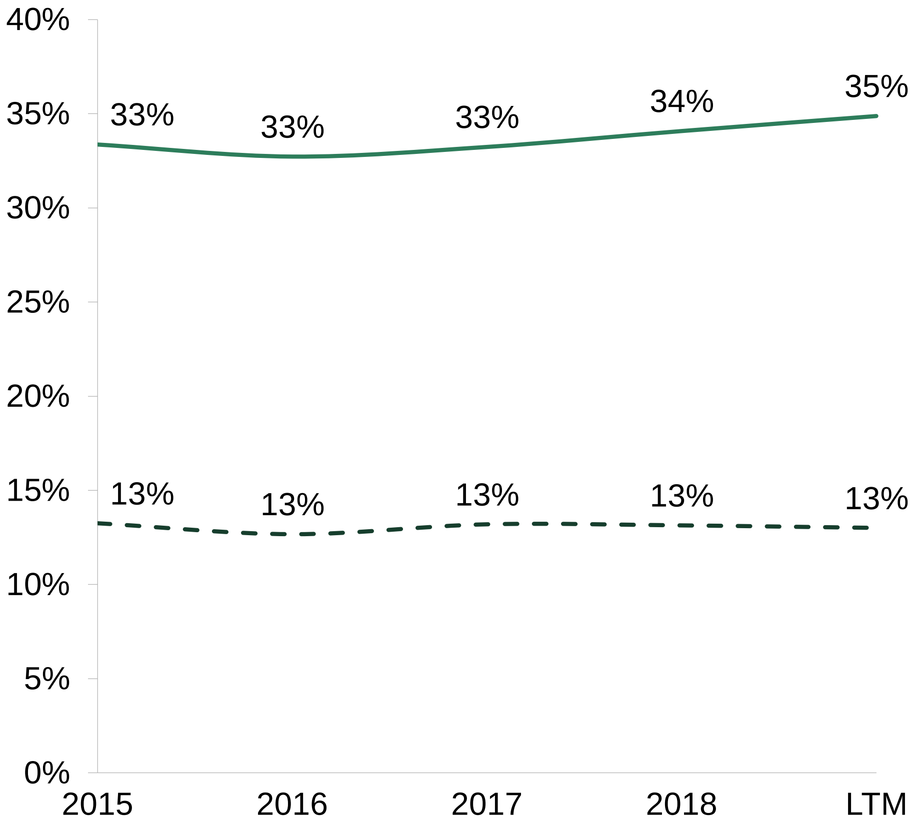
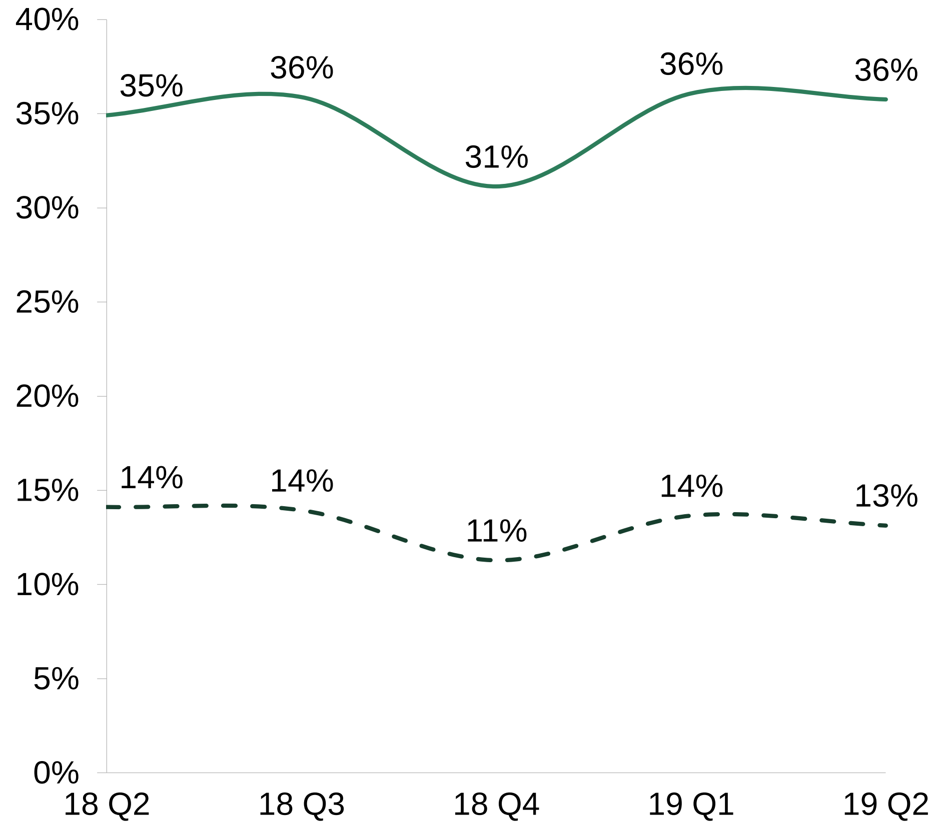
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Yearly profitability continues to be stable between 33% and 35%

Profitability
2015-LTM



Profitability
18 Q2-19 Q2



NOPAT % EBITDA %

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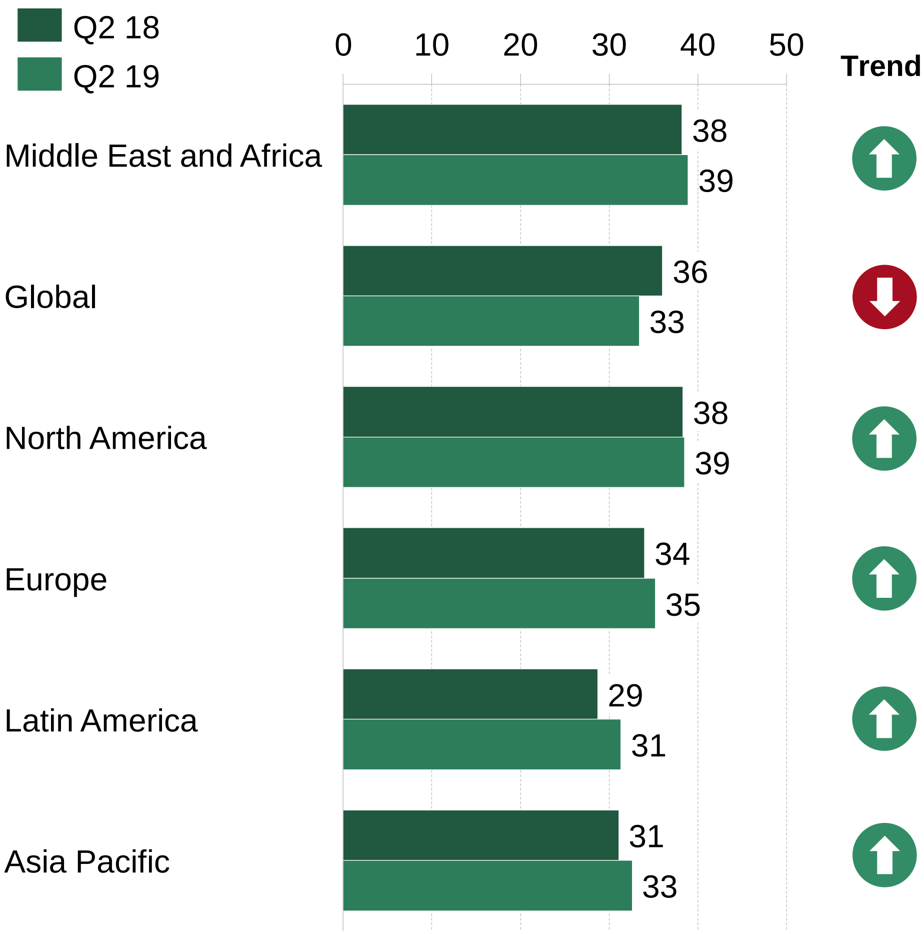
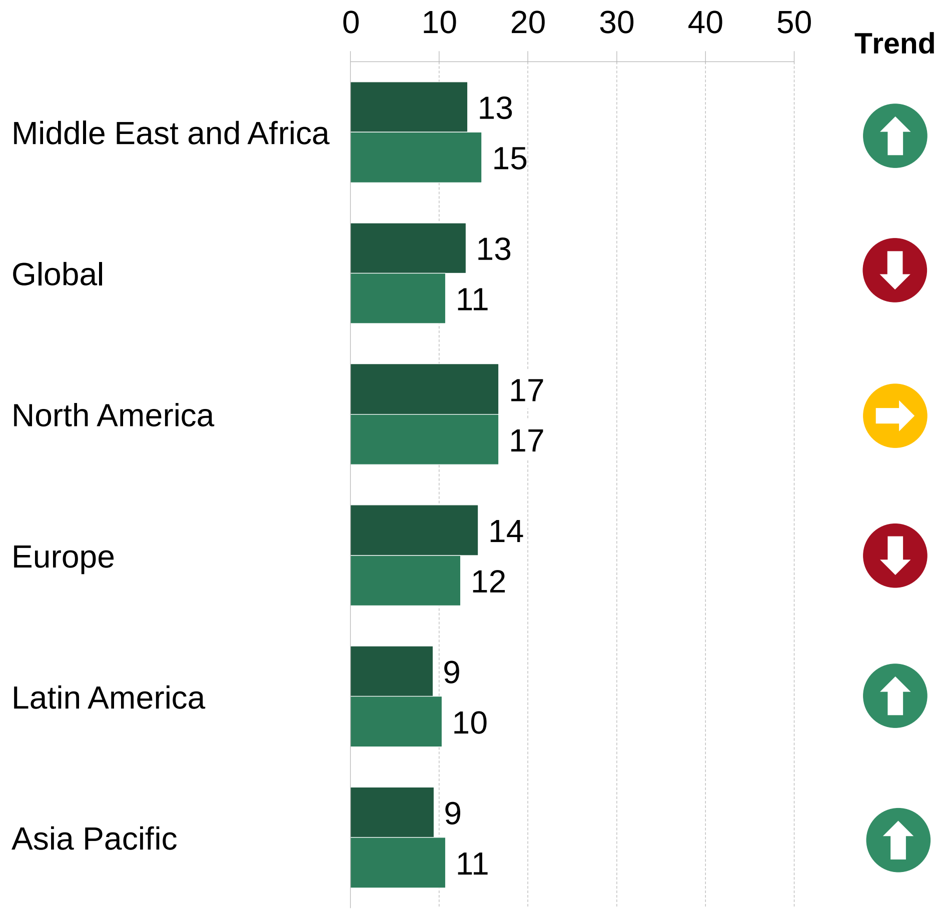
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

On a regional level Middle East and Africa, North America and Asia Pacific continues to show the highest profitability

EBITDA
% of revenues

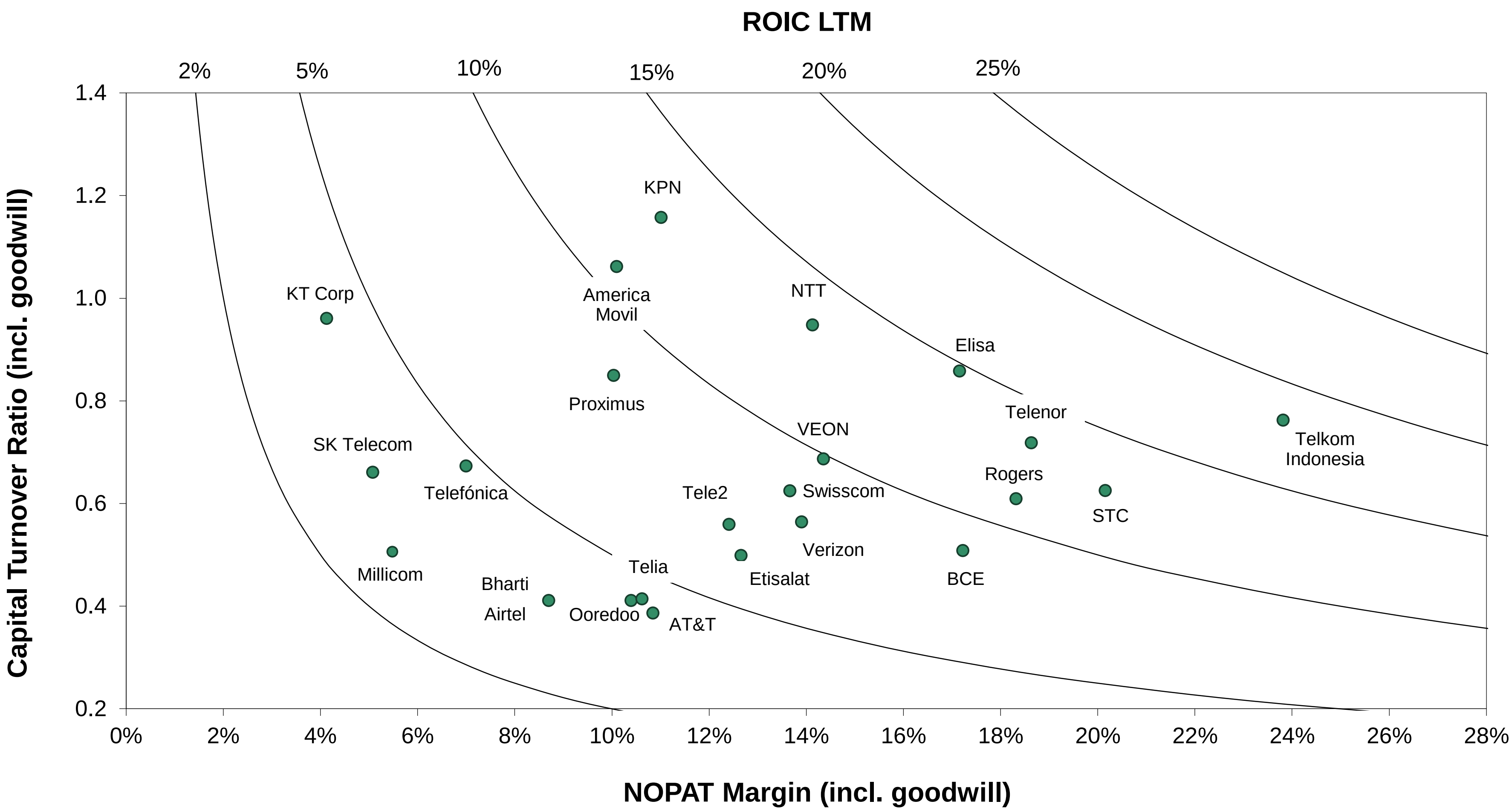


NOPAT
% of revenues



Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

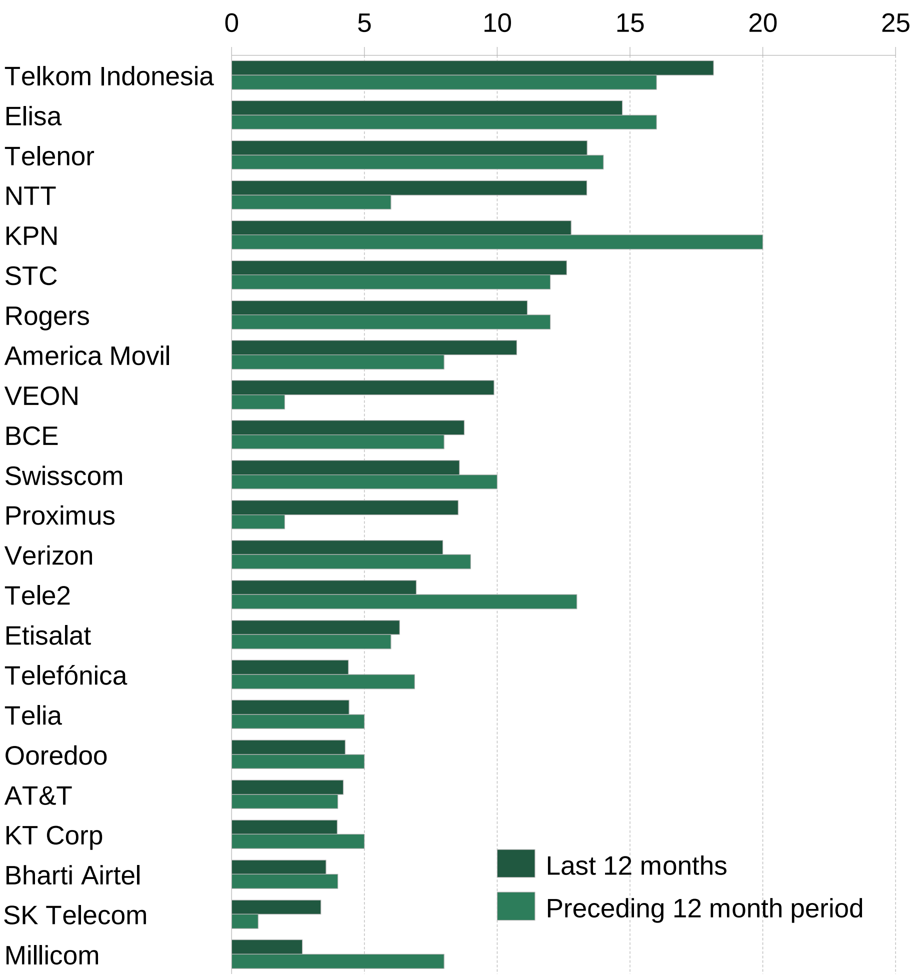
Over the last 12 months ROIC performance varied between ~3% and ~18%



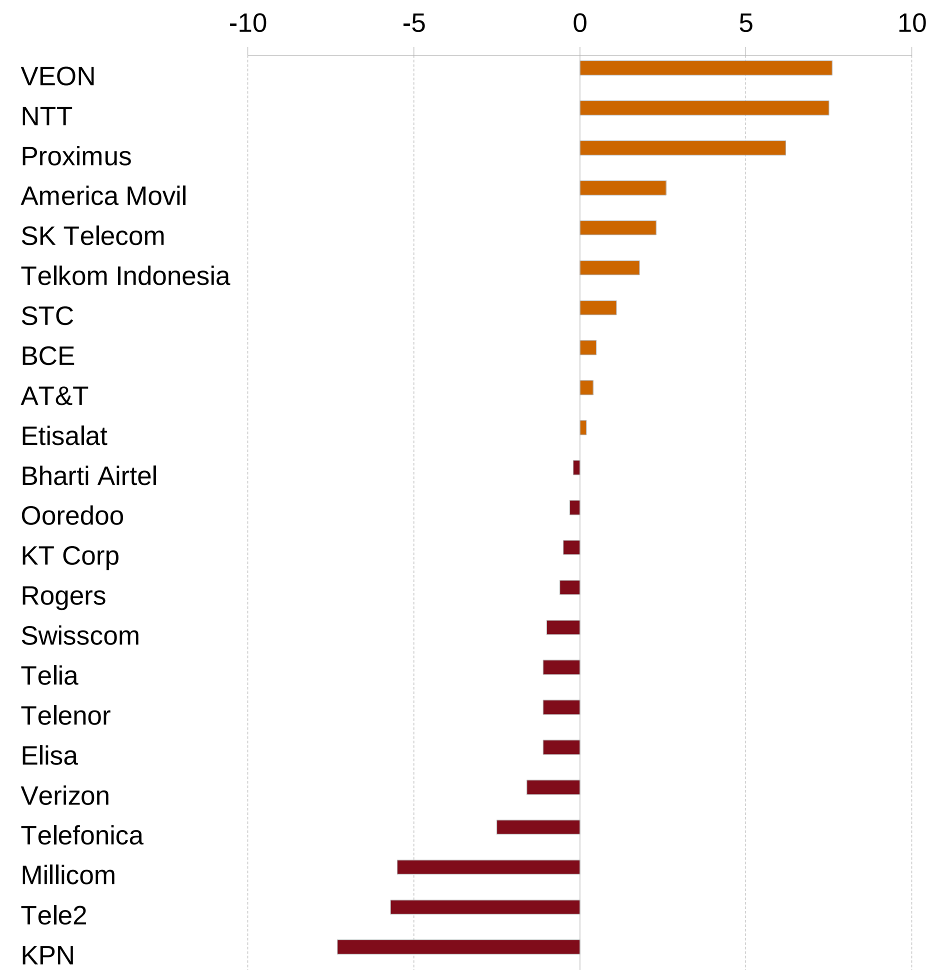
Notes: ROIC = Return on Invested Capital (actual return that the company has generated after tax)
Throughout the ROIC calculation, EBIT is normalized to remove one-time or unusual influences.
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Large variance in ROIC performance across analyzed companies, biggest uplift compared to previous 12 months by VEON, NTT and Proximus

ROIC
Last 12 months vs preceding 12 month period, %



ROIC
Delta, %



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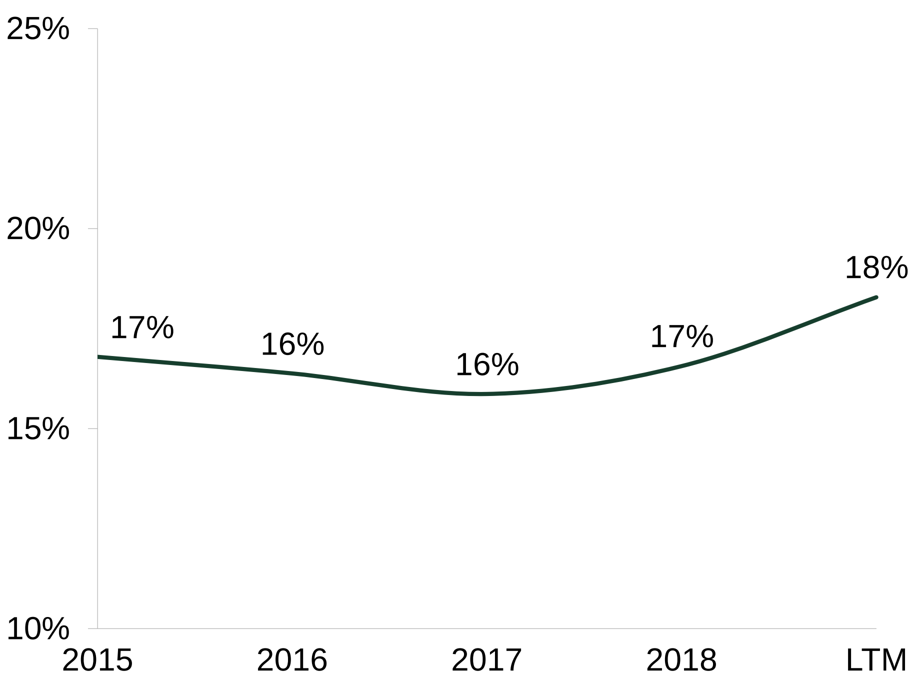
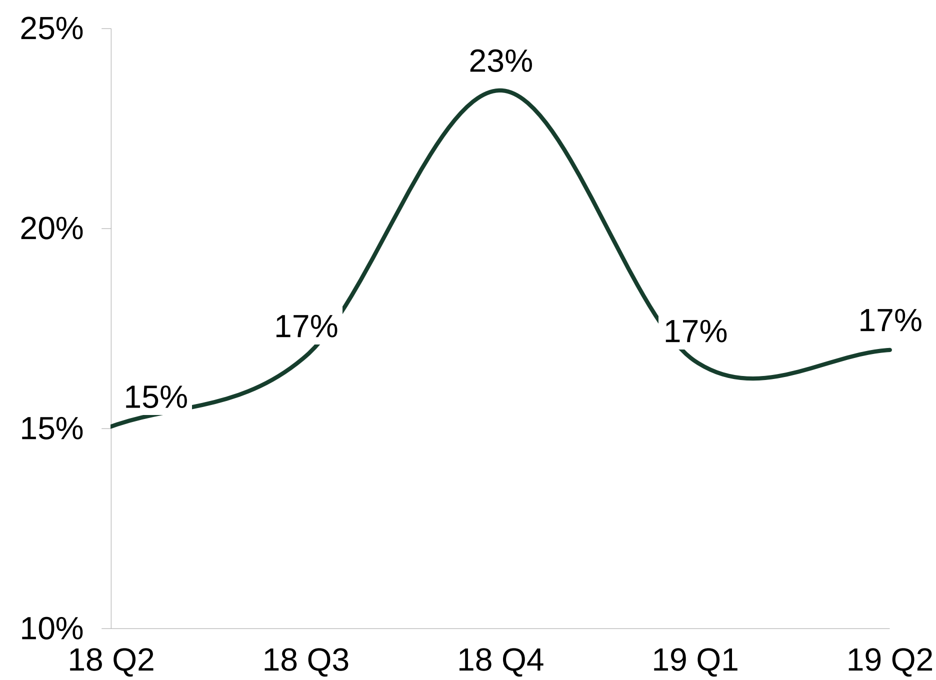
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Global operators' CAPEX levels have varied between 16% and 18% since 2015

CAPEX over sales
2015-LTM



CAPEX over sales
18 Q2-19 Q2



Increased 5G rollouts expected to continue driving CAPEX, e.g. Ericsson forecasts 10 million 5G subscriptions worldwide by the end of 2019 as compatible devices become available

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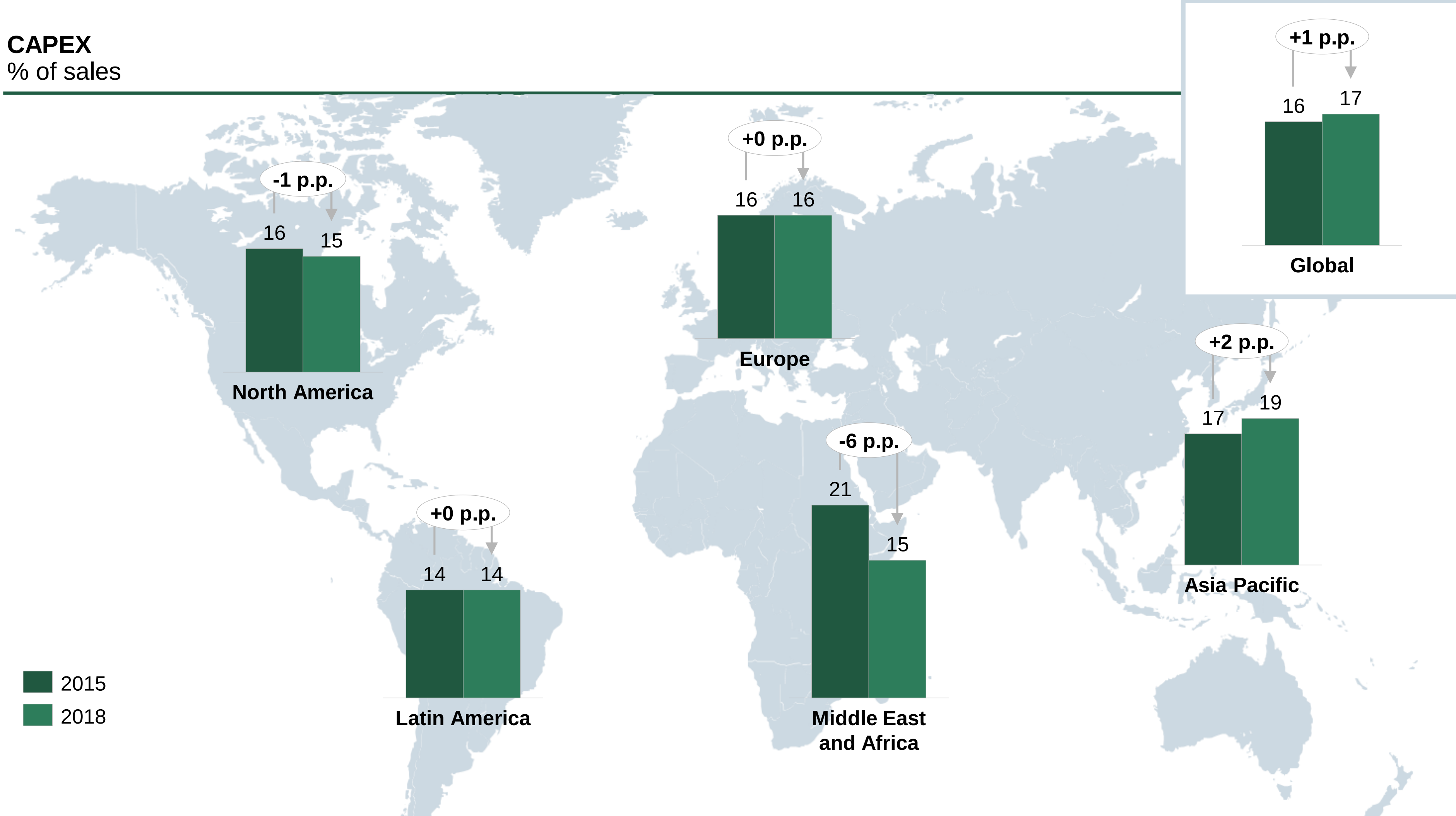
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Looking at regional CAPEX, increased investments were mainly driven by APAC and Global operators while MEA investments have decreased

CAPEX
% of sales



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Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

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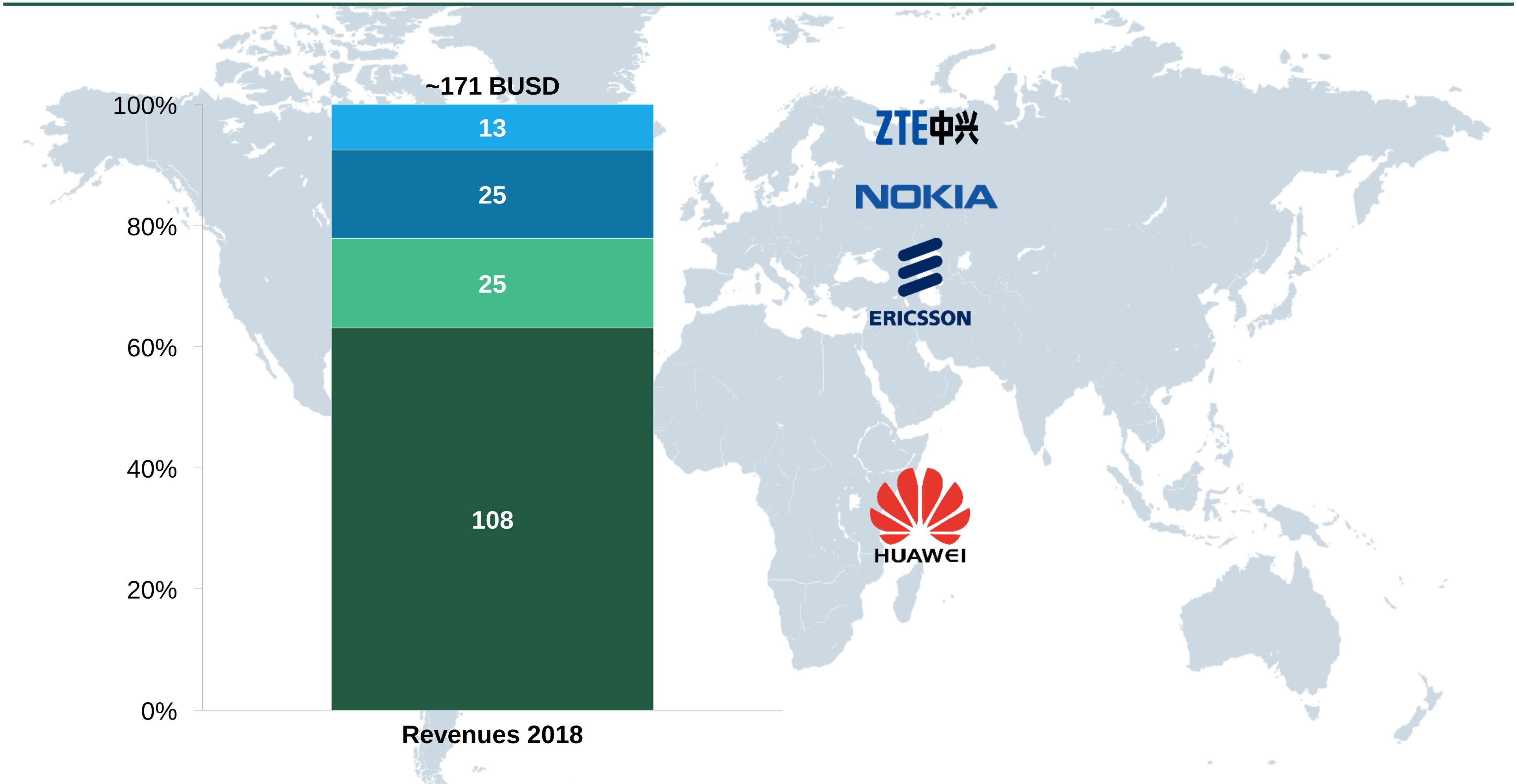
Key takeaways from the Infrastructure OEM segment

Key takeaways

Creating Shareholder Value	› Huawei continues to outperform by delivering 33% return on invested capital › Ericsson and Nokia have shown significant ROIC improvements over the last years
Revenue Performance	› Ericsson continues to deliver positive growth and has demonstrated double-digit growth in four consecutive quarters › ZTE continues to recover from the record low 2018 and stabilized revenues in Q2 19, resulting in an ~88% LTM growth year on year from Q2 2018
Margin Performance	› After the losses in 2017, Ericsson has delivered six profitable quarters › Huawei has outperformed its peers in terms of NOPAT margin since 2016
Capital Efficiency	› Huawei continues to show the strongest capital efficiency › Ericsson's positive momentum in capital efficiency which began in 2017 continues

The Q2 2019 report includes the major infrastructure players, giving an overview of industry performance

Report overview, *revenue in BUSD*



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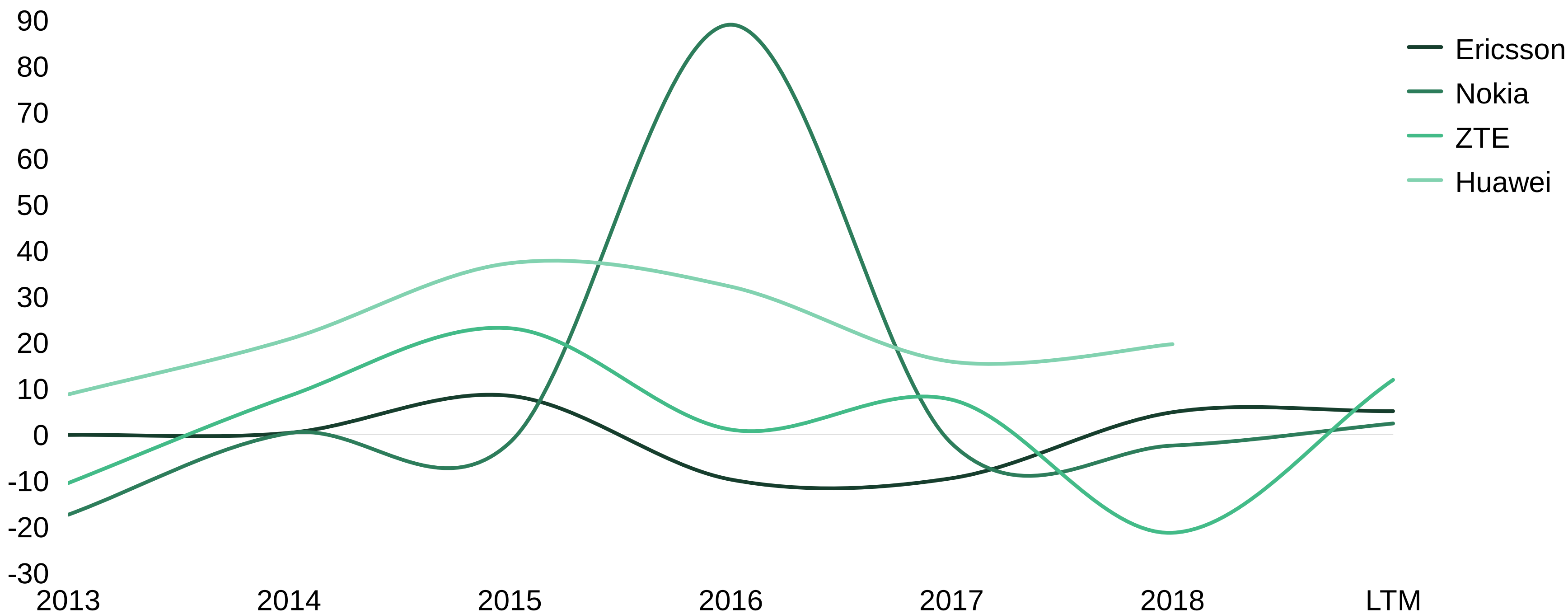
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Huawei has delivered the highest year on year revenue growth among Infrastructure OEMs since 2017

Yearly revenues
Year-on-year change, %



The positive trend for Ericsson continues in Q2 19 which was the fourth consecutive quarter with double-digit year-on-year growth. ZTE has recovered from their record losses in Q2 18 which is attributed to their 5G equipment sales

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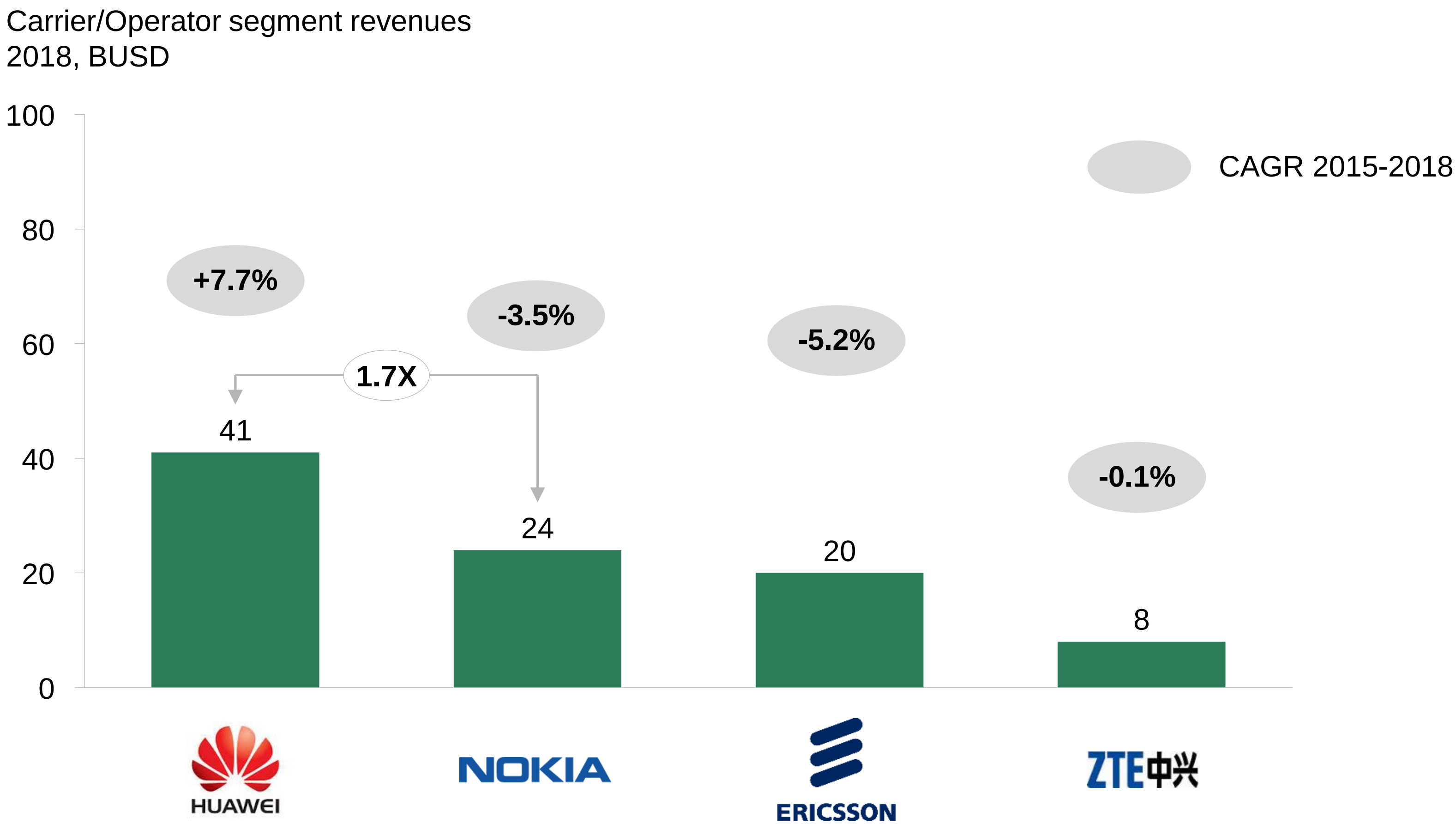
Notes: Nokia acquired Alcatel-Lucent in 2016. Huawei reports annually.
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

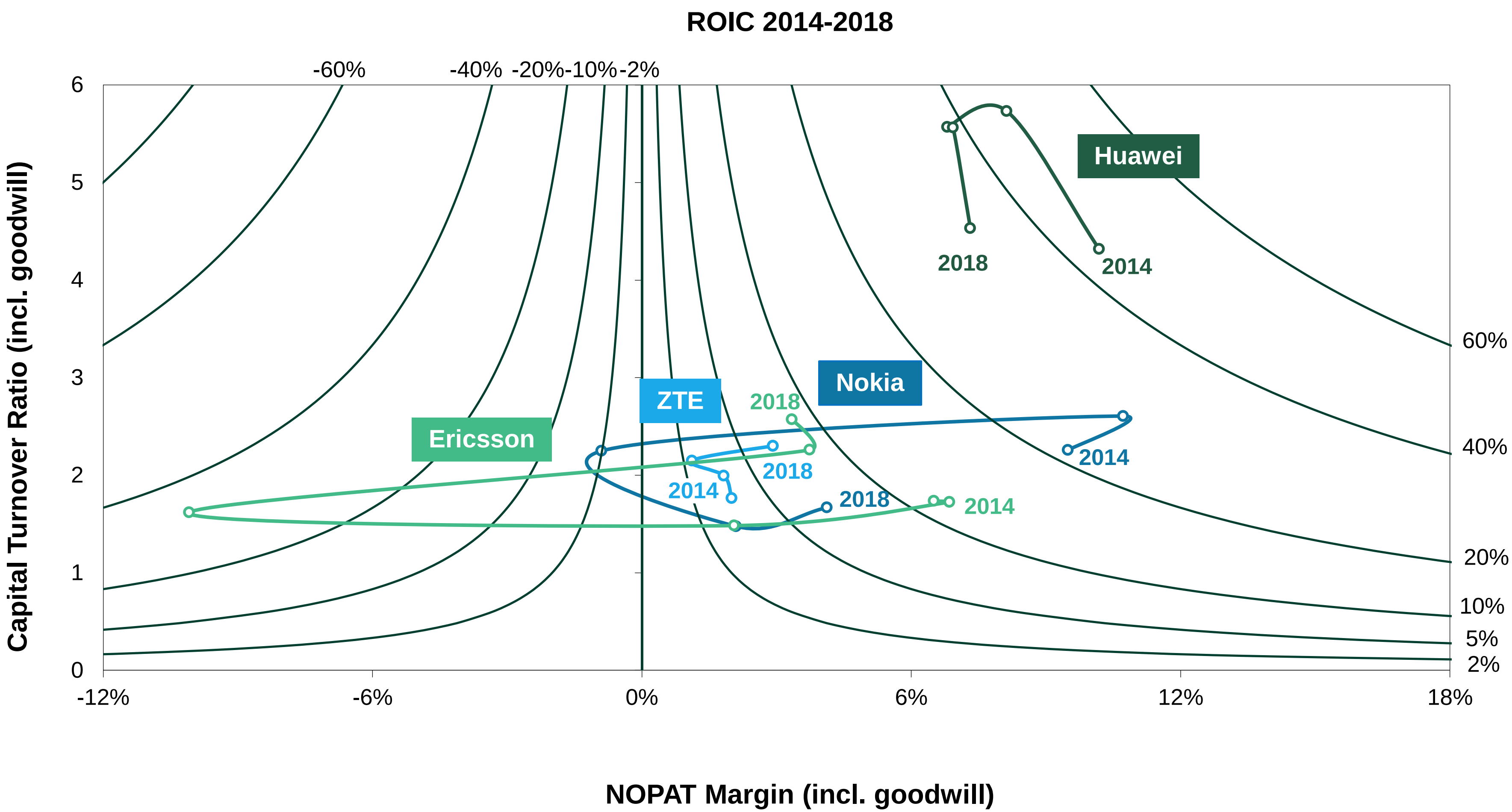
Since 2015, Huawei has enforced its position within the carrier/operator segment and generates ~1.7X the revenues of the closest competitor



Notes: CAGR 2016-2018 were used for Nokia due to segment reporting circumstances. Included segments per company: Huawei (Carrier), ZTE (Carrier), Ericsson (Networks, Digital Services, Managed Services), Nokia (Networks, Software).

Source: Capital IQ, Dell'Oro Group Analysis, Annual & quarterly reports, Applied Value Analysis.

In terms of ROIC performance, Huawei's has consistently outperformed other peers for the past five years



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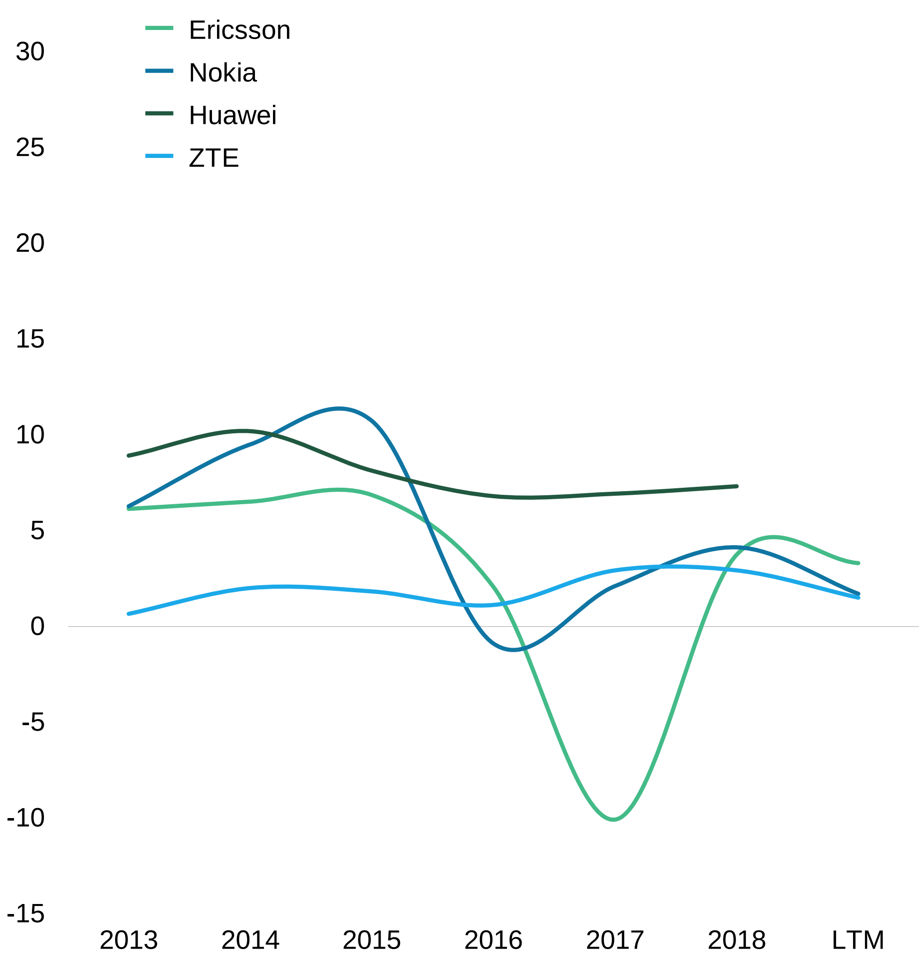
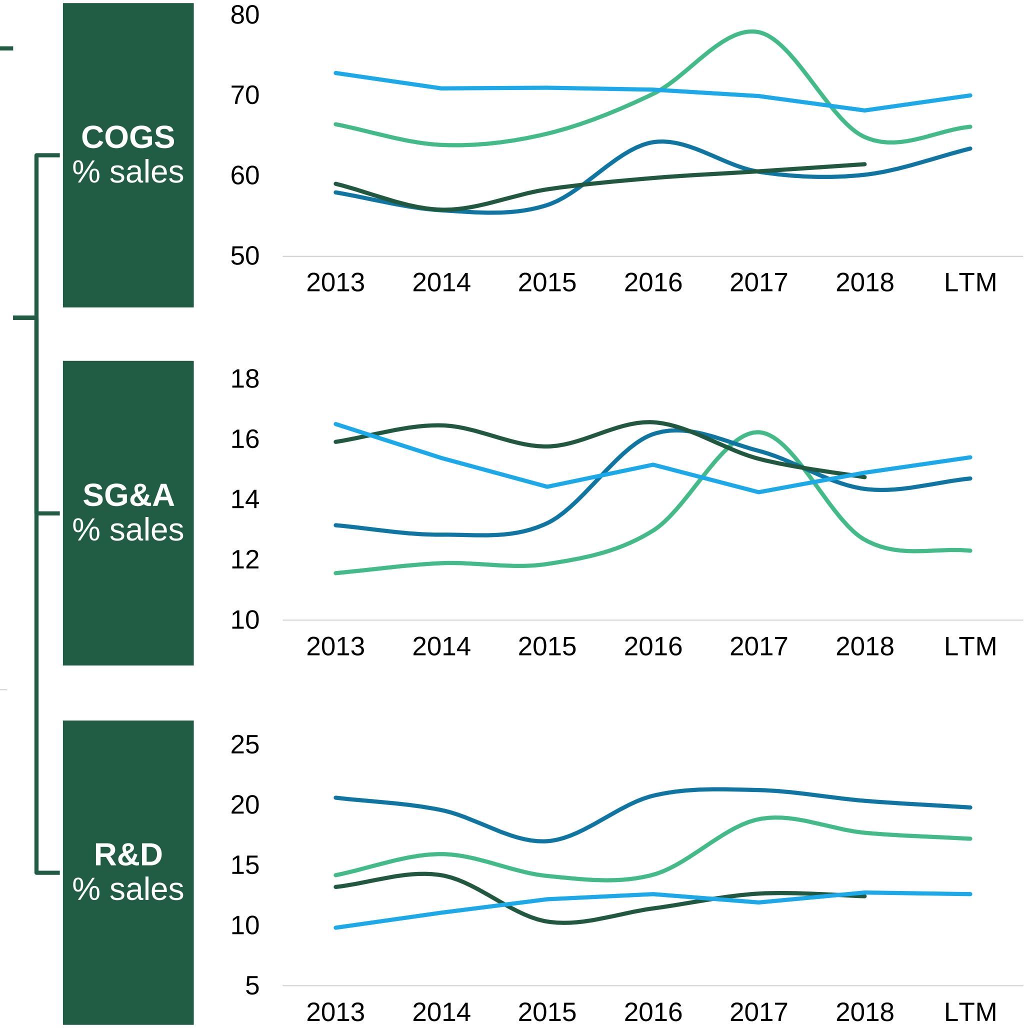
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

In the last 12 months NOPAT margins have begun showing signs of weakening; Nokia showed a notable decline from 4.1% to 1.7%

NOPAT margin, %





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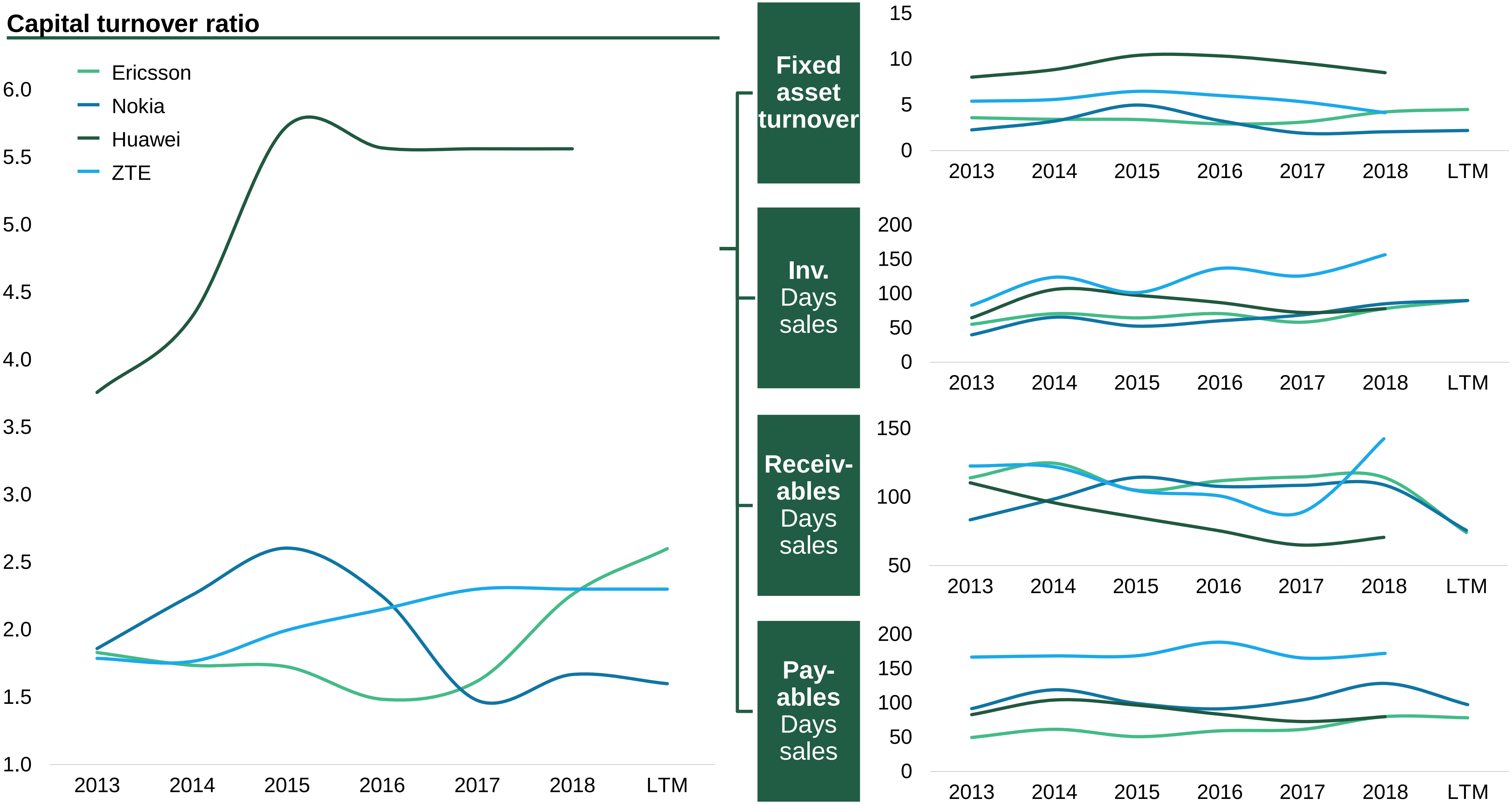
Notes: Missing comprehensive data for Huawei 2019.

Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Huawei shows the strongest capital efficiency while Ericsson's momentum which started in 2017 continues



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Notes: Missing comprehensive LTM data for Huawei 2019.

Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

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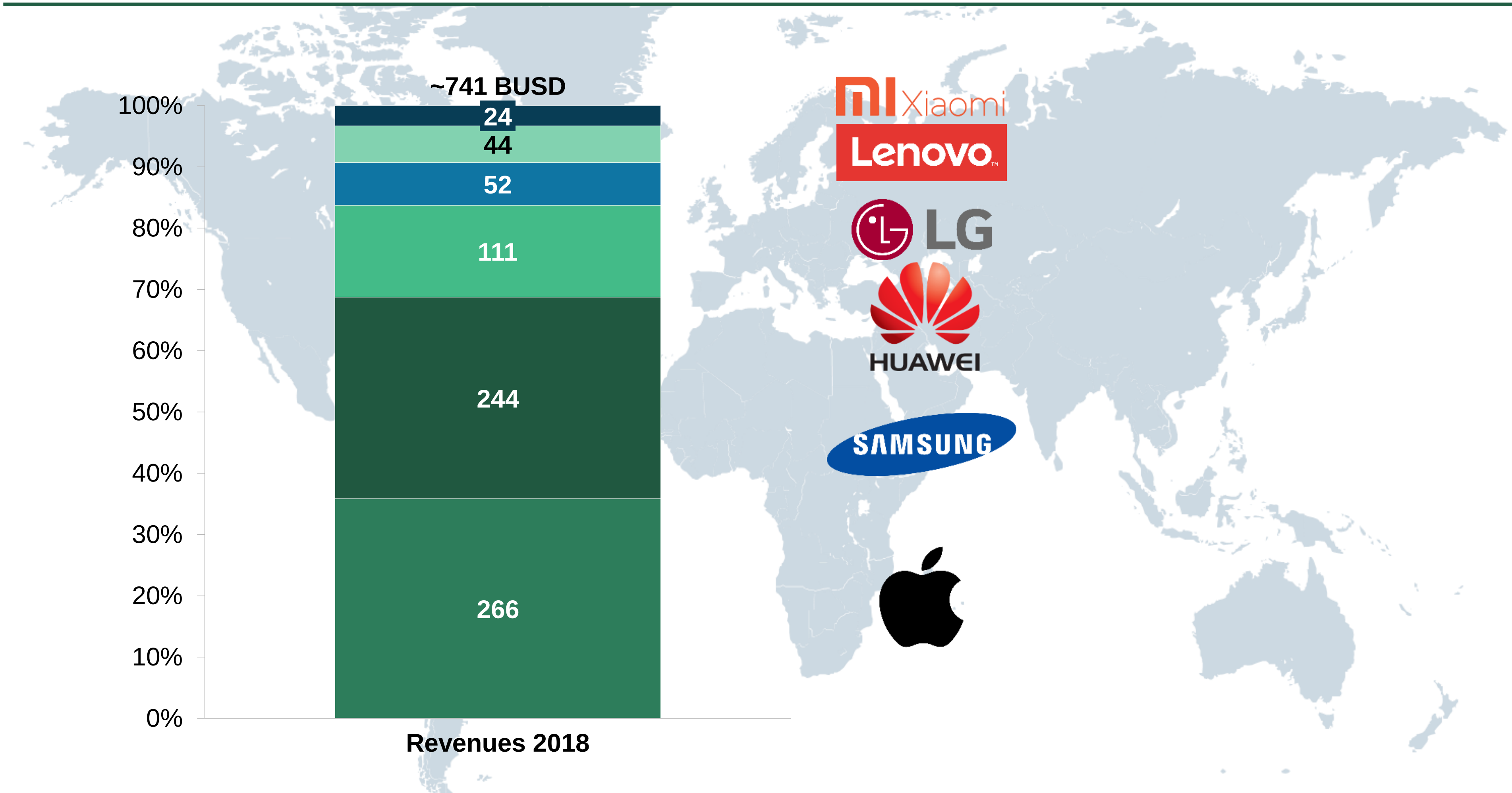
Key takeaways from the Device OEM segment

Key takeaways

Creating Shareholder Value	› Declining ROIC was mainly driven by decreased capital turnover with NOPAT remaining relatively stable during the LTM › Apple suffered a steep decline in ROIC LTM and are currently below 2015-2016 levels
Revenue Performance	› Xiaomi's quarterly year on year revenue growth pace continues to decline from its peak in Q2 2018 › The market undergoes a shift in its business mix, from smartphones towards other smart devices and services
Margin Performance	› Xiaomi showed the most notable change with profitability (NOPAT margin) with +5 p.p. in the last twelve months compared to 2018 › Apple continues to be the Device OEM segment's top performer and continues to deliver above 20% NOPAT margins
Capital Efficiency	› The trend of declining capital turnover continues for all companies except Lenovo which has delivered increased CTR every year since 2015 › Lenovo is now the segment's top performer in terms of capital efficiency after Apple's steep reduction in capital turnover during LTM

The Q2 2019 report includes major device makers, giving an overview of industry performance

Report overview, *revenue in BUSD*



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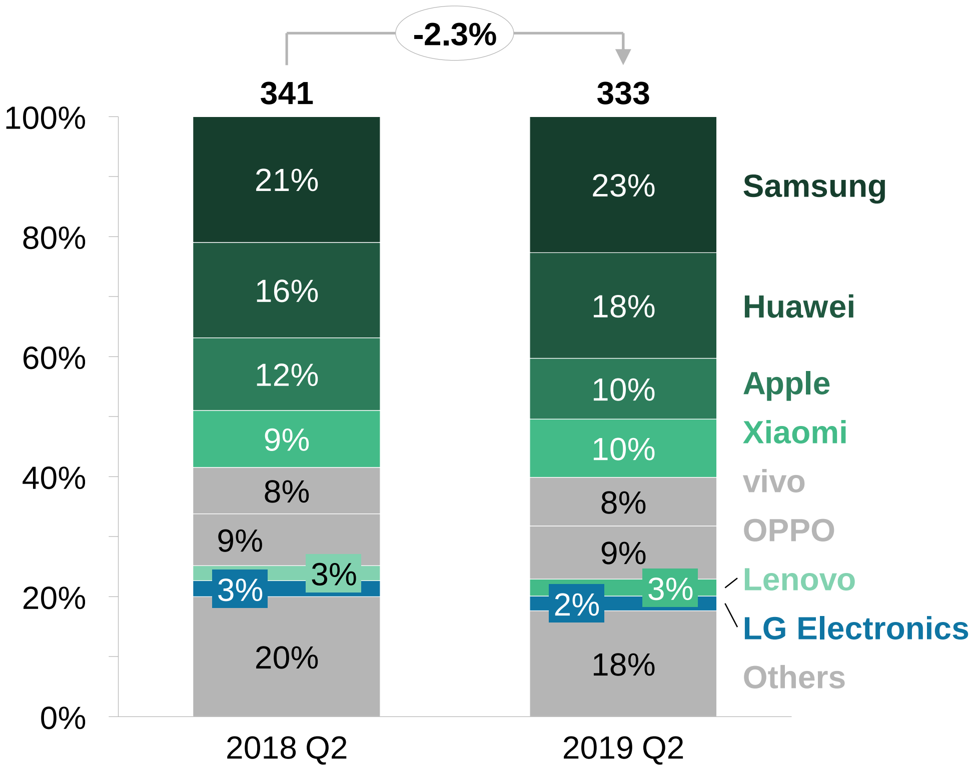
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

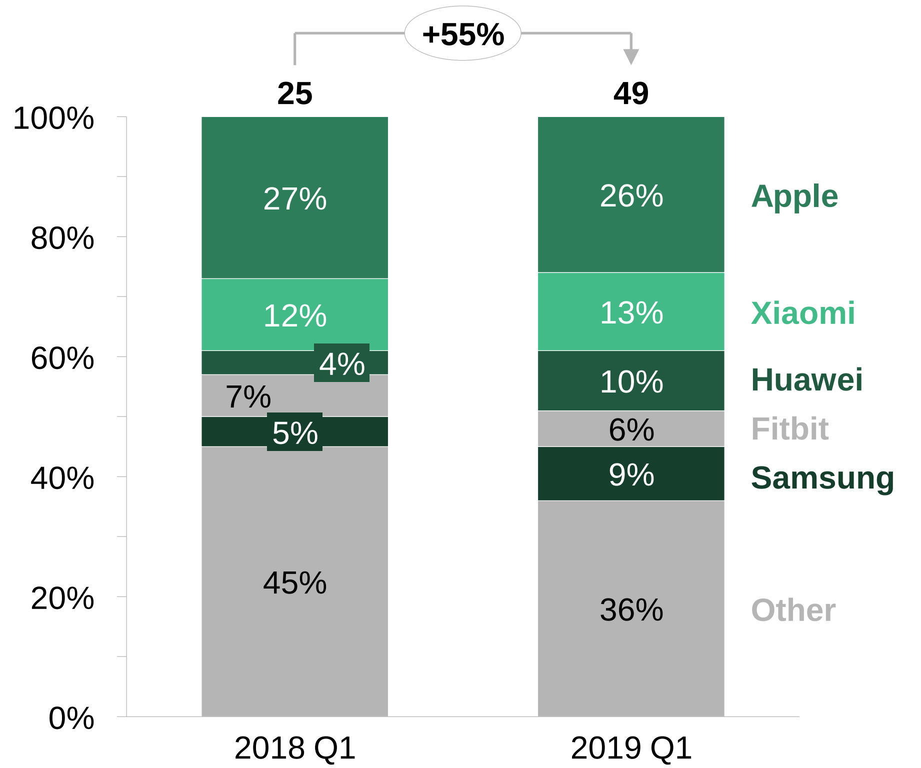
Global smartphone shipments declined by 2.3% year on year in Q2, while global wearables shipments increased by 55% year on year in Q1

Global smartphone shipments
Million units



Samsung maintains market leadership; Huawei continues growing while Apple shipments declines

Global wearables shipments
Million units

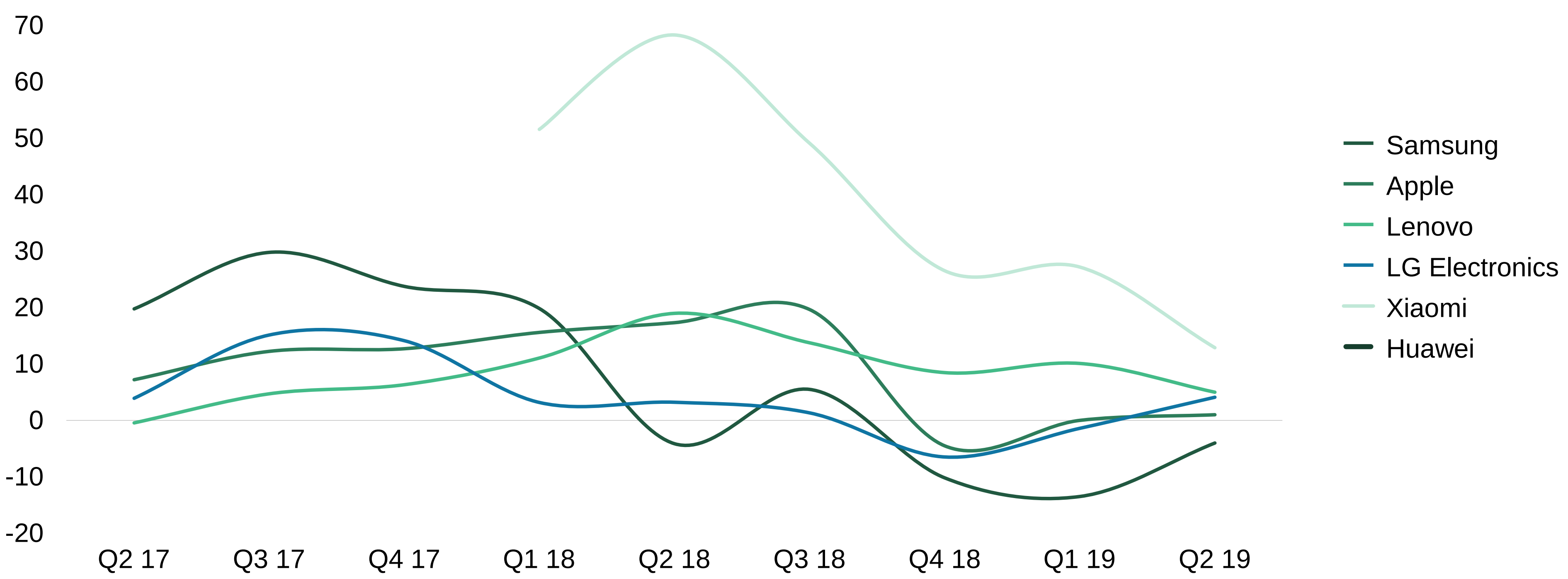


The wearables market's consolidation continues with top 5 players currently controlling ~2/3 of shipments

Notes: Huawei is also tracked as part of the Infrastructure OEM segment
Source: IDC, Counterpoint Research

Xiaomi’s quarterly year on year revenue growth continues to decline from its peak in Q2 2018

Quarterly revenues
Year-on-year change, %



Samsung sales are continuing to trend downwards since peak in Q3 17. Device makers cite growing uncertainties over the global economy and trade for declining growth in revenues

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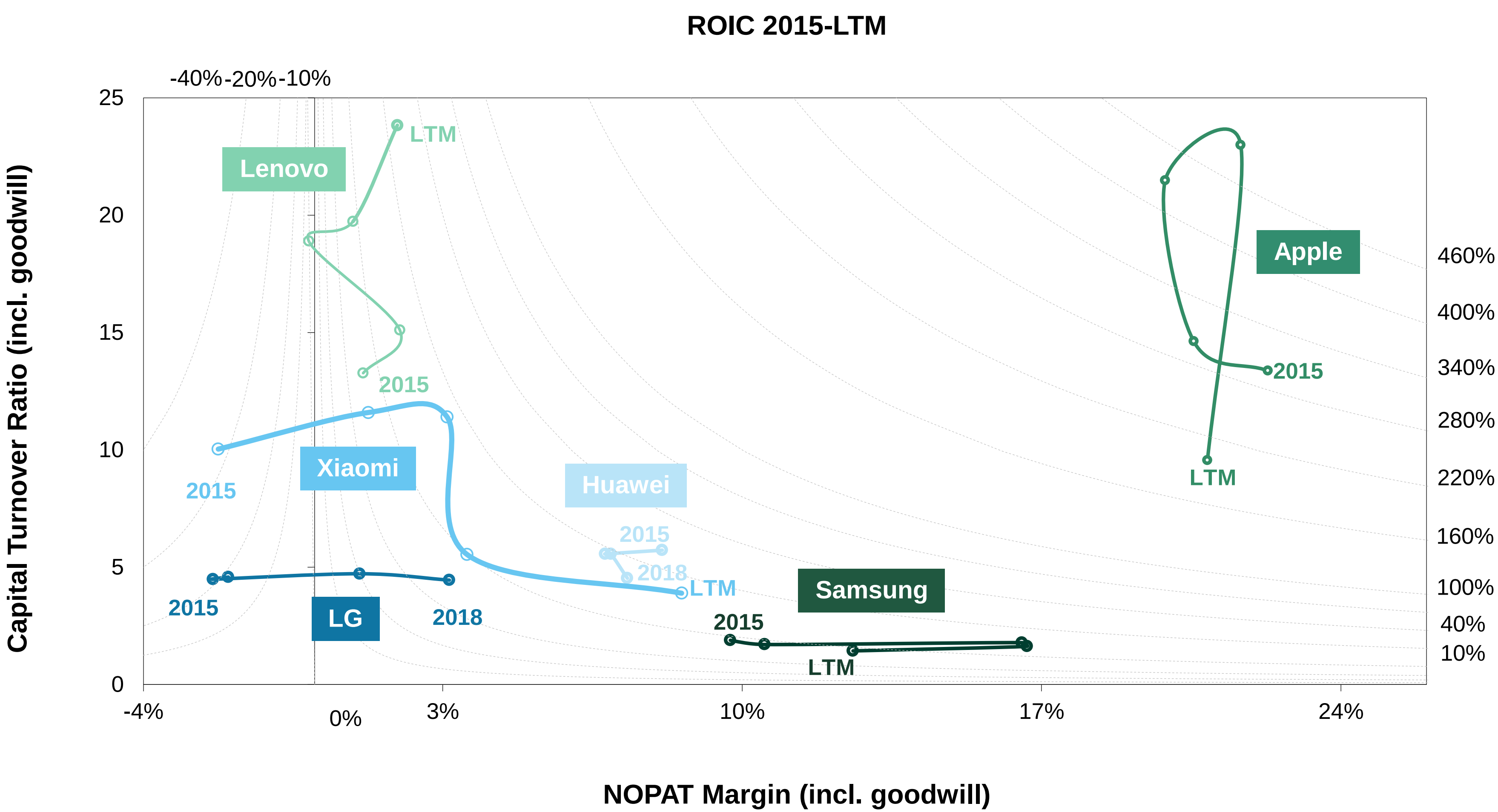
Notes: Missing comprehensive data for Huawei 2019. Xiaomi went public first in 2018.
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Declining ROIC was mainly driven by decreased capital turnover with NOPAT remaining relatively stable during LTM



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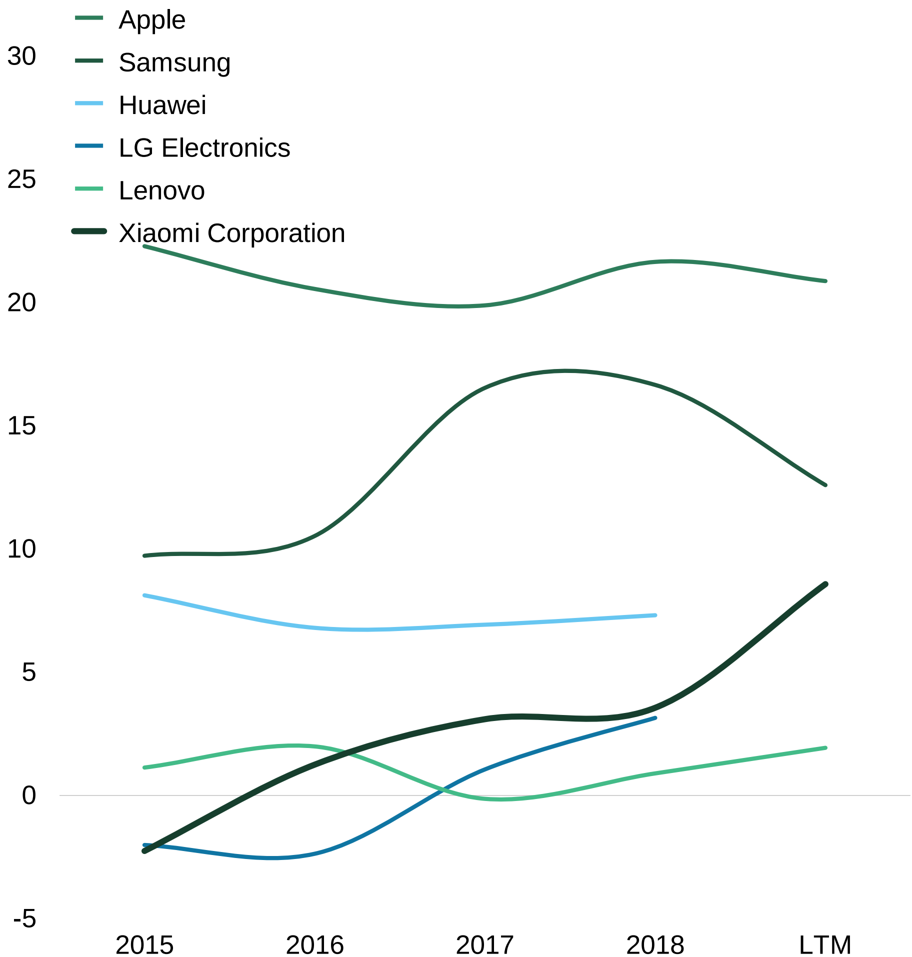
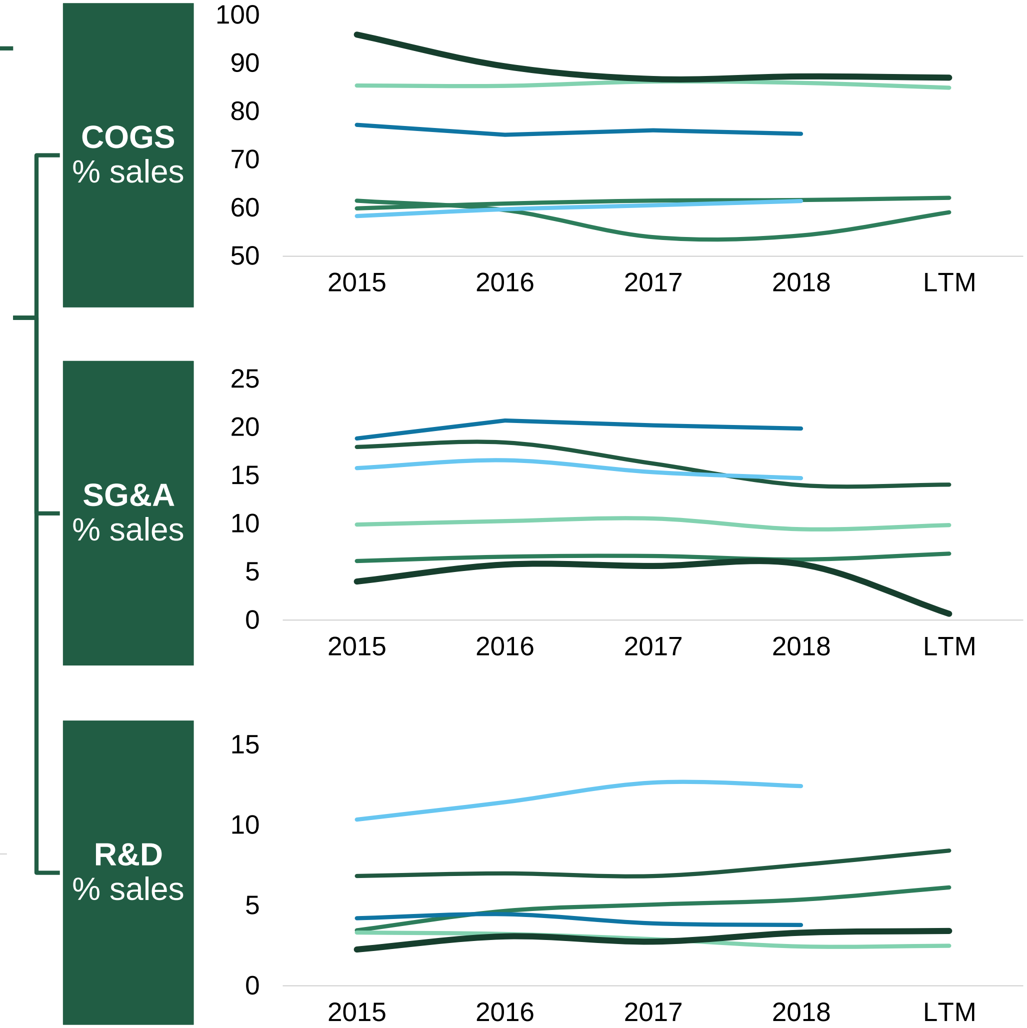
Notes: Missing comprehensive LTM data for Huawei and LG 2019.
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Xiaomi improved its NOPAT margin from -2% in 2015 to 9% in LTM, while Samsung's NOPAT is continuing the declining trend from 2017

NOPAT margin, %





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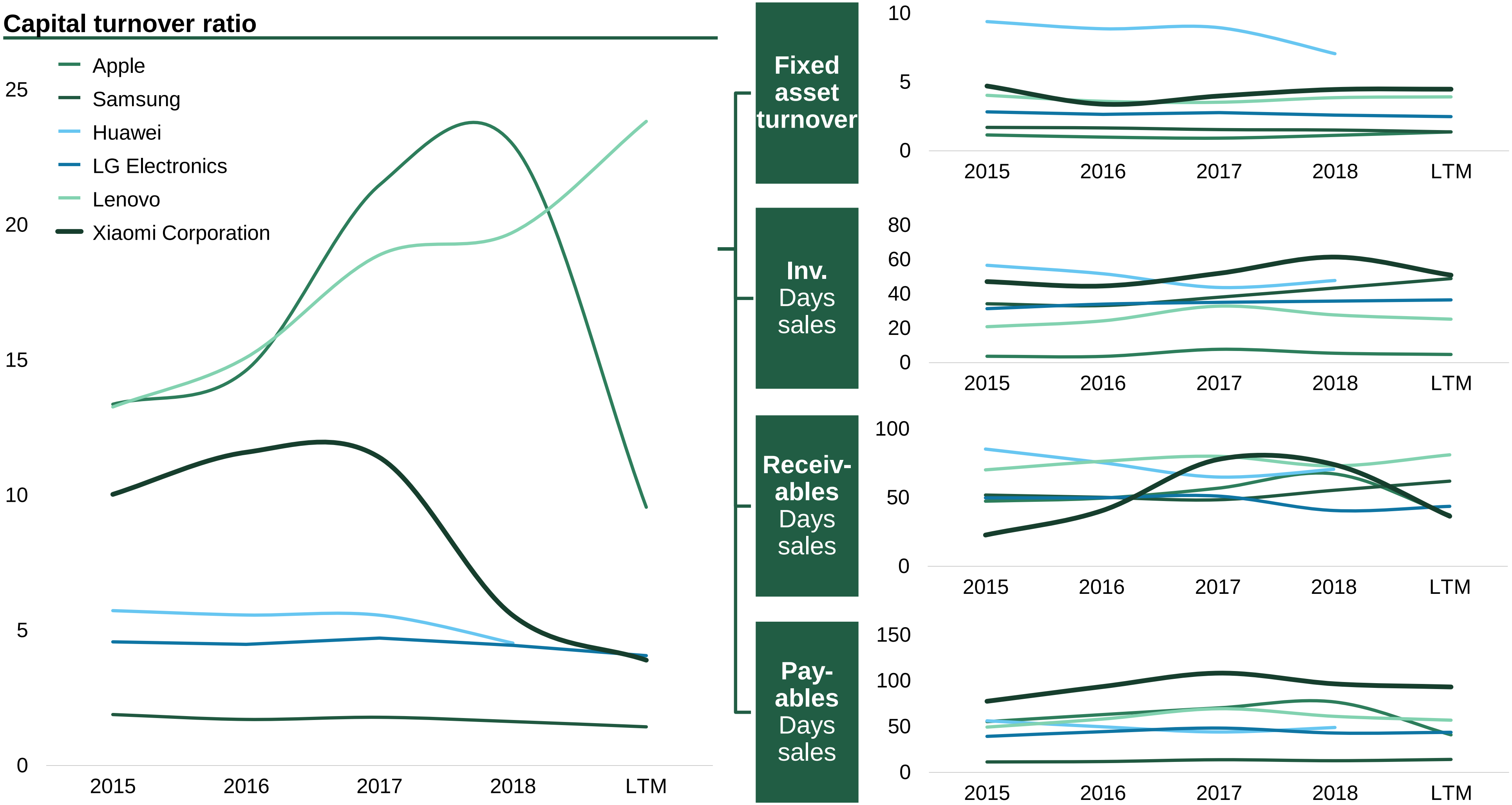
Notes: Missing comprehensive data for Huawei and LG 2019.

Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Capital turnover declined for all companies except Lenovo, Apple noted a steep decline and has reverted below 2015-2016 performance levels



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Notes: Missing comprehensive LTM data for Huawei 2019.

Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

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Applied Value is a management consulting & investment firm founded on the principles of lean growth and entrepreneurship.

1997

Background as an internal change agent in the **Kinnevik Group**…

KINNEVIK

…today, a hands-on consultancy supporting clients **across industries**

2019

Industries of Expertise

- Telecom & Media
- Chemicals & Process
- Industrials & Engineering
- Consumer Goods
- Automotive

Lean Growth Principles

Investments

Management Consulting

Social Responsibility

Selected portfolio companies

HUMAN CARE, COSMOSID, rivermeadow, Bake My Day, Division 5 Inc Steel Fabrication, Söderfors Steel, flexenclosure

APPLIED VALUE

HAND IN HAND, Straight Ahead Ministries, Exodus

ROI driven

Fact-based

Practical over theoretical

Hands-On

Global perspectives

Applied Value challenges and supports repeat global clients across industries from three offices.

Selected ICT Clients

Ericsson, Sony, Facebook, Digicel, Millicom, Telenor, CellMax Technologies AB, rivermeadow, Sprint, Telcel, Nokia, Tele2, 3, BlackBerry, ascom, Telia Company, Tradedoubler, Clavister, Fingerprints, flexenclosure

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