Financial performance and trends in telecommunications

Applied Value

Q1 2019

Applied Value
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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.

Principal Contacts

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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
swisscom
ROGERS
TELE2
proximus
Telia Company
MILLICOM THE DIGITAL LIFESTYLE
tigo

Infrastructure OEMs

NOKIA
ERICSSON
HUAWEI
ZTE中兴
CISCO
JUNIPER NETWORKS

Device OEMs

SAMSUNG
SONY
LG
Lenovo

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Executive summary

Key takeaways per segment

Operators	› Q1 2019 saw overall revenues increase year-on-year with growth driven by Asia Pacific and European operators › However, continuing the negative trend from the end of 2018, many operators are struggling to deliver a strong return on invested capital › In the short term it will be critical for operators to continue focusing on finding OPEX efficiencies , develop clear plans for maximizing the use of 4G assets to cope with growing data requirements while exploring cost efficient ways to roll out 5G
Infrastructure OEMs	› Huawei continues to dominate in terms of value creation with return on invested capital above 37% since 2014 › Despite significant improvements over the last years, both Ericsson and Nokia saw return on invested capital decline LTM. The key question is whether these companies can sustain ROIC levels while simultaneously continuing their revenue growth trajectories › Cisco reported stable performance with margins improving for the fourth consecutive year
Device OEMs	› Device makers are in a challenging position as smartphone shipments are beginning to decline. There is however a clear trend in the segment with the business mix gradually shifting away from smartphones towards higher growth segments such as wearables, smart speakers and services › From a ROIC perspective, Apple continues to be the segments undisputed top performer despite a steep performance decline in the last twelve months. Overall most players saw ROIC decline, driven by worsened capital turnover.

Roundup of telecommunication forecasts

Growth in mobile subscriptions is expected to be dominated by Asian markets. During Q3 2018 China had the highest number of net additions (+37 million), followed by India (+31 million) and Indonesia (+13 million). In fact, Indonesia alone outgrew all western markets combined (North America and Europe added 8 million subscriptions). Mobile broadband is expected to be the key future driver for subscription uptake, fueled by 5G deployments.

Source: Ericsson Mobility Report January 2019

By 2022, global mobile data traffic will be 77 exabytes and the average smartphone connection speed will exceed 40 Mbps with ~10% of mobile traffic running over 5G networks. However, a large share of traffic (~60%) will be offloaded to Wi-Fi networks.

Source: Cisco Visual Networking Index

By 2024, video is expected to account for 74% of all mobile data traffic (~35% p.a. growth 2019-2024). Video growth will be fueled both by increased streaming and increased sharing as well as embedded video in web browsing and social media.

Source: Ericsson Mobility Report January 2019

The mobile device market will continue to face challenges, sales will improve slightly during 2019 but will not be enough to see the market return to growth by the end of the year. The key growth challenges will remain the same; **longer replacement cycles, a challenging Chinese market, and geopolitical headwinds. These challenges are not expected to be fully offset by the deployments of 5G networks and new form factors (i.e. foldables) in the short term**. Growth is expected to return during 2020, with large scale 5G deployments kick-starting device refreshes.

Source: IDC Mobile Phone Forecast 2019-2023

Financial overview (1/2): Yearly performance

	Segment	2015	2016	2017	2018	LTM
Return on invested capital (ROIC)	Operators	9.5%	8.8%	9.0%	8.7%	8.8%
	Infrastructure OEMs	20.1%	12.2%	10.4%	15.1%	N/A
	Device OEMs	51.3%	45.4%	55.5%	62.1%	40.1%
Net operating profit after tax (NOPAT)	Operators	11.3%	10.8%	11.2%	12.3%	11.4%
	Infrastructure OEMs	8.9%	6.0%	4.9%	7.5%	N/A
	Device OEMs	12.6%	12.3%	14.4%	16.5%	15.8%
Invested capital turnover	Operators	0.60	0.61	0.60	0.59	0.64
	Infrastructure OEMs	2.4	2.3	2.2	2.3	N/A
	Device OEMs	4.1	3.7	3.9	3.8	2.5

Financial overview (2/2): Quarterly performance

	Segment	18 Q2	18 Q3	18 Q4	19 Q1
Sales Y-o-Y % change	Operators	-11.9%	3.3%	2.7%	7.3%
	Infrastructure OEMs	-5.8%	5.4%	4.1%	N/A
	Device OEMs	7.8%	12.1%	-5.3%	-5.2%
Net operating profit after tax (NOPAT) Y-o-Y change	Operators	-1.5 p.p.	+0.7 p.p.	-1.7 p.p.	+0.4 p.p.
	Infrastructure OEMs	-1.2 p.p.	+3.5 p.p.	+2.1 p.p.	N/A
	Device OEMs	+0.7 p.p.	+1.6 p.p.	-2.0 p.p.	-4.3 p.p.
EBITDA Y-o-Y change	Operators	-1.5 p.p.	+1.9 p.p.	+3.3 p.p.	-0.2 p.p.
	Infrastructure OEMs	+0.7 p.p.	+2.3 p.p.	+0.1 p.p.	N/A
	Device OEMs	+1.8 p.p.	+2.6 p.p	-1.9 p.p.	-3.7 p.p.

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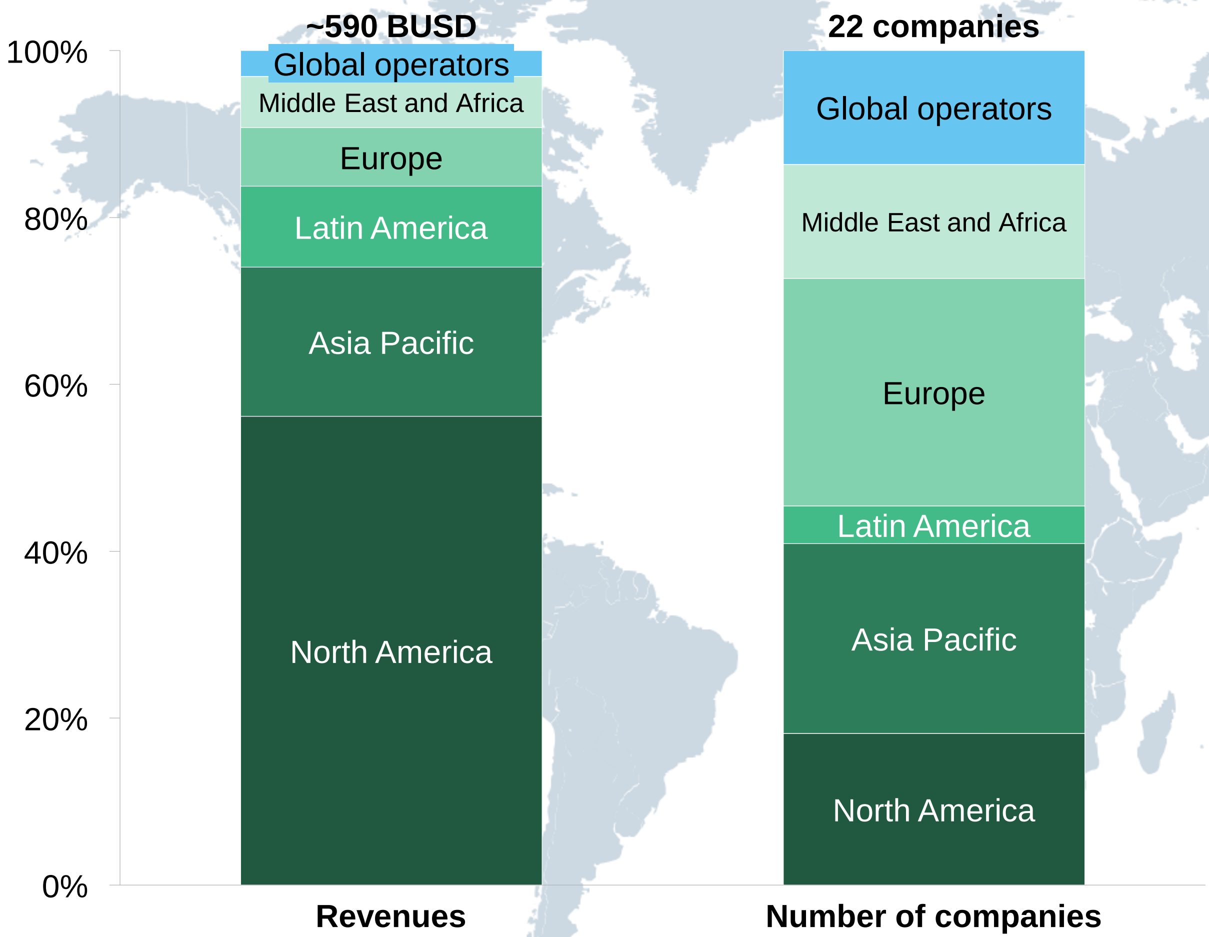
Key takeaways from the operator segments

Key takeaways

Creating Shareholder Value	› During the first quarter of 2019, operator return on invested capital (ROIC) varied between 2% and 17% › Compared to the same period 2018, a majority of operators saw ROIC performance decline
Revenue Performance	› Revenues declined in in Q1 2019 compared to Q4 2018 but are still up year-on-year › Asia Pacific and European operators led the pack by returning to growth year-on-year while Global and Latin American operators declined
Margin Performance	› Overall operator profitability rebounded in Q1 after a weak end in 2019 and are currently in line with the longer term trend › From a regional perspective, all regions except Asia Pacific saw EBITDA margins improve year-on-year
Capital Expenditure	› The long term CAPEX trend continues to trend upwards despite a slow down in Q1 › Increased investments are mainly driven by Asia Pacific and Global operators

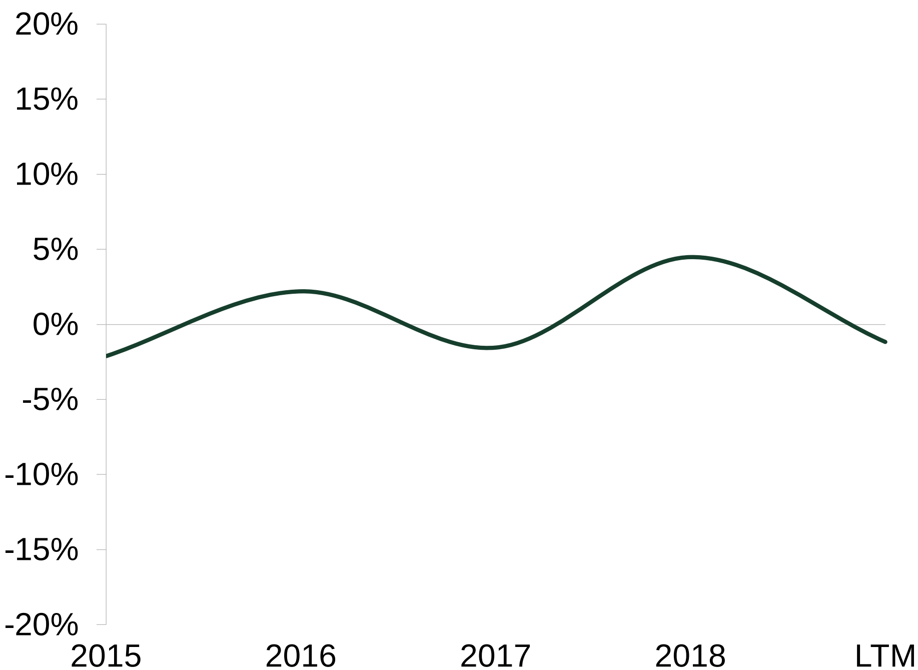
The Q1 2019 report includes 22 of the largest operators accounting for ~590 BUSD in annual revenues, giving an overview of industry performance

Report overview

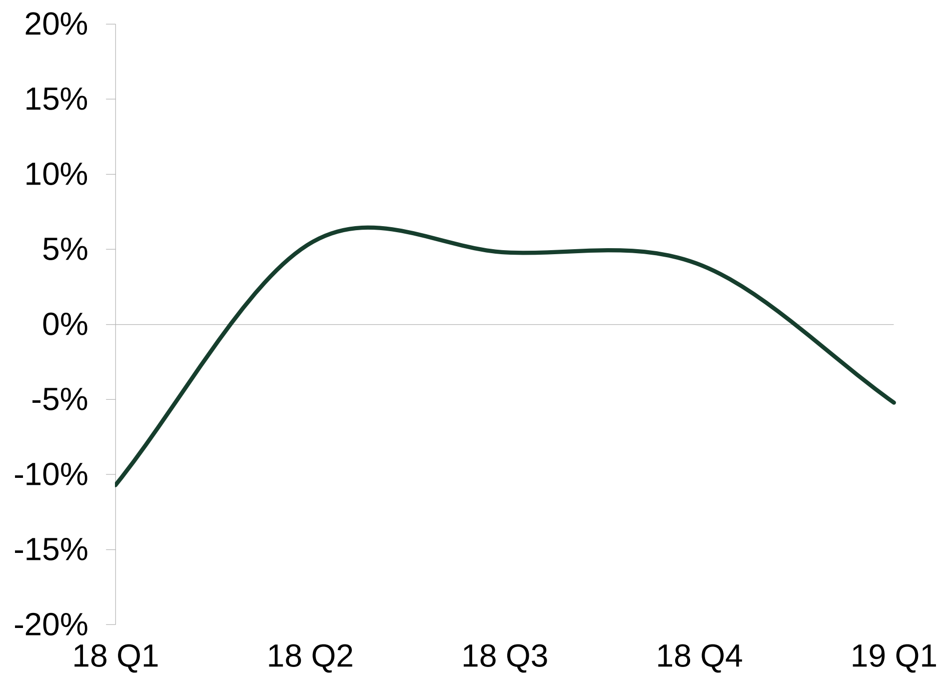


Q1 19 saw revenues decline compared to the previous quarter however with positive development year-on-year

Revenues
2015-LTM



Revenues
18 Q1-19 Q1



Long term revenue trend remains largely flat

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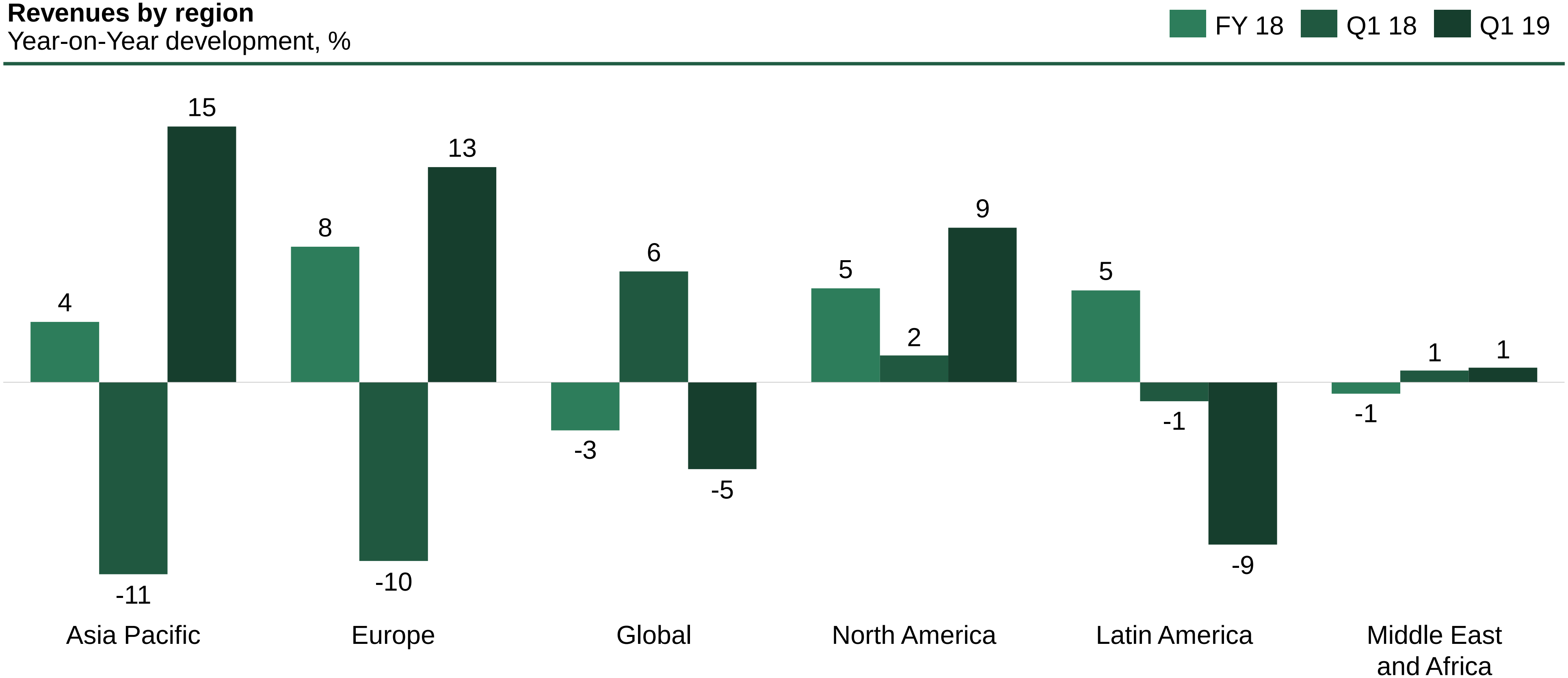
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Most regions reported positive revenue development year-on-year with strongest uplift by Asia Pacific and European operators

Revenues by region
Year-on-Year development, %



Global and Latin American operators saw revenues decline year-on-year

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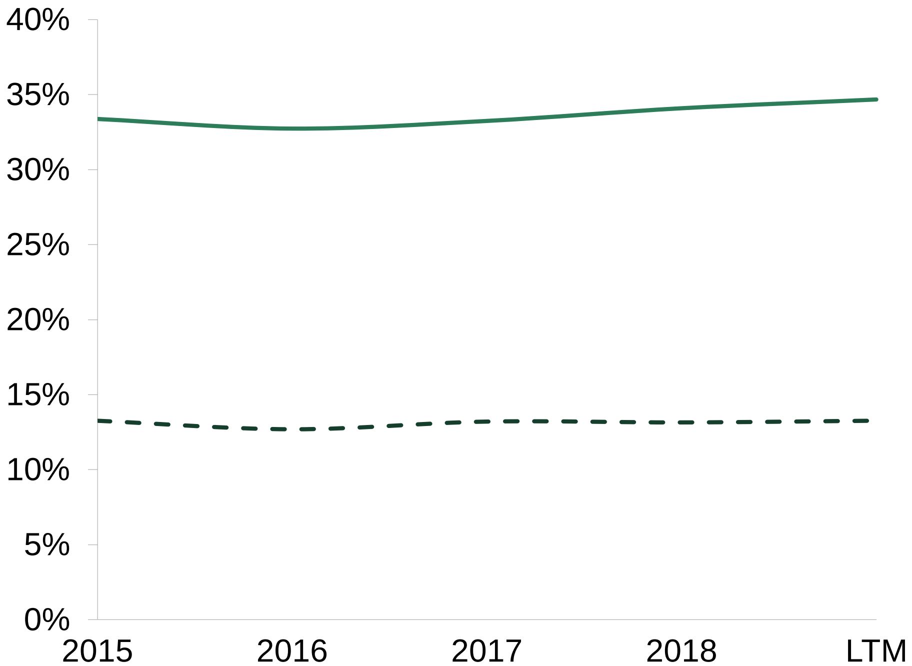
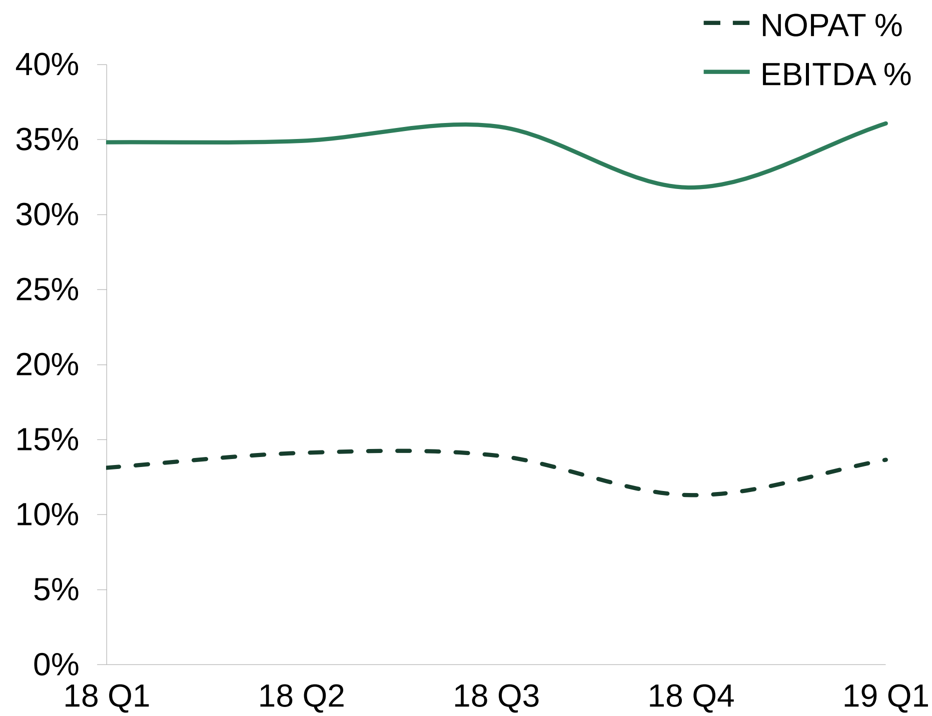
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Overall profitability rebounded after a slightly weaker Q4 with short term EBITDA and NOPAT margins now in line with longer term trend

Profitability
2015-LTM



Profitability
18 Q1-19 Q1



Gap between EBITDA and NOPAT remains constant at 20 to 22 percentage points

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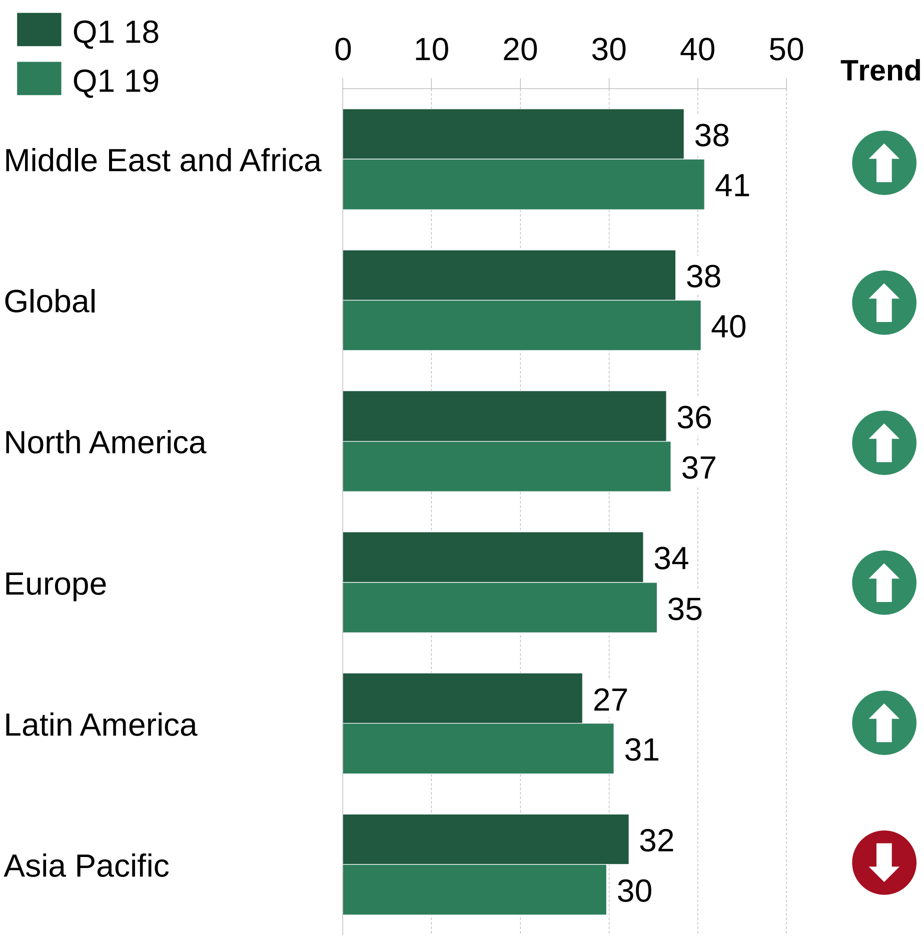
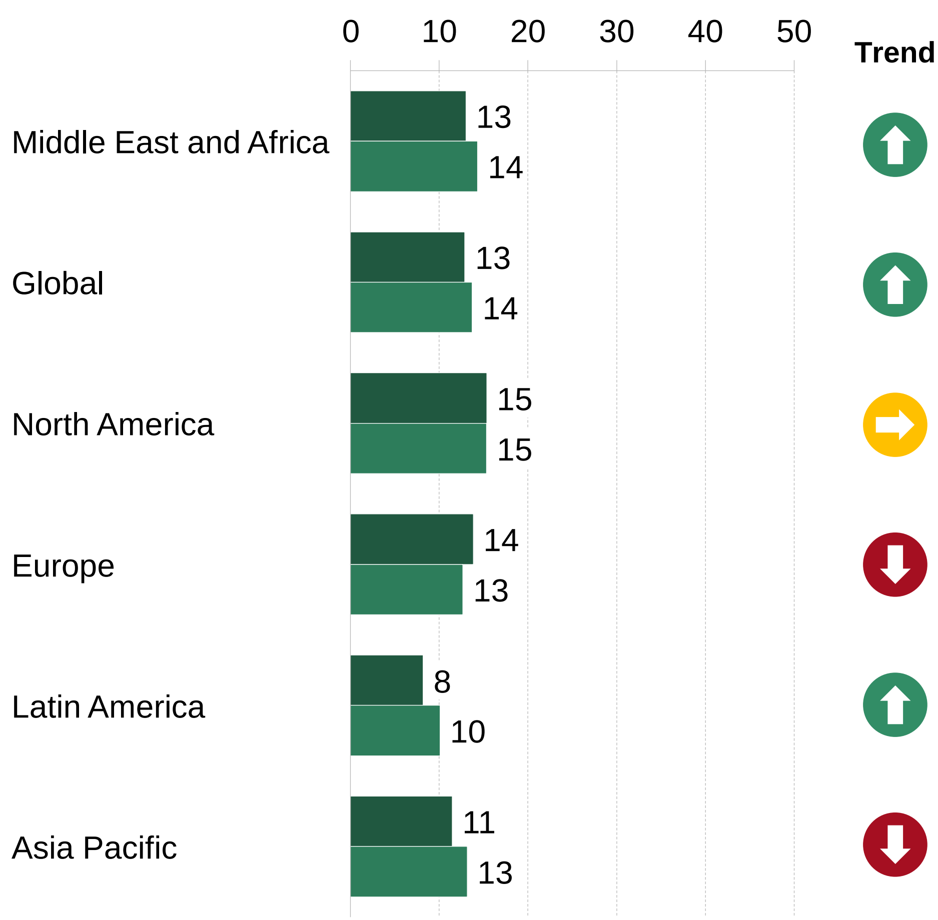
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

EBITDA margins improved across a majority of regions year-on-year, however with Asia Pacific operators declining despite strong sales trend

EBITDA
% of revenues



NOPAT
% of revenues



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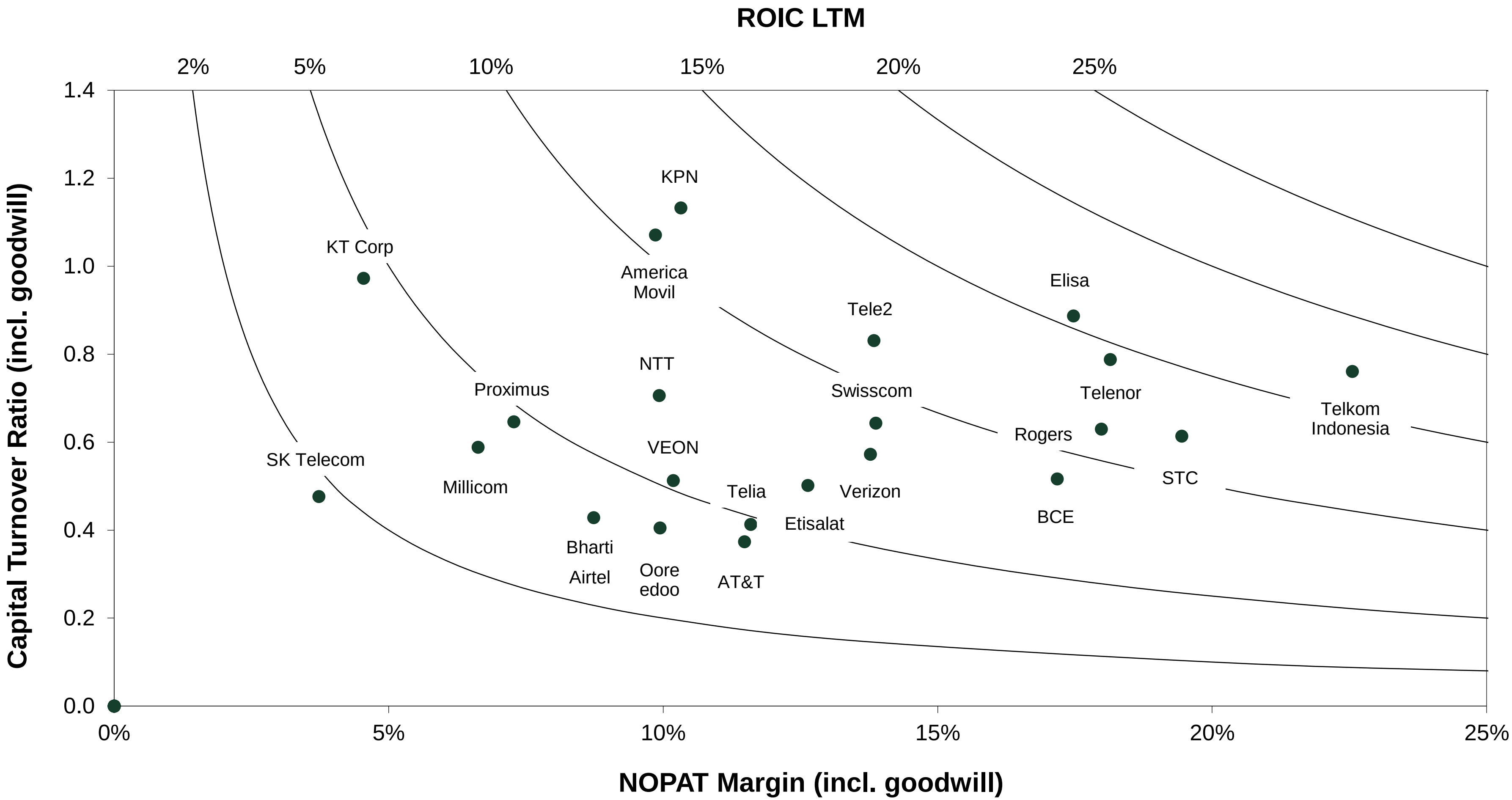
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

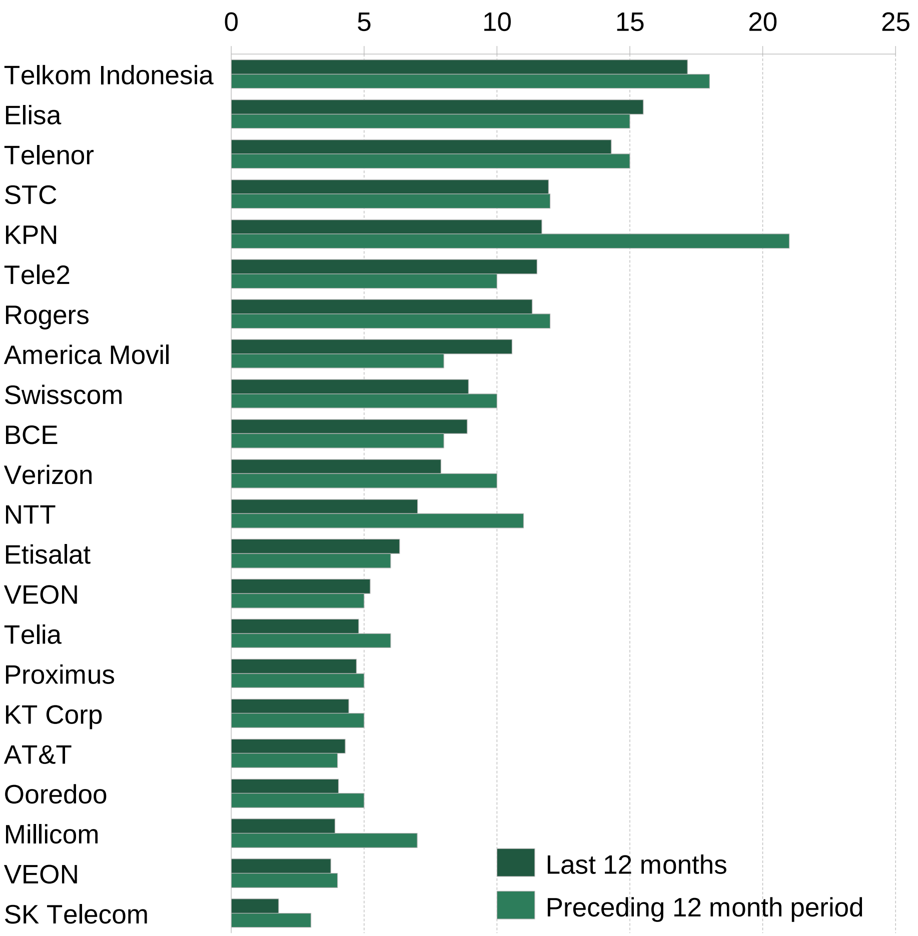
Over the last 12 months ROIC performance varied between ~2% and ~17%



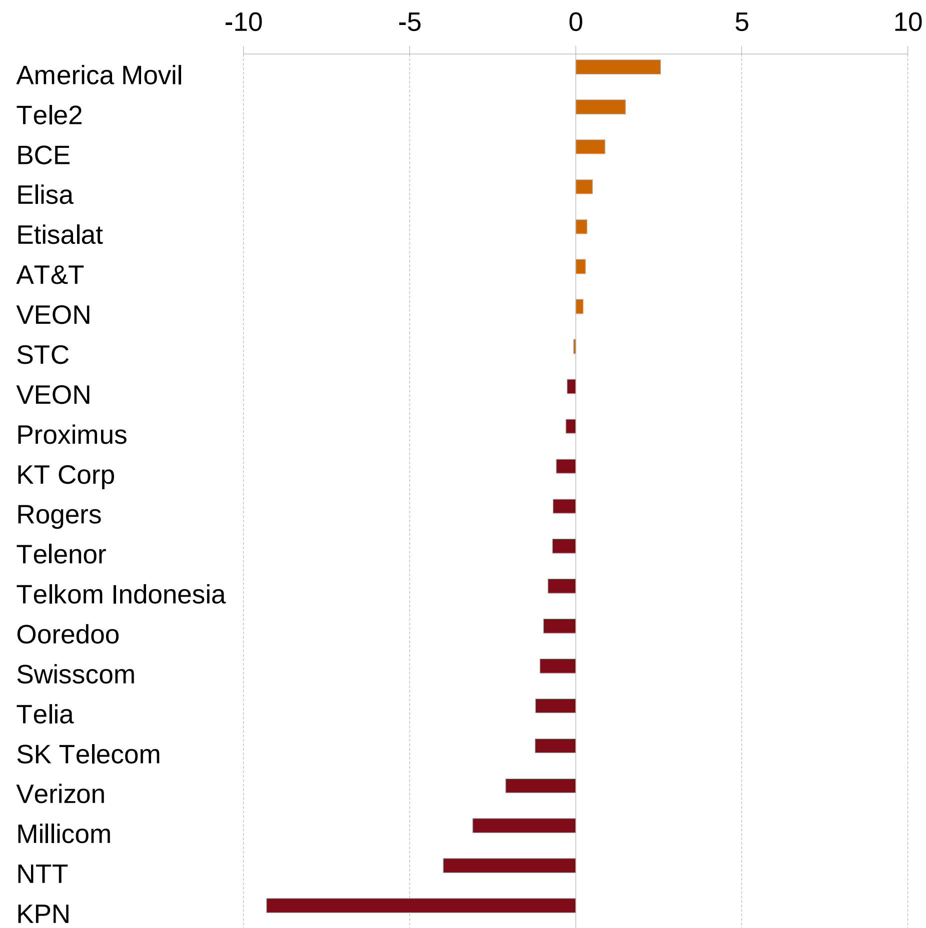
Notes: ROIC = Return on Invested Capital (actual return that the company has generated after tax)
Throughout the ROIC calculation, EBIT is normalized to remove one-time or unusual influences.
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Most operators saw ROIC decline compared to the preceding 12 month period

ROIC
Last 12 months vs preceding 12 month period, %



ROIC
Delta, %



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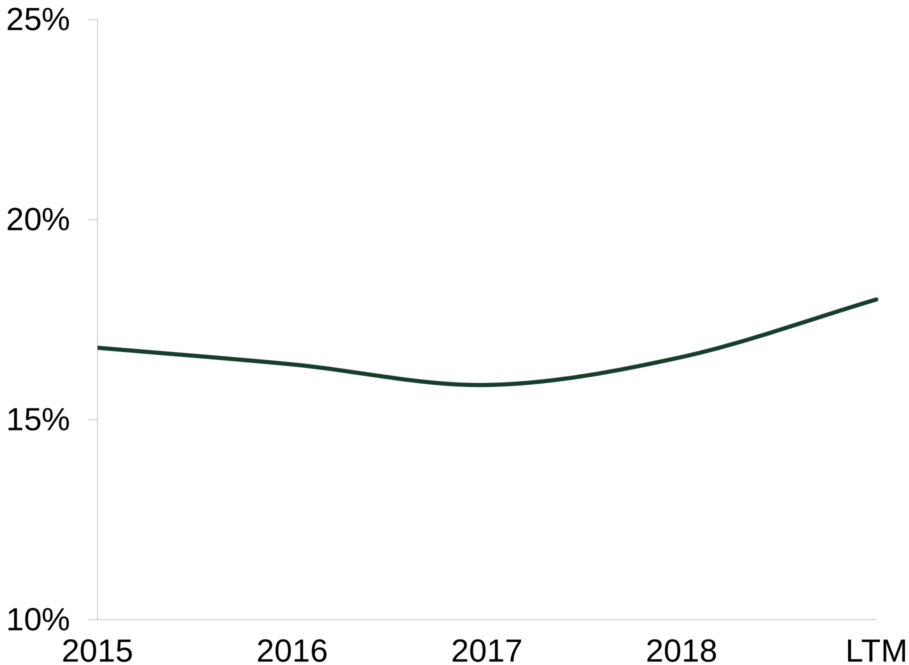
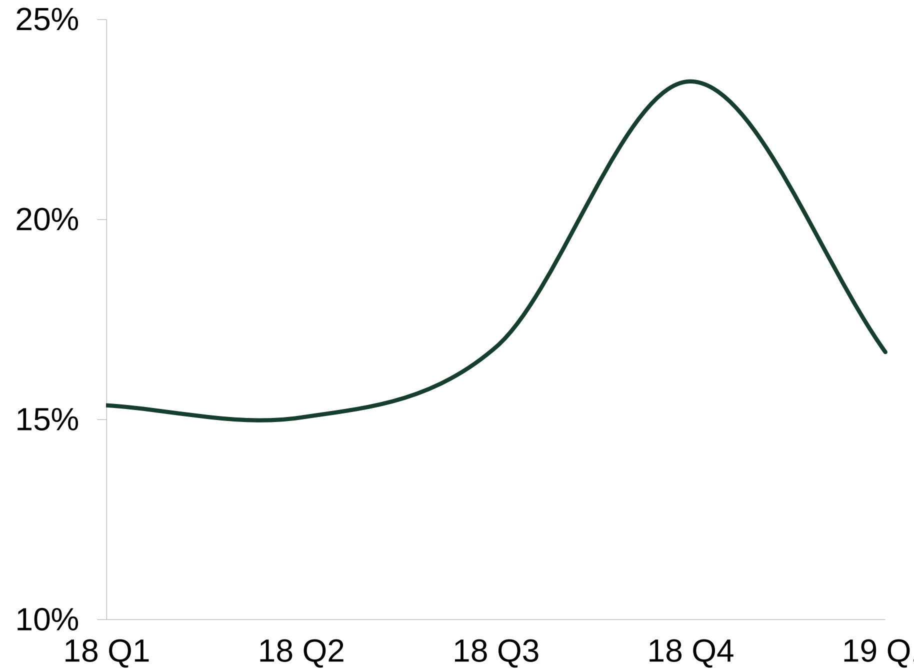
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Despite downturn in the last quarter, longer term CAPEX is beginning to trend upwards

CAPEX over sales
2015-LTM



CAPEX over sales
18 Q1-19 Q1



CAPEX moving slowly upwards as operators look to expand 4G capacity to meet growing data demands and prepare for 5G

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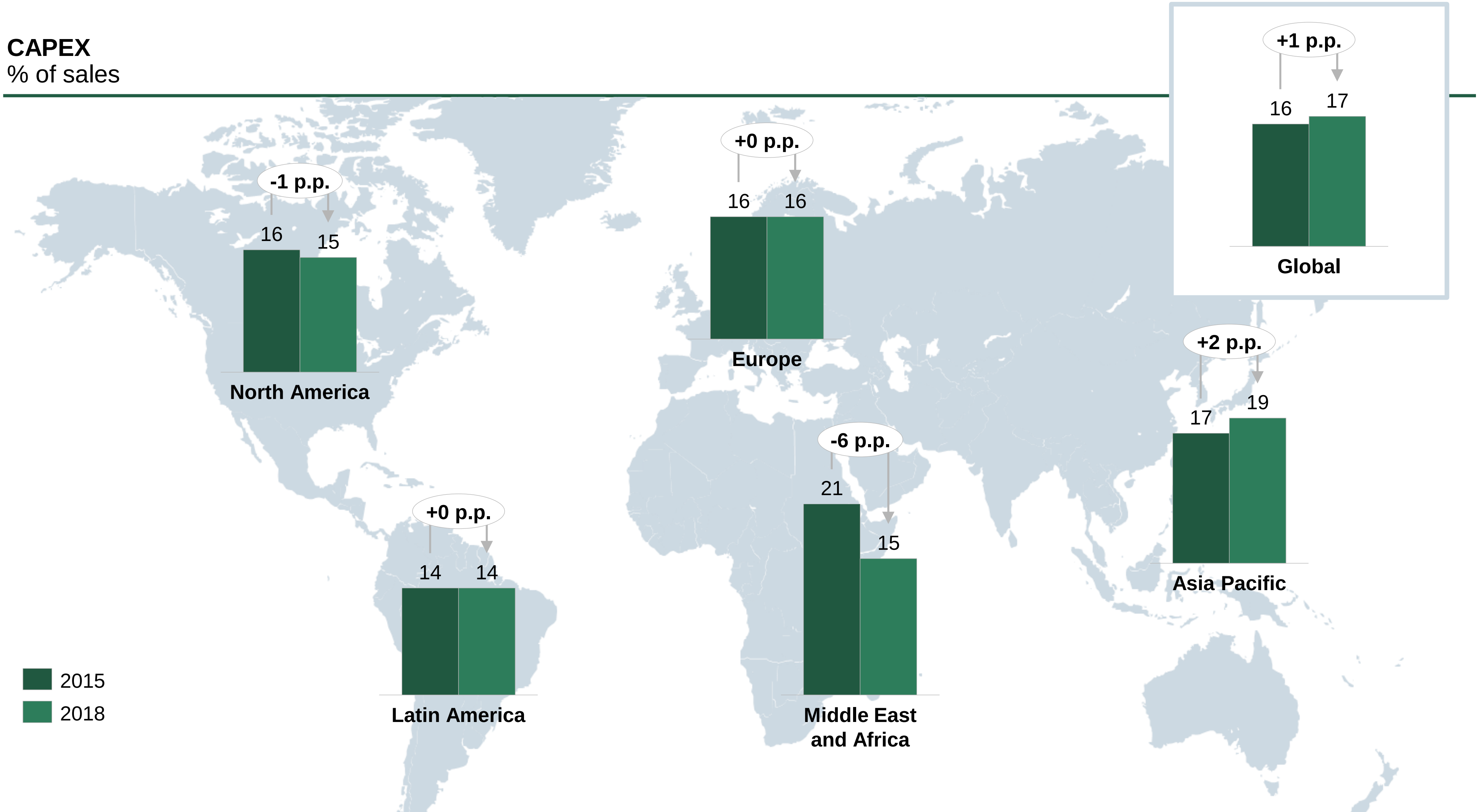
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

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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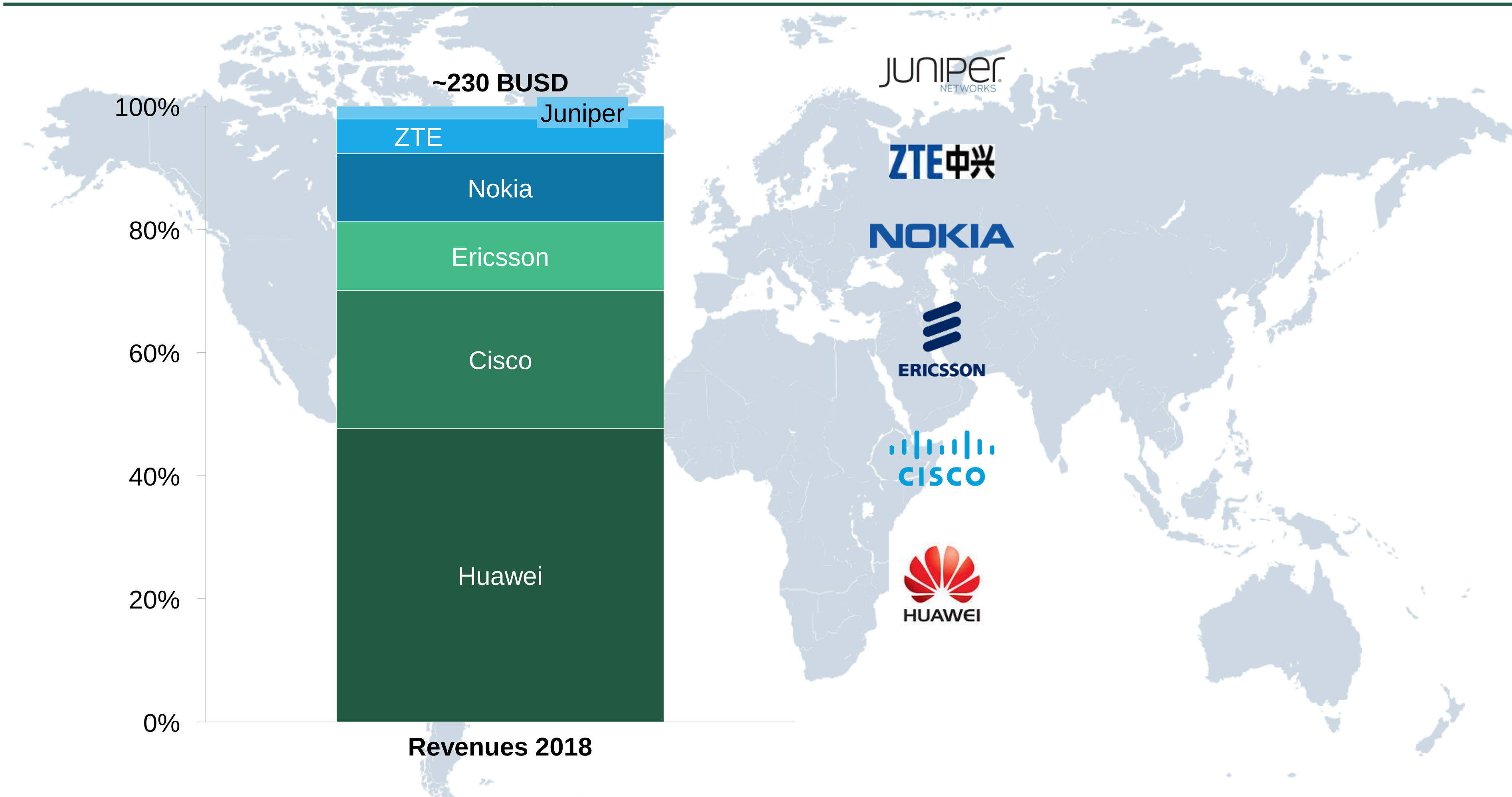
Key takeaways from the Infrastructure OEM segment

Key takeaways

Creating Shareholder Value	› Huawei continues to outperform by delivering ~40% return on invested capital › Juniper saw a slight ROIC increase and are currently in line with long term ROIC at ~9% › Ericsson and Nokia saw ROIC decline LTM
Revenue Performance	› Ericsson continued positive growth trajectory (+13% y-o-y) and has demonstrated double-digit growth in three consecutive quarters › ZTE and Juniper saw the weakest performance with 23% and 8% y-o-y declines respectively
Margin Performance	› Ericsson and Nokia saw margins decline LTM, in both cases driven by increased COGS › Both Cisco and Juniper benefitted from reduced corporate tax rates and recorded improved NOPAT margins
Capital Efficiency	› Huawei continues to outperform in capital efficiency and has recorded >5 since 2015 › Ericsson continued to improve and maintained the positive momentum which began in 2017

The Q1 2019 report includes the major infrastructure players, giving an overview of industry performance

Report overview



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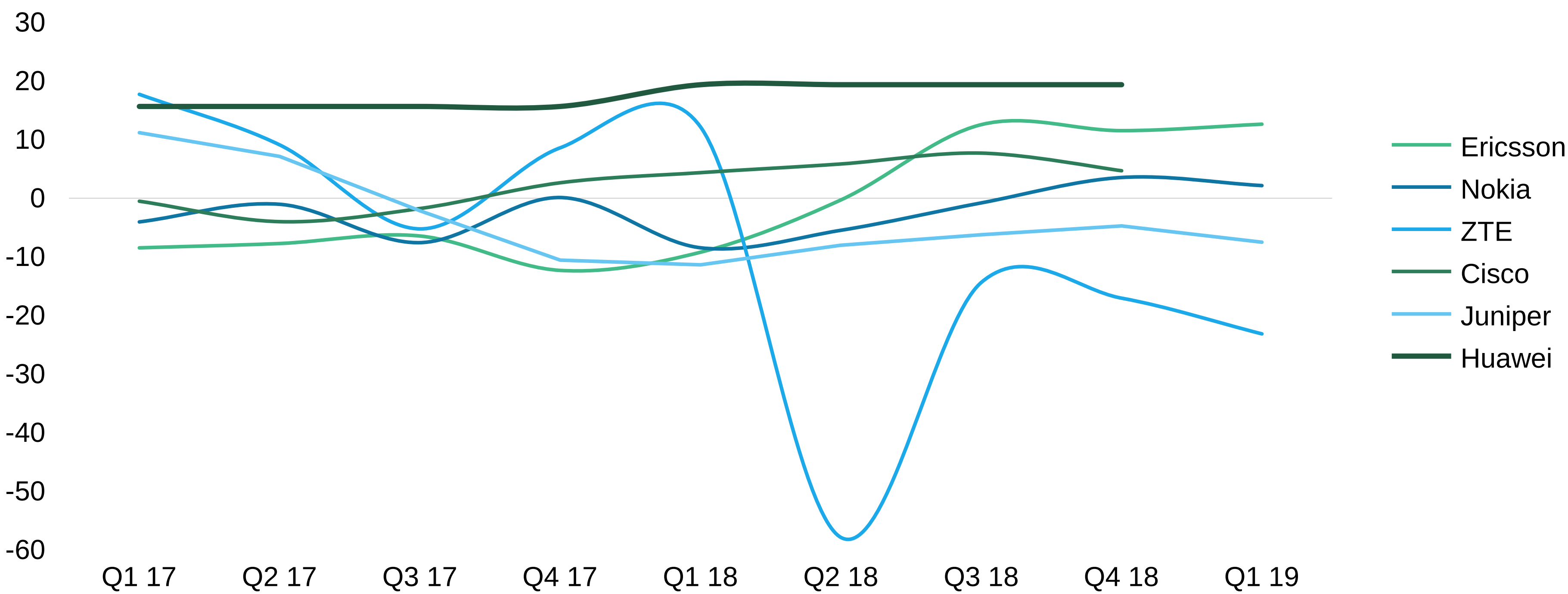
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

During Q1 19 Ericsson continued the positive growth trajectory while Juniper and ZTE failed to revert their negative trends

Quarterly revenues
Year-on-year change, %



The positive trend for Ericsson continued in Q1 19 which was the third consecutive quarter with double-digit year-on-year growth

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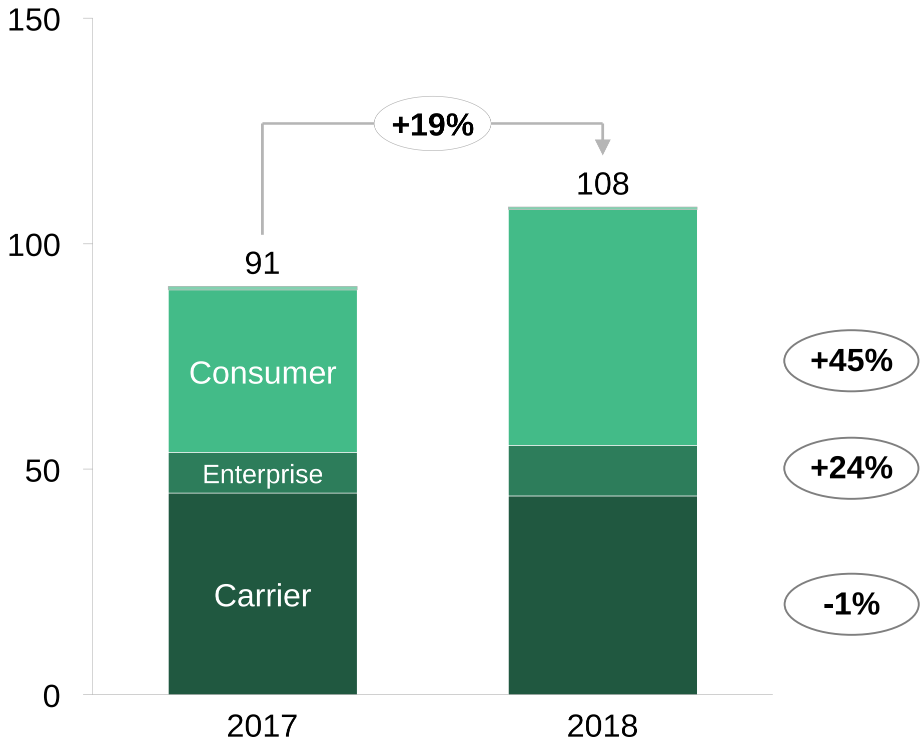
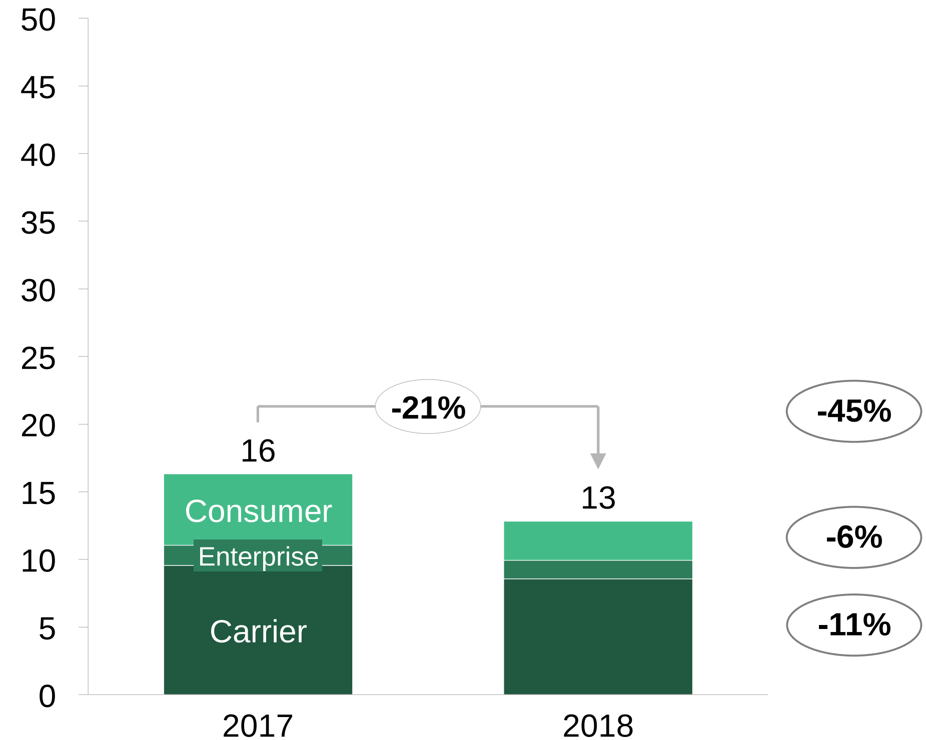
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Huawei's growth was driven by the consumer business, ZTE saw all segments decline with a dramatic slowdown in the consumer business

Revenues by segment
BUSD

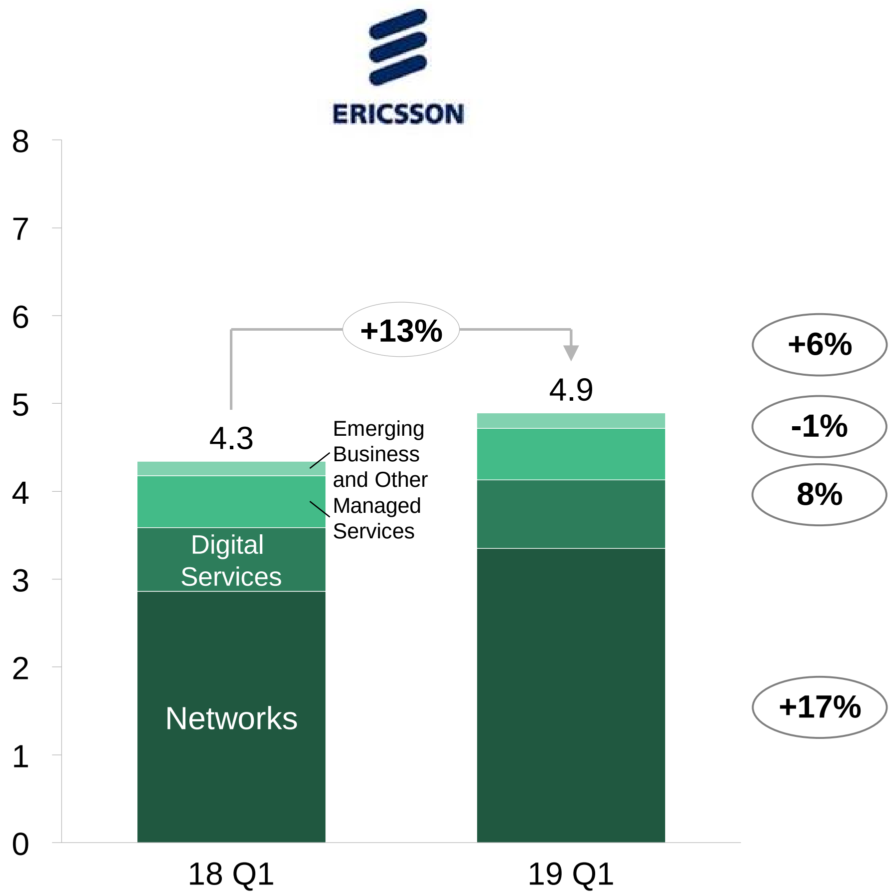


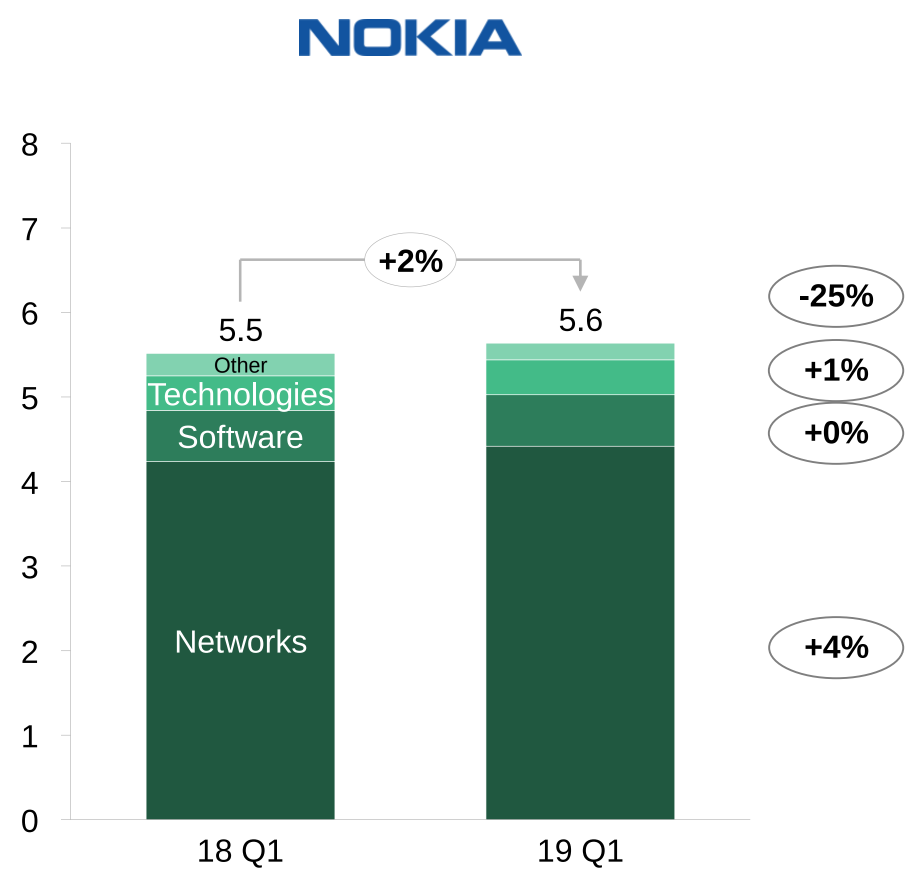


Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Ericsson's revenue was driven by ~17% y-o-y uplift in Networks with also Digital Services showing growth, Nokia reported ~4% uplift in Networks

Revenues by segment
BUSD





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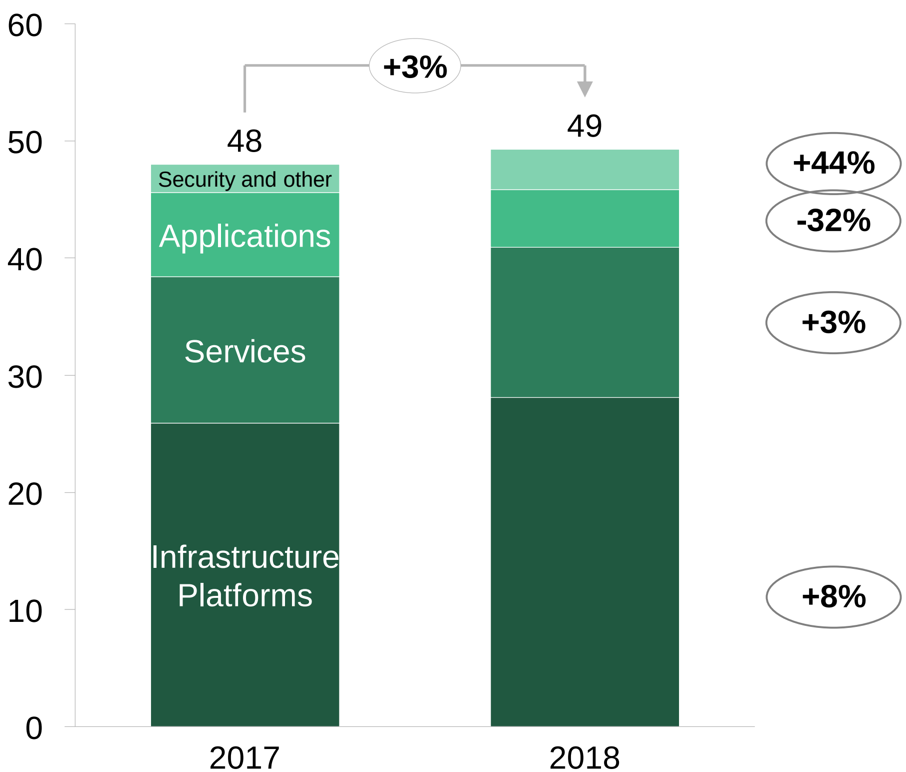
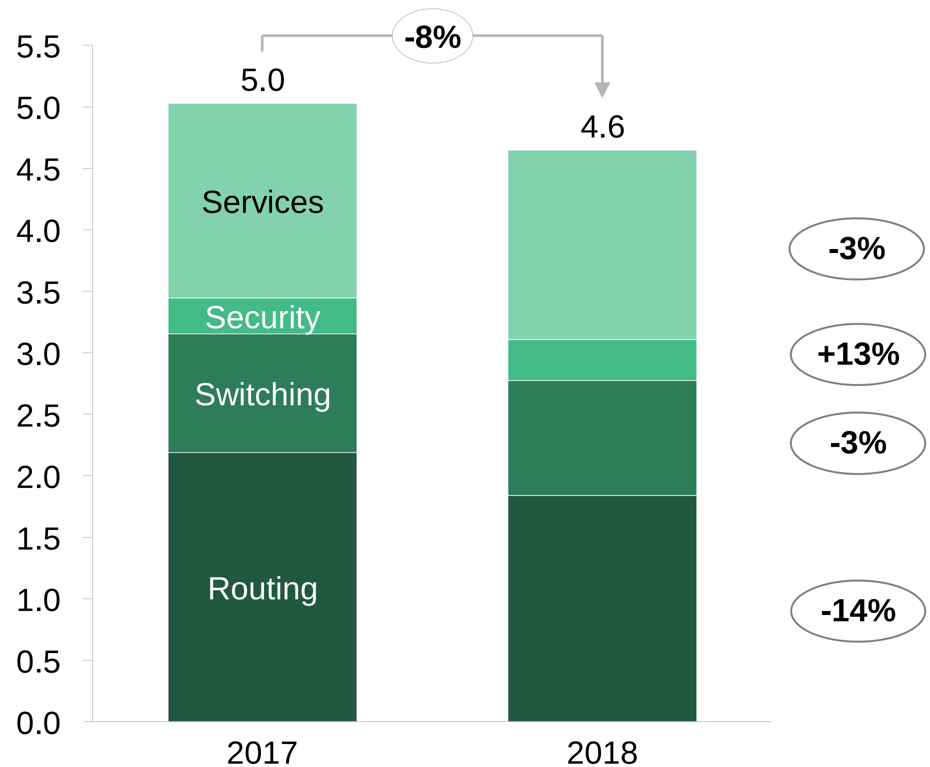
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Cisco grew Infrastructure ~8% y-o-y but saw sharp decline in Applications, Juniper's growth in security was not enough to offset decline in networks

Revenues by segment
BUSD





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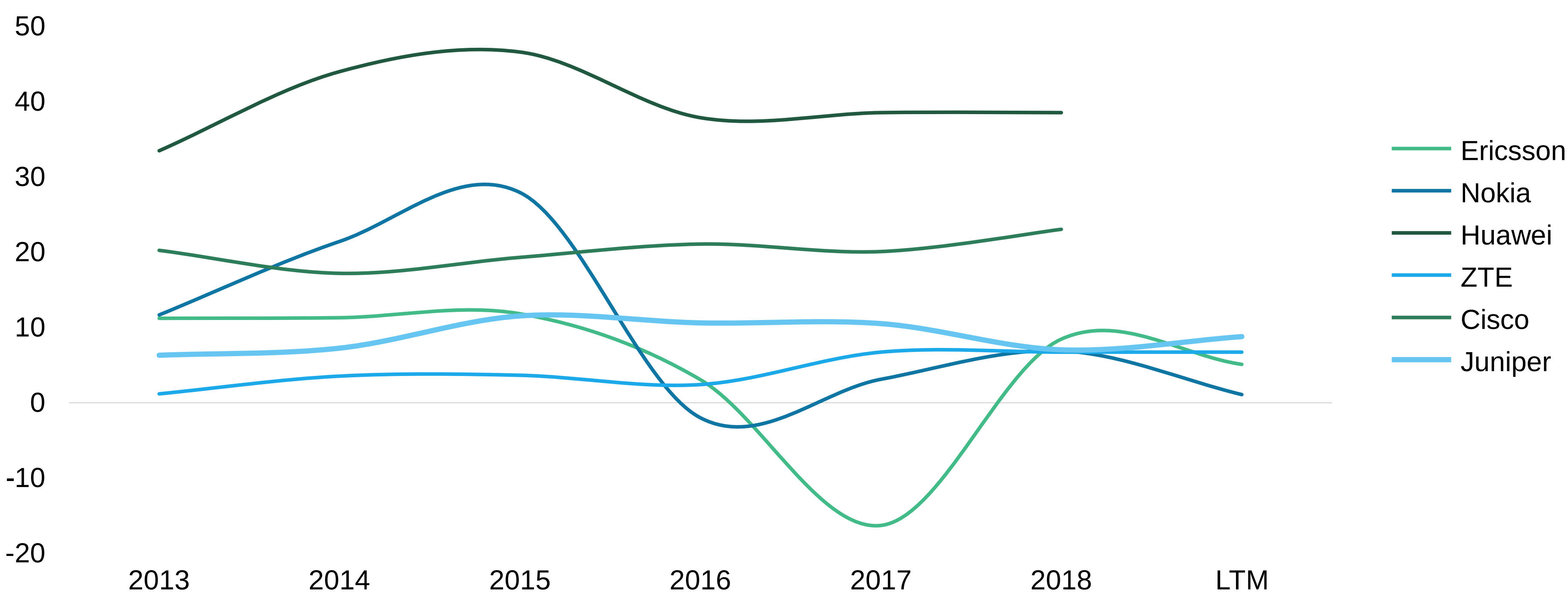
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Juniper saw ROIC increase slightly during Q1 while Ericsson and Nokia declined, Huawei has consistently outperformed 13-18 with ~40% ROIC

Return on Invested Capital
%



Over the last 12 months, Ericsson and Nokia declined 3.4 p.p. and 5.8 p.p. respectively

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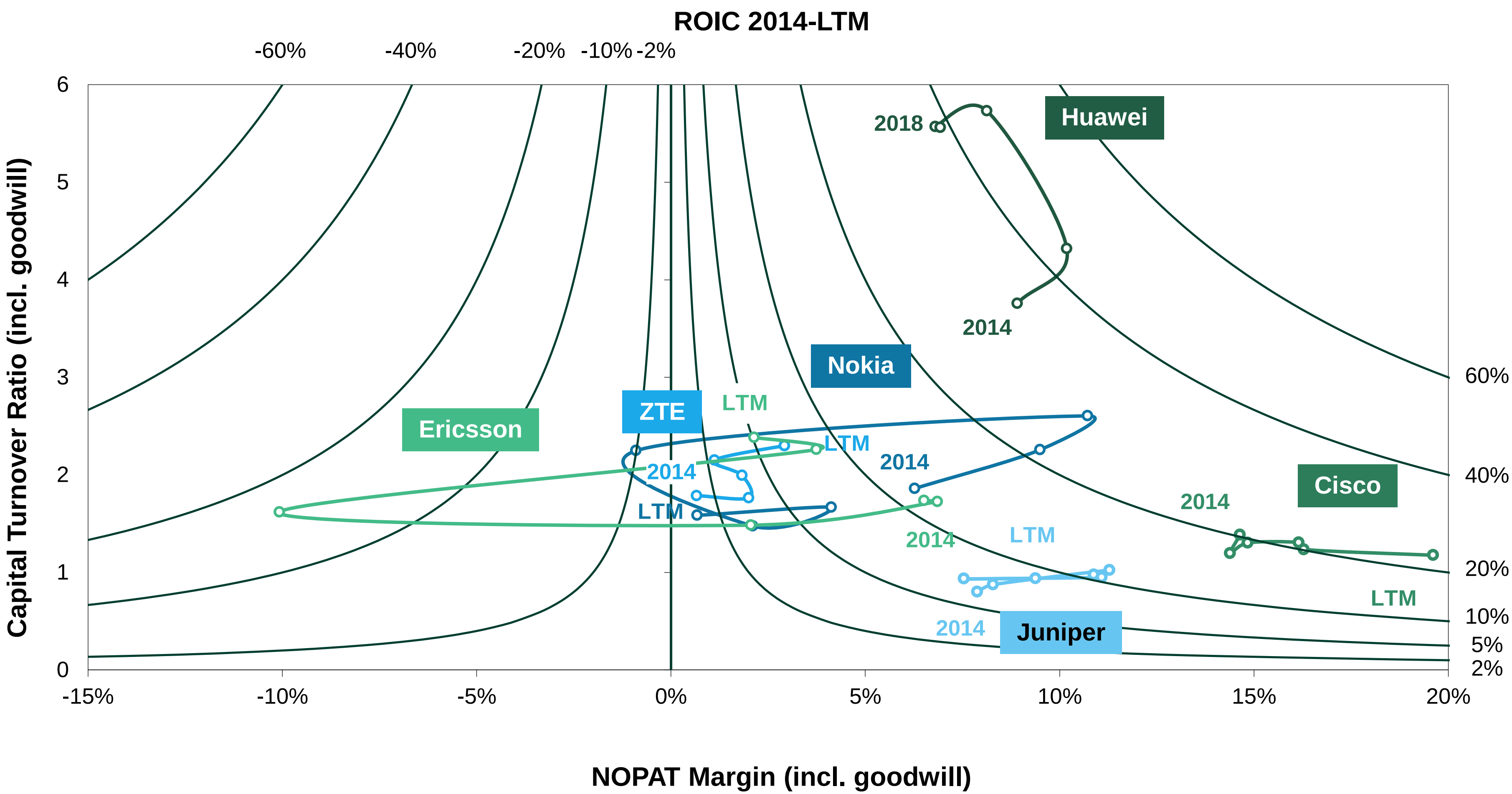
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Juniper's increase was driven by improved margins while Ericsson's and Nokia's margins declined, Huawei consistently with highest capital turnover



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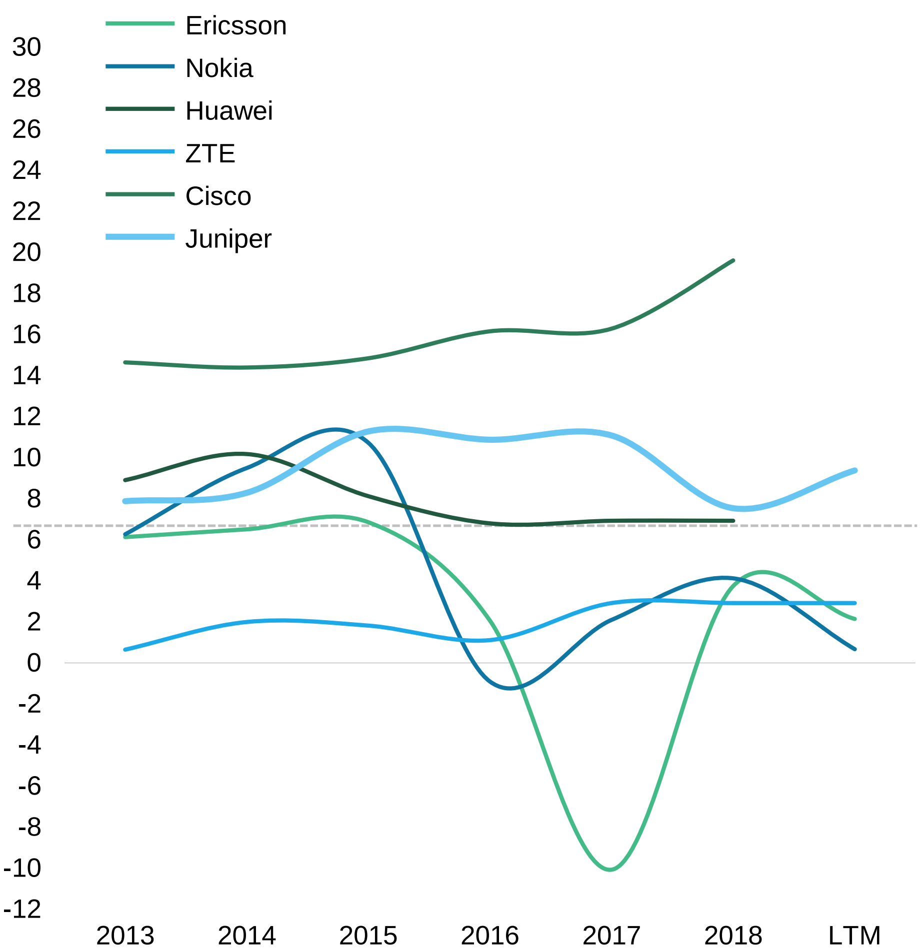
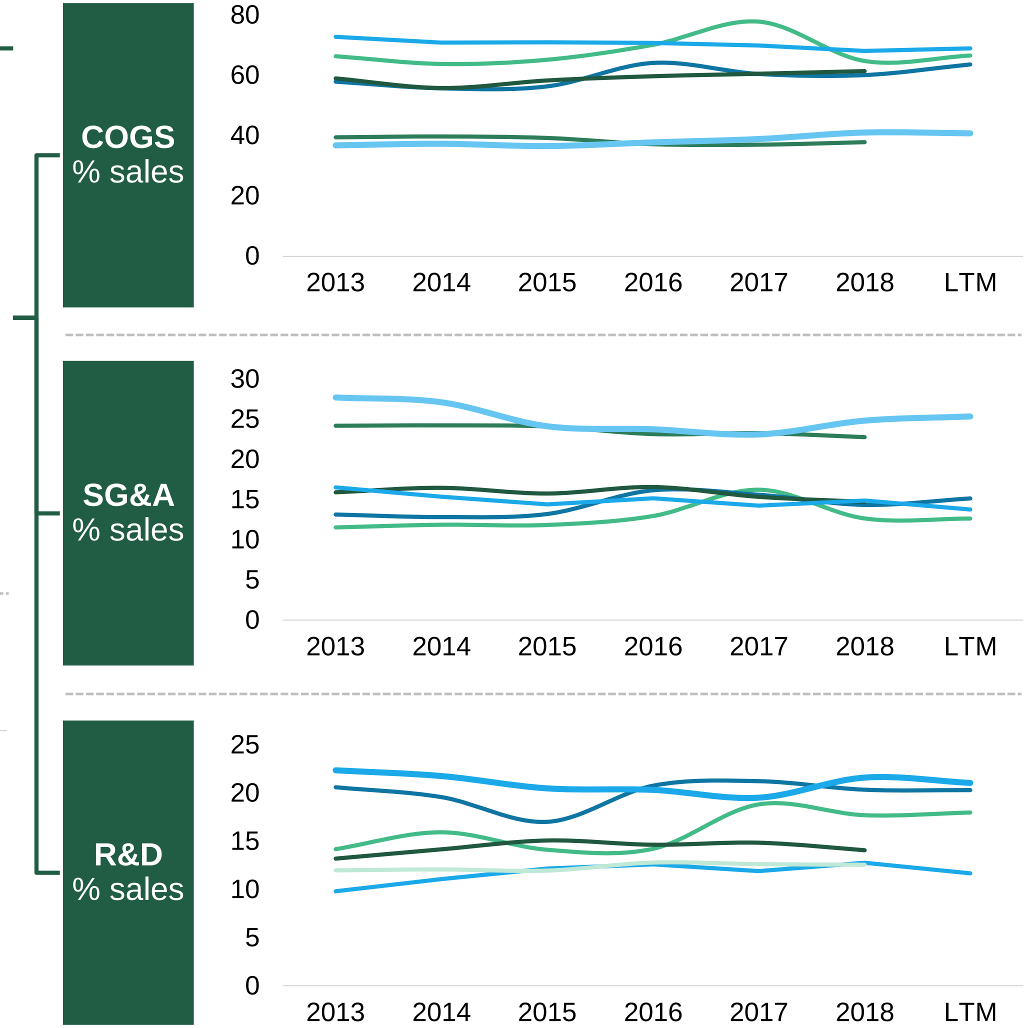
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Juniper's margins increased in Q1 while Ericsson and Nokia declined, Cisco showed the largest uplift in NOPAT fueled by decreased tax rates

NOPAT margin, %





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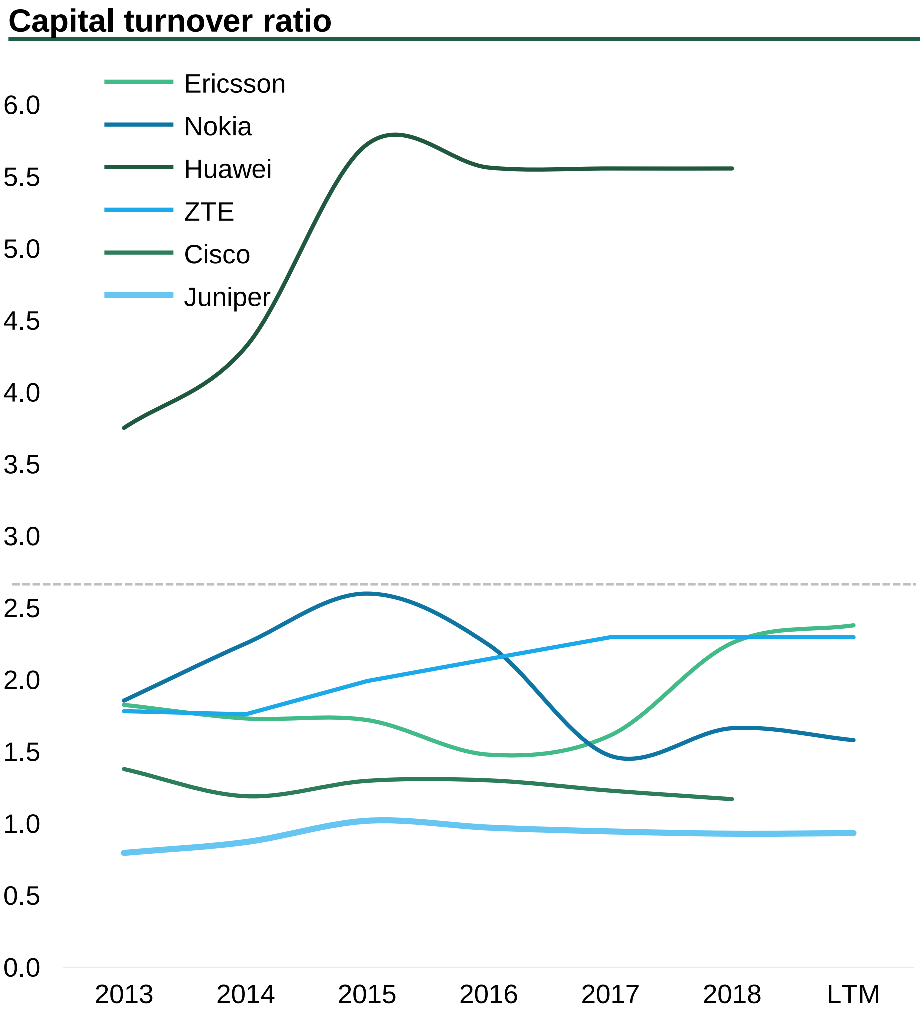
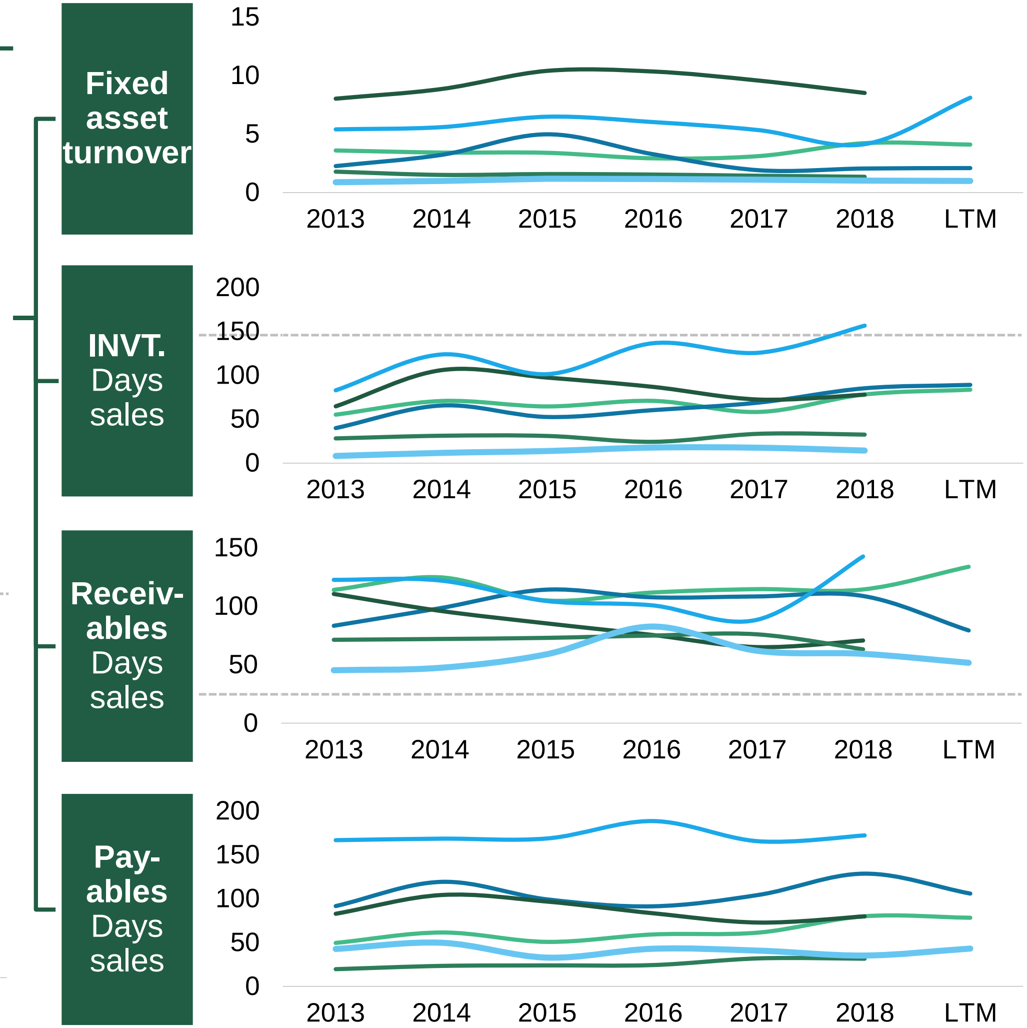
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

Huawei continues to show the strongest capital turnover while Ericsson and ZTE show upwards momentum





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

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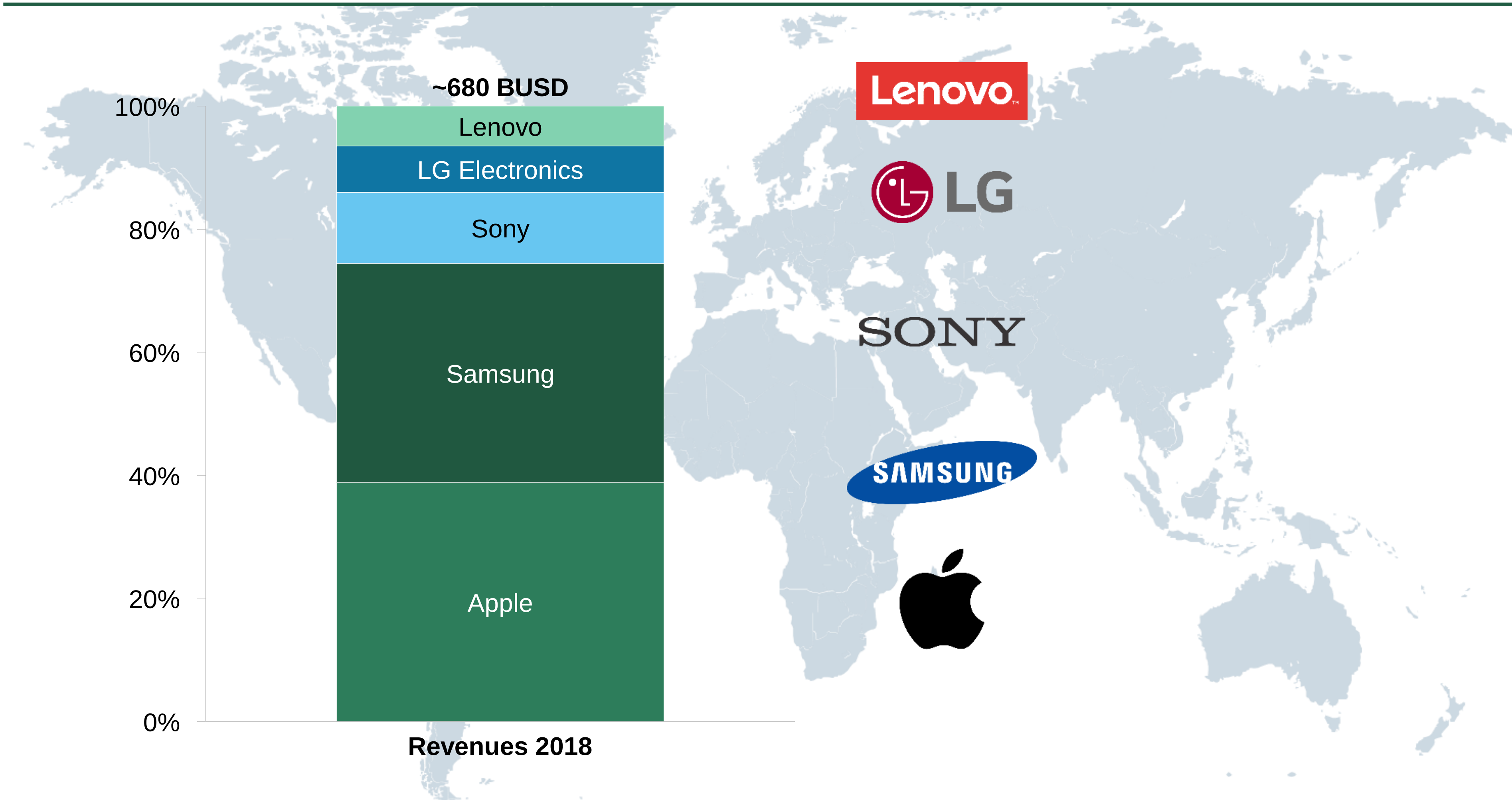
Key takeaways from the Device OEM segment

Key takeaways

Creating Shareholder Value	› Most companies saw ROIC decline in the last 12 months, Lenovo was the only company that went against the trend and increased 9 p.p. to 37% › Apple saw a steep decline and are currently in line with 2015-2016 ROIC levels
Revenue Performance	› Revenue performance was mixed in Q1 with Sony standing out as the top performer (9 p.p. year-on-year increase) › The market is struggling with declining smartphone sales and a shift in business mix is underway, from smartphones towards other smart devices and services
Margin Performance	› Samsung showed the most notable change with profitability (NOPAT margin) declining 1.7 p.p. to 15% › Apple is the segments top performer and continues to deliver above 20% NOPAT margins
Capital Efficiency	› Capital turnover declined for all companies except Lenovo which has delivered improved CTR every year since 2015 › Apple noted a steep reduction and has reverted to 2015-2016 performance levels

The Q1 2019 report includes major device makers, giving an overview of industry performance

Report overview



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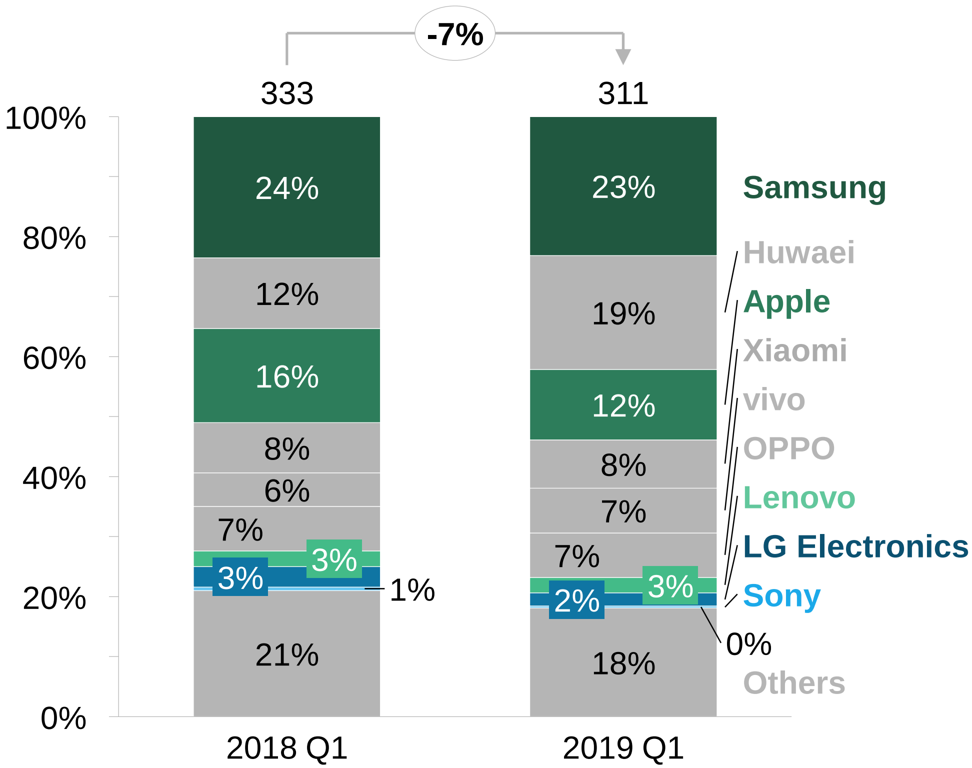
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

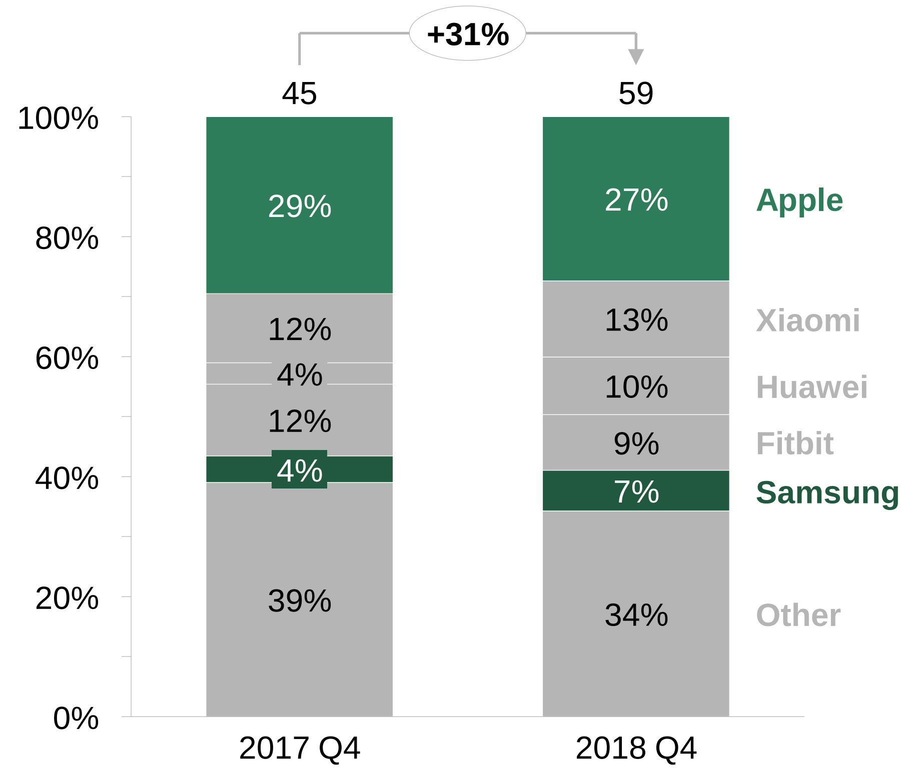
Global smartphone shipments are beginning to decline with growth now coming from the wearables segment

Global smartphone shipments
Million units



Samsung maintains market leadership, Huawei continues growing while Apple declines

Global wearables shipments
Million units

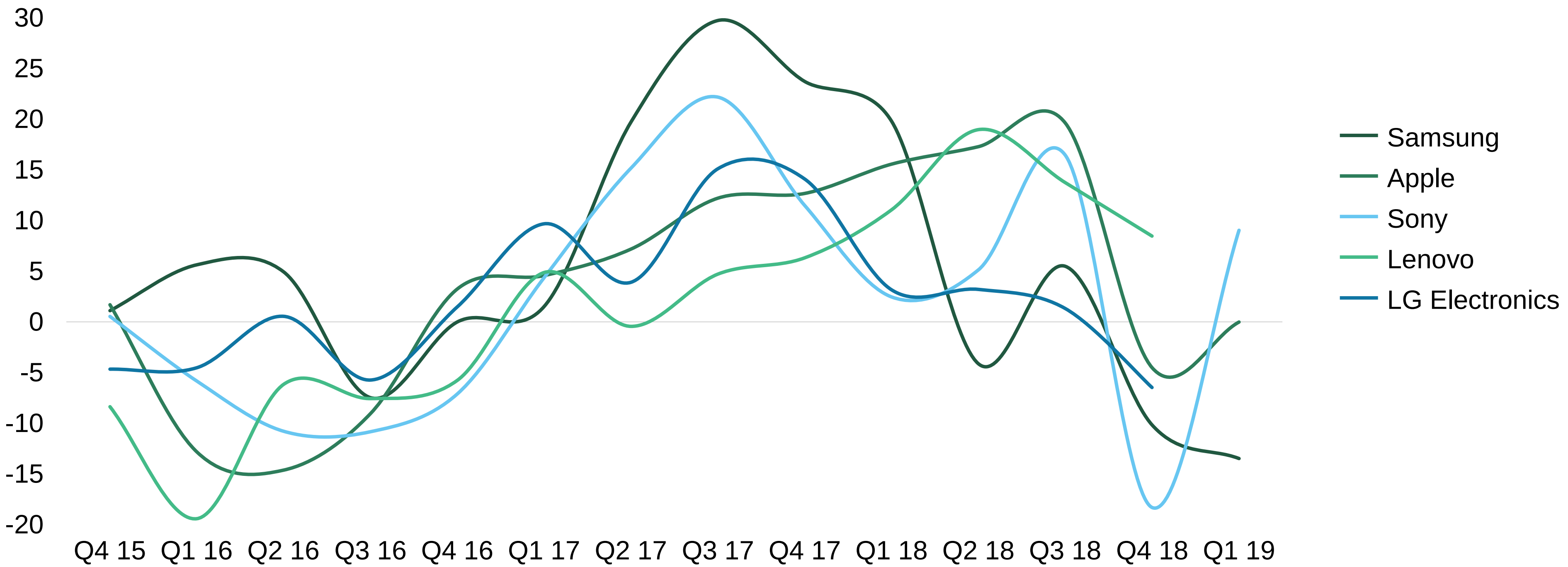


Wearables market is continuing to consolidate with top 5 players currently controlling 2/3 of shipments

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

Q1 19 saw mixed performance in terms of revenues; Sony jumped 9 p.p., Apple sales were flat and Samsung declined by 14 p.p.

Quarterly revenues
Year-on-year change, %



Samsung sales are continuing to trend downwards since peak in Q3 17

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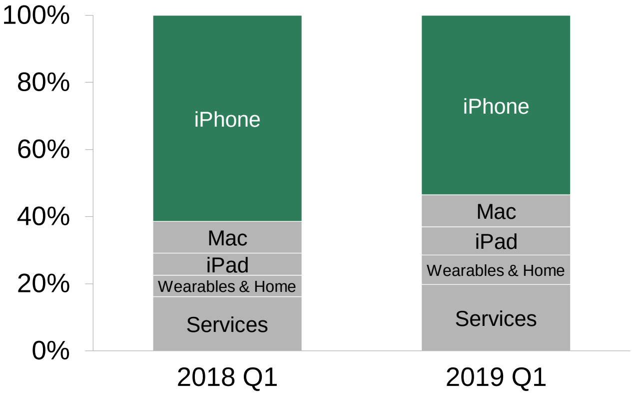
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

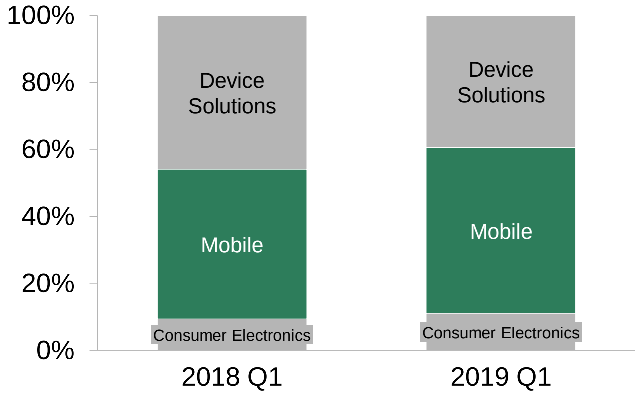
Business mix is continuing to shift from mobile devices towards other smart devices and services

Distribution of revenues

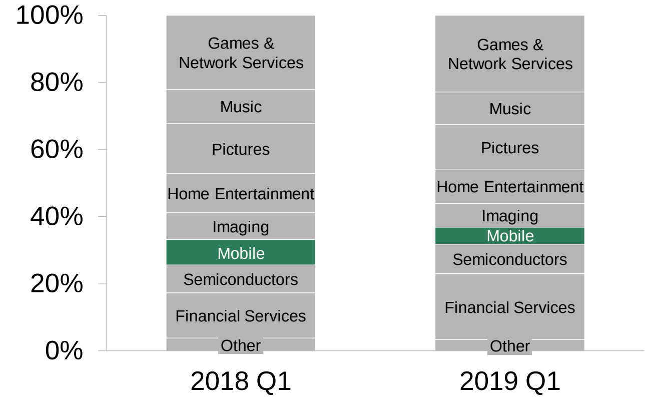
Apple



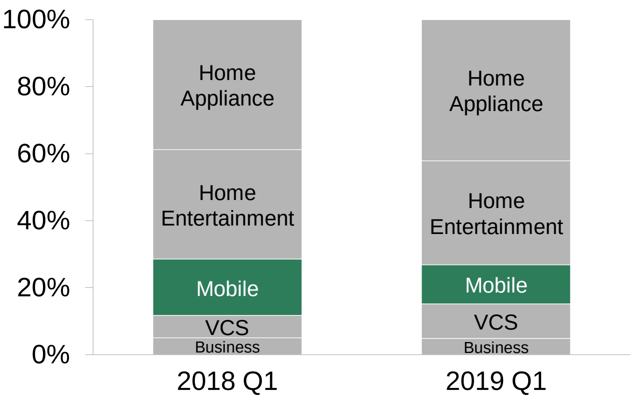
Samsung



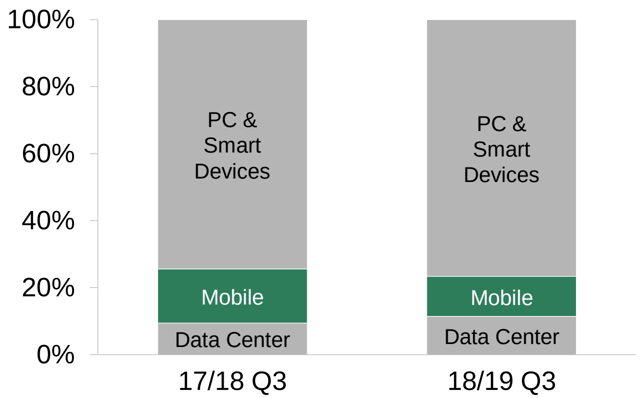
Sony



LG Electronics



Lenovo



Observations

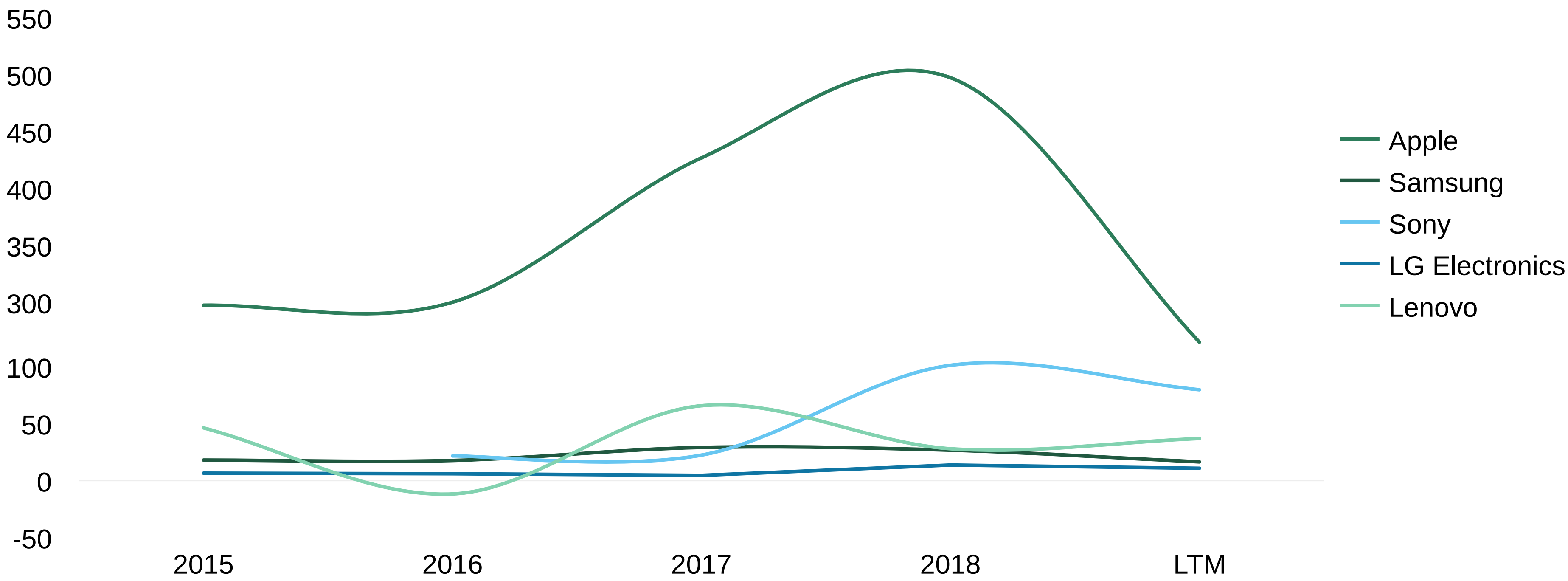
All companies except Samsung have seen the share of mobile device revenues decline

Primary growth levers are currently within services (Apple grew share of services from ~16% to 20% Y-o-Y), and other smart devices (e.g. smart speakers and home appliances)

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

Most companies saw ROIC decline in the last 12 months, Lenovo was the only company that went against the trend and increased 9 p.p. to 37%

Return on Invested Capital
%



Apple noted a steep decline in ROIC and have reverted to 2016-2017 levels

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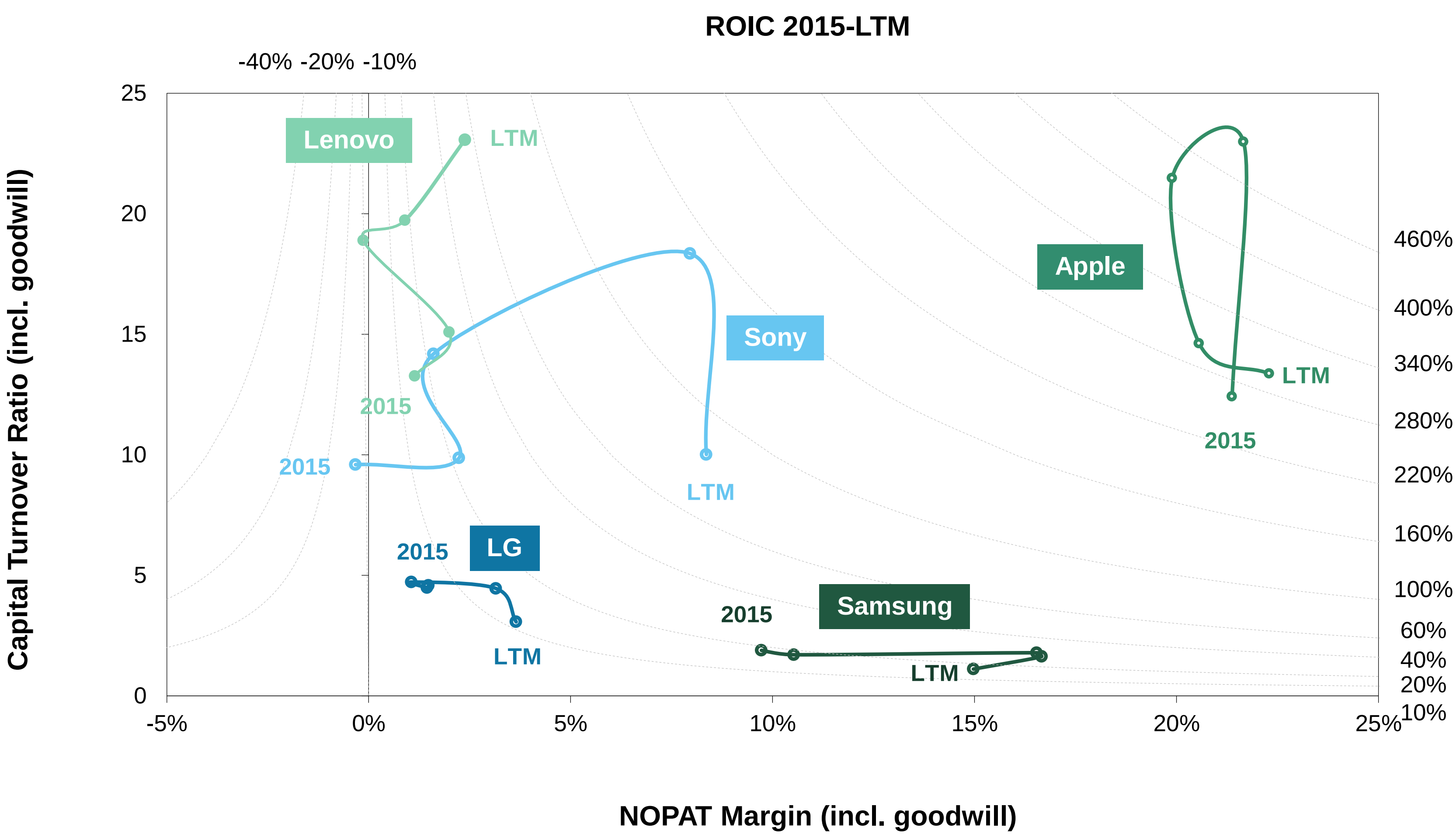
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

With NOPAT remaining relatively stable LTM, decline in ROIC was mainly driven by reduction in capital turnover



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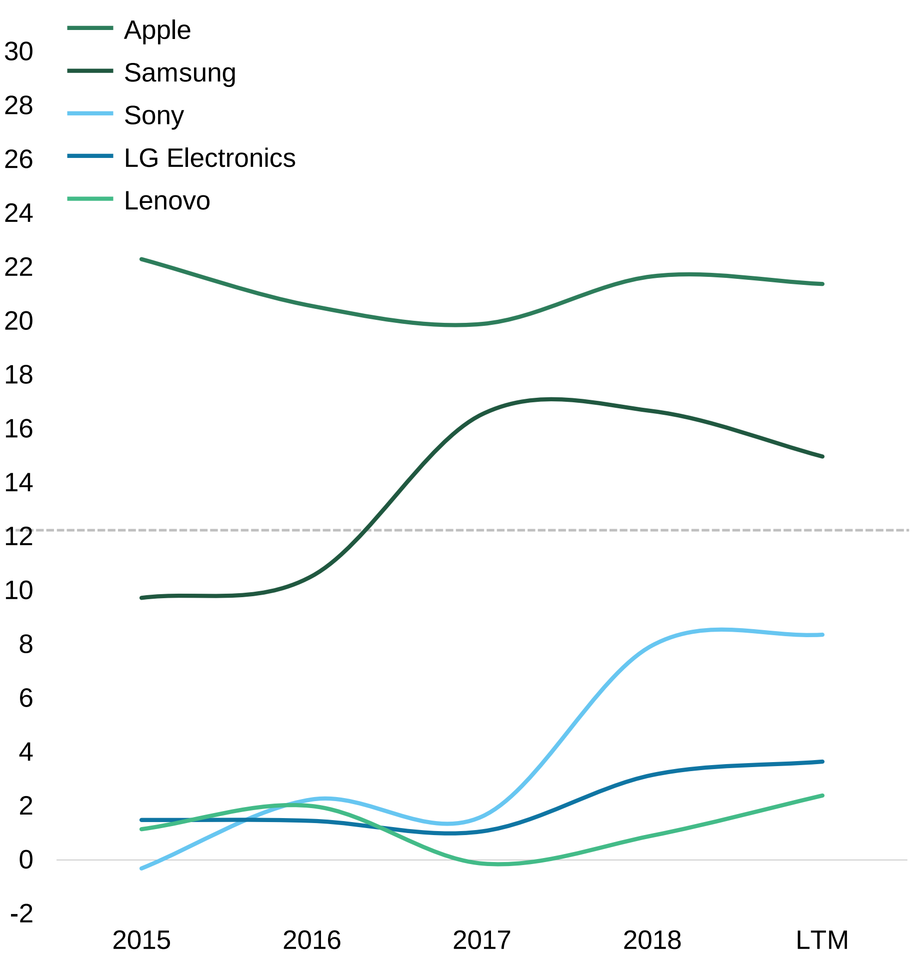
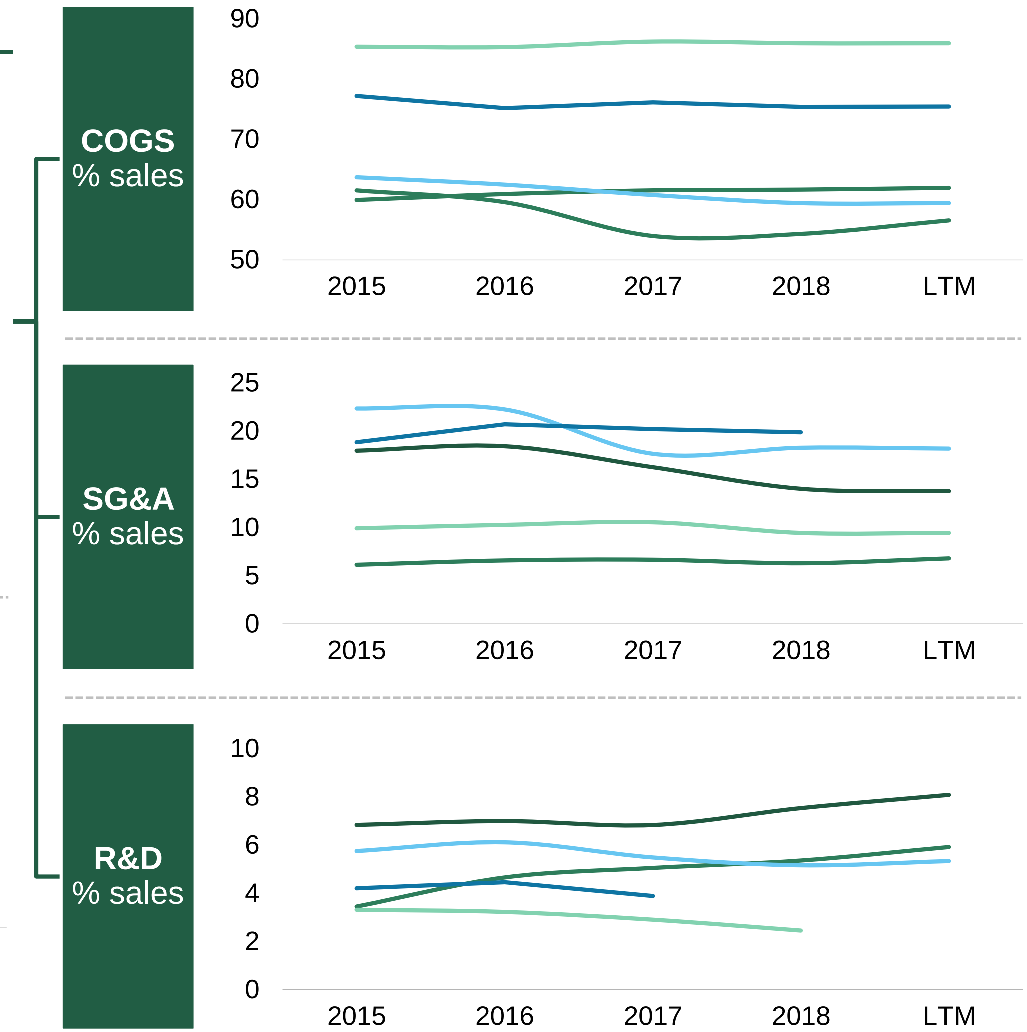
Source: Capital IQ, Annual & quarterly reports, Applied Value Analysis.

NOPAT margins remained relatively stable LTM, Samsung noted the most significant change with a 1.7 p.p. decline to 15%

NOPAT margin, %





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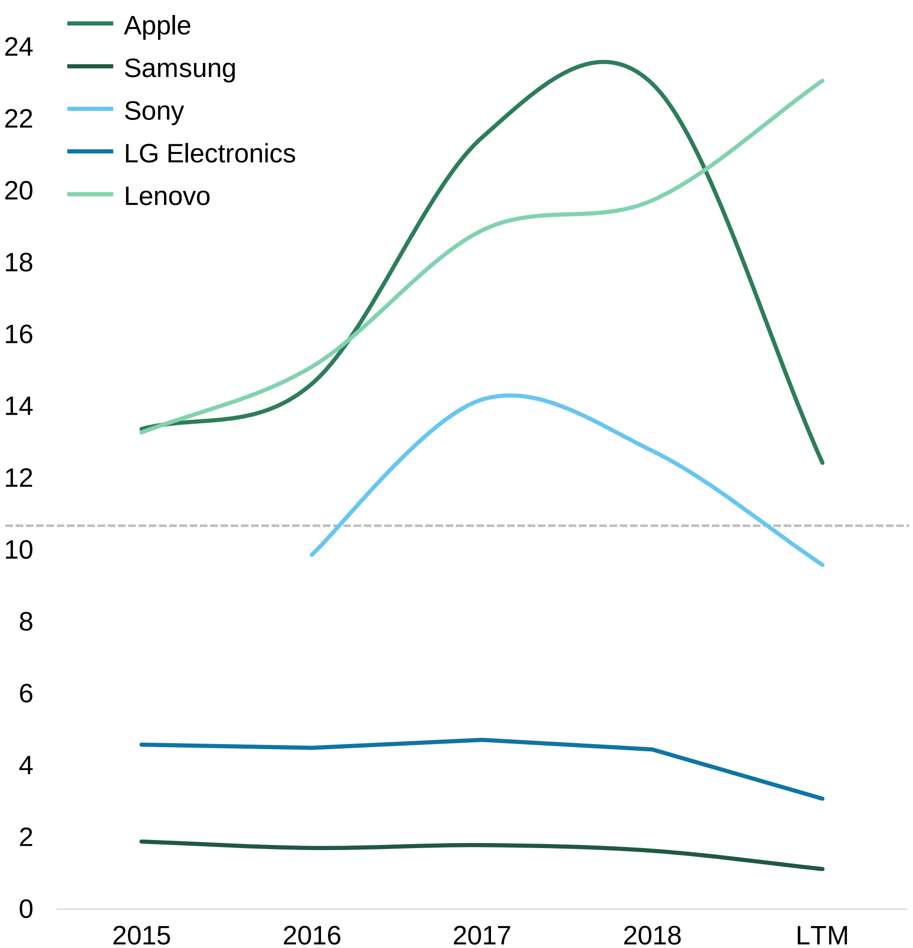
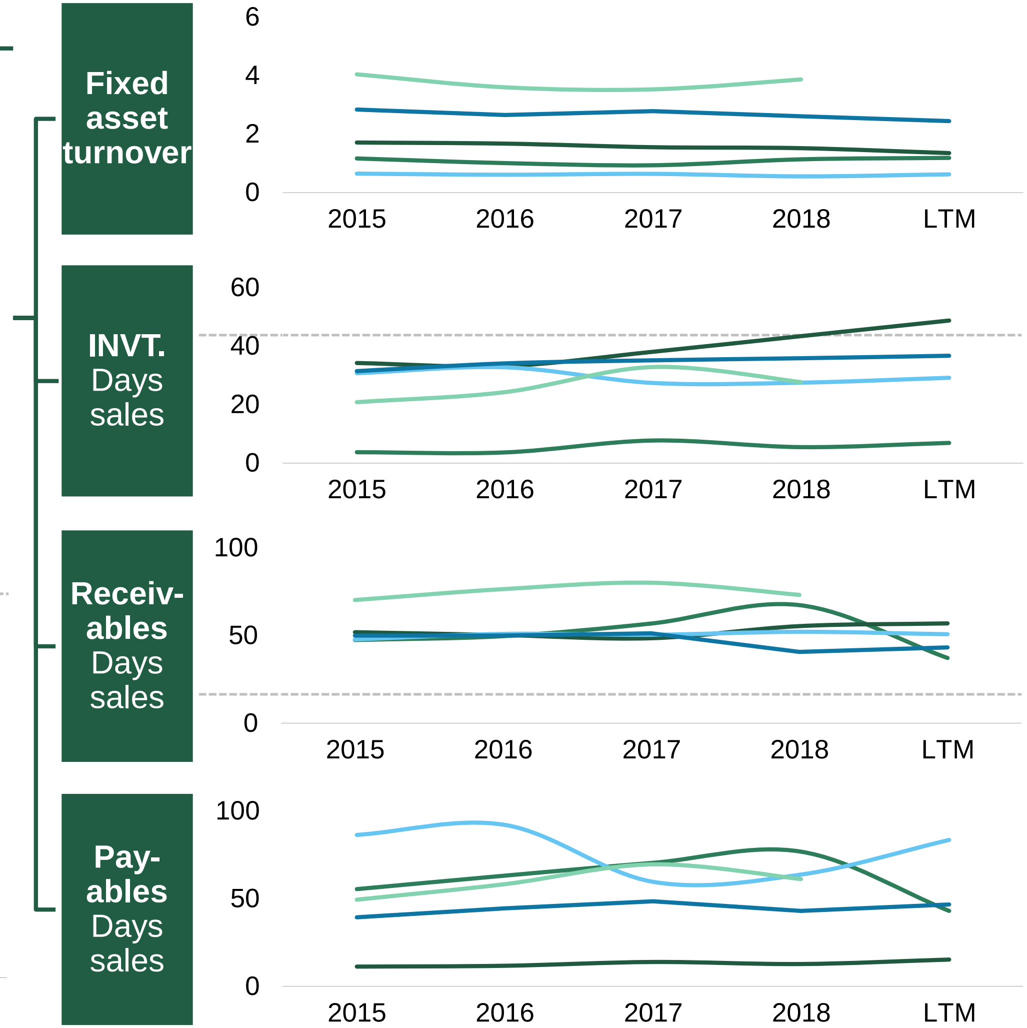
Notes: Lenovo R&D expenditure to reported at time writing

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

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

Capital turnover ratio





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

Contents

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, an 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, Soderfors 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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