# Telecommunications Industry Overview

*A case study on decreasing performance, strategic uncertainty and diminishing shareholder value?*

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# Executive Summary

**1.42%**

***Global GDP Compound Annual Growth Rate 2011-21***

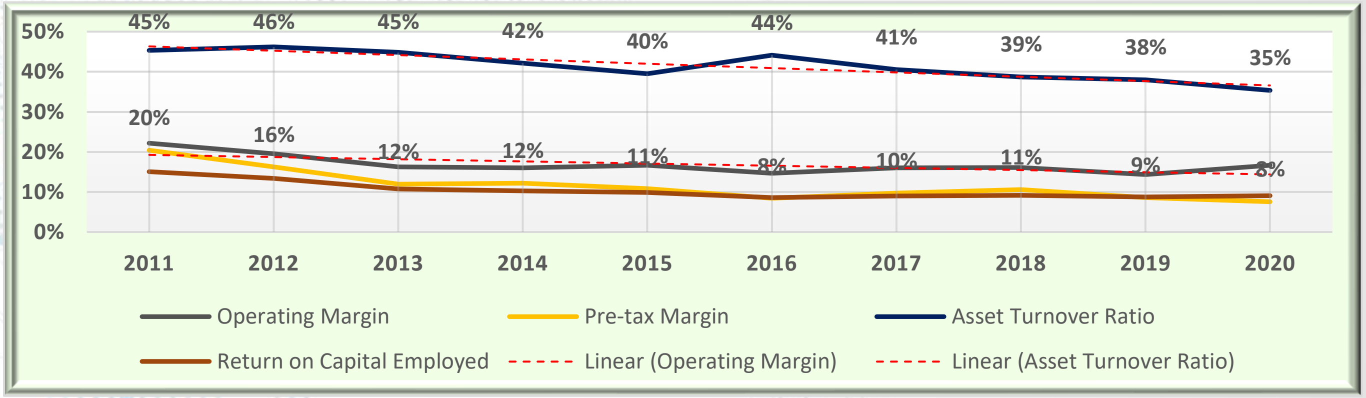
***Industry CAGR 2011-21***

| Revenue | EBITDA | EBIT | Free Cash Flow | Share Price |
|---|---|---|---|---|
| 1.48% | 1.07% | -1.14% | 1.24% | -1.03% |

**Deteriorating efficiency & profitability ratios**

**Stable EBITDA margins & CAPEX intensity ratios**

**Diminishing returns on capital employed**




***The Challenges:-***

- High CAPEX intensity
- The “commoditisation trap”
- Intense price rivalry
- OTT disruption of traditional revenues

***Key Insights:-***

- Positive CAGR in revenue/EBITDA/cash flow, albeit *lower* than *global GDP*
- *Negative* CAGR in both *operating income* and *share price*
- Perpetual *CAPEX* investments *without considering impact* on *EBIT* and *ROCE*
- *Wrong focus*? - EBITDA or EBIT/(and PBT), market share or shareholder value?
- *Strategic uncertainty* (in a red ocean industry): differentiation, cost leadership or focus?

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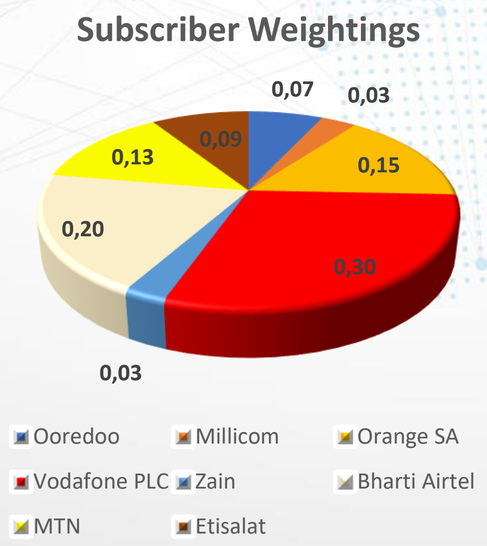
# Sample selection & methodology

| Sample Profile | |
|---|---|
| Period under review | 10 years: 2011 to 2020 |
| Entity profile | Listed multinational, mobile network operator (MNO) groups |
| Eight companies analysed | Ooredoo, Millicom, Orange, Vodafone, Zain, Bharti Airtel, MTN, Etisalat |
| International footprint | 5 continents, 89 countries, 144 networks |
| Subscriber share of global market | 2.3 billion subscribers, representing 29% of an 8 billion global market |

***Research based on analytical reviews of:***

- Global economic data
- Group annual reports
- Stock exchange data
- GSM Association reports
- Academic articles
- Industry expert reports




**Research notes:**

1) GDP and company revenues, profits and cash flows are stated in current prices and currencies as per published annual financial statements.
2) All exceptional items that may have an impact on company operating performance, have been eliminated.
3) Financial ratios are calculated as per standard formulae.
4) Net cash flow is calculated as: EBITDA – CAPEX.
5) Averages are to be interpreted as general trends and not necessarily as weighted average industry trends.

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# Is there still growth in revenue, margins, free cash flow & share price?

| Industry Performance vs Global GDP (CAGR: 2011 – 2020) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ooredoo | Millicom | Orange | Vodafone | Zain | Bharti Airtel (1) | MTN | Etisalat | Average | *Global GDP* |
| Revenue | -1.00% | -0.82% | -0.76% | -0.20% | 1.94% | 3.96% | 3.94% | 4.80% | 1.48% | *1.42%* |
| EBITDA | -1.71% | -3.48% | -1.37% | 0.14% | 1.56% | 6.29% | 4.03% | 3.06% | 1.07% | *1.42%* |
| Operating income | -5.96% | -9.84% | -2.80% | -3.07% | -1.91% | -0.54% | 1.28% | 11.57% | -1.41% | *1.42%* |
| Free cash flow | -0.20% | -13.32% | -2.45% | 3.25% | 2.35% | 9.57% | 4.46% | 6.27% | 1.24% | *1.42%* |
| Share price | -1.15% | -10.75% | -1.58% | -5.82% | 4.69% | 5.03% | -4.99% | 6.35% | -1.03% | *1.42%* |

*Sources: Ooredoo, Millicom, Orange, Vodafone, Zain, Bharti Airtel, MTN and Etisalat group annual reports 2011-2021. World Bank and IMF reports.*

(1) Bharti Airtel: Free cash flow time series - negative opening value was smoothed out over 9 years in order to enable CAGR calculation.
(2) The industry CAGR in total assets, over the 10-year period, was 3.94%. Seven of the MNOs saw their asset base growing significantly faster than revenue.
(3) More research is required on the relationship between growth trends in fixed/& intangible assets, revenue and operating income.

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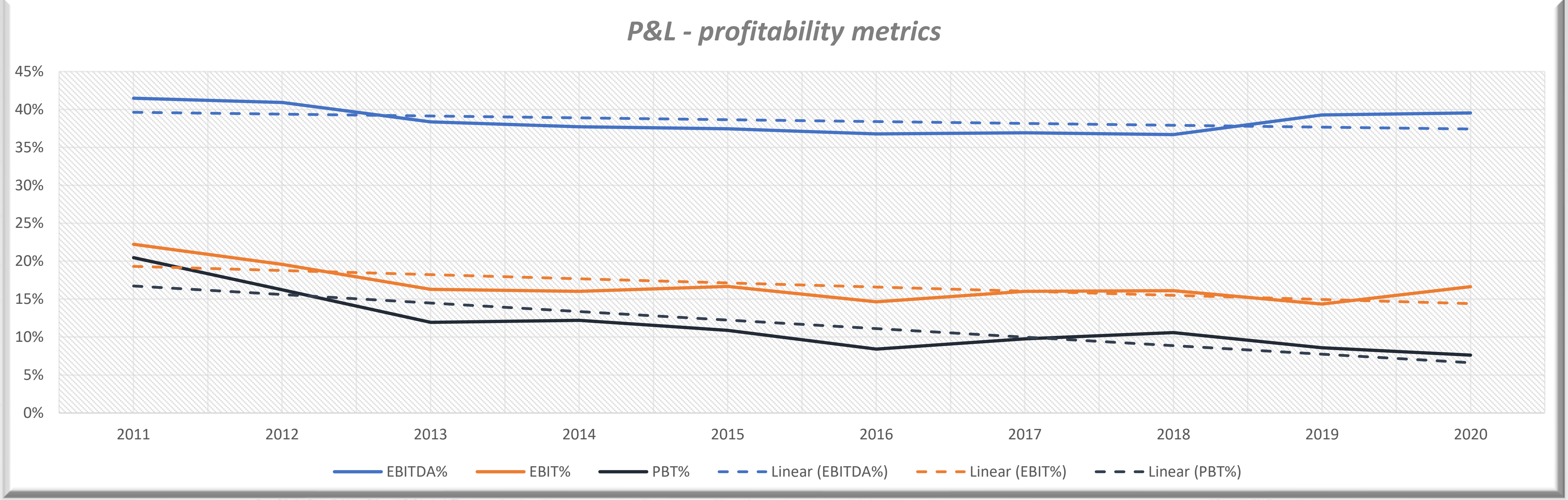
# General trends: P&L metrics




- **EBITDA margin**:- Fairly stable, decreasing by ***1%*** from 41% to 40% over the 10 years under review. The OPEX to revenue ratio is therefore reasonably consistent.
- **Operating margin:-** Decreasing by ***5%*** from 22% to 17%, which is indicative of increasing depreciation/amortisation costs on a continuously expanding asset base. Total operating costs as percentage of revenue is therefore increasing at a higher rate than OPEX (above the line) costs.
- **Pre-tax margin:-** Decreasing by ***12%*** from 20% to 8%, which is the combined effect of faster growing depreciation/amortisation costs and the interest on continuously growing borrowings.

These P&L trends clearly indicate a divergent increase in below the line costs (depreciation/amortisation & interest). For more detail on individual MNO performance trends, see slides #8 to #13.

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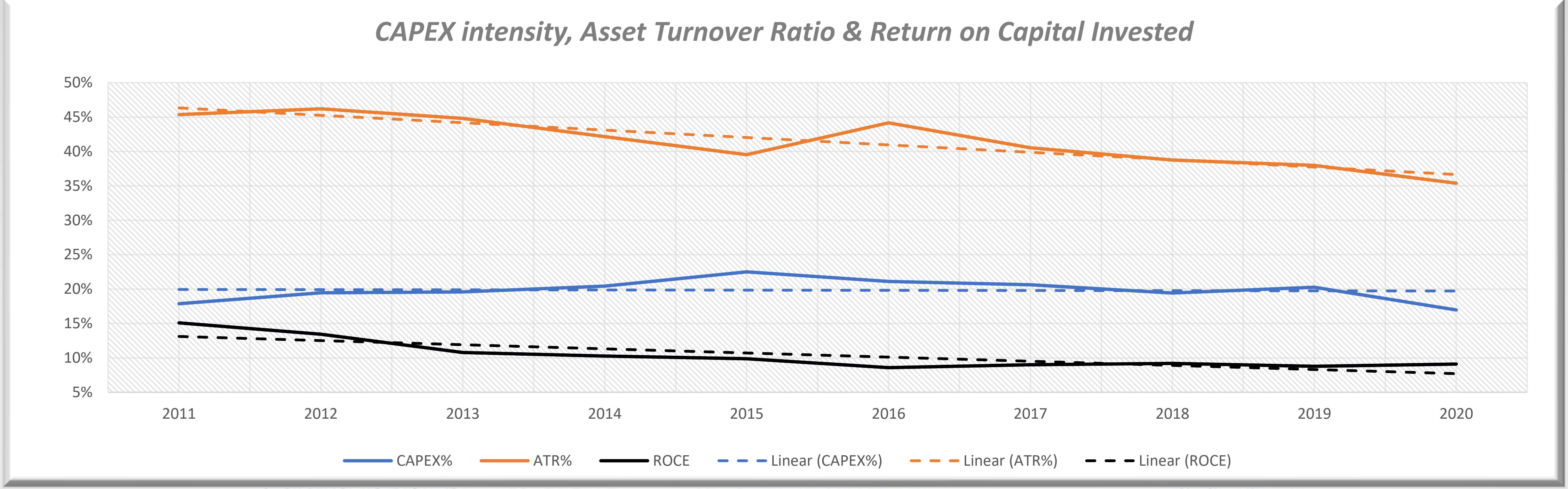
# General trends: *High* CAPEX intensity, declining asset utilisation & ROCE




- **CAPEX intensity ratio:-** Reasonably stable at **17%**, decreasing from 18% over the 10-year period. The reasons for the high CAPEX intensity ratio are: (i) cost of infrastructure to keep up with demand for high-speed internet, (ii) staying relevant, (iii) infrastructure supplier bargaining power: lock-in clauses for continued support, and (iv) technology driven marketing strategies.
- **Asset turnover ratio:-** Decreasing by ***10%*** from 45% to 35%. The slowing down in the ATR is the inevitable result of a 1.48% industry CAGR in revenue against a 3.94% growth in total assets. Total assets grow significantly faster than revenue. On average, operating assets constitute circa 70% - 80% of a typical MNO’s total assets.
- **Return on capital employed:-** Decreasing by **6%** from 15% to 9%.

These trends suggest a strong correlation between high capex intensity, deteriorating efficacy in asset utilisation, and diminishing returns on capital employed. See slides #8 to #12 for more detail.

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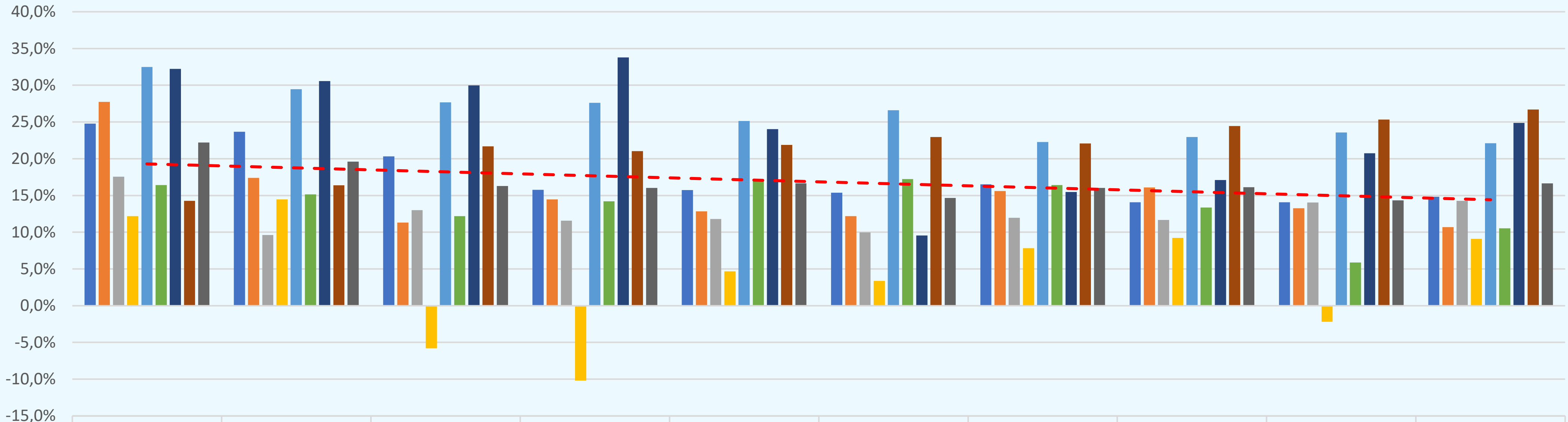
# Decreasing operating margins

***7 out of 8 MNOs reported a decreasing operating margin – characteristically of a diminishing ability to generate profit through core operations …***




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ooredoo | 24,8% | 23,7% | 20,3% | 15,8% | 15,7% | 15,4% | 16,5% | 14,1% | 14,1% | 14,8% |
| Millicom | 27,7% | 17,4% | 11,3% | 14,5% | 12,8% | 12,2% | 15,6% | 16,1% | 13,3% | 10,7% |
| Orange SA | 17,6% | 9,6% | 13,0% | 11,6% | 11,8% | 10,0% | 12,0% | 11,7% | 14,0% | 14,3% |
| Vodafone PLC | 12,2% | 14,5% | -5,8% | -10,2% | 4,7% | 3,4% | 7,8% | 9,2% | -2,2% | 9,1% |
| Zain | 32,5% | 29,5% | 27,7% | 27,6% | 25,1% | 26,6% | 22,3% | 23,0% | 23,6% | 22,1% |
| Bharti Airtel | 16,4% | 15,1% | 12,2% | 14,2% | 17,2% | 17,2% | 16,4% | 13,4% | 5,9% | 10,5% |
| MTN | 32,2% | 30,6% | 30,0% | 33,8% | 24,0% | 9,6% | 15,5% | 17,1% | 20,8% | 24,9% |
| Etisalat | 14,3% | 16,4% | 21,7% | 21,0% | 21,9% | 22,9% | 22,1% | 24,5% | 25,3% | 26,7% |
| Average | 22,2% | 19,6% | 16,3% | 16,0% | 16,7% | 14,7% | 16,0% | 16,1% | 14,3% | 16,6% |

Ooredoo Millicom Orange SA Vodafone PLC Zain Bharti Airtel MTN Etisalat Average Linear (Average)

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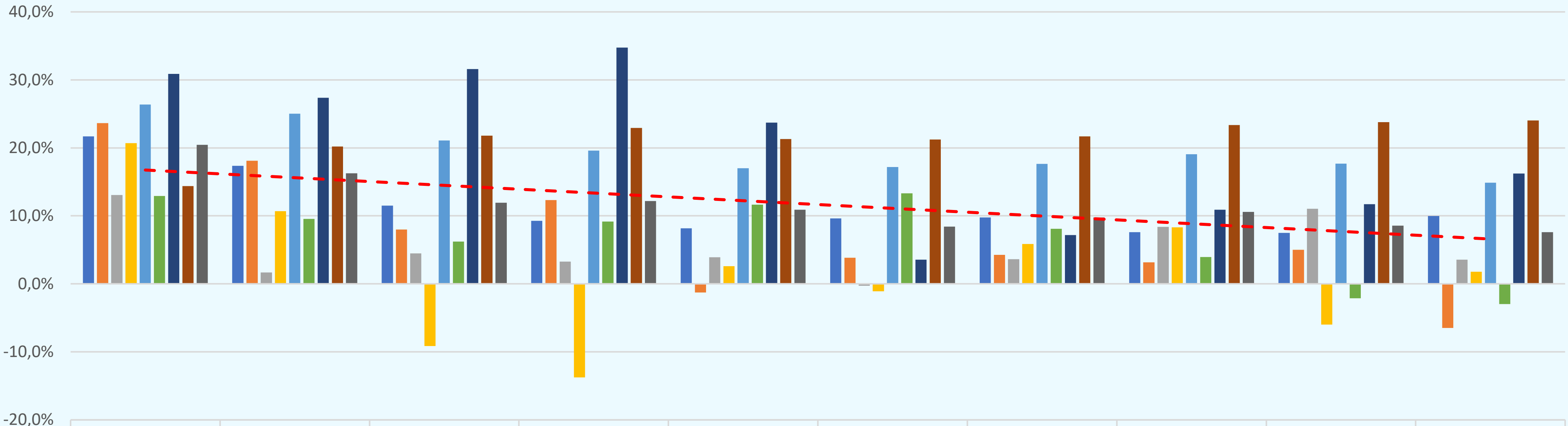
# Decreasing pre-tax profitability ratios

***7 out of 8 MNOs saw their PBT% declining as well – the combined effect of lower operating incomes and increasing financing costs … (see slide#13 on increasing debt levels)***




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ooredoo | 21,7% | 17,4% | 11,5% | 9,3% | 8,2% | 9,6% | 9,8% | 7,6% | 7,5% | 10,0% |
| Millicom | 23,6% | 18,1% | 8,0% | 12,3% | -1,3% | 3,8% | 4,3% | 3,2% | 5,0% | -6,5% |
| Orange SA | 13,1% | 1,7% | 4,5% | 3,3% | 3,9% | -0,3% | 3,6% | 8,4% | 11,1% | 3,5% |
| Vodafone PLC | 20,7% | 10,7% | -9,2% | -13,7% | 2,6% | -1,1% | 5,9% | 8,3% | -6,0% | 1,8% |
| Zain | 26,4% | 25,0% | 21,1% | 19,6% | 17,0% | 17,2% | 17,6% | 19,1% | 17,7% | 14,9% |
| Bharti Airtel | 12,9% | 9,5% | 6,2% | 9,2% | 11,6% | 13,3% | 8,1% | 3,9% | -2,1% | -3,0% |
| MTN | 30,9% | 27,4% | 31,6% | 34,8% | 23,7% | 3,5% | 7,2% | 10,9% | 11,7% | 16,2% |
| Etisalat | 14,4% | 20,2% | 21,8% | 22,9% | 21,3% | 21,2% | 21,7% | 23,4% | 23,8% | 24,0% |
| Average | 20,5% | 16,2% | 11,9% | 12,2% | 10,9% | 8,4% | 9,8% | 10,6% | 8,6% | 7,6% |

Ooredoo Millicom Orange SA Vodafone PLC Zain Bharti Airtel MTN Etisalat Average Linear ( Average)

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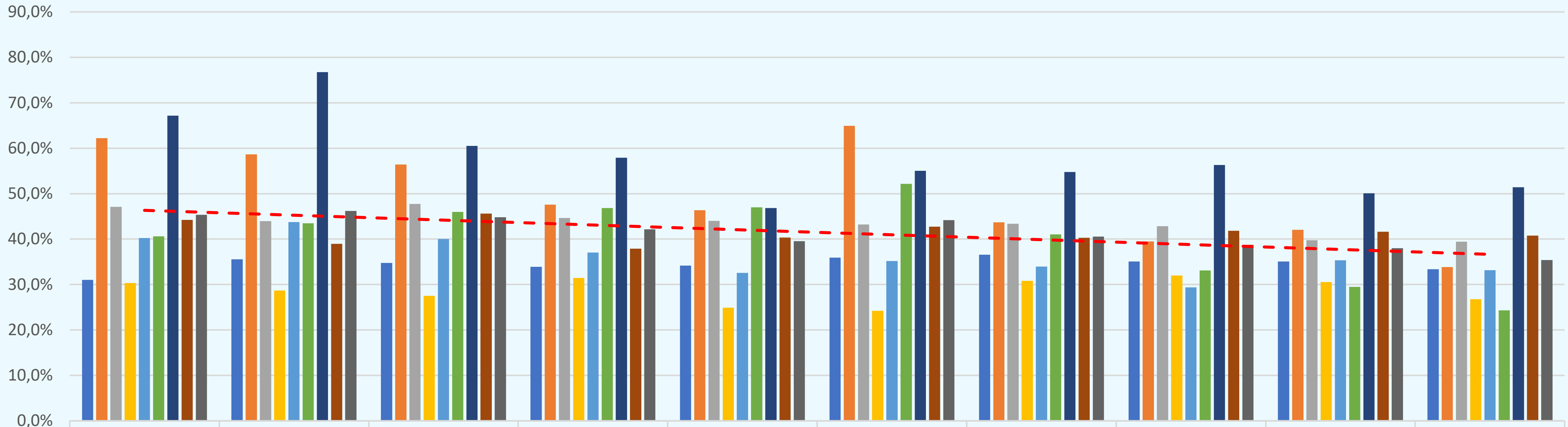
# Deteriorating efficacy in asset utilisation - ATR

***7 out of 8 MNOs experience a declining asset turnover ratio – the result of low revenue growth rates, consistently high CAPEX intensity levels & an asset base that is growing faster than revenue …***




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ooredoo | 31,0% | 35,5% | 34,7% | 33,9% | 34,2% | 35,9% | 36,5% | 35,1% | 35,1% | 33,3% |
| Millicom | 62,2% | 58,6% | 56,4% | 47,6% | 46,4% | 64,9% | 43,7% | 39,5% | 42,0% | 33,8% |
| Orange SA | 47,1% | 44,0% | 47,7% | 44,6% | 44,0% | 43,2% | 43,4% | 42,8% | 39,7% | 39,5% |
| Vodafone PLC | 30,3% | 28,7% | 27,5% | 31,5% | 24,9% | 24,2% | 30,8% | 32,0% | 30,6% | 26,7% |
| Zain | 40,2% | 43,7% | 40,0% | 37,0% | 32,5% | 35,2% | 33,9% | 29,4% | 35,3% | 33,2% |
| Bharti Airtel | 40,6% | 43,5% | 46,0% | 46,8% | 47,0% | 52,2% | 41,0% | 33,1% | 29,5% | 24,3% |
| MTN | 67,2% | 76,7% | 60,5% | 57,9% | 46,9% | 55,1% | 54,8% | 56,3% | 50,1% | 51,4% |
| Etisalat | 44,2% | 38,9% | 45,6% | 37,9% | 40,3% | 42,7% | 40,3% | 41,8% | 41,6% | 40,8% |
| Average | 45,4% | 46,2% | 44,8% | 42,1% | 39,5% | 44,2% | 40,6% | 38,7% | 38,0% | 35,4% |

Ooredoo   Millicom   Orange SA   Vodafone PLC   Zain   Bharti Airtel   MTN   Etisalat   Average   Linear ( Average)

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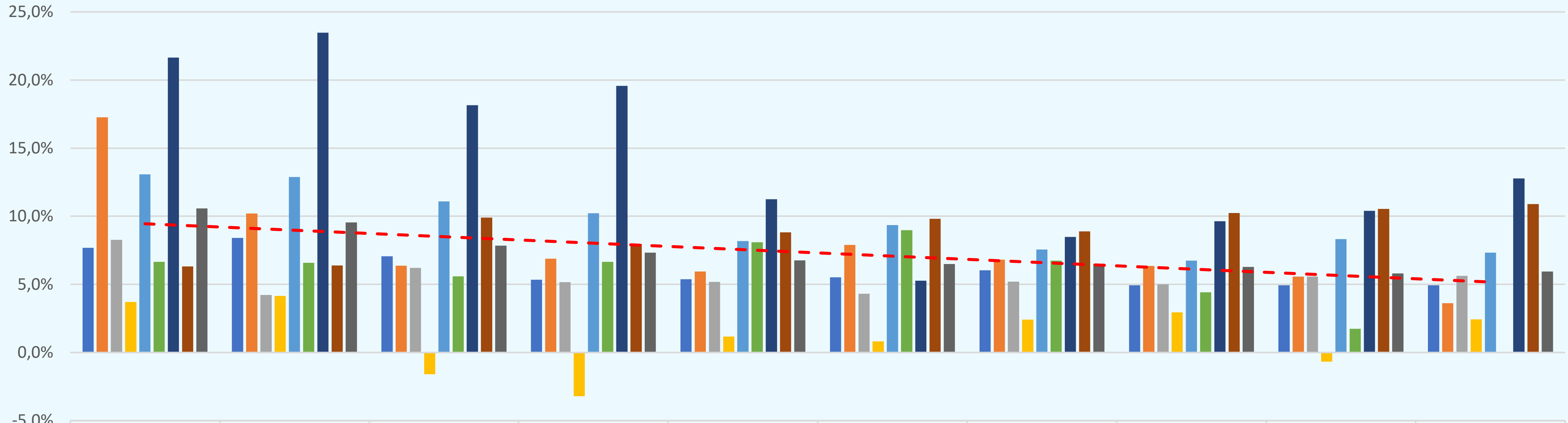
# Deteriorating efficacy in asset utilisation - ROA

***7 out of 8 MNOs saw a decreasing return on assets – the inevitable combined result of reduced EBIT performance and a continuously growing asset base …***




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ooredoo | 7,7% | 8,4% | 7,1% | 5,3% | 5,4% | 5,5% | 6,0% | 4,9% | 4,9% | 4,9% |
| Millicom | 17,3% | 10,2% | 6,4% | 6,9% | 5,9% | 7,9% | 6,8% | 6,3% | 5,6% | 3,6% |
| Orange SA | 8,3% | 4,2% | 6,2% | 5,2% | 5,2% | 4,3% | 5,2% | 5,0% | 5,6% | 5,6% |
| Vodafone PLC | 3,7% | 4,1% | -1,6% | -3,2% | 1,2% | 0,8% | 2,4% | 3,0% | -0,7% | 2,4% |
| Zain | 13,1% | 12,9% | 11,1% | 10,2% | 8,2% | 9,4% | 7,6% | 6,7% | 8,3% | 7,3% |
| Bharti Airtel | 6,7% | 6,6% | 5,6% | 6,7% | 8,1% | 9,0% | 6,7% | 4,4% | 1,7% | 0,0% |
| MTN | 21,6% | 23,5% | 18,1% | 19,6% | 11,3% | 5,3% | 8,5% | 9,6% | 10,4% | 12,8% |
| Etisalat | 6,3% | 6,4% | 9,9% | 8,0% | 8,8% | 9,8% | 8,9% | 10,2% | 10,5% | 10,9% |
| Average | 10,6% | 9,5% | 7,8% | 7,3% | 6,8% | 6,5% | 6,5% | 6,3% | 5,8% | 6,0% |

Ooredoo Millicom Orange SA Vodafone PLC Zain Bharti Airtel MTN Etisalat Average Linear ( Average)

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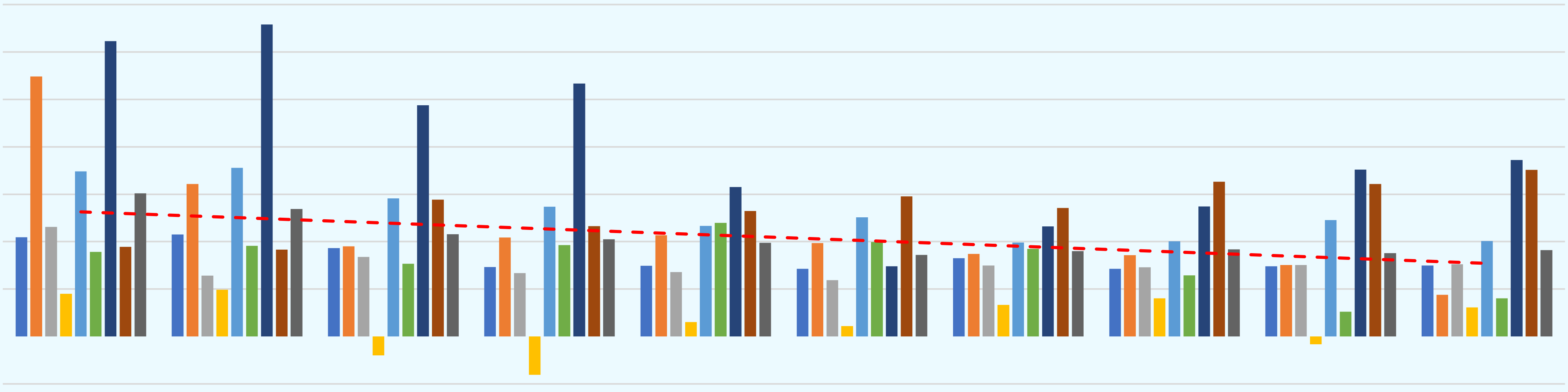
# Diminishing returns on capital employed

***As a result of the low/no revenue & EBITDA growth, decreasing operating income, consistently high CAPEX investments, 7 out of 8 MNOs saw a significant decrease in their return on capital employed …***



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ooredoo | 10,5% | 10,7% | 9,3% | 7,3% | 7,5% | 7,1% | 8,3% | 7,1% | 7,4% | 7,5% |
| Millicom | 27,4% | 16,1% | 9,5% | 10,4% | 10,7% | 9,8% | 8,7% | 8,6% | 7,5% | 4,4% |
| Orange SA | 11,5% | 6,4% | 8,4% | 6,7% | 6,8% | 5,9% | 7,5% | 7,3% | 7,5% | 7,6% |
| Vodafone PLC | 4,5% | 4,9% | -2,0% | -4,0% | 1,5% | 1,1% | 3,3% | 4,0% | -0,8% | 3,1% |
| Zain | 17,4% | 17,8% | 14,6% | 13,7% | 11,7% | 12,6% | 9,9% | 10,0% | 12,3% | 10,1% |
| Bharti Airtel | 8,9% | 9,6% | 7,7% | 9,6% | 12,0% | 9,9% | 9,2% | 6,4% | 2,6% | 4,0% |
| MTN | 31,1% | 32,9% | 24,4% | 26,7% | 15,7% | 7,4% | 11,6% | 13,7% | 17,6% | 18,6% |
| Etisalat | 9,5% | 9,1% | 14,4% | 11,6% | 13,2% | 14,8% | 13,5% | 16,3% | 16,1% | 17,6% |
| Average | 15,1% | 13,4% | 10,8% | 10,3% | 9,9% | 8,6% | 9,0% | 9,2% | 8,8% | 9,1% |

Ooredoo  Millicom  Orange SA  Vodafone PLC  Zain  Bharti Airtel  MTN  Etisalat  Average  Linear ( Average)

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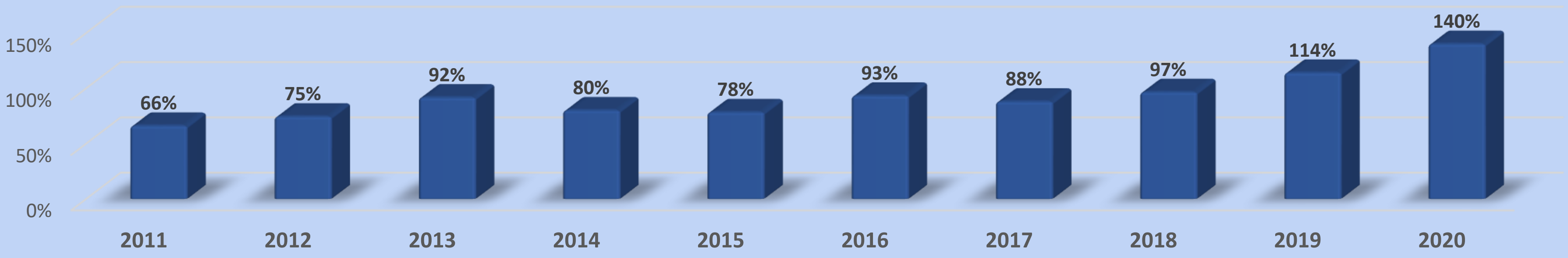
# Capital structure – rising debt levels

***7 out of 8 MNOs' debt-to-equity levels increased significantly. The continuous CAPEX investments have been financed through debt, which together with consistently high depreciation/amortisation costs is the main contributor to decreasing pre-tax profit m***




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| MTN | 36% | 35% | 41% | 39% | 48% | 81% | 88% | 95% | 110% | 113% |
| Millicom | 87% | 123% | 195% | 137% | 114% | 129% | 125% | 174% | 174% | 347% |
| Zain | 12% | 24% | 34% | 37% | 37% | 62% | 44% | 83% | 102% | 111% |
| Orange | 133% | 147% | 142% | 116% | 110% | 107% | 99% | 99% | 128% | 128% |
| Vodafone | 42% | 46% | 52% | 35% | 38% | 49% | 52% | 55% | 85% | 116% |
| Ooredoo | 91% | 101% | 128% | 134% | 139% | 142% | 121% | 110% | 154% | 146% |
| Airtel | 112% | 103% | 125% | 98% | 98% | 131% | 128% | 120% | 114% | 125% |
| Etisalat | 17% | 18% | 19% | 46% | 44% | 45% | 46% | 37% | 46% | 36% |

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# Market related causes of the declining trends

***Commoditisation trap*** (1)

- 93% of telecom markets are already commoditised/or on the edge of it.
- Little to none product differentiability is available anymore.
- Attempts to differentiate are adding to costs only.
- Price has become the only way of competition.

***Intense price rivalry*** (2)

- Fierce price wars are forcing down prices.
- Due to low elasticity of demand, tariff discounting may increase traffic volumes, but not revenue - thus the volume effect is greater than the price effect. (4)
- Lower prices, existing cost structures & investment levels, are driving down margins and returns on capital employed.

***Note: Etisalat derives 58% of its revenue from a duopoly market, i.e., the UAE, where both MNOs are state-owned.***

***Over the top (OTT) applications***

- OTT services are cannibalising traditional revenue streams, in particular voice services.
- According to a McKinsey (2017) report, voice over IP calls may eventually replace voice revenue. (3)
- Revenue from international incoming interconnection services, has been mostly wiped out.

***Note: 90% of Etisalat's revenue is derived from countries where VOIP is blocked.***

(1) PwC (2018) *Strategy& (pwc.commmoditization in wireless telecoms*
(2) Economist Intelligence Unit (2017) Throttled: Telecoms in 2018 (eiu.com)
(3) McKinsey (2017) Overwhelming OTT: Telcos' growth strategy in a digital world | McKinsey
(4) Highly commoditised (inferior) products in a highly competitive market, will have a low to unit price elasticity of demand.. Read up on microeconomic price theory or see Price Elasticity of Demand and Total Revenue - Course Hero

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# When business (management) as usual is no longer good enough

| Strategy | CAPEX investment | Finance |
|---|---|---|
| ▪ Strategic uncertainty in extremely competitive markets: Differentiation, cost leadership or focus?<br>▪ Flawed pricing models focusing on competition, sales & market share, with little (or no) consideration to full cost and investment recovery.<br>▪ Uncertainty on how to deal with the market share and/or profitability (shareholder value) dichotomy.<br>▪ Porter's Five Forces: A strategy designed to focus on the strongest force only is fatally flawed.<br>▪ Does current strategy and business model consider the impact of ESG on enterprise risk and therefore value?<br>▪ Judging by the finance & CAPEX investment issues, finance appears not to be a strategic business partner.<br>▪ Strategic alignment, value-based management & ccompetitive advantage: reality or perception? | ▪ Perpetual CAPEX investments without understanding its full impact on:-<br>➢ operating margin,<br>➢ value creation,<br>➢ returns on investment,<br>➢ impact on capital structure,<br>➢ borrowing cost, and eventually<br>➢ enterprise value.<br>▪ Continuously increasing capex does not necessarily result in sustainable competitive advantage. | ▪ Silo-ed planning, analysis & EPM.<br>▪ Still focussing on the wrong metrics, i.e., EBITDA%.<br>▪ Can current capital structures be considered sustainable, particularly in a highly competitive low/no growth telecom industry?<br>▪ IFRS/statutory compliance-oriented planning, analytics & reporting.<br>▪ Traditional spreadsheet-based FP&A still widely used.<br>▪ Current business planning cycles are not keeping up with rapid change & volatility – resulting in slow time to market and delays in taking corrective actions.<br>▪ Single dimension P&L formats for a multi-dimensional reality - consisting of revenue streams, product units, value segments, S&D channels, do NOT support optimal decision-making.<br>▪ Impact of business decisions on enterprise value not being considered: just an oversight, or a fatal flaw? |

# A new mindset is needed

Managing a business from EBITDA margin to operating and pre-tax profit margins, from value destruction to value optimisation, management needs to measure the impact of their strategic decisions on the company's enterprise value; in real-time, all the time.

Executives need to challenge their reliance on traditional management concepts such as competitive advantage, strategic alignment and value-based management. In today's highly competitive, rapidly changing, complex and uncertain business landscape, management can no longer afford to remain a prisoner of past beliefs and practices.

Value-based management now encompasses profit, people and planet, which is why enterprise value is becoming the key indicator on the reporting dashboard of a 21st century company. Strategic alignment, traditionally linking strategy and organisational functions, now also requires links to capital investment and funding. Sustainable competitive advantage without the ability to think faster than the competition, is nothing but a mirage.

Organisational agility, multidimensional perspectives, smart CAPEX, strategic finance, connected planning & analysis – these are the imperatives for premium business decisions, and *optimised enterprise value*.

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