Bucharest Stock Exchange and local M&A market valuation multiples

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4th Edition

Content

Foreword

The PwC Romania Valuation and Economics team is pleased to publish the fourth edition of its analysis regarding the companies listed on the Regulated Market of the Bucharest Stock Exchange and the local M&A market multiples.

- This study presents the valuation multiples trend during the period 2007 – 2020 following the analysis of 79 companies listed on the Bucharest Stock Exchange (BSE), with a focus on the Consumer, Oil & Gas, Financial Services, Healthcare, Industrial, Materials and Electricity sectors. Our analysis also covers the valuation multiples trend based on a selection of 289 transactions closed between 2007 and 2020 for which reliable financial data was available.
- In 2019, the COVID-19 pandemic outbreak shattered the overall economy and the first news of the developing health crisis put pressure on stock exchanges across the world. The situation was no different in Romania, which closed 2020 with an economic contraction of approximately 4%. With respect to the Bucharest Stock Exchange, the data analysed for 2020 (price returns of Bucharest Exchange Trading – BET index) indicated that the initial negative trend was successfully overcome, with the rebound occurring towards the end of the year. A more in-depth analysis of how the local equity market absorbed the shock of COVID-19 pandemic and how various sectors responded is presented throughout this study. Please note that it is not possible for PwC to assess with any certainty the implications of COVID-19 for the Romanian economy as a whole, the local capital market or the M&A market in terms of how long the current crisis may last or, more specifically, its direct impact on business activity. At the sector level, some companies are likely to face significant ongoing supply issues if their supply chains include companies in regions where the authorities have implemented, or may implement, measures to contain and / or prevent the spread of COVID-19.
- We envisage that the readers of this report will gain insights into:
  - overall equity market performance between 2007 and 2020, and in Quarter 1, 2021 (Q1 2021) – BET and Bucharest Exchange Total Return Index (BET-TR) performance against the return on the Romanian government bonds as a proxy for Risk-free assets;
  - the evolution of valuation multiples on different sectors based on an analysis of the listed companies;
  - the evolution of valuation multiples derived from local transactions.

Such studies increase in value as a result of recurrence and also based on the updates embedded in each new edition. We express our commitment to updating this study on an annual basis in order to provide higher value added for our readers.

Valuation and Economics

PwC Romania, Advisory - Deals

Executive summary

Macroeconomic outlook and Stock market performance

- In 2020, Romania's 3.9% GDP contraction due to COVID-19 pandemic was less severe than originally assumed. Moreover, the GDP recovery observed in Q4 2020 (5.3% increase vs. Q3 2020) brings hope for future economic growth. A 3.8% real growth rate is projected in 2021 based on the EC institutional paper "European Economic Forecast, Winter 2021". Private consumption, the main driver of growth in recent years, decreased by approx. 5% in 2020 due to lockdown measures imposed by the government. However, it is expected to recover gradually as social distancing measures are eased in 2021 and 2022.
- Romania entered the COVID-19 pandemic after nine consecutive years of economic growth. The health crisis brought volatility to all global markets and changed the economic perspective. In Romania, as in other countries, the pandemic led to lockdown and reduced economic activity, with companies suspending or even closing their activities, employee layoffs and technical unemployment, falling private consumption, supply chain disruptions, etc.
- Romania's market capitalisation to GDP ratio was 15.4% in 2020, thus lagging behind other regional countries such as Hungary, Czech Republic and Bulgaria. The evolution of BET and BET-TR against CDS over the period 1 January 2007 – 31 March 2021 showed that the BSE is very sensitive to the country risk perception, with a negative correlation observed between CDS and stock prices, i.e. when the credit risk rose, the equity prices fell.
- The local equity market performance over the period 31 March 2020 – 31 March 2021 indicated that both the decline and the rebound took place very quickly:
  - Market capitalisation rose by approximately 50% in the one-year period;
  - The BET index also recorded a strong increase, from 7,625.38 points on 31 March 2020 to 11,189.60 points on 31 March 2021. That surge in the BET index followed the sharp drop recorded during March 2020 and was boosted by the inclusion of Romania in the FTSE Russell indices for Emerging markets as of 21 September 2020;
  - The BET-TR index (reflecting also dividends of BET index companies) closed 2020 3.4% higher than in 2019, despite the context of uncertainties generated by the pandemic. Furthermore, the BET-TR index closed the trading session on 31 March 2021 at an all-time high of 18,848.03 points, thus breaking the previous record 16,509.64 points set on 31 December 2020.
- BSE key events during 2020:
  - The local equity market was promoted by FTSE Russell from a Frontier market to the Secondary Emerging market category (effective as of September 2020);
  - Only one new company (Bittnet Systems) started trading on the BSE main market through its transfer from the MTS to the regulated segment. Moreover, this company and three others were included in the FTSE Russell indices: Banca Transilvania, Nuclearelectrica and TeraPlast;
  - In 2020, the BSE launched the ESG initiative on the Romanian capital market aimed at providing high-level ESG insights for the listed companies by using Sustainalytics risk ratings.
- **It is perhaps more important than ever to consider the long-term perspective. Thus, if we analyse the surplus return compensating investors for taking on the relatively higher risk of investing on the stock exchange as opposed to risk free assets, we note the following:**
  - **during the period from 1 January 2012 to 31 March 2021, the median excess return of BSE indices exceeded the Risk-free Rate by 4.9% for BET and 12.5% for BET-TR.**
  - **in 2020, BET return was below the Risk-free rate by 4.5%, while BET-TR return exceeded the Risk-free rate by only 0.5%.**

Valuation multiples – companies listed on the BSE

This study focuses on the performance of the underlying seven industries from two perspectives: sector evolution in 2020 and in the years before against the overall economic context; and inclusion in either cyclical or defensive sector category.

The key conclusions of our study regarding sector performance in 2020 are:

- Both **Electricity** and **Healthcare** sectors recorded strong increases in average market capitalisations, with double-digit growth for two years in a row.

  The listed companies in the **Electricity sector** (i.e. Transelectrica, Nuclearelectrica and Electrica) closed 2020 on a very positive note in terms of performance, thus indicating that Electricity is a defensive sector.

  The same situation was also recorded in the **Healthcare sector**, where Medlife doubled its market capitalisation in 2020, thus leading to robust growth of this sector regardless of the economic contraction. As such, the Healthcare sector proved to be defensive, maintaining consistent earnings and even benefiting from the pandemic.
- **Materials**, often seen as a defensive sector, experienced a 5% decline in average market capitalisation due to the TMK-Artrom delisting. If TMK-Artrom were excluded, however, the Materials sector would show 20% growth.
- **Consumer** sector evolution was mixed, considering its constituents are companies operating in HoReCa, which were strongly affected by the pandemic, and resilient companies such as Digi Communications. Among the most affected stocks, which dragged down the average market capitalisation, were those of Sphera Franchise Group, Casa de Bucovina - Club de Munte and Turism Felix.
- The **Oil & Gas, Financial Services and Industrial** sectors were among the most affected sectors due to the COVID-19 pandemic.
- The shock in oil demand was hefty due to 2020 lockdowns and reduced consumption. As a result, the West Texas Intermediate (WTI) crude oil price fell as low as minus USD 37.6 / barrel in April 2020, which was the first time it had ever been negative. The cyclical behaviour of oil prices was also felt on the BSE, with the average market capitalisation of the Oil & Gas companies within this sector dropping by 20%.
- Of the 12 companies included in the Financial Services sector, only two posted market capitalisation growth in 2020 (Fondul Proprietatea and Transilvania Broker de Asigurare). All the others (mainly banks and financial investment companies) proved weak in the face of the health crisis, with an average 6% market capitalisation drop observed vs. 31 Dec 2019. A general observation for the Financial Services sector is that the market capitalisation drop was generally associated with periods when relief measures were imposed by authorities (such as moratoria on repayments, falling interest rates, etc.) during or outside recession periods. Except for a few specific years (e.g. 2016, 2018 and 2020), the Financial Services sector remunerated its investors through appreciation of market capitalisation. We might therefore consider the sector to be cyclical, as it is generally affected by recessions and other economic shocks.
- The extreme uncertainty observed on the market (lockdown enforcements, travel restrictions and telework) in 2020 negatively affected companies operating in the Industrial sector. On the BSE, the average market capitalisation of the Industrial sector followed the economic downward trend and experienced an 11% fall in 2020 vs. 2019. The underperformance of the listed companies included in the Industrial sector was mainly attributable to their dependency on discretionary spending, as this sector includes companies operating in auto manufacturing, building construction and other industrial auxiliary activities.

M&A multiples

The key conclusions of our study regarding sector performance in 2020 are:

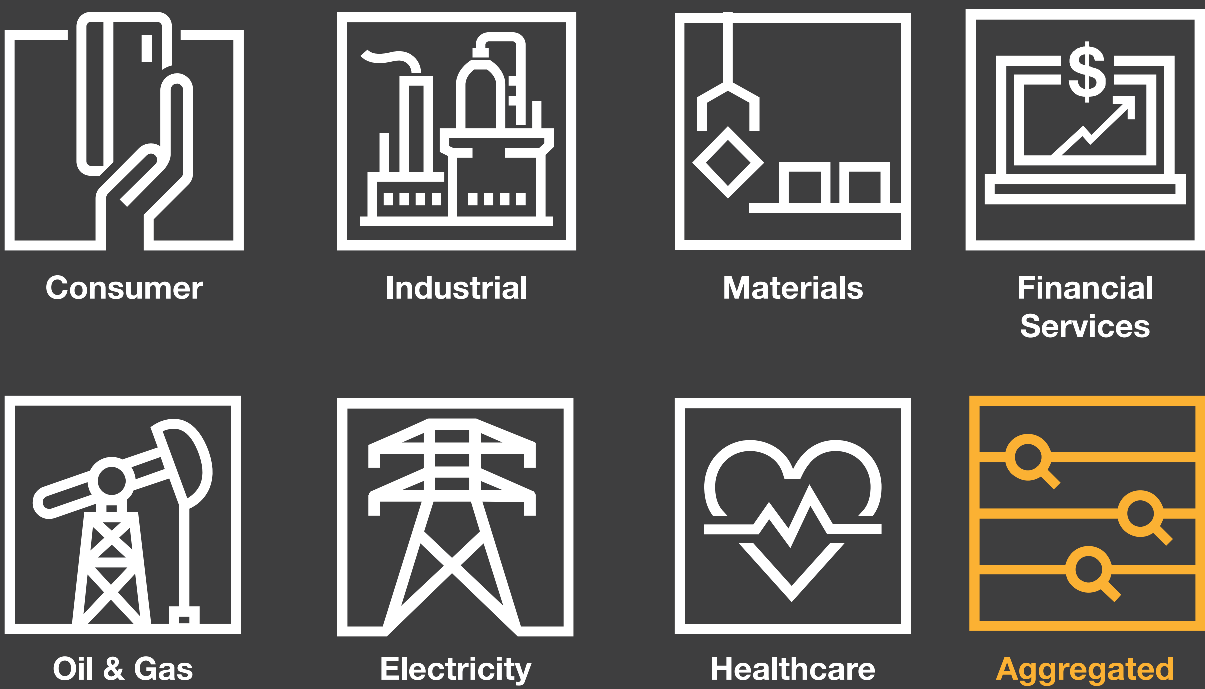
- The analysis of the M&A market was based on a sample of 289 selected transactions completed over the period 2007 – 2020 with available public information. Of those transactions, 91 were successfully closed during 2020.
- The highest EBITDA multiple derived for those transactions sample was the 13.1x recorded in 2019, whereas the lowest EBITDA multiple was 2.6x, recorded ten years ago.

In 2020, the average EBITDA multiple derived based on completed transactions (9.8x) was above the median EBITDA multiple observed on the BSE (7.1x). The gap might be explained by the fact that the companies listed on the main BSE market are generally mature, stable companies, whereas private transactions often refer to companies with lower profits but higher growth prospects.

Scope and methodology

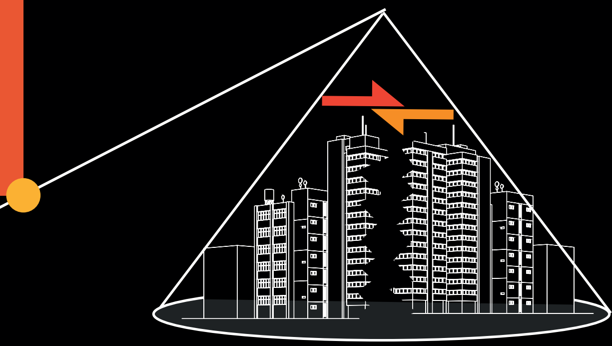
Romanian capital market performance is an indicator of prosperity and economic outlook stability. The increasing investment appetite for companies listed on the Bucharest Stock Exchange (BSE) has enabled growth in one of the most important BSE indices, namely the Bucharest Exchange Trading (BET) index. That index reflects the growth of the most liquid shares listed on the BSE.
On 31 March 2021, the BET index closed the trading session at a record 11,189.60 points, thus surpassing the previous high of 10,813.59 achieved in 2007. The maximum reached in 2021 is the result of all the effort put into the BSE's upgrade to Secondary Emerging market status. It also confirmed the local equity market development and the increasing number of investors showing interest in the BSE in 2020. One of the BSE's most important initiatives in 2020 was the promotion of Environmental, social, and governance (ESG) criteria among all listed companies. The BSE agreed a partnership with Sustainalytics to support that initiative.

The purpose of this study is to provide a comprehensive analysis of (1) the capital market and (2) the M&A market, from a valuation perspective, over a 14-year period, with a focus on:



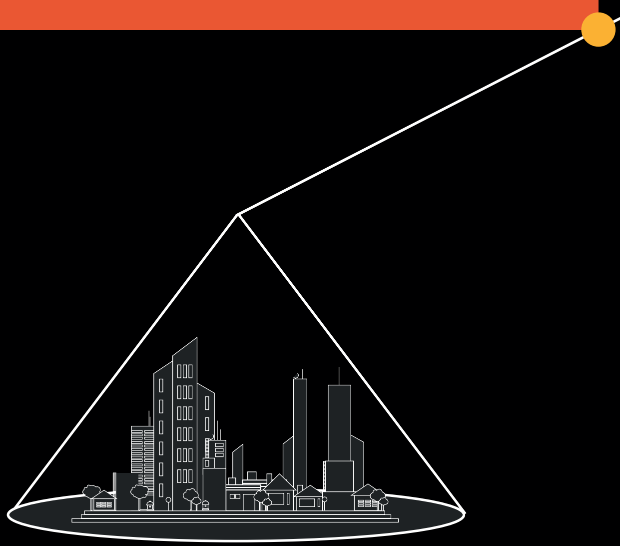
Understanding the results

- All the financial data used in this study was sourced from the BSE official website, S&P Capital IQ, Mergermarket, ISI Emerging Markets and Bloomberg. PwC has not verified, validated or audited the data and cannot therefore give any undertaking as to the accuracy of the study results. The time frame selected for the analysis included the 14-year period 2007 – 2020 and the period January – March 2021. Those periods encompass the performance of the selected sectors over the economic business cycles.
- The main conclusions of our study were drawn following a comparative analysis of the trading multiples paid for listed companies and those derived from private transactions.



M&A valuation multiples

- Of the 1,108 transactions closed in Romania during 2007 – 2020, we selected in our analysis 289 transactions for which reliable financial information was available. Of those deals, 91 were closed during 2020.
- The financial data used in our analysis was sourced from Mergermarket, EMIS or PwC internal database.



Listed companies valuation multiples

- Following an initial company screening that resulted in 83 companies listed on the BSE Regulated Market (80 local companies and three international), we eliminated three companies which were suspended from trading and Erste Group Bank AG, whose main market is the Vienna Stock Exchange. As a result, our analysis is based on the remaining 79 companies.
- The selected companies operate in the following S&P Capital IQ industry classification sectors: Consumer, Industrial, Materials, Financial services, Oil & Gas, Electricity and Healthcare.

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Valuation based on market approach

- Market multiples are valuation metrics widely used to value businesses. Assuming that the selected peer companies have similar valuation multiples, appraisers may conclude that, by applying the industry multiple to a specific company's financial metrics, they can arrive at the company's market value (enterprise value or equity value, depending on the selected multiple).

EV Enterprise Value

1. EV/Sales
2. EV/EBITDA
3. EV/Total Assets

Price Market capitalisation

1. P/BV
2. P/E

- For the listed companies' multiples analysis, we considered the following metrics:

  (a) Quartiles – 1st, 2nd (median) and 3rd – are statistical metrics describing a division of observations into four defined intervals based on the values in the sample. Each quartile contains 25% of the total observations.

  Quartiles have been determined by sorting the data from the lowest to the highest values and taking the data point at ¼ of the sequence for the 1st quartile, at ½ for the 2nd quartile (median) and at ¾ for the 3rd quartile.

  (b) Mean is the sum of the values divided by the total number of the companies included in the data set. It is one of the most commonly-used measures of central tendency and it is the preferred multiples proxy when the distribution is set to be normal. Otherwise, the median is the preferred central tendency measure (because it is not influenced by outliers).

  (c) Coefficient of variation equals the standard deviation divided by the mean and it is a measure of the dispersion of a data set from its own mean. The more spread out the data, the higher the deviation. When the deviation is too high, the mean multiple is not relevant.

- The multiples selection considers the robustness of the data available within the data set while focusing on the multiples that best represents the sector / subindustries. Given the exhaustive analysis of the seven sectors, the selection of the best indicator from the median and the mean considers the dispersion test.

  Outliers, defined for the purpose of this report as multiples exceeding 50, were excluded from our analysis.

- Various methods can be used to value a company. In practice, business valuation is often a combination of different approaches. The market approach (comparable listed companies and comparable transactions) is generally used in addition to other valuation approaches, mainly as a cross-check of the applied estimation procedures. Put simply, within the market approach, a company's sales or profits (or other financial indicator) are multiplied by an industry average/median multiplier as basis for estimating the Market Value of the business or the market value of the equity.

Current financial multiples include historical multiples based on standardized financials for the last completed fiscal period: Last Twelve Months (LTM). Current multiples based on per-share metrics (such as P/E or P/BV) are calculated using the last closing equity price, whereas current multiples based on company-level metrics (such as net sales, EBIT or EBITDA) are calculated using the Enterprise Value (EV).

It must be stressed, however, that any conclusions derived from using such multiples could be misleading and would need to be thoroughly reviewed, primarily for the following reasons:

- In reality, there is no such thing as 'twin-security', i.e. a perfect comparable company with the same risk exposure as the valuation target. In essence, that means that companies with risk profiles different from that of the valuation target are used to estimate its value;

- There are usually a number of strategic reasons for acquiring a particular company in a specific market. Such considerations lead to prices that are not aligned with the typical values of the most frequently used multiples such as price-to-earnings ratio (P/E) and the price-to-book value of equity ratio (P/BV).

Macroeconomic outlook

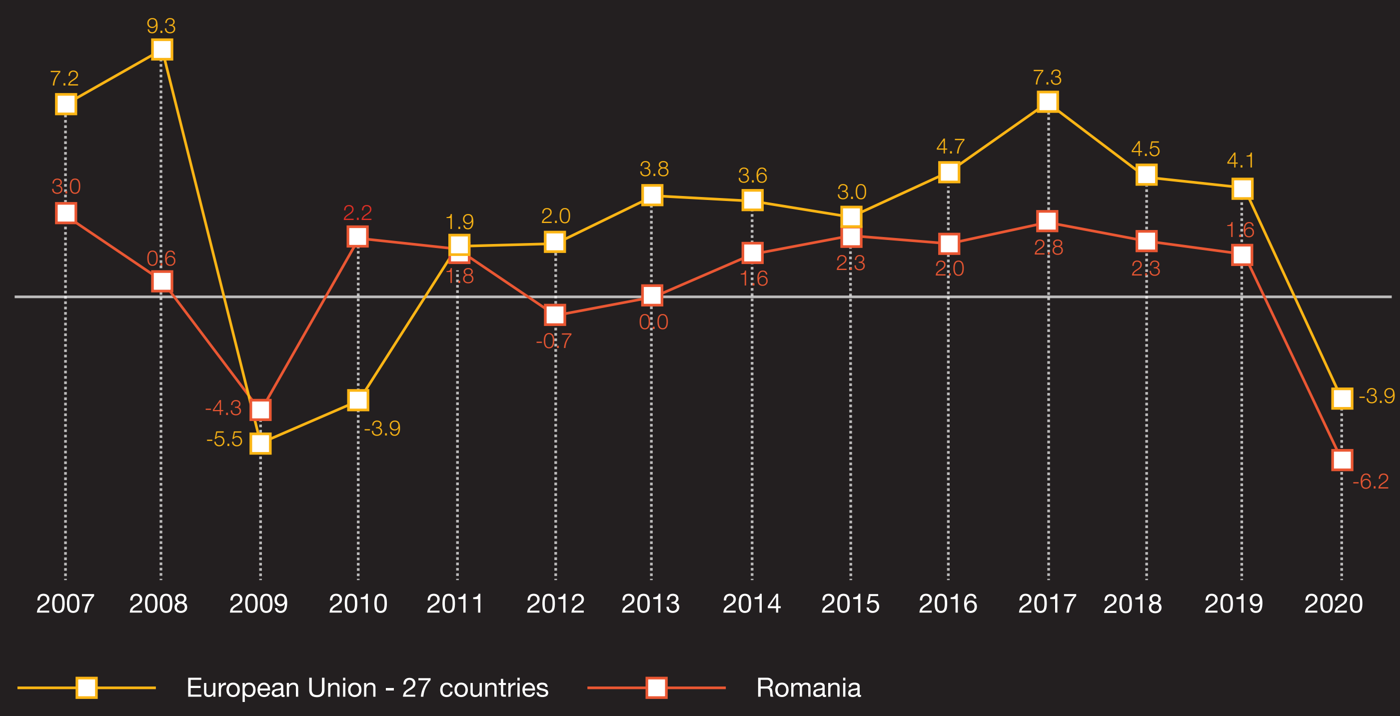
Romania is a relatively large European market with an economy measured at EUR 218.2 billion in GDP terms in 2020 and a population of 19.3 million people. The diversified and competitive industrial landscape, low unit labor costs, significant agricultural potential and low energy dependence can ensure a stable long-term path of growth and development. Despite those favorable aspects, the context changed in the spring of 2020 due to the COVID-19 outbreak, which led to lockdown and reduced economic activity in terms of companies closing or suspending their business, employee layoffs or technical unemployment, reduced private consumption, restrictive measures on mobility and goods transportation, and supply chain disruptions.

- The COVID-19 pandemic outbreak started in Romania in February 2020, when the first case of SARS-CoV-2 infection was confirmed by authorities. With the onset of the restrictions imposed by the government to contain the spread of COVID-19 among the population, many sectors were forced either to reduce or close their activities. Among the sectors most affected by the 2020 health crisis were recreational facilities (spa, sport activities, etc.), hotels and restaurants, real estate, transport and storage, professional, cultural and educational activities. Some businesses have thrived, including those in the IT&C industry, software solutions for businesses (software as a service - SaaS), mobile telecommunications and internet providers, e-commerce, food trade and pharmaceutical, medical and social work services.
- Romania endured an economic slowdown in 2020 with a 3.9% year-on-year fall in real GDP. That contraction was mainly attributable to (1) weak external demand that slowed production and exports, and (2) lower consumer spending.

Despite the economic contraction in 2020, the outlook for 2021 and 2022 is promising, based on the GDP recovery observed in Q4 2020 (5.3% increase Q4 vs. Q3 2020). According to the EC estimate (European Economic Forecast, Winter 2021) Romania's GDP is expected to grow by 3.8% in 2021 and 4.0% in 2022.

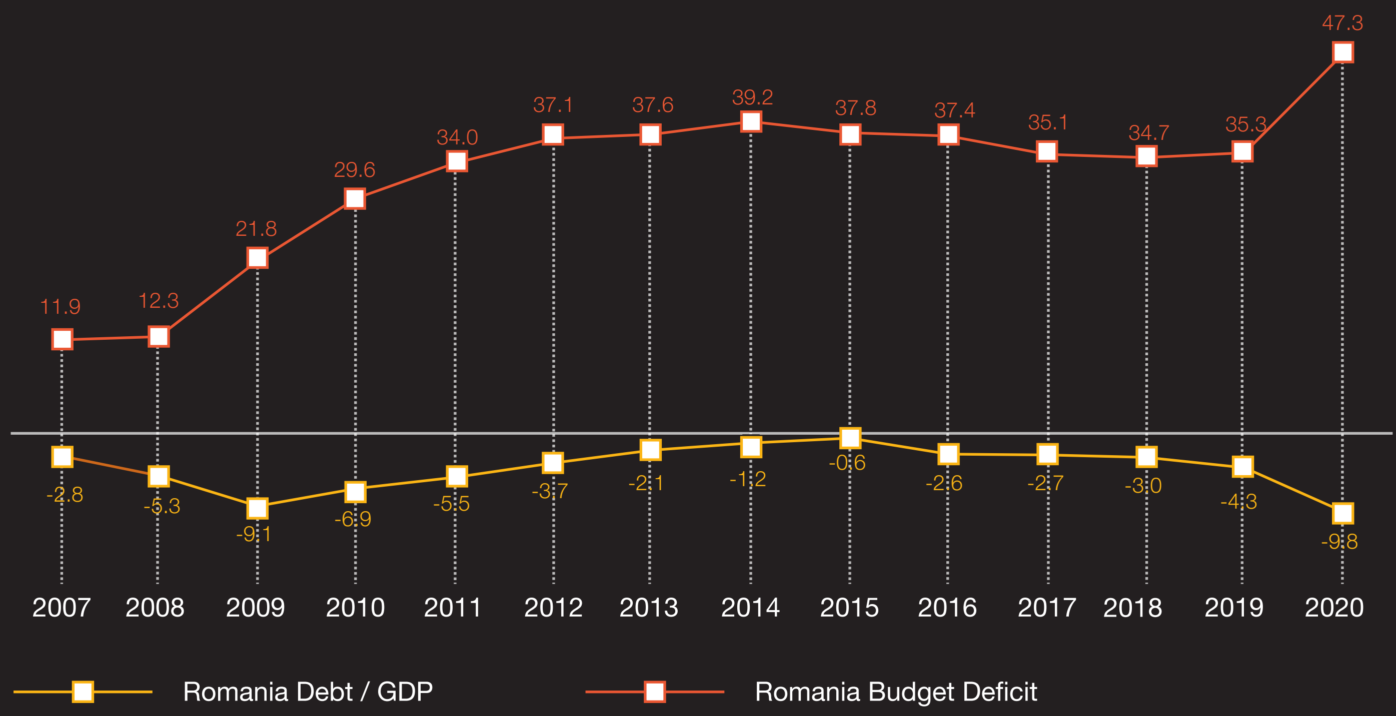
- Romania has consistently achieved higher GDP growth rates than the EU27, thus creating the potential for economic convergence. In terms of GDP per capita, living standards in 2020 were 69.1% of the EU27 average and are expected to reach 76.4% by 2026.
- The COVID-19 crisis led to the unemployment rate increasing to 5.0% in 2020 from the 3.9% recorded in 2019. In the coming period, the unemployment rate is forecasted to decrease slightly to 4.5% in 2021, based on the latest data provided by the National Commission for Strategy and Prognosis. The average wage increase in Romania of approximately 7% in 2020 vs. 2019 was almost double compared to EU27 average, this upward trend being triggered by labour force shortage caused by emigration and an aging population, as well as minimum wage increase. Despite recent salary increases, Romania's unit labour costs remain well below the EU27 average.

% Real GDP growth rate - Romania vs. EU27 (%)



Source: Eurostat

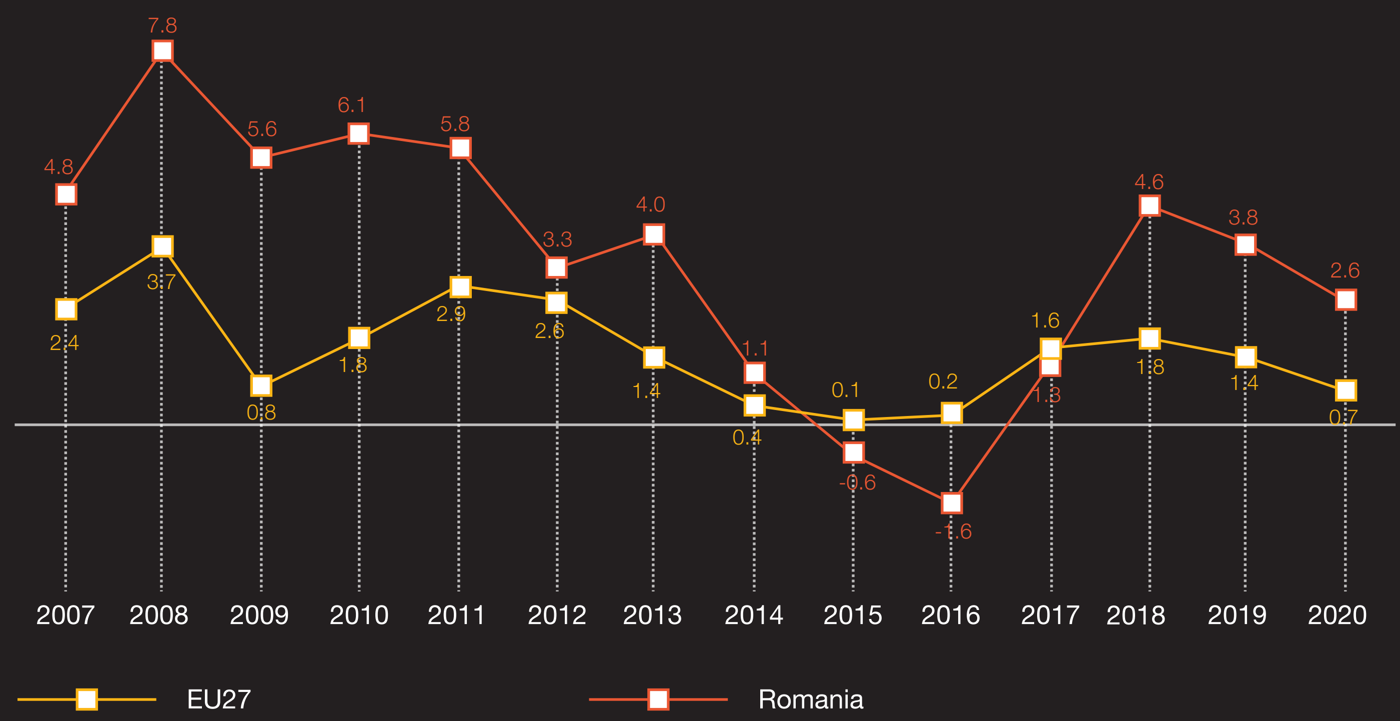
Romania's Debt / GDP and government budget deficit evolution (%)



Source: Eurostat, IMF

- Investments (gross fixed capital formation), as percentage of GDP, grew from 22.6% in 2019 to 24.6% of GDP in 2020 against a backdrop of higher absorption of EU funds, especially the financial help in connection with the COVID-19 pandemic. In the period 2021 – 2027, Romania will benefit from European funds amounting to approximately EUR 75 billion, including over EUR 29 billion from the EU Recovery Plan and EUR 46 billion related to the EU's Multiannual Financial Framework. Private consumption, the main driver of growth in recent years, is expected to continue to be affected by the lockdown measures imposed by the government. However, it is forecast to recover gradually, in line with the eventual easing of social distancing measures in 2021 and 2022.
- In 2020, **exports** fell by 9.7% from the previous year and their share in GDP decreased by 3.2 pp (to 37.3% of GDP). **Imports** also declined by 5.1% and accounted for 41.7% of GDP in 2020. As a result, net exports had a negative contribution to GDP growth, resulting in a trade balance gap of 4.5% of GDP in 2020. In the current COVID-19 context, both exports and imports have suffered shocks, conditioned by the general economic situations of Romania's trading partners. For example, three of Romania's five most important trading partners are Germany, Italy and France, which are all strongly affected by COVID-19 and the related restrictive measures, contraction of economic growth and reduced appetite for consumption.
- The **budgetary deficit** reached 9.8% of GDP in 2020 (vs. 4.3% in 2019), thus exceeding the Maastricht Treaty limit of 3%. The sharp increase in budgetary deficit in 2020 is mainly explained by: (1) the unfavourable budget revenues during March – December 2020 and (2) the increased expenditures needed to combat the effects of the pandemic.

Inflation rate % (CPI, annual average) - Romania vs. EU (%)



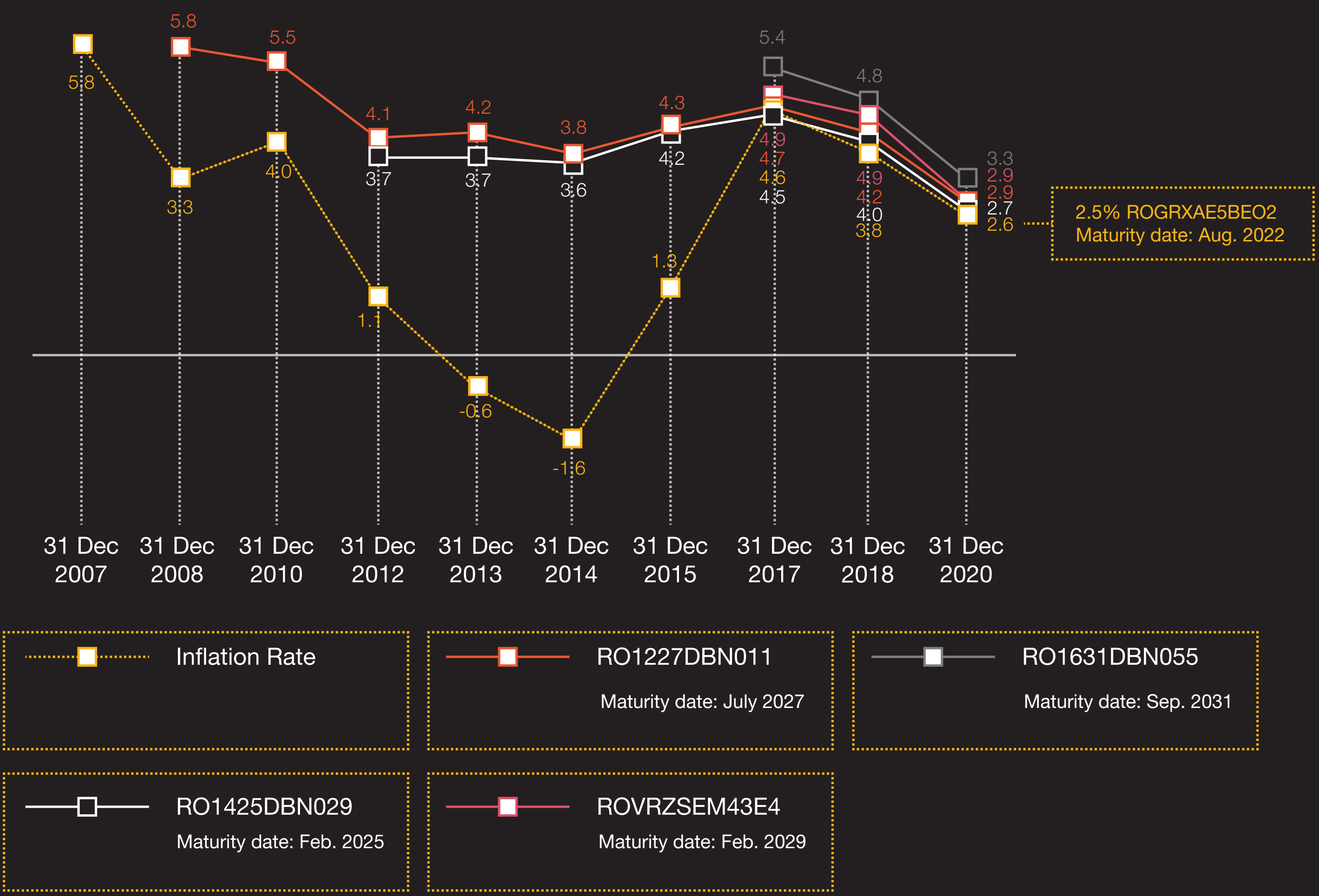
Source: IMF

- In 2020, the European Commission decided to lift the deficit limit on its Member States due to the current COVID-19 outbreak. Between 2012 and 2020, however, the public debt has been hovering within the range 34.7% – 47.3% of GDP. That's below the EU27 average public debt of 84.1% and the Maastricht Treaty public debt limit of 60% of GDP. According to Eurostat, Romania's public debt was of approximately RON 500 billion (EUR 102.5 billion) as at the end of 2020. Furthermore, the debt-to-GDP ratio of 47.3% of GDP projected for 2020 was a significant increase on the 35.3% recorded the previous year because of Romania's expansionary fiscal policy.
- According to the IMF, the inflation rate slowed to 2.6% in 2020 (from 3.8% in 2019) due to the sharp fall in oil prices. A slight increase to 2.8% is estimated for 2021.
- The risk-free rate (RfR) represents the return expected by an investor from a risk-free asset. The common proxy used for RfR in Romania is the yield to maturity of a liquid long-term Romanian Government Bond. The domestic government debt (including issuance, redemption, interest payments, etc.) is handled by the Ministry of Finance (MF). The National Bank of Romania (NBR) acts as the MF's agent overseeing the management of government securities, in both national and foreign currencies, on the domestic market.
- According to the NBR, there are **23 outstanding government bonds denominated in local currency,** issued as of 2011 and with maturity dates ranging from one to ten years. Based on the latest monthly report for 2020 published by the MF Public Debt Management Office, the most traded government bond in December 2020, denominated in local currency, is the bond with ISIN number ROGRXAE5BEO2 issued in April 2019, with 3.3 years to maturity (August 2022). The yield to maturity of that bond as at 31 December 2020 was 2.5%, according to data provided by the S&P Capital IQ platform. However, the most traded bond over the entire period 2011 – 2020 was the bond with ISIN number RO1227DBN011, issued in 2012 and maturing in 2027.

Our analysis shows that the RfR, as approximated by the yields to maturity of such government bonds, has fluctuated in response to the local political and economic context. In the last three years it has been closely correlated with the inflation rate. Before 2018, government bonds provided investors with real returns, whereas during 2018 – 2020 those reduced to zero for instruments with shorter remaining maturities.

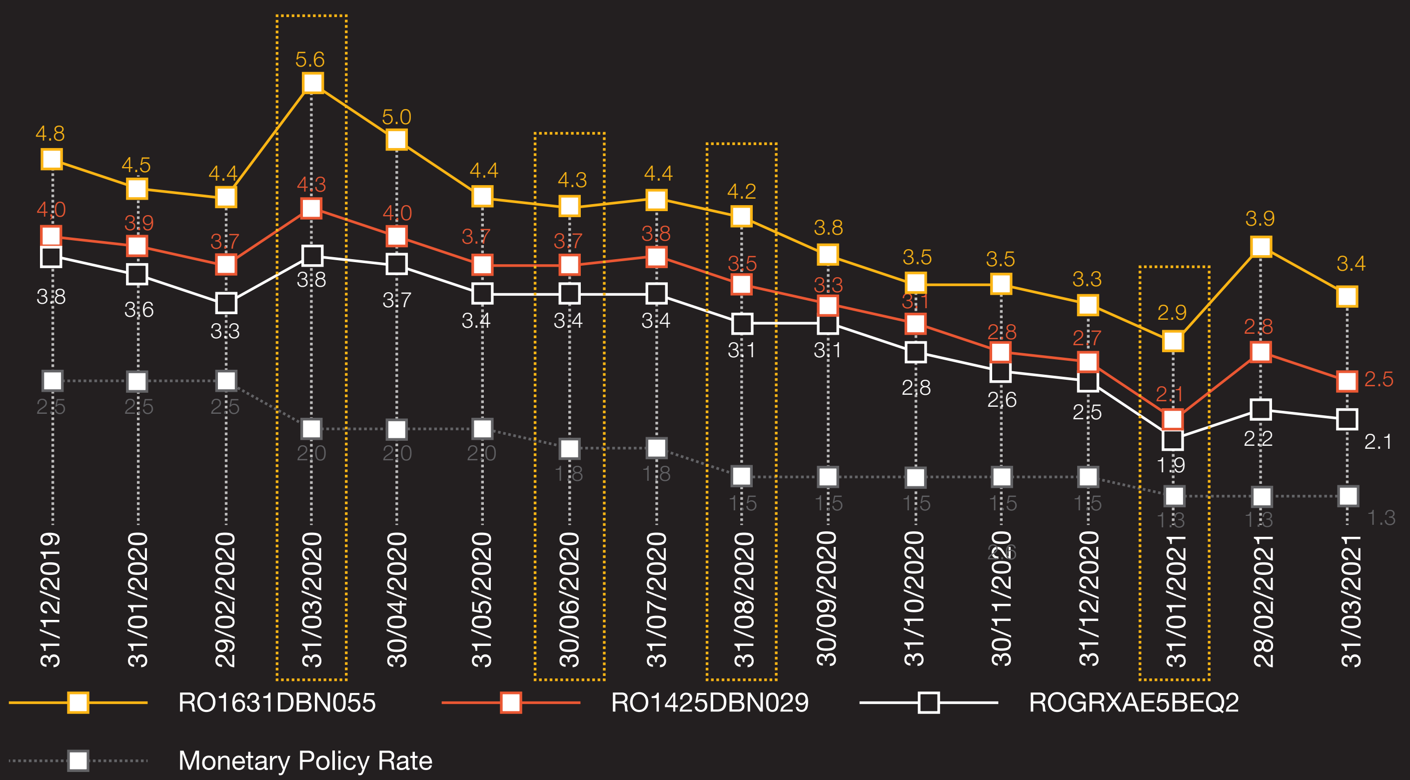
An analysis of the monthly returns on those bonds shows a clear increase in the returns required by investors for risk-free assets immediately after the COVID-19 pandemic outbreak in March 2020, followed by a gradual decrease over the following months before reaching a record low in January 2021. Those returns were also influenced by NBR measures such as the cutting the monetary policy rate four times during 2020 – 2021 and purchasing government securities on the secondary market (repo operations).

Risk free rate evolution for selected bonds denominated in RON vs. inflation rate (%)



Source: S&P Capital IQ, MF, NBR, PwC Analysis

Monthly evolution of Risk free rate vs. monetary policy rate (%)



Note: RfR or yield to maturity of each bond included in the analysis was calculated in the last day of the month.
Source: S&P CapitalIQ, NBR, PwC Analysis

Bucharest Stock Exchange ("BSE") – at a glance

Key events 2020

BSE celebrates 25 years since its re-opening

On 20 November 2020, the BSE celebrated 25 years since its re-opening. The Romanian Stock Exchange was re-established as a public interest institution in 1995, with the first 45 transactions being closed on 20 November that year. During the quarter of a century that has passed since then, the local stock market has evolved significantly: (a) the BSE was promoted in 2020 by FTSE Russell from a Frontier market to a Secondary Emerging market, (b) Over 350 companies are now listed on the two BSE market segments – the Main Market and the Multilateral Trading System (MTS or AeRO), and (c) an average of over 42 million shares are traded every day. Moreover, the BSE agreed an ongoing collaboration with Sustainalytics in 2020 to provide Environmental, Social, and Governance (ESG) criteria coverage for Romanian issuers (incl. ESG education initiatives and potential ESG weighted index in 2022).

BSE performance in times of the COVID-19 pandemic

The pandemic outbreak shifted investors' interest from the Main Market towards the Multilateral Trading System dedicated to smaller companies. During 2020 and the first four months 2021 nine companies were listed, i.e. 45% of all listings since 2015.

The BET index reached 11,189.60 points on 31 March 2021, thus marking a new all-time high, with the BSE becoming the first stock exchange in the region where the main index surpassed the level registered prior to the 2008 financial crisis. The 47% surge in the BET index during 31 March 2020 – 31 March 2021 was boosted by the inclusion of Romania in the FTSE Russell indices for Emerging markets as of 21 September 2020. Thus, Banca Transilvania and Nuclearelectrica shares were included in All-Cap indices, while TeraPlast and, as of March 2021, Bittnet Systems were included in the Micro-Cap index.

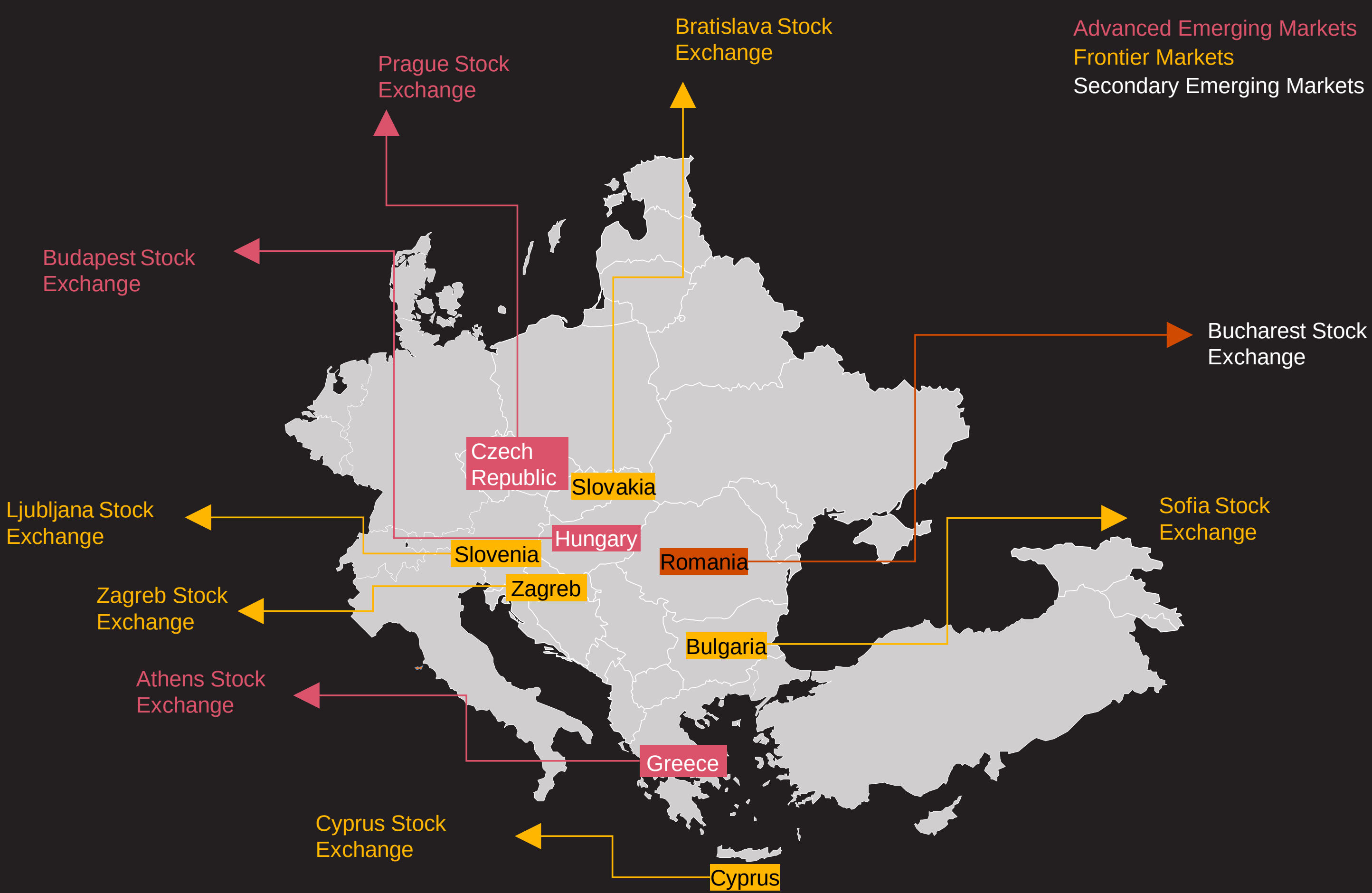
The Romanian capital market closed 2020 with a 3% increase in the BET-TR index, which also reflect dividends granted, in a very uncertain and volatile context generated by the pandemic. Moreover, the BET-TR closed the last trading session on 31 March 2021 at a record level of 18,848.03 points, thus breaking the previous high of 16,509.64 points set on 31 December 2020.

Growing perspectives for Government bonds

In 2020, the stock market has already seen some dynamics as a result of the listing of the Government Bonds programme Fidelis. In 2021, the Ministry of Finance returned to the capital market with three new issues of Fidelis government bonds, following the success recorded in 2020. The new offer was carried out on the BSE between 1 – 19 March 2021, including government bonds denominated in RON with one- and three-year maturity, and those denominated in EUR with five-year maturity.

Overview

- Based on an FTSE Russell review, equity markets are classified as: Developed, Advanced Emerging, Secondary Emerging or Frontier. For a more comprehensive analysis of the BSE's regional position, we looked at similar capital markets in terms of their volatility and the correlation between economic growth and indices value. The stock exchanges selected in our analysis are: (a) **Advanced Emerging markets** –Greece, Hungary and Czech Republic (b) **Frontier markets** – Bulgaria, Croatia, Slovakia, Slovenia and Cyprus.
- Romania's market capitalisation to GDP ratio was 15.4% in 2020, thus lagging behind regional markets such as Hungary, Czech Republic and Bulgaria. The market capitalisation (including main segment and MTS) dropped by 15% in 2020 vs. 2019 in EUR terms to EUR 33.7 billion (equivalent of RON 164.1 billion) amid adverse market developments. For all the analysed exchanges, we considered the total market capitalisation both on the main and alternative stocks trading segments, although each stock exchange has a different structure.
- The official data published by the BSE in 2020 underlines the scarcity of new IPOs concluded on the main segment, with the latest taking place in 2018 (Purcari Wineries) and 2017 (DIGI Communications, Sphera Franchise Group, AAGES and Transilvania Broker de Asigurare). However, despite the pandemic, 2020 and early 2021 showed an increased dynamic in the MTS segment, with nine listings during March 2020 – April 2021: three IT companies (2Performant Network, Safetech Innovations and Firebyte Games), two agriculture sector companies (Norofert and Holde Agri Invest), two specialty store companies (Agroland and MAM Bricolaj), one real estate investor (Star Residence Invest) and one industrial producer (Raiko Transilvania). With those new listings, the MTS market capitalisation increased by approximately 7% in 2020, then by almost 10% in the first quarter 2021 to EUR 2.2 billion (RON 10.8 billion) capitalisation at the end of March 2021.
- The BSE has been included in the Secondary Emerging markets category according to the FTSE Russell classification since 21 September 2020. Romania's promotion to Secondary Emerging market status was successful only after Banca Transilvania and Nuclearelectrica met the upgrade criteria to be included in FTSE All-Cap indices. Bittnet Systems and TeraPlast were also included in the Micro-Cap index dedicated to Emerging markets.



Country	Stock Exchange	GDP per capita (EUR)	Market Capitalisation (% GDP)
Croatia	Zagreb Stock Exchange	12,130	37%
Greece	Athens Stock Exchange	15,490	32.2%
Bulgaria	Bulgarian Stock Exchange	8,750	23.9%
Czech Republic	Prague Stock Exchange	19,970	20.2%
Hungary	Budapest Stock Exchange	13,940	16.8%
Romania	Bucharest Stock Exchange	11,290	15.4%
Slovenia	Ljubljana Stock Exchange	22,010	14.9%
Cyprus	Cyprus Stock Exchange	23,580	7.8%
Slovakia	Bratislava Stock Exchange	16,680	2.9%

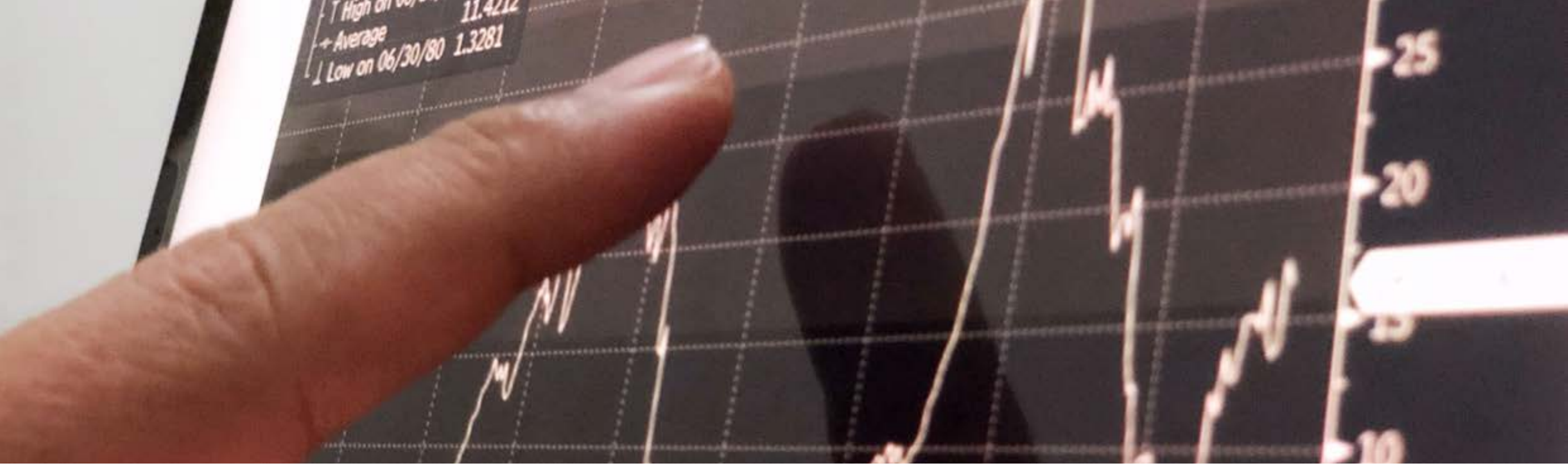
Note: The market capitalisation for Czech Republic (Prague Stock Exchange) does not include free market.
Source: Eurostat, S&P Capital IQ, Official website for each stock Exchange.

BSE Milestones

Stock exchange activity in Romania traces back to 1839, when commodities exchanges were established. The Bucharest Stock Exchange was first opened on 1 December 1882, but it was seriously affected by social and political instability until it was suspended in 1948 under the communist regime. Almost 50 years later, it was re-established as a public non-profit institution in June 1995.

- **1882** – **BSE is officially opened**
- **1995** – **BSE is re-established as a public interest institution**
  First trading session on 20 November
- **1996** – **RASDAQ platform set up**
- **1997** – **First IPO (financial services)**
  BET
  BSE launching its first index
- **2002** – **BSE**
  Becomes FESE member
- **2005** – **BSE Becoming a Joint-stock company**
  Rasdaq absorption by BSE
- **2010** – **BSE listing on its own Regulated Market**
- **2014** – **RASDAQ dissolving**
- **2015** – **Launch of AeRO**
  BSE's alternative trading system
- **2017** – **Sibex absorption by BSE**
- **2020** – **BSE promotion to Secondary Emerging market status**
  effective September 2020

Source: BSE Official Website



BSE operates two markets:

1. Regulated Market, where financial instruments, including debt instruments (corporate, municipality and government bonds issued by Romanian entities and international corporate bonds), UCITs (shares and fund units), structured products, tradable UCITS (ETFs) are traded; as at 31 December 2020, 83 companies were traded on the regulated market, of which three were included in the International tier (Erste Group Bank AG, Purcari Wineries Public Company Limited and Digi Communications NV).

2. The MTS (also known as AeRO) segment was designed for listing early stage companies, such as start-ups and SMEs, and launched in February 2015 following the closure of RASDAQ. RASDAQ was the unregulated segment of the BSE launched in 1996 for listing Romanian entities resulting from the mass privatisation programme. It was dissolved based on a parliament decision in October 2014. As a consequence of RASDAQ's closure, the companies listed on that segment had one year to decide whether to migrate to the regulated market or to the MTS, or go private. The last trading day for the RASDAQ-listed companies was in October 2015. According to information published by BSE, a total of 288 companies were operating on the MTS segment in 2020.

BET Constituents	Weight in BET, 13 Dec 2019	Weight in BET, 6 Dec 2020
Fondul Proprietatea	19.99%	19.99%
Banca Transilvania	20.00%	19.98%
OMV Petrom	18.36%	16.10%
BRD - Groupe Societe Generale	10.55%	9.71%
Romgaz	10.69%	10.33%
Societatea Energetica Electrica	3.69%	4.02%
Transgaz	5.32%	5.17%
Nuclearelectrica	2.12%	3.16%
Digi Communications	3.09%	3.96%
Medlife	1.09%	1.25%
Teraplast	n/a	0.69%
Transelectrica	1.42%	1.66%
Alro	1.12%	1.21%
Purcari Wineries Public Company Limited	0.87%	0.97%
Conpet	0.67%	0.75%
Bursa de Valori Bucuresti	0.51%	0.54%
Sphera Franchise Group	0.53%	0.51%

BSE Indices

BSE calculates and distributes eight indices in real-time, i.e. BET, BET-TR, BET-XT, BET-XT-TR, BET-BK, BET-FI, BET-NG and BET-Plus, and one index developed together with the Vienna Stock Exchange, i.e. ROTX.

BET, the first index developed by BSE in 1997, represents the reference index for the local capital market, including Blue Chip Companies; the BET index reflects the performance of the top 17 most-traded companies listed on the BSE, with the most recent change being TeraPlast's inclusion in the index as of March 2020. The main selection criterion for constituents' inclusion in the BET index relates to the liquidity coefficient. BET index constituents are adjusted quarterly to update their weights as a result of: corporate events (share capital increases, splits, consolidations, etc.); changes of the index composition following the inclusion / exclusion of a company; the market price evolution of the index constituents' shares.

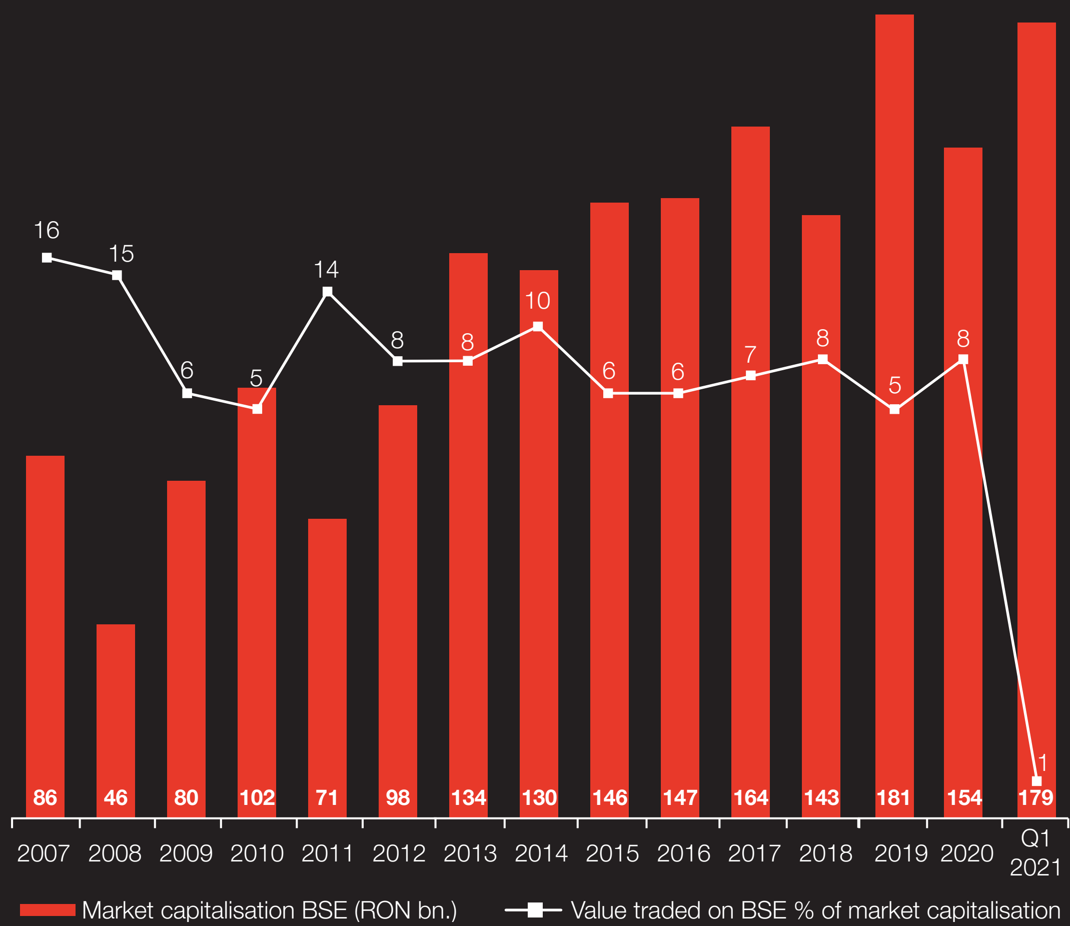
BET-TR is the first total return index launched by the BSE based on the BET structure. This index tracks price changes of component shares and is adjusted to reflect the dividends paid by its constituent companies. BET-TR includes the 17 most-traded companies listed on the BSE and has the same constituents as the BET.

In addition to BET and BET-TR, other indices are available. Those include BET-XT and BET-XT-TR, which tracks the price changes of the 25 most-traded companies listed on the BSE's Regulated Market, including financial investment companies and the corresponding total return, three sectorial indices (BET-FI for financial investment companies, BET-NG for energy and utilities, and BET-BK a benchmark index for asset managers and other institutional investors), BET-Plus that is a free float market capitalisation-weighted index of the Romanian companies excluding investment companies and ROTX, which is an index developed by BSE together with Vienna Stock Exchange for all "blue chip" shares traded on the regulated market.

Liquidity analysis – BSE regulated market

- During 2013 – 2020, the total market capitalisation of all companies listed on the regulated market (including domestic and international tiers) oscillated in the range RON 130 – 180 billion, while the value traded as percentage of market capitalisation stayed within the 5% – 10% range. Before that period, the capital market evolution and trading activity was less predictable, with higher fluctuations observed.
- After reaching a record high of RON 181 billion in 2019, BSE market capitalisation dropped by 15% in 2020 (RON 154 billion) on the back of the COVID-19 pandemic. Economic uncertainty led to stock market volatility and decreased share values as bad news about COVID-19 spread and accelerated the panic of some investors. However, the overall impact of the COVID-19 pandemic was counterbalanced by positive news about BSE promotion to secondary market. The rebound was already observable in the last quarter of 2020.
- The number of companies listed on the regulated market fell from 87 as at 31 Dec 2018 to 82 as at 31 Mar 2021, following the delisting of Oltchim, Boromir Prod, Amonil Slobozia, Petrolexportimport, TMK-Artrom and Transilvania Constructii. Of the 82 currently listed companies, two are suspended from trading due to insolvency (UCM Resita and Natura Quattuor Energia Holdings) and one resumed trading in March 2021 (Romcab).
- BSE market capitalisation as at 31 Mar 2021 reached RON 179 billion, thus posting 16% year-on-year growth, whereas the average monthly traded value in Q1 2021 was 20% below the 2020 average. The effervescence currently observed on the local equity market is mainly attributable to the resilience shown during COVID-19 pandemic, increased liquidity and competitiveness resulting from the promotion to Secondary Emerging market status.
- The weakest BSE performance in the last 14 years was recorded in 2008 during the financial crisis, when market capitalisation almost halved. The RON 46 billion market capitalisation at the end of 2008 represents only 30% of the market capitalisation recorded as at 31 Dec 2020. Comparing BSE market capitalisation during those two crises shows that the equity market remained relatively attractive during the health crisis in 2020 compared to during the financial crisis in 2008.
- The trading value on the BSE regulated market increased by more than 25% in 2020 from that in the previous year (2020: RON 12.2 billion vs. 2019: RON 9.7 billion). In the last 14 years, the lowest traded value was recorded in 2009 (RON 5.1 billion), when investor confidence was strongly affected by large corrections from 2008, whereas the highest level was reached in 2007 (RON 13.8 billion) at the beginning of the financial crisis.
- The top five most-traded shares on the regulated market in 2020 were the same as in the previous few years: Banca Transilvania (BVB: TLV), Fondul Proprietatea (BVB: FP), OMV Petrom (BVB: SNP), Romgaz (BVB: SNG) and BRD - Groupe Société Générale SA (BVB: BRD).

Evolution of market capitalisation and traded value on BSE - Main Market, 2007 - Q1 2021 (%)

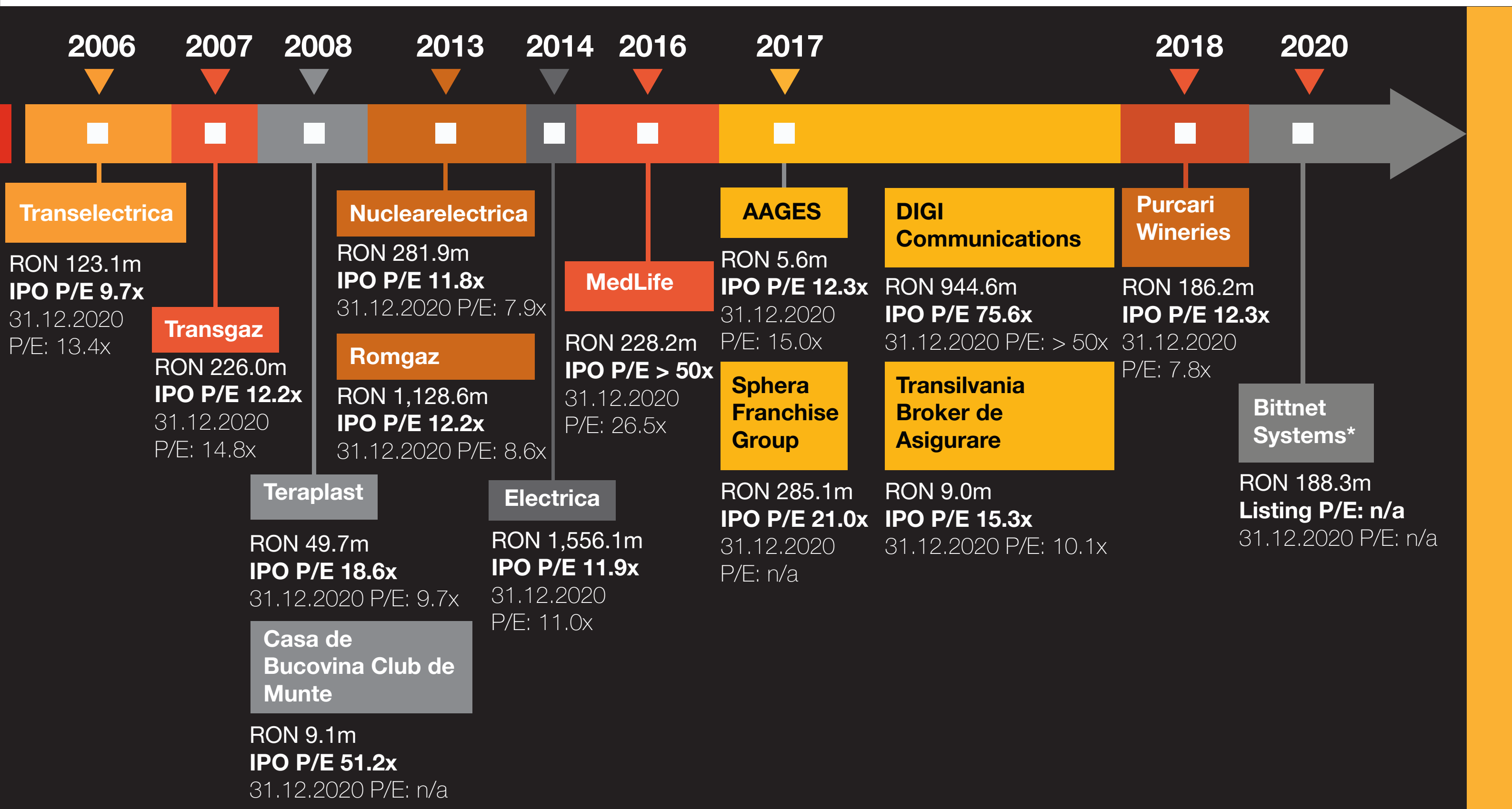


Company	Sector	Ticker	Total Value Traded (RON)
Banca Transilvania S.A.	Financial Services	BVB-TLV	2,917,569,535
Fondul Proprietatea	Financial Services	BVB-FP	1,842,973,425
OMV Petrom S.A.	Oil & Gas	BVB-SNP	1,407,702,793
S.N.G.N Romgaz S.A.	Oil & Gas	BVB-SNG	976,985,526
BRD - Groupe Societe Generale S.A.	Financial Services	BVB-BRD	948,779,171

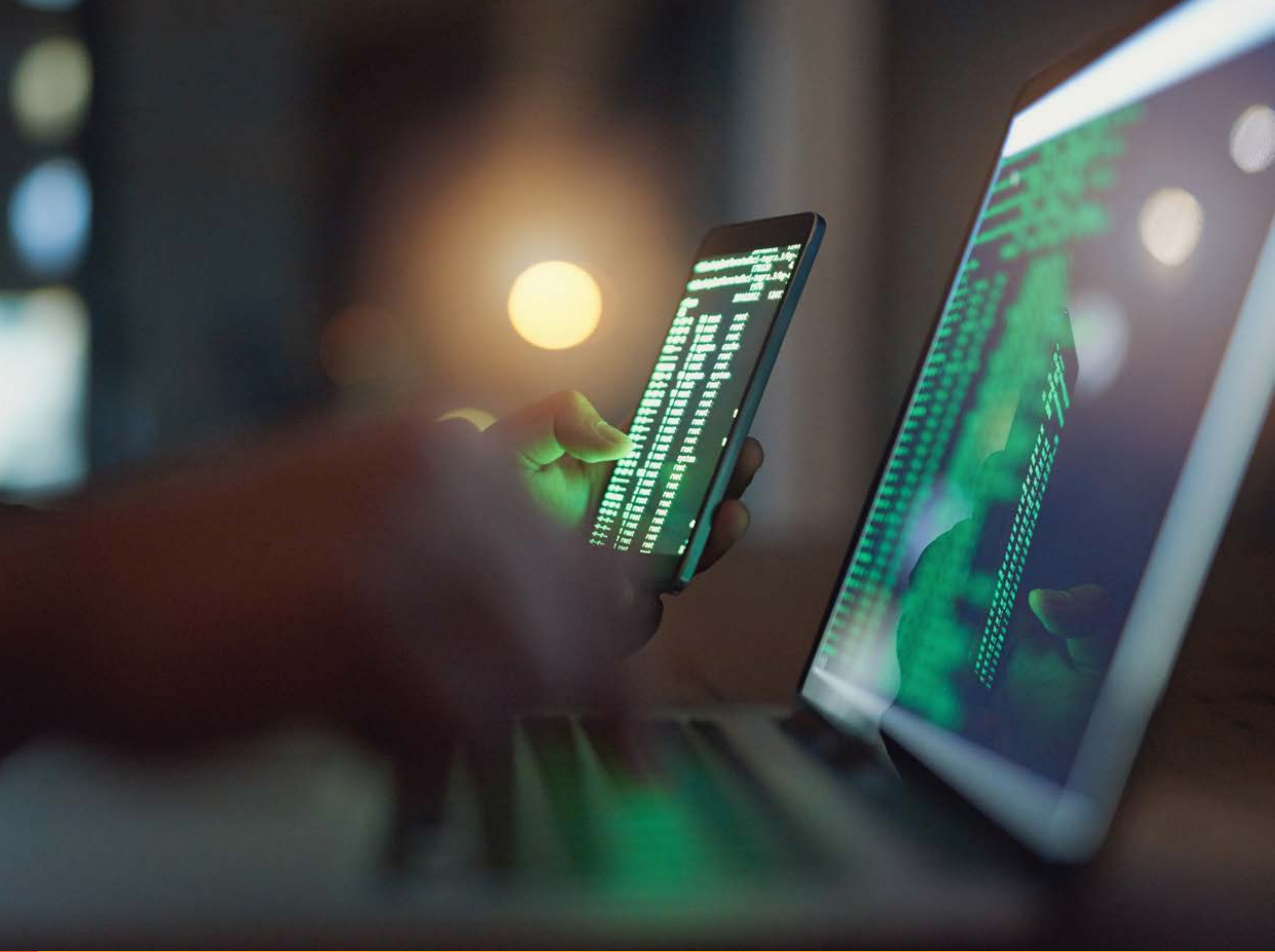
Source: BSE, PwC Analysis

Overview of Romanian IPOs – a retrospective analysis

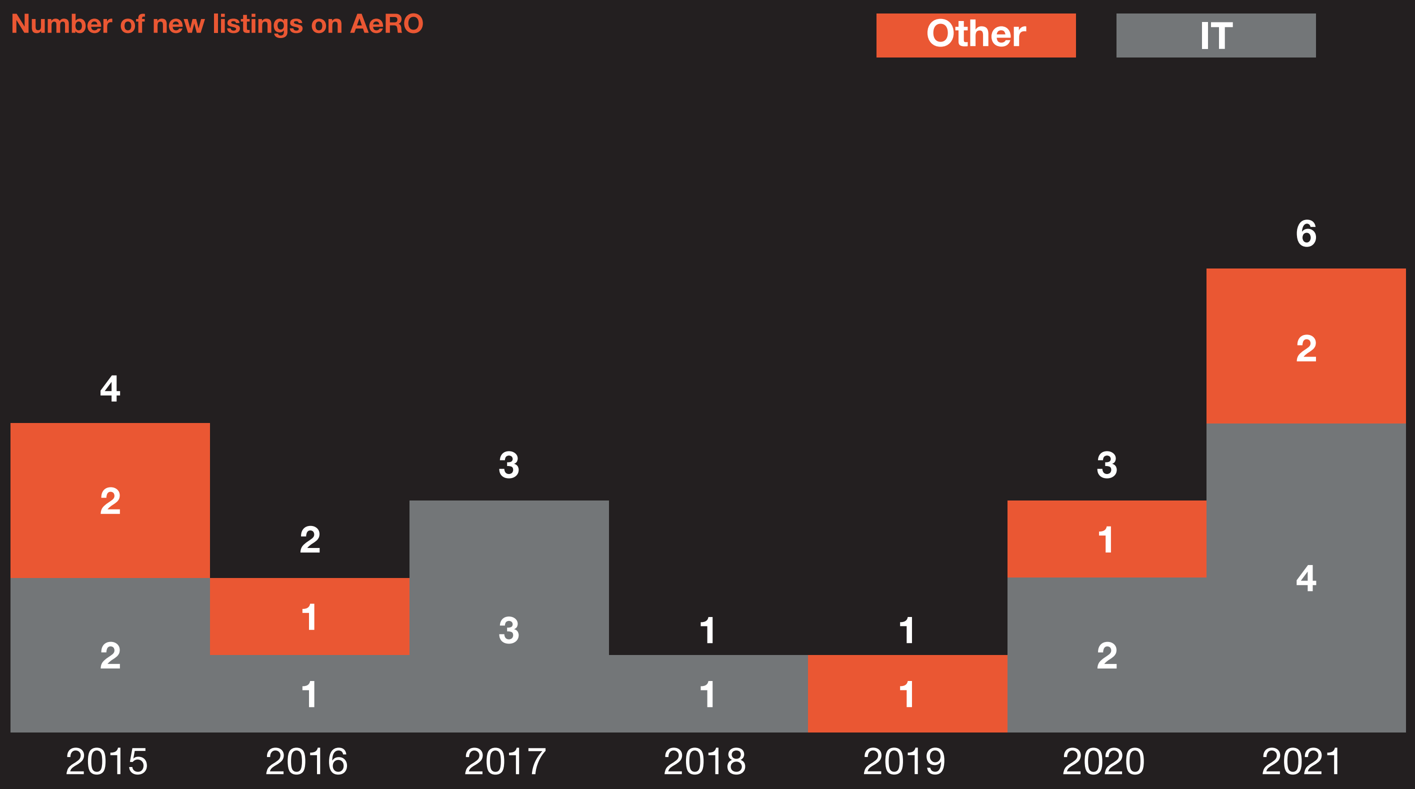
- The scarcity of IPOs in Romania might be explained by the low appetite for transactions in the context of global uncertainties, especially in the period 2008 – 2012, the postponing of public listings for state-owned companies and the lack of experience regarding raising financing via primary capital markets. The mass privatisation process from 1995 – 1996 was preferred for accelerating the privatisation of state-owned companies and helping to build the foundation of local IPO culture. In the context of alternative equity providers (i.e. private equity and venture capital equity funds), some companies decided not to go public on the BSE, thus keeping the number of domestic IPOs at low levels. In recent years, the BSE has been committed to holding financial seminars and campaigns to increase awareness regarding trading on a capital market and the inherent advantages.
- The timeline presents all successful IPOs of companies listed on the regulated segment of the BSE during 2006 – 2018, along with the value obtained and an estimated P/E ratio calculated at the IPO price and the P/E ratio as at 31 December 2020. In the last two years, no IPOs have been concluded on this market segment, but Bittnet Systems transferred from AeRO to the main BSE market in 2020.
- Although only 13 IPOs were counted on the regulated segment during 2006 – 2020, 20 listings have taken place on the MTS segment since it was established in 2015. This year has already seen the highest number of listings on MTS – we have already assisted six new IPOs in the first four months of 2021. Of the 20 companies listed since 2015, seven are IT companies.



Note: Romgaz and Electrica were both listed on the Bucharest Stock Exchange and the London Stock Exchange; The above timeline displays the IPO value raised only on the Bucharest Stock Exchange, regardless of global depositary receipts traded on London Stock Exchange.
* the company was initially listed on MTS and in June 2020 migrated on the BSE main segment.
Source: BSE website (www.bvb.ro)



Number of new listings on AeRO



Source: BSE website (www.bvb.ro)

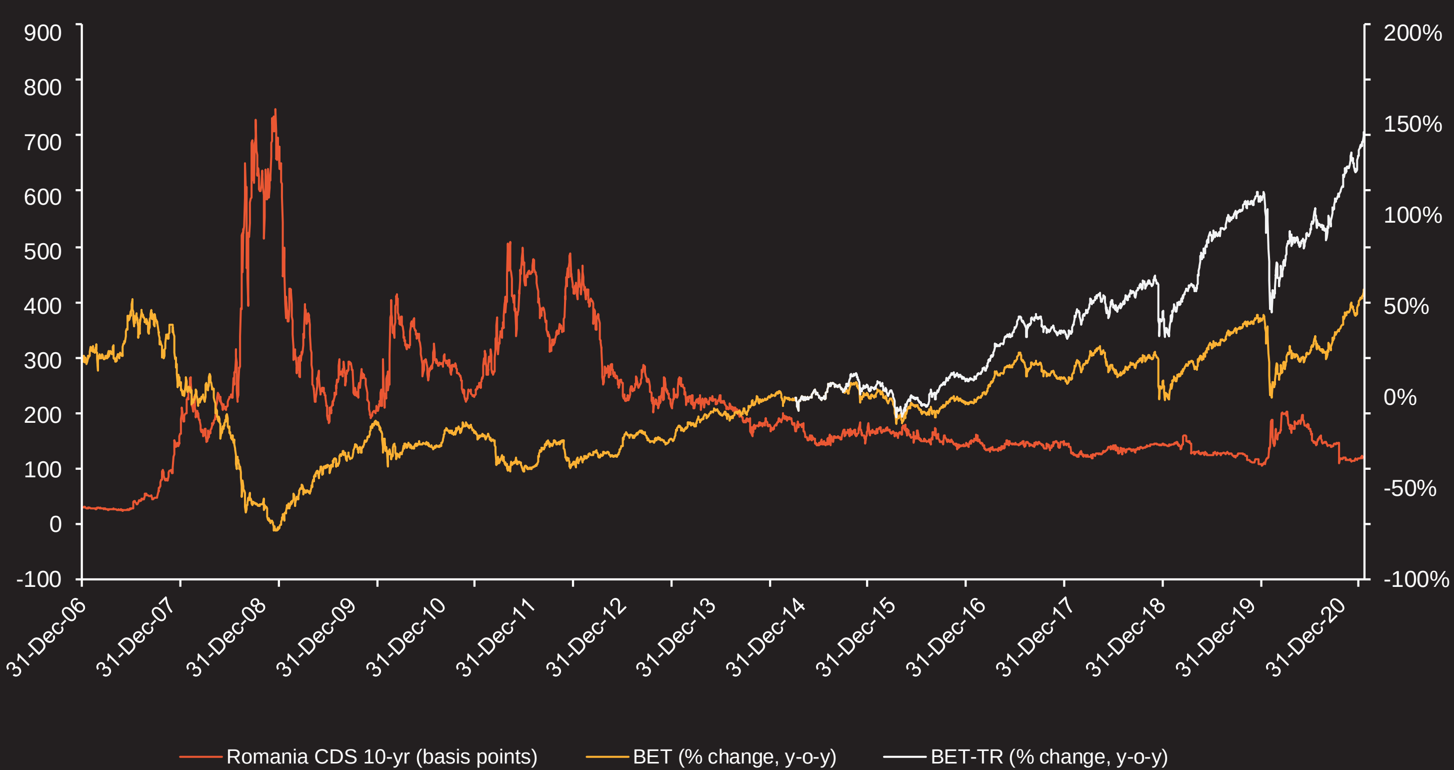
Romanian stock market performance

Stock market indices performance vs Credit Default Swap (CDS)

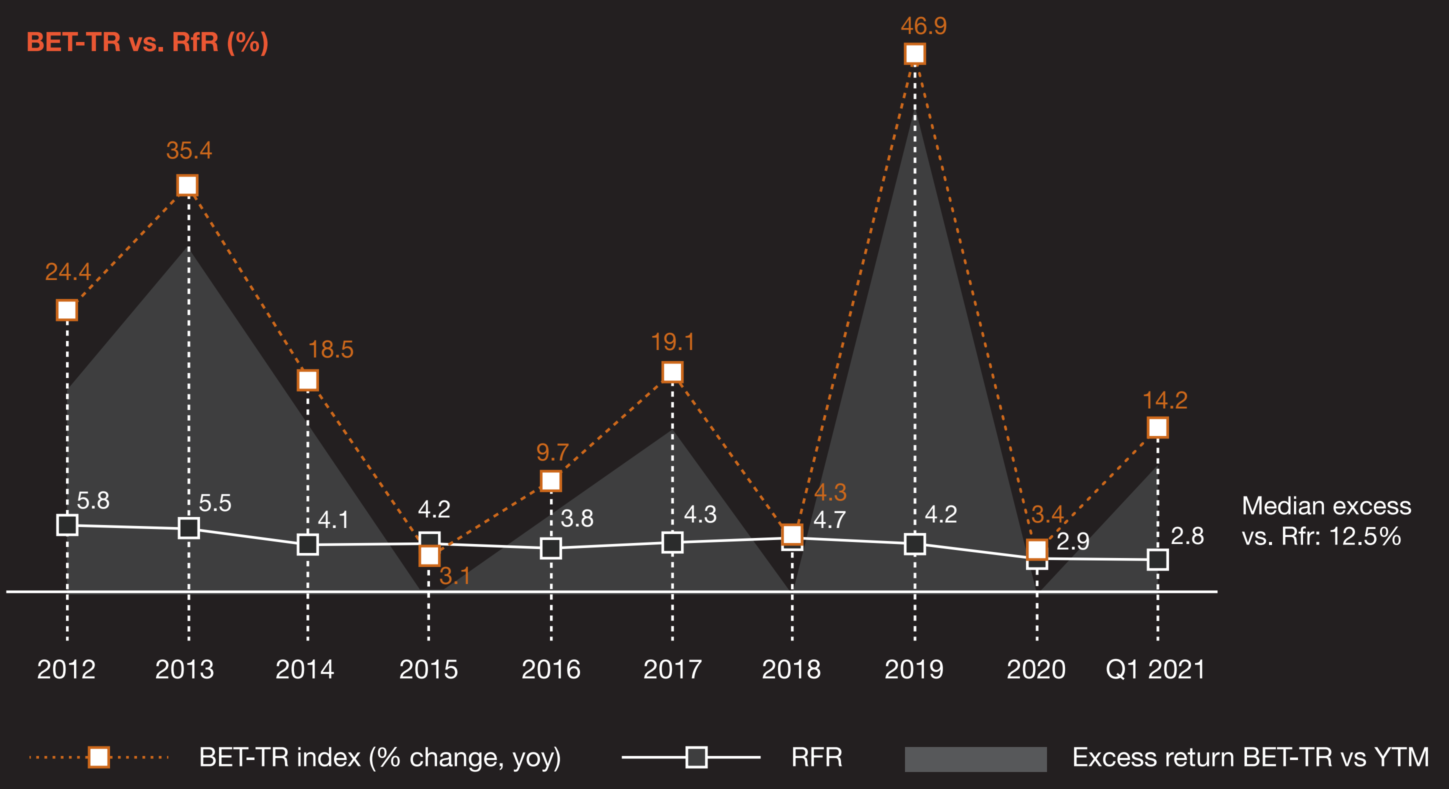
A country-specific CDS is an indicator for the default risk perception of sovereign debt instruments issuers, its evolution being driven by the changes in local economic fundamentals. A country's stock market has long been viewed as an economic barometer.

- Stock market returns were analysed based on the performance of the BET and BET-TR compared with the Risk Credit Default Swap (CDS). The development of BET, BET–TR and CDS, as depicted in the graph, shows that the BSE indices are sensitive to the country risk, which also influences foreign capital investments.
- In July 2007, when the BET index reached a new high of 10,813.59 points, the CDS for Romanian government bonds reached a new low of 30 basis points. Once the financial crisis had started to take its toll, the CDS recorded a historic high of 762 points in February 2009, whereas the BET index reached a new low of 1,887.14 points following an 80% collapse from its 2007 high.
- Between 2010 and 2011, the CDS recorded an average level of 300 points and fewer fluctuations. The beginning of 2012 brought some tensions and, amid worsening economic conditions in the EU28 zone, Romania's CDS jumped to approximately 500 points. The context had improved by the end of 2012, with the CDS dropping by about half to approximately 260 points. In April 2014, the CDS was around 160 points, with BET index growth showing investors' increasing appetite for the Romanian capital market. From 2015 to 2019, CDS volatility was lower, thus presenting a downward trend. During 2018 and 2019, the CDS averaged 135 points, although Romania was considered riskier than other countries in the region. On 19 December 2018, the BET dropped by 11.2%, thus wiping out the entire growth achieved during 2018. The BET decrease in December 2018 was the second largest fall after 2009, when Romania entered recession, and was associated with rumors regarding additional taxation in banking, energy and telecom sectors, as well as changes in the Pillar II pension system, whereas the developments in 2020 were triggered by the pandemic and the promotion of the BSE by FTSE Russell.

Stock market performance vs. Romania's CDS evolution (%)



Source: S&P CapitalIQ

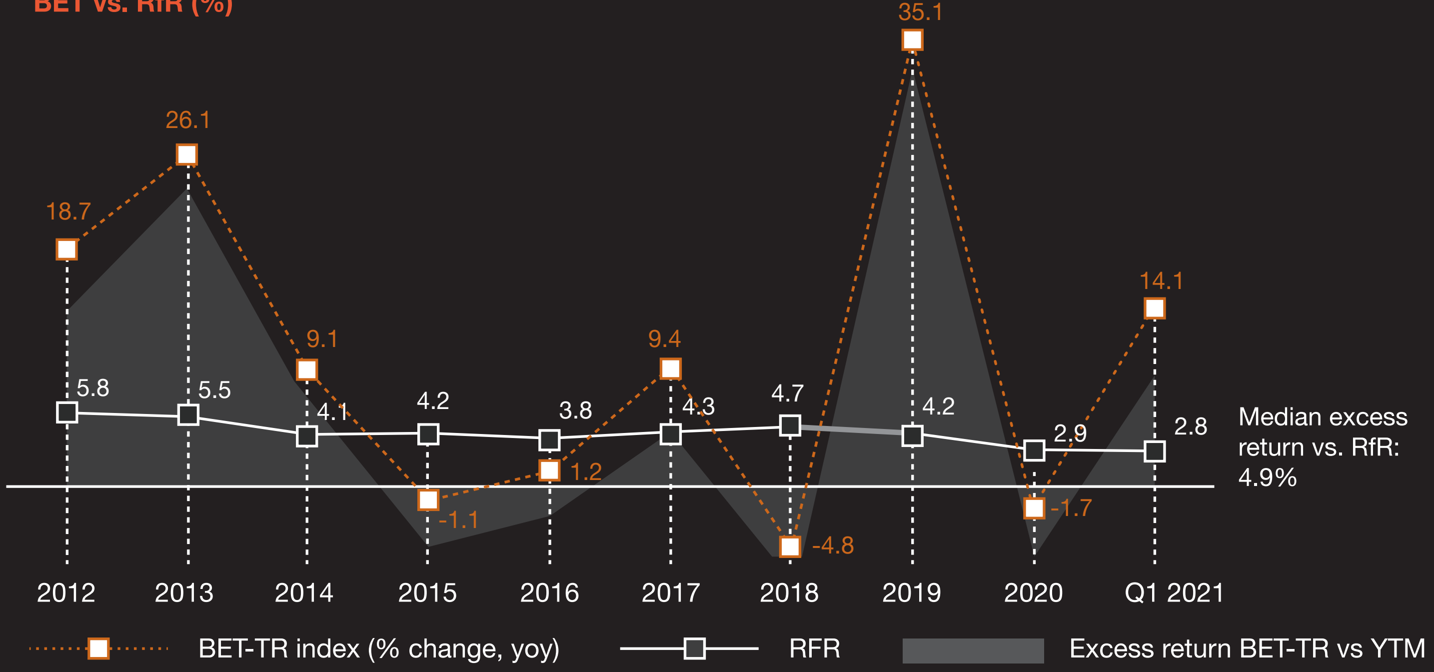


Source: BSE website (www.bvb.ro)

- In order to ensure that its indices are representative and relevant to the stock market, the BSE launched the BET-Total Return index (BET-TR) in September 2014. This index provides investors with more information about the capital market; accounting not only for capital gains but also for the total return of its constituents. According to publicly available data on the BSE, the average dividend yield for the BET index was approximately 6.5%, in 2020, compared to the 8% recorded in 2019.
- The BET and BET-TR indices decreased significantly in February and March 2020, while the CDS (insurance against non-payment of Romania's debt) increased.
- Based on the information available on the S&P Capital IQ platform for ten-year CDS data points, the insurance cost for Romania's debt was USD 12,019 (120 basis points) in February 2021, but it increased by 4.3% in March 2021 to USD 12,540 (125 basis points).
- In light of the above, we performed an analysis of the returns on capital invested in bonds market vs. equity market, focusing on the evolution of the Risk-free Rate (RfR), as approximated by the yields on long-term Romanian Government Bonds denominated in local currency and main BSE indices. The two graphs present the evolution of the yield to maturity one of one of the most-traded Romanian bonds (i.e. RO1227DBN011) in comparison with the performance of the two most representative indices, i.e. BET and BET-TR, during the period 2012 – Q1 2021. While the RfR halved during 2012 – 2020, the local equity market provided clearly superior returns during most of the analysed period, except for the years 2015 – 2016, 2018 and 2020.

- This analysis covering more than nine years shows that the period median excess return over the Risk-free Rate was 4.9% for the BET index and 12.5% for the BET-TR index. Those figures can be seen as proxies for the return surplus associated with stock market investment vs. the investment in government bonds, thus compensating investors for taking on the relatively higher risk of equity investing. The size of the premium varies depending on the level of risk in a particular portfolio.
- The Romanian CDS dynamic has been closely linked to the CDS evolution in the region over the period 1 December 2007 – 31 March 2021. Risk premiums have increased considerably in 2008, after the onset of the financial crisis, both in countries with Frontier stock exchanges and in those with Emerging stock markets. In 2019 and 2020, the CDS of many analysed countries, including Romania, hovered at reduced levels compared to years before, but still above the levels recorded until 2007, before the financial crisis outbreak. After reaching a 10-year minimum in February 2020 (108 basis points), Romania's CDS (ten years term, mid-price) grew in the pandemic context up to a maximum of 208 basis points in May 2020, but decreased by the year-end to 122 basis points.
- The analysis of CDS for a few countries in the region shows that as at 31 March 2021 Romania is perceived as riskier than Slovakia, Czech Republic, Bulgaria and Hungary, less risky than Serbia and similarly risky as Greece, Croatia and Cyprus.

BET vs. RfR (%)



Source: BSE website (www.bvb.ro)

ESG factors – investment perspective

In the last couple of years, traditional investment approaches have shifted towards sustainable investments that incorporate Environmental, Social and Governance (ESG) factors. Although ESG has become a "buzzword" in finance and some investors have already decided to apply these non-financial metrics, the ESG factors are not mandatory metrics in financial reporting statements.

ESG factors have gained more importance in recent years for several reasons:

  - ESG factors help in identifying and mitigating risks that a company may face, and provide better indications compared to traditional financial metrics related to companies able to generate superior returns;
  - They promote a sustainable business model as companies and investors look at society and the environment in a more responsible way;
  - As economies are changing very fast, so too are business models – in this respect, investors and companies must shift their vision / strategy / objectives from short-term perspectives of risks and returns to sustainable, long-term business models that generate profitability.
- ESG factors are incorporated within a wide range of investing approaches, each of which includes a different set of financial indicators and social metrics. The traditional investment approach takes account only the financial indicators intended to maximise shareholder profit or value. However, as a result of modern economic dynamics, a new approach has been considered by investors which focuses more on the ESG and societal investments where the returns are linked to environmental or social benefits (including human and employee rights, gender equality, race, age, social background, etc.).

ESG value creation ecosystem

The inclusion of the ESG factors in valuing a company has evolved considerably over the past couple of years, with a Value Creation Ecosystem factoring in ESG drivers being developed as a result. ESG investing is an approach that seeks to incorporate Environmental, Social and Governance factors into asset allocation and risk decisions with the intention of generating sustainable, long-term financial returns.

Numerous publicly available studies indicate a positive correlation between ESG factors and a company's share price increase. A positive effect on a company's share price can be achieved if that company gets a high score on ESG factors. A summary of the ESG value creation system is presented below. For a more detailed analysis, please see the article "A CEO guide to today's value creation ecosystem", published by Helen Mallovy Hicks, Aaron Gilcreast, Hein Marais and Chris Manning, and presented on the website strategy-business.com.

Value Creation Ecosystem

1. Capital markets have long rewarded companies for investing to drive growth while also improving efficiency to make that growth profitable.
2. A truly resilient organisation can both respond to and adjust effectively to external shocks, and flex and stretch to seize new opportunities.
3. An organisation creates enterprise value by addressing broad societal challenges and considering a wide range of stakeholders beyond shareholders.

Benefits of ESG investing

- Helps to improve risk management.
- Improved returns when used alongside traditional financial metrics.
- Growing societal attention (climate change, responsible business conduct and the need for diversity in the workplace) leads to better corporate performance.
- Shifts emphasis from short-term perspectives on risks and returns to longer-term sustainability in investment performance.
- ESG metrics – ESG ratings providers and ESG indices (MSCI, FTSE Russell, Bloomberg, Thomson Reuters, etc.).

How to measure ESG metrics

In response to the increasing demand for non-financial reporting metrics such ESG factors, a set of products and services related to ESG ratings and indices have been developed.

Thus, ESG rating providers, ESG indices, as well as ESG-focused equity and fixed income funds are now available.

- In September 2020, the BSE launched the first ESG initiative for listed companies, closing a partnership with Sustainalytics for ESG Risk Ratings of the listed companies. That BSE initiative is meant to encourage local companies to align their business strategies with ESG strategy. Sustainalytics' ESG Risk Ratings represent a tool for investors to measure a company's exposure to industry-specific ESG risks and provide a quantitative measure of unmanaged ESG-associated risks comparable across all industries. It has five identified levels of risk: negligible, low, medium, high and severe.
- According to a BSE press release in September 2020 (also available on the official website), the Romanian capital market "aims to develop the local ESG infrastructure starting from this first initiative, with the involvement of other market participants, by preparing and publishing presentation materials and guidelines for issuers, and by launching new dedicated products. ESG standards represent a set of norms taken into consideration by investors in their decision-making processes. ESG standards include three components: Environment – the environmental impact and externalities derived from the activity of the company, Social – the relationships with the stakeholders, and Governance – encompassing the corporate governance rules and best practices."

Multiples valuation and ESG factors

In addition to the most common method selected for valuation of a company, namely the DCF method, a widely used and popular way of valuing companies is that based on relative multiples (Market approach). When looking at multiples, investors will most likely include ESG factors in the business valuation by adjusting the valuation in two ways: (a) adding a premium for those companies that do well on ESG metrics, and (b) by applying a reduction for companies that have a low score on ESG ratings.

Listed companies' valuation multiples

Although the number of analysed companies (for which financial information was readily available) remained the same as in 2019, their total market capitalisation as at 31 December 2020 had dropped by 8.4% from the level achieved as at end-2019 following a strong growth of 33% that year. The BET index performance shows only a slight decrease (-1.7%), despite the complicated pandemic context.

Key facts

- The BSE regulated segment has a high concentration of listed issuers, with the top 5 companies accounting for 63% of the total market capitalisation as at the end of 2020. At the top level, companies are active in the Oil & Gas, Financial Services and Electricity sectors. Those economic sectors' degree of representation on the local capital market is therefore low in the absence of several industry leaders.
- The BET index is a relevant proxy for capital market performance, as confirmed by the strong correlation coefficient of 0.9 between total market capitalisation and BET index performance.
- The number of analysed listed companies fluctuated over the period 2007 – 2020 as a result of the suspension and / or delisting of some of the companies included in the study. Similar to the previous two years, the 2020 analysis covers 79 listed companies, but that is considerably more than the approximately 50 companies analysed for 2007 – 2008. In this edition of our study, we reviewed the companies' inclusion in each sector and performed slight adjustments to the Industrial, Healthcare and Materials sectors over the period 2007 - 2020.
- The market capitalisation of the 79 companies analysed for 2020 was RON 101 billion, which was below the highest market capitalisation of RON 110 billion reached in 2019.
- As at 31 December 2020, the BET index had decreased by 172 points from the level recorded one year previously.

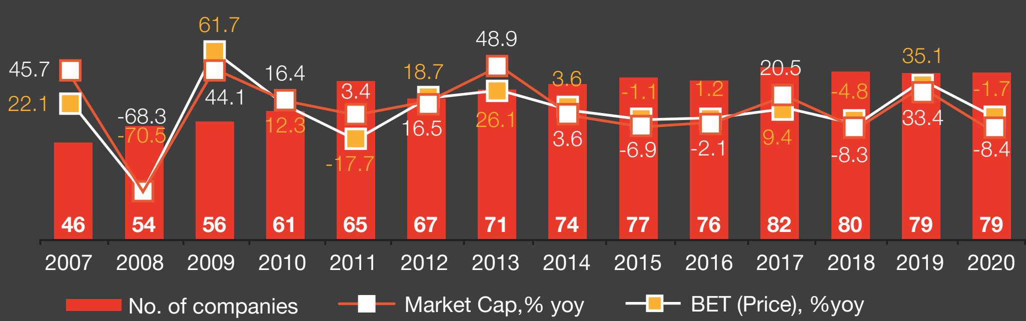
Top 3 sectors by market cap as at 31 Dec 2020:
1. Oil & Gas (37.2%)
2. Financial Services (36.8%)
3. Electricity (11.4%)

Top 3 sectors by value traded in 2020:
1. Financial Services (55.2%)
2. Oil & Gas (23.7%)
3. Electricity (12.4%)

Market capitalisation and value traded by sectors as at 31 December 2020

Sector	No. of Companies	Market Cap. (RON m)	Total value traded (RON m)	% Total Values Traded
Oil & Gas	9	37,609	2,791	7.4%
Financial Services	12	37,161	6,504	17.5%
Electricity	3	11,525	1,464	12.7%
Consumer	10	4,772	354	7.4%
Healthcare	6	4,428	153	3.4%
Materials	12	3,075	422	13.7%
Industrial	27	2,514	90	3.6%
Total	**79**	**101,084**	**11,777**	**100%**

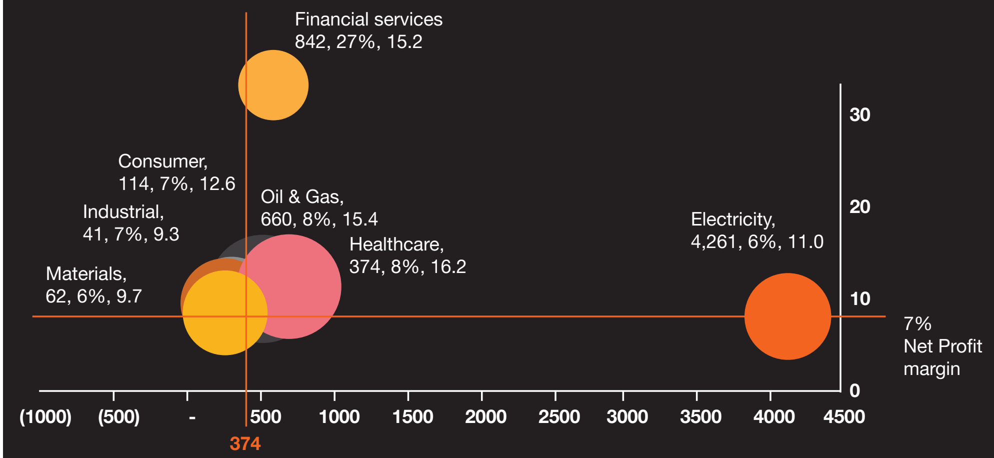
Number of analysed companies, market cap and BET performance over 2007 - 2020



Note: Market capitalisation as per BSE for the period 2007 – 2015, whereas the figures for the remaining analysed period are according to S&P Capital IQ.

In 2020, the Oil & Gas sector recorded the highest market capitalisation, followed closely by the financial sector. The highest median market capitalisation (RON 4,261 million) was in the electricity sector, while the highest median P/E multiple was reported in the Healthcare sector (16.2x). The lowest median market capitalisation and P/E multiple were recorded by the Industrial and Materials sectors (market capitalisation of RON 41 million and 62 million, P/E of 9.3x and 9.7x, respectively).

Market capitalisation and value traded by sectors as at 31 December 2020



Note: Label information - Sector, Market Capitalisation median RON m, Net Profit margin, P/E median

The BSE market capitalisation ranges from RON 34 million to 656 million (quartiles), with a median value of RON 108 million.

Net profit margin observed on the local capital market ranges from 4.6% to 20.0% (quartiles), with a median value of 8.2%.

Leading companies by sectors –market capitalisation at 31 December 2020

Top 3 by market cap: Nuclearelectrica, Societatea Energetica Electrica, Transelectrica
Net profit margin: 5.9 % to 16.7% (quartiles), with a median of 6.0%
P/E multiple: 9.4x to 12.2x (quartiles), with a median of 11.0x

Top 3 by market cap: Banca Transilvania, BRD - Groupe Société Générale, Fondul Proprietatea
Net profit margin: 9.4% to 64.5% (quartiles), with a median of 26.9%
P/E multiple: 10.6x to 18.9x (quartiles), with a median of 15.2x

Top 3 by market cap: OMV Petrom, RomGaz, Transgaz
Net profit margin: 6.7% to 13.1% (quartiles), with a median of 8.2%
P/E multiple: 12.1x to 25.3x (quartiles), with a median of 15.4x

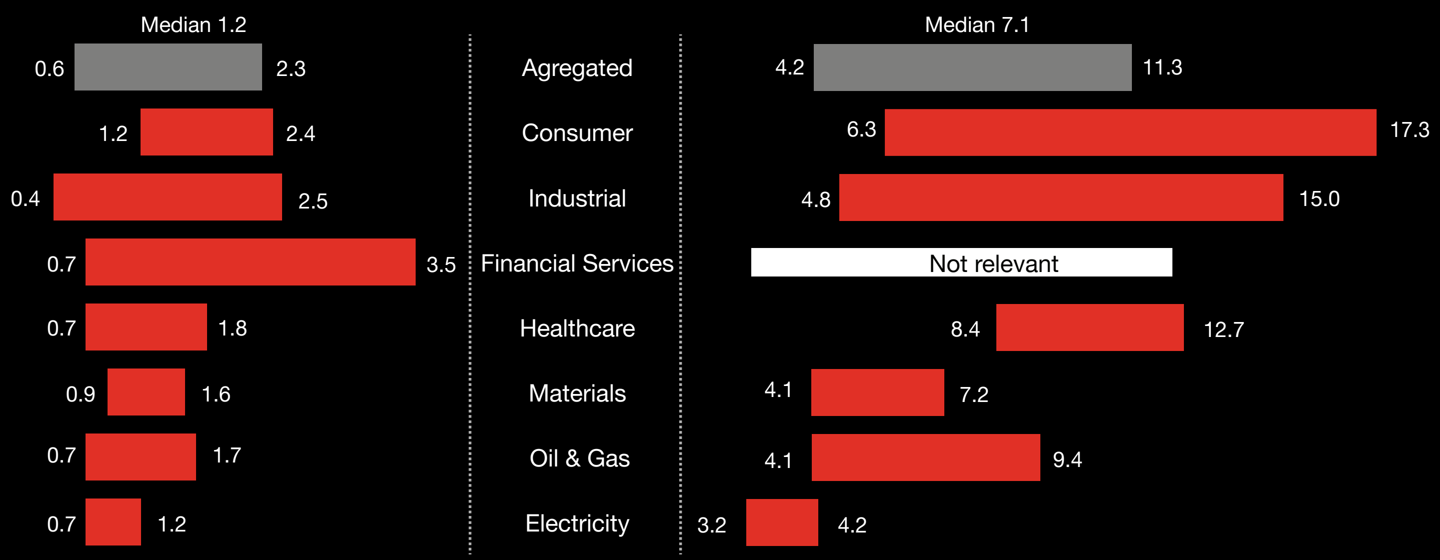
Top 3 by market cap: Zentiva, MedLife, Biofarm
Net profit margin: 5.7% to 9.8% (quartiles), with a median of 8.1%
P/E multiple: 8.9x to 24.9x (quartiles), with a median of 16.2x

Top 3 by market cap: Digi Communications, Sphera Franchise Group, Purcari Wineries Public Company Limited
Net profit margin: 2.0% to 15.5% (quartiles), with a median of 7.0%
P/E multiple: 7.4x to 18.3x (quartiles), with a median of 12.6x

Top 3 by market cap: Alro, Teraplast, Cemacon
Net profit margin: 4.6% to 17.0% (quartiles), with a median of 6.3%
P/E multiple: 6.9x to 15.2x (quartiles), with a median of 9.7x

Top 3 by market cap: Aerostar, Impact Developer & Contractor, IAR Brasov
Net profit margin: 2.5% to 16.4% (quartiles), with a median of 7.3%
P/E multiple: 7.2x to 13.4x (quartiles), with a median of 9.3x

Revenue and EBITDA multiple analysis as at 31 December 2020



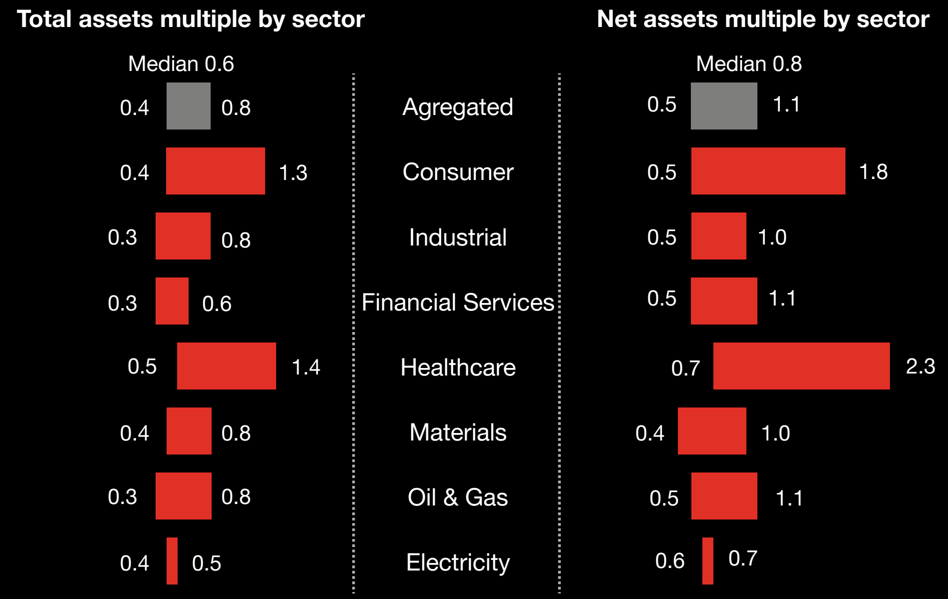
Revenue multiple

- The aggregated median for Revenue multiple is 1.2x
- Top-performing sector was Financial Services, with a median multiple of 3.1x
- The lowest revenue multiple was recorded by the Electricity sector, with a median of 0.7x
- Revenue multiple is a reliable metric as it is less volatile than P/E or EBITDA multiples and less susceptible to accounting manipulation
- It is highly used by distressed, start-up and small companies with a low or negative EBITDA figure
- It should be used with caution in cases where some products / services intermediaries could count revenue as either the commission charged or the value of products / services they intermediate

EBITDA multiple

- The aggregated median for EBITDA multiple is 7.1x
- Top-performing sector was Healthcare, with a median multiple of 10.4x
- The lowest EBITDA multiple was recorded by the Electricity sector, with a median of 3.2x
- This multiple is not meaningful for the Financial Services sector because it is difficult to isolate the financing requirements of a financial institution from its wider operational activities
- It can be used to compare directly companies operating in the same industry, regardless of their debt level, and it is not affected by accounting choices regarding amortisation and depreciation
- EBITDA is a good proxy for cash, but it has a drawback in that it cannot be used for company comparisons across industries, given the variations in capital expenditure requirements

Total assets and Net assets multiple analysis as at 31 December 2020

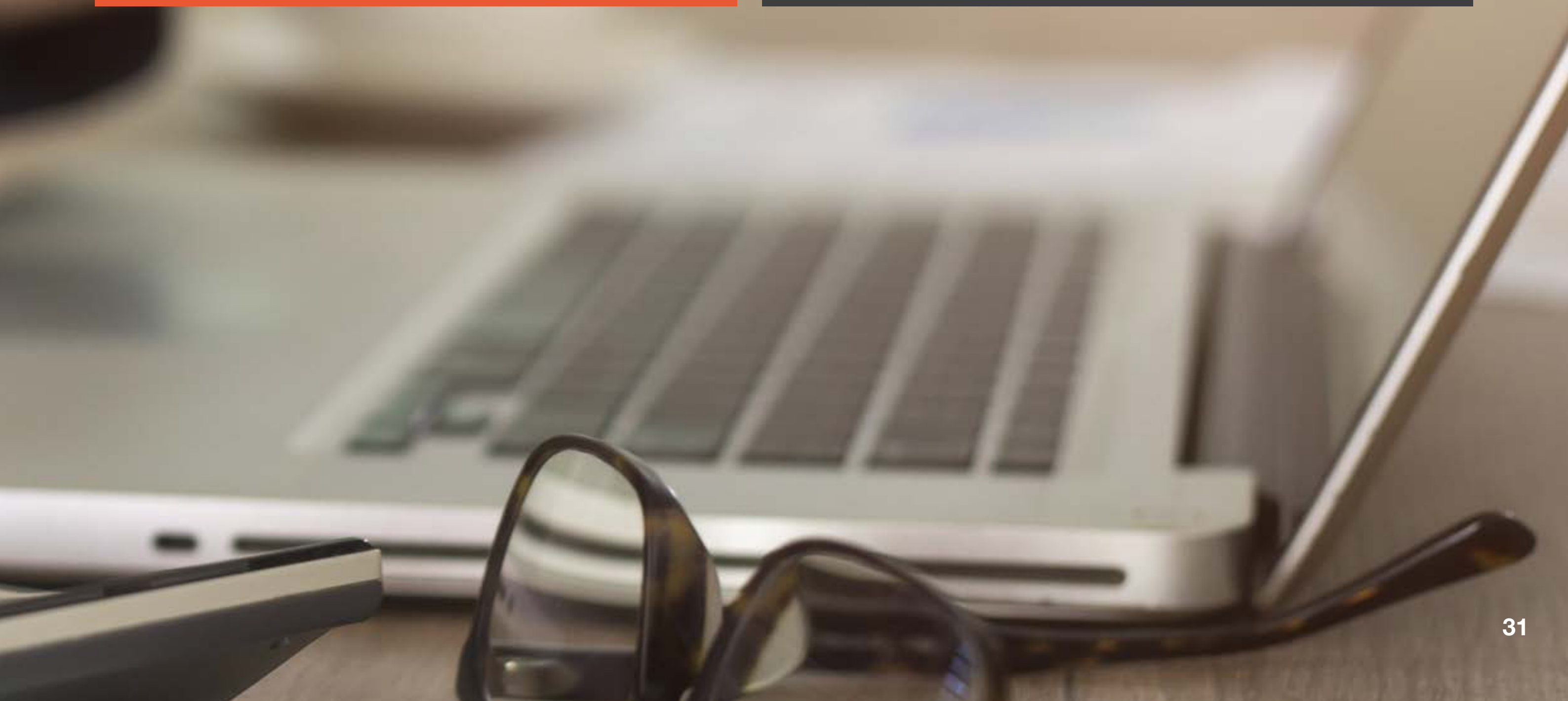


Total assets multiple

- The aggregated median for Total assets multiple is 0.6x
- Top-performing sector was Consumer, with a median multiple of 0.8x
- The lowest Total assets multiple was recorded in the Financial Services sector, with a median of 0.4x
- Especially relevant for capital-intensive sectors
- Should be applied with caution in the case of companies with significant intangible assets bases, as presumably they do not fully capture the future growth opportunities

Net assets multiple

- The aggregated median for Net assets multiple was 0.8x
- Top-performing sectors were Healthcare and Consumer, with a median Net assets multiple of 1.1x
- The lowest Net assets multiple was recorded by the Electricity and Materials sectors, with a median of 0.7x
- Especially relevant for financial services and real estate sectors
- It can be used to compare companies operating within the same industry
- It should be used with caution in the case of companies with significant intangible assets bases



Industry	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Volatility 2008 - 2020	Minimum 2016 - 2020	Maximum 2016-2020
Consumer	17.2	11.8	13.3	16.8	11.9	17.3	20.4	20.8	13.5	14.9	13.3	13.4	13.2	12.6	20%	12.6	14.9
Financial services	18.0	3.6	7.0	12.5	5.4	7.1	11.4	10.4	8.9	14.1	9.3	7.6	7.5	15.2	37%	7.5	15.2
Oil & Gas	16.4	8.1	10.3	8.8	6.8	6.1	10.3	9.3	8.8	9.5	11.7	7.5	10.0	15.4	25%	7.5	15.4
Healthcare	25.4	10.2	18.1	12.8	11.0	10.1	11.9	12.1	18.4	11.5	10.8	12.1	15.5	16.2	22%	10.8	16.2
Industrial	33.8	7.6	8.6	9.8	15.3	6.9	12.1	7.8	6.9	8.9	10.2	7.8	8.1	9.3	26%	7.8	10.2
Materials	24.1	5.8	34.5	16.5	9.6	11.4	8.4	7.3	5.7	10.7	9.8	9.0	8.9	9.7	66%	8.9	10.7
Electricity	38.4	9.1	2.7	25.0	9.3	19.4	5.6	13.3	11.6	12.5	15.9	14.3	12.9	11.0	45%	11.0	15.9
All sectors	**25.4**	**7.0**	**10.3**	**12.7**	**9.5**	**8.0**	**11.6**	**9.8**	**9.6**	**10.9**	**11.2**	**9.0**	**10.5**	**10.9**	**15.1%**	**9.0**	**11.2**
GDP growth	**7.2%**	**9.3%**	**-5.5%**	**-3.9%**	**1.9%**	**2.0%**	**3.8%**	**3.6%**	**3.0%**	**4.7%**	**7.3%**	**4.5%**	**4.1%**	**-3.9%**	**184.3%**	**-3.9%**	**7.3%**
Industrial production growth	**10.1%**	**1.9%**	**-5.0%**	**4.9%**	**7.9%**	**2.6%**	**7.4%**	**6.3%**	**3.0%**	**3.1%**	**7.9%**	**3.5%**	**-2.3%**	**-9.2%**	**210.9%**	**-9.2%**	**7.9%**

All sectorial P/E ratios except those for the Consumer and Electricity sectors grew as at 31 Dec 2020 vs. 2019, whereas the GDP growth rate was negative, thus showing that the health crisis affecting economic growth and profits is perceived as a short-term event, but investors generally adopt a long-term perspective.

Key findings

- The Consumer sector is generally perceived as a sector with more stable financial performance, thus displaying lower P/E ratio volatility (deviation from average), whereas the Materials and Electricity sectors had the highest P/E ratio volatility.
- The Oil & Gas sector's P/E ratio was at a five-year high as at December 2020. The corporate profits of those companies decreased in 2020 due to declining international oil prices as a consequence of COVID-19 pandemic.
- Financial multiples recorded their highest levels in 2007, reflecting the general optimism at the time; for the purpose of the volatility analysis, 2007 was not included.

P/E ratio – 2020

- The aggregated P/E median in 2020 was 10.9x.
- The Healthcare sector had the highest median P/E multiple of 16.2x.
- The Industrial sector had the lowest median P/E multiple of 9.3x.
- P/E ratios for the Electricity and Consumer sectors were at a five-year low in 2020.
- P/E ratios for the Financial Services, Oil & Gas and Healthcare sectors were at a five-year high in 2020.
- P/E is a very popular metric for investors.
- One limitation of the P/E ratio is that earnings are subject to non-cash items, such as depreciation and amortisation, which can vary depending on accounting choices.

Notes:
1. The results observed in the Oil & Gas sector in 2020 were mainly impacted by the poor financial performance of OMV Petrom resulting from lower commodities prices reflecting the impact of the COVID-19 pandemic.
2. In this report, the P/E multiples for 2007 – 2019 are not the same as those for the Industrial, Healthcare and Consumer sectors in previous editions, due to a revision of the sectors' components.

Key highlights

In 2020, the Electricity and Healthcare sectors recorded their highest average market capitalisations during 2008 – 2020 (RON 3,842 million and RON 738 million)

The lowest median cross-sectorial P/E ratio in 2020 was posted by the Industrial sector (9.3x)

The highest median cross-sectorial P/E ratio in 2020 was recorded by the Healthcare sector (16.2x)

The most stable P/E ratio during 2008 – 2020 was noticed for the Consumer and Healthcare sectors

The most variable P/E ratio during 2008 – 2020 was recorded by the Materials and Electricity sectors

The P/E ratio in 2020 for all sectors was above or at least equal to the 2008 – 2020 median of each sector

Market capitalisation analysis revealed that the Financial Services, Industrial and Oil & gas are cyclical sectors, whereas Electricity and Healthcare are defensive sectors. The mixed evolution of the Materials and Consumer sectors reflects their lower homogeneity

M&A valuation multiples

Based on data sourced from Mergermarket, ISI Emerging Markets, S&P Capital IQ and a PwC internal database, about 1,108 transactions were disclosed over the period 2007 – 2020, for domestic companies operating in the following sectors: Industrial, Consumer, Healthcare, Information Technology & Communications (IT&C), Materials, Financial Services, etc. Furthermore, the screening was adjusted to include only those transactions with: (1) disclosed deal value, and (2) robust financial information available. This study is therefore based on a set of 289 selected transactions, including 49 deals covering the period 2007 – 2017 (27 deals extracted from S&P Capital IQ and 22 from ISI Emerging Markets or obtained based on individual research of the target), 68 transactions closed in 2018, 81 deals closed in 2019 and 91 deals closed in 2020 (data was sourced from S&P Capital IQ, Mergermarket and ISI Emerging Markets).

Outliers were excluded from the initial screening in order to avoid distortions in the sample extract.

The M&A market has shown signs of recovery since 2018, with a total of 240 deals forming the analysed transactions during the last three years. A total of 91 deals were concluded in 2020.

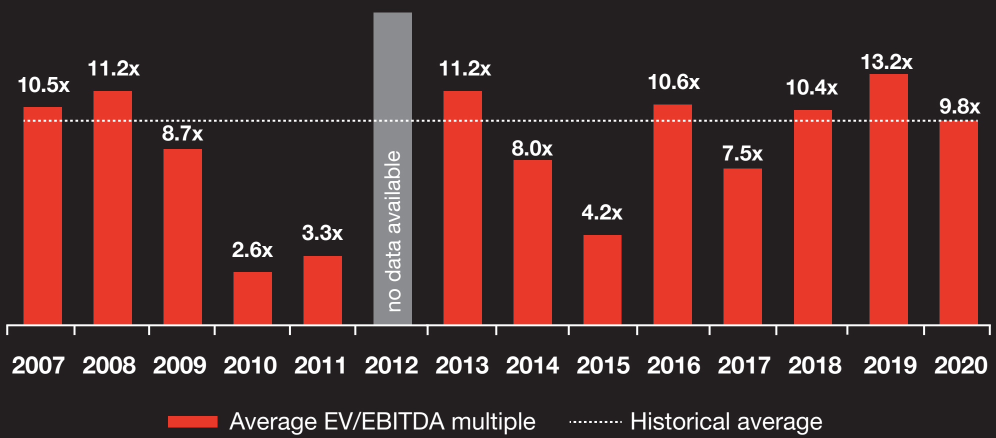
EBITDA multiple analysis

- The EBITDA multiple in 2020 was 9.8x, in line with the historical average (9.9x)
- The highest EBITDA multiples were recorded in 2019 (13.2x), 2013 (11.2x) and 2008 (11.2x)
- The lowest EBITDA multiples were recorded in 2010 (2.6x) and 2011 (3.3x)
- Year 2012 was excluded from the analysis due to the lack of reliable information

General considerations about EBITDA multiple

- It is not meaningful for the Financial Services sector because it is difficult to isolate the financing requirements of a financial institution from its wider operational activities.
- It can be used to compare companies within the same industry regardless of their debt level and it is not affected by accounting choices regarding amortisation and depreciation. However, attention should be paid if companies are applying different accounting standards or when comparing EBITDA multiple before and after 2019, when IFRS 16 – Leases came into effect.
- EBITDA is good proxy for cash, with the drawback that it cannot be used for company comparisons across industries, due to variations in capital expenditure requirements.

Average EV/EBITDA multiple



Note: The above graph depicts solely the transactions included in this analysis; selection criteria were based on the availability of data and the robustness of the financial information.

Source: Mergermarket, ISI Emerging Markets, S&P Capital IQ and a PwC internal database

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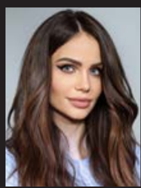

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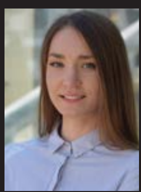

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