Financial Supervisory Authority
Monthly Market Report

Government debt to GDP has been reduced from the peak in 2014 (39.2%) to 33.9% at present and budgetary deficit will be around 3% of GDP in 2018

HIGHLIGHTS

- Year 2018 was defined by a bell-shaped inflation trajectory, with the peak reached in May (5.41%), continuing then on a downward path up to 3.27% in December;

- In December 2018 the liquidity of the Bucharest Stock Exchange increased by 46% compared to the same period of the previous year, alongside with a higher volatility;

- The contagion continued to increase in December due to escalation of the trade tensions between USA-China and the uncertainty around other future tax impositions.

ROMÂNIA
AUTORITATEA DE SUPRAVEGHERE FINANCIARĂ

Autoritatea de Supraveghere Financiară

Indicators	2017	Q4_17	Q1_18	Q2_18	Q3_18	2018***
Real economic growth*	7.0	6.7	4.0	4.1	4.4	4.5
Private consumption*	10.0	11.7	5.8	5.0	4.6	5.8
Gross domestic product (billion Lei)*	856.7	259.3	180.5	218.9	265.6	949.6
Current account balance**	-3.2	-0.6	-0.5	-1.4	-1.6	-4.3
Public budget balance (ESA2010)**	-2.9	-1.5	-0.9	-0.4	-0.4	–
Non-residents' direct investment**	2.6	0.6	0.8	0.1	1.2	2.4
Government debt**	35.2	35.2	34.5	34.1	33.9	–
External debt**	53.0	53.0	51.6	50.1	48.8	48.7
Government external debt**	18.4	18.4	18.6	17.2	16.6	16.8
Inflation rate (%, end of period)	3.32	3.32	4.95	5.40	5.03	3.27
ILO unemployment rate (%)	4.9	4.7	4.7	4.1	3.9	4.1

*gross series; ** % GDP (ratio was calculated taking into account GDPs achieved in the last 4 quarters);
*** data for January-November 2018, excluding inflation (Dec 2018) and GDP projected by **NCSP**

According to NIS "provisional (2)" estimates, GDP advanced by 4.4% (year on year) in the third quarter of 2018, driven by the contribution of agriculture (+12.1% and 1.2pp) and services (1.6pp). On the demand side, stocks became the dominant factor (3.1pp) alongside private consumption (2.8pp) with a moderation trend (+4.6% vs. +5.0% in Q2). The major contribution of changes in inventories was offset by the decline in gross fixed capital formation (-1.6%), but there was an improvement over the previous quarter (-4.8%). The allocation of investments in buildings continues to remain negative, the volume of residential construction works being below the level recorded in the same period of the previous year (-28.9%).

The vulnerability stems from the external sector where the annual dynamics of exports slowed down (+2.5% versus +7.0% in Q2-2018), leading to an increase in the negative net export contribution (-1.7pp).

Overall, in January-September 2018, the economy advanced by 4.2% compared to 7.0% in the previous year and remains robust. The data show a correction of the composition of growth, which has become more balanced, and the positive factors are still acting as well as with a pronounced base effect.

The current account deficit amounted to 8.7 billion euro in the first eleven months of 2018, up 59.7% to -4.3% of GDP, following higher than expected increases in July-August (to 1 billion euro per month) and October (to 1.4 billion euro). At the same time, non-residents' direct investments (FDI) advanced by 8.6% (2.4% of GDP) and the share of external debt in GDP (48.7%) is sustainable, in a significant decrease over one year (53% in December2017).

Fitch reconfirmed in November the long-term sovereign credit ratings BBB- for Romania with stable outlook, taking into account the low level of public debt ratio that ranks among the lowest in the European Union. Government debt to GDP has been reduced from the peak in 2014 (39.2%) to 33.9% at present and budgetary deficit will be around 3% of GDP in 2018.

EU economy and the euro zone have moderate quarterly growth rate to 0.3%-0.2% in Q3-2018, with a gradual slowdown in annual GDP dynamics (1.8% in EU and 1.6% in euro zone). The macroeconomic situation has indicated slowing exports and consumption especially in the euro area, the new staff recruitment difficulties and the low level of optimism on the business outlook amid the geopolitical trade conflicts.

Real GDP development in 2016-2019

	Q4_17	Q1_18	Q2_18	Q3_18	2016	2017	2018f	2019f
EU - 28	2.6	2.3	2.2	1.8	2.0	2.4	2.1	1.9
Euro area	2.7	2.4	2.2	1.6	2.0	2.4	2.1	1.9
Romania	6.6	4.3	4.3	4.2	4.8	7.0	3.6	3.8
Bulgaria	3.5	3.5	3.4	3.1	3.9	3.8	3.5	3.7
Hungary	5.0	4.8	4.8	5.2	2.3	4.1	4.3	3.4
Poland	4.6	5.0	5.2	5.7	3.1	4.8	4.8	3.7
Czech Republic	5.0	4.1	2.4	2.4	2.5	4.4	3.0	2.9
Germany	2.8	2.0	1.9	1.2	2.2	2.2	1.7	1.8
United Kingdom	1.6	1.3	1.4	1.5	1.8	1.8	1.3	1.2
France	2.8	2.2	1.7	1.4	1.2	2.2	1.7	1.6
Spain	3.1	2.8	2.5	2.4	3.2	3.0	2.6	2.2
Italy	1.6	1.4	1.2	0.7	1.1	1.6	1.1	1.2

Source: Eurostat - Percentage change compared with the same quarter of the previous year-seasonally adjusted data; European Commission, Autumn forecast 2018

Forecast of GDP and of the main components

	2018	2018	2019	2019
	EC	NCSP	EC	NCSP
Gross domestic product	**3.6**	**4.5**	**3.8**	**5.5**
Private consumption	4.6	5.8	4.6	6.4
Gross fixed capital formation	4.6	3.5	5.6	7.9
Exports	6.3	7.2	6.5	6.9
Imports	9.1	10.0	7.4	8.0
Average inflation rate	4.3	4.7	3.5	2.8
Current account balance	-3.7	-3.5	-4.2	-3.2
Public budget balance	-3.3	-2.9	-3.4	-2.4

*Source: EC and NCSP - Autumn **2018 Forecast***

The European Commission (EC) published the autumn economic forecasts, according to which European economy will register a sustained but less dynamic growth amid a high uncertainty.

GDP growth in the euro area, as in the EU27, is estimated to slow down to 2.1% in 2018 and 1.9% this year after the 2017 peak (2.4%), and 0.2 percentage points below the level estimated in the previous version. Exogenous factors, such as the moderate growth of the world trade, geopolitical uncertainties and high oil price, should have a mitigating effect on the overall growth, as labour market improvements are losing intensity and the constraints on the supply side become more binding in some Member States.

Regarding Romanian economy, the EC downgraded the growth forecast from 4.5% to 3.6% in 2018 (based on a GDP growth of 7.3% in 2017 in instead of 7.0%), followed by a recovery in 2019 to 3.8%. However, potential GDP increased slightly in 2018 to 4.6%, compared to 4.5% in 2017, and the dynamics will remain consistent over the forecast period (+4.1%) due to the productivity factor, placing Romania after Malta (5.2%). The weakening of the private consumption contribution to GDP growth in 2018 was followed by the correction of excess demand, so that the GDP gap decreased to 0.5% in 2018 from 1.5% in 2017 and will remain close to zero in the next two years. On the other hand, the slowdown in export growth in 2018 was shifted to the negative contribution of net exports, which doubled (-1.3pp from -0.7pp in 2017), but this behavior is a short-term one.

Following the new round of tax easing (income tax correlated with social contributions) and the high share of public wages and social assistance (in tax revenue), the government deficit is expected to increase by more than 3.0% of GDP between 2018-2020, funded by public debt growth from 35.1% of GDP in 2018 to 38.2% in 2020.

The autumn forecast of the National Commission for Strategy and Prognosis (NCSP) anticipates an advance of the Romanian economy by 4.5% in 2018, revised from 5.5% in the previous estimate. A significant recovery is expected to 5.5% and 5.7% in 2019-2020 by considering that the economy has responded much better to the tax reforms undertaken over the past three years and this effect will continue during the forecast period. Investment (gross fix capital formation) will recover in 2019-2020, up by 7.9%-8.6%, sustained by the construction activity (7.2%-7.7%).
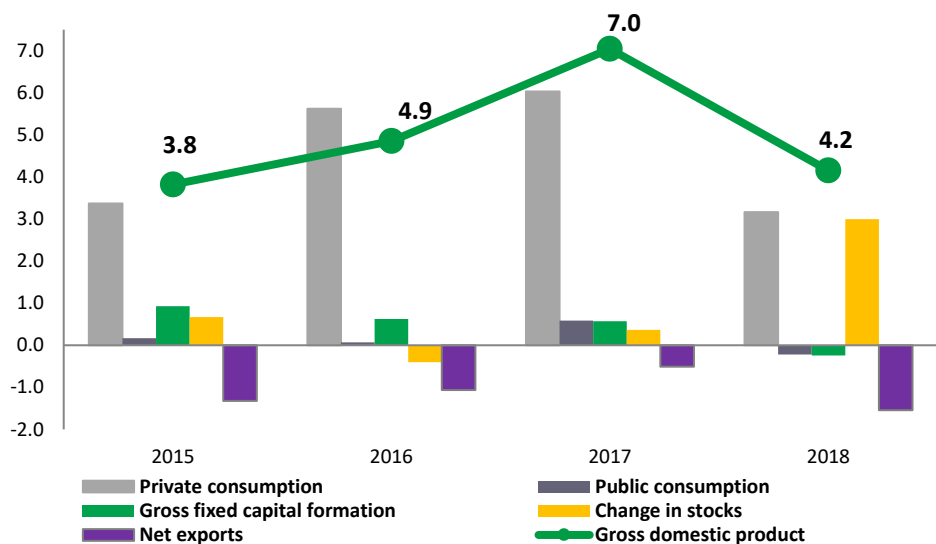
Business cycle and potential / actual GDP dynamics
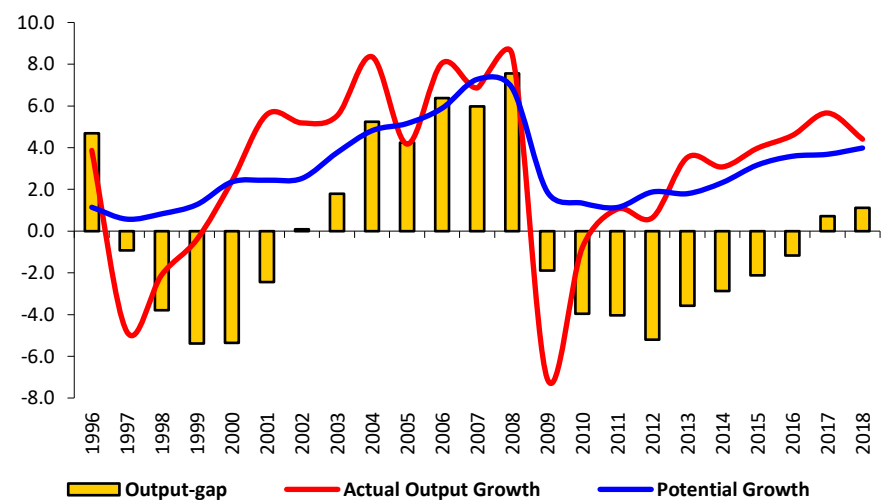

Source: European Commission

Macroeconomic background in Romania: development of the real sector, inflation and labour market

Contribution to change in real GDP (demand side) in the first 9 months of 2015-2018

Legend:
- Private consumption
- Gross fixed capital formation
- Net exports
- Public consumption
- Change in stocks
- Gross domestic product

Source: National Institute of Statistics; FSA calculations

The economic sentiment index in EU

Legend:
- EU - 28
- Romania
- Poland
- Hungary
- Germany
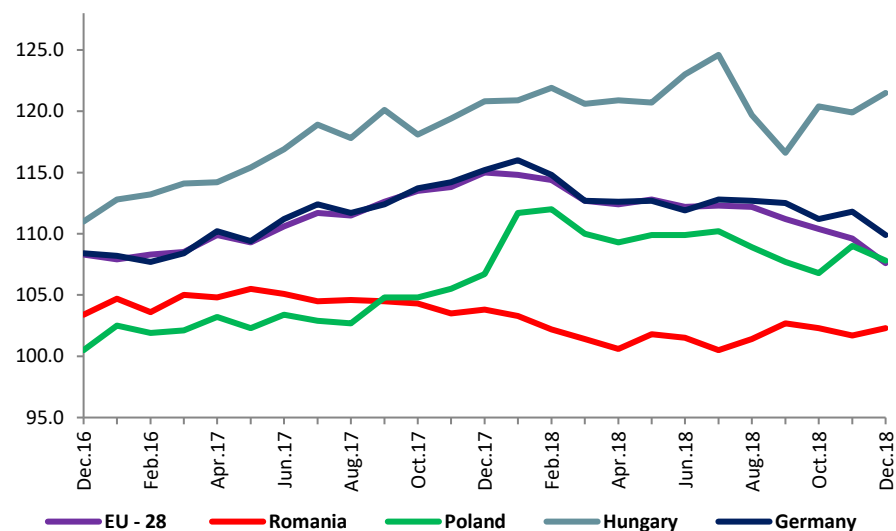
Source: Eurostat

According to NIS, industrial output advanced in November at a moderate pace specific to the period (+2.6%), supported by the manufacturing sector (+3.1%). The deceleration (compared with +3.5% in October) was the result of temporary factors affecting crude oil processing (-25.8% - periodic repairs in refineries) with side effects on the chemical industry (-12.3%). At the same time, the consumer goods industry maintained its downward trend highlighted throughout the year amid the high competitiveness of imports, but with sharp declines in November for items of clothing (-11.7%), textiles (-11.5%), tobacco (-13.0%), alongside the food industry (-1.9%). The support of the manufacturing was due to the activities integrated in the international production networks - manufacture of motor vehicle (+14.7%) against the background of favorable external demand, and also the other activities such as manufacture of electrical equipment (+16.1%) and non-metallic mineral products (+7.0%). In addition, a leap in production was observed in sectors related to equipment and construction products - metal products (+9.4%) and metallurgy (+11.0%), indicating a potential stimulus of domestic investments.

Service activities have maintained their robust dynamics in November, particularly in services for enterprises (+15.3%), having a positive impact on economic growth in the fourth quarter. This development is mainly due to the major annual growth of turnover from activities with a significant weight, respectively legal activities and consulting (+63.6%), office administrative and support services (+21.9%), IT (+21.0%) and transports (+9.8%).

Year 2018 was defined by a bell-shaped inflation trajectory, with the peak reached in May (5.41%), continuing then on a downward path up to 3.27% in December. The highest contribution to the inflation rate came from energy products of which natural gas (16.6%), fuels (4.6%) and thermal energy (4.6%), followed by some consumer products with a significant weight in the categories of vegetables (21.5%) and tobacco (4.9%). The base effect of rising electricity tariffs in the last part of 2017 has been dipped since October 2018, so that in December 2018 their dynamics reached 0.8%, compared with 17.0% in June and 7.3% in September.

Macroeconomic background in Romania: development of the real sector, inflation and labour market

Main sector indicators (annual rate of change, %)
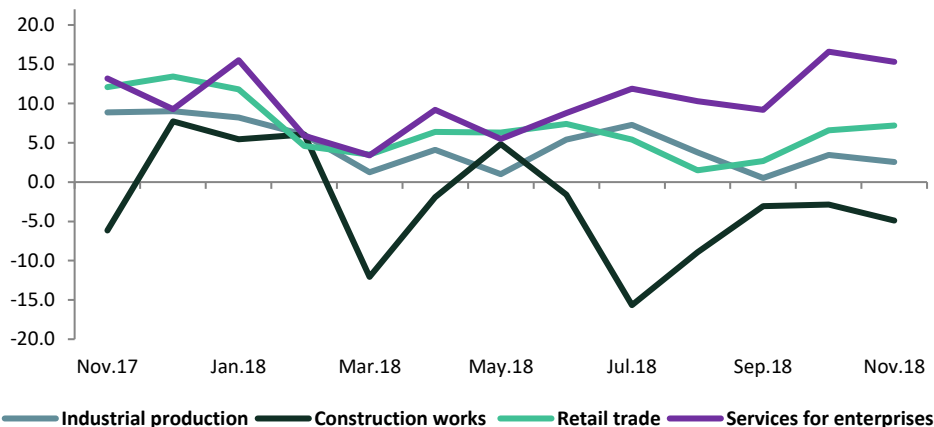
- Industrial production
- Construction works
- Retail trade
- Services for enterprises

Inflation, monthly data (annual rate of change)

- CPI inflation
- Food goods
- Non-food goods
- Services

Source: National Institute of Statistics; FSA calculations
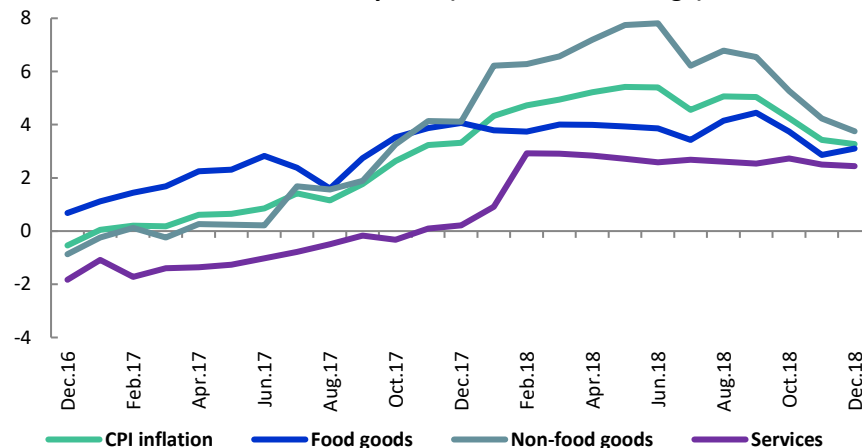
Development of current account by main components (billion euro)

- Secondary income
- Primary income
- Goods and services
- Current Account (%Q-GDP)
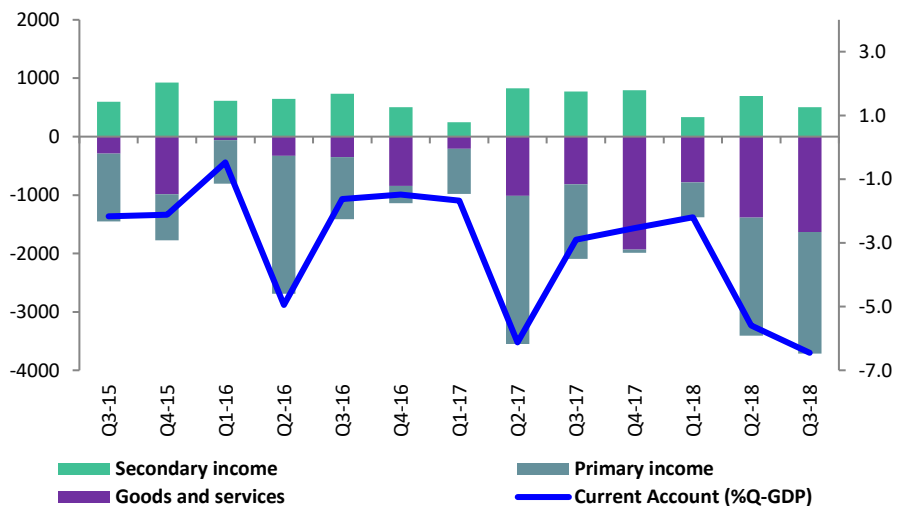
Source: NBR, FSA calculations

Development of external debt by sectors (billion euro)

- Private Sector
- General Government
- Banking and NBR
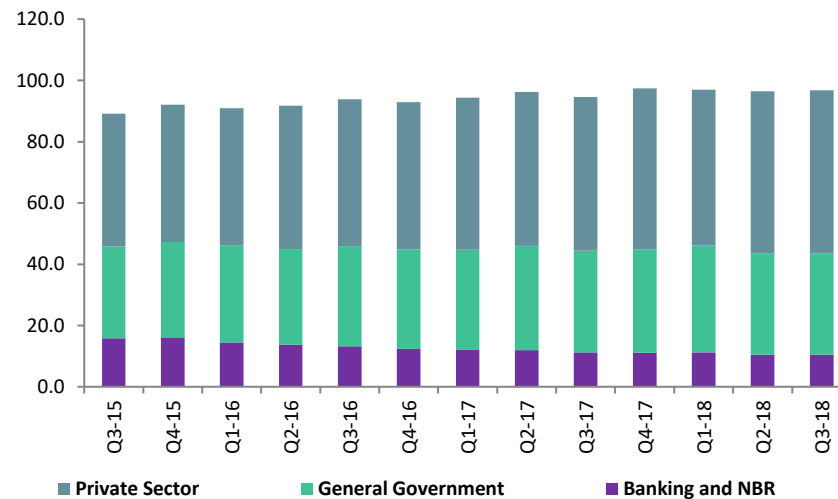
Source: NBR

Macroeconomic risk in Romania: external position and market perception of sovereign risk

Government bond yields (5Y, LC)

Source: Datastream

Evolution of Credit Default Swaps quotations (5Y, USD)
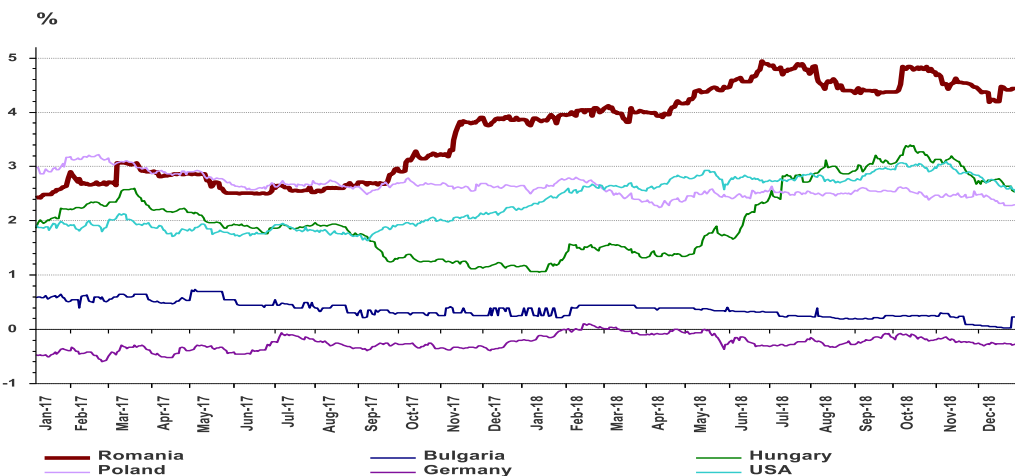
Source: Datastream

Government bond yields spread of Romania (10Y, LC)

sursa: Datastream, ASF
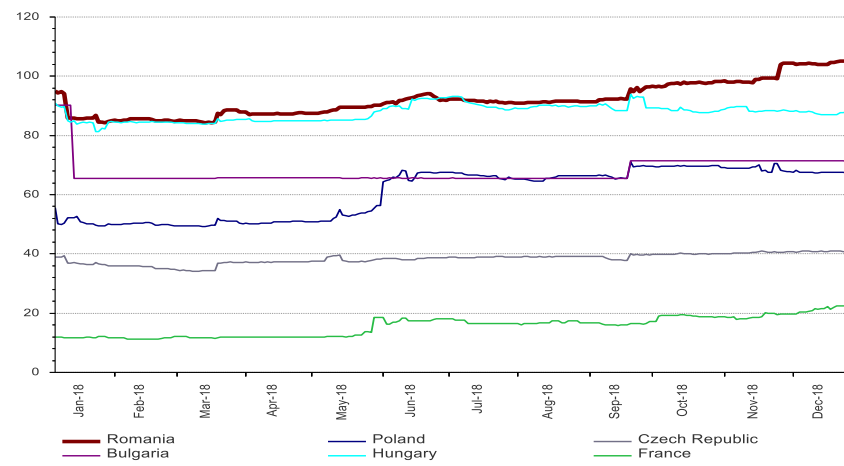
The 5-Year bond yields decreased in December as compared with November for all the analyzed countries. Romania 5 - year bond yields decreased by 4% last month, reaching an average value of 4.36%.

Romania CDS quotations increased by 4.85% mom in December 2018, reaching an average value of 104.47 bp.

The yield differential between sovereign bonds (10Y) issued by Germany and other non-euro area countries (e.g. Romania) registered a upward trend in December 2018 and in the first part of January 2019.

Market risk: evolution of local and international stock indices

International and local stock indices yields

International indices	1 W	1M	3 M	BSE indices	1 W	1 M	3 M
EA (EUROSTOXX)	0.87%	-5.87%	-13.16%	BET	-0.93%	-14.79%	-12.23%
FR (CAC 40)	2.25%	-5.46%	-13.89%	BET-BK	-0.36%	-11.42%	-9.10%
DE (DAX)	-0.70%	-6.20%	-13.78%	BET-FI	0.52%	-5.45%	-5.61%
IT (FTSE MIB)	-0.40%	-4.51%	-11.53%	BET-NG	-1.93%	-17.57%	-13.49%
GR (ASE)	0.78%	-2.69%	-11.33%	BET-TR	-0.92%	-13.94%	-11.29%
IE (ISEQ)	1.51%	-5.82%	-15.98%	BET-XT	-0.75%	-13.82%	-11.47%
ES (IBEX)	0.70%	-5.92%	-9.05%	BET-XT-TR	-0.76%	-13.06%	-10.45%
UK (FTSE 100)	0.63%	-3.61%	-10.41%	BETPlus	-0.78%	-14.14%	-11.56%
US (DJIA)	7.04%	-8.66%	-11.83%	ROTX	-1.09%	-14.50%	-11.96%

Source: Datastream, FSA's calculations

The international stock indices have recorded negative developments (1M). The worst performer was DJIA (US) which lost more than 8.6% mom in December, closing the last trading day of the year at 23,327.46 points.

All BSE stock indices have also recorded negative developments (1M). The worst performer was BET-NG which fell nearly 17.6% in December compared to the previous month.
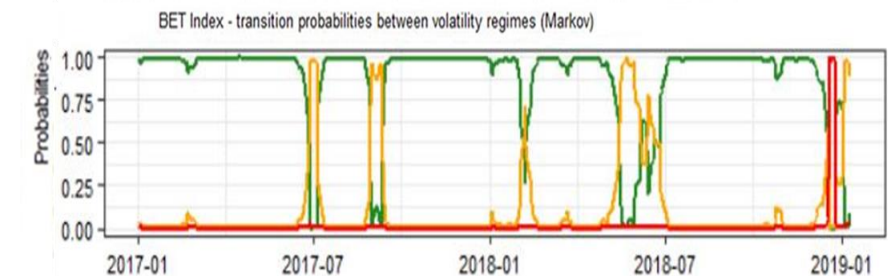
The volatility of stock indices on the Romanian increased in December, and in the case of developed markets (e.g. USA), the volatility increased compared to the previous period.

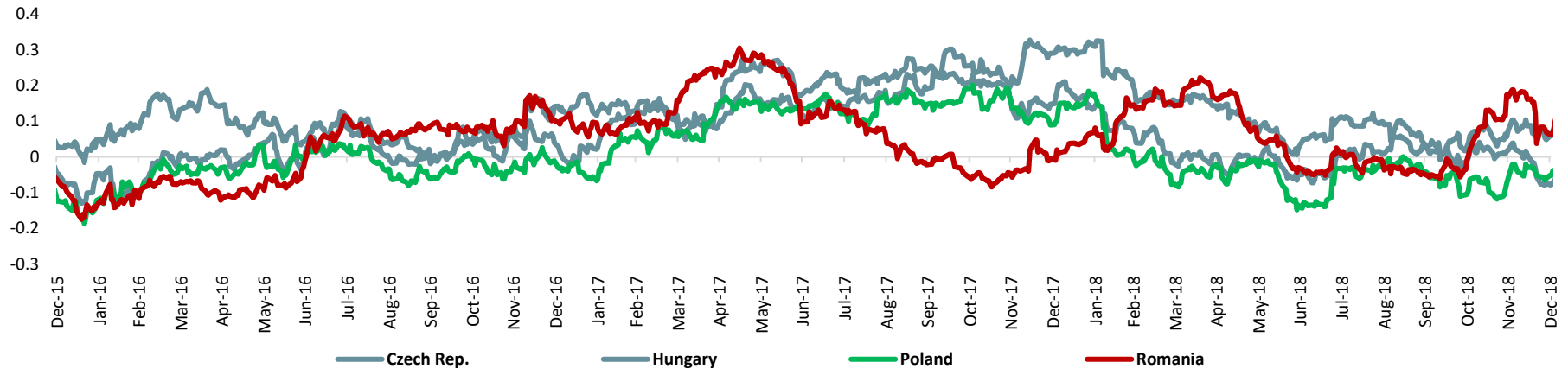## Daily conditional volatility for equity indices (Jan 1st 2017- January 9th 2019)
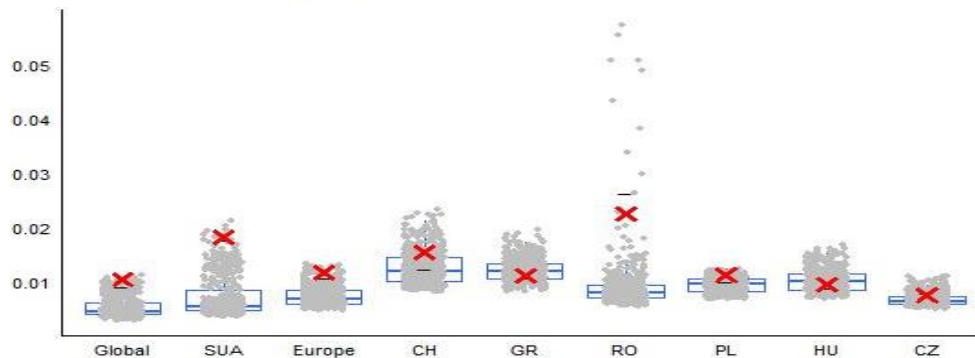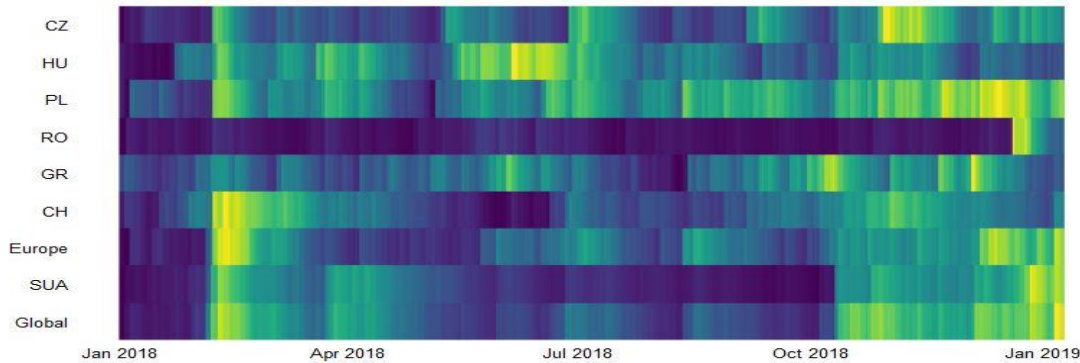
Volatility indices

Source: Datastream, FSA's calculations
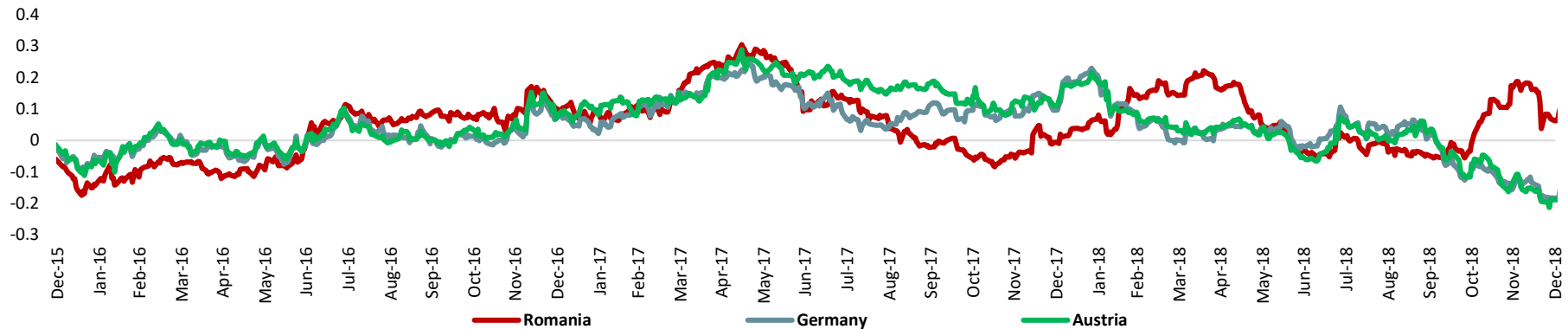
Market risk: Evolution of risk-adjusted returns

Dynamics of risk-adjusted returns: Romania vs. Central and Eastern Europe

Legend: Czech Rep. | Hungary | Poland | Romania

Dynamics of risk-adjusted returns: Romania vs. Austria and Germany
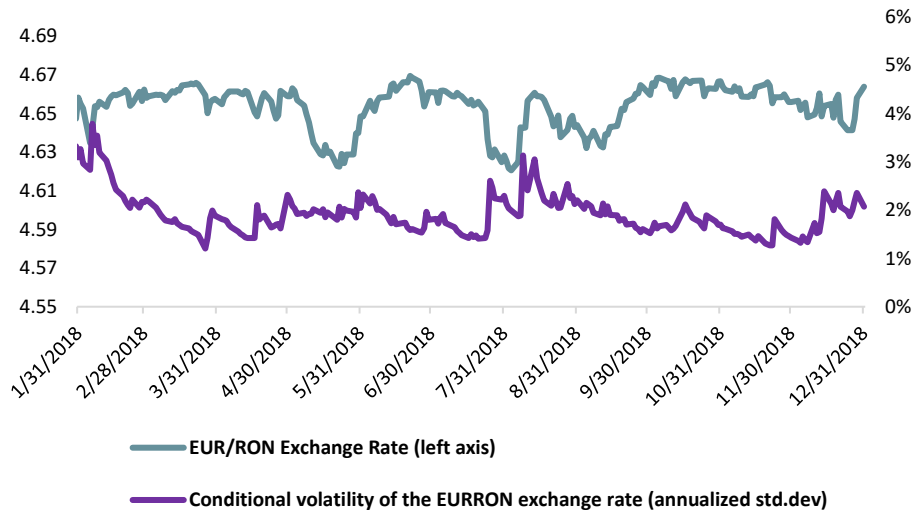

Legend: Romania | Germany | Austria

Source: Datastream, FSA's calculations

The graphs above show the dynamics of the Sharpe ratio estimated using a 6 months rolling windows for the period March 2012 – September 2018. The risk-adjusted returns for Romanian and the main Central and Eastern European markets tend to follow the same trend, with rallies during March – August 2015 and shrinkages that culminated with episodes of significant negative returns, especially for Poland. After a general negative trend that reflected difficulties to discount the uncertain political events at the end of 2016, risk-adjusted performances increased and lingered in the positive region. In Romania, risk-adjusted returns soared in both March and April 2017, tumbled during June and July and continued the downward trend from August to October 2017, when they sunk deeper into negative territory. After they soared in February this year, the risk-adjusted returns slipped as the stock market volatilities echoed the February episode. After a decreasing trend during September, we acknowledge a steep increasing trend both in October and November, followed by a sharp correction in December for the Romanian market.
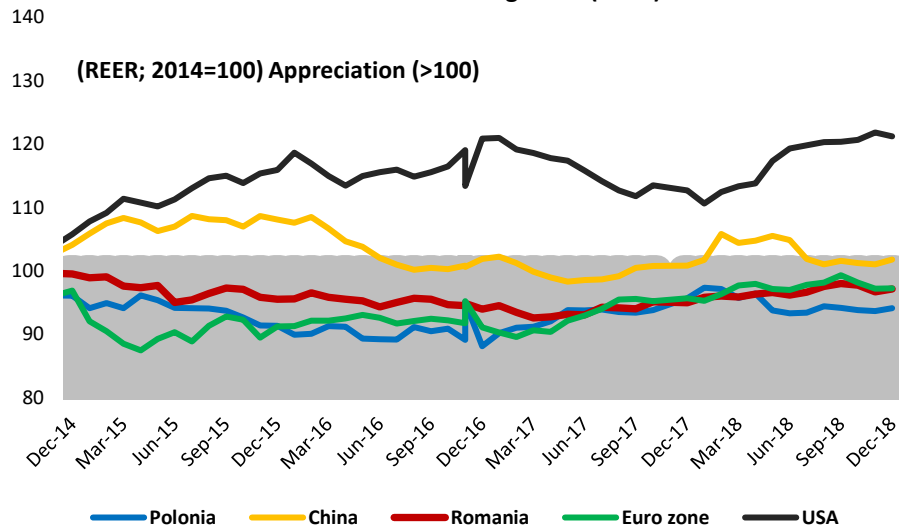
Market risk: volatility of Romanian government bond yields and the EURRON currency rate
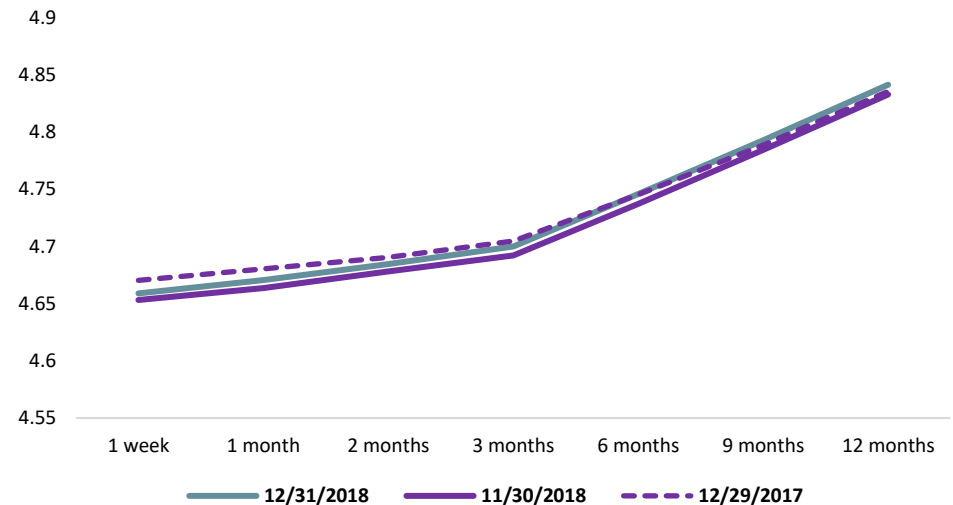
EUR/RON Exchange rate vs volatility

- EUR/RON Exchange Rate (left axis)
- Conditional volatility of the EURRON exchange rate (annualized std.dev)

Source: Datastream, FSA's calculations

Term structure of EUR/RON forward rate

- 12/31/2018
- 11/30/2018
- 12/29/2017

Source: Datastream, FSA's calculations

Real effective exchange rate (REER)

(REER; 2014=100) Appreciation (>100)

- Polonia
- China
- Romania
- Euro zone
- USA

Source: BIS, FSA's calculations

The exchange rate has maintained its low volatility (up to 2%) in December. Our forecast indicates a pick-up in the volatility dynamics over the next month. The depreciation trend of EUR/RON exchange rate comes mainly through the trade channel since the Real Effective Exchange Rate has continued to decline since 2014. Romania has a floating monetary regime with some exchange rate interventions.

The term structure of the forward rate for the EURRON exchange rate with maturities between one week and twelve months shows the market expectations. There are expectations of EURRON appreciation for all maturities with respect to the previous month (RON depreciation).

The exchange rate depreciated sharply in December and our forecast indicate a trend of depreciation for the following months.

Market risk: financial markets fragility

Turbulence Index

Legend: Calmness, Turbulence
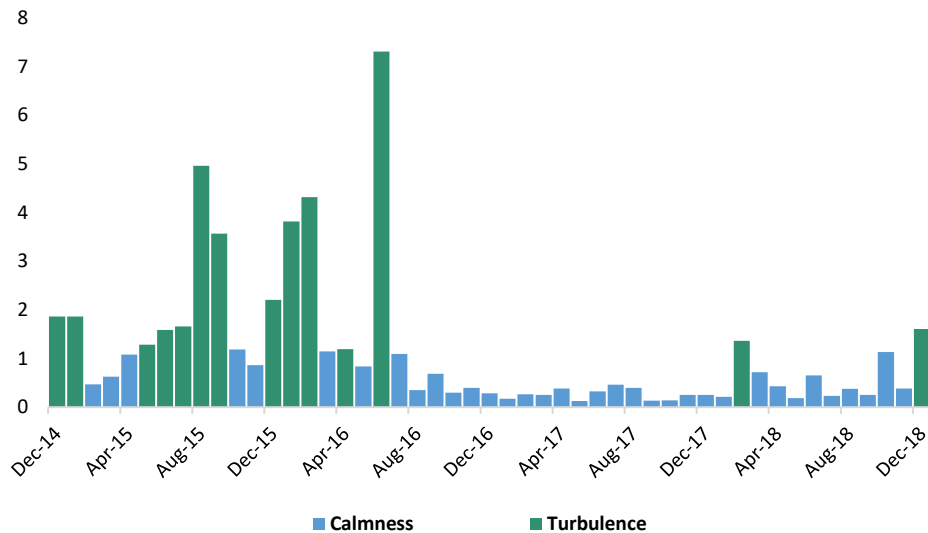
The silent evolution of markets during November was followed by a surge of the turbulence index in December to a level that exceeded the last episode of turbulence from February, this year. We noticed several episodes of volatility increase, which determined the upward movement of the turbulence index.

Contagion risk

The Spillover index measures the marginal contribution of the external capital markets on the Romanian stock exchange. The Romanian capital market is sensitive to the same regional risk factors that influence the Polish and Austrian stock markets returns. There a strong link between the spillover effect and the companies' returns, since the increase in the spillover tends to diminish the returns of the companies listed on Bucharest Stock Exchange.

The contagion continued to increase in December due to escalation of the trade tensions between USA-China and the uncertainty around other future tax impositions.

Spillover Indices

Legend: Spillover index; Trend Spillover index (Hodrick-Prescott filter)
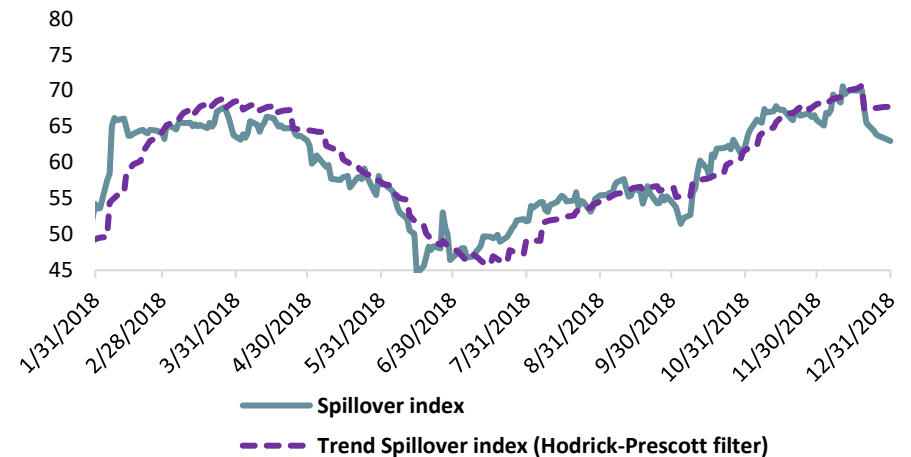
Source: Datastream, FSA's calculations

Stock Market Correlations for Romania, Germany and UK

Legend: Germany - Romania | Romania - France | Romania - United Kingdom
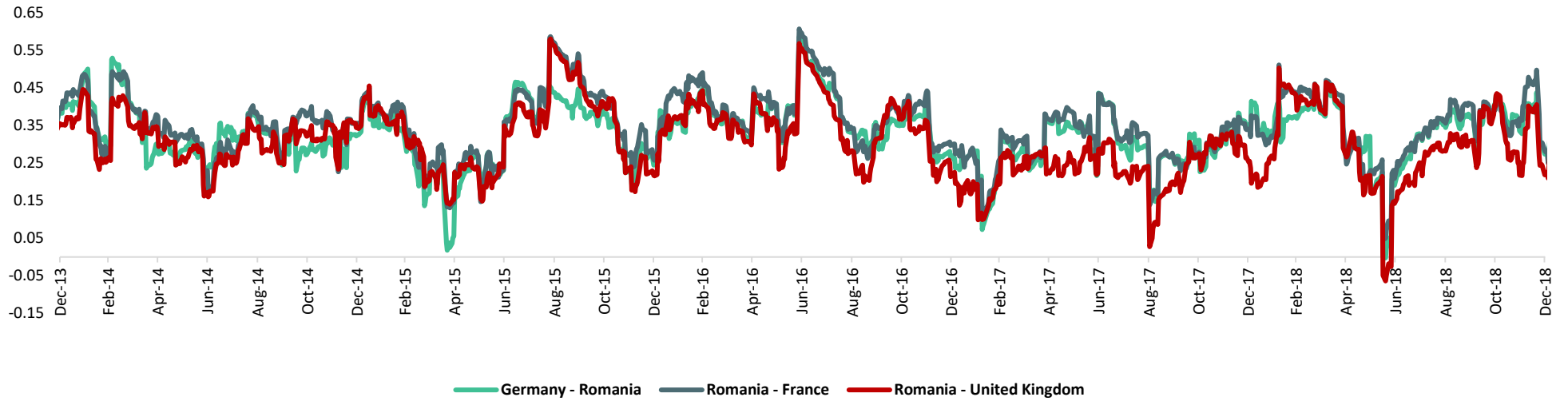
Stock Market Correlations for Germany, France, Netherlands and UK

Legend: Germany - France | Germany - The Netherlands | Germany - United Kingdom
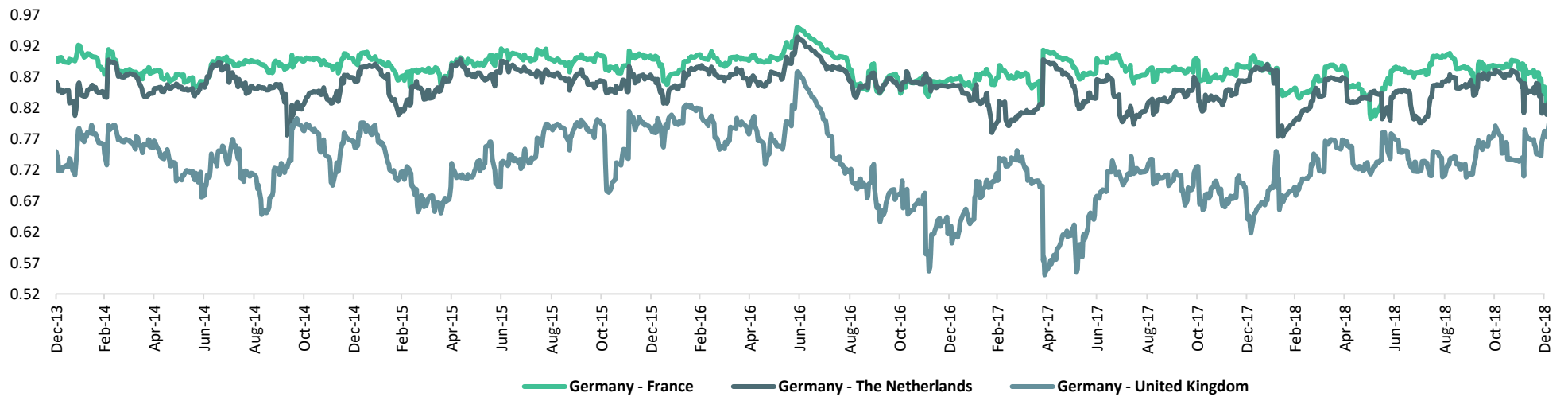
Source: Datastream, FSA's calculations

Liquidity risk on Romanian Stock Exchanges

The BSE Trading Activity (all the Segments) during December 2018

Week/month	No. of transactions	Volume	Value	
			EUR	%
Total 3-7 December 2018	9,845	123,218,513	41,750,348	9.72%
Total 10-14 December 2018	8,752	158,507,311	57,835,217	13.46%
Total 17-21 December 2018	33,368	757,034,142	296,978,671	69.13%
Total 24-28 December 2018	10,650	105,795,091	28,896,156	6.73%
Total 31 December 2018	2,474	23,325,842	4,110,273	0.96%
Total December 2018	**65,089**	**1,167,880,899**	**429,570,666**	**100.00%**

Source: BNR, BSE data, FSA's calculations; monthly average exchange rate for December 2018= 4.653 LEI/EUR

The BSE's Most Traded Companies during December 2018 (Only the Main Segment)

Symbol	Main market		Deal		Total	
	Value (EUR)	%	Value (EUR)	%	Value (EUR)	%
ALR	1,691,470	0.68%	0	0.00%	157,097,860	36.79%
TLV	95,835,233	38.54%	4,636,112	20.24%	100,471,345	23.53%
BRD	32,021,867	12.88%	1,448,865	6.32%	33,470,733	7.84%
SNG	28,609,508	11.51%	0	0.00%	28,609,508	6.70%
SNP	22,334,908	8.98%	389,534	1.70%	22,724,442	5.32%
FP	15,277,354	6.14%	0	0.00%	15,277,354	3.58%
SIF5	4,218,733	1.70%	10,728,562	46.83%	14,947,296	3.50%
EL	14,899,706	5.99%	0	0.00%	14,899,706	3.49%
SNN	8,200,924	3.30%	1,413,546	6.17%	9,614,470	2.25%
TGN	7,912,833	3.18%	0	0.00%	7,912,833	1.85%
SIF2	737,669	0.30%	4,025,790	17.57%	4,763,459	1.12%
TEL	3,307,712	1.33%	0	0.00%	3,307,712	0.77%
SIF3	1,969,263	0.79%	0	0.00%	1,969,263	0.46%
DIGI	1,780,477	0.72%	0	0.00%	1,780,477	0.42%
COTE	1,112,985	0.45%	0	0.00%	1,113,482	0.26%
Top 15 Total						**97.89%**

Source: BNR, BSE data, FSA's calculations; monthly average exchange rate for December 2018= 4.653 LEI/EUR

## Top of intermediaries during December 2018

Rank	Intermediary name	Traded Value EUR (month level)	% from Total Value (month level)
1	SWISS CAPITAL S.A.	433,299,169	50.71
2	WOOD & COMPANY FINANCIAL SERVICES, a.s. PRAGA	81,806,019	9.57
3	BANCA COMERCIALA ROMANA	68,601,790	8.03
4	BT CAPITAL PARTNERS	57,839,972	6.77
5	IEBA TRUST	57,663,679	6.75
6	TRADEVILLE	31,121,520	3.64
7	RAIFFEISEN CENTROBANK AG	19,917,764	2.33
8	CONCORDE SECURITIES LTD	16,122,906	1.89
9	ALPHA FINANCE ROMANIA	12,206,281	1.43
10	BRD Groupe Societe Generale	9,855,864	1.15
11	SSIF BRK FINANCIAL GROUP S.A.	9,808,455	1.15
12	IFB FINWEST	9,589,961	1.12
13	VOLTINVEST	9,565,709	1.12
14	GOLDRING	8,341,510	0.98
15	PRIME TRANSACTION	8,205,636	0.96
Top 15 Total			97.60

The Market Capitalization on BSE during December 2018- Only Main segment

Market Capitalization EUR
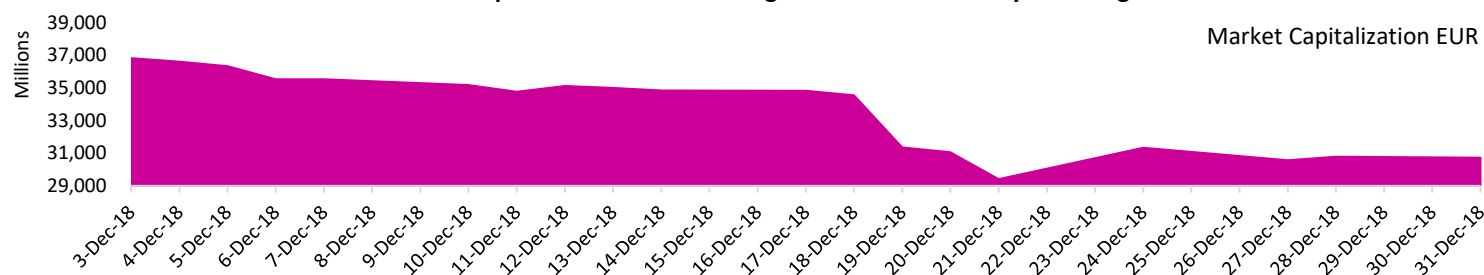
Source: BNR, BSE, FSA's calculations; monthly average exchange rate for December 2018= 4.653 LEI/EUR

# Liquidity risk at the Bucharest Stock Exchange

The analysis of liquidity at the Bucharest Stock Exchange relies on data with daily frequency for the 25 financial assets that compose the BET-XT, extracted from the Bloomberg platform for the period January 2012 – October 2018. The data employed for this analysis accounts for the difference between Bid and Ask prices, the volume of transactions and last daily prices. Based on these data four instruments for measuring liquidity were built: the difference Bid-Ask percentage volume of transactions, the gauge of illiquidity according to Amihud (2002) and the rate of liquidity as computed by Hui, Heubel (1984). Combining the series of indicators computed for each financial asset using the BET-XT weights yielded a composite Liquidity Index.

We notice an increase of liquidity at the beginning of 2014 and generally an abatement ever since with a tendency towards a rise acknowledged lately. The noteworthy moments are in September and October 2015, a rebound in December 2016 followed by a general downward trend. After a series of six consecutive months featuring increased levels, the liquidity indicator plunged in April 2017 to values recorded in April 2016, rebounded during May, lingered in June around levels touched at the beginning of 2017, reduced in July and exhibited a slowly increasing trend from August until November and slightly retracted in December 2017. This year the liquidity recorded reduced levels, with a slight recoup at the end of June and a stagnant level during July and August. In December the liquidity index continued the downward trend at a reduced pace.
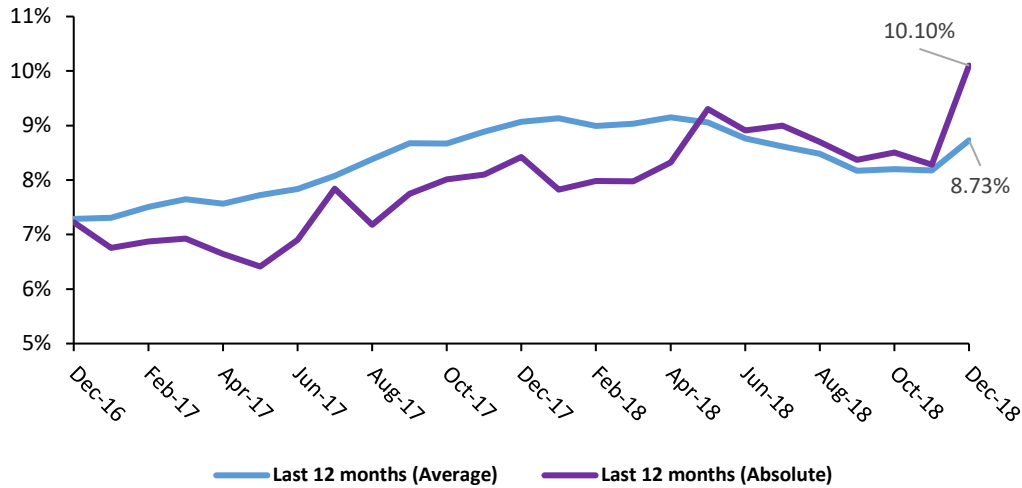
PCA-Liquidity Index – all period
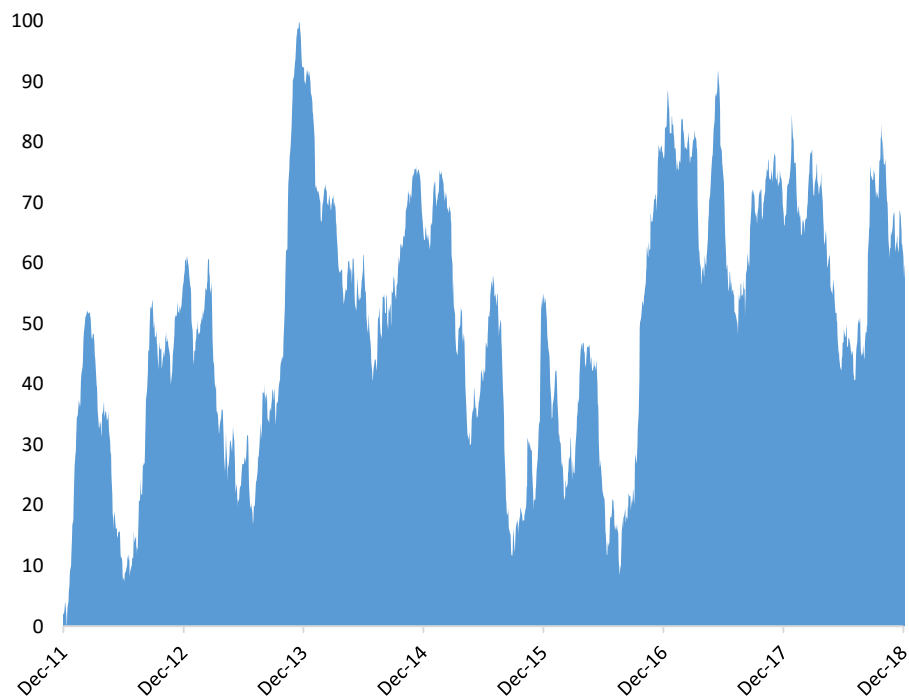
PCA-Liquidity Index – last month
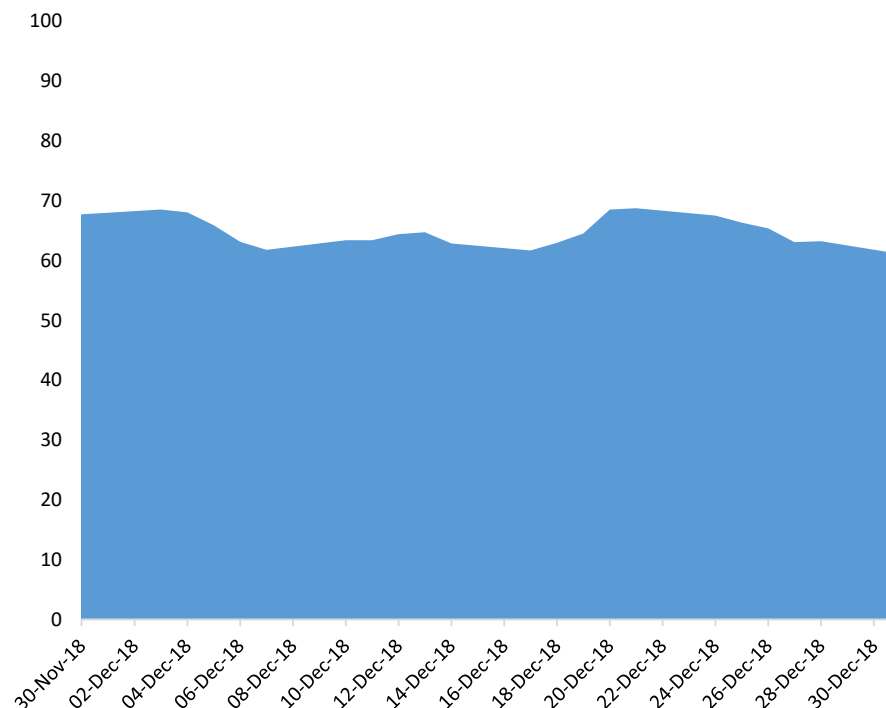
Source: Bloomberg, FSA's computations

Liquidity criteria according to FTSE

Turnover velocity

10.10%

8.73%

Last 12 months (Average) ——— **Last 12 months (Absolute)**

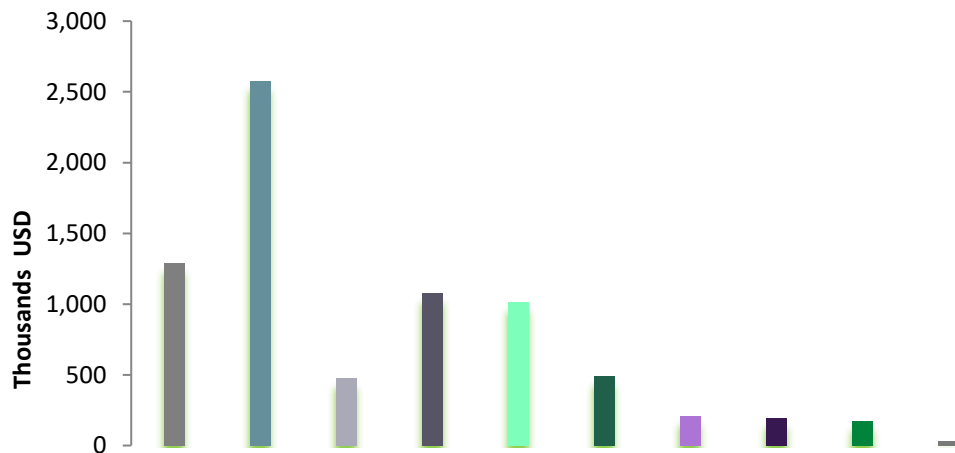*Source: BVB, FSA data, FSA's calculations*

Turnover velocity is a liquidity indicator used by FTSE to classify countries in the categories of frontier, emerging or advanced markets.

In accordance with the FTSE methodology, Romania must reach the threshold of 15% in order to update in the category of emerging markets (for the time being, the indicator is about 9%).

In September 2016, FTSE included Romania on the Watch List to possible classify to Emerging Market status but mentioned that the country still fails to meet the Turnover Velocity criterion.

The analysis of the indicator during the period January 2010-December 2018 shows a significant increase of the liquidity starting with 2011 (when Fondul Proprietatea listed on BVB) and a gradual decline after January 2012 as the positive effects dissipate. At the end of the year 2013, the ascending tendency was resumed but more slowly.

Average daily turnover (December 2018)
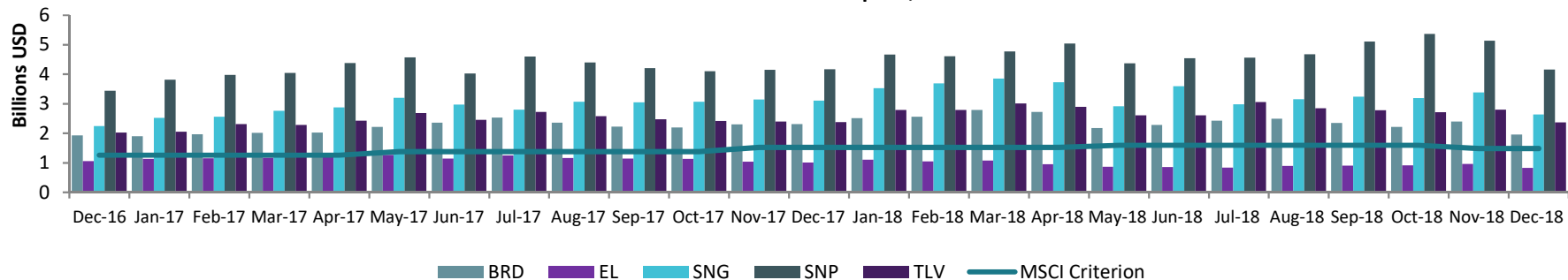

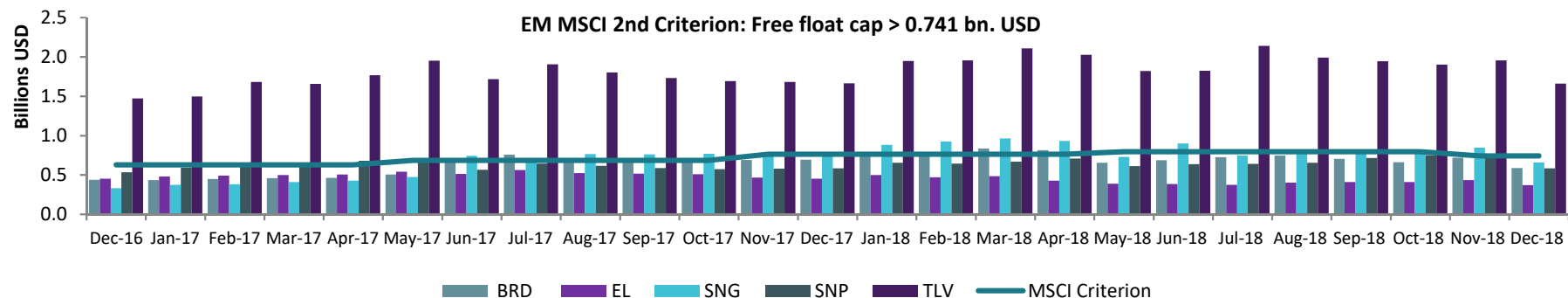*Source: FSA data, FSA's calculations*

Average Daily Volume

BRD
TLV
EL
SNG
SNP
TGN
SNN
TEL
COT
BVB

Thousands of shares
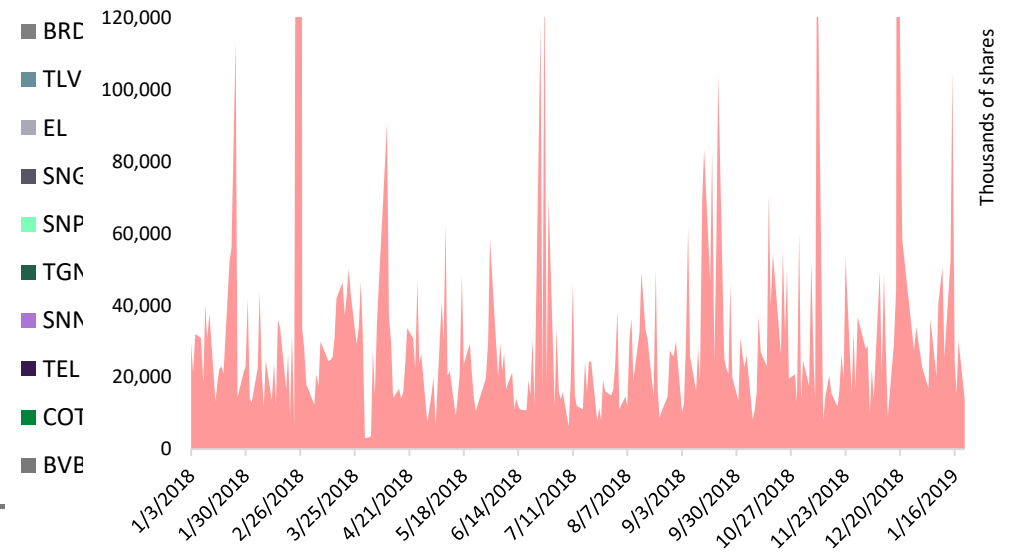
Source: BSE, FSA's calculations

MSCI: Quantitative Indicators for Emerging Market Status

EM MSCI 1st Criterion: Market cap > 1,482 bn. USD

Legend: BRD, EL, SNG, SNP, TLV, MSCI Criterion

EM MSCI 2nd Criterion: Free float cap > 0.741 bn. USD

Legend: BRD, EL, SNG, SNP, TLV, MSCI Criterion
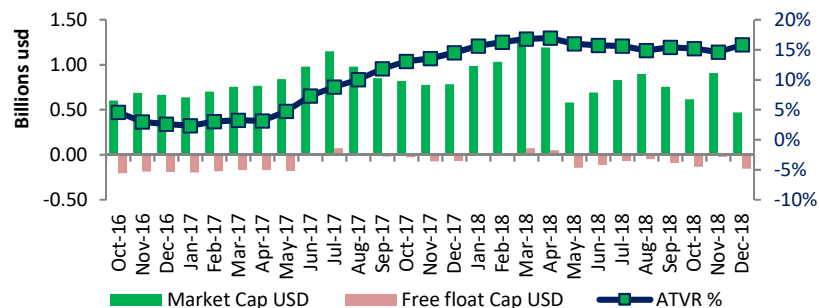
EM MSCI 3rd Criterion: ATVR > 15%

Legend: BRD, EL, SNG, SNP, TLV, MSCI Criterion
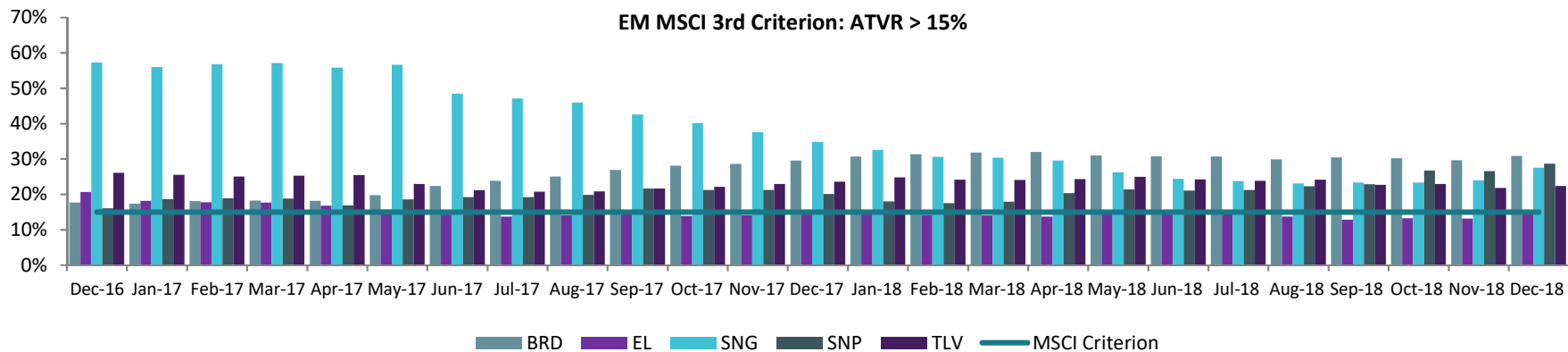
Source: ASF Calculations at 31th of December 2018
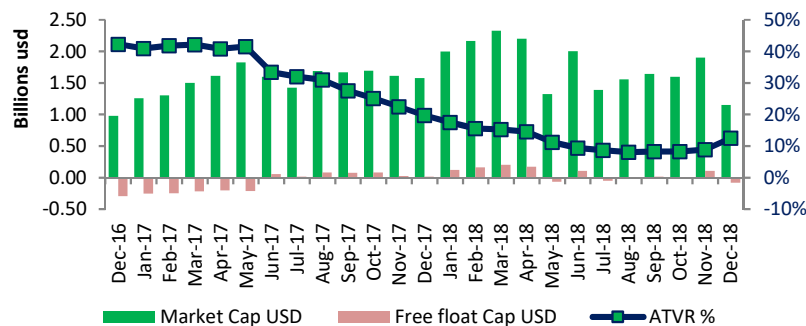
MSCI: Quantitative Indicators for Emerging Market Status
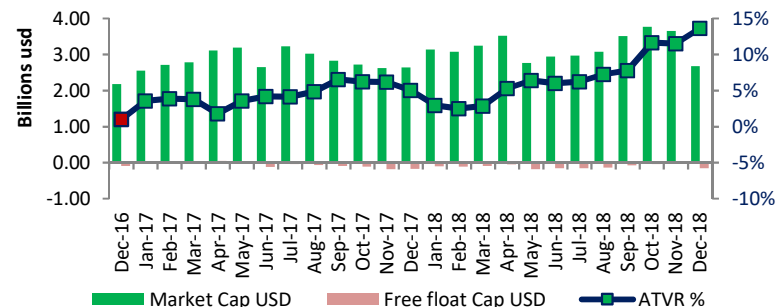
BRD - Indicators' variation to MSCI criterion
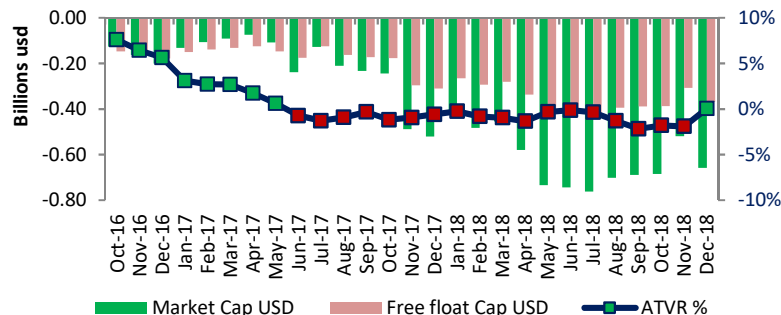
Legend: Market Cap USD, Free float Cap USD, ATVR %

EL - Indicators' variation to MSCI criterion

Legend: Market Cap USD, Free float Cap USD, ATVR %

SNG - Indicators' variation to MSCI criterion

Legend: Market Cap USD, Free float Cap USD, ATVR %

SNP - Indicators' variation to MSCI criterion

Legend: Market Cap USD, Free float Cap USD, ATVR %

TLV - Indicators' variation to MSCI criterion

Legend: Market Cap USD, Free float Cap USD, ATVR %
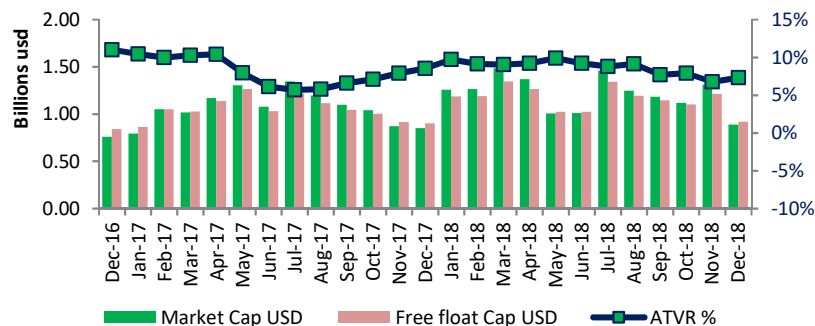
## Indicators' variation to MSCI criterion (December 2018)

Company	Cap. bln. USD	Free float bln. USD	ATVR %
BRD	0.47	(0.16)	15.85%
EL	(0.66)	(0.37)	0.07%
SNG	1.15	(0.08)	12.54%
SNP	2.68	(0.16)	13.66%
TLV	0.89	0.92	7.34%

The data series for EL, SNG and SNP were modified in order to count the GDR transactions. Starting with June 2017, the free float coefficients were modified according to Wood and Berenberg. Starting with November 2018, the MSCI criteria were modified according to the MSCI Market Classification Framework.
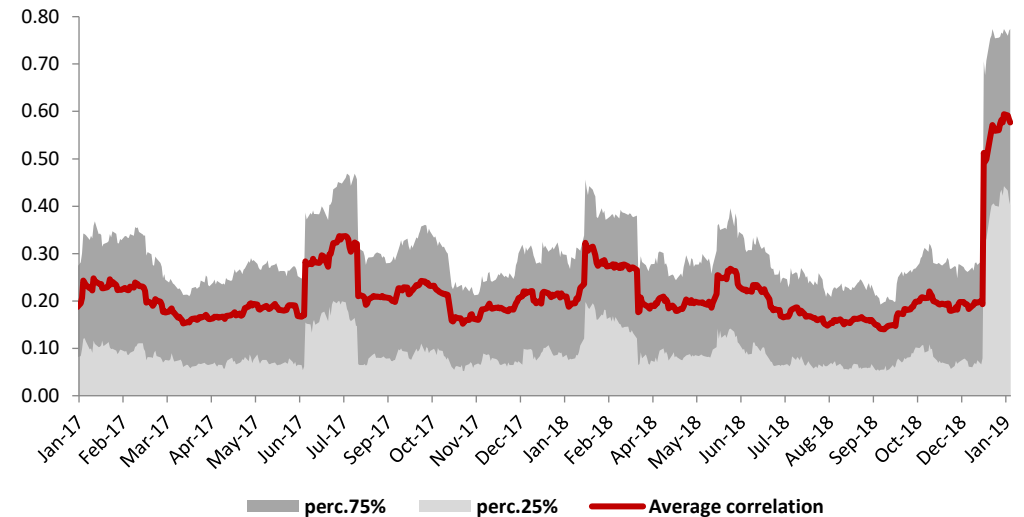
Source: ASF Calculations at 31th of December 2018

Risk assessment and the benefit of diversification

The degree of over or under-evaluation of Bucharest Stock Exchange compared with the region
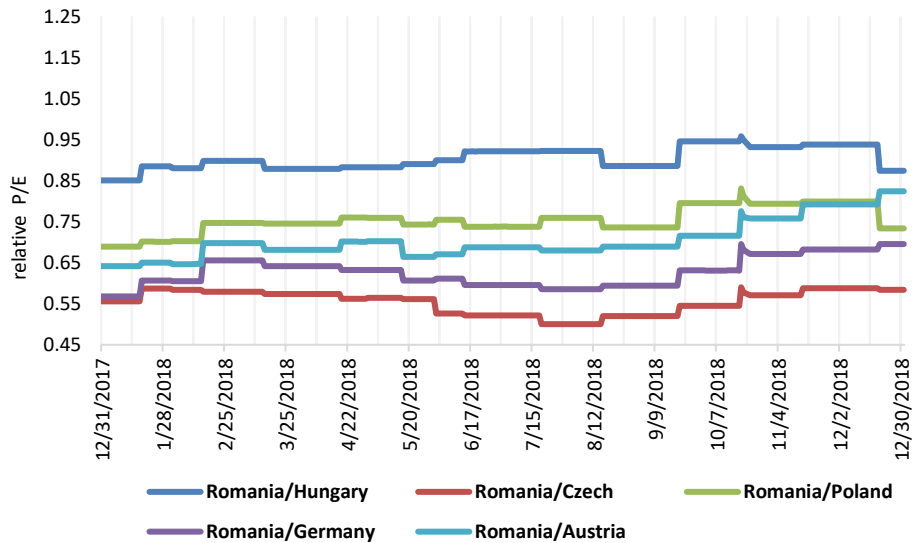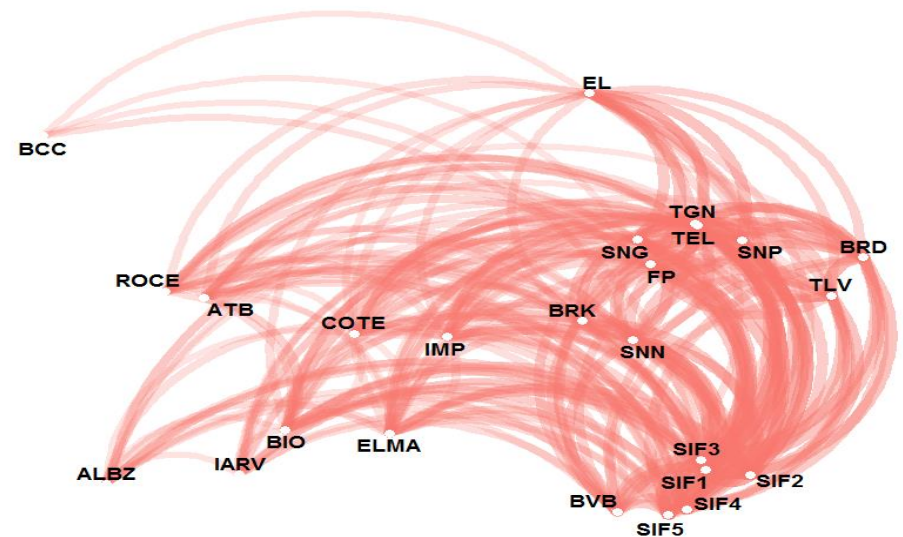

Source: Datastream, FSA's calculations

The average correlation coefficient for the 25 most liquid companies traded on BSE

Source: Bloomberg, ASF

Network of correlations among BET-XT constituents

P/E forward ratio is calculated by dividing the share price to the net earnings per share and indicates how much investors pay for earnings forecasted for next year. The risk of re-evaluation is calculated by dividing the P/E forward ratios for different markets and indicates how much investors pay for the anticipated next year in comparison with another market. This convergence in the indicator (relative P/E forward ratio) can be understood in relation with the search for yield across different markets.

In December 2018, the ratio was still lower than 1 thus indicating that the Romanian capital market was more attractive in comparison with the analyzed countries.

At the Bucharest Stock Exchange the correlations between the daily yields of the 25 most liquid companies, increased significantly at the end of December 2018 and in the first half of January 2019.

Risk assessment and the benefit of diversification

The estimates of the equilibrium level (particle filter estimates) indicate that the trend of Romanian capital market plummeted in December. The assets returns returned to the beginning of the year, erasing one-year growth in returns. Along with the sudden change, we also see an increase in the liquidity risk. The trend of STOXX600 index continued to slowly decrease in December, but the index returned to its equilibrium level.

The European capital market is currently affected by the USA-China trade war. IMF forecasted that the trade war would cost the world economy approximately 1% of global GDP. The spillover effects from external markets will also decrease the capitalization of Romanian capital market, as the foreign investors will pull out from riskier markets.

The empirical analysis shows that neither the Romanian capital market nor the European market are currently perturbed by external events and do not manifest unsustainable endogenous price growth or a spiral down of asset prices (asset bubbles). Nonetheless, due to the effects of the fiscal package announced by Romanian Government in the late December, the Romanian capital market is undergoing a structural change, downsizing for the moment.

The estimates of the equilibrium level (particle filter estimates)
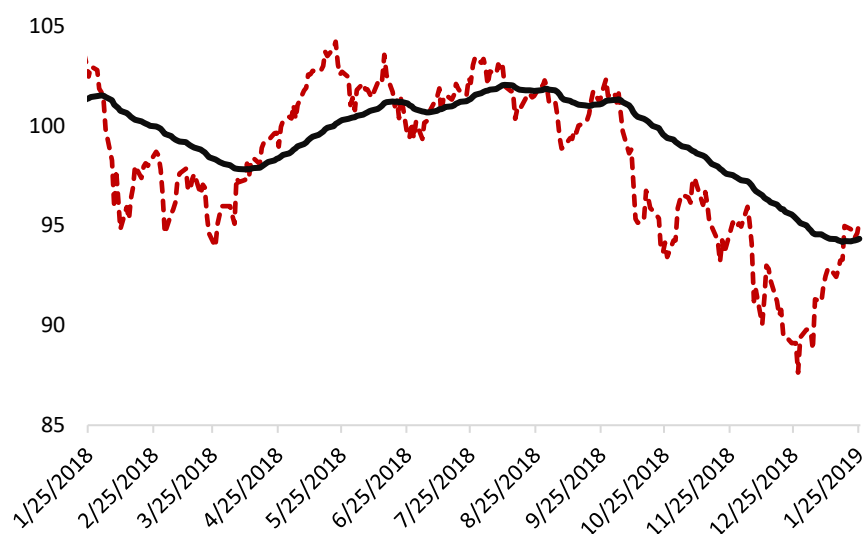
- - - - STOXX600 (jan 2018=100)

——— Equilibrium level (particle filter estimate)
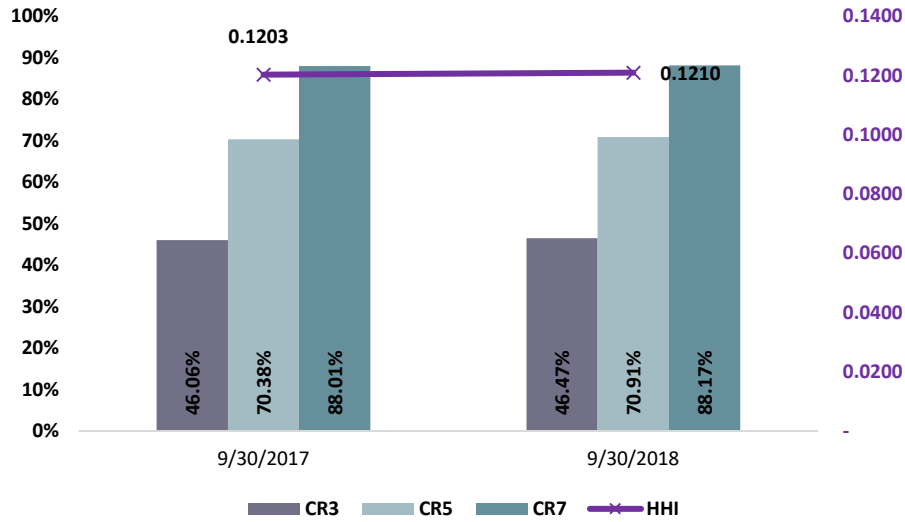
Source: Datastream, FSA's calculations
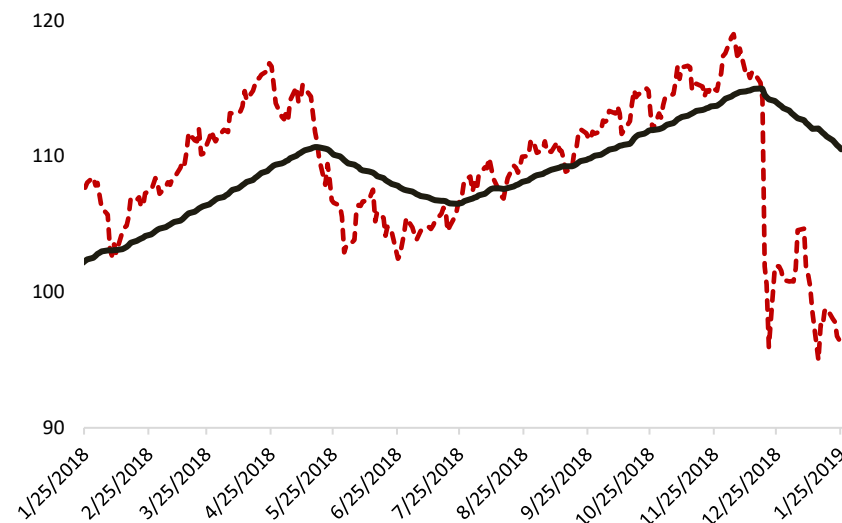
- - - - Romanian Capital Market Index (Jan 2018 =100)

——— Equilibrium level (particle filter estimate)

*ource: Datastream, FSA's calculations*

Concentration risk

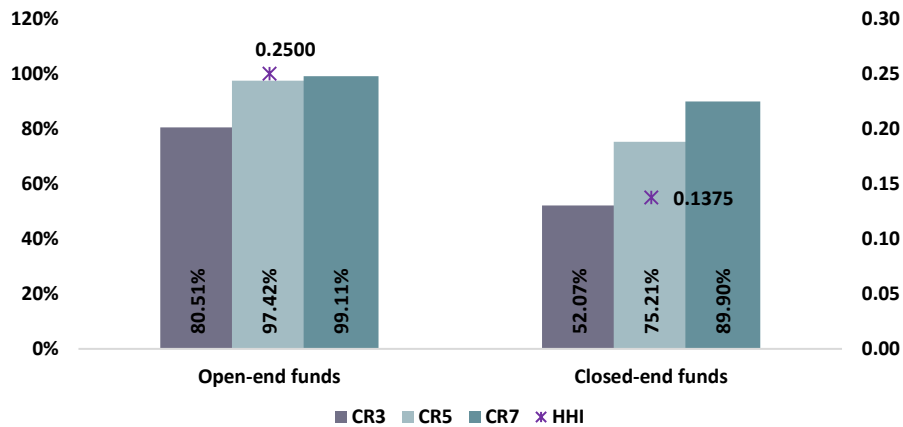## Concentration risk of non-life insurance undertakings (by value of GWP at 30 September 2018)

0.1203

0.1210

46.06% 70.38% 88.01%

46.47% 70.91% 88.17%

9/30/2017

9/30/2018

CR3 ■ CR5 ■ CR7 ✕ HHI

Source: FSA

Concentration risk of life insurance undertakings (by value of GWP at 30 September 2018)

0.1737

0.1792

60.24% 74.15% 86.70%

59.96% 75.69% 87.20%

6/30/2017

6/30/2018

CR3 ■ CR5 ■ CR7 ✕ HHI
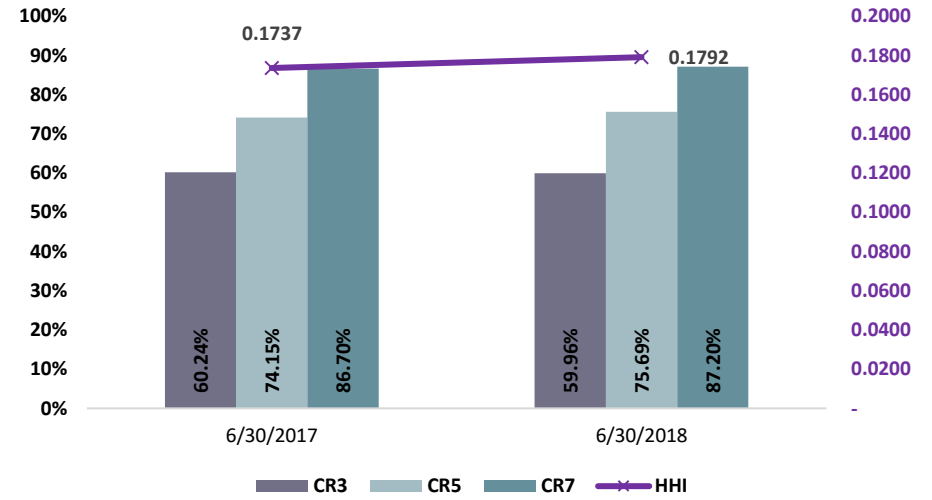
Source: FSA

Concentration risk of investment funds in Romania (by net assets – 30 September 2018)

0.2500

0.1375

80.51% 97.42% 99.11%

52.07% 75.21% 89.90%

Open-end funds

Closed-end funds

CR3 ■ CR5 ■ CR7 ✕ HHI

Source: FSA

Concentration risk of intermediaries on the BSE (by value of transactions during December 2018 – Main segment & ATS, all spot instruments)

✕ 0.1280

55.24% 72.47% 79.81%

12/31/2018

CR3 ■ CR5 ■ CR7 ✕ HHI
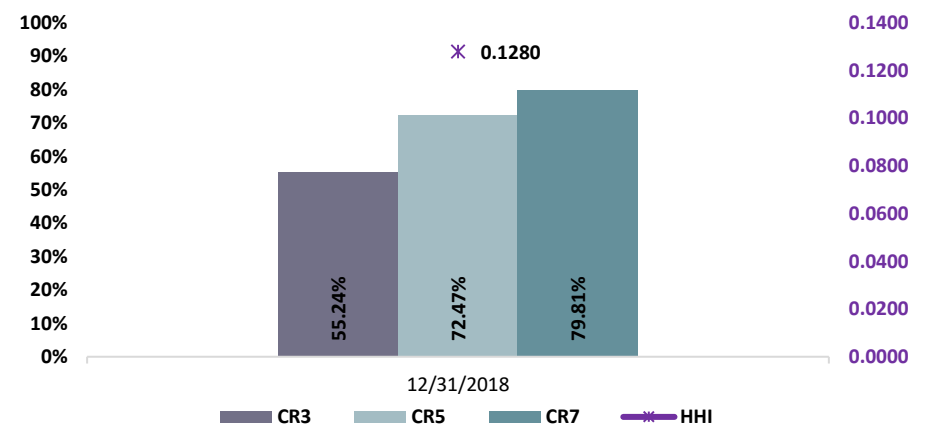
Source: FSA

Concentration risk

**Concentration risk of private pension funds (by net assets at 12/31/2018)**
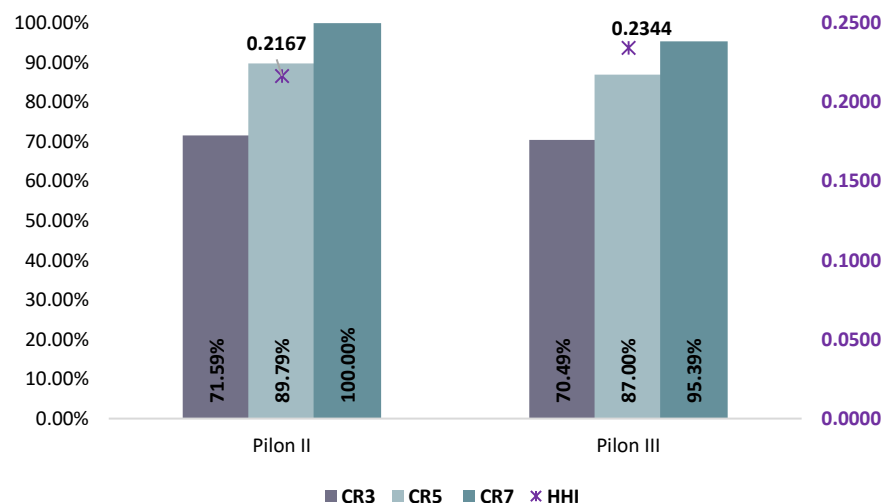
According to the main indicators used by the Competition Council, the concentration risk in the non-life insurance market is medium to high level, while the life insurance market concentration degree is still high.

The situation is similar in the case of private pension funds market (Pillar II and Pillar III), but explainable by objective reasons related to their operating mechanism and the current state of the market.

Also on the capital market, the concentration degree is medium to high for OEIFs (although the number of investment funds is high) and for the intermediaries on the BSE due to the fact that top market participants sum up a significant share of the total assets.

Liquidity coefficient

Evolution of admitted liquid assets vs. Short term obligations. Liquidity coefficient evolution
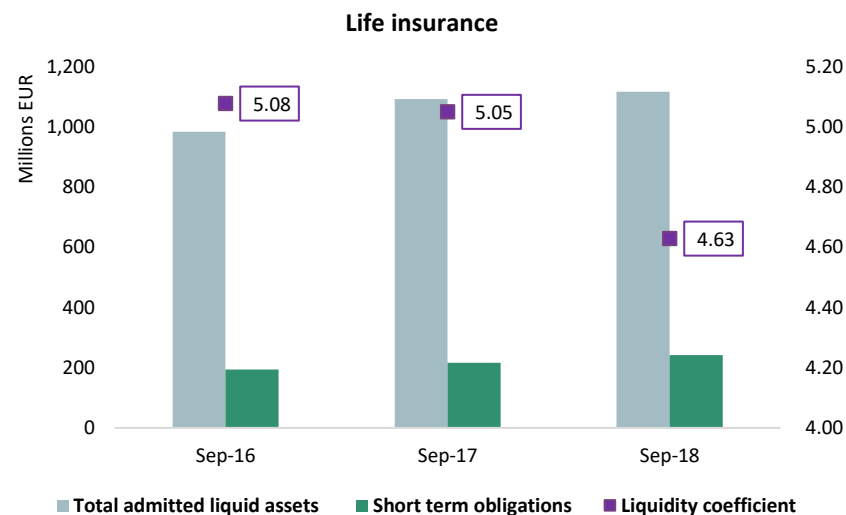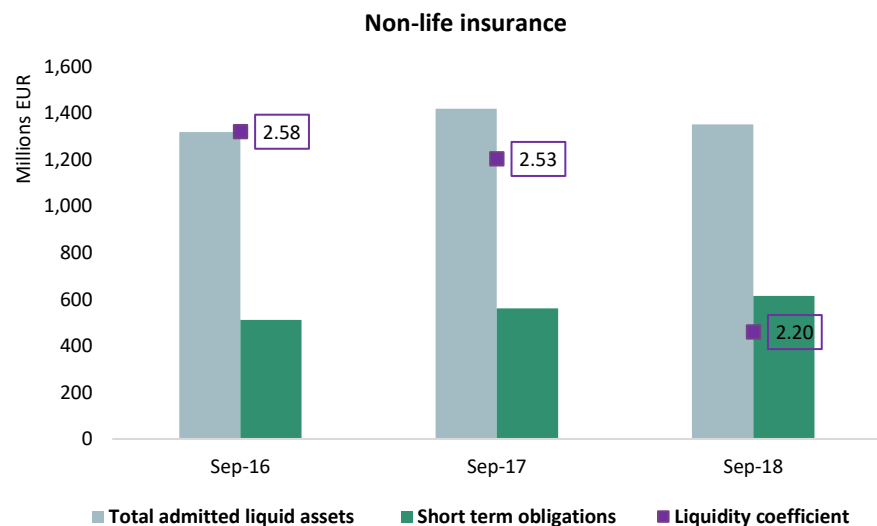
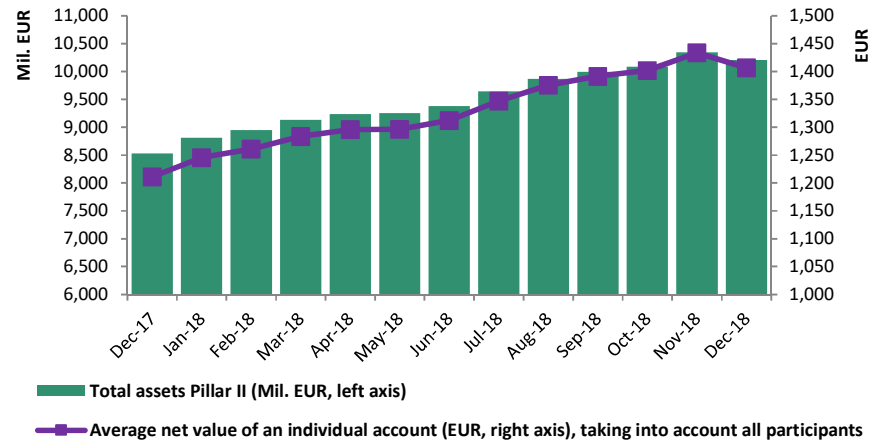**Non-life insurance**

Life insurance

Source: FSA

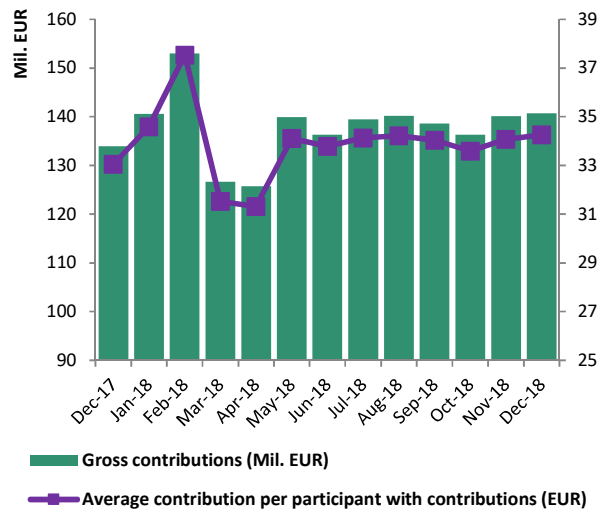**Total assets (EUR), number of participants and return rates**

Mandatory pension fund	Total Assets 31 December (EUR)	Participants (persons) Dec. 2018	Annualized 24 months return rate Dec. 2018
ARIPI*	871,931,543	735,499	2.05%
AZT VIITORUL TAU	2,213,213,316	1,560,583	2.71%
BCR	670,144,665	635,769	2.84%
BRD	371,585,903	417,361	1.98%
METROPOLITAN LIFE	1,455,113,526	1,012,614	3.58%
NN	3,638,560,613	1,986,101	2.60%
VITAL	985,677,718	902,372	2.71%
Total	**10,206,227,285**	**7,250,299**	**n/a**

*Minimum return rate for high risk pension funds: -2.24%
Minimum return rate for medium risk pension funds: -1.24%
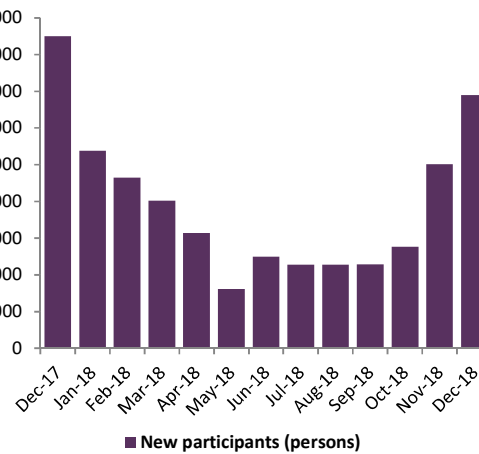Weighted average return rate for all pension funds: 2.72%

Evolution of total assets and net value of an individual account
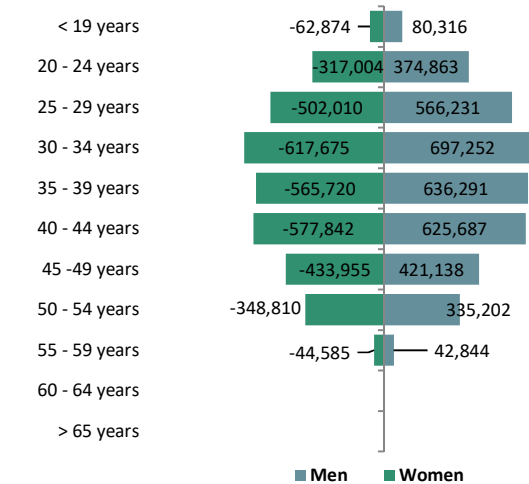

- Total assets Pillar II (Mil. EUR, left axis)
- Average net value of an individual account (EUR, right axis), taking into account all participants

Evolution of gross contributions

- Gross contributions (Mil. EUR)
- Average contribution per participant with contributions (EUR)

New participants in Pillar II

- New participants (persons)

Age and sex structure of participants at 31th of Dec. 2018

Age	Women	Men
< 19 years	-62,874	80,316
20 - 24 years	-317,004	374,863
25 - 29 years	-502,010	566,231
30 - 34 years	-617,675	697,252
35 - 39 years	-565,720	636,291
40 - 44 years	-577,842	625,687
45 -49 years	-433,955	421,138
50 - 54 years	-348,810	335,202
55 - 59 years	-44,585	42,844
60 - 64 years		
> 65 years		

- Men
- Women

Mandatory pension funds portfolio at 301th of December 2018 (EUR)

Assets Category	Assets Value (EUR)	% Total Assets
Government Bonds	6,508,606,574	63.77%
Equity	1,780,837,824	17.45%
Bank Deposits	840,060,086	8.23%
Supranational Bonds	347,889,270	3.41%
Corporate Bonds	347,595,151	3.41%
Investment Funds	307,167,419	3.01%
Municipal Bonds	64,274,592	0.63%
Metal Funds	9,689,412	0.09%
Hedging	433,209	0.00%
Other assets	(326,253)	0.00%
Total	**10,206,227,285**	**100.00%**

Currency exposure and risk hedging (EUR)

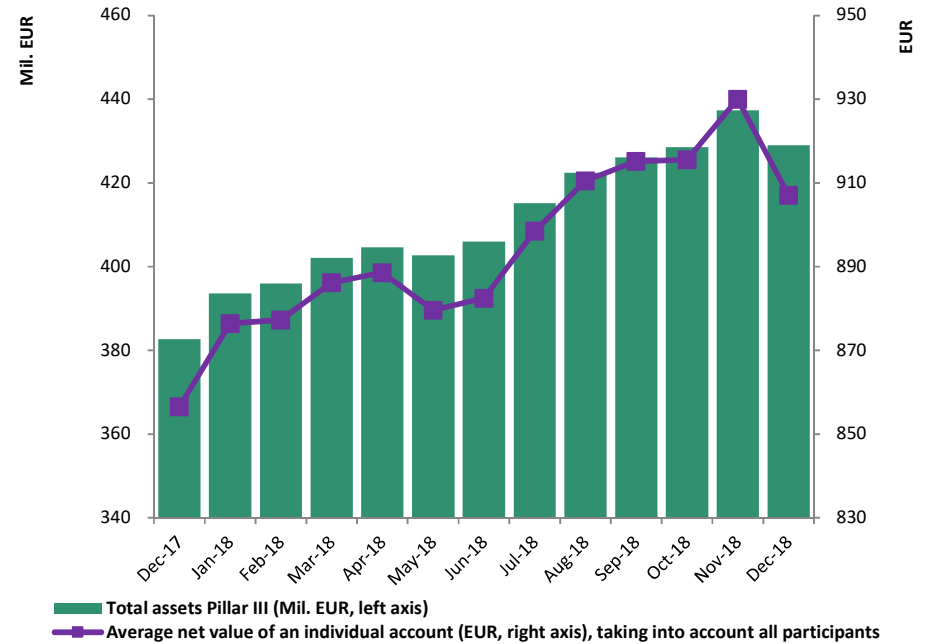| Currency	Exposure value (EUR)	% Total assets	% Hedging
RON	9,383,559,720	91.94%	-
EUR	721,144,651	7.07%	3.95%
USD	85,903,678	0.84%	-
PLN	11,770,037	0.12%	-
CHF	2,867,995	0.03%	-
HUF	981,185	0.01%	-
TRY	12	0.00%	-
CZK	5	0.00%	-
GBP	1	0.00%	-

Country exposure

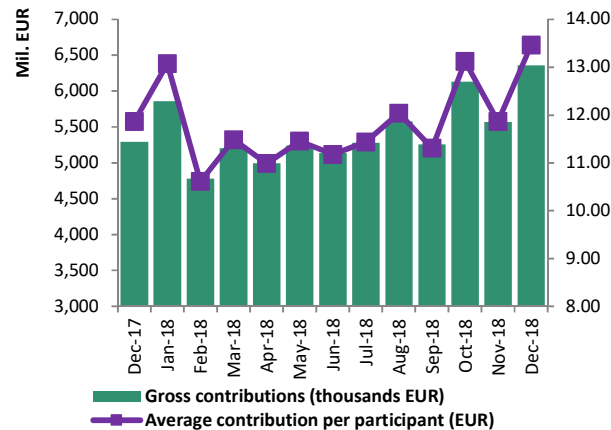**Total assets (EUR), number of participants and return rates**

Voluntary pension fund	Total assets (EUR), 31 December 2018	Participants (persons) Dec. 2018	Annualized 24 months return rate Dec. 2018
AEGON ESENTIAL	1,544,601	3,828	1.1753%
AVIVA PENSIA MEA	13,997,901	9,676	1.4354%
AZT MODERATO	49,194,771	38,489	2.5461%
AZT VIVACE*	18,764,026	20,297	3.0064%
BCR PLUS	76,737,865	135,232	1.2928%
BRD MEDIO	22,835,754	25,756	0.9771%
GENERALI STABIL	4,225,469	5,326	1.5189%
NN ACTIV*	47,980,293	47,831	2.4030%
NN OPTIM	176,449,690	172,928	1.4450%
RAIFFEISEN ACUMULARE	17,264,977	12,797	2.6422%
Total	**428,995,347**	**472,160**	**n/a**

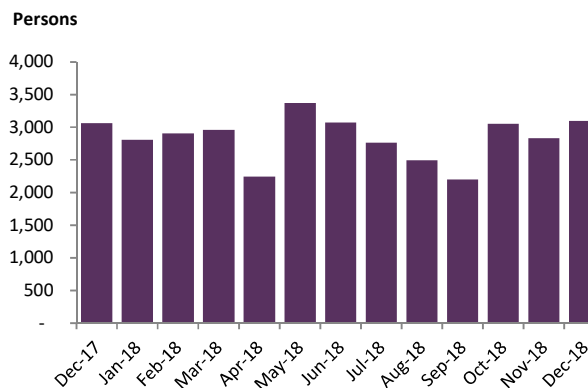|	
*Minimum return rate for high risk pension funds:	-1.4180%
Minimum return rate for medium risk pension funds:	-2.4017%
*Weighted average return rate for high risk pension funds:	2.5819%
Weighted average return rate for medium risk pension funds:	1.5982%

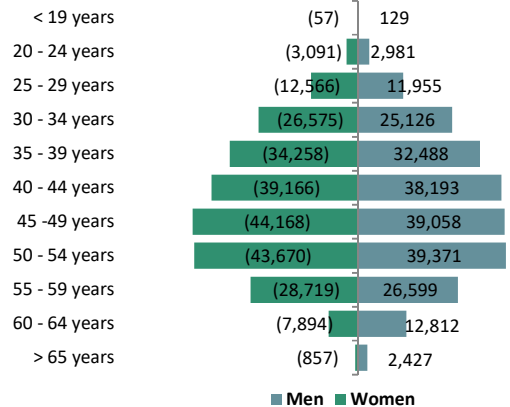**Evolution of total assets and net value of an individual account**

- ■ Total assets Pillar III (Mil. EUR, left axis)
- ■— Average net value of an individual account (EUR, right axis), taking into account all participants

Evolution of gross contributions

- ■ Gross contributions (thousands EUR)
- ■— Average contribution per participant (EUR)

New participants in Pillar III

Age and sex structure of participants at 31th of December 2018

Age	Women	Men
< 19 years	(57)	129
20 - 24 years	(3,091)	2,981
25 - 29 years	(12,566)	11,955
30 - 34 years	(26,575)	25,126
35 - 39 years	(34,258)	32,488
40 - 44 years	(39,166)	38,193
45 -49 years	(44,168)	39,058
50 - 54 years	(43,670)	39,371
55 - 59 years	(28,719)	26,599
60 - 64 years	(7,894)	12,812
> 65 years	(857)	2,427

■ Men ■ Women

Current evolutions in optional private pension funds (3rd Pillar)

Optional pension funds portfolio at 31th of December 2018

Asset class	Asset value	% of Total Assets
Government Bonds	258,011,750	60.14%
Equity	86,686,242	20.21%
Corporate Bonds	27,785,377	6.48%
Bank Deposits	22,328,802	5.20%
Investment Funds	13,106,439	3.06%
Supranational Bonds	13,056,026	3.04%
Municipal Bonds	6,826,289	1.59%
Metal funds	1,194,421	0.28%
Total Assets	**428,995,347**	**100.00%**

Cuurency exposure and risk hedging (EUR)

| Currency	Exposure value (EUR)	% Total assets	% Hedging
RON	379,901,081	88.56%	-
EUR	47,063,897	10.97%	-
USD	1,345,612	0.31%	-
PLN	551,291	0.13%	-
HUF	129,242	0.03%	-
CHF	4,212	0.00%	-
GBP	12	0.00%	-
Total	**428,995,347**	**100.00%**	**-**

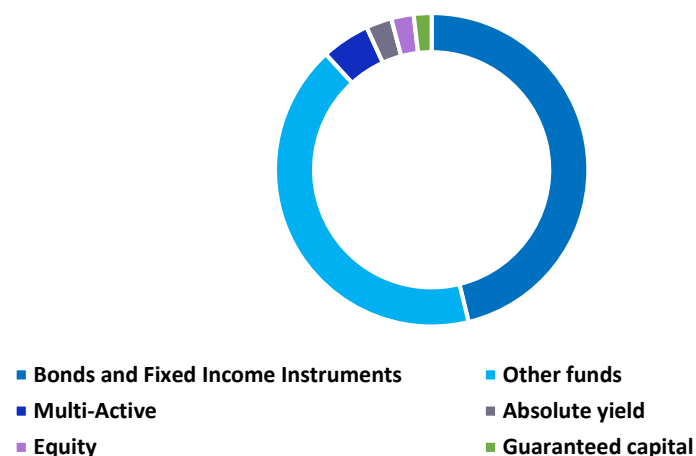## Country exposure of optional pension funds' assets
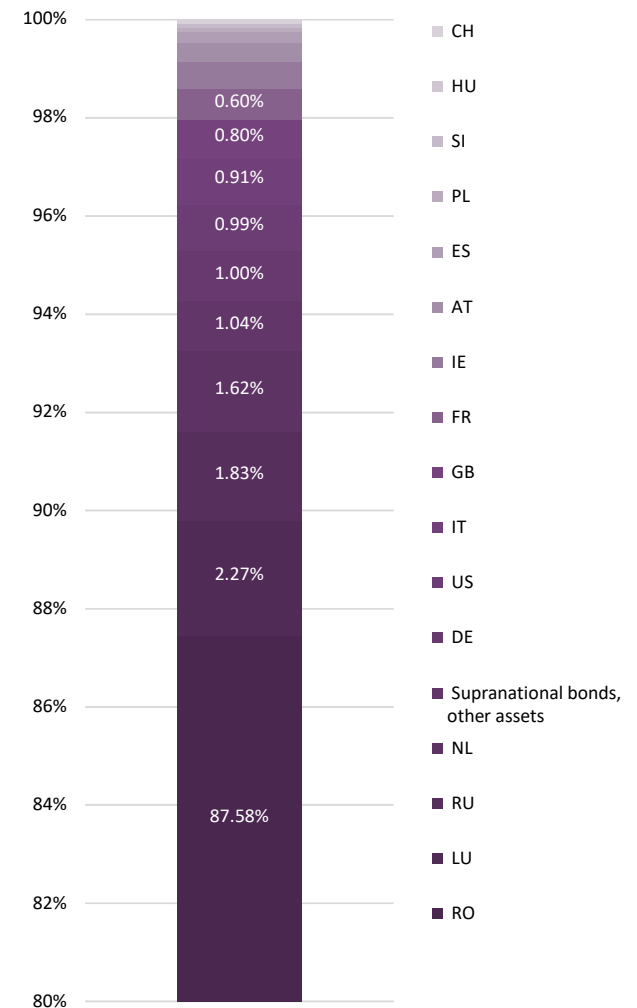
Specific developments in the investment funds sector

Evolution of net assets of open-end investment funds (December 2017 - December 2018)
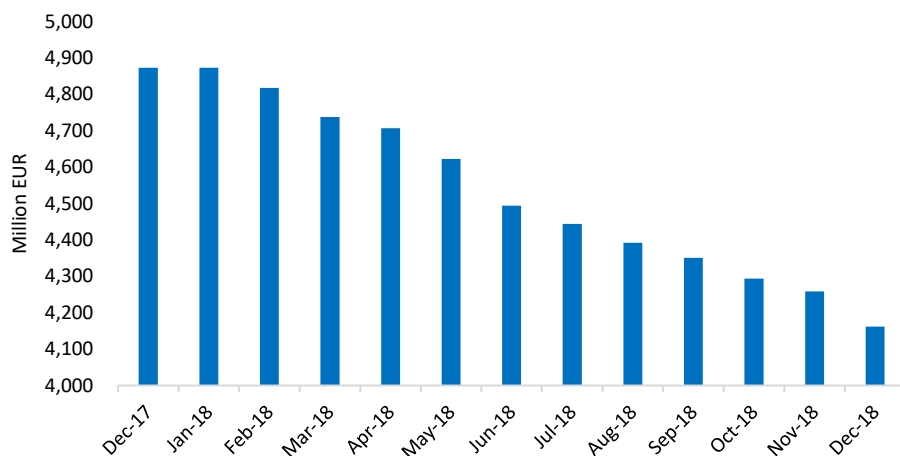
Open-end investment funds' market share by Fund Type and Net Asset (December 2018)


- Bonds and Fixed Income Instruments
- Other funds
- Multi-Active
- Absolute yield
- Equity
- Guaranteed capital

Source: AAF

According to the data published by AAF, the net assets of open-end investment funds (OeIF) registered a value of EUR 4.16 billion at the end of December 2018, down 2.3% compared with the previous month.

In December 2018, open-end bonds and fixed income instruments funds hold the largest share in total net assets of OeIF (around 46%), while the "other funds" type has a market share of approximately 42%.

At the end of December 2018, the cumulative value of the net assets of the five financial investment companies (SIFs) was EUR 1.73 billion, while FP's net asset registered a value of EUR 2.19 billion.
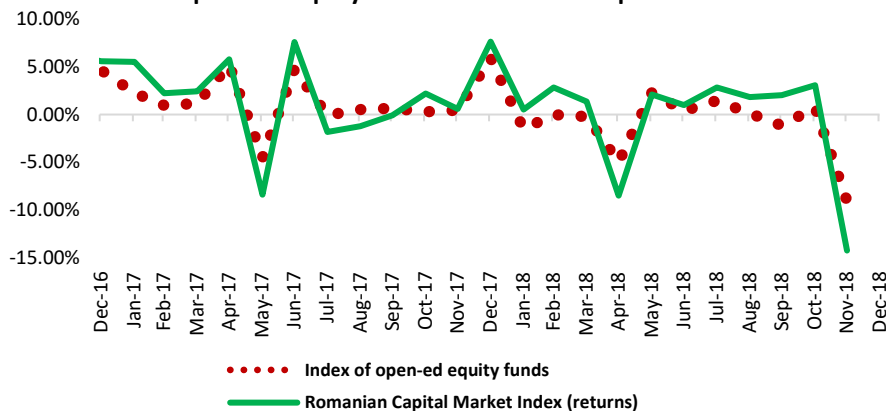
**Number of issued shares, net assets and market shares of SIFs and FP**

- SIF Banat-Crișana
- SIF Moldova
- SIF Muntenia
- SIF Transilvania
- SIF Oltenia
- FP
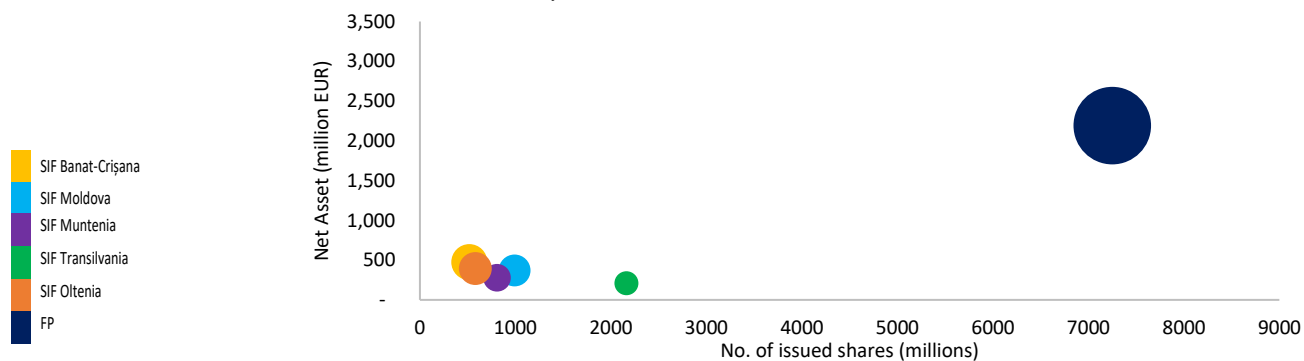
Source: AAF

Specific developments in the investment funds sector

Index of open-end equity funds vs. Romanian Capital Market Index

- • • • Index of open-ed equity funds
- —— Romanian Capital Market Index (returns)

Source: FSA, FSA's calculations

Monthly Evolution of Underwritings and Redemption of Open-end Investment Funds

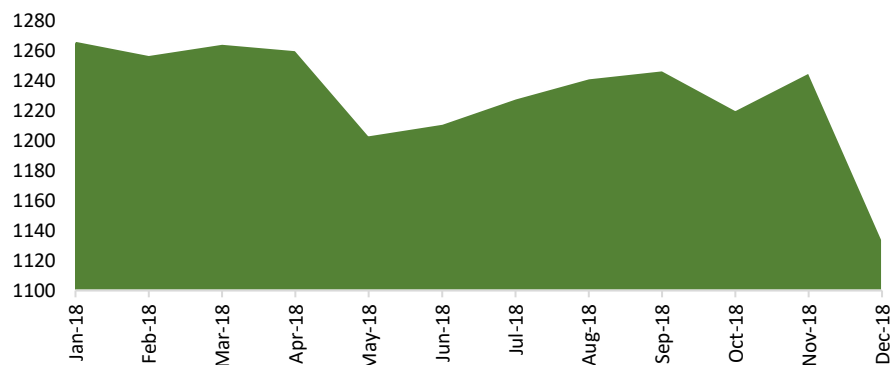■ Net sales ■ Redemptions ■ Underwritings

Million EUR
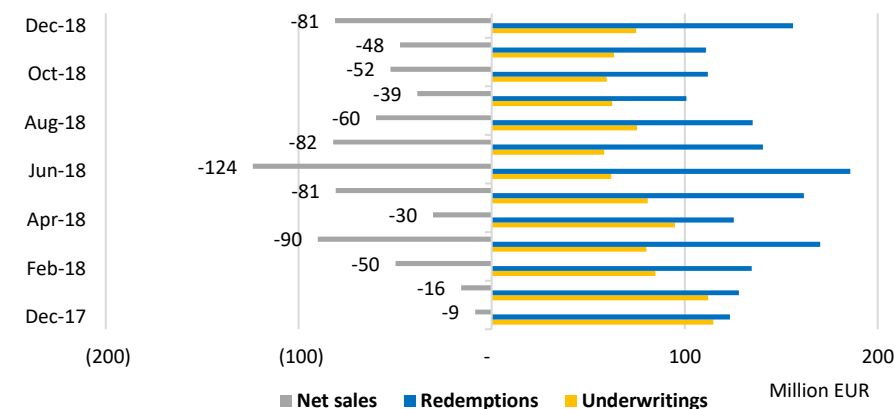
Source: AAF

Due to a set of fiscal measures announced by government officials, the Romanian Capital Market Index decreased with 14% while the index of open-ed equity funds decreased by 9%. The net assets of open-ed equity funds were 1,134 million lei in December and our forecast show a sharp decrease for the next months. The attractiveness of open-ed funds had decreased due to the increases in inflation, exchange rate, the increase of the interest rate on bank deposits and the uncertainty around the fiscal measures, which had a plummeting effect on the stock exchange returns.

The open-end equity composite index is an equal-weighted returns index of the open-end equity funds' returns and mirrors the dynamics of Bucharest Stock Exchange.

The credit risk had increased in 2018 fuelled by increases in inflation expectations, residential house prices, household and corporate loans, which led to a spike in short-term interbank interest rate which continued to grow in June. The short-term interbank lending rate (ROBOR) decreased in December due to higher bank liquidity. Our forecast indicate a pickup in credit costs for the next months due to the imposition of a high tax of bank assets.

In December, local open-end investment funds recorded net outflows of EUR 81 million. The other funds category totaled net outflows of EUR 31.83 million and bonds and fixed income instruments funds recorded net outflows of EUR 32.27 million.

Net asset of open-ed equity funds

Source: FSA's calculations

Monthly evolution of net capital flows of Open-end Investment Funds

Million EUR

■ Absolute yield
■ Multi-Active
■ Guaranteed capital
■ Equity
■ Bonds and Fixed Income Instruments
■ Monetary
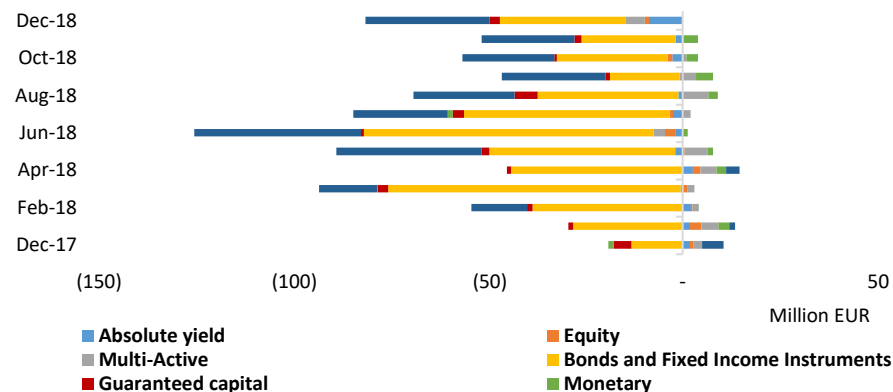
Source: AAF

Specific developments in the insurance market in Romania

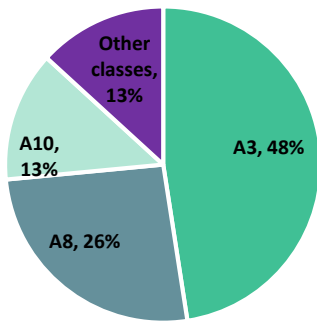## Evolution of insurance market (30/09/2018)

Gross written premiums (total)

Period	Non-life insurance	Life insurance
T3 2018	1,265	342
T3 2017	1,272	336
T3 2016	1,274	261
T3 2015	1,130	258
T3 2014	1,055	227

Millions EUR

- Non-life insurance
- Life insurance

MTPL gross written premiums

Thousands EUR

Quarter	Value
Q1 2015	184
Q2 2015	168
Q3 2015	144
Q4 2015	204
Q1 2016	240
Q2 2016	224
Q3 2016	215
Q4 2016	220
Q1 2017	235
Q2 2017	215
Q3 2017	180
Q4 2017	180
Q1 2018	150
Q2 2018	246
Q3 2018	182
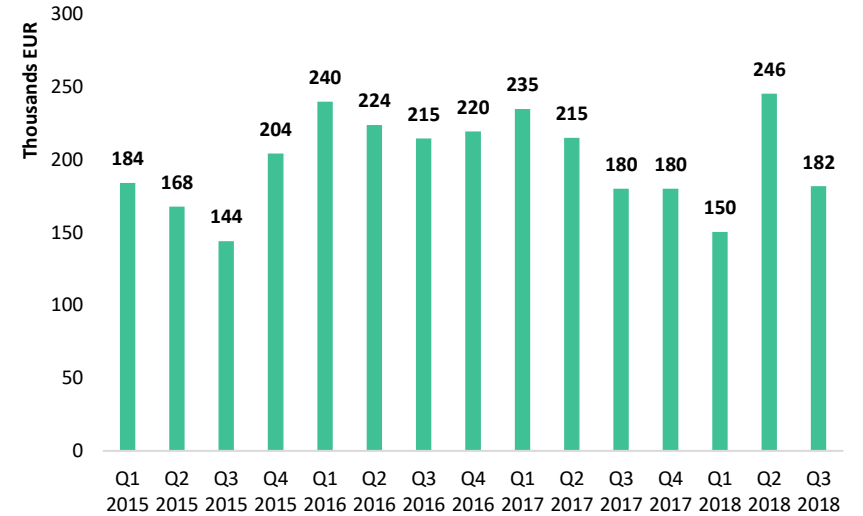
Source: FSA

Share of main insurance classes by GWP

Non-life insurance

- A3, 48%
- A8, 26%
- A10, 13%
- Other classes, 13%

Life insurance

- C1, 72%
- C3, 23%
- Other classes, 6%

Gross claims paid

| Period	AG	AV
Q3 2018	758	163
Q3 2017	650	171
Q3 2016	589	112
Q3 2015	648	122
Q3 2014	672	124

Millions EUR

- AG
- AV
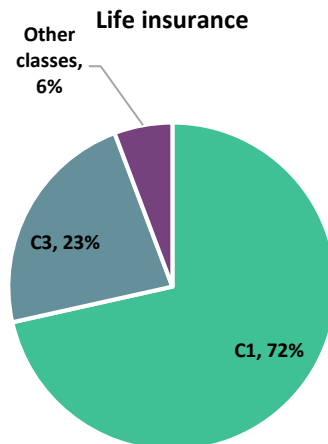
Source: FSA

Specific developments in the insurance market in Romania

## Development of claim rate and combined claim rate for the principal non-life insurance classes

| Period	Class A3			Class A8			Class A10		
	Claim rate	Rate of acquisition costs and administrative expenses	Combined claim rate	Claim rate	Rate of acquisition costs and administrative expenses	Combined claim rate	Claim rate	Rate of acquisition costs and administrative expenses	Combined claim rate
Q3 2016	71,98%	33,72%	105,69%	20,00%	36,19%	56,20%	66,89%	35,69%	102,58%
Q3 2017	72,16%	33,75%	105,91%	37,76%	38,40%	76,16%	71,29%	25,09%	96,38%
Q3 2018	75,94%	33,85%	109,79%	19,94%	38,20%	58,14%	78,08%	29,32%	107,40%

Source: FSA

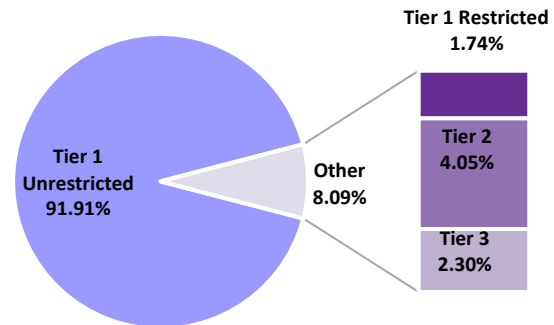### Total eligible own funds to cover the Solvency Capital Requirement (SCR)
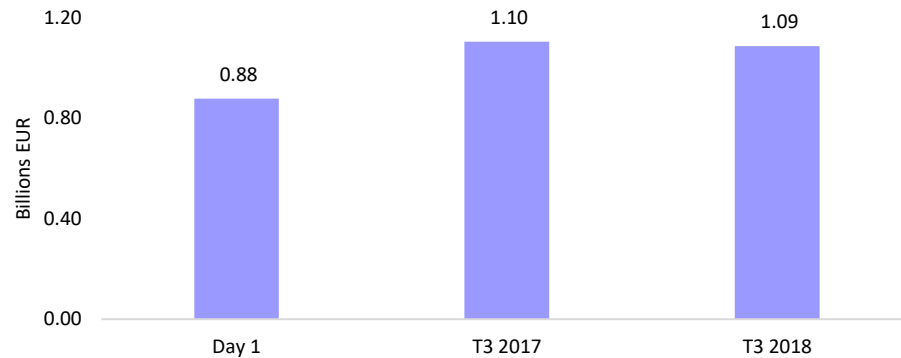
Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR)
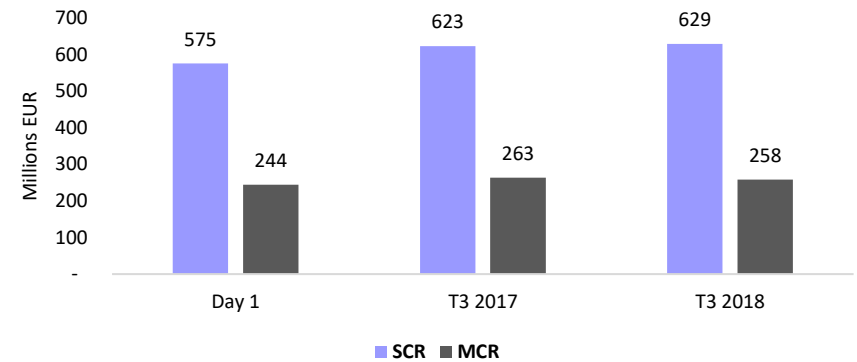
Structure of eligible own funds in Q3 2017
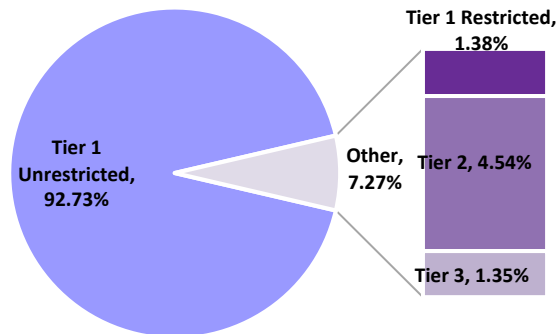
Structure of eligible own funds in Q3 2018

Source: FSA

On 1st of January 2016, eligible own funds to cover SCR were in amount of 0.88 billion EUR. Eligible own funds had an upward trend, reaching 1.09 billion EUR at the end of the first semester of 2018.

On 30th of September 2017, eligible own funds to meet the SCR were mainly composed of unrestricted Tier 1 (93%) and Tier 2 items (5%). In terms of own fund items, there were no significant changes, unrestricted Tier 1 items still having the largest share (92%) at the end of the third quarter of 2018.

Press releases and publications of European and international financial institutions in December 2018

EUROPEAN UNION	• 5 December: [Council agrees on new rules on company law adapted to the digital era.](#) • 5 December: [Commission presents ways to further strengthen the euro`s global role.](#) • 7 December: [Member States and Commission work together to boost artificial intelligence "made in Europe".](#) • 10 December: [EU negotiators agree on strengthening Europe's cybersecurity.](#) • 19 December: [EU agrees new rules on business insolvency.](#)
ESMA	• 19 December: [ESMA consults on measures to promote sustainability in EU capital markets.](#) • 19 December: [ESMA renews restrictions on CFDs for a further 3 months from 1 February 2019.](#) • 20 December: [ESMA consults on the Guidelines on settlement fails reporting and standardized procedures and messaging protocols under CSDR.](#) • 21 December: [ESMA renews the prohibition on the marketing, distribution or sale of binary options.](#)
EIOPA	• 13 December: [EIOPA evaluates the European Insurance Intermediaries Markets.](#) • 14 December: [EIOPA announces results of the 2018 Insurance Stress Test.](#) • 20 December: [EIOPA publishes the Seventh Consumer Trends Report.](#) • 20 December: [EIOPA outlines key financial stability risks.](#)
ESRB	• 13 December: [ESRB publishes the Risk Dashboard.](#)
ECB	• 13 December: [Monetary policy unchanged.](#)
US FED	• 19 December: [US FED raises the federal funds rate to 2.25 – 2.50%.](#)