Current level of key rates	
Marginal Lending Facility rate	0.25%
Main Refinancing Operations	0%
Deposit Facility rate	-0.50%
Inflation rate December 2019	1.30%

2020 Governing Council Meetings	
19-fev	Non-monetary policy
12-mar	Monetary policy
01-abr	Non-monetary policy
30-abr	Monetary policy
20-mai	Non-monetary policy
04-jun	Monetary policy
24-jun	Non-monetary policy
16-jul	Monetary policy
29-jul	Non-monetary policy
10-set	Monetary policy
23-set	Non-monetary policy
07-out	Monetary policy
29-out	Non-monetary policy
18-nov	Monetary policy
02-dez	Non-monetary policy
10-dez	Monetary policy

European Central Bank

The first step for the creation of the ECB was the decision to create an Economic and Monetary Union (EMU) in 1988, this included: free movement of capital within Europe, a common monetary authority and a single currency.

Christine Lagarde:

Born in Paris in 1956, Lagarde graduated in law at the Nanterre University in Paris and later obtained a Master's degree from the Political Science Institute in Aix en Provence. After graduating, she joined the multinational law firm Baker Mckenzie where she specialized in labor law and anti-trust. Later her specialization also included mergers and acquisitions.

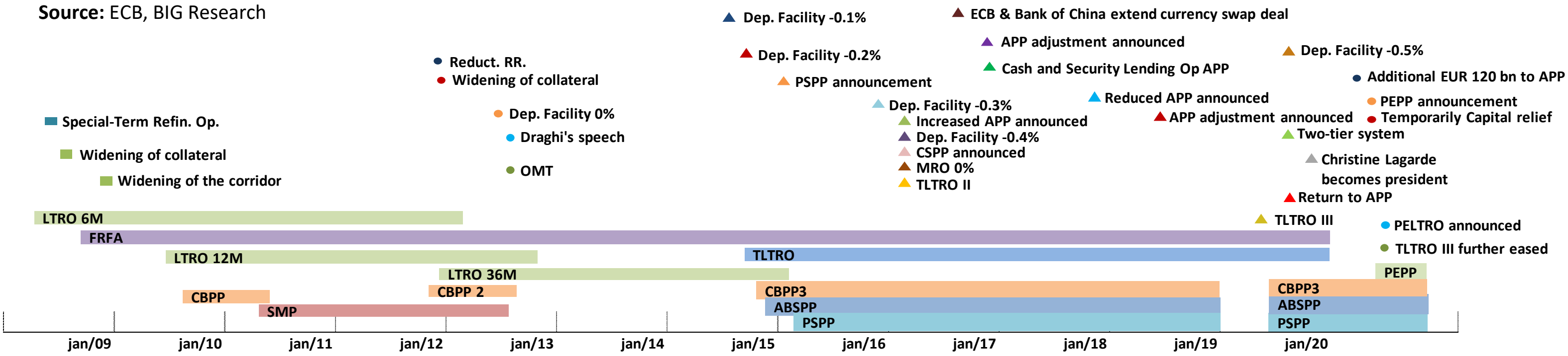
She left Mckenzie to join the politics world. In 2005 she became the French minister for foreign trade, becoming the first female chief of finance of a G7 country. In 2011, Lagarde was nominated managing director of the International Monetary Fund until just recently left the IMF to become the ECB president.

During her term as managing director of IMF, she was responsible for the bailout programs for Portugal, Greece and Ireland during the European Crisis of 2011-2012. Countries that she now will be responsible for assuring price and financial stability.

Latest monetary decision on 4th of June 2020

- Keep the Refi rate at 0%, standing lending facility at 0.25% and the standing deposit facility at -0.5%;
- Increase in the size of the PEPP envelope by EUR 600 bn to a total of EUR 1.35 tn. The horizon of the PEPP net purchases will be extended to at least the end of June 2021 and the maturing principal payments from securities purchased under PEPP will be reinvested until at least end of 2022.
- Continue net purchases under the asset purchase programme (APP) at a monthly pace of EUR 20 bn, together with the purchase under the additional EUR 120 bn temporary envelope until the end of the year. Purchases under the PEPP will continue to be conducted in a flexible manner over time, across asset classes and among jurisdictions.

Source: ECB, BIG Research



Analista:
Francisco Cavaco

Research:
research@big.pt

Q&A Press Conference (paraphrasing)

1. **Q: Regarding the composition of PEPP, did you discuss including junk bonds into PEPP? If not, why not? Given that your own stability report highlights the risk of downgrades to the market stability.**
A: We have defined parameters to our purchases, we want to isolate the way we conduct monetary policy from the effect of the pandemic and avoid self-fulfilling procyclicality. So, we will continue to examine the situation and take appropriate and proportionate action. Besides from that, we have not discussed this matter.

2. **Q: What are you prepared to do regarding the German Constitutional Court rule?**
A: The ECB is subject to jurisdiction of the Court of Justice of the EU, the PSPP has been judged by the Court of Justice of the EU to be in line with our policy mandate. We are confident that a good solution will be found that will not compromise ECB's independence.

3. **Q: Some reports before the meeting suggest that not all the members of the governing council were ready to support an increase in PEPP today. Can you give a sense of how wide was the support for the measures you adopted?**
A: There was a unanimous view in the Governing Council that action had to be taken in the face of inflation outlook. We decided to increase the size of PEPP in order to:
   - Ease aggregate financial conditions,
   - Safeguard the transmission of our monetary policy to all asset classes and jurisdictions thanks to one particular aspect of PEPP, which is its flexibility in the conduction of our purchases,
   - Help us back to our pre-covid inflation path.

   So, these conditions fully justified the expansion of PEPP by EUR 600 bn.

4. **Q: Regarding the strategy for investment under PEPP. You say the purchases will continue at least until the end of 2020 and the roll-off of those purchases should start at the beginning of 2023. Meanwhile the guidance for PSPP program says reinvestments will continue past the date of the first-rate hike. Does this imply that the roll-off from PEPP could start before the first-rate hike?**
A: We decided to extend the horizon to June of 2021 because we have a sense that by then inflation hopefully will start to kick in again and we will have a better visibility of the situation at that point in time. It is also coherent with our other monetary policy tools. So, in terms of reinvestment, which we have agreed to push at least until the end of 2022, it will ensure that financial conditions remain sufficiently supportive over a very protracted recovery phase, and it also reflects the nature of PEPP which is different from the PSPP. For these reasons we believe that giving more visibility and certainty over that horizon was certainly a good decision to make.

Analista:
Francisco Cavaco

Research:
research@big.pt

5. **Q: Why did you agree to raise the PEPP by EUR 600 bn and not more? If you keep the current pace it will be used up by February 2021.**
   A: We collectively determined that the EUR 600 bn should bring us over time significantly closer to pre-covid inflation path. But we will better understand how the economy will rebound in the third quarter and fourth, so by then we can come up with better scenarios and projections.

6. **Q: Are you worried about bank fragmentation inside the union since state guarantees and sovereign risk differ from bank to bank?**
   A: Let me remind you that the TLTRO III in its latest iteration as it was decided in April will begin in June. And we are very confident that given the attractiveness of TLTROs and the rate that will be provided to banks that at least maintain their exposure relative to the benchmark (they will benefit from minus 1% interest rate), it should certainly help with reviving the economy, by maintaining the credit flow to households and corporations.

7. **Q: Do you think that if the European Commission starts issuing debt to fund its projects, then the euro will progress to an international reserve currency status?**
   A: The euro is already a very important currency in the international market, if you look at the swap lines and repo lines that have been submitted to the ECB, our currency is clearly in demand. However, the issuance of debt by regional agencies, either by the European Investment Bank or in this case by the European Commission, will certainly reinforce the value of the euro.

Analista:
Francisco Cavaco

Research:
research@big.pt

Summary of the March 18 Council Meeting

- Although the measures taken in the meeting on 11-12 March 2020 were well calibrated at the time, **the situation deteriorated significantly, with nearly all euro area countries in full containment mode** owing to the rapid spread of the coronavirus.

- The losses in euro area stock markets were more accentuated than in other regions. **The EURO STOXX 50 was down by nearly 40% since 20 February 2020**, comparing to a fall of around 25% over the same period in the United States, Japan and emerging markets. The euro area banking sector was severely affected by the sell-off leading to a devaluation of close to 50% over the period.

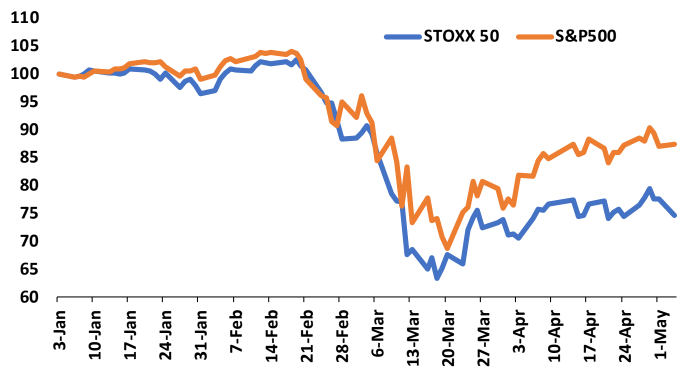
- Euro area fixed income markets registered a significant **deterioration** in terms of **liquidity.** Counterparties reported an absence of buyers for several types of assets.

- **Rise in the yields of safe** assets was likely related to the fiscal response to the coronavirus pandemic. Governments initiatives resulted in **expectations of an increased supply of government bonds** and, ultimately, higher levels of durations risk that needed to be absorbed by investors, which likely led to a rise in term premia.

- **Economic activity across the euro area is expected to decline considerably**, especially as more countries face the need to intensify containment measures. These measures will leave deep strains on the cash flows of companies and employees, **with a severe downside risk to the inflation outlook**.

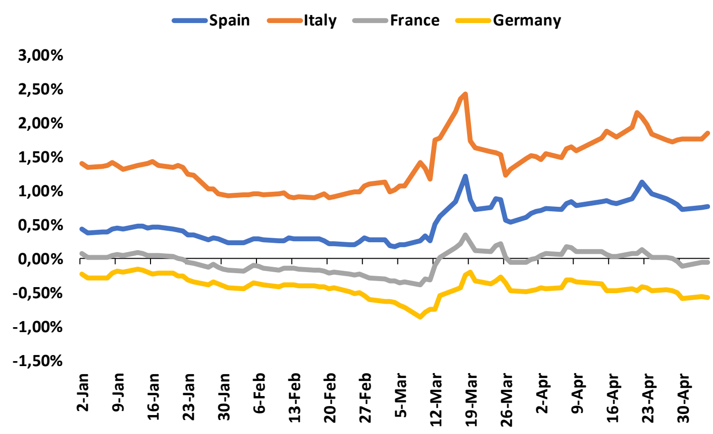
- The members stressed that the **ECB is fully committed in playing its role in supporting all euro area citizens** through this extremely challenging time. Thus, the **Governing Council presents fully prepared to increase the size of its asset purchase programmes and adjust their composition, by as much as necessary and for as long as needed.**

Stock Market Index, Base 3/Jan =100



Source: BiG Research

European 10-Year Bond Yields, %



Source: BiG Research

Analista:
Francisco Cavaco

Research:
research@big.pt

Response to Coronavirus Crisis

The ECB first response to counter the adverse impact from the pandemic was on the monetary policy meeting of March 12 when the ECB announced the additional purchase of EUR 120 bn through its asset purchase program, APP, additional EUR 1 tn to its TLTROs III limit which now stands at EUR 3 tn for loans at an interest rate that can go as low as minus 75 basis points, and additional LTROs to be conducted temporarily with an interest rate that is equal to the average rate on the deposit facility.

On March 18 the ECB announced an emergency plan, the EUR 750 bn Pandemic Emergency Purchase Programme (PEPP). This new program was a game changer for the funding costs – that were already soaring - in the euro zone, because contrarily to the purchases under APP, this new program gave full flexibility in the allocation across jurisdictions instead of following the capital key of the national central banks. Also, it was established a waiver of eligibility requirements for securities issued by the Greek governments.

On April 30 the ECB announced a new series of non-targeted pandemic emergency longer-term refinancing operations (PELTROs) to be conducted to support liquidity conditions in the euro area at an interest rate that is 25 basis points below the average rate on the main refinancing operations prevailing over the life of the PELTRO. The ECB also further eased the conditions on the TLTRO III by reducing the interest rate on the operations during the period from June 2020 to June 2021 to 50 basis points below the average interest rate on the main refinancing operations. Moreover, for counterparties whose eligible net lending reaches the lending performance threshold, the interest rate will now be 50 basis points below the average deposit facility rate prevailing over the same period.

On June 4, the governing council decided to increase the size of the PEPP by an additional EUR 600 bn, leaving the size of the program at EUR 1.35 tn and the total purchases to be conducted in 2020 (adding the APP) at EUR 1.7 tn.

ECB Monetary Policies	
March 12	**Additional EUR 120 bn to APP**
	New LTROs until June 2020
	Interest rate of current deposit facility: -50 bps
	Additional liquidity to TLTROs III
	Additional EUR 1 tn pushing limit to EUR 3 tn
	Up to 50% of loan book (vs. 30% previously)
	Interest rate reduced by 25 bps and can go as low as -0.75%
	Temporarily capital and operational relief for banks
	Banks will be allowed to operate below their Pillar 2 Guidance, capital conservation buffer CCB and their LCR
	Use capital instruments as AT1 or Tier2 to meet Pillar 2 Requirements
March 18	**Pandemic Emergency Purchase Programme (PEPP)**
	EUR 750 bn until end of 2020
	33% issuer limit will not aplly to emergency asset purchases
	Full flexibility
	Waiver for Greek bonds
	Expand the range of eligible assets under the CSPP to non-financial commercial paper
April 30	**Pandemic Emergency Longer-term refinancing operations (PELTROs)**
	Seven additional refinancing operations commencing in May 2020 and maturing between July and September 2021
	Interest rate 25 bps below the main refinancing operations
	Conditions on TLTRO III further eased
	Interest rate on the operations 50 bps below the main refinancing operations
	Interest rate can go as low as 50bps below the deposit facility for eligible counterparties (or -1%)
June 04	**Expansion of the size of PEPP**
	Additional EUR 600 bn to a total EUR 1.35 tn
	Extended horizon for the net purchases at least until the end of June 2021
	Reinvestment of the maturing principal payments until at least end of 2022

Analista:
Francisco Cavaco

Research:
research@big.pt

ECB Monetary Policy

The ECB's primary goal is to assure price stability. The ECB aims at an inflation rate of below, but close to, 2% over the medium term. The ECB also focus on the financial stability. Contrarily to the Fed or BoE, the BCE does not have a responsibility to assure economic growth and low unemployment; however, it may do it implicitly.

ECB committee meetings: The committee is the main decision-making body of the ECB; it is constituted by 6 members of the Executive Commission (including the President) and the 19 Monetary Union national central bank's governors. The committee has the following responsibilities:

- The committee is responsible for the decisions necessary for ECB and the Euro system performance,
- Define the monetary policy (and its execution) for the Euro Area, which means, deciding the monetary objectives, the interest rates levels and the constitution of the Euro system reserves;
- Currently the committee is also responsible for the approval of decisions related with the banking system supervision.

The committee meets normally twice a month, at the ECB headquarters in Frankfurt. Every 6 weeks, the committee analyses the evolution of monetary indicators and decides the correspondent monetary policy. In the other meetings, other issues are discussed. The monetary policy decision is then presented in a conference, where the ECB's President and Vice-President conduct it.

Voting system in the committee meetings: Euro Area countries are divided into two groups according to the size of their economies. Therefore, a ranking was created:

- First 5 countries: Germany, France, Italy, Spain and the Netherlands share 4 voting rights (through their CB's Governor);
- All other share 14 voting rights.

The national central banks' Governors take turns using the right to vote on a monthly rotation. However, ECB's Executive Board members hold permanent voting rights.

Source: Economia Nova

Dark blue: Euro area
Light blue: Currency pegged to euro
Green: Floating currency

Analista:
Francisco Cavaco

Research:
research@big.pt

ECB Key Interest Rates

Contrarily to other central banks, like the Federal Reserve, the ECB's monetary policy is performed in a different fashion. While the Fed has a floor monetary policy regime (in floor regimes the interest rate paid on excess reserves tends to be very close to the target rate), the ECB operates a corridor monetary policy regime. Under corridor regimes, the interest rate paid on reserves is set below the target interest rate and the interest rate charged on credit is set above the target.

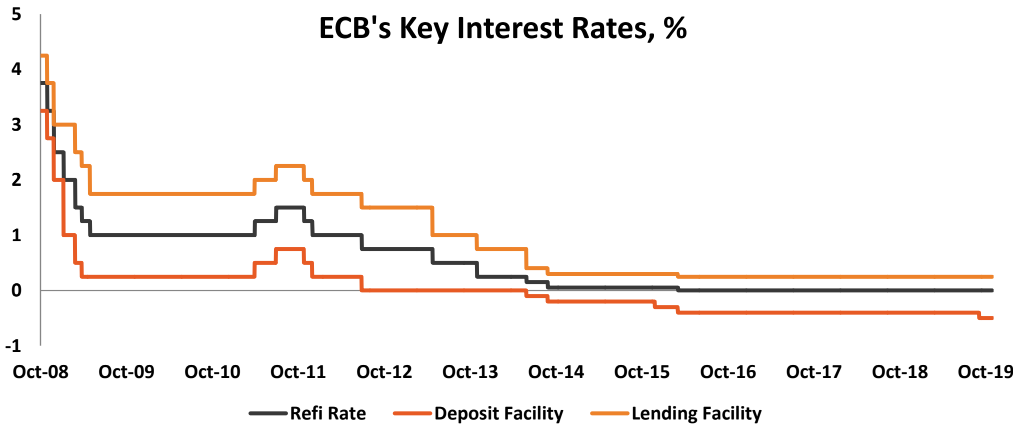
This forms a corridor that contains the market interest rate within. The corridor is constituted by 3 key interest rates: the main refinancing operations (MRO), the rate on the deposit facility and the rate on the marginal lending facility.

- **Main Refinancing Operations (MRO):** Also known as the Refi rate provides the bulk of liquidity to the banking system. It is the interest rate banks pay when they borrow money from the ECB for one week, or 3 months under the longer-term Refi. Banks have to provide collateral when borrowing.

- **Marginal lending facility rate (MLF):** It is the interest rate banks pay when they borrow from the ECB overnight. This rate works as the ceiling of the corridor, since no bank in need of liquidity will borrow from other bank paying more than they pay to obtain it at the ECB. To use this facility banks have to provide collateral.

- **Deposit facility rate (DFR):** This is the interest rate that banks receive for depositing reserves with the central bank (overnight). This works as the floor of the corridor, since no bank with excess liquidity will lend to other banks at a lower rate than they can obtain by making a deposit at the central bank. This rate has been negative since June 2014.

This way the ECB guarantees that the interbank interest rate (Euribor for longer term and Eonia for overnight) stays within the range of the corridor.



Source: ECB database

Analista:
Francisco Cavaco

Research:
research@big.pt

As part of the ECB unconventional monetary policy regime the central bank complemented the regular operations with two liquidity-providing long-term refinancing operations with a three-year maturity. More recently the ECB introduced the targeted longer-term refinancing operations (TLTROs) to provide financing to credit institutions for periods of up to four years.

Target Longer-term refinancing operations (TLTRO):

These loans are provided under attractive conditions to banks in order to stimulate the bank lending to the real economy and strengthen the transmission of monetary policy. They are target operations because the amount banks can borrow depends on their loans to non-financial corporations and households (excluding mortgage loans). The first series of TLTRO was announced on 5th of June 2014.

TLTRO: The programme was constituted by eight quarterly (fixed rate) operations that started in early September 2014, maturing in September 2018. Banks were able to borrow up to 7% of specific part of their eligible loans in the first 2 operations. In the other operations, the banks' ability to borrow would depend on the development of their lending activity comparing to a specific benchmark for each different bank.

TLTRO-II: The TLTRO-II was announced on the 10th of March 2016, with the same purpose of the first programme; to reinforce the accommodative monetary policy stance and stimulate lending to the economy. It constituted of four quarterly operations, starting in June 2016 and maturing in June 2020. This time, banks were able to borrow up to 30% of a specific their eligible loans for the four operations as a whole. As in the first programme, the rate of the operations was fixed to the applied main refinancing operations (MRO), however, this time the banks with excess eligible loans compared to their benchmark were given better funding conditions. These banks benefited of a lower interest rate on those operations. At maximum the rate could be equal to the difference between the MRO and the rate on the deposit facility at the moment of the operation.

TLTRO-III: On the 6th of June of 2019 the ECB announced the third series of TLTRO. The operations started in September 2019 and are expected to end in March 2021, with a maturity of 2 years each. Contrarily to previous programmes, the interest rate for each operation was set at 10 basis points above the average rate applied on the MROs over the life of the respective TLTRO. As before, banks can benefit better funding conditions if the number of eligible loans exceeds their benchmark by the 31th of March 2021, and can be as low as the average interest rate on the deposit facility plus 10 basis points (to achieve the maximum reduction the banks needs to exceed their benchmark number of eligible loans by 2.5%, below this limit, the reductions is linear to the rate of eligible loans over the benchmark). The operations cannot be repaid before maturity.

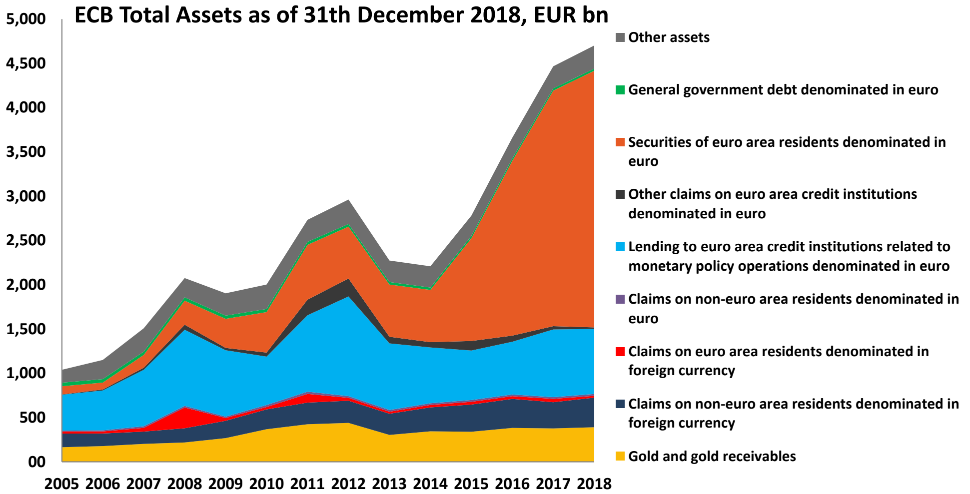
Analista:
Francisco Cavaco

Research:
research@big.pt

Asset Purchase Programmes

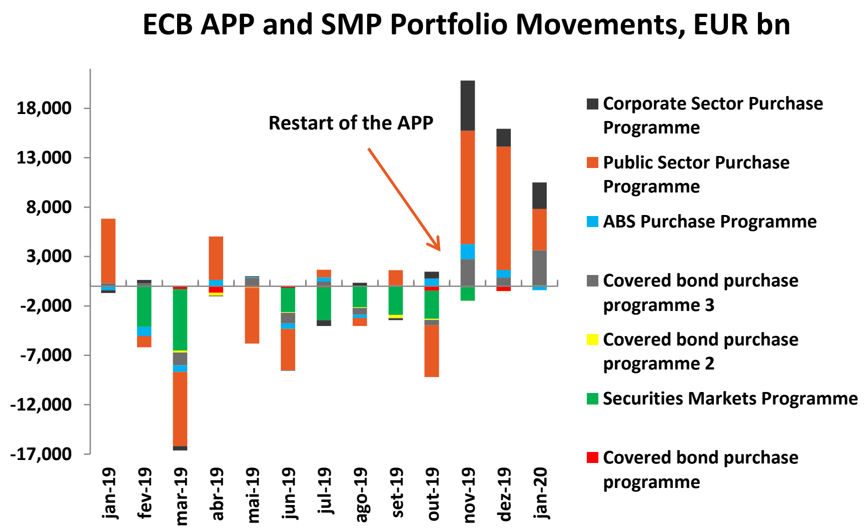
The APP constitutes a set of non-conventional monetary policy and also includes targeted longer-termed refinancing operations. This programme was initiated in mid-2014 until December 2018; however, the ECB stopped the programme for a period of time, where it only reinvested the redemptions at maturity, until it restarted the programme in November 2019. Currently the ECB conducts net purchases at a monthly pace of EUR 20 bn.

There are four different programmes, namely: Corporate sector purchase programme **(CSPP)**, Public sector purchase programme **(PSPP)**, Asset-backed securities purchase programme **(ABSPP)** and Covered bond purchase programme **(CBPP).**



Source: ECB database

It is visible that since 2014, with the start of the APP, the biggest chunk of the ECB's assets is the Securities of euro area residents denominated in euros. As of 24th of January 2014, the total amount of securities (due to unconventional monetary policy) held by the ECB is at EUR 2,650 bn, of which EUR 2,600 bn are from the APP.



Source: ECB database **Note:** Jan-20 is until 28th of Jan

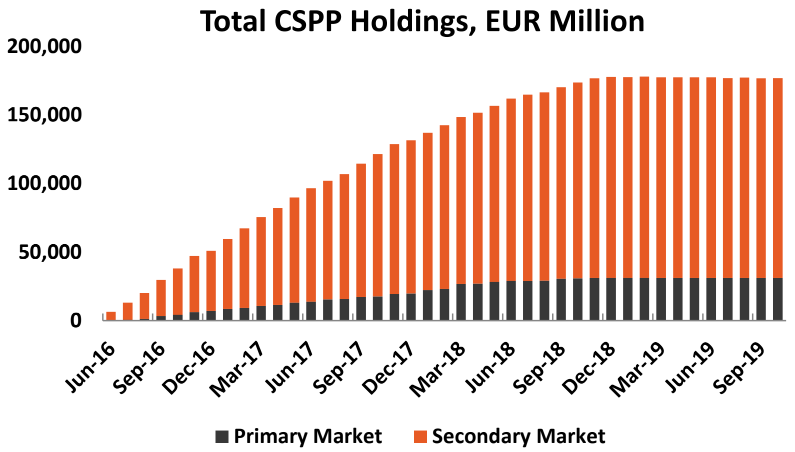
For the most part of 2019, the ECB only reinvested the redemptions from maturity of the assets held in the APP portfolio. Since the first of November 2019, the ECB reinitiated the programme and has been purchasing most of the securities through the PSPP, roughly 60% in November, 81% in December and 41% in January 2020. Lagarde intends to increase the ratio of green securities in the ECB's purchases; therefore we should see a greater increase in CSPP holdings in the future.

Analista:
Francisco Cavaco

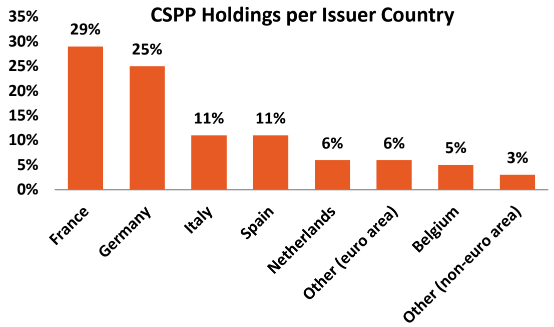
Research:
research@big.pt

Corporate Sector Purchase Programme (CSPP)

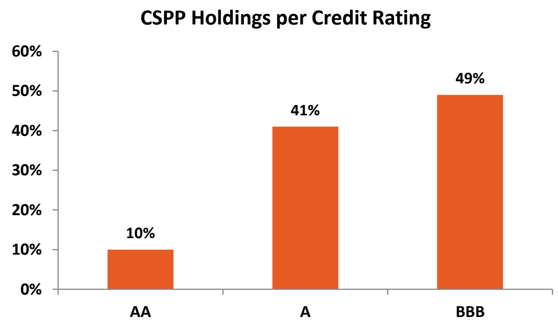
This programme initiated in June 8th of 2016, was finalized in December 19th of 2018 and was reinitiated in November 2019. It constitutes of net purchase of corporate sector bonds. During the period the Eurosystem stopped conducting the purchase of these assets, it continued to reinvest the principal payments from the securities held in the CSPP portfolio that reached maturity.



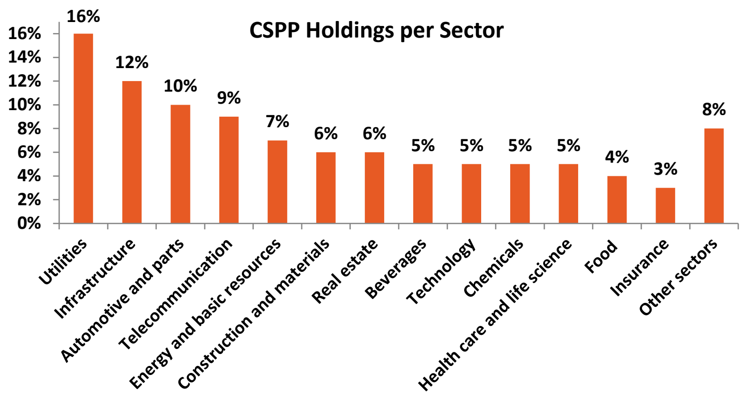
Source: ECB database



Source: ECB database



Source: ECB database



Source: ECB database

The CSPP holdings are mainly bought through the secondary market; however, the Primary market gained relevance in the last year of the programme. Currently, as of 24th of January 2020, the CSPP amounts to EUR 188 bn.

Analista:
Francisco Cavaco

Research:
research@big.pt

Public Sector Purchase Programme (PSPP)

This is the main APP programme, it took place between 9th of March 2015 and 19th of December 2018. The Eurosystem has been reinvesting the principal payments from maturing securities held in the PSPP portfolio. The securities held in the PSPP portfolio are the following:

- Nominal and inflation-linked central government bonds
- Bonds issued by recognized agencies, regional and local governments, international organizations and multilateral development banks located in the euro area

There are certain limits on the amount of sovereign debt the ECB can hold of a given country. There are two ratios that the ECB cannot exceed:

1. The ratio of the PSPP holdings of a certain country in relation to that country's capital key. It cannot exceed 33%.
2. The ratio of the PSPP holdings of a certain country in relation to that country's total emitted debt. The ECB cannot hold more than 33% of the country's total debt.

The Eurosystem's portfolio is composed mainly by government bonds (90%), while international organization's securities account for around 10%. The ECB reinitiated this programme in November first 2019, and the current amount held in the PSPP portfolio is EUR 2,113.3 bn.

2nd PSPP: In the previous programme, the ECB bought sovereign debt securities with a certain pattern. Half of the budget was always spent on German's debt, while the other half was divided in a more uniform way throughout the other Eurozone countries. If the ECB keeps the same pattern, it will spend around EUR 10 bn in German's public debt. However, the ECB can only buy up to EUR 137.6 bn of German's outstanding debt, in order to not exceed one of the ratios. This means that unless the ECB changes the ratio's levels or starts buying more debt from other countries, the programme will only last for a little more than one year.

Bn Euros	Capital Key	Total Debt	PSPP	Capital Key Ratio (Limit 33%)	Total Debt Ratio (Limit 33%)	New PSPP's buying limit	Relative Average of the previous PSPP purchases
Germany	**1,988**	**2069**	**518.6**	**26%**	**25%**	**137.6**	**50.0%**
Austria	220	285	58.2	26%	20%	14.4	1.7%
Belgium	274	460	73.4	27%	16%	16.9	2.6%
Chipre	16	21	0.7	4%	3%	4.7	-
Slovakia	87	44	11.7	13%	26%	2.9	0.7%
Slovenia	36	32	7.9	22%	25%	2.7	0.2%
Spain	**903**	**1173**	**260.8**	**29%**	**22%**	**37.1**	**5.2%**
Estonia	21	2	0.1	33%	3%	0.6	-
Finland	138	138	33.1	24%	24%	12.3	0.9%
France	**1,538**	**2315**	**420.3**	**27%**	**18%**	**87.2**	**12.0%**
Greece	187	335	0.0	0%	0%	61.8	0.0%
Ireland	127	206	30.1	24%	15%	11.9	0.8%
Italy	**1,278**	**2380**	**365.4**	**29%**	**15%**	**56.3**	**9.6%**
Latvia	30	11	2.1	7%	20%	1.4	0.1%
Lithuania	44	15	3.2	7%	21%	1.9	0.1%
Luxembourg	25	13	2.6	11%	21%	1.5	0.2%
Malta	8	6	1.2	15%	20%	0.7	0.1%
Netherlands	**440**	**406**	**115.2**	**26%**	**28%**	**18.6**	**6.1%**
Portugal	**177**	**249**	**36.8**	**21%**	**15%**	**21.6**	**1.3%**

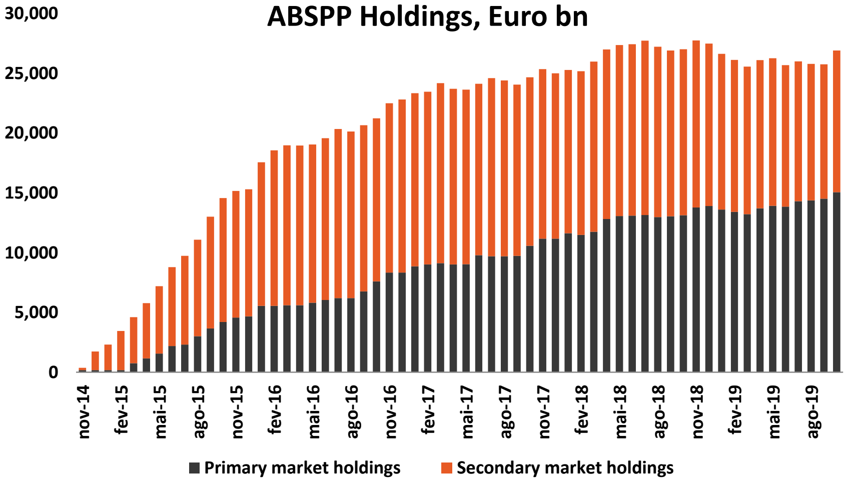
Source: ECB database, BIG Research

Analista:
Francisco Cavaco

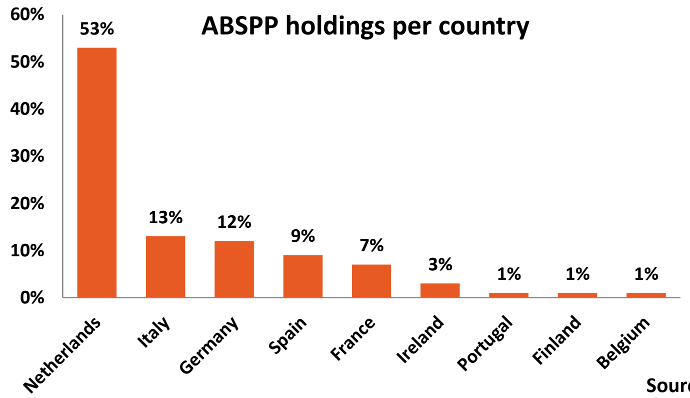
Research:
research@big.pt

Asset-backed Securities Purchase Programme (ABSPP)

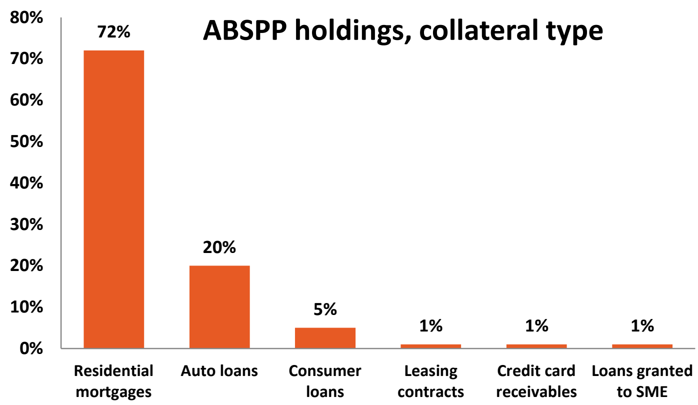
The ECB ran this programme from 21 November 2014 until 19th of December 2018 and returned to conduct purchases under ABSPP after 1st of November 2019. The programme constitutes in the net purchase of Asset-backed securities. During the interval of time that the ECB did not conduct ABSPP, it kept reinvesting the redemptions from those maturities. Currently as of 24th of January 2020, the ABSPP total holdings amounts to EUR 28.4 bn.



Source: ECB database



Source: ECB database



Source: ECB database

Analista:
Francisco Cavaco

Research:
research@big.pt

Covered Bond Purchase Programme (CBPP)

This programme has been done in three different occasions.

CBPP Holdings	
EUR mi	2360
Date	15 November 2019

CBPP:

Started in 2nd of July of 2009 and ended on 30th of June 2010 when it reached the nominal amount of EUR 60 bn.

CBPP2 Holdings	
EUR mi	2963
Date	15 November 2019

CBPP2:

The ECB initiated the second program in November 2011 and ended it on 31th of October 2012 when it reached the nominal amount of EUR 16.4 bn.

CBPP2 Holdings		
Market	Primary	Secondary
EUR mi	6015	10375
Share	36,7%	63,3%
Date	31 October 2012	

CBPP3 Holdings	
EUR mi	263101
Date	15 November 2019

CBPP3:

This programme lasted around 4 years, from 20th of October 2014 until 19th of December 2018 and has been reinitiated since the 1st of November 2019. The ECB kept reinvesting the principal payments from maturing securities during the interruption period.

CBPP3 Holdings		
Market	Primary	Secondary
EUR mi	98497	162258
Share	37.77%	62.23%
Date	31 October 2019	

Securities Markets Programme (SMP)

SMP Holdings	
EUR bn	47.9
Date	24 January 2020

The Securities Markets Programme (SMP) was announced by the Governing Council on the 10th of May 2010. This programme was intended to ensure liquidity in some malfunctioning segments of the debt securities market and to restore the functioning of the monetary policy transmission mechanisms.

Issuer Country	Nominal amount, EUR bn	Average remaining maturity, years
Ireland	3.1	1.6
Greece	3.5	3.2
Spain	10.7	1.1
Italy	27.4	1.2
Portugal	4	1
Total	48.5	1.3

It is distinct from the Asset Purchase Programmes because the latter are intended to provide additional monetary stimulus to the economy, through a boost in money supply, while the SMP is designed to be neutral with respect to the supply of money. Since the operations (under SMP) are sterilized, they do not change central bank liquidity.

The programme was terminated on the 6th of September 2012, for the ECB to then initiate the outright monetary transactions. Due to the sterilization component of the programme, the ECB re-absorbed the liquidity provided through the SMP by means of weekly liquidity-absorbing operations until mid-2014.

Analista:
Francisco Cavaco

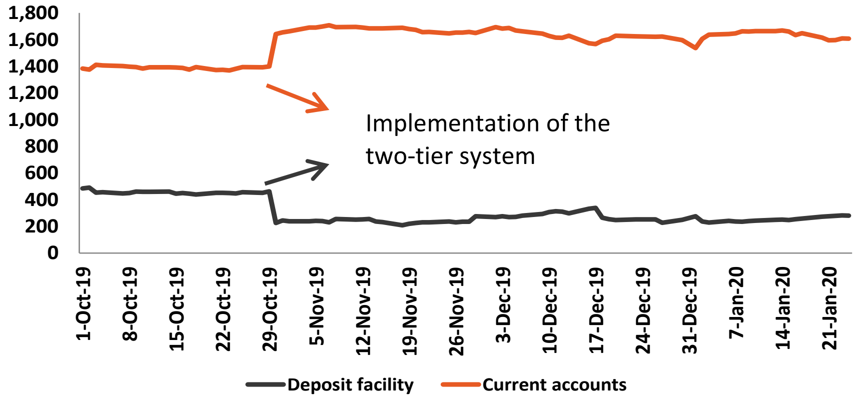
Research:
research@big.pt

Two-Tier System

The two-tier system was implemented by the ECB in the monetary policy meeting of the 12 September 2019; however, its implementation was only after 30 October 2019. This system exempts credit institutions from remunerating part of their reserves at negative interest rates at the deposit facility. Therefore, part of the reserves in excess of the minimum requirement are exempted due to the new remuneration structure with two distinct rates applicable to different parts of the excess reserves.

This new mechanism is intended to support the transmission of monetary policy through banks, while preserving the effect of negative rates in accommodating the monetary policy stance. The banks required reserves held in reserve accounts with the Eurosystem receive 0% interest rate, however, under the two-tier system, some excess reserves over the maintenance period held in reserve accounts with the Eurosystem also receive 0% interest rate, instead of paying the deposit facility rate (currently -0.5%). The excess reserves that are exempt from DFR, the “allowance”, are determined as a multiple of that institution’s reserve requirements, currently the multiplier is set at six, and the remuneration of the allowance is set at 0%.

Before and after the two-tier system, EUR bn



Source: ECB database

The average amount deposited at the deposit facility during the previous month to the implementation of the system was EUR 456 bn. The average one moth past the implementation is EUR 237 bn. The difference is EUR 218 bn, which provides an average saving of around EUR 1.09 bn per year to the banking system (assuming the current rate of -0.5% at the deposit facility).

Arbitrage on Italian Banks:

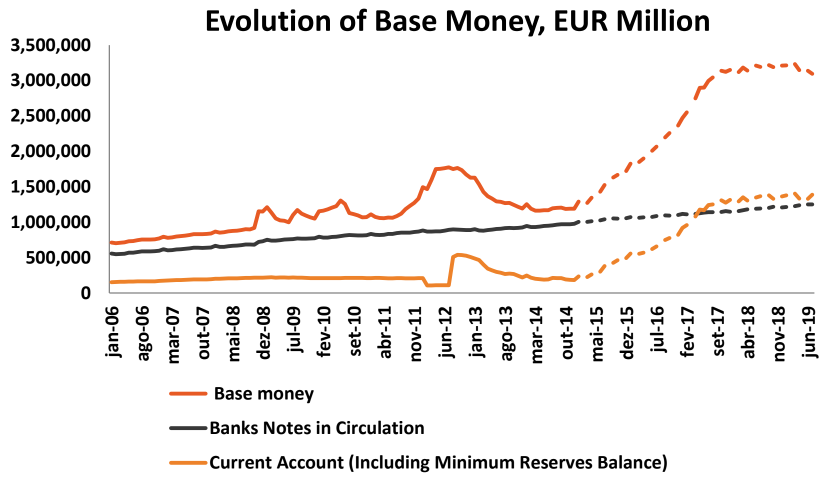
Since the implementation of the system, some Italian banks have taken advantage in order to profit from arbitrage. Given that some Italian banks have low levels of reserves, they still have room to deposit reserves at the central bank without surpassing the “allowance” limit. Therefore, these banks have been borrowing in the interbank money market at negative rates (currently the Euribor and Eonia rates are negative for all maturities) to then deposit that liquidity in the reserve account with the Eurosystem, paying 0% interest rate.

Analista:
Francisco Cavaco

Research:
research@big.pt

Evolution of Base Money

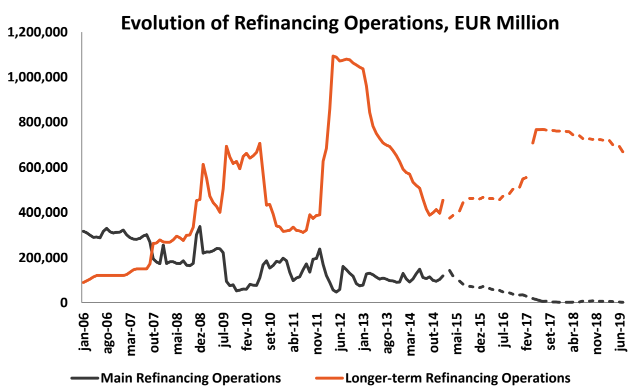
Looking at the following graph, we can see that there has been a significant change in the composition of the base money. In normal periods, when the interbank markets are functioning well, the Eurosystem works in the best allocation of the central bank reserves between the Eurozone banks, with no liquidity problems in the banking system. Therefore, the aggregate demand for central bank reserves is supplied by banks with excess reserves, that is why we can see a smooth evolution of the base money in the pre-crisis period. The developments in the base money were largely a reflection of changes in currency in circulation and required central bank reserves.

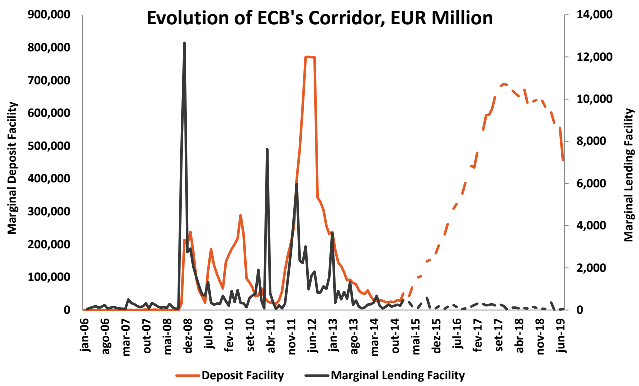


Source: ECB database

After the crisis, base money started growing disproportionally to the currency in circulation; in fact it mirrored the evolution of broad money.

The volume of monetary policy operations increased significantly after 2007. In a period of malfunctioning in the money market where banks were facing liquidity concerns, banks started injecting central bank reserves at an excessive rate. Adding to that, in 2009 the ECB launched the first programme of outright purchase of covered bonds (CBPP1), which resulted in an increase in excess central bank liquidity. In 2011 and 2012 the two longer-term refinancing operations (LTROs) with a three year maturity and also the CBPP2 resulted once again in excessive liquidity for the banking system. This explains the sharp increase in base money.





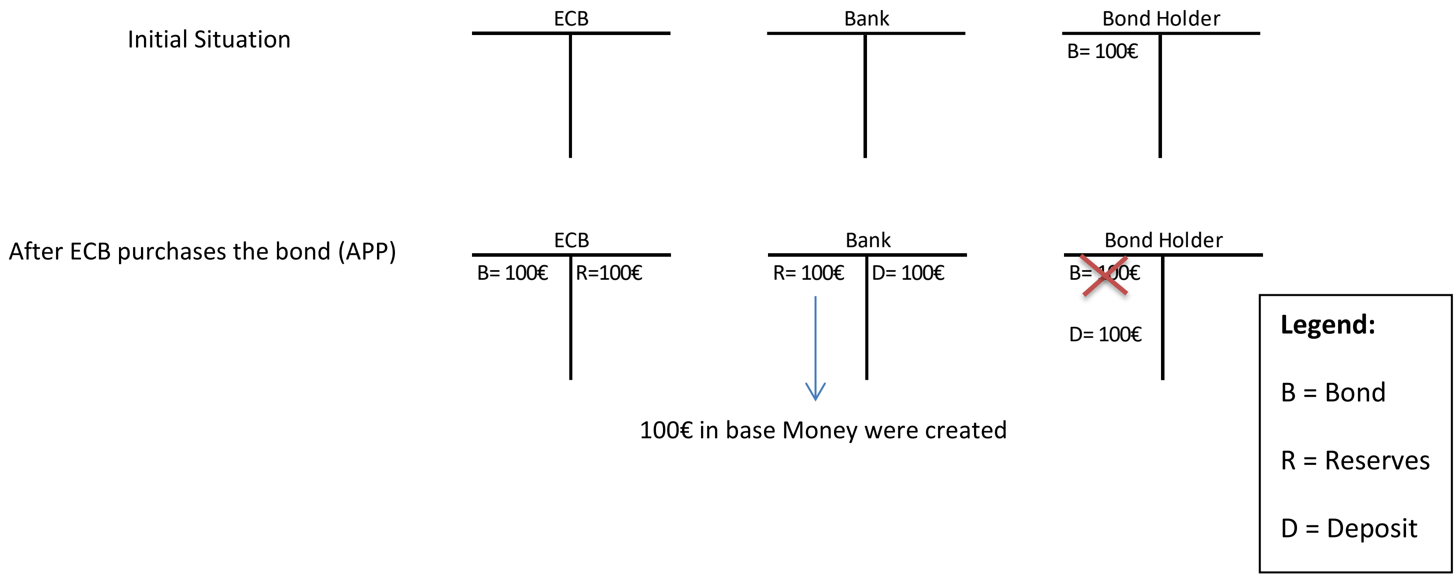
Source: ECB database

Analista:
Francisco Cavaco

Research:
research@big.pt

Banks have preferred to finance themselves through LTRO opposed to MRO. During the crisis banks used the lending facility to guarantee short-term liquidity; nowadays they are able to wait for the financing through the refinancing operations. Therefore, the MLF has not been very used by banks, while the Refi operations gained a tremendous importance. The increase in base money results primarily from the huge increase in the amount of money deposited at the deposit facility.

Something that boosted this increase in deposits was the Asset Purchase Programme (APP), under the APP; the central bank injects reserves in banks in order to purchase the bonds through the secondary market. This is because the banks are the only entities that hold depo sit accounts with the central bank (apart from the central governments), so they work as intermediaries between the ECB and the bond holder. Therefore, purchases conducted under APP results in a direct increase in base money. We can expect a further increase in base money as the ECB launched a new APP, starting November first.



Analista:
Francisco Cavaco

Research:
research@big.pt

DISCLOSURES

- Banco de Investimento Global, S.A. is an institution registered on and regulated by the Bank of Portugal and by the Portuguese Securities Market Commission, the two main entities that regulate financial activities in Portugal.

- BiG has a Code of Conduct, applicable to all its employees that carry out activities as financial analysts, with the aim to ensure the continuation of the accuracy, competence and excellence that characterize its institutional image. This document is available for external consultation, if required.

- The analysts in BiG's Research Team do not, and will not, receive any kind of compensation in the scope of the regular carrying out of its recommendations, which reflect strictly personal opinions.

- There isn't a predefined coverage policy in regards to the selection of stocks that are subject to investment recommendations.

- Clarification of the qualitative terms implied in the recommendations:
  - Buy, expected absolute return above 15%;
  - Accumulate, expected absolute return between +5% and +15%;
  - Hold/Neutral, expected absolute return between -5% and +5%;
  - Reduce, expected absolute return between -5% and -15%;
  - Sell, expected absolute return below -15%;

The investment framework aforementioned is merely indicative and not globally strict.

- Unless otherwise specified, the price-targets of the investment recommendations issued by BiG's Research Team are valid for 12 months.

- The update of the investment recommendations models and respective price-targets will occur, usually, in a period of 6 to 12 months.

- For more information please see our Disclaimer document online in this link, https://big.pt/InformacaoMercados/AnalisesBig/Outros , or please contact research@big.pt.

DISCLAIMER

This document has been prepared exclusively for informative purposes, and is based on publicly available information, retrieved from sources deemed trustworthy. BiG does not assume any responsibility for the full correction of the information provided, and the information here provided should not be interpreted as an indicator that any results will be achieved. We emphasize that the projected results are susceptible to alterations due to changes in the assumptions that have served as basis to the information here provided. We forewarn that the previous performance of a security is not a guarantee of identical performance in the future. Changes in exchange rates of securities denominated in a currency different from that of the investor may lead to a negative impact on the value, price or return of such securities. BiG may provide additional information, if so is requested. This document is not a sale proposal, nor a purchase solicitation for the subscription of any securities.
BiG ensures independence in investment recommendations under the terms of points 7.23 and 7.24 of BiG's Conflict of Interest Management Policy. BiG continuously monitors the recommendations issued by analysts under the terms of the Code of Conduct and Personal Transactions Policy.

Analista:
Francisco Cavaco

Research:
research@big.pt

This document has been prepared exclusively for informative purposes, and is based on publicly available information, retrieved from sources deemed trustworthy. BiG does not assume any responsibility for the full correction of the information provided, and the information here provided should not be interpreted as an indicator that any results will be achieved. We emphasize that the projected results are susceptible to alterations due to changes in the assumptions that have served as basis to the information here provided. We forewarn that the previous performance of a security is not a guarantee of identical performance in the future. Changes in exchange rates of securities denominated in a currency different from that of the investor may lead to a negative impact on the value, price or return of such securities. BiG may provide additional information, if so is requested. This document is not a sale proposal, nor a purchase solicitation for the subscription of any securities.
BiG ensures independence in investment recommendations under the terms of points 7.23 and 7.24 of BiG's Conflict of Interest Management Policy. BiG continuously monitors the recommendations issued by analysts under the terms of the Code of Conduct and Personal Transactions Policy..