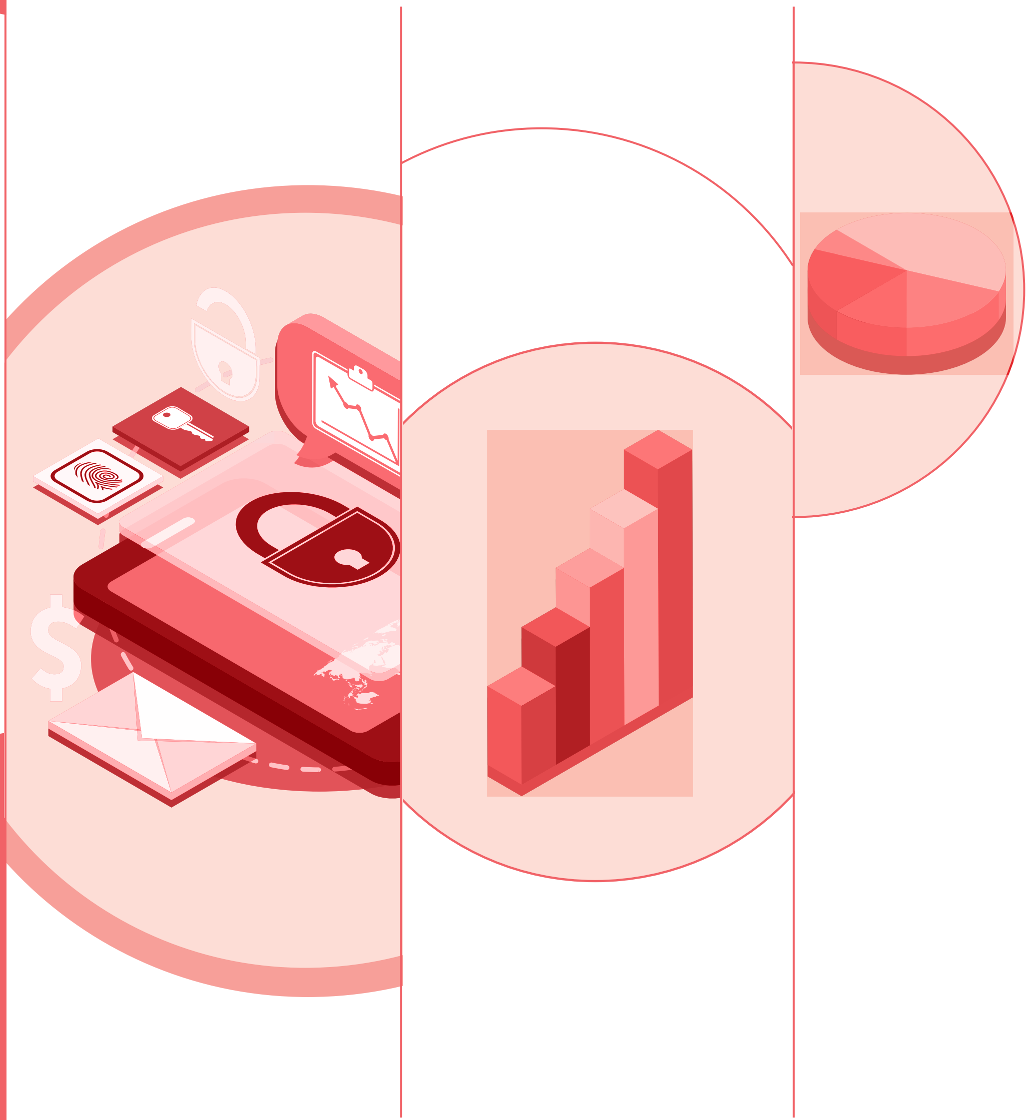
Evolution of the International Economy

This chapter describes the dynamics of the evolution of the world economy in 2022, as well as the economies of Timor-Leste's main regional and trading partners, together with the most relevant trends for our economy, concerning the world financial and commodity markets.

Next, this chapter also analyzes the main transmission channels of external developments and possible impacts on our domestic economy, focusing on the relevant developments that occurred in 2022 and the economic projections for the years 2023 and 2024. This analysis is mainly based on the most recent estimates and outlooks of the International Monetary Fund (IMF), as contained in its "World Economic Outlook Update", released in January 2023 and October 2022.

CHAPTER 01



In terms of the most relevant developments described in this chapter, the following are highlighted:

- The year 2022 was marked by a slowdown in the world economy, although showing a positive growth rate. The world economy grew 3.4% in 2022, after having shown a remarkable 6% growth in 2021. This deceleration dynamic was common to the groups of developed and emerging economies.

- In terms of projections for 2023 and 2024, the IMF foresees a deceleration in economic growth until 2023 and an acceleration in economic activity starting in 2024 for the global economy and for developed economies. However, it notes that emerging economies will experience continued increases in their economic growth rates as early as 2023. Specifically, the IMF projects the world economy to grow 2.9% in 2023 and 3.1% in 2024. This projected slowdown in 2023 and 2024 has mainly to do with the recorded uncertainties of the geopolitical and geoeconomic risks caused by the war in Ukraine, as well as the rising inflation rates recorded during 2022.

- The IMF, and other international institutions, have considered that the growing inflationary pressures seen worldwide generate an increased risk and may lead to an even more pronounced cooling of economic activity. The price levels verified in 2022 are even higher than the peaks already registered in 2021 and that signal the potential risks between a more prudent monetary and fiscal policy management to cope with the price level growth, while price increases may impact, without adequate public policies, on lower income populations.

- On the other hand, despite the decrease in risks associated with COVID-19, the spread of cases in countries such as China, whose authorities began to lift movement restrictions more pronouncedly as of 2022, may lead to an exponential growth of cases and, with this, present greater risks of a slowdown in global economic activity, through a negative impact on the supply side aggravating the current inflationary pressures recorded globally.

- Inflationary pressures registered an even more marked increase in 2022, when compared to 2021. This more pronounced dynamic was felt especially in the economies of the USA, Euro Zone and ASEAN, to record values in recent decades. In these 3 blocks, annual inflation reached values well above 2%, which tend to be the reference of most central banks, with average inflation in the USA and Euro-Zone standing at 8.1% and 9.2% in 2022.

- However, the IMF foresees a gradual convergence of average inflation rates only in 2024, with a generalized deceleration of the inflation rate to the 2% level, a value admittedly desirable in the medium term, in practically all world economies, foreseeing that the sharp increase in prices felt in 2021 and 2022 as being cyclical. This deceleration projected by the IMF is based on the fact that it is understood that the restrictive policies of monetary policy, coupled with a containment of fiscal policy, on the other hand, will produce the necessary effects during 2023 and, with greater impact, in 2024.

- The Asian economies once again recorded an evolution of economic activity more accentuated than the other global economies in 2022, despite the inflationary pressures felt worldwide, demonstrating a high degree of economic resilience. In the short term, namely 2023 and 2024, the IMF continues to distinguish the Asian economic bloc in relation to the other economies, translating into a substantial and generalized recovery of economic activity in the region, foreseeing that the bloc will continue to lead the world in terms of economic growth.

- In the money and bond markets, the highlight was the generalized rise in interest rates, even more pronounced in 2022 compared to 2021, in practically all geographies and maturities, especially in the US and the EU, in line with the worsening of inflationary pressures and the growing monetary policies of economic contraction aimed at moderating aggregate demand.

- In the foreign exchange markets, the dollar continued to appreciate in 2022, a trend that continued in 2021, mainly explained by the interest rate differential in the US against other economies. Similarly to 2021, and regarding the Asian bloc, there was a generalized appreciation of the currencies of the Asian economies against the dollar, allowing these economies a relative exchange rate stability.

- On the other hand, while the world's commodity markets continued to increase their prices in 2022 to levels even higher than those already recorded in 2021, in 2022 the equity markets ended up recording some losses as a result of the reduction of stimuli by the world's monetary authorities.

- The performance of the Petroleum Fund's investments registered a loss in 2022, reversing the trend seen in 2021 and 2020, a performance that was due to the steeper rise in interest rates in 2022 and the devaluation of equity markets.

1.1 Major World Economies

1.1.1. Economic Growth in Major Economies

After 2021, a year in which the Gross Domestic Product (GDP) of the world economy recovered quite significantly, and in which both developed and emerging economies showed similar trajectories in their growth rates, largely due to the lifting of restrictions on citizen mobility and the consequent resumption of economic and social activities prior to the emergence of the pandemic caused by COVID-19, the growth rates expected in 2022 are now on a decelerating path.

> Expected growth rates in 2022 are now on a decelerating path.

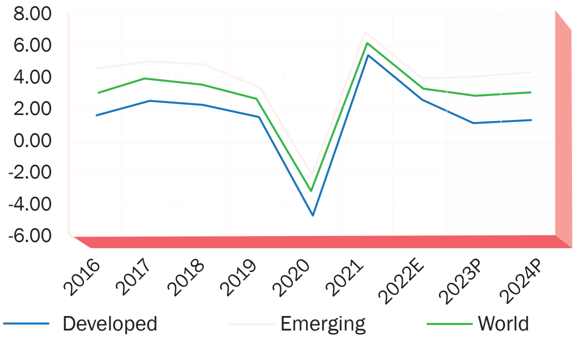
This phenomenon of deceleration in world GDP growth rates is expected. In fact, and considering the evolution of the world economy in the pre-pandemic period, the growth rates expected for 2022 are in line with the observed history. More specifically, like the average of world GDP growth rates between 2016 and 2019, a world growth rate of 3.4% is expected in 2022 (2.1% and 4.4% for developed and emerging economies, respectively).

> The world economy is expected to have grown in 2022 by 3.4% compared to 2021.

However, it should be emphasized that the observed slowdown in world economic growth rates in 2022, and especially for 2023 and 2024, should be contextualized in light of two important economic political phenomena that occurred in 2022, namely, the return of inflationary pressures and the armed conflict in Ukraine. The fight against rising prices cautioned by monetary policy authorities by reducing monetary stimulus to economies, as well as the uncertainty generated by the armed and diplomatic tension between the pro-Ukraine and pro-Russia bloc, may lead to an even more significant reduction in global aggregate demand, with more pronounced implications for the reduction of global economic development than expected.

Chart 1.1

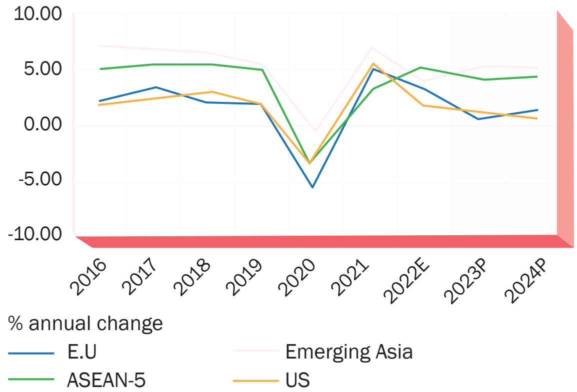
GDP growth - 3 main block-% change year



Source: IMF WEO

Chart 1.2

GDP growth - selected regions - % change year



Source: IMF WEO

In 2022 emerging economies grow 1.2 p.p. more than developed economies

When we analyze the expected growth figures for 2022, both for the main world economic blocks (Figure 1.1), as well as for some selected groups of economies that are relevant for Timor-Leste's economy (Figure 1.2), we cannot assess the same synchronism of the evolution of economic activity seen in 2021. While there is a remarkable growth rate for emerging economies (3.9%), the GDP growth rate for the block of developed economies is more modest (2.7%). The difference in the growth rates of the two blocks, rounding 1.2 p.p., is of particular importance because it reflects a phenomenon of convergence of the lower income economies with those of higher income, with all that this positive convergence phenomenon entails from the economic and social point of view.

ASEAN-5 economies grew 5.2% on average.

This heterogeneity regarding economic synchronization between developed and emerging economies is even more evident when analyzed in regional terms (Figure 1.2). Based on IMF forecasts, while the emerging economies of Asia grow by 4.3% and the economies belonging to the ASEAN-5 group register an average GDP growth rate of around 5.2% in 2022, the GDP grows, on average, by 3.7% in the economies of the European Union (EU) and 2.0% in the United States of America (USA). From these forecasts, especially for those made for the years 2023 and 2024, the phenomenon of economic convergence is increasing, which is of extreme importance for the Asian economies. In these years 2023 and 2024, and according to IMF forecasts, the average difference in the GDP growth rates of the Asian economies is about 3 p.p. higher than those of the EU and US economies.

On the other hand, and when analyzing the economic performance of each of the regional economies, it is possible to conclude that only the ASEAN-5 economies register a positive variation in the GDP growth rate, accelerating from an annual GDP growth rate of 3.4% in 2021 to a rate of 5.2% in 2022. On the contrary, the economies belonging to the group of emerging Asian economies register a reduction of 2.9 p.p. of their GDP growth rates between 2021 and 2022, from 7.2% to 4.3%, while the North American economy registers a slowdown in its growth rate in the order of 2.7 p.p. in the same period, from 5.7% in 2021 to 2.0% in 2022. Finally, the economies of the European Union also register a deceleration in their economic growth rates, from 5.4% in 2021 to 3.7%, which translates into a reduction in their economic performance between the two years of 1.7 p.p. In comparative terms, the European economies recorded a less abrupt reduction in growth rates when compared with the US economy, largely due to the more pronounced program of reduction of monetary stimuli in the US when compared with the European reality and, on the other hand, these policies had a more significant impact in the US than the economic effects that the war in Ukraine had on the European economies.

While the economies of the Union recorded an economic slowdown in 2022.

Figures 1.3.1 and 1.3.2 also present the comparative economic performance of the 4 largest world economies, which enables us to see that the Chinese economy had a substantial reduction in its growth rate in 2022 - even more pronounced than the growth rate expected by the IMF in 2021 of the Chinese economy for 2022. This more pronounced deceleration in 2022 of the Chinese GDP growth rate, when compared with previous forecasts, is mainly due to the resurgence of cases related to the COVID-19 pandemic, as well as the attempt by the Chinese political authorities to impose restrictions on the freedom of movement of the Chinese population due to the pandemic effects, a reality already outdated in the European context.

Of the world's largest economies, the Chinese economy was the one that registered the greatest deceleration in the GDP growth rate.

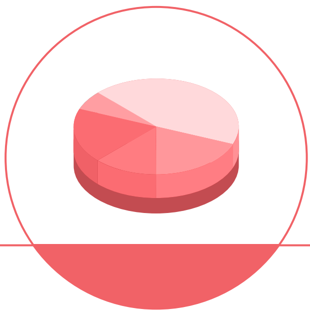
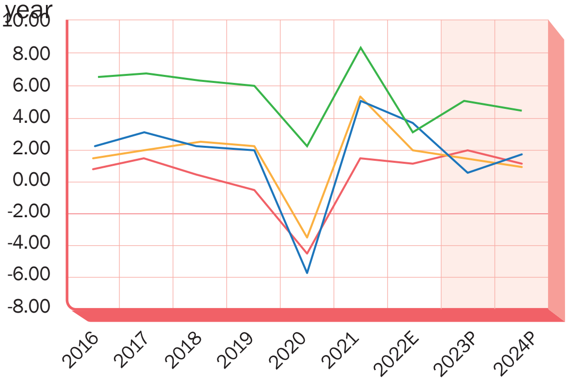


Chart 1.3.1

GDP growth - 4 largest economies-% change year



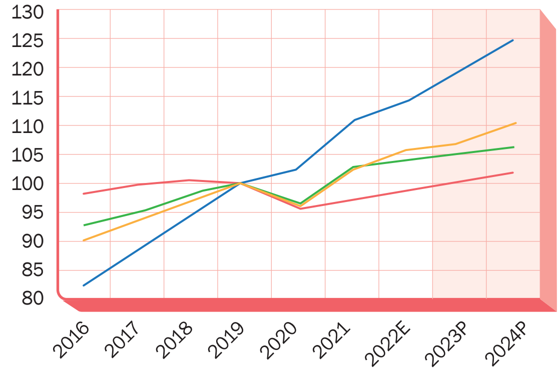
% annual change

E.U
Japan
China
US

Source: IMF WEO

Chart 1.3.2

GDP growth in Levels - 4 largest economies



2019 = 100

China
Japan
US
E.U

Source: IMF WEO

The slowdown in GDP recorded in 2022 is largely due to the more restrictive economic policy measures.

Regarding the forecasts for 2023 and 2024, from the data projected for these years, it can be concluded that the IMF an inflection in the dynamics of growth rates in 2023, forecasting that the growth rate of the world economy will accelerate in 2024 to 3.1% compared to that expected for 2023, at 2.9%. This economic acceleration for 2024 is due, according to the forecasts made by the IMF, to a greater contribution from the acceleration of the GDP growth rates of the developed economies, when compared to the emerging economies. This expectation, on the part of the IMF, of a greater contribution from the developed economies in 2024 is justified, to a large extent, by the fact that the IMF believes that the peak of the inflation rate in the developed economies has already occurred in 2022 and that, even if some tighter monetary and fiscal policies are maintained in order to force a slowdown in the rise of the general price level, the intensity of these policies may come to relax as from the 2nd half of 2023, 1st half of 2024.

However, it is important to note the constant warnings that the IMF and other international institutions have given about inflationary pressures worldwide, requiring an effective strategy to reduce inflation in order to combat the anchoring of inflation expectations. Additionally, one should point out the significant risks to the world economy that the war in Ukraine - a country that is one of the largest world producers of cereals - and a potential uncontrolled pandemic situation in China - imposing an expected policy of control over the movement of people and with unpredictable effects on the production of goods and essential services to the rest of the world - may give rise to in the near future.

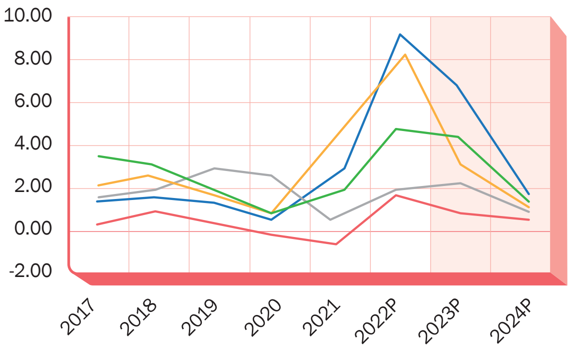
1.1.2. The Evolution of Inflation in Major Economies

The following graphs show the evolution of average inflation rates and price levels in 5 of the world's major economies.

In 2022 the inflation rate was significantly high, especially in the context of Western economies.

Chart 1.4.1

Inflation rates
– 5 major economies - % change year)



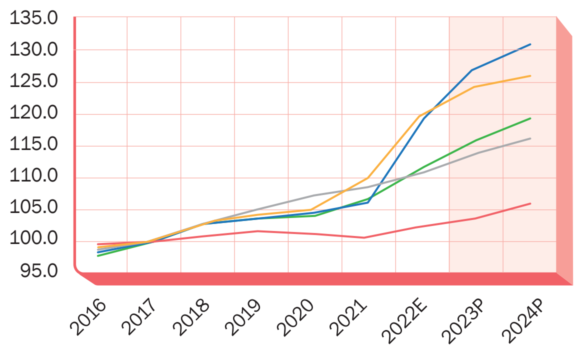
% annual change

E.U — Japan — China
ASEAN-5 — US

Source: IMF WEO

Chart 1.4.2

Price levels – 5 major economies



E.U — Japan — China
ASEAN-5 — US

Source: IMF WEO

Through graphs 1.4.1 and 1.4.2 we can conclude that despite the fact that in 2021 it was already considered that there had been a significant increase in the price level, in 2022 the inflation rate was significantly higher, particularly in the economies of the European Union and the USA. With lower values for the inflation rate than in the U.S. and the U.S., we find the ASEAN-5 economies. More specifically, and according to IMF forecasts, the EU economies registered in 2022 an inflation rate of 9.2% compared to an inflation rate of 2.9% in 2021. The USA, on the other hand, registered in 2022 an inflation rate of 8.1% versus a registered value of 4.7%. In turn, the ASEAN-5 economies saw an acceleration in the growth of the general price level from 2.0% in 2022 to 4.7% in 2023. On the other hand, and more modestly, we conclude about a slight acceleration of the inflation rate in China (from 0.9%, in 2021 to 2.2% in 2022) and Japan (-0.2% in 2022 to 2.0% in 2023).

In particular, in 2022 the inflation rate in the US was 8.1% while the euro-zone reported a historic inflation rate of 9.2%.

While the ASEAN-5 economies recorded an inflation rate close to the reference value

Therefore, we can see that although in 2021 there has already been an acceleration in the evolution of prices compared to 2020, already in 2021, the economies of the EU and USA recorded values above the reference value of 2%. The difference between this reference value and the even more significant values expected for 2022 increased for these two economies, and the ASEAN-5 economies have already registered a value for their inflation rate well above the 2.0% reference value. These dynamics in the evolution of prices, especially in developed economies are extremely relevant, since the inflation rates seen in 2021 and, especially, in 2022, were just a remnant of the last decades of the 20th century in these two economic blocks.

In addition to the war between Ukraine and Russia, an overly expansionary monetary policy in the recent past will have contributed to the inflation rates seen in 2022.

The inflation rates seen in these two economic blocks, but also somewhat at the global level, can be explained by several factors. First, one can list successive expansionary policies in the years preceding the pandemic crisis of COVID-19 that took place globally. Secondly, the lifting of restrictions on freedom of movement that took place in 2021 allowed aggregate demand to revive, causing additional pressure on the price level. To this factor we can also point out that many economies launched income protection programs in 2020 and 2021 for workers who had to stay in their homes without being able to commute to work. In short, there has not been a convergence between incomes and production, thus causing a more pronounced recovery in demand. Third, the fact that some economies, particularly Asian ones such as China, stopped their production processes during the years 2020 and 2021 due to the confinements carried out, led to adverse shocks in global production chains, with significant reductions in production and increased costs of intermediate goods and services needed to produce final goods. In parallel, and lastly, the war in Ukraine and the political and diplomatic consequences arising from this event, led to an upward movement in food prices - remember that Russia and Ukraine are among the world's largest cereal producers - as well as to an increase in energy prices. This is because the set of economic and diplomatic sanctions by Western economies on the Russian economy, as well as the reduction of fossil fuel production by this economy - Russia is the world's third largest oil producer and the second largest natural gas producer - have caused some apprehension in international markets leading to an increase in oil and natural gas prices.

Bearing in mind this generalized increase in prices, as well as its acceleration in 2022 in relation to 2021, the budgetary authorities, but especially the monetary authorities, have developed policies to contain the evolution of price levels, namely reducing or even ending monetary stimulus programs, with an increasing verification of key interest rates of central banks. However, and given that in a first stage, the monetary authorities, especially of the US and EU economies, have developed monetary policies in order to reduce the differential between deposit and lending interest rates to stimulate the reduction of aggregate demand and the consequent normalization of the evolution of the price level.

Monetary policy authorities have made efforts to contain rising inflation rates.

Regarding inflation expectations, the IMF now foresees for 2023 and 2024 a convergence of inflation rates, however, this convergence will be more substantive in 2024. However, and even in 2024, inflation rate values will register values slightly above 2%. In short, according to the values projected by the IMF, this institution admits that the values verified in 2021 and 2022 do not represent a structural phenomenon, but rather a temporary one, and so the inflation rate in the USA and in the EU should reduce from 3.5% and 6.8%, respectively, to 2.2% and 3.0% in 2024, respectively. In parallel, the economies belonging to the ASEAN-5 economic bloc, China and Japan will experience the same downward trend between 2023 and 2024. Specifically, and from 2023 to 2024, the economies belonging to the ASEAN-5 will see their inflation rate reduce from 4.4% to 2.8%, China's inflation rate will fall from 2.2% to 1.9% and the inflation rate of the Japanese economy will drop by about 0.4 p.p., from 1.4% in 2023 to 1.0% in 2024.

Although the inflation rates projected for 2023 are high, price increases are believed to slow down.

1.1.3 Commodity Markets

Unlike what happened in 2021 compared to 2020, where there were some exceptions in the rise in commodity prices, the year 2022 was marked by a generalized rise in international prices of the main world commodities, as shown in figures 1.5.1. and 1.5.2. However, and compared to the period between 2020 and 2021, where oil was the commodity with the highest price increase (about 49%), we can see that, in general, food commodities were those that registered a more pronounced evolution in their prices.

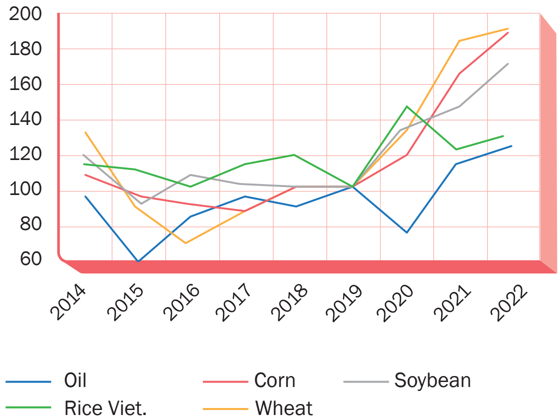
In 2021, oil was the commodity that registered a 49% percentage increase.

When analyzing the price evolution of each commodity individually, between 2021 and 2022, we see that, in decreasing terms, we have soybean with an increase of 16.5%, corn with an increase of 14.3%, rice-viet with an appreciation of 7.4%, oil with an increase of 8.9% and, finally, wheat with an increase of 2.5%.

However, food prices also registered significant increases.

Chart 1.5.1

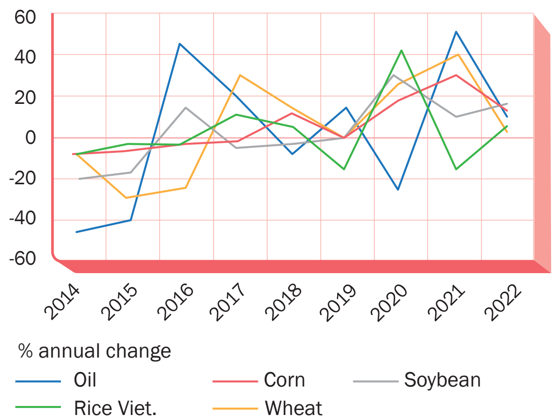
Major commodity prices - levels



Source: World Bank

Chart 1.5.2

Major commodity prices - % change



Source: World Bank

Food commodities registered price increases of more than 20% between 2019 and 2022.

It should be noted, however, that although wheat is the “commodity” with the lowest growth between 2021 and 2022, it is the one with the highest growth between 2019 and 2022, with an accumulated appreciation of 83.2%, followed by corn (81%), soybeans (68.5%), rice-viet (28.1%) and, finally, oil (22.9%). From this we can conclude that the prices of food goods are on a strongly upward trajectory, which may jeopardize some lower income economies that are not producers of these “commodities”. The continued rise in prices of these goods can put additional pressure on the food security of populations.

As previously highlighted, the price dynamics of these commodities are, in addition to the causes related to the post-covid economic recovery and the consequent increase in aggregate demand, very correlated to the war between Russia and Ukraine, two important global players in terms of cereal production. In addition to this factor, and as highlighted in the 2021 edition, it should be noted the continued dependence on oil, despite all efforts to reduce the use of this and other fossil fuels, in order to combat climate change caused by CO_2 emissions. Also contributing to this phenomenon is the high dependence that the EU economies have on fossil energy sources, despite their continuous investment in alternative energy sources, and which has worsened with the military conflict between Russia and Ukraine.

1.1.4 World Financial Markets

Regarding international financial markets, namely the main bond markets - Germany, the United States and Japan - the data allows us to analyze not only the past medium-term evolution, but also the evolution of the last two years, which allows us to gauge the future evolution through its recent trend. This analysis is extremely relevant since it allows us to assess future inflation expectations in these economies and which, in general, condition the other world financial markets.

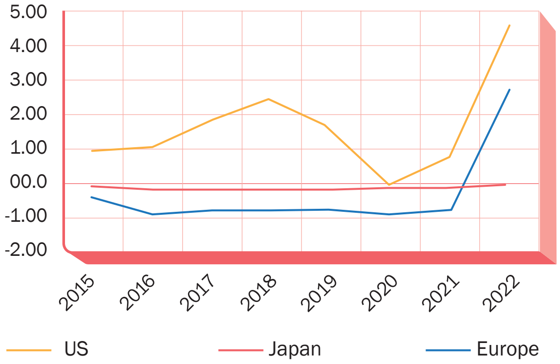
After a downward trend in US interest rates between 2018 and 2020, when a 2-year interest rate of just over 0.7% was recorded, in 2021 and, especially in 2022, there was a strong increase in short-term interest rates, reaching, in the USA, a value of approximately 4.4%. This dynamic was also followed in the EU, where interest rates registered historically low values - negative values until 2021, reaching a value of, approximately, 2.8%. However, when we analyze the evolution of interest rates in the Japanese economy, we can observe a growing evolution, but rather timid, when compared to the two economic blocks.

Last year, short-term interest rates accentuated the upward trend...

These developments in short-term interest rates were also observed, as expected, in long-term interest rates. This phenomenon of sudden increases in interest rates is very much due to the growing inflationary pressures observed in the economies under analysis and, as a result of this phenomenon, the monetary policy authorities were forced to end their stimulus programs in order to bring the values of the inflation rates to more reasonable values.

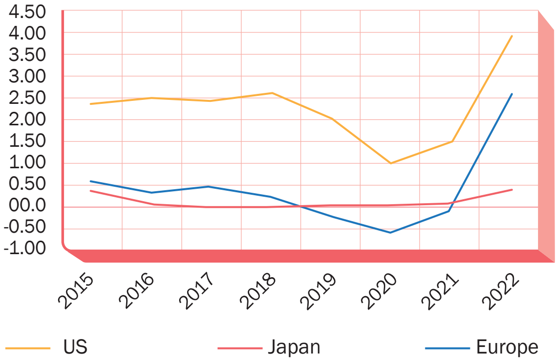
There was an increase of approximately 3.7 p.p. and 2 p.p. in the 2-year interest rates for the US and Europe, respectively.

Chart 1.6
2-Year Interest Rates (%)



Source: Bloomberg

Chart 1.7
10-Year Interest Rates (%)



Source: Bloomberg

However, it is important to point out some additional aspects about the evolution of interest rates in these three economies in order to put into perspective what the future dynamics will be. First, we can observe that the European Central Bank was less reactive than the US Federal Reserve between 2021 and 2022, through a more pronounced rise in short-term interest rates in the US than in the EU. Following this dynamic, a convergence of interest rates between the two economies can be expected in the short term, through a more intense rise in interest rates in the EU than in the US. This is because, given the trade relations between the two countries and the appreciation of the USD against the EUR, the European economies may experience inflationary pressures via more expensive imports - imported inflation. Namely, and given that commodities are traded in USD in international markets, there is a growing tendency for higher imported inflation as the USD appreciates against the EUR. Thus, only a more pronounced rise in short-term interest rates in the EU versus the US will allow us to combat an important component of the inflation currently felt in Europe, which is imported inflation.

Short-term interest rates have been higher than long-term interest rates, signalling that the recent high inflation rates may be a temporary phenomenon.

A second aspect to highlight is the fact that long-term interest rates in the US and EU economies are slightly lower than those of the short term, something contrary to what one would expect. However, this dynamic can be explained considering an expectation of high and temporary inflation only in the short term, while the monetary authorities fear a potential financial crisis with a very assertive increase in long-term interest rates.

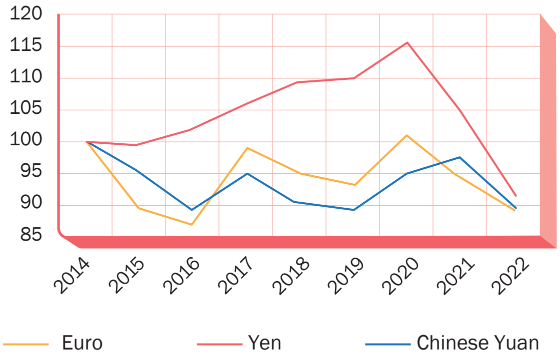
Finally, the Japanese economy has a higher long-term interest rate than the short-term, as expected, but much lower than the interest rates of the other two economies. This fact is important given that the Japanese economy has experienced in recent decades a very low growth rate and with inflation rates also very close to zero. This may indicate that the Japanese authorities, aiming to stimulate some inflation in the short and medium term, want some inflation, namely imported inflation, to cause a generalized increase of prices in their economy.

With the increase in interest rates there was some devaluation of the world stock markets...

In this sense and bearing in mind the analysis previously made of the recent bond market dynamics, together with the economic developments already examined, have also determined, to a considerable extent, the developments in the main foreign exchange and equity markets worldwide.

Chart 1.8

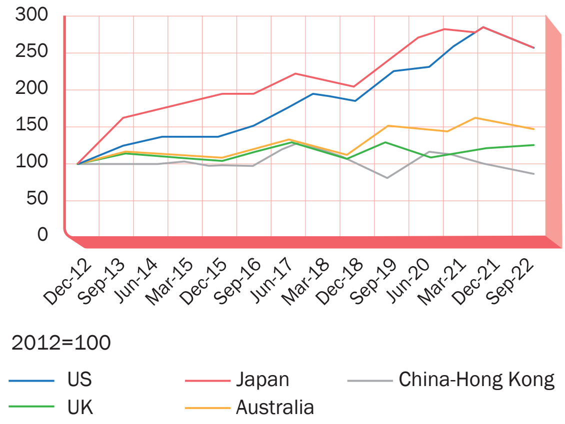
Foreign Exchange Rates - December



Source: Bloomberg

Chart 1.9

Stock markets, USD prices, 2012=100



Source: Bloomberg

In the foreign exchange markets, the dollar appreciated against all currencies under consideration, namely the Euro, the Yen and the Yuan, in 2022 versus 2021. This appreciation resulted from the fact that the North American monetary policy authority, the North American Federal Reserve (FED) acted more quickly and earlier in reducing expansionary measures in the money market, due to growing expectations and observation of inflation, when compared to what was seen in other economies.

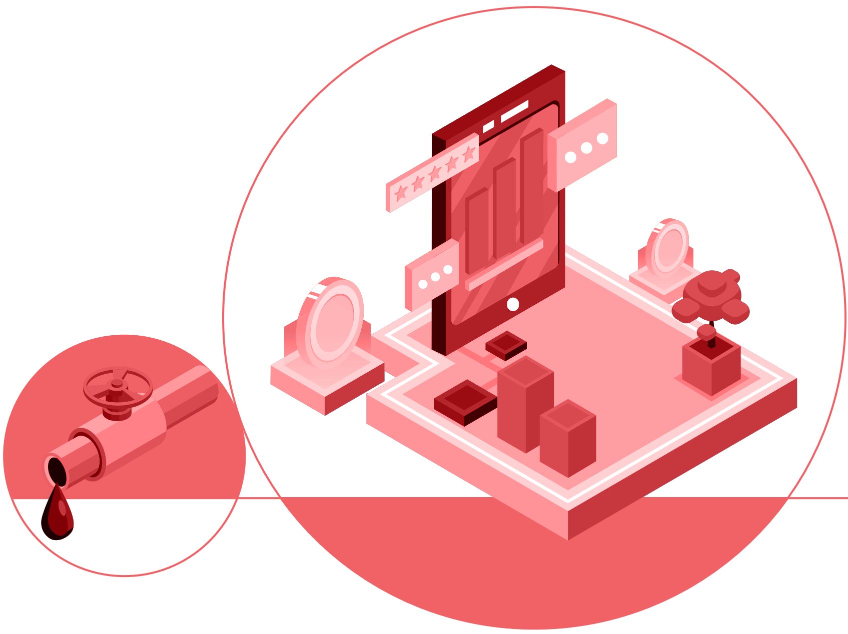
On the other hand, the USD appreciated against the more relevant world currencies.

The observation of a tighter monetary policy than the other economies, through a sharper increase in interest rates in the US relative to other economies, caused a greater demand for US dollars in foreign exchange markets, as international investors are encouraged to seek financial investments with higher rates of return. Taking into account this movement of appreciation of the USD against other currencies, the ECB (monetary policy authority of the euro zone) and faced with expectations of imported inflation, but also confronted with increases in the domestic inflation rate, decided to make an equally remarkable increase in its interest rates, therefore reducing the monetary stimulus to European economies. However, its action was later than the FED's which explains, in part, the appreciation of the USD against the EUR.

The tightening of monetary policy by the major central banks contributed to a less positive dynamics of the stock markets.

On the other hand, equity markets have registered some losses, which is understandable given the tightening policies of monetary policy authorities. As can be seen in graph 1.9 above, in 2022 the equity markets of the largest economies recorded losses, namely the US, Japan, Australia and China, which saw their stock markets register losses of -8.96%, -9.39%, -6.0% and -14.49%, respectively, in 2022 relative to 2021, with only the UK seeing its stock index appreciate by 1.24% in 2022 relative to the previous year.

This generalized decline in stock markets was only observed in 2018, a year in which all these indices showed a devaluation. Not even in 2020, with the consequences of the Covid-19 pandemic, did the markets show the devaluations that were felt in 2022. Bearing in mind future inflation expectations and the consequent tighter monetary policies to cope with the generalized increase in prices, we can foresee that 2023 will see a slight reduction in the stock market indices, or, in case of an increase in value, it will not be as significant as the one seen in 2021 compared to 2020. Thus, it is clear that uncertainties about the evolution of future inflation and the economy will be fundamental in determining the evolution of the main stock markets.



1.2 Economic Framework in Asia

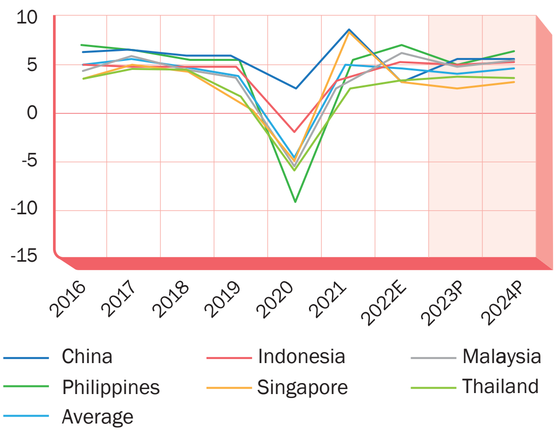
After analyzing the world macroeconomic framework, it is of great importance to assess the economic development of the major Asian economies, namely those belonging to the ASEAN group, which, not only for their geographical location but also for the economic impact they have on the economy of Timor-Leste, deserve a detailed analysis.

The analysis here will focus, therefore, on the 5 largest ASEAN economies together with China, whose economy has assumed a key role not only regionally but also globally. Besides this, the Indonesian economy deserves a special focus in the economic analysis, given its extreme relevance as the main economic partner in the foreign relations of the Timorese economy.

Economic growth in Asian economies in line with that observed in 2021.

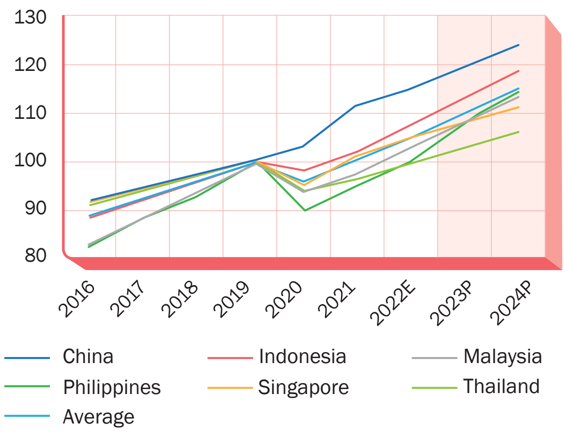
About the economic evolution of the economies mentioned above, all 6 economies recorded a positive evolution of their GDP, registering an average growth rate in 2022 of 4.7 compared to 2021, a growth rate that recorded quite similar values to those recorded in 2021 compared to 2020 (5.0%). The slight slowdown recorded in 2022 compared to the growth rate in 2021 can be considered normal given that in 2021 the Asian economies returned to a more normal pace of economic activity post-pandemic.

Chart 1.10.a
GDP - Annual Growth



Source: IMF WEO

Chart 1.10.b
GDP - Levels



Source: IMF WEO

The observed economic growth in the Asian economies displayed greater convergence in 2022.

Thus, we can conclude that this group of Asian economies continued to record sustained economic growth and at similar rates to those seen before the COVID-19 pandemic that ravaged the world. Furthermore, it is important to note that the growth rates of the various economies in 2022 showed a more convergent growth pattern when compared to 2021. This pattern of converging growth rates is even greater for 2023 and 2024, as forecast by the IMF.

Given the IMF data, we can also conclude that of the 6 economies under analysis, only Thailand's economy has not yet fully recovered from the negative effects of COVID-19 on its economy. It is only in 2023 that the IMF projects a full economic recovery for Thailand given the decrease in income of its economy recorded during the health crisis. By 2022, the economies of the Philippines and Malaysia have fully recovered from the cumulative economic contraction in 2020 and 2021 caused by the pandemic, with their economies already showing net GDP gains compared to 2019.

Most Asian economies have now recovered from the economic contraction experienced during the pandemic of COVID-19.

Of this set of countries, only 3 - the Philippines, Thailand and Malaysia - had an annual GDP in 2021 that was lower than in 2019 (pre-pandemic), with Indonesia, China and Singapore having already recovered the pre-pandemic level in 2021, with special emphasis on China, whose 2021 GDP is already 11% above that of 2019.

In terms of short-term growth prospects, IMF expectations for these economies are generally optimistic. Despite the deceleration of the 6 economies in 2023 when compared to 2022, only countered by the acceleration of economic growth in China (5.2% in 2023 against 3.0% in 2022) and Thailand (3.7% in 2023 against 3.2% in 2022), the economies of these regions will register quite significant values and belong to the group of economies that grow the most in 2023. Additionally, in 2024 and according to the IMF, it is expected that this regional and economic block will grow again at a faster pace than in 2023.

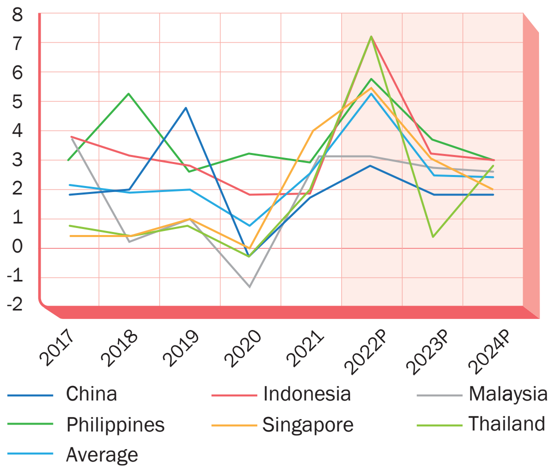
By 2024, China and Indonesia will register a GDP increase of approximately 20 p.p. over 2019.

More specifically, in 2024, the IMF forecasts that the economies of China and Indonesia will show GDP values that are 24.5% and 18.3% higher, respectively, compared to 2019, while the economies of the Philippines, Malaysia and Singapore will see their annual income increase by 13.4%, 12.4% and 11.5%, respectively, between 2019 and 2024. More modestly, Thailand's economy will only see 5.2% more income in 2024 than in 2019.

On the other hand, and following the trend in global terms, in 2022 the rise in the general price level also accelerated in these economies, a phenomenon already seen in 2021. When observed the values projected by the IMF, the average inflation rate accelerated to 5.3% in 2022 when compared with the values of 2.7% observed in 2021. Apart from the economies of China and Malaysia, all other economies recorded an inflation rate above the average and, more specifically, above 3%.

Chart 1.11.a

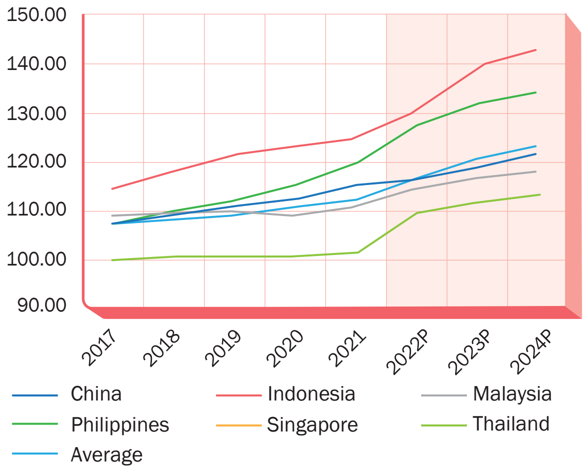
Inflation rates – annual change (%)



Source: IMF WEO

Chart 1.11.b

Price Levels 2014 = 100



Source: IMF WEO

Despite the trend acceleration in the inflation rate in 2023 relative to 2022, the IMF projects a deceleration in inflation rates for 2023 and 2024 in the economies of this region, to an average value of 2.5% in each of the years. With the outbreak of war in Ukraine and a more intense wave of COVID-19 in China, the inflation rate has accelerated again, contrary to what was forecast for 2022 and 2023 by the IMF in the recent past. This data on the future evolution of inflation rates signals the IMF's confidence in less expansionary policies, namely those that are the responsibility of monetary policy authorities.

The IMF forecasts a deceleration of the inflation rate for 2023 compared to 2022.

Therefore, the rise in inflation rates, as well as the appreciation of the debts of these 6 economies against the USD, by more than 3%, help explain the acceleration of regional inflation rates, when these are measured in USD.

The dynamics of the two important macroeconomic variables - GDP and inflation - are also explained by the relevance that the foreign exchange and bond markets play in macroeconomic terms.

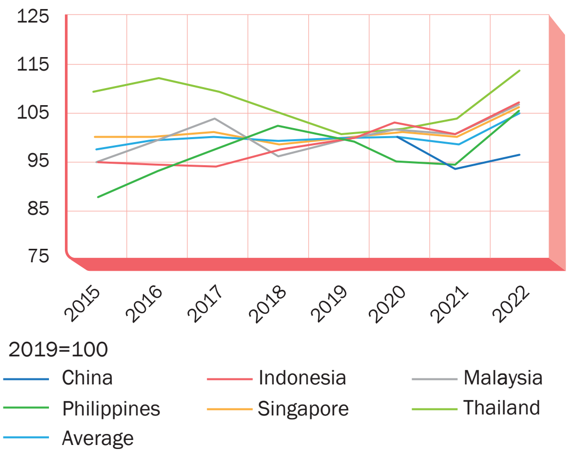
In 2022, Asian currencies appreciated against the USD.

As far as the foreign exchange market is concerned, and despite the volatility verified in the exchange rate dynamics of each economy, in 2022 an average depreciation of the various currencies against the USD is registered, in the order of 6.1%, with only Singapore's currency registering a depreciation against the USD below 3%.

In foreign exchange terms, despite the high volatility registered throughout the year, 2021 ended up being marked by an average appreciation of the currencies against the dollar of 3%, with only the currencies of the Philippines and Indonesia registering an appreciation against the dollar of less than 3%, of 0.6% and 1.8%, respectively.

Chart 1.12

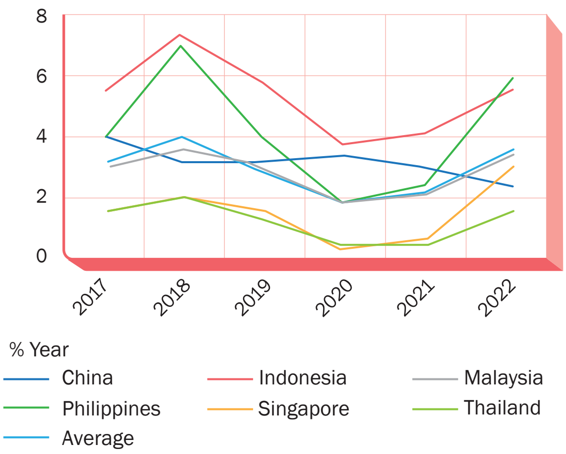
Exchange Rate of ASEAN 5
+ China vs USD 2019 = 100



Source: IMF WEO

Chart 1.13

2 – year interest rates



Fonte: Google Finance

The IMF foresees a stable exchange rate for Asian currencies in the short term.

The IMF expects that most regional currencies will remain relatively stable against the dollar between 2022 and 2023, which will contribute, if this scenario materializes, to stabilize inflationary pressures in the region and, above all, to stabilize the prices of goods imported by Timor-Leste. It should be noted, however, that this scenario of exchange rate stability may be materially affected by risks related to economic recovery, pandemic developments and inflationary pressures in global terms.

The bond market interest rates, illustrated in figure 1.13 and based on 2-year bonds, have registered a generalized and more pronounced increase in 2022 than the one registered in 2021 versus 2020, in line with world markets. This more pronounced increase in 2022 has mainly to do with the inflationary risks already discussed above, and which accompany tighter policies by central banks.

Short-term interest rates in Asian economies grew by 1.5 p.p. in 2022.

The average 2-year interest rate of the 6 economies increased by 1.5 p.p., rising from an average rate of 2.2% in 2021, to 3.7% at the end of 2022, this average value of interest rates being only surpassed by the average value of interest rates recorded in 2018. The generalized rise in interest rates, particularly in the shorter maturities is the result of a growing concern with the growing increase in price levels and the potential anchoring of inflation expectations, as well as the prospects for future economic development that may have repercussions on the rise in the cost of living of the population. It should also be noted that, despite interest rates registering similar dynamics to those seen in developed economies, short-term interest rates in Asian economies are lower than in the US but higher than in Europe. Based on this, we can gauge that there is some risk on the lower margin as far as monetary and exchange rate policy is concerned. However, given the expectations of rising interest rates in the developed economic blocks, this risk may be circumscribed.

At the same time these economies recorded external surpluses...

With respect to the analysis of the external sector of the economies, it is noted that most of the 6 economies under analysis recorded a surplus in 2022. More specifically, while the Chinese economy recorded a similar external surplus in 2021, around 1.8% of GDP, the external surplus of the Indonesian economy recorded an increase of almost 1.9 p.p. in 2022 compared to 2021 (in 2022 the external current account balance was 2.2% compared to 0.3% in 2021). On the other hand, Thailand and the Philippines registered a drop in their external surplus in 2023. More specifically, while Thailand recorded a slowdown in its external account balance surplus of 3.3 percent of GDP in 2021 from a recorded 2.4 percent of GDP, the Philippines recorded a much steeper decline in its external account balance by 5.3 percent from a surplus of 18.1 percent of GDP in 2021 to a surplus of 12.8 percent in 2022. Contrary to the external balance surplus, the economies of Singapore and Malaysia registered a deficit in their external accounts, although there has been an improvement in the balance of the Singaporean economy, where there was an improvement of 1.7 p.p. relative to 2021, reaching the value of -0.5% of GDP in 2022. Malaysia saw its external dynamics worsen significantly, by approximately 2.6 p.p., presenting an external deficit of -4.4% of GDP in 2022.

For 2023 and 2024, the IMF foresees a reduction in external surpluses, noting, however, that only the economies of Malaysia and Indonesia, Timor-Leste's main economic partner, will show negative values by 2024.

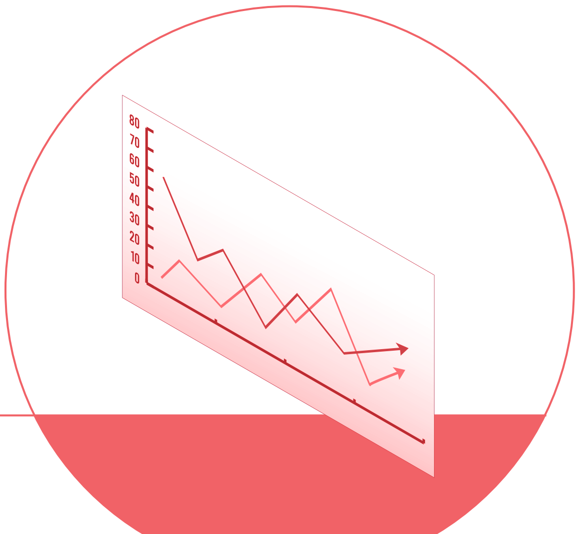
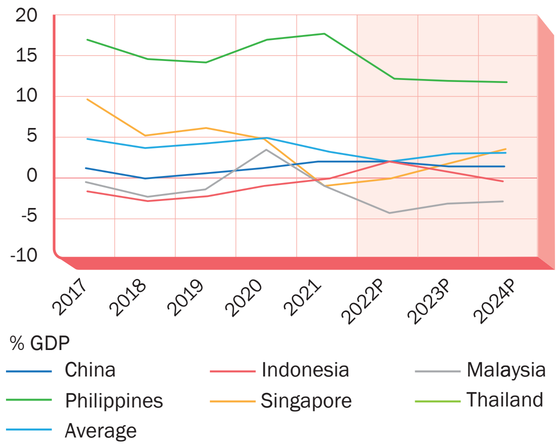


Chart 1.14

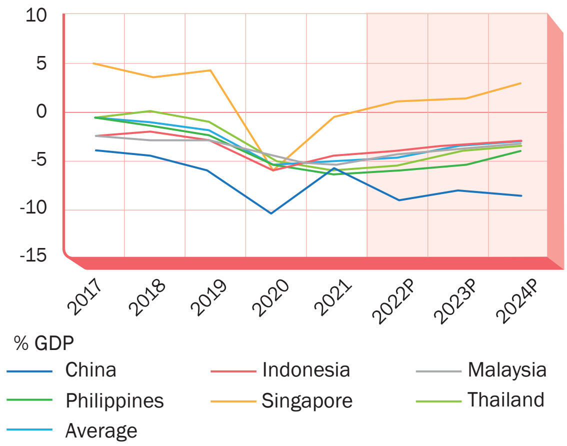
External Current Account Balance - % GDP



Source: IMF WEO

Chart 1.15

Public sector Balance - % GDP



Source: IMF WEO

For the public sector, the year of 2022 reveals an improvement in budget balances compared to 2021.

Regarding the public sector of the economies under analysis, only Singapore showed a budget surplus of 1.4% of GDP in 2022, a figure which translates as an improvement of almost 1.6 p.p. against 2021. In turn, China's public sector is the only one to register a deterioration in its budget balances, registering a deficit of 8.9% of GDP in 2022, when in 2021 it registered a balance of -6.1% of GDP. All the other Asian economies register an improvement in their budgetary balances, despite having a negative value. In 2022, and relative to the economies that present negative balances, Indonesia is the economy that presents the best results (-3.9% of GDP), followed by Malaysia (-4.9% of GDP), the Philippines (-5.4% of GDP) and finally Thailand, which registers a budget balance of -5.6% of GDP. When analyzing the 6 Asian economies, one can conclude that there was a slight improvement in the average budget balances, from -5% in 2021 to -4.6% in 2022.

For the near future, namely 2023 and 2024, the IMF believes that, for these 6 economies as a whole, there will be a marked average reduction in deficits in 2023, from -4.6% of GDP in 2022 to -3.4% of GDP in 2023, and less pronounced between 2023 and 2024, with only a 0.3 p.p. reduction in fiscal balances, when the IMF projects an average fiscal balance equal to -3.1% of GDP, in 2024. Despite the improvement in the budget balances in 2023 and 2024, the negative figures suggest a bet on economic growth in the next two years. The only exception to this negative dynamic of budget balances is Singapore, which maintains a positive budget balance between 2022 and 2024. However, it should be noted that these future developments of improving budget balances anticipate a balance between the commitment to growth, as mentioned above, and the inflationary pressures that a too expansionary fiscal policy, through the presentation of constantly negative budget balances, may entail.

In the near future, the IMF foresees a consolidation of public accounts, with an improvement in budget balances for Asian economies.

In summary, there was an improvement in the macroeconomic framework of the economies analyzed in 2022, in line with what was observed in the rest of the world, namely in the recovery of the level of economic activity from the pandemic period experienced mainly in 2020 and an improvement in the external position and fiscal balances.

In addition to these dynamics, the exchange rate stability of the Asian economies against the US dollar associated with a positive evolution of external accounts and a reduction of public deficits signal that these economies have an increased degree of economic resilience capable of dealing with possible future adverse shocks.

However, it is important to give a special focus on the Indonesian economy, Timor-Leste's main trading partner and whose evolution is extremely relevant for Timor-Leste's domestic economy. In addition to a remarkable economic growth, an improvement in external accounts, allied with exchange rate stability and an improvement in public accounts compared to 2021, these dynamics of the Indonesian economy, as analyzed above, are extremely positive for the economy of Timor-Leste. The dynamics foreseen for the macroeconomic fundamentals of the Indonesian economy for 2023 and 2024 are even more significant, signaling good prospects for Timor-Leste's main economic partner.

The Indonesian economy, the main partner of Timor-Leste's economy has shown important improvements from a macroeconomic point of view.

On the other hand, the sharp appreciation of "commodity" prices felt in 2020 and 2021, but also seen in 2022, allows us to assess the positive contribution that this price increase has on Indonesia's national accounts, particularly the positive effects on the balance of external accounts and, consequently, on the balance of the Indonesian public sector.

However, excessive dependence on these "commodities" implies that the future economic growth of Indonesia may show some signs of fatigue, particularly if the pace of increase in prices of exported raw materials, very determined by global and regional developments, slows down, which will pose some potential obstacles to the increase in national income of this important partner of the Timorese economy.

In sum, the evolution of the Indonesian economy, namely the positive evolution of the main macroeconomic indicators and its specificities of domestic production implies continued analysis by the fiscal policy authorities and the BCTL. However, it is expected that both the government as well as the central bank of Indonesia will continue to implement economic policy measures in order to gradually mitigate the underlying economic risks to its economy.

1.3 Economic Transmission Channels for Timor-Leste

An analysis, even if brief, of the international financial evolution and of the ASEAN countries, is of vital importance to the economy of Timor-Leste, since the financial component of the world and Asian economy decisively influences the evolution of the national economy.

In this sense, this section aims to identify the main transmission mechanisms of international economic developments with relevant impacts on our economy. At present, it is admitted that these effects impact in a very circumscribed way on some sectorial components of the economy of Timor-Leste. Thus, in the next sections to be discussed, the study on the impact on the evolution of domestic inflation rates, the analysis on the oil revenues, as well as the investment made under the Petroleum Fund are something of a broader discussion in order to understand, in a more comprehensive way, the various mechanisms of economic transmission to Timor-Leste. Still, and although foreign direct investment (FDI) is a variable of particular interest to be able to assess the mechanisms of international transmission to the economy of Timor-Leste, the lack of data with the necessary quality on the investments made in Timor-Leste makes it difficult to make a rigorous analysis of this component.

In this way, and as there is a growing openness of the Timor-Leste economy and a greater integration of trade interdependence with major economic partners, particularly at the regional level, it is expected that the external dynamics of regional partners will increasingly impact the evolution of the Timorese domestic economy, thus broadening the range of influences of the various transmission channels.

1.3.1 Imported Inflation

The evolution of international prices of goods and services impacts decisively on an economy, and the greater the degree of openness of an economy, the greater the impact on, among other variables, domestic inflation and the formulation of its expectations. Thus, the evolution of international prices represents an important channel of transmission for an economy which, like the economy of Timor-Leste, has a large share of imported goods and services. More specifically, the economy of Timor-Leste had a ratio of imports, compared to non-oil GDP, in 2021 of 47.6%, increasing this percentage to 55.1% in 2022. From these data it is clear, therefore, that the evolution of international prices decisively influences the evolution of the domestic price level.

In 2022, imports increased to 55.1% of GDP, an increase of 6.5 p.p.

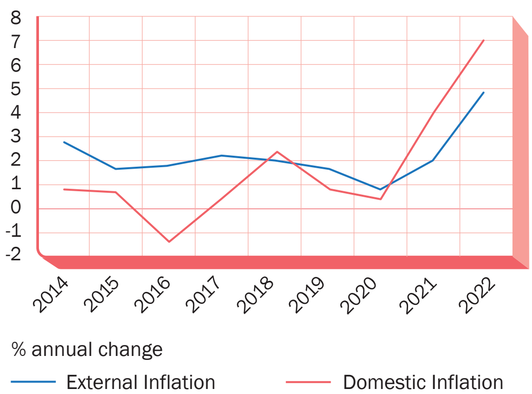
The empirical analyses as well as the development of economic models carried out by the BCTL have continuously demonstrated the great relevance of this transmission channel. However, one of the main difficulties in conducting this analysis stems from the difficulty in defining an appropriate variable to assess the impact of “external inflation” for Timor-Leste. This difficulty has to do with the lack of a price index for imports associated, at the same time, with a great volatility of the basket of goods and services imported by the national economy, as well as the economic origin of the goods and services that are purchased from abroad. Thus, and after analyzing different ways that best fit the required analysis, the BCTL has opted for a variable that seems more adapted to the specificities of the Timorese economy, therefore choosing an average of the inflation rates of the 5 largest ASEAN economies together with China’s inflation rate, this inflation rate being measured in USD. In practical terms, this measure of inflation calculated for regional economies has two main advantages. The first is that it allows for the measurement of price developments while keeping in mind the exchange rate changes of these Asian economies and, secondly, it allows for a benchmarking of inflation rates in regional currency.

The domestic inflation rate in Timor-Leste was significantly influenced by the external inflation rate.

As can be seen in graph 1.16, below, the domestic inflation rate tends to show similar dynamics to those recorded for external inflation, although with less variability. Since the BCTL uses the average inflation rate of the Asian partners, the inflation forecast models are based on this variable, as described above, allowing a distinction to be made between the domestic and imported components of inflation in Timor-Leste.

Chart 1.16

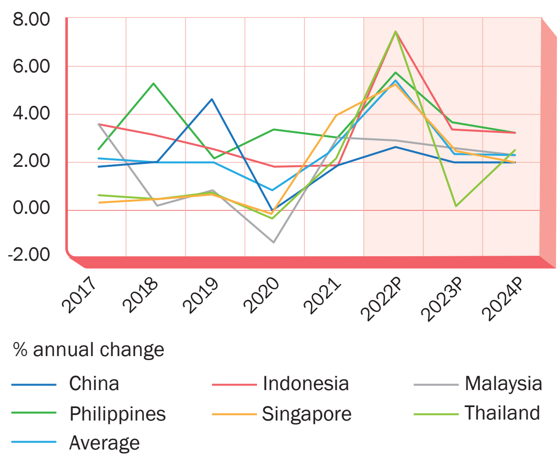
(Domestic vs foreign inflation - % change year)



Source: DGE & BCTL calculations

Chart 1.17

(Regional inflation in USD terms)



Source: IMF WEO

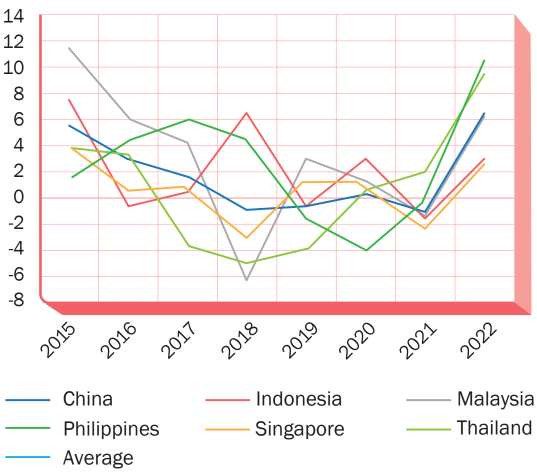
As can be seen from the two graphs above, we can conclude that the rise in the inflation rate in Timor-Leste is quite correlated with the acceleration of external inflation. Recognizing that naturally the correlation between the inflation of the domestic economy and the partner economies of the Timorese economy is not unitary, we can only conclude that the evolution of the price level in Timor-Leste has been significantly influenced by the evolution of the domestic inflation rate.

In terms of trajectory, the year 2022 is marked by an increase in external inflationary pressures, which led to a more accentuated growth in domestic inflation, as already recorded in 2021, when a generalized increase in world prices began to be observed. It should be noted that in 2022, external inflation as measured by the BCTL was 4.7%, when in 2021 it had been 2.2%. The figure recorded in 2022 for external inflation results from an appreciation of regional currencies against the USD by just over 6%, on the one hand, and an increase in the inflation rate, measured in local currency, of 5.3%.

There was an external inflation rate of 4.7%, the result of an appreciation of Asian regional currencies.

Gráfico 1.18

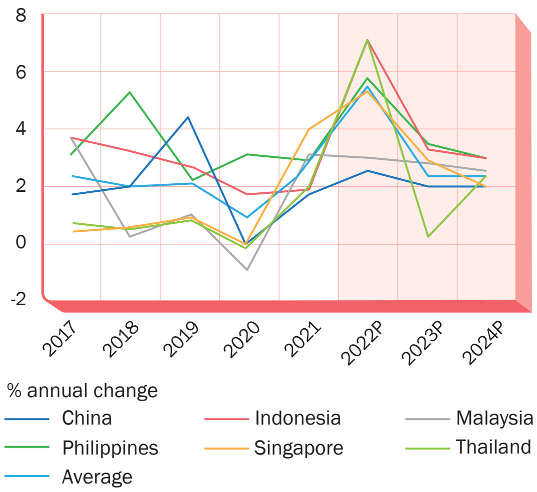
Taxa de câmbio vs USD



Source: IMF WEO

Gráfico 1.19

Taxas de inflação – anual variação %



Source: IMF WEO

Bearing in mind the enormous relevance of this transmission channel for the national economy, the short and medium-term evolution of "external inflation", decisively influenced by the exchange rate evolution, will be one of the main factors in determining the evolution of domestic inflation.

In this domain, the BCTL expects that, in line with the IMF expectations, the regional currencies will be stable against the USD in 2023, which together with the forecasts of slowdown in the inflation rate of the Asian trading partners, will allow the economy of Timor-Leste to register moderate levels of its inflation rate during this year. On the other hand and given that the evolution of the domestic economy in Timor-Leste also plays a relevant explanatory role in determining the inflation rate, the growth forecasts for Timor-Leste will be analyzed in greater detail in the chapter that analyzes the evolution of the domestic economy, providing a more detailed analysis, as well as its assumptions, for the forecasts made by BCTL on the evolution of future prices in Timor-Leste.

1.3.2 Energy Markets and Oil Revenues

In 2022, coal has seen a significant price increase of 147% compared to 2021.

The development of energy prices, such as oil and natural gas, among others, are highly volatile, both in the short and long term, oscillating significantly between periods of low and high prices of these "commodities". Charts 1.20 and 1.21, below, show not only these oscillations mentioned, but also allow us to assess the recent evolution of the price of these commodities in a multi-year and intra-annual perspective. Thus, the graphs allow us to verify that prices can register variations of -/+ 25% in year-on-year terms. When analyzing commodity prices in levels, we can see that the price of oil rose significantly in world markets, having, in some of the months of last year, reached peak values like those recorded in 2012. However, the price of this energy commodity registered a slight decrease in December 2022, when compared with December 2021. In 2022 it is therefore notable the volatility that the price of this raw material recorded in international markets, with inflationary pressures, but especially the war in Ukraine, playing a relevant role in explaining the price dynamics.

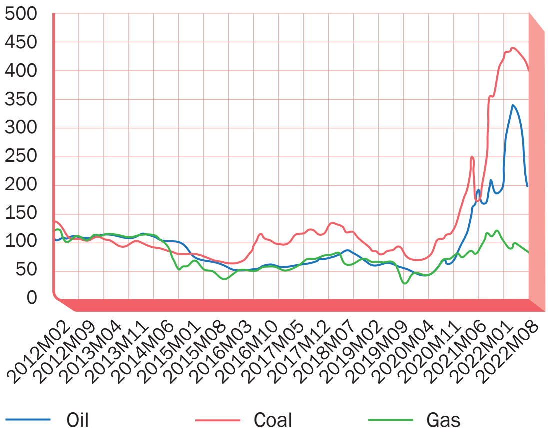
On the other hand, natural gas prices recorded an all-time high in April 2022.

In 2022, the price of other "commodities" such as natural gas and coal, but especially gas, recorded remarkable price increases, with natural gas increasing 27.4% in December 2022 compared to the same month of the previous year, while in the same period, coal recorded an incredibly significant increase in its price by more than 147d%. Although natural gas prices had already peaked in 2021, the price of this energy commodity was even higher, with an all-time high of 11 years in April 2022. Similarly, coal also recorded a price maximum in 2022 compared to the last decade.

The price dynamics of these raw materials are essentially due to the anxieties and risks associated with the military escalation in Ukraine which, in view of the sanctions imposed on Russia - one of the world's largest producers of natural gas and oil - caused a general increase in prices. As a result of these events, EU countries have reopened some coal plants to deal with increased potential shortages of oil and natural gas, which has led to pressure on coal prices.

Chart 1.20

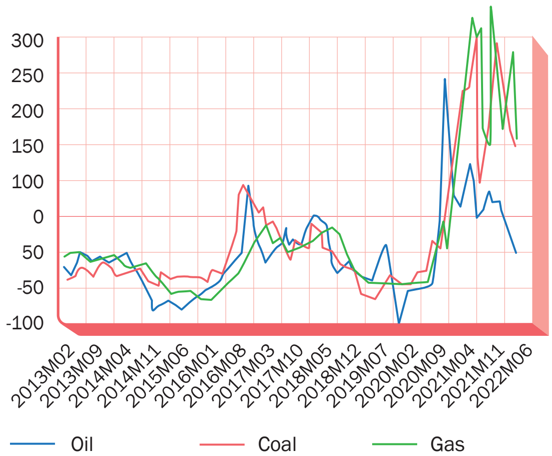
(Energy prices – SPOT)



Source: World Bank

Chart 1.21

(Energy prices - Variation)



Source: World Bank

However, the future evolution of energy commodity prices is not easy to predict, given that the movement of prices of these raw materials is not only the result of the natural forces of the economy, dictated by demand and supply, but also significantly by the international political context, as is the case of the war in Ukraine, as well as by the aspects of financial leverage characteristic of these markets, greatly influenced by financial futures contracts and other derivative financial instruments. More specifically, and as proof of this reflection is the galloping rise in energy commodity prices in 2022, at an even faster pace than the price dynamics recorded in 2020, and whose variability and amplitude of the rise recorded in 2022 was considered totally unexpected by financial analysts researching this market.

The sharp increase in energy commodity prices was partly a result of the military tensions in Ukraine.

It should also be noted that the impact of energy price fluctuations on the country's oil wealth is much lower today than in previous years. This stems from the fact that future petroleum revenues, considering the fields in current exploration, are today very small compared to what has already been extracted from the reserves of the Timor Sea, with the prospect of

The impact of oil prices is lower for oil revenues in the near future given the closure of oil exploration in 2023.

the exploration of existing fields cease completely by 2023. The expected future revenues from 2022 to 2023 now amount to only about $150 million, a further reduction from the expected 2020 figure of $200 million.

Given the now tiny estimate of future petroleum revenues expected from the Timor Sea, we have not developed in this report, as we did in previous years, the exercise of sensitivity analysis of revenues in relation to the price of oil.

1.3.3 Financial Markets and the Petroleum Fund

FP recorded losses of USD 2,237 million in 2022 versus 2021.

Finally, we address another channel of transmission of international developments to our economy, related to the Petroleum Fund created to efficiently manage the country's oil wealth. The operating mechanism of this channel is similar to that of the price of oil, in that the evolution of international financial asset prices determines the value of the Petroleum Fund and, in turn, the value of Sustainable Income. Insofar as they affect these two aggregates, the prices of financial assets end up influencing the amount of revenue available to finance the State Budget and, consequently, the pace and size of spending policies and public investment.

The Petroleum Fund (PF) closed the year 2022, with a value of net financial assets of $17,414 million, which represents a reduction of $2,237 million compared to the year 2021, where the PF recorded an amount of $19,651 million. The assets of the PF were mainly invested in Treasury bonds of the most developed countries, a percentage equal to 72.23%, and in shares of companies based in these economies, representing 27.77% of the Petroleum Fund.

FP assets were worth USD 17.4 billion at the end of 2022.

In the year 2022, FP recorded an overall loss net of fees and taxes of $1,939 million, when in the year 2021 it had recorded a net gain of $1,088 million. This result was mainly due to the devaluation of assets, negatively impacting FP's results.

Since its inception, the PF has broadened its investment universe, first by investing only in U.S. Treasuries, then gradually investing in equities, and finally extending investments into bonds of various global Treasuries. The gradual broadening of the investment mandate has been driven by the Fund's increasing demand for higher expected returns and greater diversification of the investments and markets considered.

Rising interest rates in the US had a negative impact on FP profitability.

Unsurprisingly, this institutional development exposes the Fund to new risks and markets, but by benefiting from the diversification between the evolution of the prices of the various assets, it allows to build a more solid Portfolio whose return is more efficient, for the desired level of risk.

Currently, the Fund invests only in fixed interest rate bonds and stocks, so that the interest on the bonds and the dividends on the stocks provide the Fund with a fixed and constant income, at least a priori. Naturally, when investing in bonds and stocks, the Fund benefits from the rises in their respective market values, or, on the contrary, may be adversely affected by their declines. Therefore, the Fund's main financial risks correspond to possible losses arising from a decrease in the prices of the bonds or of the shares acquired.

In addition, since the PF invests in several markets denominated in currencies other than the US dollar, the Fund is also exposed to currency risk on investments, understood as the possibility of depreciation of the various investment currencies against the US dollar. In summary, the financial risk of the PF includes 3 types of risks: equity risk, or the risk of falling prices on the main world equity markets, interest rate risk, which corresponds to the risk of falling prices of treasury bonds; and currency risk, which consists of the risk of depreciation of the investment currencies against the dollar.

Thus, it is latent the contribution of the dynamics of the price of PF assets and exchange rate changes of currencies associated with each of the investments, thus consisting of this interconnection between the two economic aspects in the most relevant channel of transmission between international markets and the evolution of the value and profitability of the PF. Regarding profitability, the PF recorded a loss of 10.1% in 2022, contrasting with an appreciation in 2021 of 5.6%. It should be noted, however, that in a long medium-term perspective, that is, for 3 and 5 years, the annual profitability of the fund is positive, registering gains of 1.4% and 2.8% per year in these periods. Furthermore, since its conception, the FP has shown an average annual return of 3.9%.

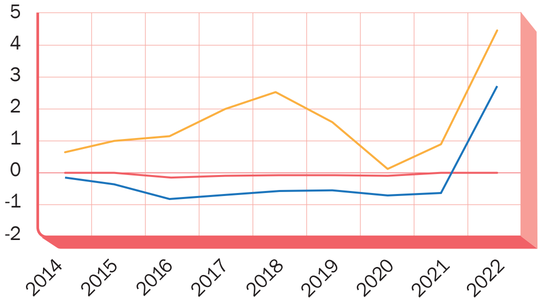
The PF profitability registered, in 2022, a devaluation of 10.1% when, in 2021, it presented a positive return of 5.6%.

As previously mentioned, in 2022, in the global Treasury bond markets, there was an even more expressive rise in interest rates in the US market and in the EU (Germany), with greater acceleration in the case of 2-year maturities than in 10-year maturities.

However, the profitability of the PF has registered positive values in a 5-year term.

Chart 1.22

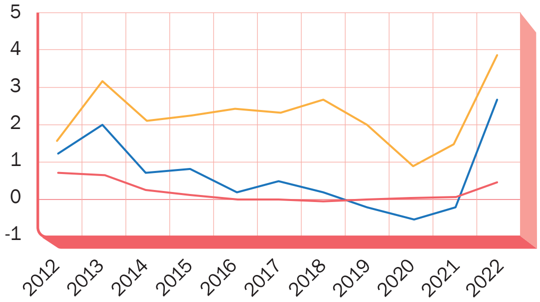
(2- year Interest Rate - % year)



Source: Bloomberg

Chart 1.23

(10-Year Interest Rates - % year)



Source: Bloomberg

In the European and Japanese markets, long-term interest rates have also risen, with 2022 as much as 8 times the 2021 figure. However, short-term interest rates, despite a rather marginal increase, rose to positive ground, but close to the zero threshold, a trend recorded since 2014.

This rise in interest rates, to be felt from 2020 on, but more expressively in 2022, in the three economic blocks, but mainly in the USA, the market that represents the largest percentage of the Petroleum Fund's bond investments, may translate into higher expected returns, contrary to what happened in 2021.

FP investment in US treasury bonds explained the largest share of the return observed in 2022.

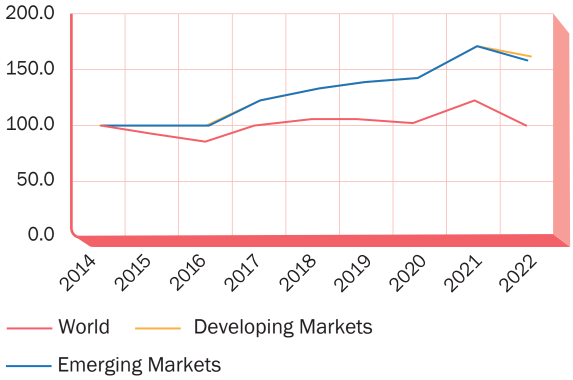
The increase felt since 2021, but even more pronounced in 2021, year in which there was a reversal of the cycle of interest rates observed between 2019 and 2020, with special emphasis on the US market which represents the largest share of the FP investments, had a negative impact on the profitability of the Petroleum Fund, despite the coupons received. This movement resulted in the calculation of an overall loss of the bond portfolio of -9.1% in 2022, when in 2021 the overall loss for this item had already been -2.25% and, further cancelling out part of the gains of this type of investment, registered in 2020 (5.04%) and in 2019 (5.16%).

Regarding equity markets, the equity benchmark of the Fund (**blue line** - "World") registered losses in 2022, after a sharp rise in 2021. This loss was due to the losses registered in the US equity markets, but also in most global markets. The investments made by the PF in stocks registered a loss of 16.84% in 2022, in contrast to the profitability registered in 2021, at an impressive 22.72%, to which were added the gains of 2020 and 2019, profitability that totaled 14.03% and 27.67%, respectively. However, the PF recorded some gains, as a result of an appreciation of the USD against other investment currencies.

Similarly, the more negative equity market dynamics, at 16.8%, contributed to a significant portion of the PF return in 2022.

Chart 1.24

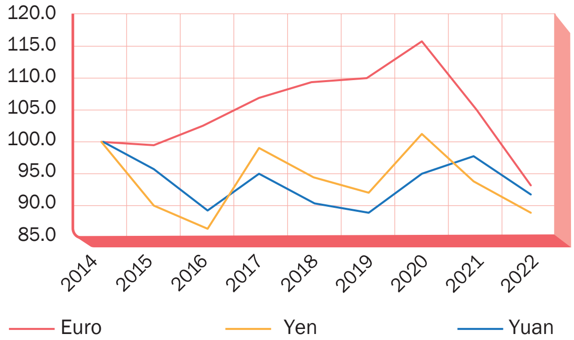
(Stock markets – Annual 2014 = 100)



Source: Google Finance

Chart 1.25

(Foreign Exchange Rate - December)



Source: Google Finance

In conclusion, the PF today has a wide range of investments cemented in the main stock and bond markets worldwide, allowing it to optimize the return-return profile and, at the same time, minimize the associated risks.

From a medium-term perspective and given the restrictive policies of monetary authorities to address the generalized increase in prices, some risk, at least for 2023, on the profitability of global equity and bond markets should be considered. With expectations of a lower slowdown in the inflation rate than previously forecast by central banks, the potential risks to the evolution of profitability that the PF may experience in the year ahead should be highlighted.

It should be noted, in this regard, that the North American stock market, after the new rise recorded in 2021, a year in which the share price was three times the level recorded in December 2009, the share devaluation seen in 2022 may herald some risks for 2023 and the respective evolution of the income generated by the PF.

However, the Fund's long-time horizon and its institutional framework were optimally designed to allow it to face market fluctuations in a rational way and even to benefit from episodes of price declines that regularly occur in the markets.

On the contrary, the lack of significant future revenues from the current exploitation of petroleum resources, together with the continued maintenance of a level of public spending that requires a reduction in the capital of the petroleum fund, now represent significant risks to the success of the strategy and time horizon of the Fund, so its objectives and implementation may have to be reassessed in light of these highly relevant developments.