

# 1

## International Macroeconomic Developments

This chapter briefly reviews the main economic developments registered in 2014 for the major world economic blocks and Timor Leste's main economic partners. Additionally, it also summarizes the main trends in international financial and commodities markets, especially those that are more relevant for our country.

Building on this initial summary, the chapter then analyses the main transmission channels of international developments to our domestic economy, detailing relevant effects observed in 2014 and expected developments for 2015.



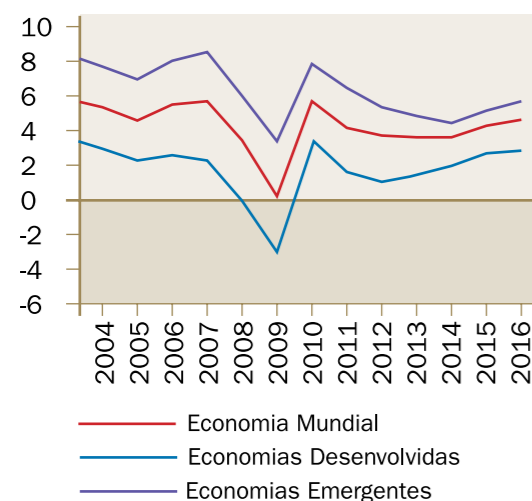
# Global and Asian Economies

## Economic growth in major economies

In 2014, the world economy continued to grow (3.3%) around the levels registered for the last 2 years, extending the economic recovery from the great international financial crisis of 2008-2009. In terms of major blocs, 2014 saw a slight pickup of growth for the more advanced economies to 1.8%, which mitigated the continued deceleration of growth across developing economies (4.4% in 2014). For 2015 and 2016, IMF expects a renewed but slight pickup in global growth, sustained by economic recovery in both blocks.

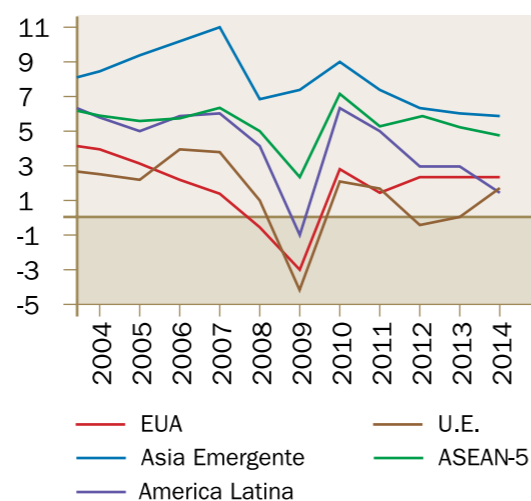
The global economy continued to recover in 2014, and just pick-up again in 2015 and 2016...

GDP - % Growth in Main Blocks



Fonte: FMI, World Economic Outlook, Outubro 2014

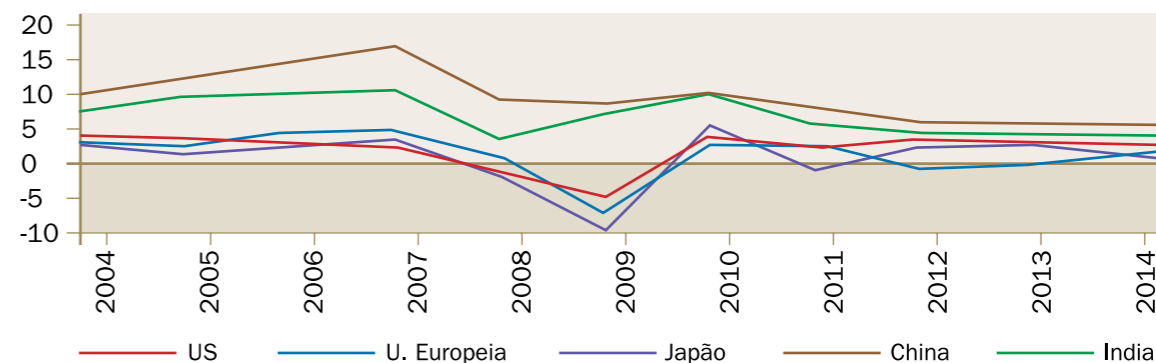
GDP - % Growth Selected Regions



...while ASEAN economies slowed down slightly in 2014.

In terms of regions, Emerging Asia and Sub-Saharan Africa continue to be the world's more dynamic regions, growing 6.6% and 5.7%, while European Union was the region with lower recorded growth in 2014 (1.4%). Nonetheless, it should be highlighted in 2014 the growth slowdown for ASEAN top 5 economies and the slight recovery in European growth in 2014, versus the stagnation registered for 2012 and 2013. For 2015 and 2016, the IMF expects a pickup in growth for every region, with particular optimism for US and ASEAN economies.

GDP % growth - 5 Largest economies



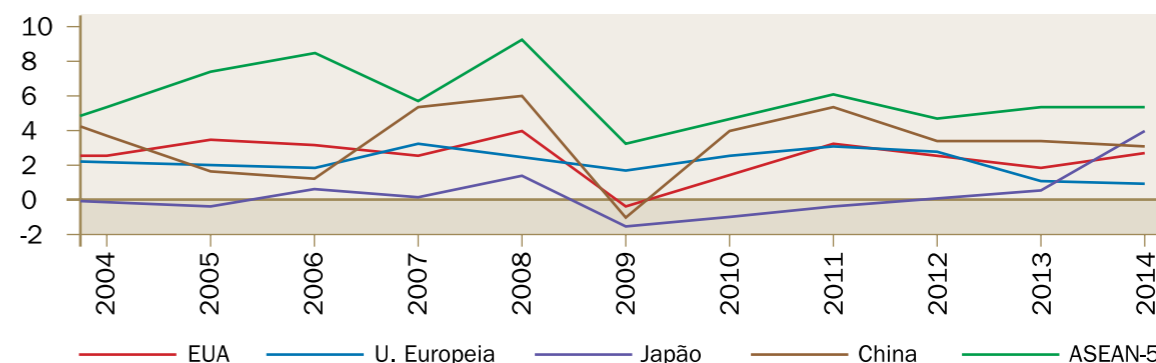
Last, comparing economic performance across 5 major world economies - US, EU, Japan, China and India - reveals that the 2 Asian emerging economies continued to grow substantially in 2014, although at a slower pace than in the last decade, and that the US has grown more rapidly than EU and Japan. In line with IMF optimism, growth in these major economies should even pickup in 2015 and 2016, with the exception of China, which should continue the much needed slowdown and sectorial rebalancing trajectory.

## Inflation trends in major economies

As for price trends in 2014, we highlight that EU inflation and respective expectations have fallen substantially below the long-term reference of 2% in 2014, and that Japan inflation increased to its highest level in the last 20 years. Asian economies, especially those from the ASEAN block, continued to register moderate inflation rates in 2014, whereas China has managed to keep inflation pressures contained.

Inflation remained low in global economy, and registered substantial fall in Europe.....

Inflation rates % year - 5 Selected Economies



Fonte: FMI, World Economic Outlook, Outubro 2014



.... due to the perpetuation of high levels of unemployment, sluggish recoveries and commodities prices fall.

EU inflation decrease is mostly due to the slow growth level of European economies along the last 3 years, which has resulted in low rates of employment of resources and labour across Europe, thus resulting in negative price pressures. This worrying trend has even justified the adoption of further and more radical monetary policies on the part of the ECB, who, at the beginning of 2015, announced the implementation of a massive programme to buy bonds across EU financial markets, similar to FED's QE programme. Japan registered positive inflation rates for the first time in years, due to the substantial expansion of Bank of Japan asset acquisition programme and the substantial depreciation of the Yen in 2014.

Overall, 2014 registered subdued inflation pressures across major economic blocks, which resulted from the growth slowdown in emerging economies, perpetuation of unemployment levels in many advanced economies and the substantial price falls registered for the major international commodities.

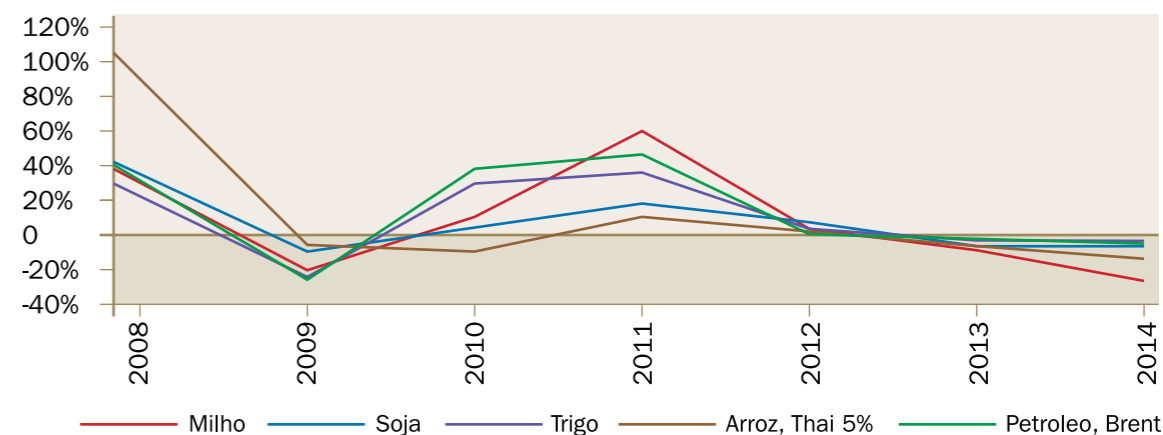
### Commodities Markets

In terms of commodities markets, 2014 registered generalized price falls for agricultural, energetic and industrial metal items. As shown below, the prices of these items registered annual price falls similar to those registered in 2009, a year marked by the recessive effects of the great financial crisis. Agricultural price falls were especially marked in the 1st half of 2014, while oil price has fallen mostly during the 2nd semester, particularly in the last quarter (-31% in annual terms). As the major world economies were essentially robust in 2014, the commodities price falls represents a boost for the economies, which import these items, thus supporting their economic growth. On the contrary, for the exporters of these goods, typically less developed countries, the fall in prices represents a negative shock for their incomes and, naturally, for their economies.

Commodities prices fell again....

.... supporting growth in importing economies, but representing challenges for exporters.

Inflation rates % year - 5 Selected Economies



Fonte: Banco Mundial, Commodities Datasheet, Fevereiro 2015

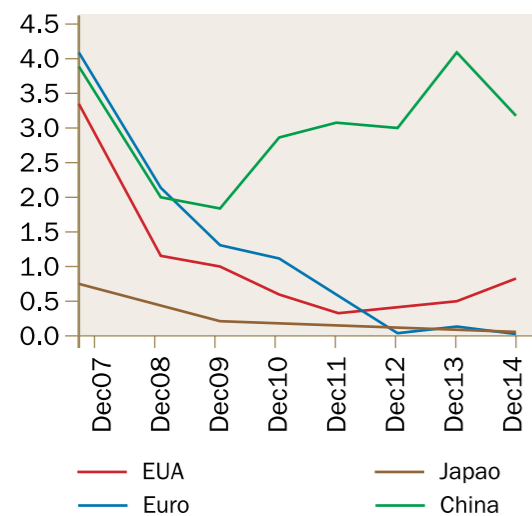
### Main Financial Markets

In terms of financial markets, we start with the trends registered in bond markets, especially Treasury bonds, which allow us to measure the impact of changes in monetary policies, expectations, growth rates and inflationary trends. 2 years interest rates, which are more sensitive to changes in monetary policy stances, show a clear divergence between the 3 largest world economies, with the markets gradually incorporating, in 2014, a future rise in US policy rates and the maintenance of zero policy rates in Japan and EU. On the other hand, 10 year rates have decreased across all economies, reflecting lower inflation pressures, amidst the deflationary developments of commodities markets in 2014. Note, however, that 10 year rates for EU and Japan have registered larger falls, since the anaemic growth rates of these regions resulted in a more pronounced inflation expectations fall and strengthening of lower for longer of policy rates, than in the US.

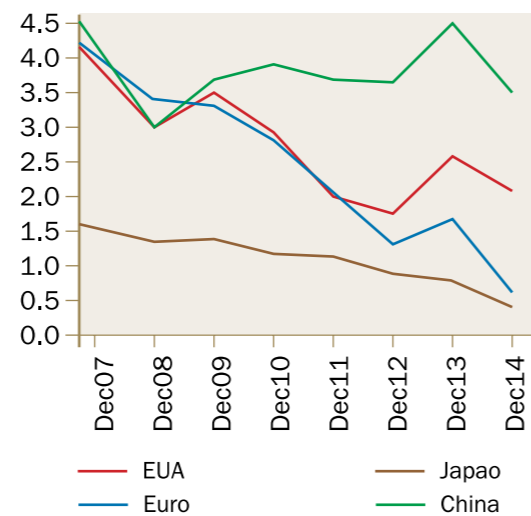
2 years interest rates rose in the US, but kept low in EU and Japan...



Treasury Bonds – 2 Years Rates in %



Treasury Bonds – 10 Years Rates in %

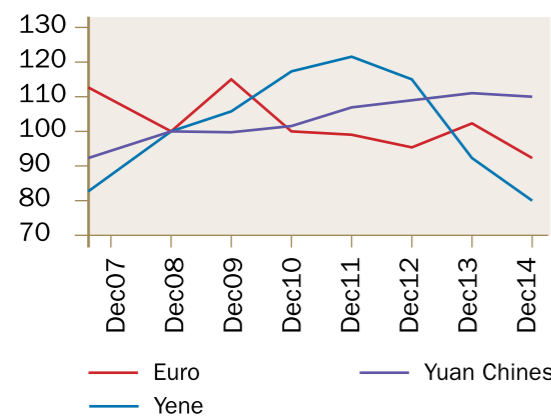


Fonte: Bloomberg

... resulting in the depreciation of the yen and euro versus the dollar.

Naturally, these bond market trends, together with the already mentioned economic developments, determined a great part of the trends registered in global foreign exchange and equity markets. On the one hand, the divergence in expectations of monetary policy stances between US EU and Japan justified the substantial appreciation of the dollar versus the yen and euro in 2014.

Currencies versus the \$ US Dollar. 2008=100; decrease means depreciation

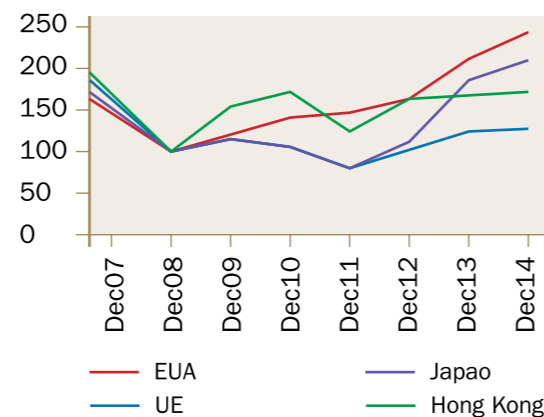


Fonte: Bloomberg

Global equity markets registered gains in 2014

On the other hand, US equity market continued to record gains above the remaining developed markets, due to the strengthening of US economic outlook. Nonetheless, practically all main world equity markets continued to register gains in 2014, given the recovery and stability of growth rates, inexistence of negative macroeconomic shocks and maintenance or intensification of monetary stimulus programmes for the respective economies.

Main World Stock Indices. 2008=100



Fonte: Bloomberg

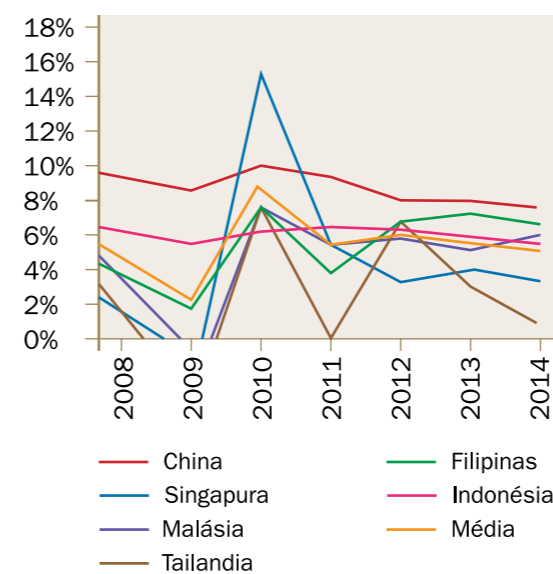
### Asian Macroeconomic Review

Once synthesized the global macroeconomic developments, it is also relevant to detail the important trends registered in the Asian space, especially for ASEAN, given that the major economic partners of Timor Leste are from this region. We focus specifically on the trends for the 5 largest ASEAN economies and China, because they are the main trading partners of our country. Additionally, Indonesia is the most important of these 6 economies, in terms of trading relevance, which justifies some detailed comments regarding this country.

In terms of the 2 major macroeconomic indicators, GDP growth and inflation, growth levels continued robust in 2014, with average annual growth at around 5%, although Thailand and Singapore registered slight slowdowns. As for inflation, average inflation in the region was around 4%, whereas Indonesia has registered high inflation rates due, mostly, to the substantial depreciation of the rupiah.

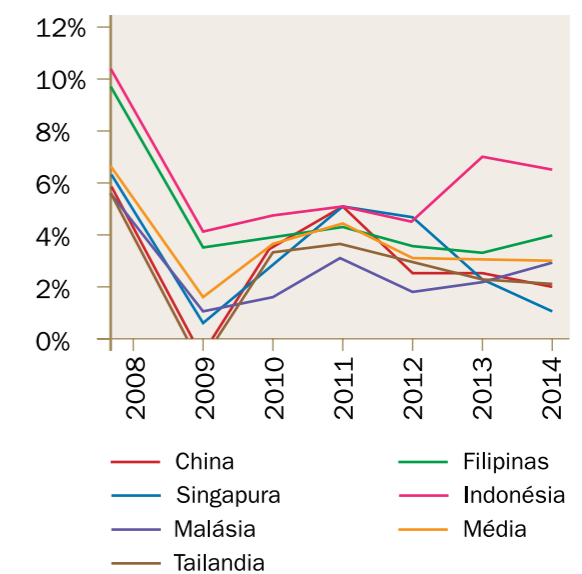
ASEAN economic growth continued robust but slowed down slightly in 2014...

GDP – annual % growth rates



Fonte: Bloomberg

Inflation - % annual rates



.... while inflation levels remain moderate, with exception of Indonesia.

The maintenance of robust and dynamic economic growth in the region in 2014, together with the depreciation of regional currencies versus the USD, explained the continued moderate inflation pressures in the region, notwithstanding the slowdown of global inflation expectations.

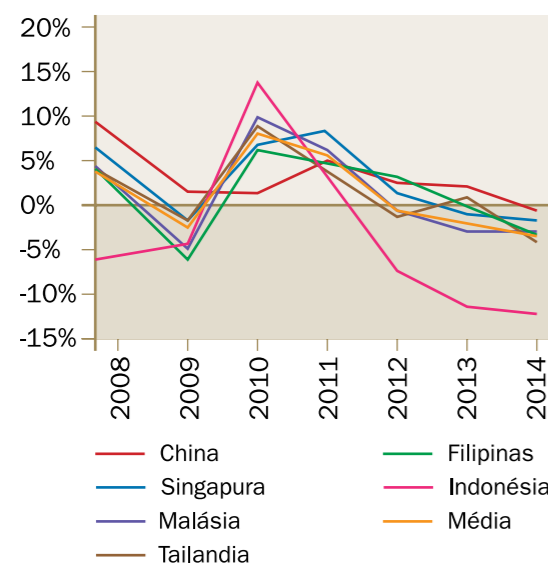
Regional currencies depreciated versus the dollar....

The change in macroeconomic drivers explains and is also explained by the developments registered in the 2 main financial markets, the bond and foreign exchange markets. In the latter, 2014 was characterized by the generalized depreciation of regional currencies versus the dollar, resulting from the gradual elimination of over-expansive US monetary policy. In the case of Indonesian rupiah, the excessive fall was explained by the deterioration of external deficit and the delay of respective central bank in facing the rising inflation pressures and foreign exchange depreciation.

As to what refers external and public accounts balances, the major part of ASEAN economies continued to register external surplus in 2014, except Indonesia, which recorded a deficit of 3% of GDP. Given that Indonesia is an exporter country of commodities, especially energetic and industrial metals, the decrease of international prices in 2014 yielded negative shocks to its economy in 2014, demanding more restrictive economic policies to contain domestic demand and correct external deficit and the fall in rupiah's value. 2014 was also marked by the continuation of small public deficits across the region, around the levels of 2013, of -2%. The 2 regional exceptions continue to be Singapore, on the positive, and Thailand, on the negative, whose public deficit ascended to -4% of GDP in 2014.

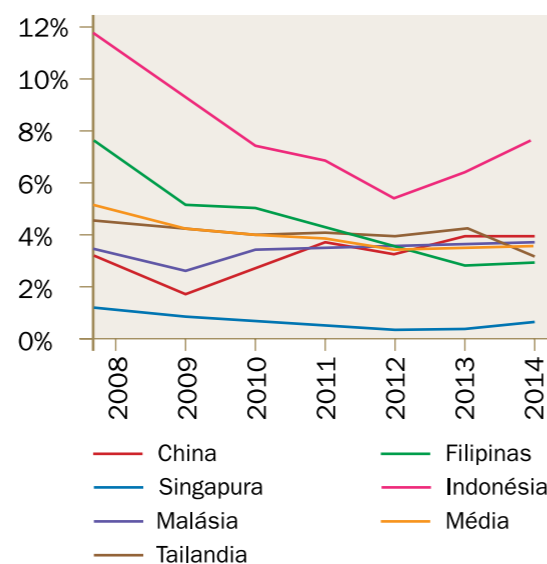
External accounts continued in surplus, except in Indonesia...

Exchange rates - % versus USD

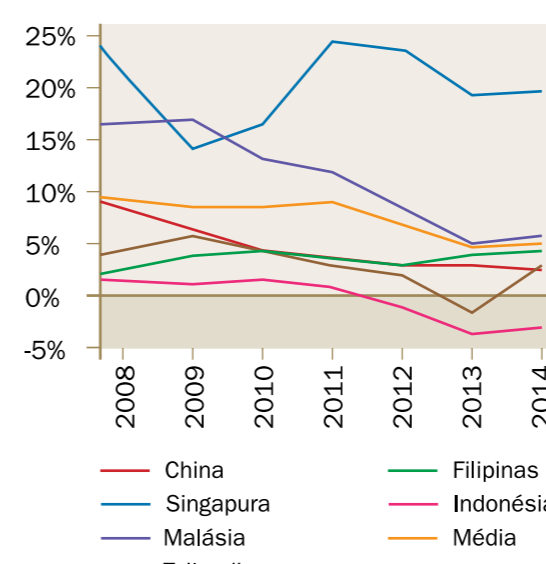


Fonte: Bloomberg

2 Year Bonds Yields in %

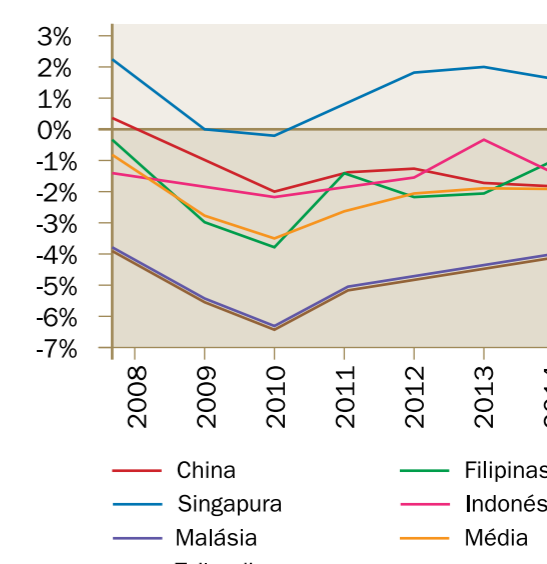


Current Account in % GDP



Fonte: Bloomberg

Public Surplus in % GDP



.... as 2 years rates were stable, except for Indonesia.

Bond markets interest rates, here represented by 2 years maturities, have been stable across the region in 2014, with Indonesia the notable exception. In the case of Indonesia, rates increased again in 2014, due to the hike in policy rates and increase of expectations of further needed rate hikes to answer to the depreciation in the rupiah and, simultaneously, to the pick up of inflationary expectations, especially needed given the perpetuation of the external deficit of the country.

Thus the regional macroeconomic backdrop continued to be stable in 2014, although we should highlight the generalized depreciation of the regional currencies versus the dollar. This depreciation seems more due to the end of extraordinary monetary support policies in the US, given that the region has kept robust economic growth and a strong external position.

In general, asian economies continued stable....



.... with the exception of Indonesia, which saw the rupiah depreciate substantially.  
.... due to high inflation pressures and external deficit.

Notwithstanding the positive regional backdrop, we note that Indonesia differs considerably from this picture. Note that the rupiah has fallen 11% versus the dollar in both 2013 and 2014, reinforcing domestic inflationary pressures, without yet correcting a significant part of the high external deficit position. Although experiencing high foreign exchange volatility levels, together with the referred macroeconomic imbalances, Indonesia still registered annual growth of 5% in 2014. The commercial and economic importance of Indonesia for our country implies naturally that we will continue to monitor the respective macroeconomic developments and spillovers, expecting that the recent policy measures introduced by the new incoming Government and a tighter vigilance by the Central Bank represents a positive step towards addressing these macroeconomic risks.

## Transmission Channels for Timor Leste

### Summary

The previous review of global and Asian macroeconomic and financial developments in 2014 is not complete, without an understanding of the respective impacts for our domestic economy. Here we identify the main transmission channels between the international developments and our economy. Currently, these channels are still few and limited to certain sectorial aspects of our economy. Specifically, this chapter illustrates the inner workings of the main transmission channels, which are: impacts on domestic inflation; influence on oil revenue and effects on the financial value of investments held in the Petroleum Fund. Foreign Direct Investment is also another variable highly influenced by external influences, but the dearth of effective investments and accurate data in Timor Leste, does not allow us to properly assess this interesting dimension.

Naturally, as our economy develops and deepens the interdependence relationships with its regional economic partners, we expect that external developments will influence even more domestic economic developments, expanding the number and influence of the various transmission channels.

### Imported Inflation

One of the more important transmission channels to our economy is the impact of international prices in Timor Leste domestic inflation and respective expectations. Given the high import dependence of our country – in 2012, goods and services imports amounted to 101% of non-oil GDP – it is natural that to expect a great degree of influence from international prices in our domestic inflation.

BCTL research and modelling efforts have in fact confirmed the empirical relevance of this channel. A major issue of our works in this context relates to the difficulty in defining an adequate variable that measures the level of external inflation for Timor Leste, since we still do not have an import price index variable and the basket of imported goods and services has varied considerably in terms of geographic origin and composition along the last decade. After experimenting different functional variables for external inflation, we have concluded that, the most successful measure, in empirical terms, seems to be an average of inflations rates for the 5 largest ASEAN economies and China, converted to dollars. In practice, this measure corresponds to the average of regional inflation rates in dollars, which includes simultaneously the impact of foreign exchange variations versus the dollar and local currency inflation rates.

As show in the chart below on the left handside, domestic inflation does tend to track developments in external inflations, although with less volatility. As external inflation corresponds to the average inflation of 6 economies, BCTL models used to explain and forecast inflation employ this variable to project domestic inflation. Additionally, as can be seen in the 2 charts below, the recent fall in domestic inflation coincides and was reinforced by the decrease in regional inflation rates, measured in dollar terms. Naturally, the relationship is not perfect, since there are other factors, such as the domestic non-oil economic cycle, especially along the last few years, that affect substantially domestic inflation rates.

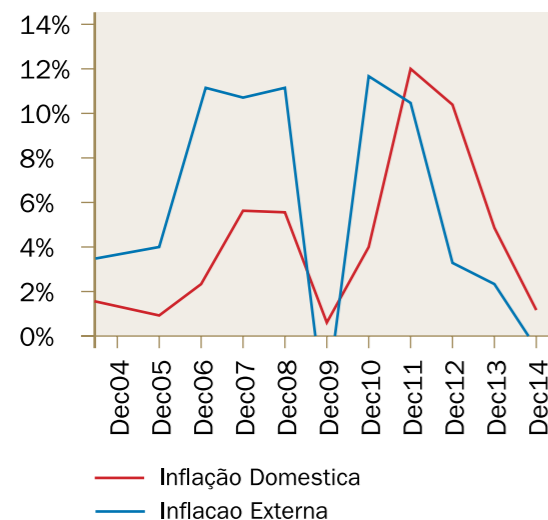
BCTL finised its model to explain and forecast inflation....

.... which included as drivers of inflation, the regional inflation in ASEAN and China and the domestic economic cycle.

External inflation influences domestic inflation....

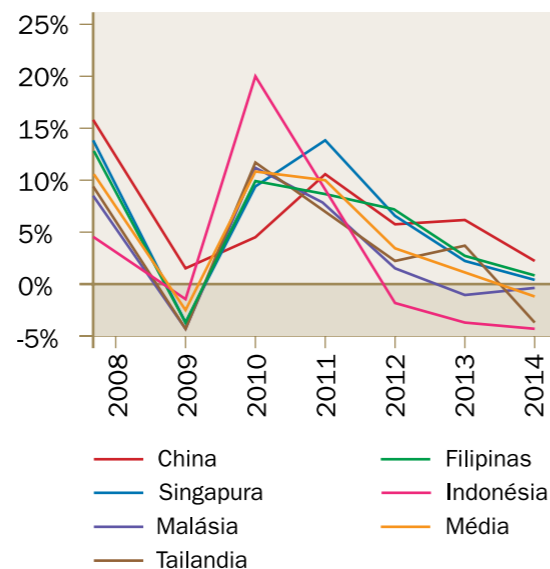
.... decrease in 2014 explained mosto f domestic inflation decrease.

**Inflation Domestic & External - % year**



Fonte: DNE e Bloomberg

**Regional Inflation rates - % year in USD**



Fonte: Bloomberg

**Lower regional inflation was mostly due to regional currency depreciation versus the dollar.**

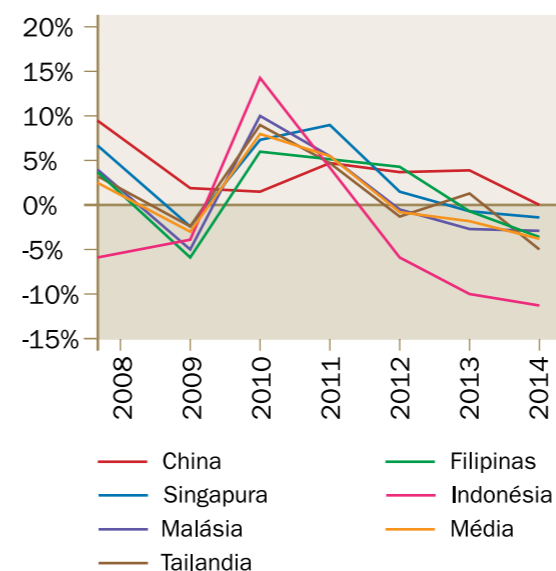
In 2014, the slowdown in regional inflation in dollars, observed for all 6 economies, particularly for Indonesia, was due to the depreciation of regional currencies versus the dollar, as can be confirmed in the charts below. In fact, this depreciation trend, registered in both 2013 and 2014, has been the main driving factor of domestic inflation rates in Timor Leste, as imported goods and services have become cheaper.

As local currency inflation rates are generally more stable, we conclude that foreign exchange movements are a major driver of domestic inflation trends. Note also that the commodities prices fall in 2014 also reinforced this downward movement in domestic inflation, as oil and food items prices have become substantially cheaper in 2014.



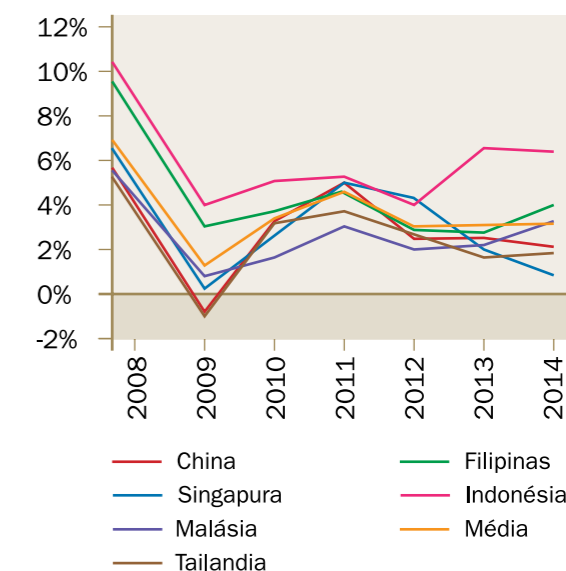
Given the importance of this channel, the outlook for domestic inflation is heavily determined by the movements of regional currencies against the dollar. In this context, BCTL continues to expect that the dollar will be relatively stable versus Asian regional currencies in 2015 and 2016, which, together, with stable and controlled local currency regional inflation rates, leads us to expect subdued external inflation pressures for the same horizon, contributing to controlled and lower domestic inflation rates.

**Asian Currencies versus USD - % year**



Fonte: Bloomberg

**Regional Inflation rates - % Local Currency**

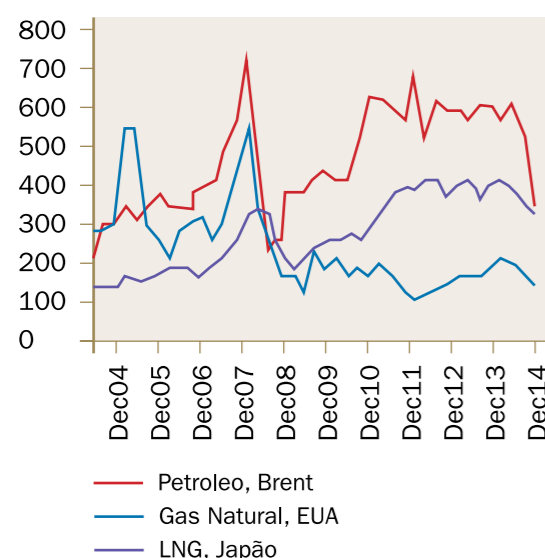


## Energetic Markets and Oil Revenues

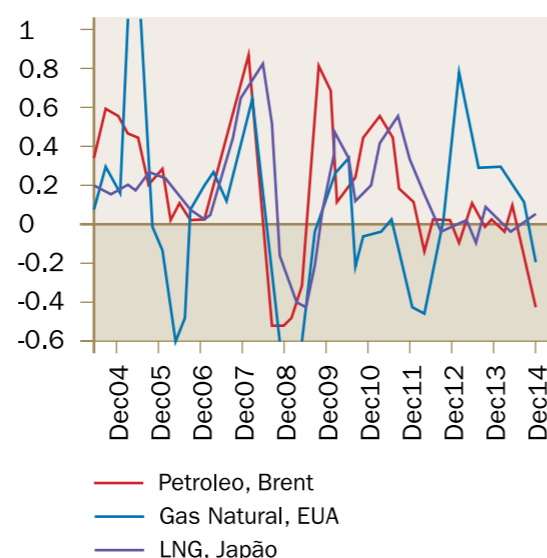
Oil price fell substantially in 2014, especially in the last quarter....

The change in prices of oil, natural gas and other energetic resources is highly volatile, oscillating wildly between periods of high and low price levels. The charts below depict these trends and allow us to put 2014 price changes within a broader pluriannual perspective. Note that it is not exceptional to register price falls of 50% and then subsequent price gains of 50% in the space of 1 year. In levels, the price fall of 2014 resulted in recording prices similar to those of 2006, eliminating all nominal price gains registered in the last 8 years. Interestingly, the oil price fall was not followed by an equivalent fall of natural gas prices, which resulted in the elimination of the premium of oil prices to natural gas prices.

Energy Spot Prices – 2001 Dec = 100



Energy Spot Prices – annual % change



Fonte: Banco Mundial

.... which was hardly predictable at the beginning of 2014.

The change in energetic prices is not, however, easy to forecast in advance, since it results both from the interplay of aggregate supply and demand in physical markets, as, and growingly, from the impacts, harder to quantify, resulting from the “financialization” of these markets, evident in the expansion of derivative markets and growing participation of financial intermediaries and speculators. As proof of such inability to forecast prices is clearly 2014’s price fall episode, whose speed and breadth were not, in anyway, foreseen by the generality of market players and analysts.

This note is important, because it warns us against accepting simplistic scenarios and extrapolations of further price decreases, only based in current price falls. On the other hand, the international price of oil continues to be very important for Timor Leste, because oil revenue continue to be fundament for the financing of domestic public spending and investments.

Taking into account the natural limitations of price forecasts to quantify future oil revenues of the country, it seems to be more reasonable to use various scenarios and assumptions for the price of oil and assess the degree of revenue sensitivity to each price scenario. The table below quantifies the impact of various mid-term oil price scenarios for oil revenues, total oil wealth and estimated sustainable income (ESI), which are compared to the figures included in 2015’s Government Budget. As can be seen, 2015 Budget assumes an average oil price level of 88.5 usd per barrel, between 2015 and 2021, which is above to 2014’s year end price of 60usd. The comparison with the relevant column, which presents calculations based on average oil price of 60usd, the present value of oil revenues decreases from 4716 millions usd to only 3198 millions. Importantly, the ESI, or the amount of annual income/spending which keeps oil wealth constant decreases from 638 million usd per year to 593 millions.

Continues to be very importante to monitor oil price trends for Timor Leste....

.... but use several and diferente price scenarios to evaluate future oil revenues.

ESI of 638 million usd was based in an oil price of 88.5 usd....

Sensibilidade do Valor da Riqueza Petrolifera e RSE ao Preço do Petróleo						
	Preço = 40 usd	Preço = 50 usd	Preço = 60 usd	Preço = 70 usd	Preço = 80 usd	<b>OGE 2015</b>
<b>Receitas Petroliferas</b>						
Preço Medio Petroleo, USD	40	50	60	70	80	<b>88.5</b>
Producao barris milhões	192	192	192	192	192	<b>192</b>
Valor Nominal	2405	3006	3607	4208	4809	<b>5323</b>
<b>Valor Actual</b>	<b>2132</b>	<b>2665</b>	<b>3198</b>	<b>3731</b>	<b>4263</b>	<b>4716</b>
Valor Activos Fundo Petrolifero	16567	16567	16567	16567	16567	<b>16567</b>
<b>Riqueza Petrolifera</b>	<b>18699</b>	<b>19232</b>	<b>19765</b>	<b>20298</b>	<b>20831</b>	<b>21283</b>
ESI - % Ano	3%	3%	3%	3%	3%	<b>3%</b>
<b>ESI – 3% x Riq. Petrolifera</b>	<b>561</b>	<b>577</b>	<b>593</b>	<b>609</b>	<b>625</b>	<b>638</b>



.... but 2014 year-end price was 60 usd, which will have indirecta impacto ver Timor Leste...

This analysis tried to offer an idea of the impact of international oil prices on our economy, whose transmission mechanism works indirectly, impacting first the oil revenues, then the value of Oil wealth and, lastly, the sustainable income and financing capacity of public spending and investment decisions. Note thus that the oil price considerably impacts, even if only indirectly, the management of Public Budget.

.... but this impact is lower than in the past, as financial assets are now larger than future oil revenues.

Nonetheless, we may state that today, given the expectation that oil production ends by 2021, the country, through oil revenue, is less exposed to international oil price changes than in the past, since the future revenues are today inferior to the savings already accumulated and invested in the Petroleum Fund. As an example, note that if the oil price decreases from 88.5 usd to 60usd (-33%) in the next 6 years, ESI is only lowered by 6.1%, from 638 to 593 million dollars on an annual basis.

### Financial Markets and the Petroleum Fund

In last, we analyse another relevant transmission channel, related to the Petroleum Fund, established to effectively manage the financial wealth of the country. This mechanism works in a way similar to the oil price mechanism, as financial assets prices determine the value of the Fund and, only subsequently, the annual ESI. As financial markets prices impact these 2 aggregates, they indirectly impact the public revenue available to finance the Public Budget and, consequently, the respective spending and investment policies.

Financial asset prices influence ESI and, subsequently Public Budget financing.

The Petroleum Fund (PF) closed 2014 with a total financial assets value of 16,830 million dollars, invested in global treasuries markets (60%) and global equities markets (40%), including thousands of companies stocks headquartered around the world. Since its establishment, the PF has gradually widened its investment universe, starting initially by only investing in US Treasuries, then moving into equities markets investment and, lastly, by spreading its investments in Treasury Bonds across all developed markets. This gradual trajectory followed the search for a higher expected return for the Fund as a whole and higher diversification of investments and asset classes.

Naturally, this institutional development exposes the Fund to new risks and markets, but, benefiting from greater asset diversification, allows a more solid investment portfolio and a more efficient return, for the desired risk allocation. Currently, the Fund only invests in fixed coupon treasuries and stocks, so that the rolling yield and dividends provide a fixed and stable income for the Fund, at least a priori. By investing in bonds and equities markets, the Fund benefits from increases of respective market prices, or, on the contrary, might lose by their decrease. In this context, the main financial risks of the Fund correspond to eventual losses arising from the decrease of bonds or equities prices. Additionally, since the PF invests in several international markets, many denominated in currencies different than the dollar, the Fund is also exposed to foreign exchange risk in its investments, which corresponds to eventual losses arising from the depreciation of investment currencies versus the dollar. All considered, the financial risk of the PF includes 3 types of risks: equity risk, or risk of price decreases in the main global equity markets, interest rate risk, which corresponds to the risks of price falls for global treasuries investments; and foreign exchange risk, which is driven by the risk of currency depreciation versus the dollar.

Presently, PF allocation consists of 60% for bonds and 40% for equities.

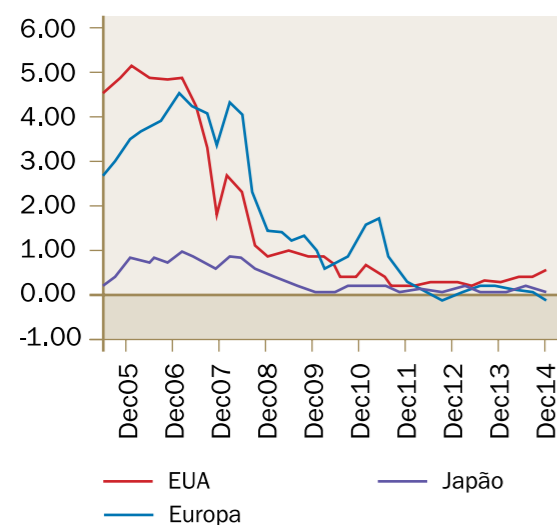
In 2014, the PF had positive returns for the 2 asset classes, but lost on foreign Exchange exposure.

The change in asset prices and investment currencies of the PF is thus the true transmission mechanism between international financial markets, the PF value and annual ESI. In terms of returns, 2014 was positive for the PF, which registered gains in treasuries investments (2.14%) and equity markets positions (5.20%). Nonetheless, the PF was negatively impacted by the depreciation of investment currencies versus the dollar, with total non-realized losses of -199 million usd at the end of 2014. Note also that the equities and bonds aggregate returns were above the respective dividend and yield returns, which implies that the respective securities registered price gains in 2014, which is confirmed in the charts below.

Lower yields resulted in higher prices for PF bond investments.

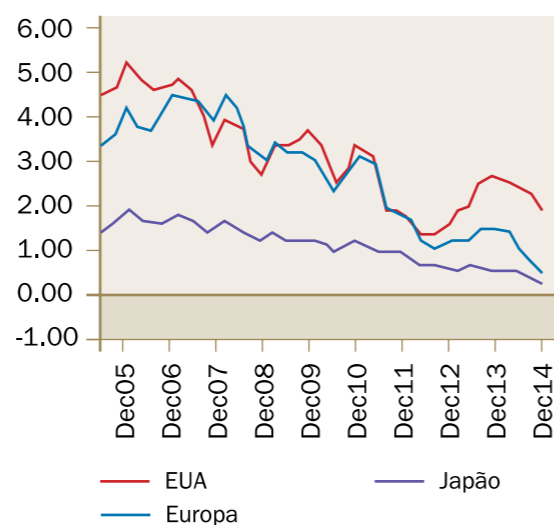
As to what relates to global treasuries markets, most of the relevant interest rates, across markets and maturities, registered small falls in 2014, which resulted in a generalized price rise of bond prices. The rates decreases were larger for the longer maturities of the curve, but in the case of the US shorter rates, they even registered small increases. Note, however, that, given the existing strategic framework, the bonds portfolio of the Fund has a “moderate” duration, thus reducing the benefit for the Fund of the decrease in longer rates.

2 Year Treasuries Yields in %



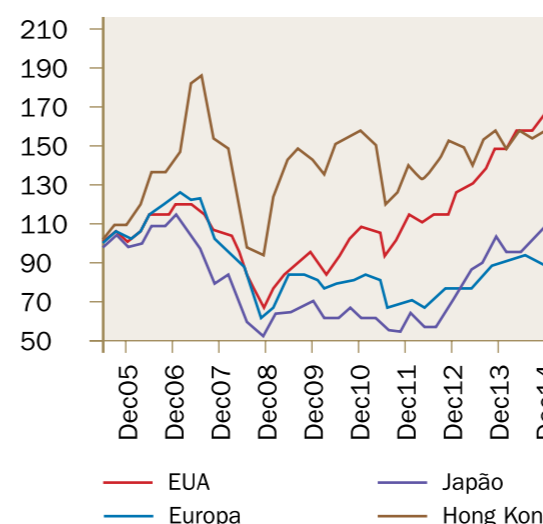
Fonte: Bloomberg

10 Year Treasuries Yields in %

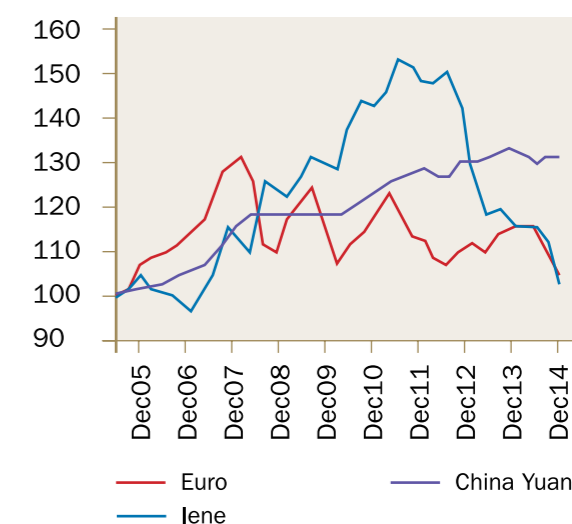


In terms of equity markets, practically all regions and countries registered gains in 2014, with particular highlight for the US, given its stronger economic dynamism. These positive developments, given the substantial investments of the Fund in equity markets, benefited the Fund’s return in 2014.

Equity Markets - 2005 Dec = 100



Currencies versus USD - 2005 Dec = 100



Fonte: Bloomberg

Lastly, the generalized appreciation of the dollar versus several of the investment currencies, following the announcement of a more restrictive monetary policy in the US, resulted in foreign exchange losses for the Fund.

All in all, the Petroleum Fund holds today a fully diversified securities portfolio, invested in the main global fixed income and equity markets, so as to achieve the highest possible return-risk profile. Nonetheless, given the substantial investments in both equities and global bonds markets, the value and income of the Fund are intrinsically dependent of the performance of the respective financial asset prices.

Within a broader and longer temporal framework, the risk of materialization of future losses in both equities and bonds markets is today substantial, given the high historical valuations of both asset classes. Nonetheless, given the long investment horizon of the Fund and its institutional framework, we expect to be able to face eventual market price oscillations rationally and even benefit from episodes of generalized price falls in the market, which tend to happen every once in a while.

PF value depends on the prices of both types of securities.