IMPACT OF OIL PRICE ON THE COLOMBIAN ECONOMY

Economic Research
Bancolombia Group

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Key Points

- After falling about 40% in 2H14, international oil prices are expected to fluctuate in a range between USD58-USD73 next year, with an expected value for the average WTI and Brent references of USD65.5 per barrel.

- The ultimate impact of the oil price shock on the Colombian economy depends crucially on whether it is temporary or permanent. Until now, experts favorite the latter.

- We believe this shock could have the following consequences:

Key Points

Exchange Rate

- For 2015 we estimate the USDCOP will fluctuate between COP2,350 and COP2,450, averaging COP2,400 and closing at COP2,350.
- If the current depreciation trend deepened the Central Bank could apply intervention mechanisms to the foreign exchange market.

Key Points

External Sector

- The trade deficit will widen to almost USD3bn in 2014 to USD6.9bn in 2015.
- The 26.4% drop in the value of oil exports will contrast with a recovery in other products and a contraction in imports.
- The current account deficit in 2015 will exceed 5% of GDP, with the larger trade deficit being partly compensated by lower transaction of profits.
- In the financial account inflows of direct and portfolio investment will fall.
- This will lead to a decrease in reserve assets.

Key Points

Public Finances

- The oil shock may trigger a negative scenario for public finances, one in which the difference between the government's projected deficit and the actual effect could be up to 0.8% in 2016. Furthermore, a recurrent pressure on the balance of the national government over the next decade is noticed.

GDP Growth

- The oil crisis has increased the likelihood of our bearish growth scenario in 2015 (3.9%).
- From the demand side, the oil shock will impact the external sector and, to a lesser extent, public and private investment and private consumption.
- From the supply side, the oil shock will have positive impacts on industry and agriculture (exchange competitiveness). In addition to mining, retail, construction, social and financial services could also be affected.

Key Points

Inflation

- The transfer of the depreciation of the exchange rate to inflation depends on its size and the state of the economy.
- As a result of the expected exchange rate depreciation headline inflation could rise by 1.08%. However, the scenario is complicated: the impact of falling oil prices and the depreciation of the exchange rate must be considered.
- The impact of depreciation could transfer to inflation faster. The impact of oil may be slower but the combined effect will depend on the persistence of both shocks over time.
- As inflation expectations remain within the target range the Central Bank's leeway to apply a more expansionary monetary policy will be higher.

Key Points

Credit

- Short-term impact: Drop in imports and retail. Medium-term: Positive for industry and non-traditional exports.
- Given the short-term negative effect on real activity a fall in credit growth is recorded. In the medium term this trend is reversed except for credit in foreign currency.
- The quality of loan portfolio improves as the slowdown in expired credit is greater than in the gross balance. Furthermore, the positive effect of real variables contributes to this trend in the medium term.

1. OIL PRICE: RECENT EVOLUTION AND PERSPECTIVES

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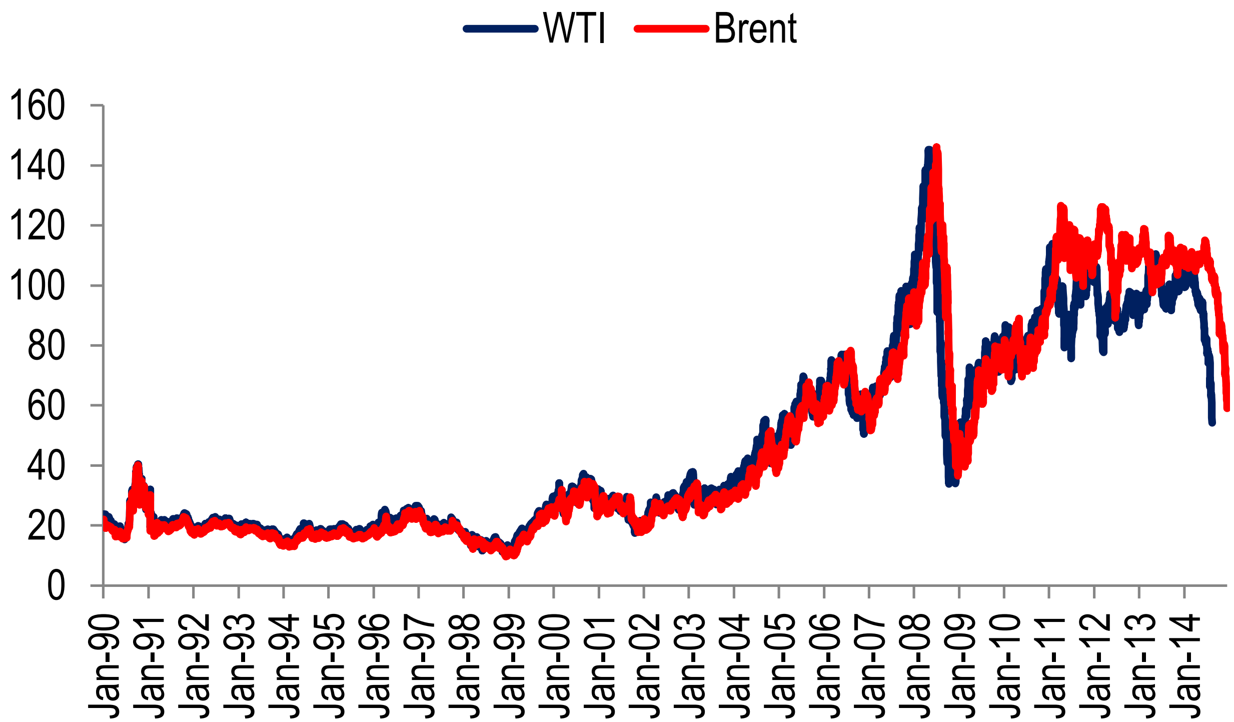
The drop in the international price of almost 40% in 2H14 has been one of the sharpest in the last 30 years, the only comparable situation being the 2008 global crisis

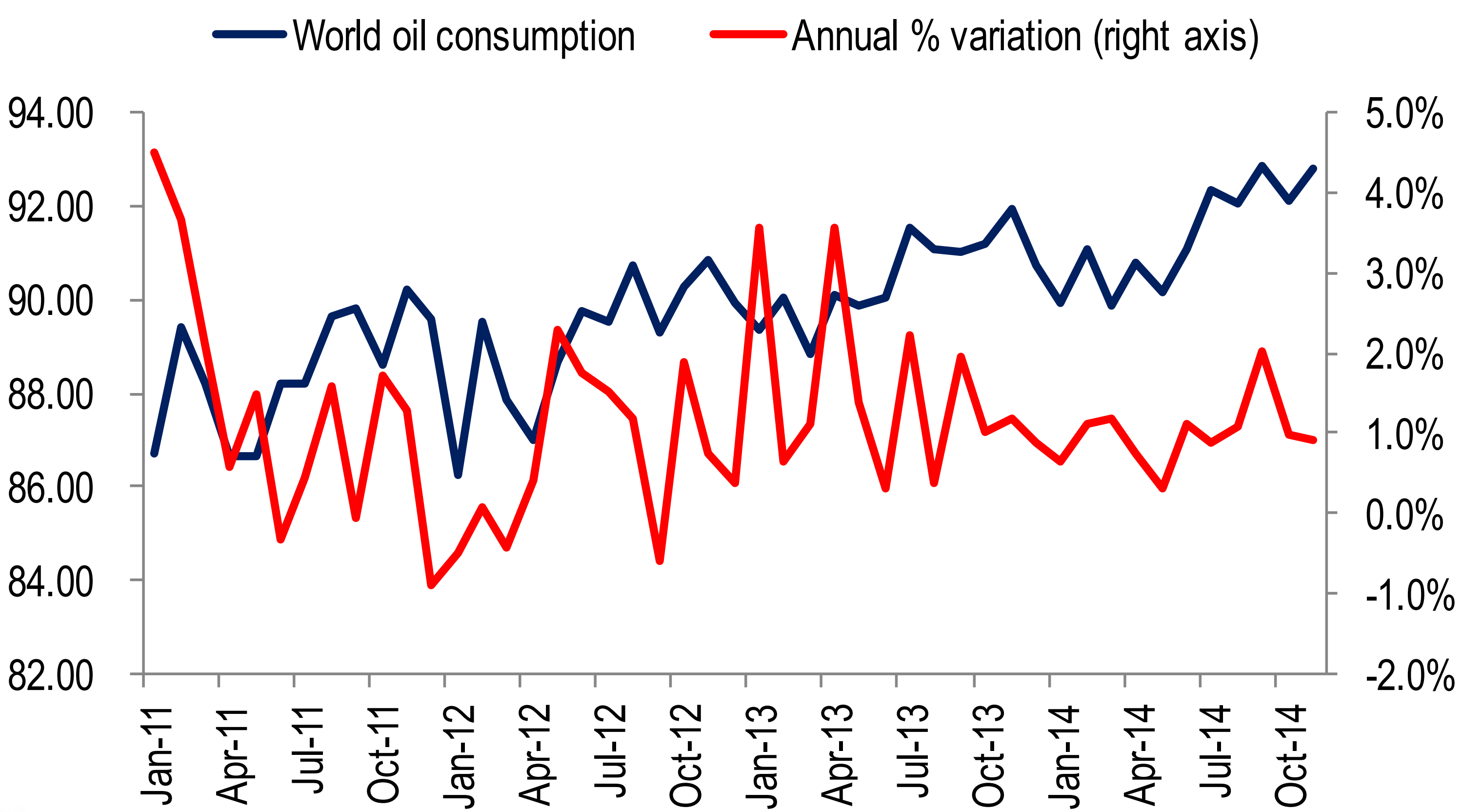
International Oil Price (USD per barrel)



Source: Grupo Bancolombia, Bloomberg

This trend is partly explained by the slowdown in demand coming from the slowdown in productive activity and reduced growth forecasts for 2014. However, this slowdown does not look particularly severe

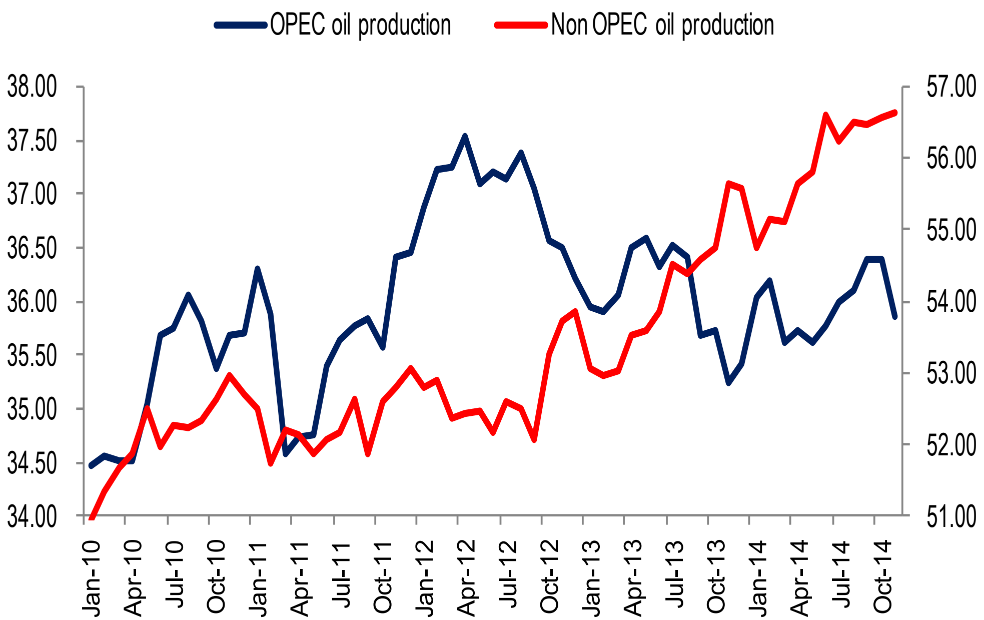
World Oil Consumption
(mn barrels per day and annual % change)



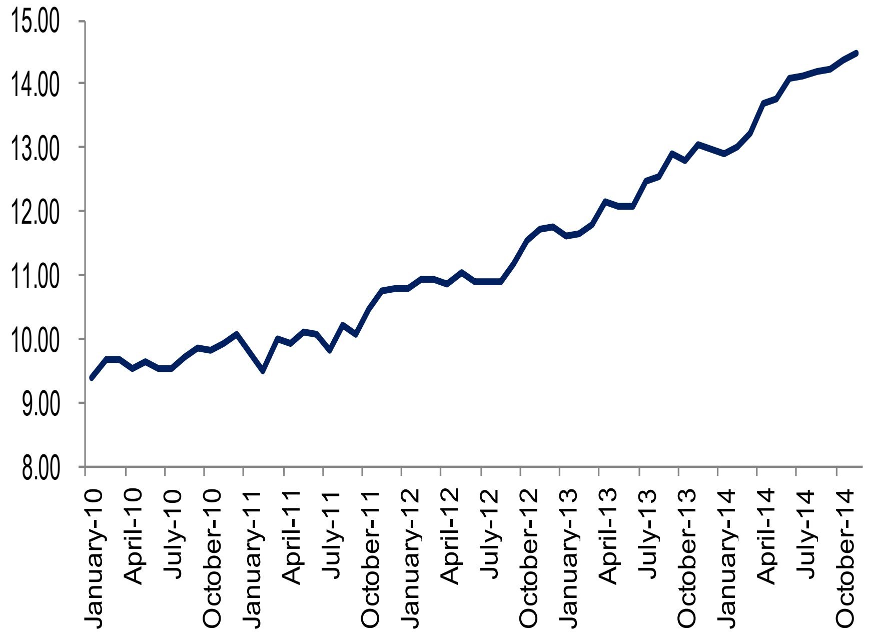
Source: Grupo Bancolombia, EIA

The underlying reason is oversupply in the market, mainly the result of the rise of unconventional production in the U.S. and the OPEP's increasingly ineffective action. This has led to a structural change in the configuration of the global oil market

Oil Production in OPEP and Non-OPEP Countries (mn of barrels per day)



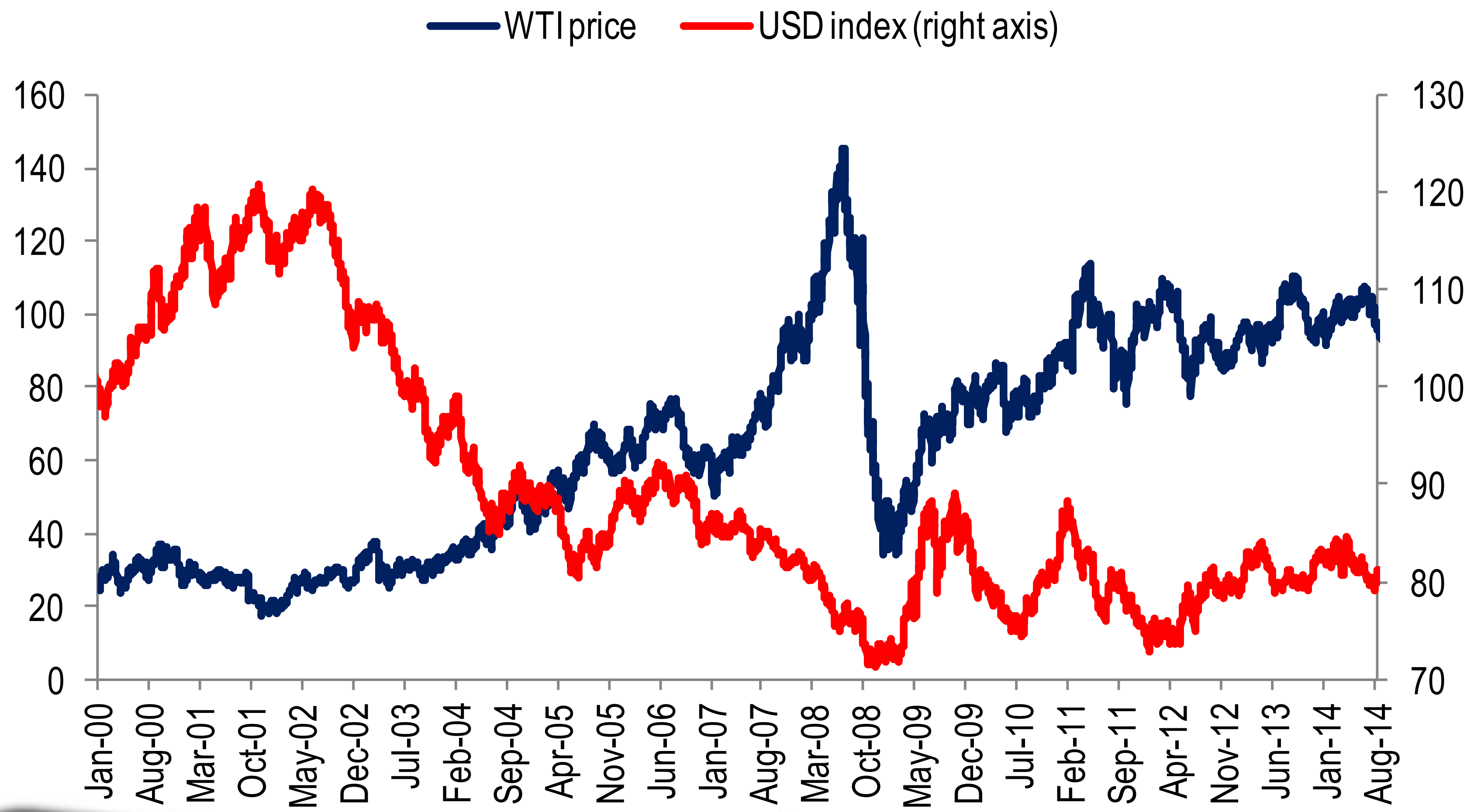
U.S. Oil Production (mn of barrels per day)



Source: Grupo Bancolombia, EIA

Market factors should be added to this fundamental reason. One is the strong dollar this year which makes the cost of oil in local currency higher for oil importing countries

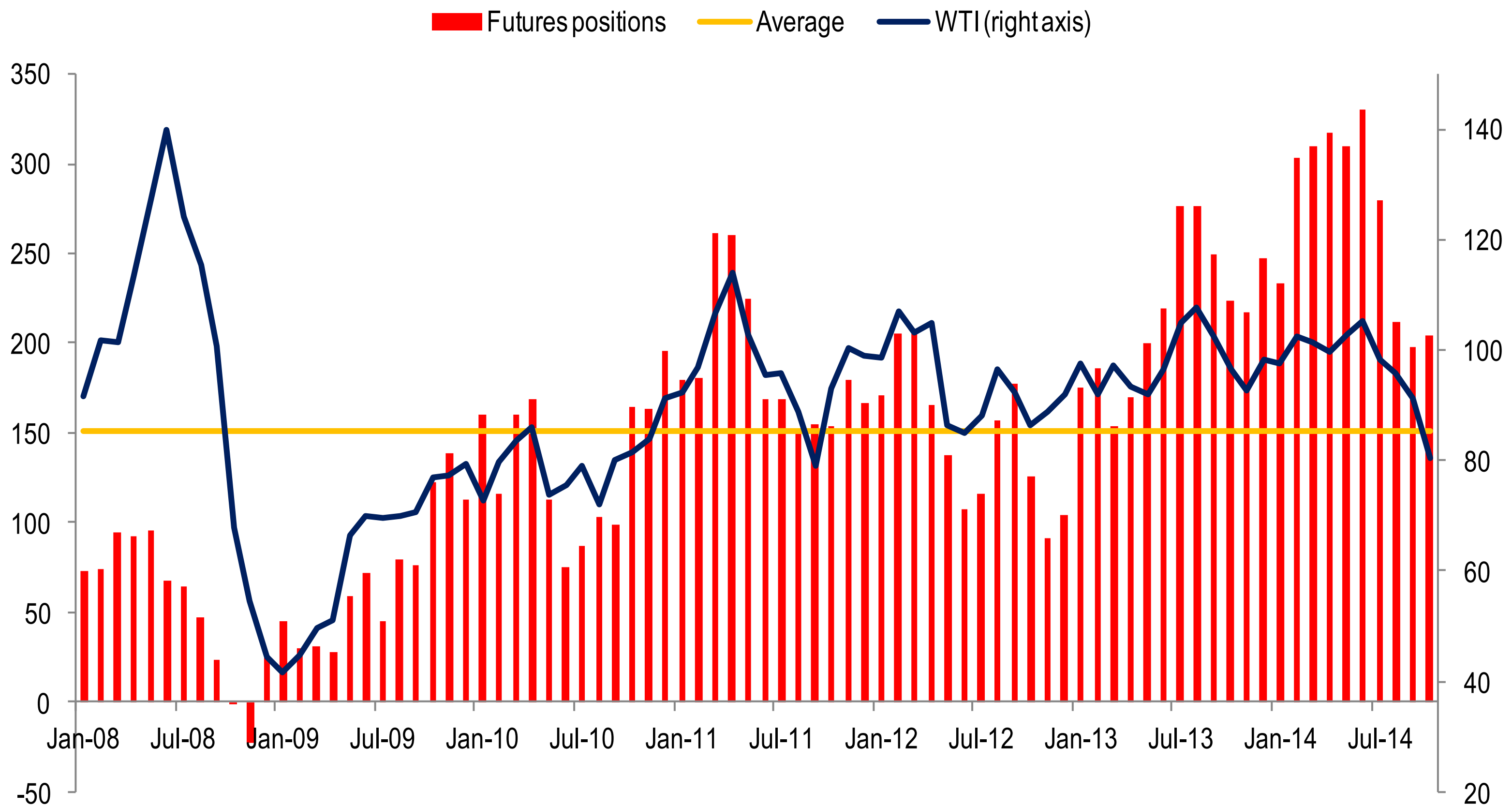
USD Index and WTI Price (USD per barrel)



Source: Grupo Bancolombia, Bloomberg, IIF

Another market factor was the accumulation of long positions in derivatives by institutional investors, which reached their peak mid-year. The clearing of these positions has exacerbated the downward trend

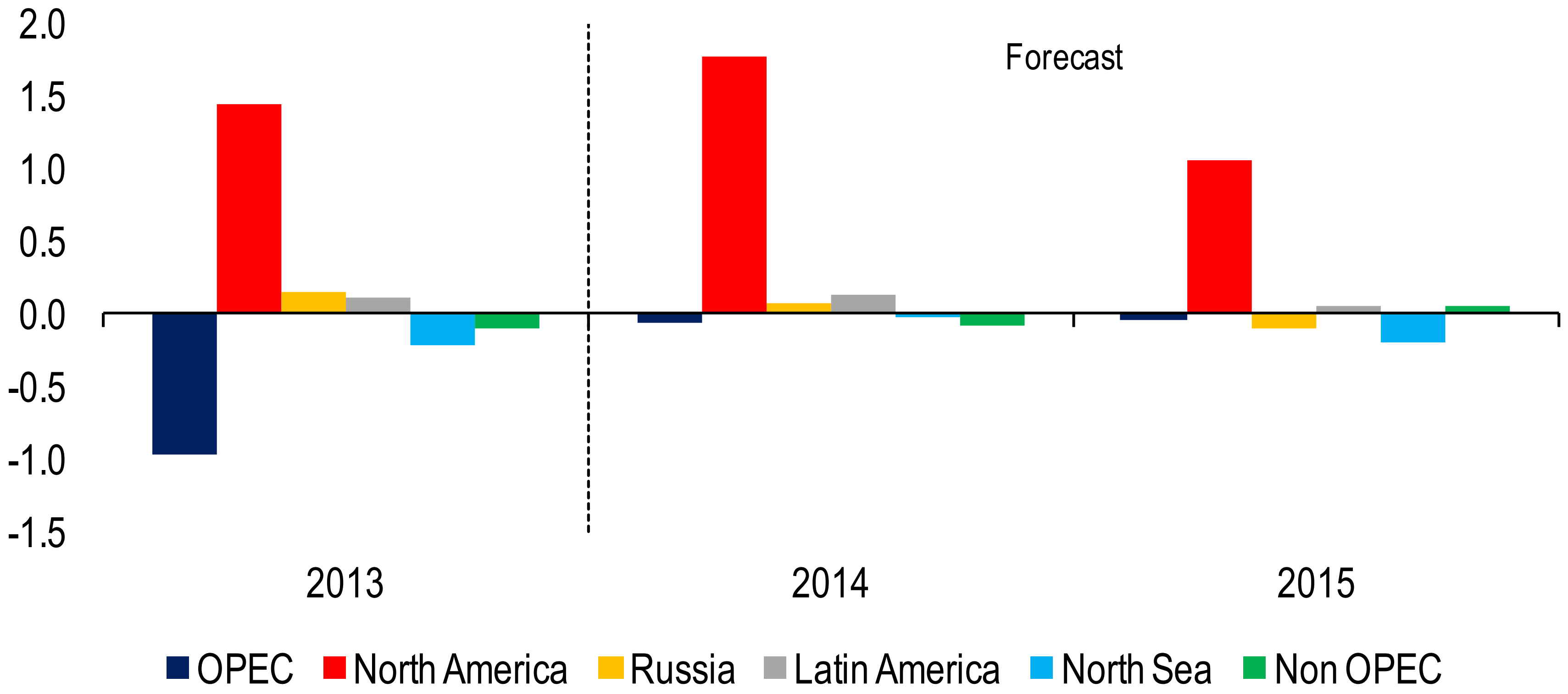
Long Positions in Oil Futures by Institutional Investors in the U.S. (number of contracts) and WTI (USD per barrel)



Source: Grupo Bancolombia, EIA, IIF

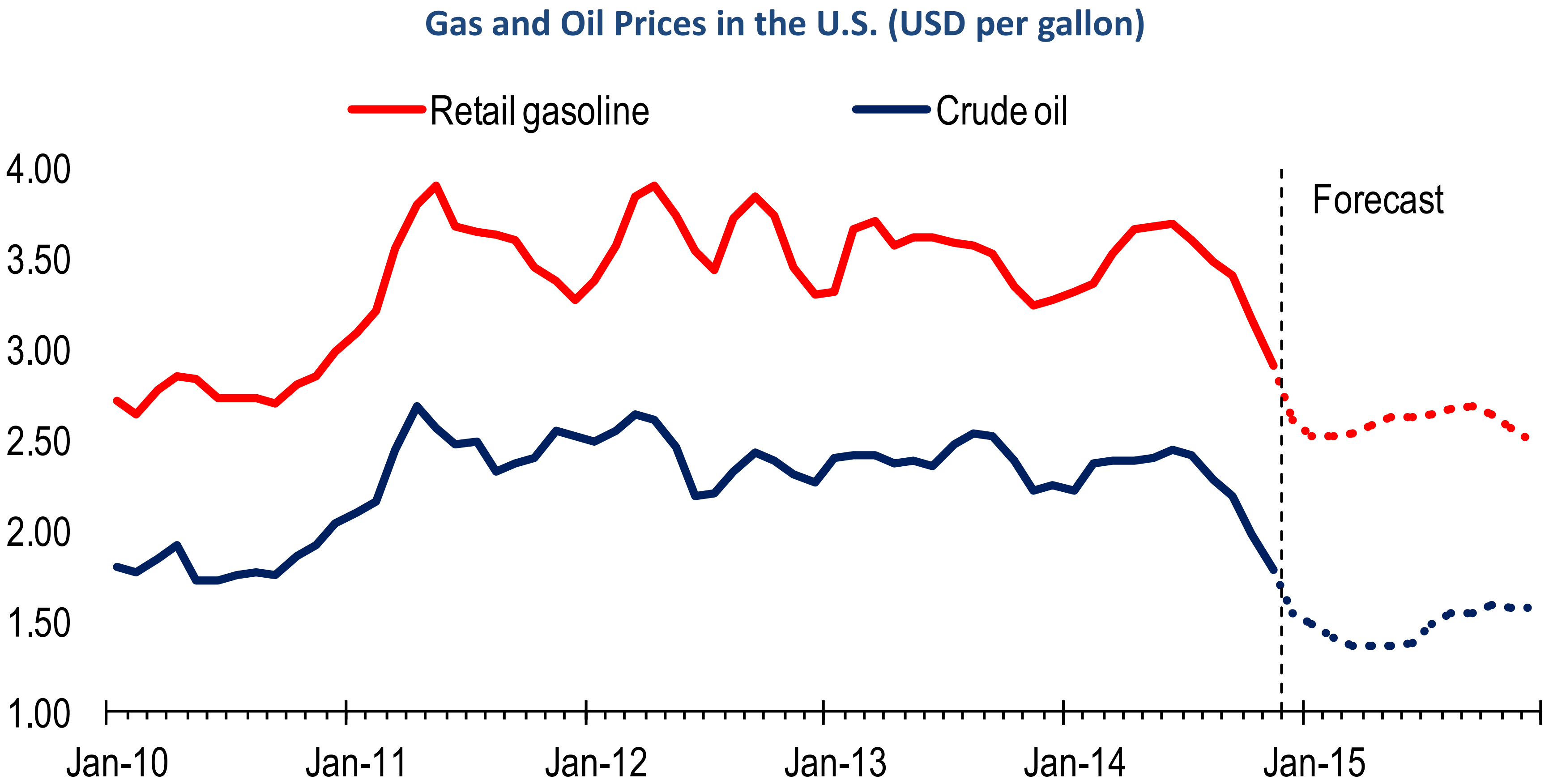
Despite the structural changes in the market, the recent slump in prices may lead to their stabilization in the medium term. One reason for this is that the growth of oil supply is expected to drop in 2015

Growth of Oil and Liquid Fuels in OPEC and non-OPEC Countries (mn barrels)



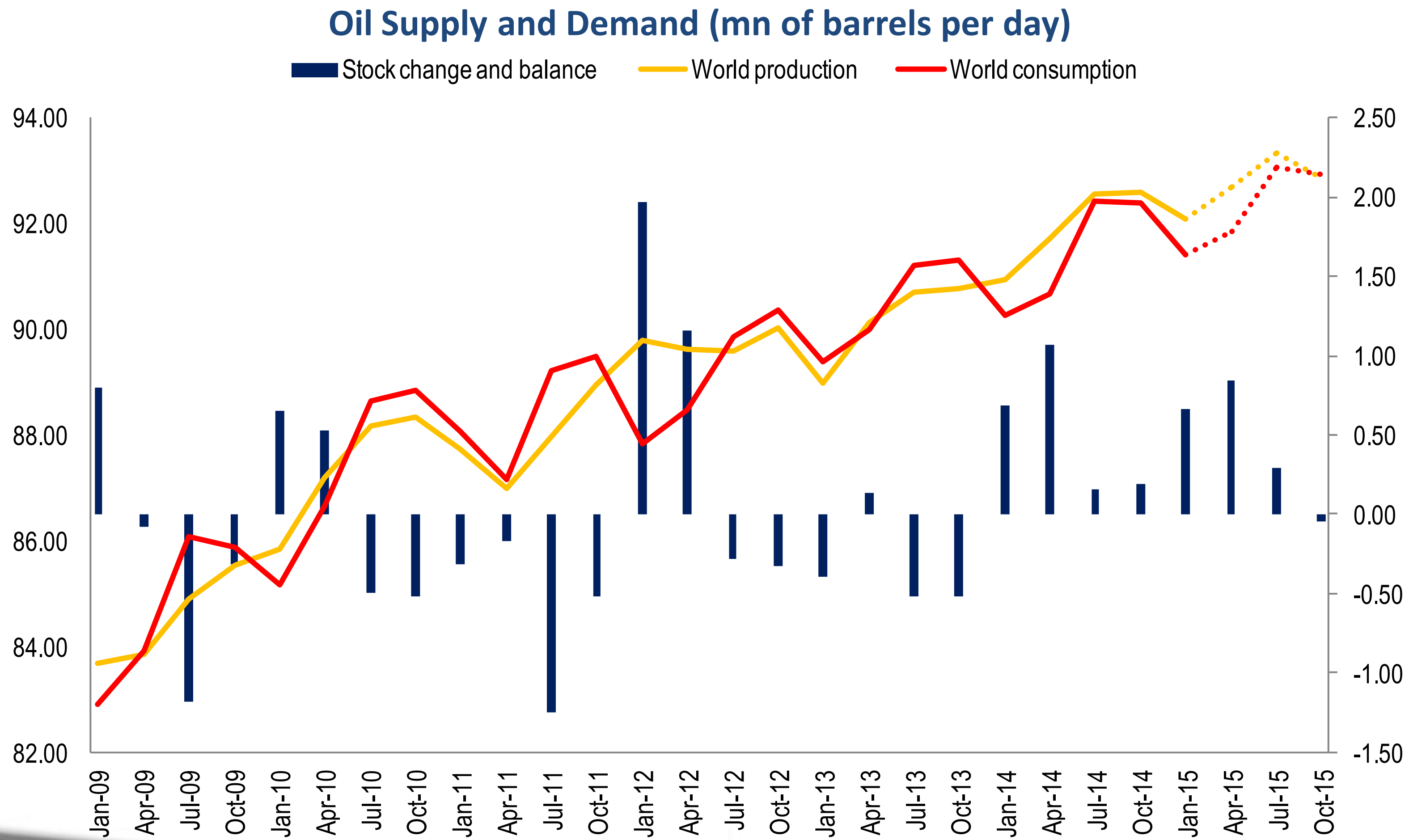
Source: Grupo Bancolombia, EIA

Another reason to foresee stabilization is that low fuel prices can trigger a rebound in demand, particularly in 2H15



Source: Grupo Bancolombia, EIA

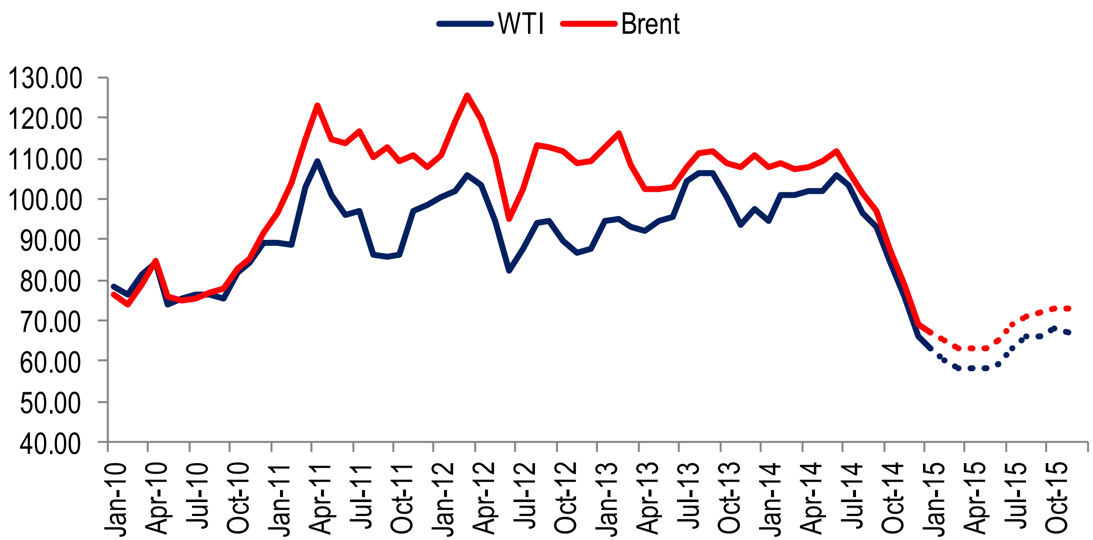
As a result, worldwide oil surplus is expected to gradually decrease in 2H15



Source: Grupo Bancolombia, EIA

Therefore, the U.S.' EIA and the International Energy Agency forecast that after reaching its lowest in 2Q15, prices will slightly rebound in 2H15. However, the WTI average price will go from USD94.6 this year to an estimated USD62.8 in 2015

Observed and Projected International Oil Price (USD per barrel)

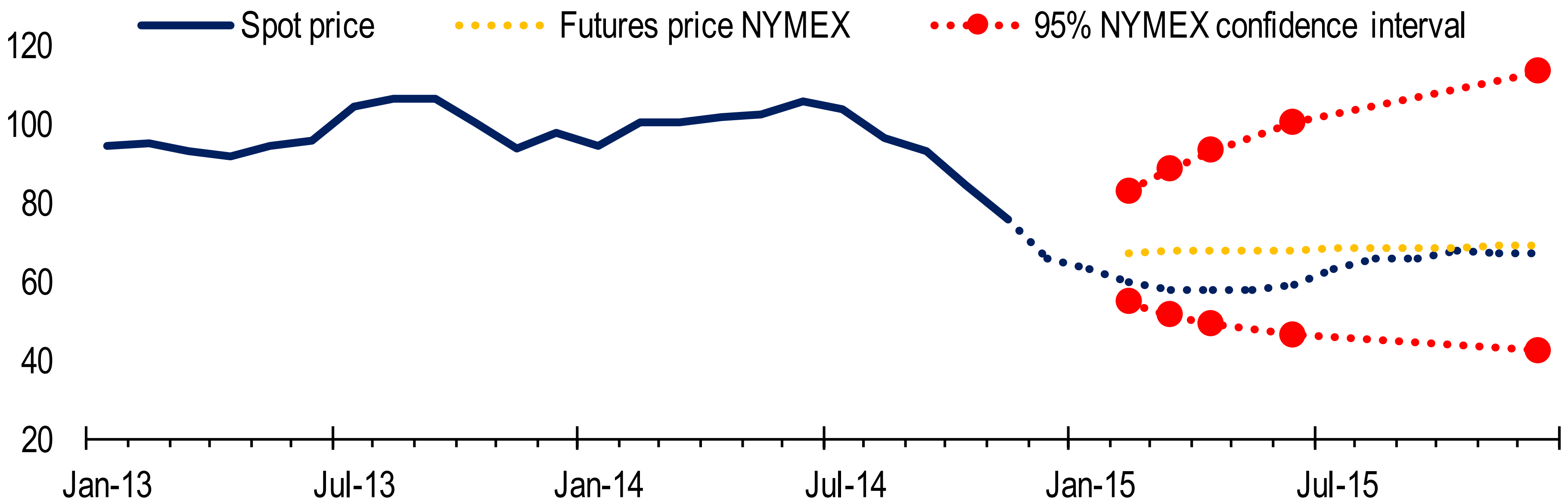


	Brent Price		WTI Price		Average Price	
	Value	Change	Value	Change	Value	Change
2010	79.51	26.9%	79.4	27.9%	79.455	27.4%
2011	111.26	39.9%	94.86	19.5%	103.06	29.7%
2012	111.65	0.4%	94.12	-0.8%	102.89	-0.2%
2013	108.64	-2.7%	97.91	4.0%	103.28	0.4%
2014	99.54	-8.4%	94.62	-3.4%	97.08	-6.0%
2015	68.08	-31.6%	62.75	-33.7%	65.415	-32.6%

Source: Grupo Bancolombia, EIA

However, it is important to note that the uncertainty in these forecasts is high as implied volatility in oil contracts has seen a significant rise in recent months

Oil Price Projections in NYMEX (USD per barrel)



Source: Grupo Bancolombia. EIA

2. OIL IN THE COLOMBIAN ECONOMY

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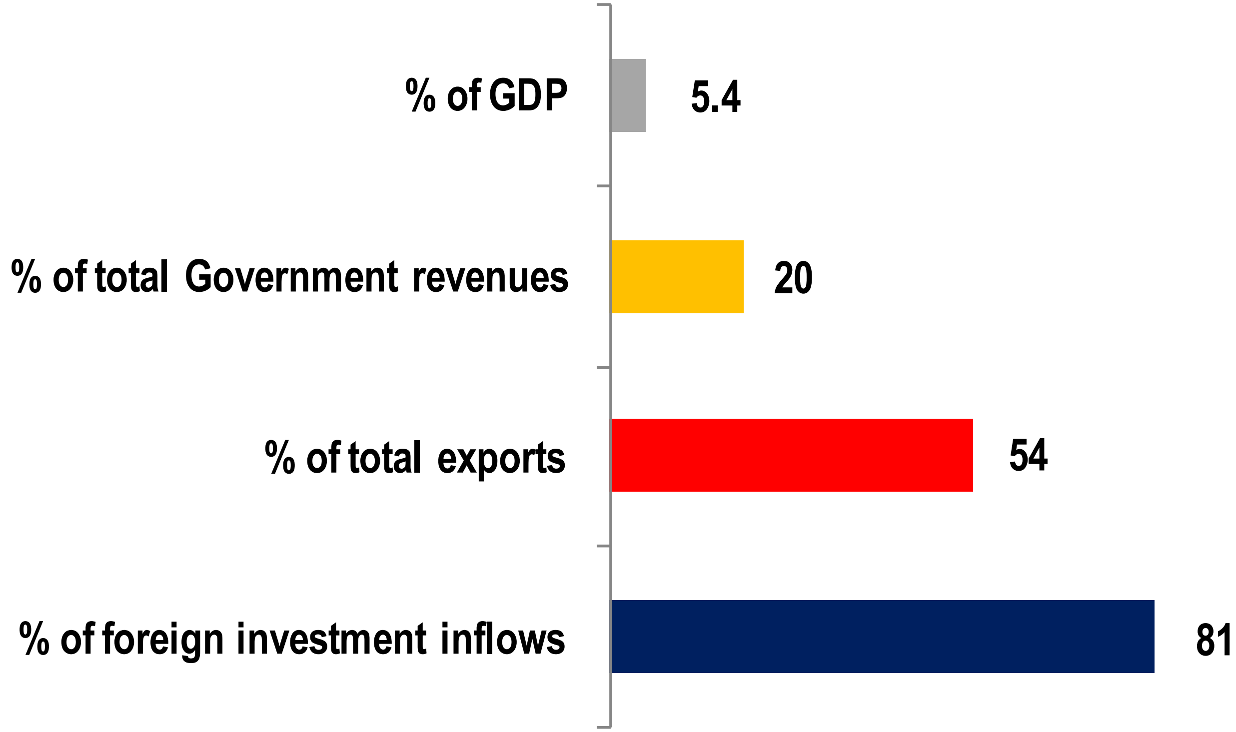
Being an economy diversified by productive activity, dependence of Colombian GDP on the oil sector is low. However, the sector's participation in public finances and the external sector is notorious

Weight of Oil in the Colombian Economy
(% of total, average last 3 years)



Source: Bancolombia Group, DANE, Central Bank

This dependence, specially international trade's, is obvious when comparing Colombia to other oil producers in the region

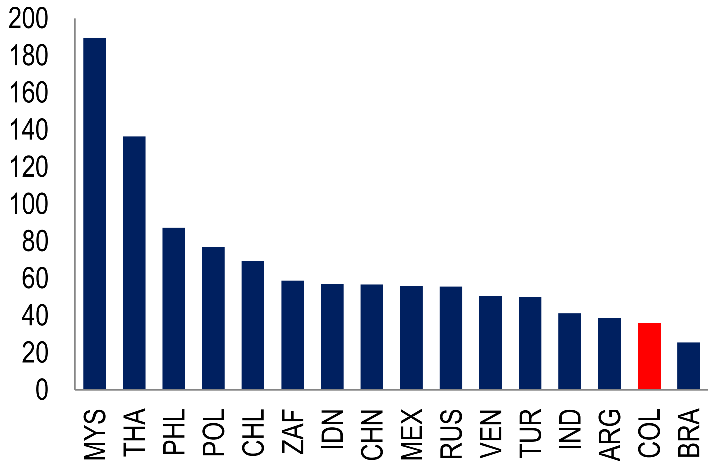
Participation of Oil in Different Aspects of the Economy in Latam Oil Producers in 2013 (% of total)

	Exports	Government revenues	GDP
Venezuela	96%	47%	11%
Ecuador	57%	31%	11%
Colombia	55%	18%	6%
Mexico	13%	33%	6%

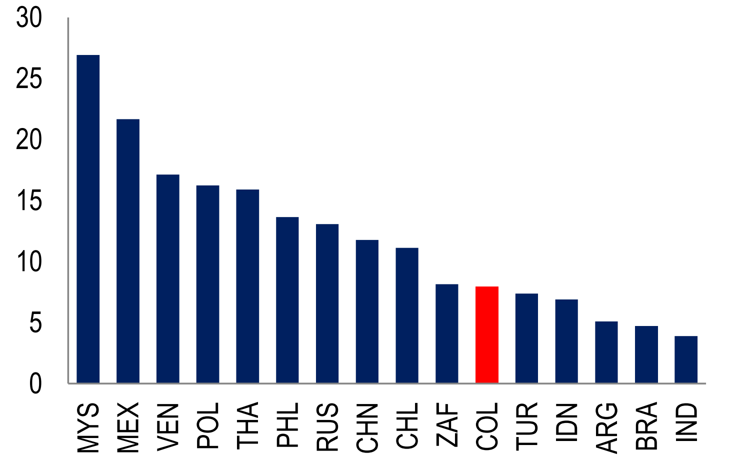
Source: Bancolombia Group, IIF

However, it is worth remembering that the Colombian economy remains relatively closed

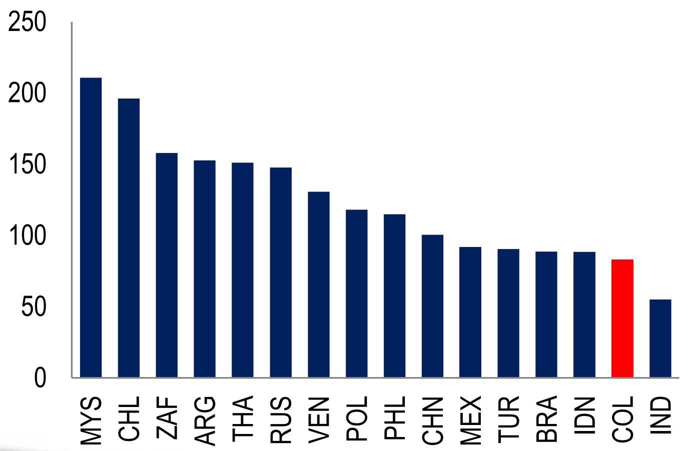
Trade Openness (X+M as % of GDP)



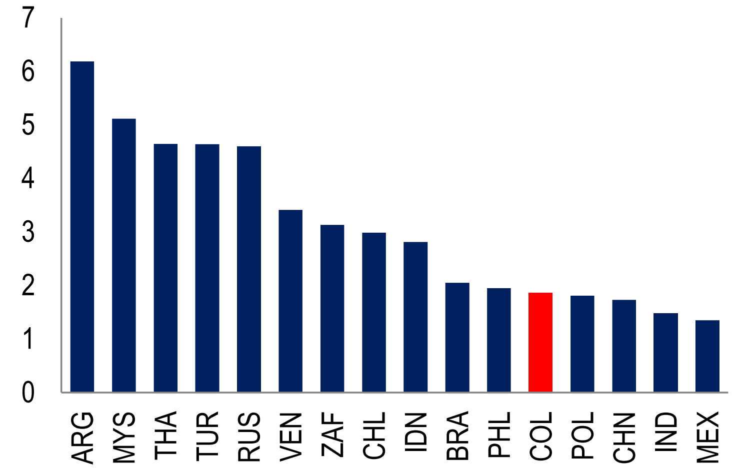
Trade Exposure to Developed Countries (X to U.S. and Euro Zone as % of GDP)



Financial Openness (foreign investments and liabilities as % of GDP)

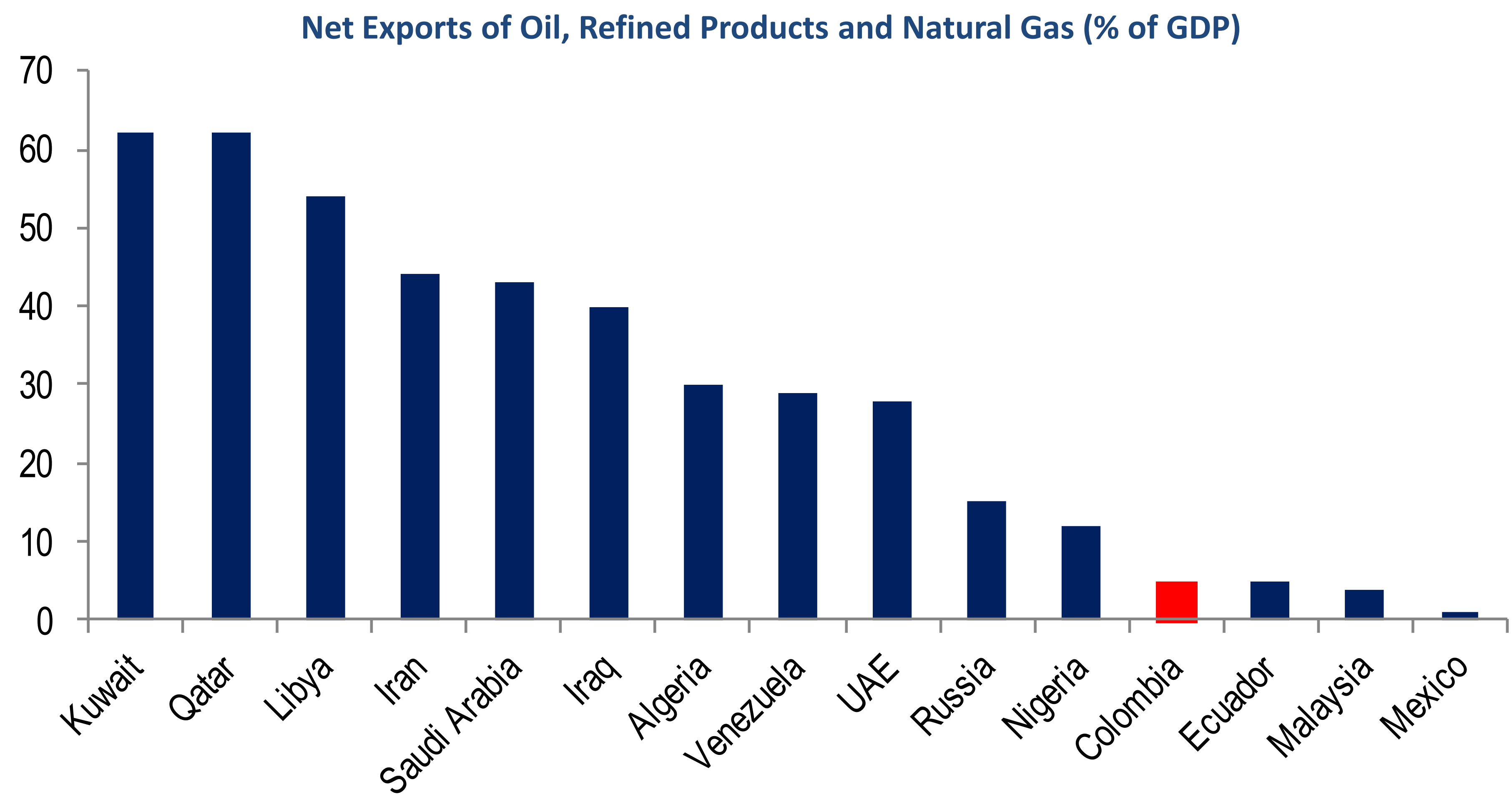


Exposure to Volatility of Capital Flows (deviation of private flows as % of GDP)



Source: Grupo Bancolombia (GB), FMI

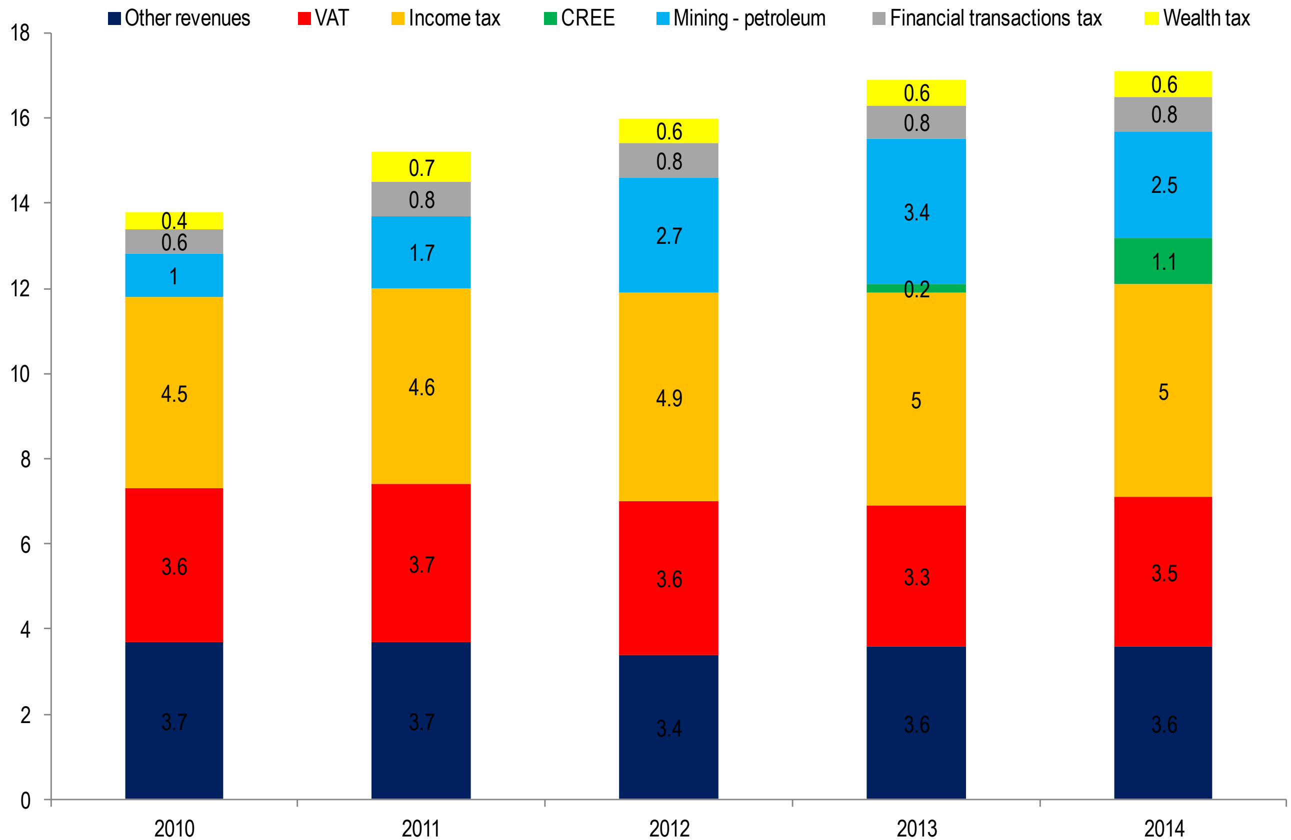
That is why, in relative terms, oil exports as % of Colombian GDP are low. This leads to their aggregate impact on the performance of the economy to be limited



Source: Bancolombia Group, IIF

Until last year the increase in oil revenues was an important determinant in strengthening the country's fiscal position. With the structural changes in the oil market is unlikely for these revenues to increase substantially in the future

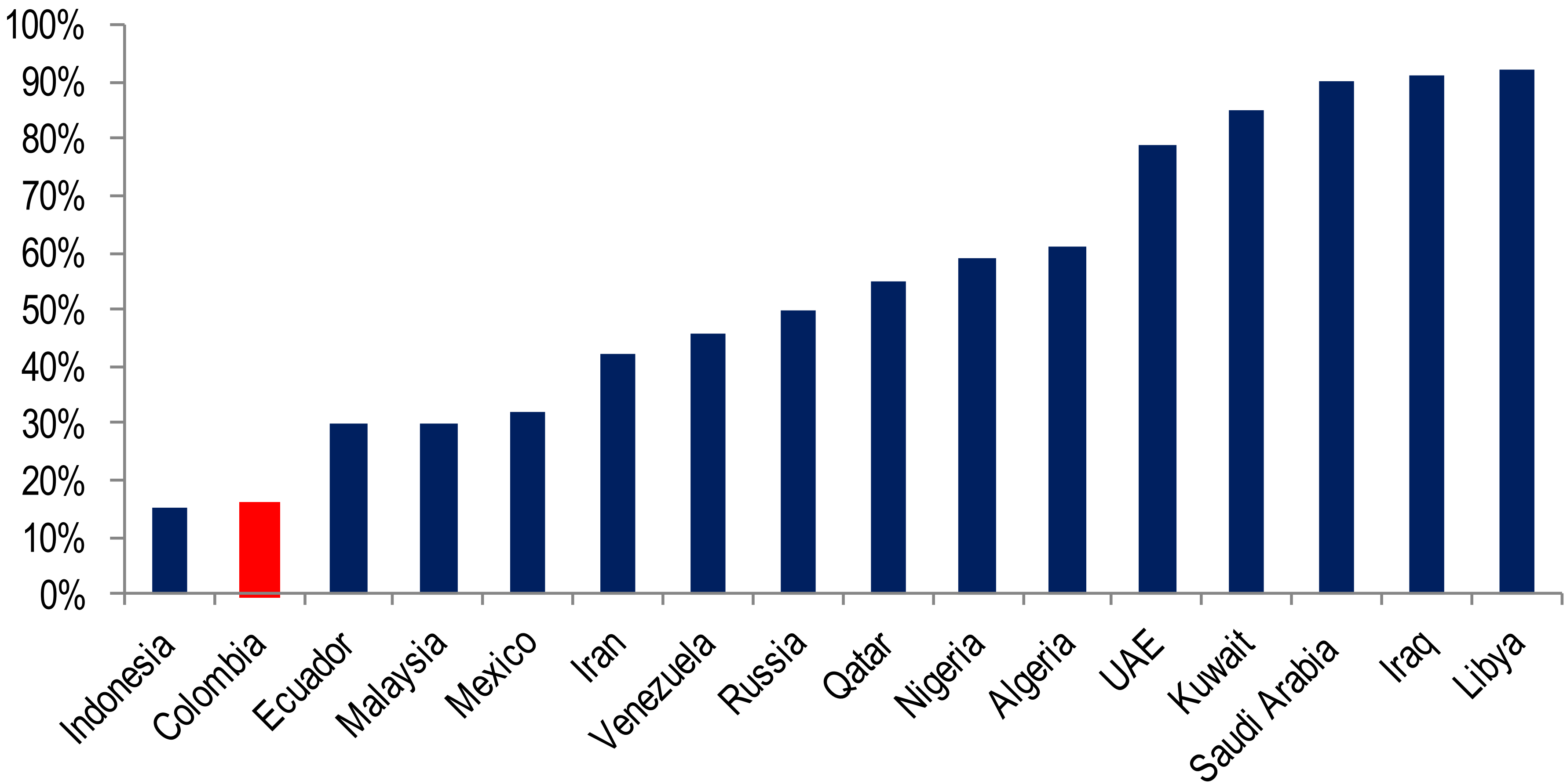
Central Government Revenues (% of GDP)



Source: Bancolombia Group, Bloomberg

However, Colombia's fiscal vulnerability is lower than that of the world's major oil producers

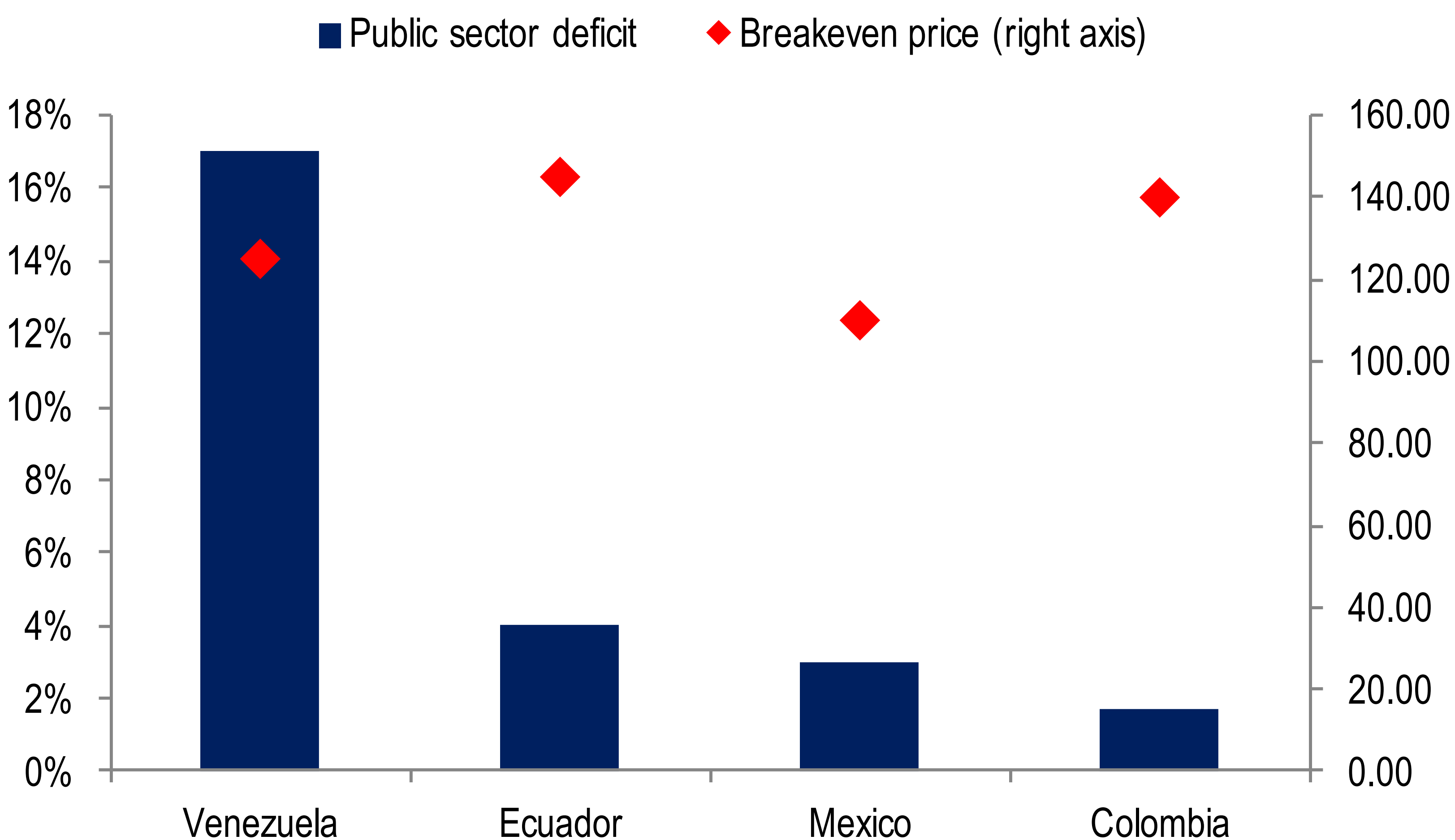
Oil and Natural Gas Revenues in 2013 (% of government's total income)



Source: Bancolombia Group, IIF

The starting point in the balance of the central government is more favorable to Colombia than to other oil producers in the region

Government Deficit in 2013 (% of GDP) and Breakeven Oil Price for the Budget



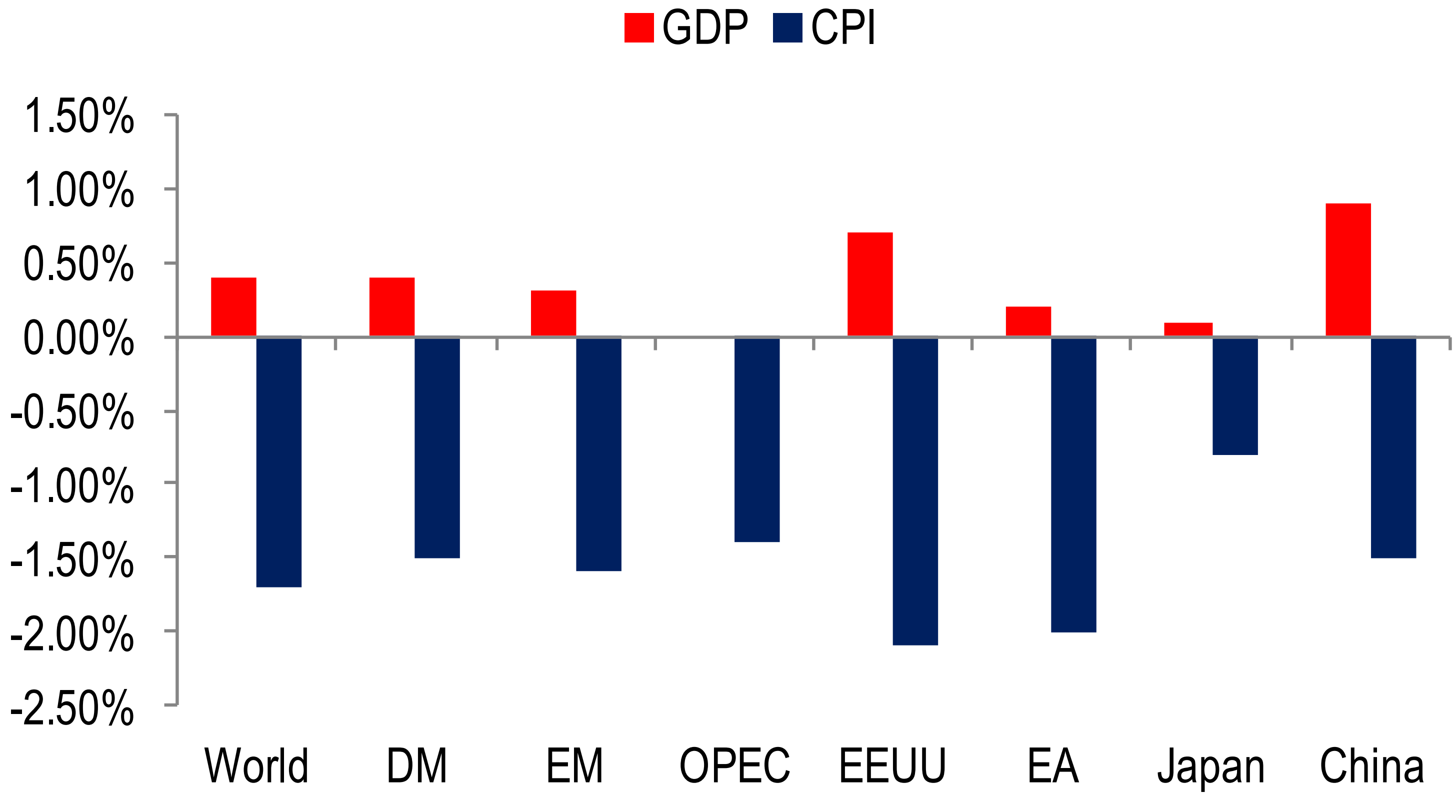
Source: Bancolombia Group, IIF

3. ECONOMIC IMPACT

3.1 EFFECT ON THE GLOBAL ECONOMY

The impact of the fall in oil prices is positive for the global economy, particularly for developed countries and China. In terms of growth, its biggest boost is found in private consumption. It also helps reducing inflation and keeping inflation expectations controlled

Effect on GDP and Inflation of a USD25 Fall in Oil Price

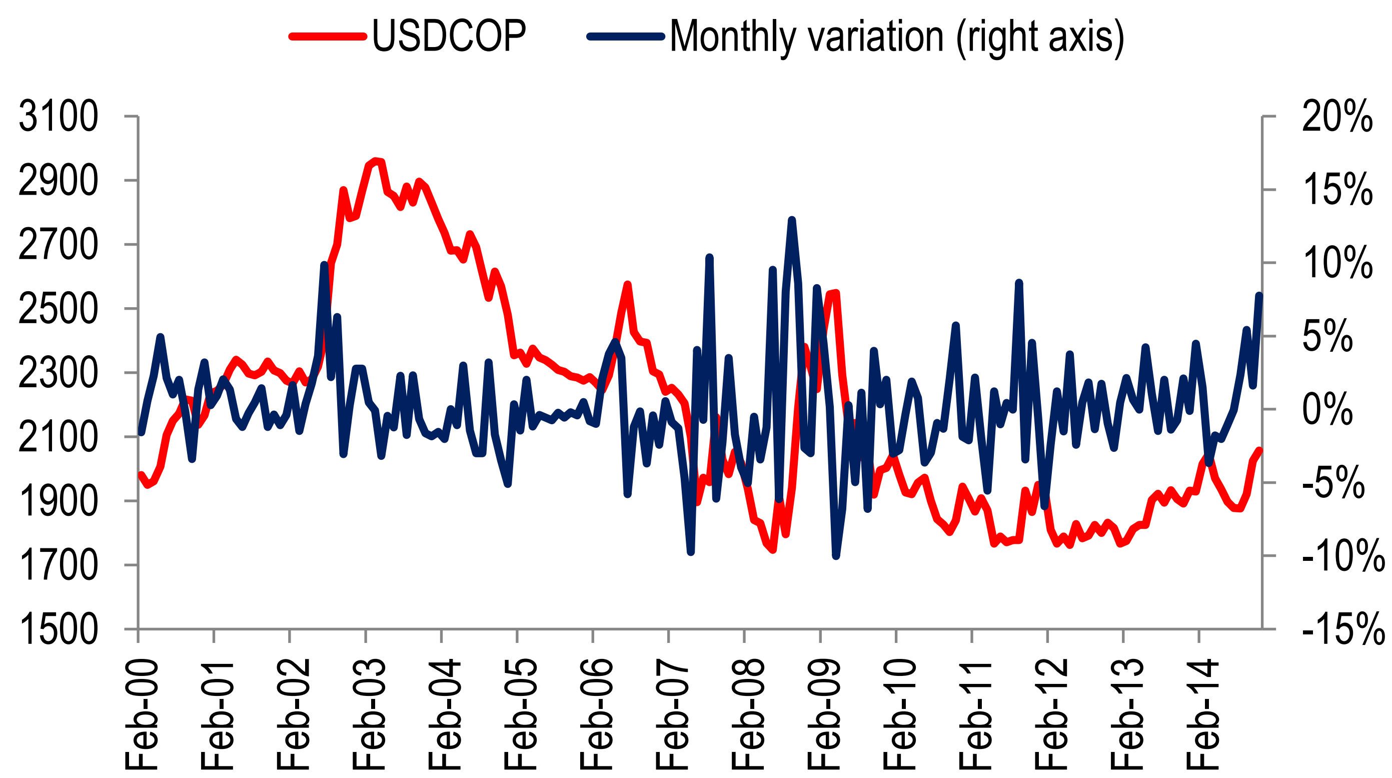


Source: Bancolomba Group, IIF

3.2 EFFECT ON THE EXTERNAL SECTOR AND THE EXCHANGE RATE

The first channel of transmission of the shock in oil prices has been the USDCOP rate which records one of the highest rates of increase since Colombia adopted the system of flexible exchange rate

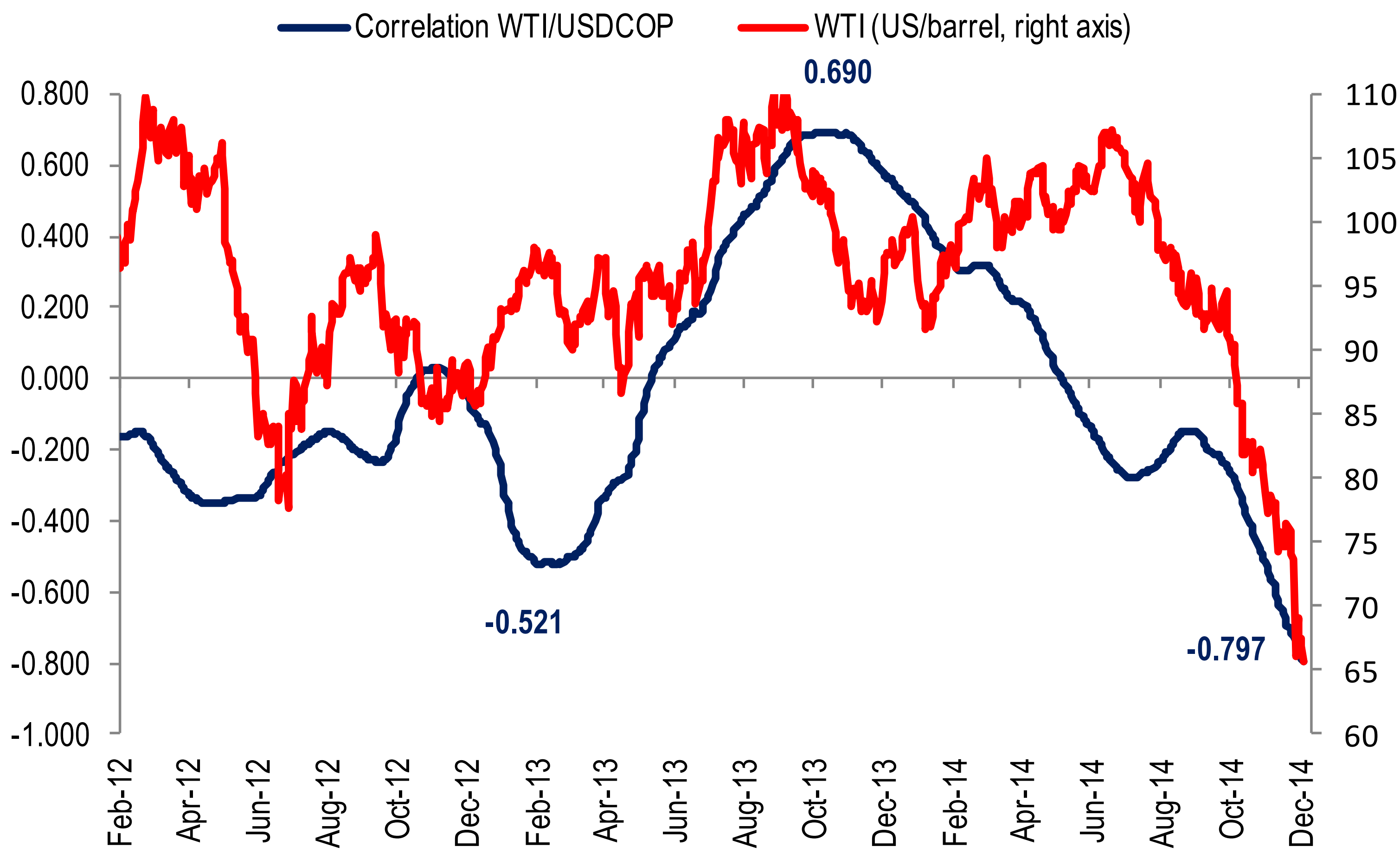
USDCOP Exchange Rate and Monthly Variation



Source: Bancolombia Group, Bloomberg

The correlation between oil prices and the exchange rate is now very significant. This trend could be partially reversed during 2015

Oil Prices and their Correlation Coefficient with USDCOP (MA 1 year)



Source: Bancolombia Group, DANE

We estimate that the trade deficit would widen from almost USD3bn in 2014 to USD6.9 in 2015. The 26.4% drop in the value of oil exports will contrast with a recovery in exports of other products and a contraction in imports

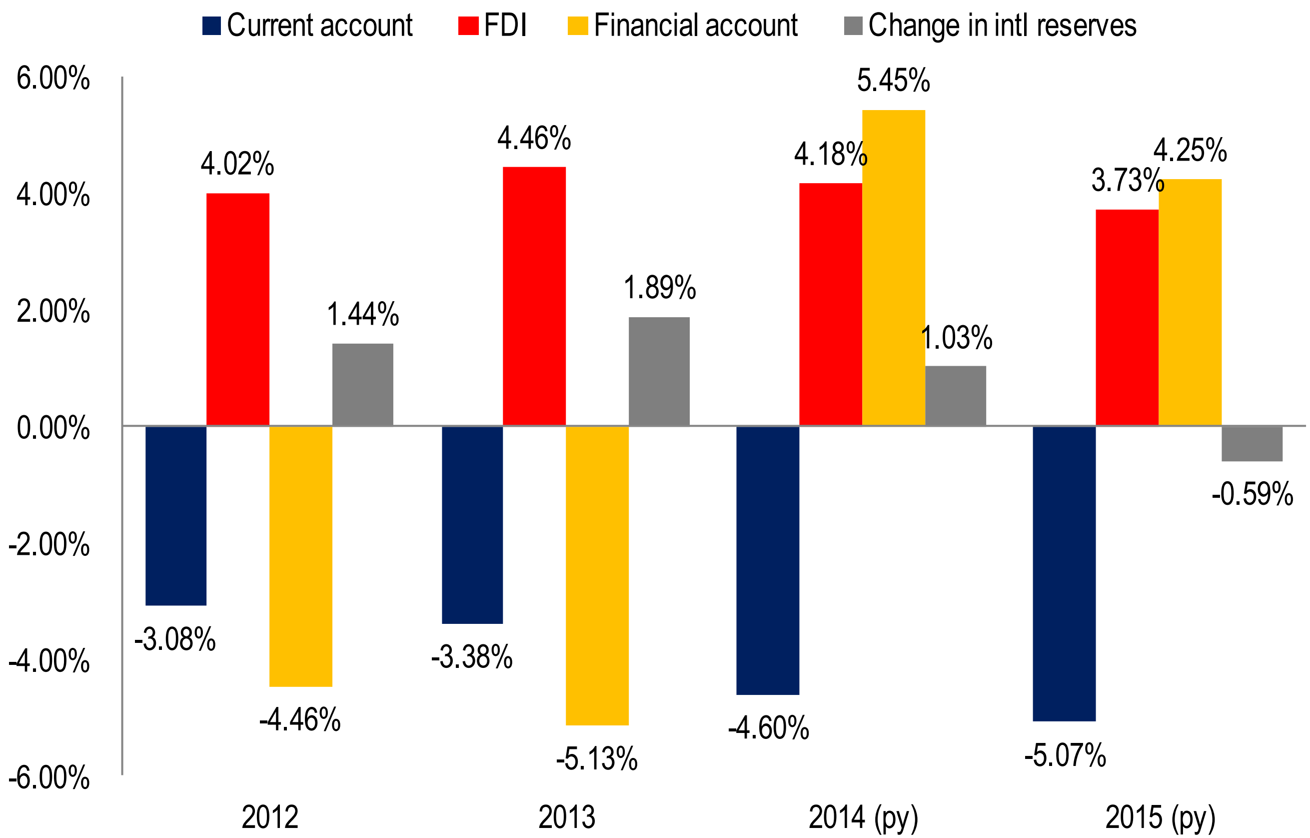
Colombian Balance of Trade

	2014 forecast		Prior 2015 forecast		Revised 2015 forecst	
Concept	**2014 (F) (USD Bn)**	**2014 (F) YoY%**	**2015 (F) (USD Bn)**	**2015 (F) YoY%**	**2014 (F) (USD Bn)**	**2014 (F) YoY%**
Total Exports	**56,080**	**-4.7%**	**58,590**	**2.7%**	**50,180**	**-10.5%**
Traditional	40,006	-4.1%	41,952	1.9%	32,960	-17.6%
Coffee	2,238	18.8%	2,425	8.4%	2,525	12.8%
Oil	30,013	-7.6%	31,610	0.7%	22,098	-26.4%
Coal	7,134	6.7%	7,306	5.4%	7,706	8.0%
Nickel	621	-8.7%	611	-1.6%	631	1.7%
Non traditional	16,074	-5.9%	16,638	4.9%	17,219	7.1%
Imports CIF	**62,139**	**4.6%**	**65,647**	**3.6%**	**60,134**	**-3.2%**
Imports FOB	**59,076**	**4.3%**	**62,313**	**3.5%**	**57,080**	**-3.4%**
Trade Balance	**(2,996)**	**-236.1%**	**(3,723)**	**16.5%**	**(6,901)**	**130.3%**

Source: Bancolombia Group, Central Bank, DANE

The current account deficit in 2015 will exceed 5% of GDP. The larger trade deficit will be partly compensated by lower transactions of profits. In the financial account flows of direct and portfolio investment will fall. This would lead to a decrease in reserve assets

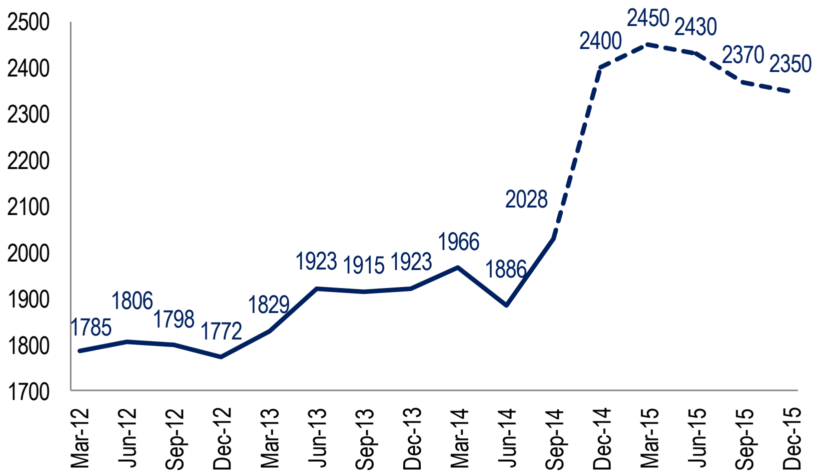
Colombian Balance of Payments

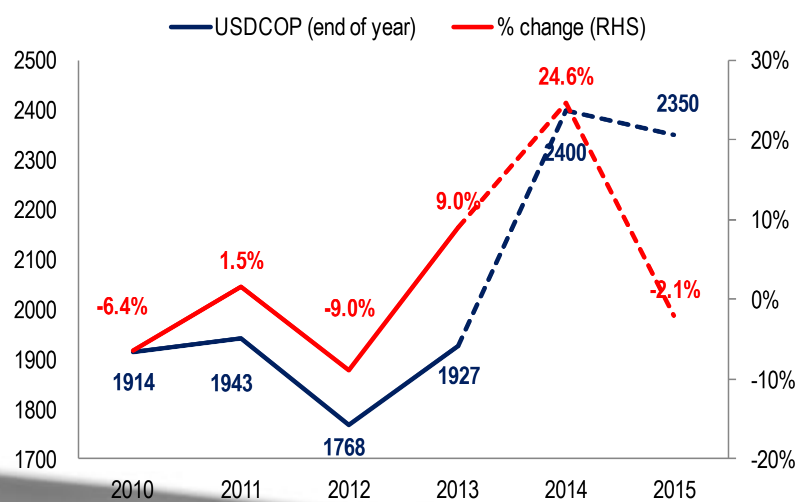


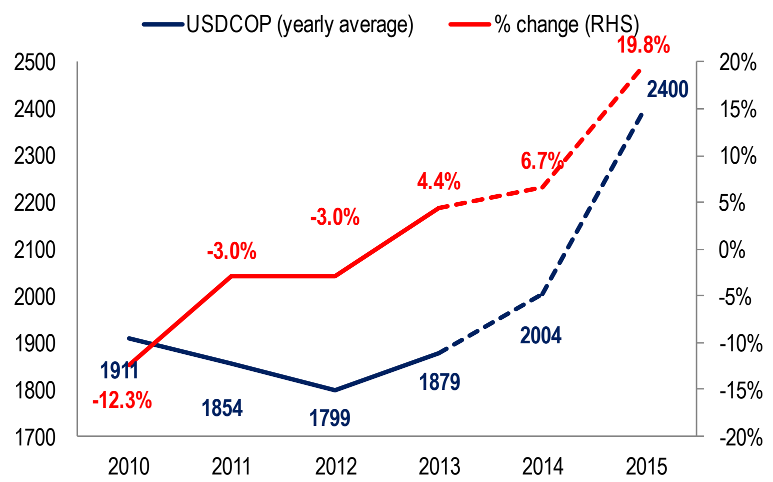
Source: Bancolombia Group, Central Bank

External imbalances will lead to the recently observed increase in the USDCOP not to be corrected substantially. Therefore, we project the USDCOP will fluctuate in a range between COP2,350 and COP2,450 next year

USDCOP Exchange Rate Projections



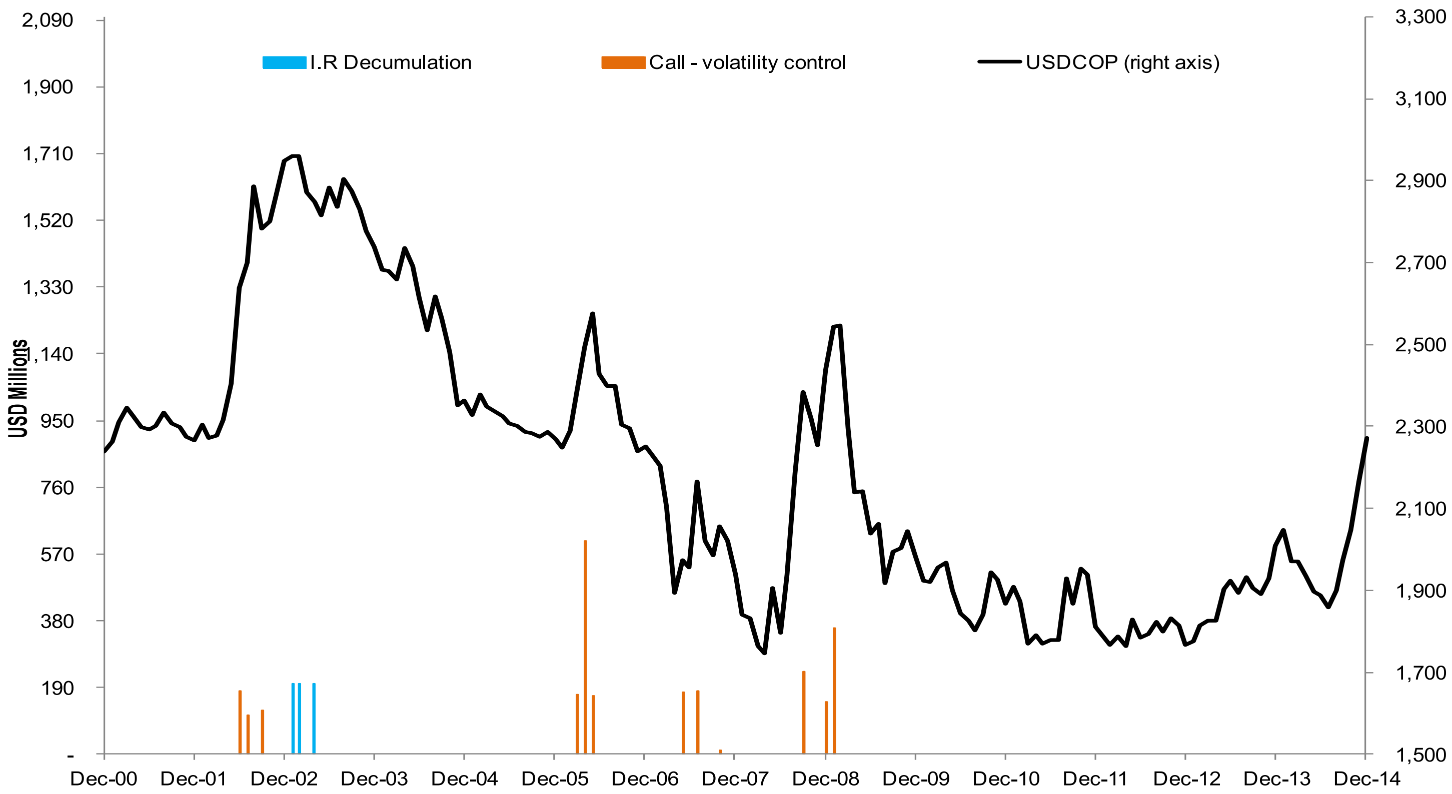




Source: Grupo Bancolombia (GB), DANE

In previous episodes of accelerated depreciation and/or high volatility the Central Bank has implemented mechanisms of intervention in the foreign exchange market. If the current trend deepened the Bank may carry out such measures

USDCOP Exchange Rate and Intervention Mechanisms during Devaluation Periods

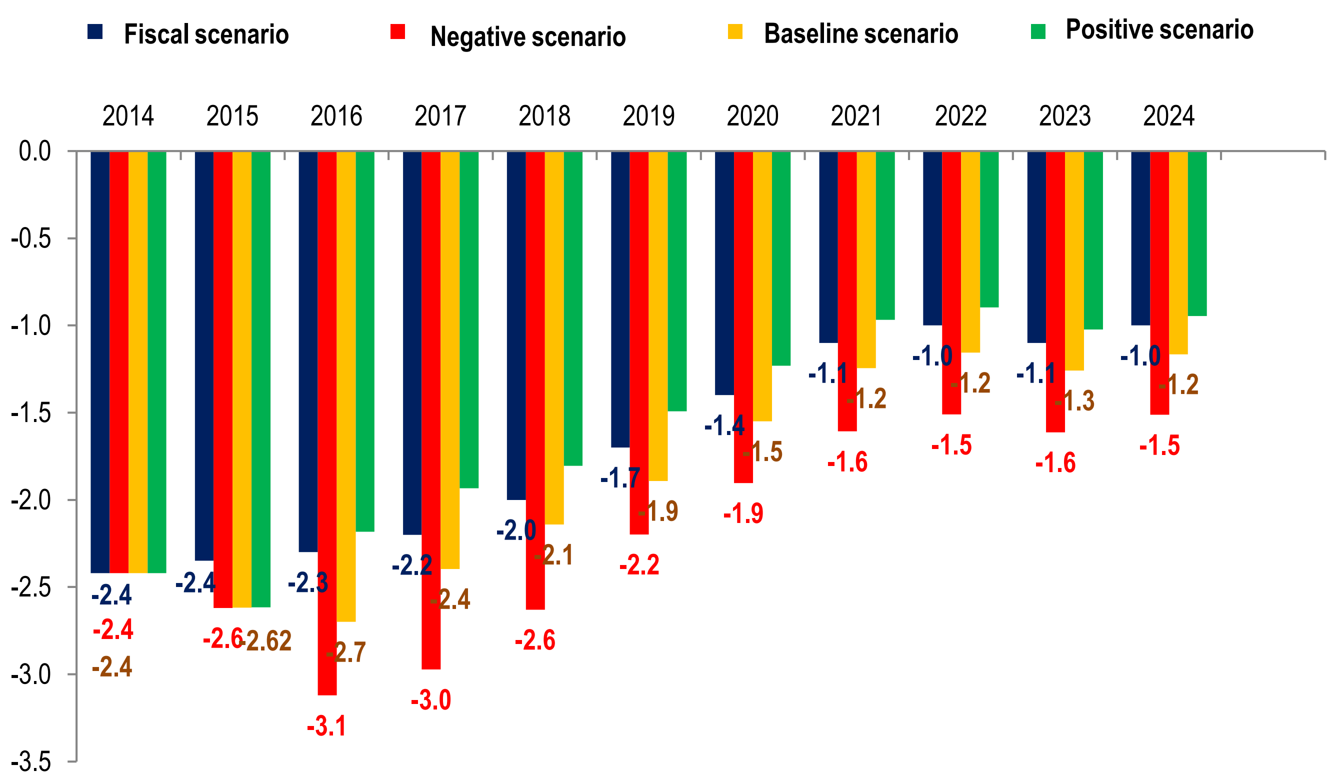


Source : Bancolombia Group, Central Bank

3.3 EFFECT ON PUBLIC FINANCES

The oil shock may trigger a negative scenario for public finances, one in which the difference between the government's projected deficit and the actual effect could be up to 0.8% in 2016. Furthermore, a recurrent pressure on the balance of the national government over the next decade is noticed.

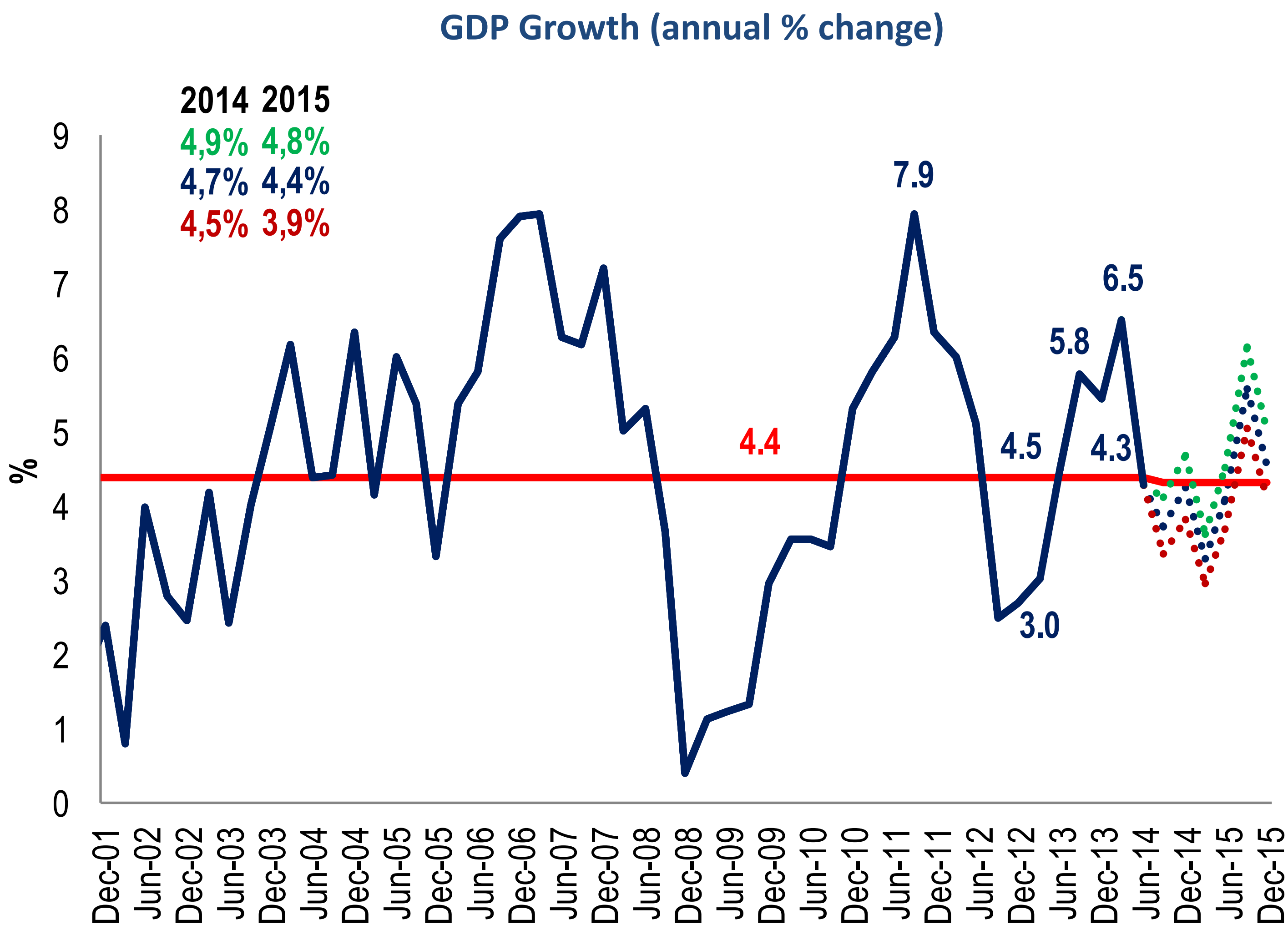
Central Government balance scenarios(% of GDP)



Source: Grupo Bancolombia, Ministerio de Hacienda

3.4 EFFECT ON GDP GROWTH

The oil shock has increased the likelihood of our bearish growth scenario in 2015 (3.9%).



Source: Bancolombia Group, DANE

From the demand side, the oil shock will impact the external sector and, to a lesser extent, public and private investment and private consumption.

Demand Components of GDP under an Oil Shock

Indicator	Growth Base Scenario 2014	Growth Base Scenario 2015	Impact of Oil Shock: Direction	Impact of Oil Shock: Magnitude	Comment
Private Consumption	5.0	4.3	Negative	Low	The consumption of imported durable goods can be affected by devaluation. Negative wealth effect generated by the collapse of financial markets. Deterioration in consumer confidence and the willingness to purchase durable goods.
Public Consumption	6.4	4.2	Negative	Low	Applying austerity measures in current spending will mean lower government consumption.
Investment	14.4	9.4	Negative	Medium	Private investment may decrease, particularly in the mining and energy sector. In the case of a budget adjustment, public investment would be affected.
Imports	10.9	7.9	Negative	High	Due to the peso depreciation, the value of imports in dollars may decrease 3.4%
Exports	-1.3	4.5	Negative	High	The 26% fall in the value of oil exports will not be offset by higher expected growth of the rest of the exportable offer. Non-traditional exports could benefit from increased global consumption and greater competitiveness via exchange rate.

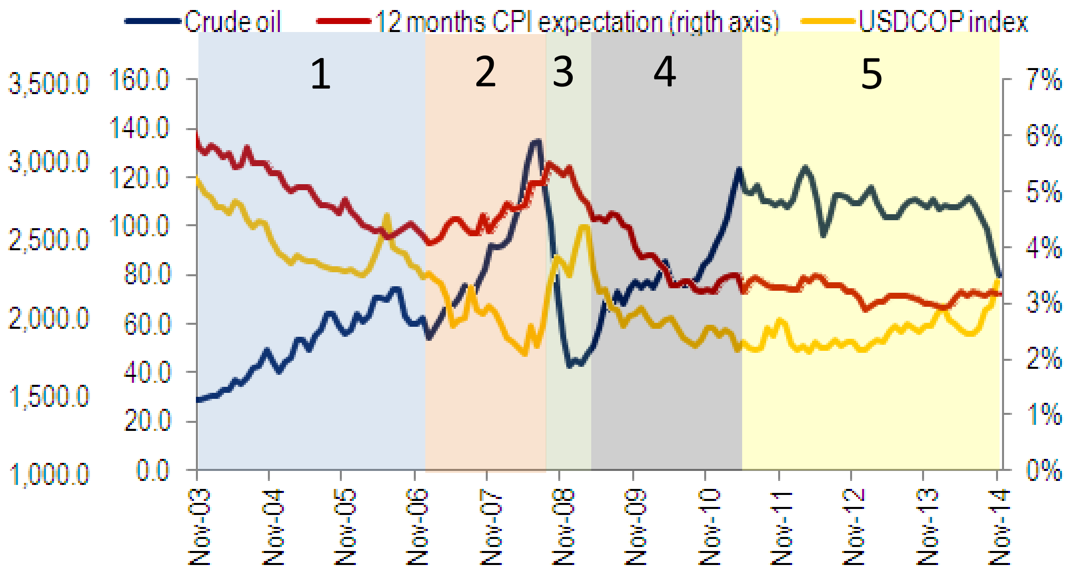
From the supply side, the oil shock will have positive impacts on industry and agriculture (exchange competitiveness). In addition to mining, retail, construction, social and financial services could also be affected.

Supply Components of GDP under an Oil Shock

Indicator	Growth Base Scenario		Impact of Oil Shock		Comment
	2014	2015	Direction	Magnitude	
Agriculture	3.8	2.6	Positive	Medium	The gain in exchange competitiveness may induce an increase in foreign sales.
Mines and Quarries	1.3	3.0	Negative	High	The sector's performance would be driven by the contraction of the oil industry.
Industry	1.7	2.2	Positive	High	The gain in exchange competitiveness can induce an increase in foreign sales.
Electricity, Natural Gas and Water	3.3	3.4	Neutral		
Construction	11.7	6.3	Negative	Medium	A lower rate of public investment could lead to a lower boost in the sector. The negative wealth effect and deteriorating expectations may lead buyers to cancel or suspend their purchasing decisions.
Retail	4.9	4.7	Negative	Moderate	Sales of imported goods, particularly durable ones, can be negatively impacted.
Transport and Communications	4.4	4.8	Positive	Low	The drop in fuel prices can have a positive effect on the transport subsector.
Financial Institutions	5.9	5.5	Negative	Moderate	Volatility and devaluations in financial assets may impact the results of some institutions. The growth of the loan portfolio may slow down.
Social Services	5.2	4.0	Negative	Medium	The need to adopt austerity measures in public spending may affect the sector.
Taxes	8.5	6.4	Negative	Moderate	The slowdown in 2015 may affect tax collection, mainly VAT, wealth tax and the tax on banking transactions.

3.5 EFFECT ON INFLATION

Exchange Rate, Oil Prices and Expectations for Annual 12-month Inflation



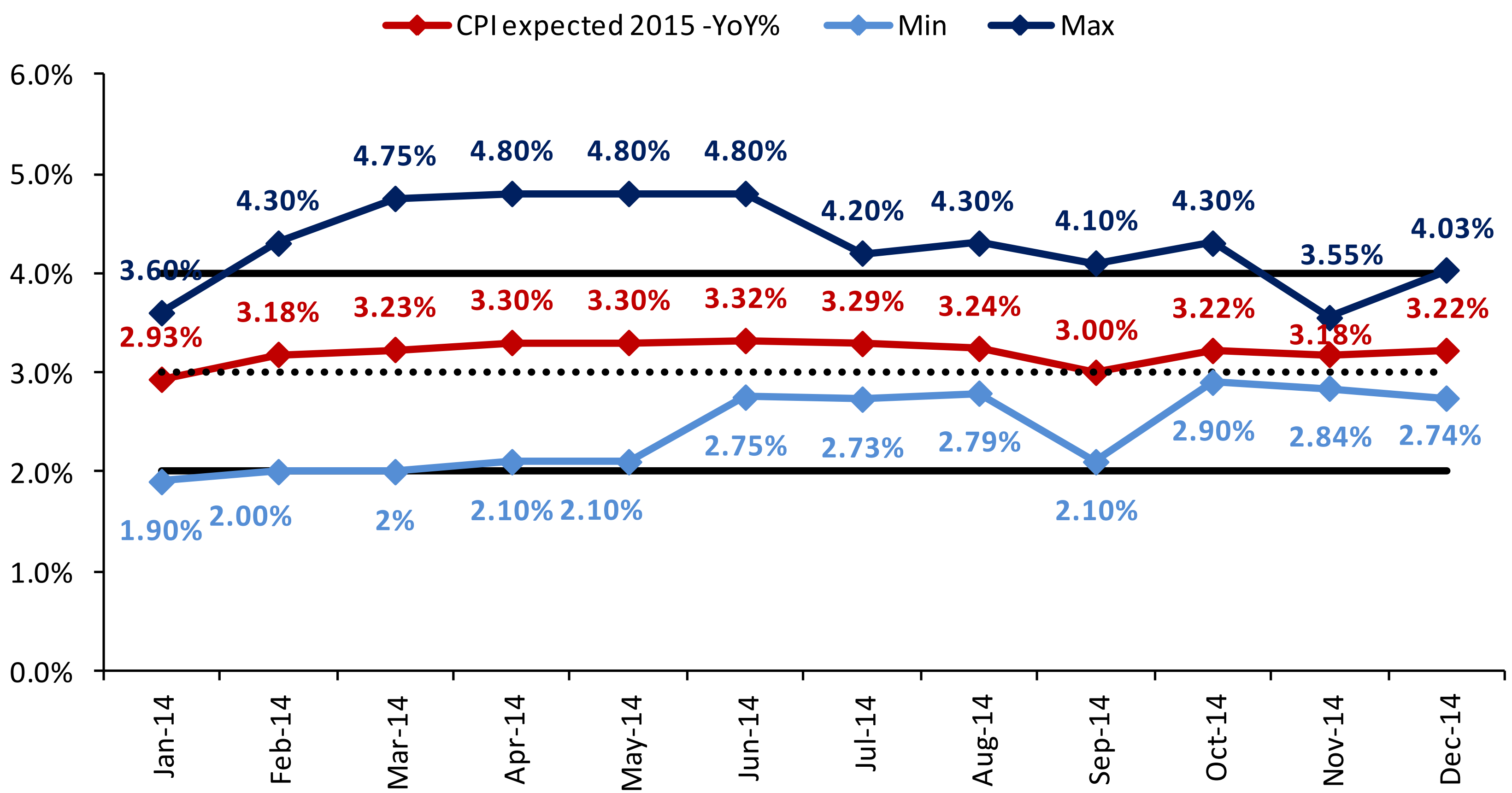
The current period is somehow similar to period 3: Dropping oil and increasing exchange rate ... this led to lower inflation expectations. However, much of that shock in expectations is explained by the negative impact on supply derived from the situation in Venezuela, and the relatively short length of the period of currency depreciation.

A current advantage is that expectations are anchored. The perspective for the GDP gap is to be slightly negative in 2015, which will keep agents' inflation expectations from being damaged.

Source: Bancolombia Group. DANE, Central Bank

For now inflation expectations 2015 remain slightly above target but they have done so for several months

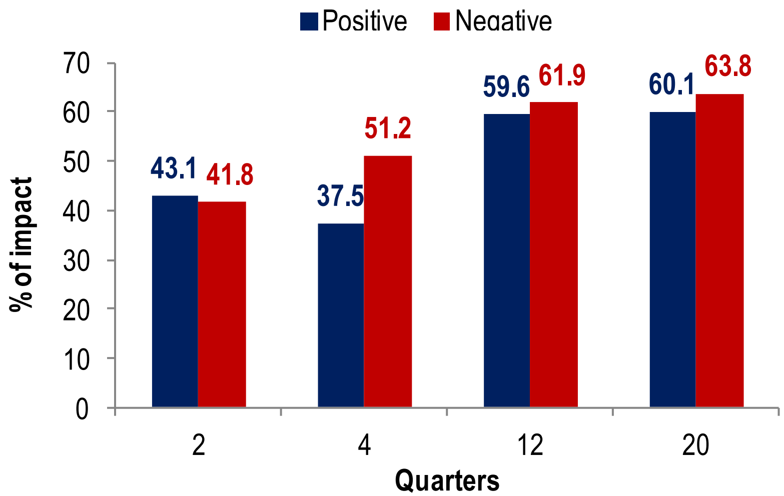
Inflation Expectations December 2015. Central Bank's Inflation Monthly Survey



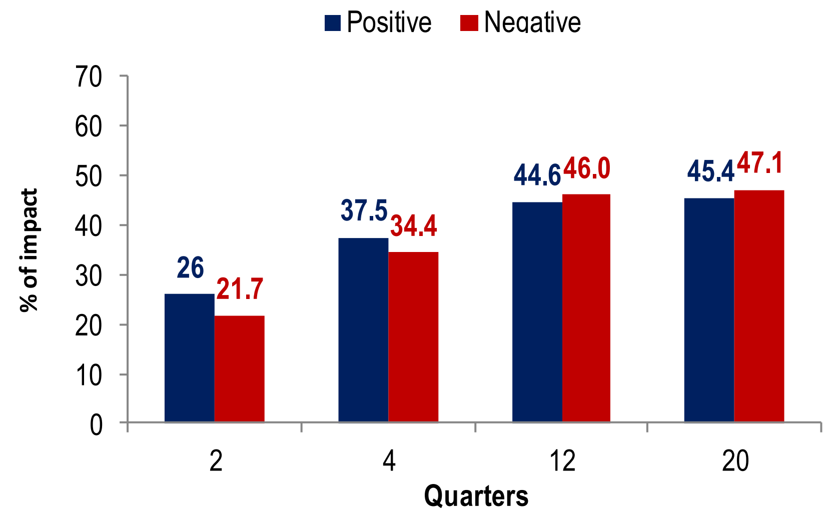
Source: Grupo Bancolombia, Central Bank

The transfer of the depreciation of the exchange rate to inflation depends on its size and the state of the economy

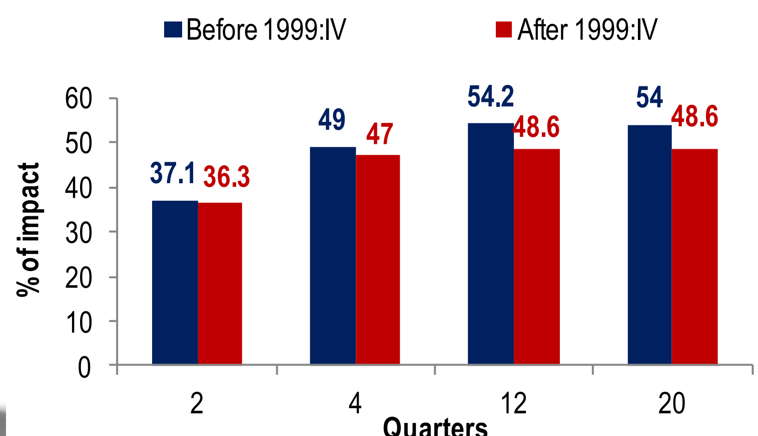
Effect on Tradable Inflation of a Depreciation of the FX by 1% - Transition Variable: GDP Gap



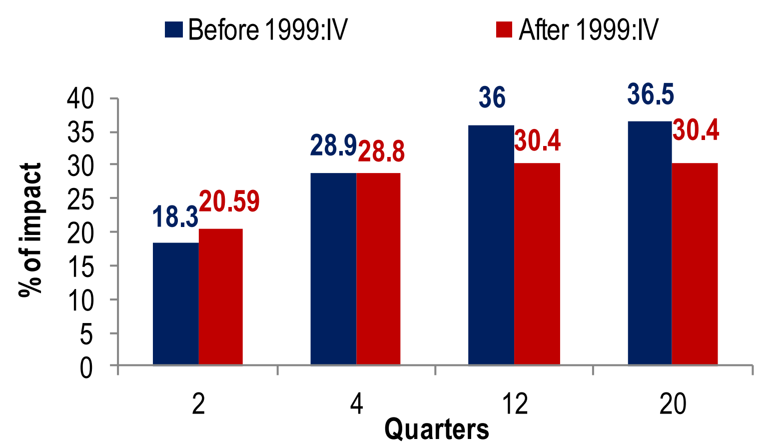
Effect on Tradable Inflation of a Depreciation of the FX by 10% - Transition Variable: GDP Gap



Effect on Tradable Inflation of a Depreciation of the FX by 1% - Transition Variable: Inflation Regime



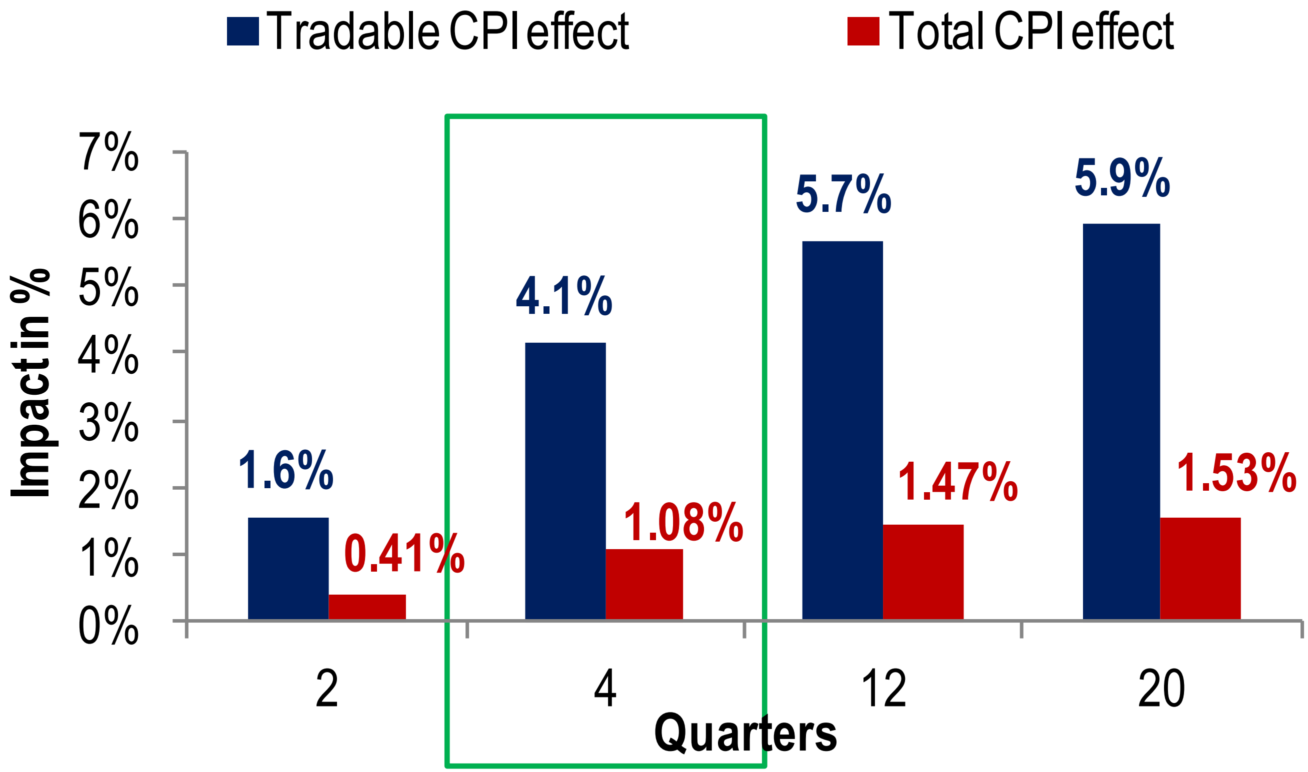
Effect on Tradable Inflation of a Depreciation of the FX by 10% - Transition Variable: Inflation Regime



Source: Grupo Bancolombia, BanRep

How much could inflation rise in 2015 as a result of the depreciation we expect?

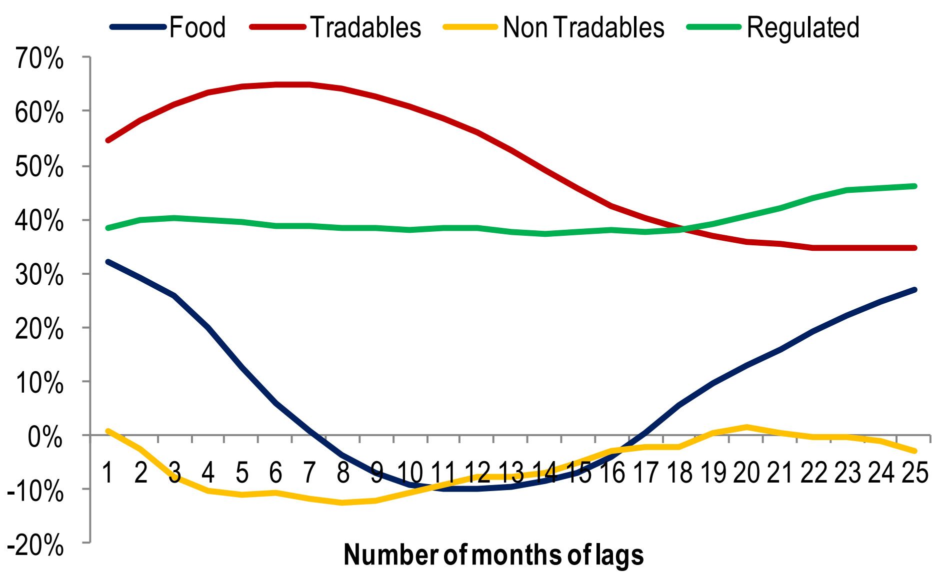
Effect on Tradable and Headline Inflation of an FX depreciation by 19.6%



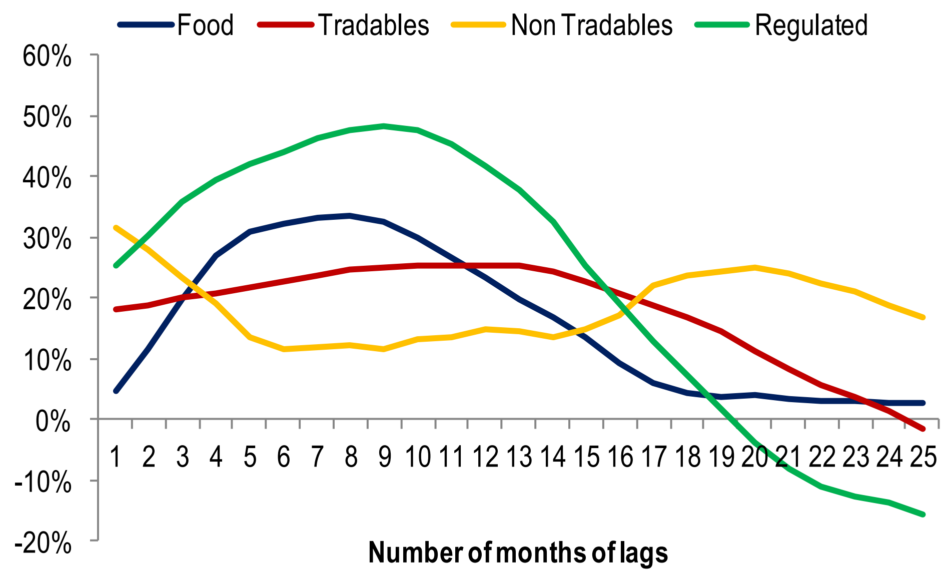
Source: Bancolombia Group. Central Bank

However, the scenario is complicated: the impact of falling oil prices and the depreciation of the exchange rate must be considered.

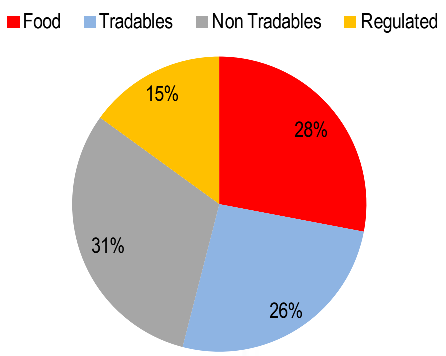
Correlation between Inflation for each Group and the Exchange Rate



Correlation between Inflation for each Group and the Oil Price



CPI Composition

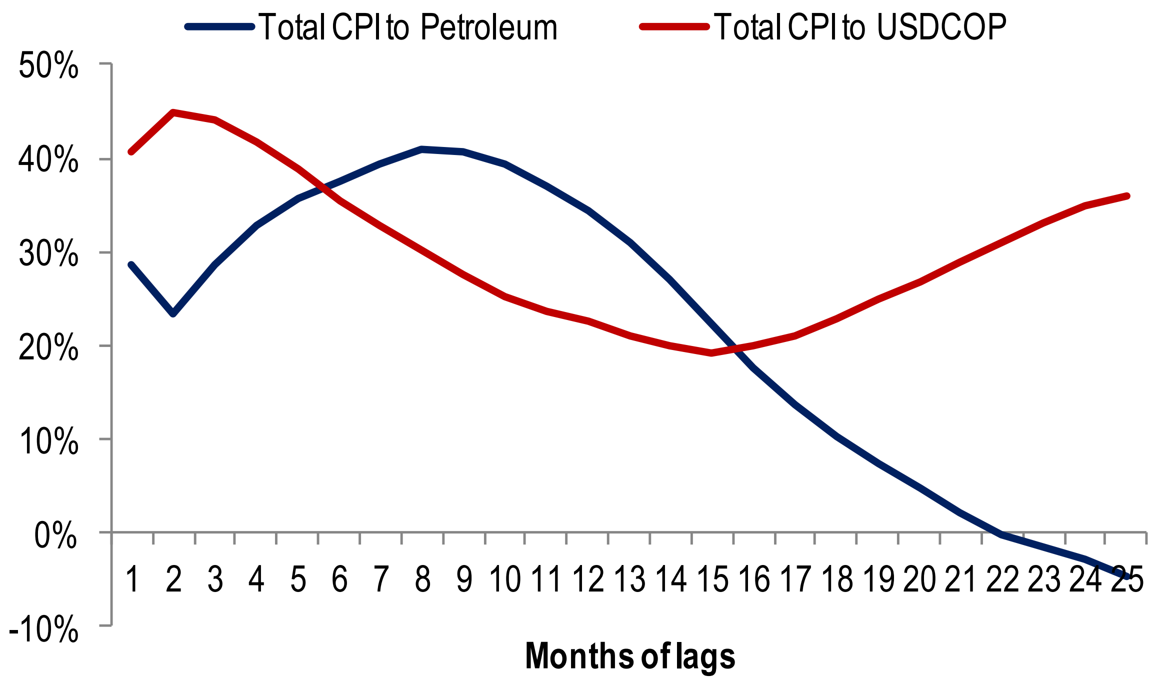


Source: Bancolombia Group, Central Bank

The impact of depreciation could transfer to inflation faster. The impact of oil may be slower but the combined effect will depend on the persistence of both shocks

Source: Grupo Bancolombia. BanRep.

Correlation between Headline Inflation and the Exchange Rate and Oil



Monetary Policy Scenarios by the End of 2015

		CPI	Target	CPI gap	GDP	Repo rate	Real Repo
2015 end of year	Negative	2.50%	3%	-0.50%	3.90%	3.50%	0.98%
	Baseline	3.09%	3%	0.09%	4.40%	4.25%	1.13%
	Positive	4.09%	3%	1.09%	4.80%	5.50%	1.35%

4. CONCLUSIONS

The ultimate impact of the oil price shock on the Colombian economy depends crucially on whether it is temporary or permanent. Until now, experts favorite the latter.

"The more pronounced the movements in oil prices are the less sustainable. However, a return to the high prices seen before does not seem a likely possibility since it is increasingly clear that we have entered a new chapter in the history of the oil market".

International Energy Agency, Oil Market Report

Challenges the oil shock can bring to the Colombian economy in the short term

- **Continued volatility in financial markets,** which has recently extended to country risk premiums and public debt curve.
- **Possible intervention of the Central Bank in the foreign exchange market:** Completion of the dollar purchase program, options to disaccumulate reserves or to control volatility.
- **Eventual transfer of devaluation to inflation** and inflation expectations. This could be offset by the reduction in fuel prices and its impact on the rest of the CPI basket, coupled with lower inflation from the demand side.
- **Possible fiscal adjustment in 2015,** which could involve reducing public investment or increasing debt acquisition.
- **Possible impact on the confidence** of economic agents, leading to a **slowdown in growth in 2015.**
- **The margin of the authorities to stimulate growth will be relevant:** It'll be limited on the fiscal front (given the constraints of public finances in 2015); on the monetary front it will be loose as long as inflation expectations do not exceed the target range and temporary supply shocks that have been pushing prices up are corrected in 2015.

Since the shock can be permanent, it is also important to consider the medium-term challenges for the country

- In the external sector, the main challenge is to **maintain FDI inflows at a level similar to the one seen in recent years** amid a less favorable global context. This will involve an adjustment in the level of current account deficit.
- The current situation promotes conditions for a **sustained recovery in tradable sectors** such as industry and agriculture, as well as to **recompose and diversify the country's export supply.**
- After the end of the mining-energy boom, continue having **investment levels close to 30% of GDP will be increasingly challenging.**
- Once the boom of the terms of trade is over, achieving **potential growth levels near 4.5% will require substantial improvements in productivity.**
- **Compliance with the framework of discipline in the management of public finances described in the fiscal framework will be tested** in the coming years. To achieve this, a substantial increase in tax revenue (about 4% of GDP) and a reduction in public investment are expected.

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