Venezuela/PDVSA Monthly Report
November 2018

Venezuela and PDVSA bond prices traded down throughout November and threaten to mark new all-time lows, amid a collapse in oil prices. In an environment of low liquidity and risk-off in global risk assets, PDVSA bonds faded most of the rebound from the October lows, at which time *low-dollar-value* securities briefly traded at 15 cents. After a rebound of smaller magnitude at the end of last month, VENZ bonds continued their downtrend and settled at an average price of 24 cents.

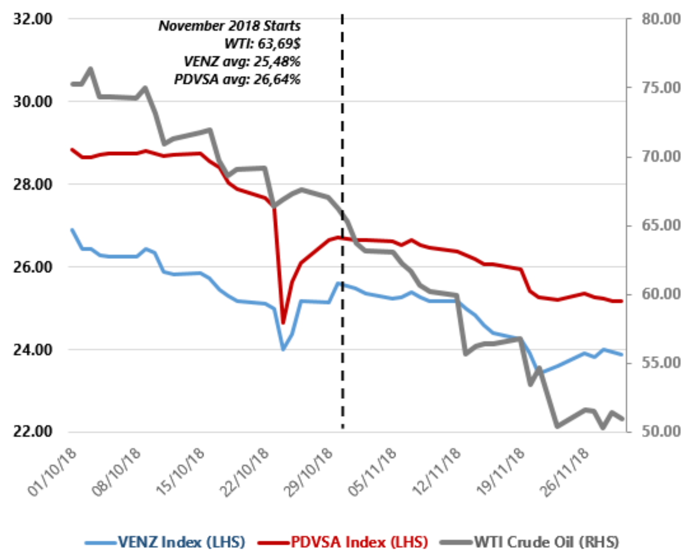


Chart N°1: VENZ and PDVSA avg. bond prices vs prices of WTI Oil (Oct-Nov 2018). *Source: Bloomberg BGN, own calculations.*

Investors' sentiment with Venny bonds worsened irreparably after the unveiling of the Constituent Assembly's plans to repudiate PDVSA's unsecured debt, which triggered the collapse in prices at the end of October. Despite subsequent comments by ANC president Diosdado Cabello that no changes were being discussed in the oil legislation, investors have kept on selling their positions in Venezuelan bonds. The market-implied probability of a friendly debt restructuring has been reduced significantly amidst the selloff; in contrast, the alternative debt-repudiation scenario (*a la* Cuba in the 50s and 60s) becomes more relevant by the day.

In parallel, PDVSA continues with its strategy of shielding Citgo Holding at all costs. A couple of weeks after paying (on-time) PDVSA 20's second amortization, Reuters reported that the state oil company reached a new agreement with the Canadian mining company Crystallex for the repayment of its USD 1.4 Bn arbitration award. Under the terms of the agreement, Venezuela had to pay USD 425m between cash and VENZ/PDVSA bonds, and pledged to put an equivalent amount as collateral before January 10, 2019.

The settlement with Crystallex has come alongside several commitments with other key creditors:

- ConocoPhillips: USD 2 Billion, of which Venezuela paid USD 500m in kind (bonds and oil shipments) and must distribute the remainder in quarterly installments, with the next in February 2019.

- Gold Reserve: USD 1.03 Bn; Venezuela (through BANDES) has forked over USD 276m, but remains in default with USD 207m of monthly installments.

- Rusoro Mining: USD 1.3 Bn, payable in an initial fee of USD 100m (before the end of November, payment has not been confirmed yet), and the rest in monthly payments of USD 20m for five years.

The main reason why Venezuela continues to honor these commitments is because these constitute ***Final Awards***, so all these creditors may credibly threaten to take over Citgo Holding if Venezuela stops paying. This situation is completely different for holders of unsecured debt, who accumulate over USD 7.9 Bn of defaulted coupons and maturities, plus USD 1 Bn of the VENZ 7% 2018 maturity (due December 1st).

Further supporting negative investor sentiment, there have been recent signs of deteriorating relationships between Venezuela and its Russian and Chinese allies. Visits by Rosneft CEO Igor Sechin and a technical team from the Development Bank of China - which weren't covered by state media - reflect increasingly hostile positions from the foreign partners. Both nations are critical of President Maduro and PDVSA CEO Manuel Quevedo, due to their inability to avoid the collapse in oil production and the consequent breach of shipment quotas for loan repayments. OPEC secondary-source figures suggest that Venezuela produces less than 1.2m b/d and exports just over one million barrels per day, approximately half to the United States and other cash-paying customers, and the other half as debt repayments to the Russians and Chinese. These shipments represent on average less than 50% of the amounts committed on the loans, which implies that the nation is in default with the Chinese Fund and Rosneft since the first quarter of this year.

The large amounts in short-term commitments payable by the Republic combine with acute cash-flow stress in the state oil company's books and unsympathetic relations with last-resort financiers, leading to a critical financial position in the face of Maduro's swearing-in ceremony due on January 10th. The majority of the international community does not recognize the results of May 20th's sham election, and a new round of sanctions and economic isolation is expected for the new government of Maduro after the inauguration.

Monthly Performance

Measured by the JPMorgan EMBI+ Venezuela index, VENZ bonds posted a -7.31% return in November 2018, the second straight month with the worst returns on the index. Year-to-date, the Sovereign benchmark is down -8.23%, only exceeded by the falls in the Argentina (-18.96%) and Turkey (-9.98%) indices.

All bonds fell in the month, but once again the PDVSA 20 outperformed, falling only by -0.30%. No significant differences in performance between VENZ and PDVSA unsecured debt. With over 10% falls, PDVSA 24 and 37 underperformed, while the VENZ 13.625% 18 were spared from most of the selling, with a drop of just -1.64%.

Security	31/10/2018	30/11/2018	Total Return	Total Return (2018 YTD)
VENZ 13 5/8 08/15/18	25.40	25.00	-1.64%	-55.08%
VENZ 7 3/4 10/13/19	24.75	23.30	-5.81%	-6.06%
VENZ 6 12/09/20	24.95	22.75	-8.73%	-2.17%
VENZ 12 3/4 08/23/22	25.70	23.90	-7.06%	-14.20%
VENZ 9 05/07/23	25.55	23.25	-9.05%	+2.03%
VENZ 8 1/4 10/13/24	25.30	24.00	-5.25%	+5.50%
VENZ 7.65 04/21/25	25.25	23.15	-8.28%	+2.88%
VENZ 11 3/4 10/21/26	25.70	24.80	-3.42%	-1.09%
VENZ 9 1/4 09/15/27	25.45	23.70	-6.94%	-6.86%
VENZ 9 1/4 05/07/28	25.15	23.45	-6.71%	+4.55%
VENZ 11.95 08/05/31	25.85	23.75	-8.12%	-10.51%
VENZ 9 3/8 01/13/34	28.75	27.60	-4.00%	+7.85%
VENZ 7 03/31/38	24.60	23.00	-6.53%	+1.36%
PDVSA 8 1/2 10/27/20	93.65	93.35	-0.30%	+12.74%
PDVSA 9 11/17/21	20.90	19.20	-8.06%	-37.20%
PDVSA 12 3/4 02/17/22	21.30	20.05	-5.86%	-46.41%
PDVSA 6 05/16/24	17.90	16.05	-10.32%	-33.61%
PDVSA 6 11/15/26	17.65	15.95	-9.55%	-33.14%
PDVSA 5 3/8 04/12/27	17.90	16.10	-9.98%	-37.92%
PDVSA 9 3/4 05/17/35	21.50	20.05	-6.81%	-30.91%
PDVSA 5 1/2 04/12/37	18.05	16.25	-10.00%	-36.88%

Table N° 1: Performance of Venezuela/PDVSA bonds, November 2018.
***NOTE: Returns were adjusted to account for the accrued interest lost, per recent EMTA resolutions.**

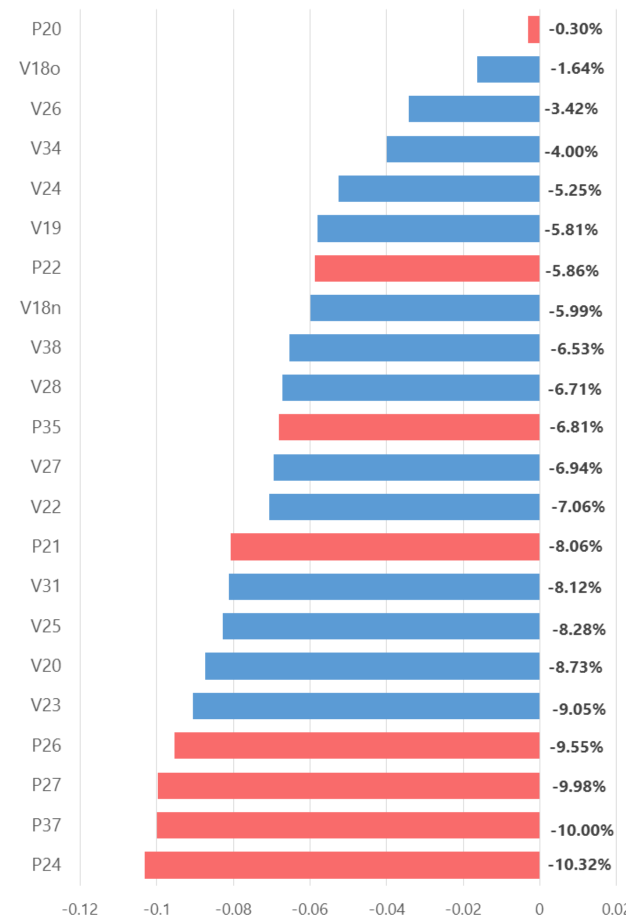
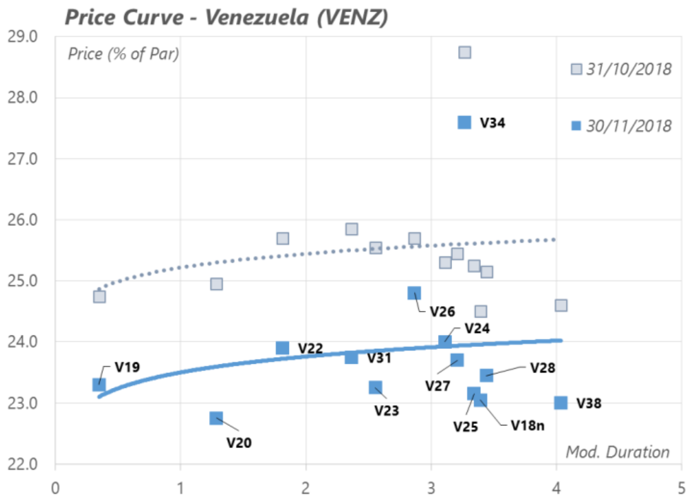


Chart N°2: VENZ/PDVSA bonds by Total Return, November 2018.
Source: Bloomberg, Knossos Asset Management.

Evolution of the curves

The following Graphs 3 and 4 show the price curves of Venezuela and PDVSA bonds at the end of November 2018. There are no significant changes in shape with respect to the previous month: VENZ 34 bonds continue to trade at a 4-point premium to the rest of the sovereign curve, and PDVSA low-dollar-value bonds found price support at 16 cents, 2 points below last month's closing value.



Graph N°3: Venezuela Price Curve evolution, November 2018.
Source: Bloomberg CBBT.

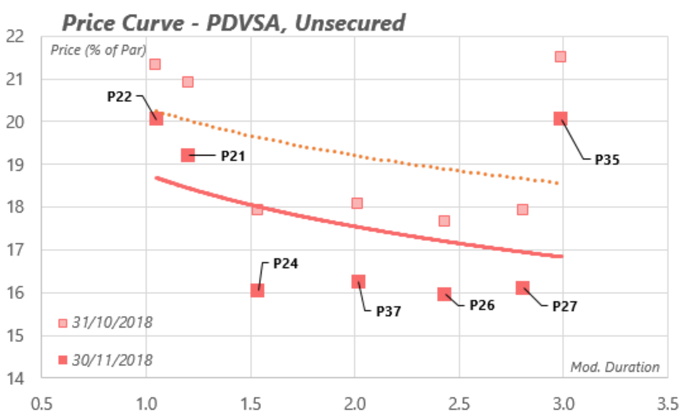


Chart N°4: PDVSA –Unsecured- Price Curve evolution, November 2018. *Source: Bloomberg* CBBT.

Return analysis – Short term

In the October report we introduced a new valuation method for Venezuelan debt, consistent with the market's current characterization of distressed debt and bets on future restructuring prospects. We recommend reading the last report to understand the concepts and assumptions on which the analysis of this section is based. Note on the scenarios:

'Up': Bonds climb up to 30 cents (with no discount for risk of selective repudiation in PDVSA) due to an increase in the likelihood of a short-term debt restructuring.

'Down': Debt crisis continues for another year. Sovereign bonds are quoted at 15 cents, and PDVSA securities trade at 0.73x with respect to VENZ (discount for risk of selective repudiation).

In a 12 month horizon, we consider that the probabilities of occurrence are:

$$P(up) = \mathbf{1/3} \quad ; \quad P(down) = \mathbf{2/3}$$

Our assessment of the situation implies that chances of regime change - forced by the economic crisis, and that would open the possibility of a resolution to the debt crisis- are rising every day. However, the possibility of a military coup (instead of a return to democracy) and the precarious state of Venezuela's finances and a glut in global oil supply (threatening a new regime of lower oil prices) suggest the possibility of delays of more than 1 year and/or Recovery Values lower than those anticipated by the market (30% approx.) in a hypothetical restructuring in the current stage of the economic cycle.

Our forecasted returns based on these probabilities can be found in Table Nª 2. Note that our valuations are almost exactly the same as the implied average probabilities in the Sovereign curve, save for VENZ 34. It is well known in the market that the security is trading at such a high premium versus the curve due to a group of creditors owning more than 15% of the issue, which gives them the power to block any attempt of debt restructuring contrary to their interests through Collective Action Clauses. We agree that this situation gives strategic value to the bond, but taking into account that the debt of each issuer is usually restructured *pari passu*, without preferential treatment between securities, we consider that the current levels show an unfavorable risk/return profile for the VENZ 34. Only the VENZ 22, 23, 28 and 31 offer slightly favorable risk/return profiles.

For PDVSA, current levels offer a much more attractive investment profile and significantly better entry levels. Our model forecasts equilibrium prices slightly below 20 cents for PDVSA low-dollar-value bonds, a target price 4 cents - or more than +20% potential return - over current levels.

Security	Market Price	Model Price	Potential return
VENZ 13 5/8 08/15/18	25.00	**25.45**	1.8%
VENZ 7 12/01/18	23.05	**22.85**	-0.9%
VENZ 7 3/4 10/13/19	23.30	**23.40**	0.4%
VENZ 6 12/09/20	22.75	**22.35**	-1.8%
VENZ 12 3/4 08/23/22	23.90	**25.05**	4.8%
VENZ 9 05/07/23	23.25	**23.95**	3.0%
VENZ 8 1/4 10/13/24	24.00	**22.85**	-4.8%
VENZ 7.65 04/21/25	23.15	**22.55**	-2.6%
VENZ 11 3/4 10/21/26	24.80	**24.20**	-2.4%
VENZ 9 1/4 09/15/27	23.70	**23.40**	-1.3%
VENZ 9 1/4 05/07/28	23.45	**24.05**	2.6%
VENZ 11.95 08/05/31	23.75	**24.80**	4.4%
VENZ 9 3/8 01/13/34	27.60	**23.80**	-13.8%
VENZ 7 03/31/38	23.00	**22.40**	-2.6%
PDVSA 9 11/17/21	19.20	**20.90**	8.9%
PDVSA 12 3/4 02/17/22	20.05	**21.95**	9.5%
PDVSA 6 05/16/24	16.05	**19.60**	22.1%
PDVSA 6 11/15/26	15.95	**19.60**	22.9%
PDVSA 5 3/8 04/12/27	16.10	**18.95**	17.7%
PDVSA 9 3/4 05/17/35	20.05	**21.20**	5.7%
PDVSA 5 1/2 04/12/37	16.25	**19.00**	16.9%

Table Nº2: Market vs. Equilibrium prices, VENZ / PDVSA, Nov 2018
Note: market prices at the end of November. 1-year US Treasury yield (2.5875%) as a proxy for the risk-free rate. 'Up' and 'down' returns derived from custom scenarios, with probabilities p (up) = 1/3 and p (down) = 2/3, respectively.

Return analysis – Long term

We use 3 representative bonds for the analysis of a hypothetical long-term holdout investor:

- **PDVSA 26** (favorable risk/return at current prices);
- **VENZ 13.625% 18** (lacking CACs);
- **VENZ 34** (critical mass of holdouts currently positioned).

Our estimates show a YTR that ranges between 33 and 117% in horizons of a year and decreases exponentially as the waiting period extends, but remains above the risk-free rate throughout the relevant time horizon.

Another interesting result is that the PDVSA 26 offers the highest annualized returns in all scenarios up to 10 years at current prices, all under the assumption that the state oil co.'s debt would rank *pari passu* to the Sovereign bonds in the restructuring.

	YTM	Yield to Restructuring		
	US Treasuries	PDVSA 26	VENZ 18o	VENZ 34
1y	2.9	117.3	58.2	33.4
2y	2.9	51.2	32.1	19.8
3y	2.8	33.9	24.0	15.4
5y	2.8	21.3	17.5	11.7
7y	2.8	16.1	14.4	10.0
10y	2.9	12.3	11.8	8.5
20y	3.0	7.6	8.0	6.1
30y	3.0	5.8	6.3	5.0

Table 3: *Yield To Restructuring* (YTR) vs US Treasury yield term structure, November 2018. *Source: Knossos Asset Management*

Valuation update – PDVSA 2020

We update the value of Citgo Holding's equity based on the view of several analysts following the US refiner, who indicate that the company's total debt has been reduced significantly in 2018, due to the current inability of Citgo to send dividends to PDVSA under the sanctions, leading it to use free cash flow to lower debt balance by USD 1.4Bn compared to our previous estimate. We now value the net worth (net of liabilities) at **USD 5.38Bn**. We applied a 20% discount for uncertainty in the collateral execution, and lastly computed the collateral as 50.1% of the residual value of Citgo: **USD 2.16 Bn**. This implies that the bond is **1.28x** collateralized at present, and in the event that PDVSA pays the 2019 amortization, this ratio would rise to **2.56x**. The data can be verified in table 5 below.

PDVSA 20 collateral valuation	Amount (MM USD)	*Source, reporting date*
Amount outstanding	1,683.77	*Bloomberg, oct 2018*
Next amortization value	841.88	*Bloomberg, oct 2018*
Citgo Holding - Assets	7,900.00	*Moody's, mar 2018*
(less)		
Citpet 22	-646.61	*Bloomberg, oct 2018*
Cithol 20	-1,500.00	*Bloomberg, oct 2018*
Cithol 20 retap (March 2018)	-375.00	*Bloomberg, oct 2018*
Other current liabilities (est.)	-	
Citgo Holding - Liabilities	-2,521.61	
Citgo Holding - Equity	5,378.39	
Discunted equity	4,302.71	
P20 collateral value	**2,155.66**	
Collateral ratio (today)	128.03%	
Collateral ratio (1y forward)	256.05%	

Table 5: Citgo Holding balance sheet and PDVSA 2020 collateral valuation, November 2018. *Source: Knossos Asset Management*

The fact that PDVSA 20s currently have a collateralization ratio greater than 1 suggests that price volatility should be relatively muted, and would only come from the implied probabilities of collateral execution. We can estimate a fair value for the PDVSA 20s as a probability-weighted sum of one-year forward returns under two scenarios:

• **Scenario 1: PDVSA remains solvent with the security up to the October 2019 amortization.** The payoff would consist in of 25% of the principal paid at par, interest accrued on 50% of the principal (currently alive) and a terminal value for the remaining quarter. This terminal value would be the minimum between 2.56 times the remaining 25%, and the price that PDVSA would have to pay to retire the issue, triggering the Make-Whole clause (buying back the bond at approximately 109.70 cents).

• **Scenario 2:** Whether by a PDVSA decision to default on the bond, or as a result of the December 20 hearing in Delaware court, the sale of Citgo is forced. In this scenario, we assume that holders of the PDVSA 20s do not have clear collection priority over the other creditors and therefore receive only half of the amount corresponding to their 50.1% share of Citgo's equity. This value would be half the current collateralization ratio (64%).

For these scenarios we are left with measures almost exactly equal to the risk-neutral probabilities, which are approx. 65%/35% for the up- and down-scenarios respectively:

$$P\ (up) = \mathbf{2/3};\ P\ (down) = \mathbf{1/3}$$

We decided to use this set of probabilities because we do not have a clear view on the evolution in 2019 on this bond, due to the large number of final judgments with creditors that Venezuela has been forced to pay on time and that compete against the PDVSA 20's amortization payment.

While maintaining the willingness to protect Citgo at all costs has led the Republic to negotiate relatively flexible terms of payment to date, the weakness in oil prices and the increasingly narrow situation in the PDVSA's cash flow suggests that the state oil company has a high risk of default with one of its multiple creditors in 2019, leading to a forced liquidation process of Citgo Holding where the beneficiaries may not be ordered under the current payment rank.

PDVSA 20 scenario	***Payoff***
Current price	***93.65***
UP - PDVSA pays P20 through the third amortization (Oct 19)	113.35
DOWN - Citgo is iliquidated, but holders receive half of 50.1% of Citgo	64.01
Expected payoff	**94.46**
Expected return	**0.86%**

Table 6: PDVSA 20 one-year forward payoffs and return scenarios, November 2018

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