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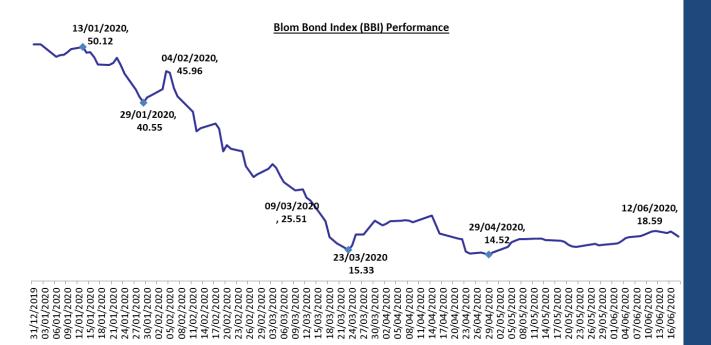
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On March 7 2020, the Lebanese government announced for the first time that Lebanon will not pay a \$1.2B Eurobond due on March 9 and will seek to restructure its sovereign foreign currency debt which reached \$31B in 2019. In this paper, we study the performance of the Lebanese **Eurobonds** Market in the first half of 2020 especially after this unprecedented move, noting that lately we notice as slight increase in the Blom Bond Index. In details; we will discuss how bondholders are affected by this decision and the reasons that might be behind this rise in bond prices. Most importantly, we will explain the mechanisms of the **Credit Default Swap (CDS)** market and how it affected the Eurobonds' prices following the "Lebanese Republic Credit Event Auction"

1. Blom Bond Index Performance in H1 2020



Source: BlomInvest Bank



In Lebanon, the performance of the bonds market is highly correlated with the domestic and regional developments. In the first half of 2020, the Blom Bond Index (BBI)¹ performance can be mainly divided in 2 parts in the first half of 2020: Pre and Post Default. Social rioting and political bickering during parliament sessions following the resignation of PM Hariri's government end October 2019 sent the Blom Bond Index (BBI) to unprecedented levels and therefore started the year at 50.51 points.

During Q1 2020 the Lebanese Eurobond's market performance was mainly affected by a series of events. On January 21, following a months-long political vacuum, Lebanon has formed a new government made up of specialist ministers. However, opinions remained divided among citizens and the international community on the new cabinet which sent the BBI to 40.55 points on January 29. In the first week of February, the performance of the Lebanese Eurobonds witnessed a correction to the drops it incurred during January. This can be mainly due to the official approval of the Cabinet's policy statement. The latter involved a set of measures and action plans to put forward Lebanon's needed reforms that can help the Cabinet earn a vote of confidence to begin its work especially on the financial and economic fronts and ultimately unlock the international community's money. Therefore the BBI closed at 45.96 points on February 4. However; the improvement remained partial as investors were concerned over the possibility of a default by the Lebanese government on upcoming maturing Eurobonds on March 09th.

Although the default final decision was not made before maturity time, bondholders have started anticipating and digesting it since February. In details, the BBI decreased by 38.74% (from February 4) to reach 25.51 points in March 9. Note that the details of the default decision and its repercussion on bondholders will be discussed in the following section.

In the second quarter of the year, the BBI continued its downtrend to reach 15.33points in March 23 followed by a series of Government and Banks downgrades by US credit agencies. S&P Global Ratings lowered its foreign currency sovereign ratings on Lebanon to 'SD/SD' (selective default) from 'CC/C'.

Lebanese authorities declared a state of emergency in an attempt to control the spread of coronavirus virus. In details, a complete lockdown was announced for 15 days, excluding bakeries, pharmacies, food stores and health institutions. In addition, all entries and exits to the country including borders, airports and ports closed between March 18-29.

On March 27, Lebanon's Finance Ministry held an investor presentation to update the country's Eurobond holders on the government's economic plans and the principles for debt

restructuring. The presentation was composed of 4 sections mainly covering the current Lebanese situation and developing a recovery plan that it hoped to finalize before the end of the year.

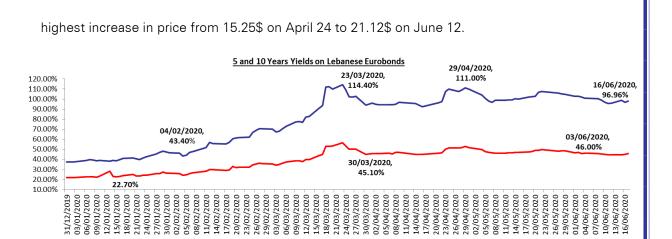
On April 24, the BBI reached 14.52 points its lowest record in H1 2020. In fact, the impact of Lebanon's coronavirus lockdown fully materialized in April. Businesses faced sharp economic uncertainties while consumers demand weakened. Moreover, the Lebanese pound accelerated its depreciation and reached unprecedented levels against the dollar, nurturing hyperinflation.

Despite the economic and financial crisis, the BBI started to record relatively higher values since mid-May and reached 18.59 points on June 12. The reasons behind this rise will be discussed in the following sections. Worth mentioning that the bonds maturing on 23/03/2037 witnessed the

	Bonds Prices		
Bonds Maturity Date	Apr-14	<u>Jun-12</u>	<u>Change</u>
04/10/2022	15.25	20.13	31.97%
27/01/2023	15.69	19.63	25.10%
22/04/2024	15.25	19.25	26.23%
04/11/2024	15.83	19.63	23.95%
03/12/2024	15.33	19.08	24.46%
26/02/2025	15.25	19.48	27.70%
12/06/2025	16.75	20.13	20.15%
28/11/2026	15.75	19.55	24.13%
23/03/2027	15.25	19.13	25.41%
29/11/2027	15.75	19.55	24.13%
03/11/2028	15.75	19.63	24.60%
26/02/2030	15.25	19.06	25.00%
22/04/2031	15.56	19.33	24.17%
23/03/2032	15.75	19.42	23.32%
02/11/2035	15.25	19.88	30.33%
23/03/2037	15.25	21.13	38.52%

The BBI is a market value-weighted index tracking the performance of the Lebanese government Eurobonds market excluding coupon payment,



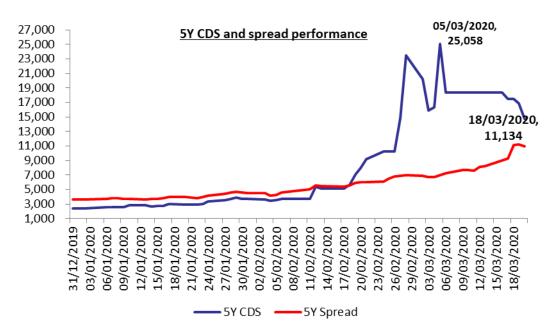


The yield curve remains inverted reflecting investors' fragile confidence in Lebanese papers. The demand on the long term 10Y Lebanese Eurobonds during H1 2020 exceeded the demand on the 5Y bonds. In fact, Lebanon's inverted yield curve shows that Lebanon has still not regained the confidence of investors and expectations of strong recessionary times in the medium to long term.

5Y yields

- 10Y yields

As yields move opposite to bonds prices, the yields on Eurobonds maturing in 5Y and 10Y increased during Q1 2020 and reached 114.40% and 56.60%, on March 23, respectively.



Source: BloomInvest Bank, Reuters

Foreign investors' perception of Lebanon's default risk reached unprecedented highs in Q1 2020. Investors' perception of Lebanon's default risk is best reflected in the 5Y Credit Default Swaps (CDS) which climbed from 2,417 bps by the end of 2019 to 25,058 bps (highest level) on March 5, 2020. Moreover, the spread between the 5Y yield on the Lebanese Eurobonds and their US comparable broadened from 3,588 bps by the end of 2019 to 11,134 bps on March 18, 2020. The fact that CDS premiums exceed the 5 Year Spread is an indication that credit insurance markets value Lebanese risk much more than capital markets.



2. Default Decision and its Repercussion on Bondholders:

On March 07th 2020, the Lebanese government announced that its does not intend to pay the \$1.2B worth of Eurobonds maturing on March 09th. In details, the government was supposed to pay \$2.72B and \$2.26B in 2020 as principal and coupon maturities, respectively.

2,258 2,132 2,012 1,861 1.783 2,719 2,320 2,221 1,760 1,610 2020 2021 2022 2023 2024 ■ Principal maturities ■ coupon matutities

Foreign Currency Debt (Eurobonds- Loans) (\$M)

Source: MOF

The official statement emphasized the country's dwindling foreign reserves and therefore opted to prioritize the funding of basic imports over foreign debt payments amid the current crisis. The Lebanese government also revealed a willingness to negotiate with creditors on a debt restructuring, yet it refrained from dissipating further details on the form of the intended restructuring.

Sovereign debt restructurings are perceived as inflicting large losses to bondholders. What happens to bondholders after a default isn't always easy to answer. Government discussions can take time. Following such a decision, bond prices will firstly drop as investors become concerned with the issuer's ability to make timely interest and principal payments. However, prices could rebound.

When a government defaults on its debt, what bondholders "recover" can vary significantly. Recovery is what a bondholder ultimately receives from holding a defaulted bond through all court proceedings. Unfortunately, both the ultimate recovery value and how long it will take to actually receive the recovery value are unknown in advance. Most importantly, the recovery is often less than the \$1,000 par value of the bond. In other words, it's unlikely that an investor would "recover" what the bond was originally worth.

A bondholder should be aware of the following when a government bond defaults:

- No more income payments. Bonds are often purchased for the income payments they
 provide. Since defaulted bonds no longer make coupon payments, investors are stuck
 holding non-interest bearing investments with an unknown recovery value and
 unknown recovery date.
- The time until ultimate recovery is unknown. Some restructurings are done relatively quickly, while the restructuring process for more complex issuers could take several years.
- The bankruptcy process can be time-consuming and costly. Investors will likely need
 to deal with legal paperwork and may need to vote on certain provisions related to the
 court proceedings.



Therefore the bondholder remains with 2 options:

- Sell the bond in the secondary market. The investor will get a certain amount and won't need to be concerned with the bankruptcy proceedings. It should be noted that different hedge funds and investors might be interested to invest in junk bonds. These hedge funds purchase these bonds at a steep discount of their face value in the anticipation of a higher recovery rate.
- Continue to hold the defaulted bond through the bankruptcy proceedings knowing that how much bondholders will receive and when they will receive it is unknown in advance.

In this context, an IMF working paper entitled "Long-Term Returns in Distressed Sovereign Bond Markets: How Did Investors Fare?" (Andritzky and Schumacher, 2019) analyzes the long-term returns of sovereign bonds during 32 crises since 1998, taking into account losses from bond exchanges as well as profits before and after such events. The analysis shows what sovereign debt crises and their subsequent resolution imply for bondholders: overall, investors do not seem to fare too badly, and not significantly worse in case of restructurings.

3. Credit Default Swap Market

In this section we will try to understand how the Credit Event Auction related to the Credit Default Swap (CDS) can affect the prices of the Eurobonds following a default event. However, it's important first to introduce the mechanisms of CDS and the reasons behind this auction.

A credit default swap is a derivative contract between two parties, a credit protection buyer and credit protection seller, in which the buyer makes a series of cash payments (CDS spread) to the seller and receives a promise of compensation for credit losses resulting from the default—that is, a pre- defined credit event—of a third party (Lebanese Government in this case)-(Rose and Chance, 2020)

In any derivative, the payoff is derived from the performance of an underlying asset that we call the underlying. For a CDS, the underlying is the credit quality of a borrower. At its most fundamental level, a CDS provides protection against default, but it also protects against changes in the market's perception of a borrower's credit quality well in advance of default. The value of a CDS will rise and fall as opinions change about the likelihood of default. The actual event of default might never occur.

Each CDS contract specifies a notional amount, which is the amount of protection being purchased. For example, if an investor holds Lebanese Eurobonds amounting \$1M, a CDS could be constructed for any amount up to \$1M. The notional amount can be thought of as the size of the contract. It is important to understand that the total amount of CDS notional can exceed the volume of debt securities which leads us to an important conclusion. Not all the buyers of CDS hold the underlying asset. It can be simply a party that believes that there will be a change in the credit quality of the reference entity.

The credit event is what defines default by the reference entity—that is, the outcome that triggers a payment from the credit protection seller to the credit protection buyer. When a credit event occurs, the two parties to a CDS have the right, but not the obligation, to settle. CDS can be settled by **physical settlement** or by **cash settlement**. The former involves actual delivery of the debt instrument in exchange for a payment by the credit protection seller of the notional amount of the contract. However, this method became less common. As the CDS market developed into a primary indicator of an entity's creditworthiness, default swaps evolved from being a hedging tool to the primary credit trading tool. As a result, at some point early this decade, the volume of CDS trades began to outstrip the volume of bonds outstanding - there were more CDS traded on a credit than the outstanding bond issuance of that credit. For investors with only the derivative position, physical settlement is not appealing.



Furthermore, with the CDS outstanding greater by multiples than the volume of bonds issued, the bonds would have to be "recycled" a number of times through the market to settle all the CDS trades. Investors recognizing this would rush to source bonds, artificially raising the price of the bonds higher than the expected recovery value, and increasing the volatility of the bonds post default. Therefore, cash settlement was widely regarded to be the best alternative.

In cash settlement, the credit protection seller pays cash to the credit protection buyer. Determining the amount of that payment is a critical factor because opinions can differ about how much money has actually been lost. The payment should essentially be the loss that the credit protection buyer has incurred, but determining that amount is not straightforward. In fact, default on a debt does not mean that the creditor will lose the entire amount owed. A portion of the loss could be recovered as discussed in the previous section. The percentage of the loss recovered is called the recovery rate². It then becomes the percentage received by the protection buyer relative to the amount owed. The complement is called the payout ratio, which is essentially an estimate of the expected credit loss. The payout amount is determined as the payout ratio multiplied by the notional.

Payout ratio = 1 - Recovery rate (%) Payout amount = Payout ratio \times Notional

To determine an appropriate payout ratio, the industry conducts a "Credit Event Auction" in which major banks and dealers submit bids and offers for the cheapest- to- deliver defaulted debt. This process identifies the market's expectation for the recovery rate and the complementary payout ratio. Moreover, the CDS parties agree to accept the outcome of the auction, even though the actual recovery rate can ultimately be quite different, which is an important point if the CDS protection buyer also holds the underlying debt.

In the case of Lebanon, the auction to settle the credit derivative trades for Lebanese Republic CDS was held on 23 April 2020. The recovery rate was set at 14.12% and therefore a payout ratio will be 85.88%. After two weeks of the auction, the BBI rose gradually from 14.70 basis points on April 24 to 17.26 basis points on May 11.

Let's assume the below example:

Consider a \$10M long protection investor. Assuming a 40% recovery rate, they would be compensated 60% of par (\$6M in this case), and sell \$10M par of bonds/loans. As the bond/loan trades in the auctions take place at the final price, they receive \$4M for the bonds/loans, in total receiving \$10M, and passing off \$10M par of bonds/loans to a buyer in the auction. Note that protection sellers would make requests to buy bonds/loans in the auction (as normally they would be delivered bonds/loans in physical settlement).

The "Actual recovery rate" is determined after the bankruptcy proceedings and therefore can occur much later than the payoff date of the CDS.



The Lebanese Eurobonds prices recorded high volatility in the first half of 2020 due to many events. In details, the market's performance was mainly affected by the Lebanese Government announcement of default on its Eurobond debt for the first time on March 7. Following such a decision, bond prices were at a very steep discount to the face value and the bondholder has to choose between selling the bond in the secondary market and holding the defaulted bond through the bankruptcy proceedings. However, when a country starts its negotiations with investors, bonds might witness an increase in their prices for many reasons. First, the demand on these bonds will rise in the secondary market as some hedge funds will be interested to invest in junk bonds as they anticipate higher recovery rate. Second, the auction to settle the credit derivative trades for CDS leads also to a rise in bonds demand and therefore in prices. In fact, in addition to determining bonds recovery rate, protection buyers have to settle their positions by physical or cash settlement while protection sellers will be interested to buy the underlying (bonds).

Bonds prices in the second half of the year will surely depend on the debt restructuring plan and negotiations with investors and as importantly on the outcome of the rescue plan with the IMF.

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