AFFINIUM

Disciplina + Humildad + Rigor ⇒ Verdad

3rd Quarter 2022 Letter

8 November 2022

"We shall soon be in a world in which a man may be howled down for saying that two and two make four, in which furious party cries will be raised against anybody who says that cows have horns, in which people will persecute the heresy of calling a triangle a three-sided figure, and hang a man for maddening a mob with the news that grass is green."

—G.K. Chesterton (1926)

"Those who leave the tradition of truth do not escape into something which we call Freedom. They only escape into something else, which we call Fashion."

—G.K. Chesterton (1935)

Dear Fund Investor:

During the third quarter of 2022 the Fund NAV net total return was -8.12%.

The net total return since the Fund commenced operations on 31 March 2021 ("Since Inception") until 30 September 2022 is -22.17%.

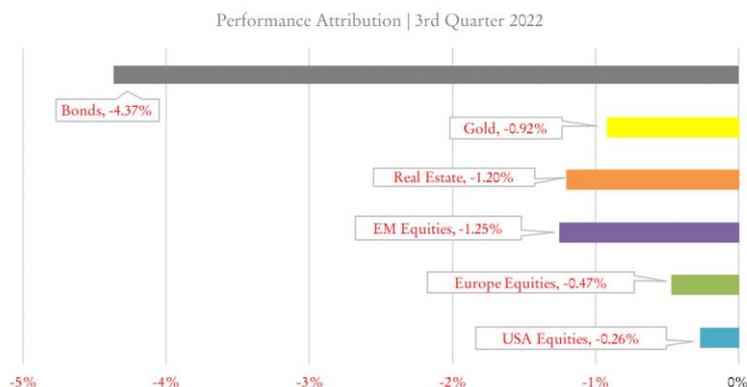**Month end Fund NAVs and monthly net total returns are shown in the following tables[1]:**

	Jan	Feb	31 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2021
NAV	-	-	99.49	101.53	103.73	102.46	103.76	104.36	100.88	102.21	100.98	103.49	YTD
Net TR	-	-	-	2.05%	2.17%	-1.23%	1.27%	0.58%	-3.33%	1.32%	-1.21%	2.48%	4.01%
Since Inception	-	-	-	2.05%	4.26%	2.98%	4.29%	4.90%	1.40%	2.73%	1.49%	4.01%	

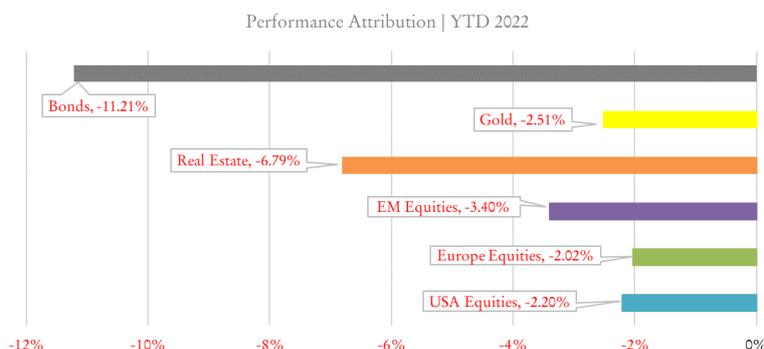|	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2022
NAV	98.03	95.63	94.51	90.13	88.65	84.27	87.02	82.74	77.43				YTD
Net TR	-5.27%	-2.44%	-1.17%	-4.63%	-1.65%	-4.94%	3.26%	-4.92%	-6.41%				-25.18%
Since Inception	-1.47%	-3.88%	-5.01%	-9.41%	-10.90%	-15.30%	-12.54%	-16.84%	-22.17%				

*   *   *

---

[1] En la sección de datos de la web se pueden seguir los resultados mes a mes: https://affinium.info/datos

Portfolio performance attribution by asset[2] during the 3rd Quarter is as follows:

Performance Attribution | 3rd Quarter 2022

Bonds, -4.37%
Gold, -0.92%
Real Estate, -1.20%
EM Equities, -1.25%
Europe Equities, -0.47%
USA Equities, -0.26%

-5%   -4%   -3%   -2%   -1%   0%

As can be observed, bonds contributed a little over half the portfolio return during the quarter.

Portfolio performance attribution by asset YTD 2022 is as follows:

Performance Attribution | YTD 2022

Bonds, -11.21%
Gold, -2.51%
Real Estate, -6.79%
EM Equities, -3.40%
Europe Equities, -2.02%
USA Equities, -2.20%

-12%   -10%   -8%   -6%   -4%   -2%   0%

Again, YTD at 3rd quarter-end as of 30 September bonds are contributing almost half the portfolio return.

Due to this, the remainder of this letter will be dedicated to explaining some key basic concepts of the bonds utilized in our portfolio and their return evolution over time. This will assist you in better understanding the behaviour of the portfolio in the past, the present, the future and to appreciate a few facets of the portfolio's ab initio construction.

*   *   *

---

[2] Utilizamos una simple suma aritmética de la rentabilidad bruta de cada activo comparada con la rentabilidad bruta aritmética total de la cartera. Este ha sido tradicionalmente el método más frecuente para mostrar cuánto ha contribuido cada activo al retorno total de la cartera. Hoy en día, el campo de la atribución de rentabilidades cuenta con más artículos y modelos que muchas teorías de valoración de activos. Sin embargo, seguiremos utilizando la suma aritmética de los rendimientos brutos individuales (aunque puedan aparecer diferencias con otros métodos), ya que muestra las contribuciones de los activos al rendimiento bruto total de la cartera de una manera directa y comprensible.

¿What can we expect of our bonds over time?

First of all, we should explain one of the many reasons for the bonds selected in our portfolio structure. To achieve this, we will present examples based on some simplifying assumptions to make it accessible for all level of readers to follow and grasp firmly each concept.

Our portfolio invests in a bond maturity of generally 5 years ("5Y") with a Convexity Adjusted Modified Duration ("CAMD") that varies slightly over time between 5% and 4% —assuming coupon and yield ranging from 0 - 7.5%.

As such, the argument that duration was much higher today than in previous periods of rising yields because coupons and yields were nearer zero is not a valid argument —at least not in our case. Convexity being higher or somehow creating a more negative effect is also incorrect in our case because convexity subtracts from our duration in cases of a rise in yields and adds to our duration in cases of a fall in yields.

The larger than historical negative returns from bonds this year have more to do with both the speed of the rise in yields and even more so the fact that yields started rising from very low levels. This latter factor meant that even though we started to receive a new higher yield than before, such yields could not keep up with the price loss caused by the duration. Meaning, the new higher yield could not cushion and recover so quickly the percentage price loss.

The latter duration methodology CAMD above approximates the percentage amount the bond price will fall due to a +1% increase in the bond's current yield, and conversely if the bond's current yield falls by -1%, the CAMD is an estimate of the percentage amount the bond's price will rise.

So, when our 5Y bond yields rise our bond prices fall. This is probably now very evident to all of you considering the events of 2022! Conversely, when our 5Y bond yields fall, our bond prices rise.

Many market participants believe that a rising yield is terrible news for bonds because of the price falls and thus negative bond total returns. However, as long-term investors we must respectfully disagree. Although it is of course true that our bond total returns are negative at the moment, this is only in the very short term and masks a few important basic properties of bond total returns over time.

It is a material fact that the total return of our bonds is formed predominantly by at least the following three components; **Price Return, Coupon Income Return** and **Reinvestment Income Return.**

Let's explain quickly these three concepts:

Price Return of a bond is the capital appreciation return originating from the change in the bond's market price due to rises or falls in the bond's yield. The market price of our bonds is rarely the 'Face Value' (also called Par Value) of $100, rather it can be either above Face Value —such as $105 or below Face value —say $95.

Coupon Income Return of a bond is the return generated by the annual fixed interest payments — Coupons— made by the issuer of the bond to the investor. The amount of this coupon payment is fixed at the conclusion of bond auctions that occur when the bond is first issued to investors by the specific government or corporate issuer. The principal capital amount or Face Value of each individual bond is $100 and this will be returned to the investor who owns the bond on the maturity date (expiry date). If the auction resulted in a yield of 1.25% then the total annual coupon amount is

fixed at $1.25. This coupon payment amount never changes during the life of the bond, regardless of how the bond price changes after the auction in the financial markets. It is paid every year until the maturity date when the bond expires and the Face Value is returned to the investor. Hence, bonds are called 'Fixed Income' securities due to this 'fixed' annual coupon payment income.

Reinvestment Income Return of a bond is the return earned by using the coupon income payments received each year to 'reinvest' in additional bonds.

From here on in this letter, we will refer to "Income Return" as being the aggregation of Coupon Income and Reinvestment Income. If at some moment we only include Coupon Income but not Reinvestment Income, we will highlight it.

Now that we are aware of these three basic components of bond total returns, let's see how they behave and perform over time.

Intermediate Bonds Total Return and Price Return 1926-2015:

INTERMEDIATE BOND | PRICE RETURN % vs INCOME RETURN %
(linear scale)
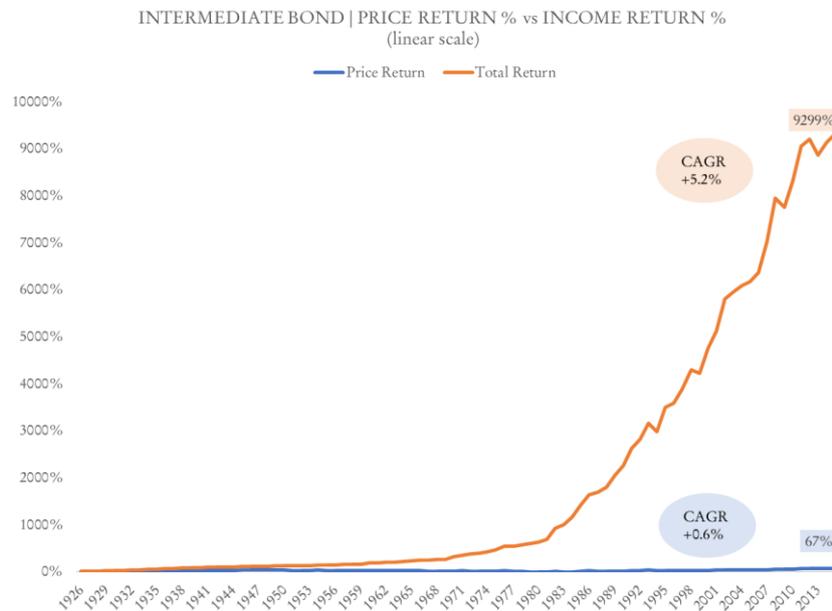
Evidently, over time the reason our bonds are in the portfolio has almost nothing to do with bond price return —the return obtained from a change in price as yields rise or fall. Rather, practically our whole total return over time is simply income return, assuming buy & hold and all else equal. Even after any rebalancing, unless one engages in significant market timing or substantial duration decrease/increase strategies applied to a large part of the bond allocation, Price Return would still dwarf Income Return.

Growth of $1 invested in Intermediate Bonds 1926-2015:

INTERMEDIATE BOND | $1 GROWTH
(log scale)
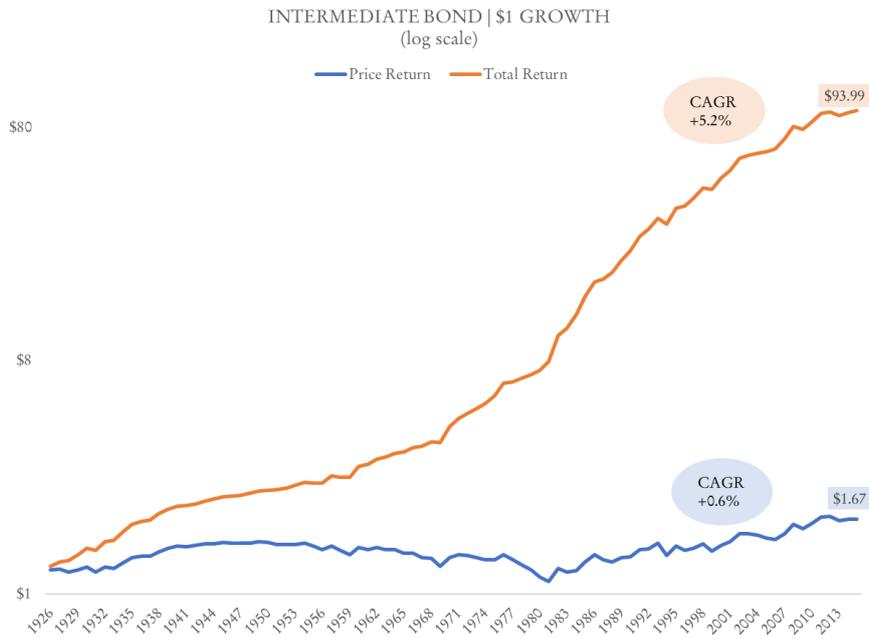
The growth of $1 logarithmic graph which normalizes the data points allows one to appreciate better the differences, divergences/convergences between the observed series. Important to note that the bifurcation of income return from price return is significant from the get-go during the fall in yields after The Great Depression between 1932-1940, becoming more acute during the rising yield cycles of the 1950/1960s and again during the late 1970s and early 1980s. Once yields began their long steady decline cycle after the early 1980s until the Taper Tantrum in 2013, one can observe the recovery in price return due to the positive bond price change effect due to falling yields.

Price Return Only of Intermediate Bonds 1926-2015:

INTERMEDIATE BOND | PRICE RETURN %
(linear scale)
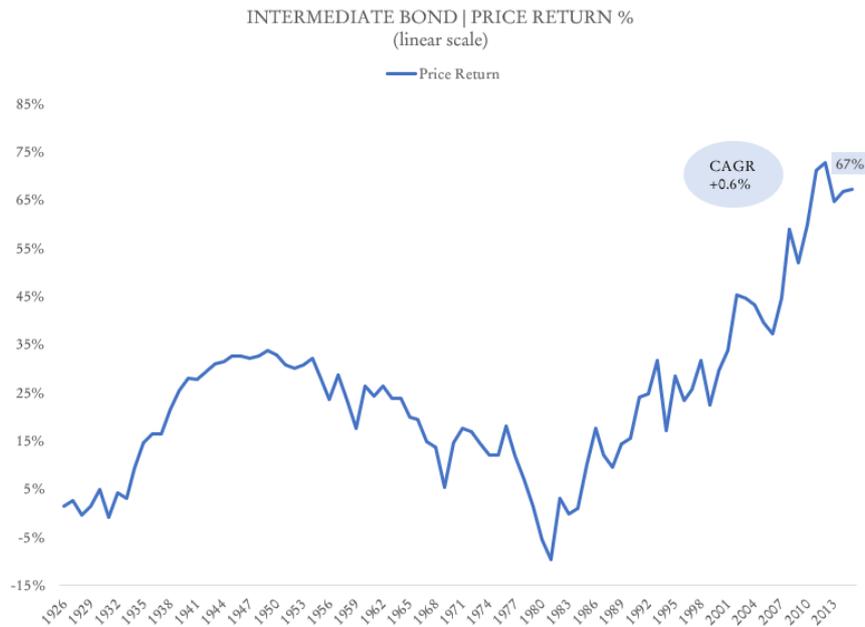
The linear graph of Price Return Only shows clearly that price return was favourable when yields fell from 1932 until 1940 and of course again from early 1980s until 2013.

By the same token, during the yield rising cycles of 1950/1960s, and late 1970s until early 1980s bond price return was significantly negative.

Of course, one could always try active market timing if they could predict the inflection points of yield cycles, actively conduct significant rebalancing or duration reduction/increase strategies and all in substantial size to make any significant worthwhile difference to buy & hold — more appropriately this approach would be called 'tactical asset allocation'. However, we implement a more passive buy & hold approach seeking simply the carry of the substantial income return over time.

As always when looking in the rear-view mirror, the results depend on when you decide to start and end your data series, but over the 90-year period although yields rose on average there was a 30-year period (1982-2015) when yields fell and bond price return was extremely positive and even so, Price Return was insignificant compared to Income Return. Despite the great bond bull market between 1982-2015 when yields fell from ~15% to ~2%, Price Return was positive ~85% and Income Return was positive ~1000%.

Therefore, at this stage we can conclude that higher yields are more important than lower yields for bond total returns and much more promising for our portfolio return over time in the future.

*   *   *

Putting this altogether, we can turn to present events and look in the short-term rear-view mirror of the current year 2022. The 5Y yield as of 31 December 2021 was ~1.25% ("Starting Yield") and as of 27 September 2022 it had risen to ~4.25% ("Ending Yield") resulting in a change in yields of +3.0% over the period. To illustrate this, we simplify events in the example below assuming the +3.0% occurred all on the same one day with a CAMD duration 5% bond.

Bond portfolio value impact over time post hypothetical yield changes of a duration 5% bond with starting yield of 1.25% immediately before the different yield change scenarios:

CONVEXITY MODIFIED DURATION 5% BOND IMPACT POST
HYPOTHETICAL CHANGES IN INTEREST RATES
WITH STARTING YIELD OF 1.25%
(linear scale)
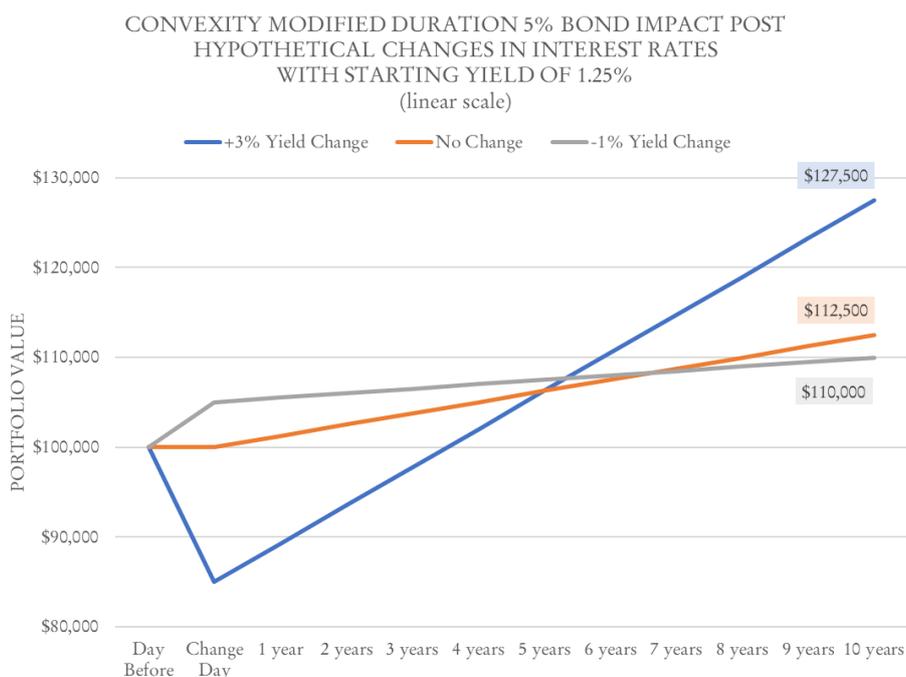
This example assumes no reinvestment of coupon payments; rather only income returns from coupon payments. The coupon amount is assumed to be at the new level of interest after the hypothetical yield change scenarios ("+3% Yield Change" is 4.25% coupon, "No Change" is 1.25% and "-1% Yield Change" is 0.25% coupon). It also assumes yields do not change again during the 10 years after the hypothetical yield change scenarios –after "Change Day". Finally, a 5% CAMD is assumed to reflect the change in bond price due to the two hypothetical scenarios in which bond yield changes (+3% and -1%) with the alternative third scenario being No Change in yield.

The most striking observation is that although the yield rises +3% —blue line bond— with the subsequent bond price fall of -15% (-$15,000), the new higher coupon of 4.25% recovers the original portfolio value of $100,000 after just 3.5 years due to higher income return.

Another two interesting observations are:

i.   After 5 years the +3% rise in yields with new higher coupon of 4.5% generated the same return as the No Change bond (orange line)
ii. After 6 years the blue line bond generated more return than both the orange line bond and the -1% Yield Change bond (grey line) with new lower coupon of 0.25%.

A useful reflection from this brief example is that if your overall investment holding period is greater than your bonds' duration, you should have nothing to fear from rising yields —on the contrary you wish yields would rise! If you holding period is less than your duration price return is more important. If your holding period is longer than your duration, then price return is much less important than income return from your bonds.

Once again, we can conclude that higher bond yields are less favourable in the short-term but significantly more favourable over time — especially over the medium/long-term, which matches our own investment holding period.

*   *   *

Finally, we must recognize and appreciate the stability of conviction you are showing as continual Fund Investors and your steadfast discipline during this current period, all so soon after our recent fund inception.

As we have shown in this letter more than half the YTD losses are attributed to bonds, but these are short-term in nature and higher yields vastly improve our portfolio total return over time.

There may still be difficult times ahead for bonds, stocks and real estate, but one bright spot in the portfolio going forward will be the full recovery of current short-term bond losses and higher income return if yields stay higher for longer.

As always, please do not hesitate to contact us directly with any doubts or questions for clarification.

Yours faithfully,

Marcos Pérez & Sharash Alexander