

BLOOMBERG INTELLIGENCE: ETF TRAFFIC LIGHT SYSTEM

Definitions of factors involved in
Bloomberg Intelligence's ETF
Traffic Light System as seen on
{BI ETF <GO>}

Contacts

Eric Balchunas, *Bloomberg Intelligence ETF Senior Analyst*, ebalchunas@bloomberg.net

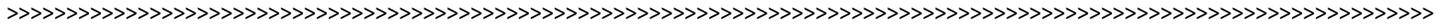
James Seyffart, *Bloomberg Intelligence ETF Associate Analyst*, Jseyffart3@bloomberg.net

Athanasios(Tom) Psarofagis, *Bloomberg Intelligence ETF Analyst*, apsarofagis1@bloomberg.net

As of

February 14th, 2018

Bloomberg



System Summary

The Bloomberg Intelligence ETF Traffic Light System is **not** a ratings system, **nor** a recommendation of products to purchase. The system has been created to complement the unique ways institutional and retail investors are using Exchange Traded Funds (ETFs) today. ETFs are not only being used in long-term allocation decisions, but for short-term tactical trading, hedging, cash equitization, or liquidity sleeves, to name a few examples. While an ETF may be a bad product for one particular use case, it may be the best product on the market for a separate use case. This makes it extremely difficult to assess and ‘rate’ an ETF with one broad brush because there may be 10 different use cases for each product. *This system avoids any attempt at giving such a rating.* The Bloomberg Intelligence Traffic Light System is simply meant to alert investors to the potential surprises from investing in an ETF based on its underlying structure, underlying holdings, and/or past pricing issues.

A new ETF launches every day in the United States, on average. Globally, that number jumps to three. This is positive for investors as it increases their breadth of choices. This increase in investment options also creates a greater need for proper due diligence on product selection. It is very common for ETFs to look and sound very similar, but the correct selection of one product over the other (depending on intended use and investor circumstances) can create excess return, known as Product Selection Alpha. The basis of this system is to empower investors to make educated decisions that best suit their investment needs.

“The existence of children does not mean that people shouldn’t be able to watch R-rated movies.”

A simple real world example of this is found in long volatility/VIX products, some of which have lost 99% of their value since inception. On the other hand, these same ETFs may be used by sophisticated investors to hedge against a spike in volatility. Generally speaking, these products are not meant for long term investment, but they may be an ideal solution for hedging volatility.

The System is not meant to be used as the sole input for an investment decision. It is simply meant to provide an initial level of due diligence to help warn investors of potential pitfalls down the road.

Use case example: if an investor were looking to invest in Master Limited Partnerships (MLPs) through an ETF. There are essentially two product types to choose from if they solely desire MLP exposure: are either via an Exchange traded note (ETN), which has credit risk, or an ETF with the underlying structure of a C-corporation, which has complicated tax situation causing a pseudo hidden fee. Neither is wrong, but an investor should be aware of the nuances/risks of each.

Every ETF that has been assessed is given a score and a list of the relevant factors included in that score.

The Traffic Light score is almost completely automated based on underlying Bloomberg data. Therefore, changes to an ETP’s data points within the Bloomberg database may affect that ETP’s score.

BI ETFS – TRAFFIC LIGHT

Factors Summary

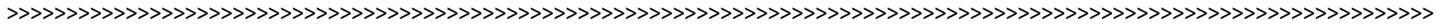
Flag/Factor	Short description	Points
Alternative Tax Treatment	Structure and underlying investments can cause unforeseen paperwork and/or additional costs that differ from traditional equity investments	1 Point
Alternative Weighting	Non-market capitalization weighted passive products may have differentiated returns from the underlying market.	1 Point
Fund Is Actively Managed	Actively managed ETFs are subject to the decisions of the fund managers and returns may differ from the underlying broad market.	1 Point
Hidden Fees	Some ETFs have additional costs that are not transparently stated. Examples of these fees are acquired fund fees, deferred tax liabilities, shorting costs, etc.	1 Point
Credit Risk	Investors should be aware that their investments are not secured by actual holdings and are subject to the solvency of the instrument's issuer/guarantor.	2 Points
Low Trading Volume	ETFs are trading vehicles and minimal trading may cause adverse price movement when entering or exiting a position. Risk of fund closure.	1 Point
Less Liquid Holdings	These ETFs are most vulnerable to issues with liquidity and pricing during a crisis or tail risk event.	2 Points
Potential NAV Tracking Issues	Passively managed ETFs are expected to track their indices closely.	1 Point
Discount/Premium Issues	NAV is considered fair value, and if the price is not at the fair value this can cause issues for the investor.	Large D/P Range = 1 Point Large Avg D/P = 1 Point Max = 2 Points
Leverage	Creates path dependent returns and increased risk.	Inverse/Minimal Leverage = 2 Point Heavy Leverage/Daily Reset = 5 Points Max = 5 Points
Potential Futures Roll Costs	Additional costs can occur from the rolling of futures contracts and can have a large impact on returns.	4 Points

Points Summary

1. ETP's with **1** point or less are given a **green** light.
2. ETP's with **2-4** points are given a **yellow** light.
3. ETP's with **5** points or greater are given a **red** light.

Factor Descriptions, Explanations, and Examples

BI ETFS – TRAFFIC LIGHT



1. **Alternative Tax Treatment**

The tax treatment flag is reserved for funds that use a structure or have underlying investments that will cause investors to have a tax treatment different from normal equity investments.

a. **Examples:**

- i. Funds structured as a commodity pool (a form of a limited partnership) will require the completion of a K-1 form alongside or instead of the normal 1099 form.
- ii. Underlying investments in Gold and precious metals will be taxed where relevant at the Short Term Capital Gains rate. But, instead of moving down to the Long Term Capital Gains rate when the investment is held for a time greater than one year, these investments will be taxed at the collectibles tax rate. Currently, long term (greater than one year) investments in gold are taxed at a maximum of 31.8% rather than the typical long term capital gains rate (currently at a max of 20%).
- iii. Currency ETPs structured as grantor trusts are always taxed as ordinary income and are not subject to the lower Long Term Capital Gains tax rate.

2. **Alternative Weighting**

This flag denotes a passive product whose underlying holdings are weighted differently from a conventional Market Capitalization scheme. This is to allow investors to be aware that there is likely to be factor tilts and/or differentiation from the overall market that the fund is tracking.

3. **Fund is Actively Managed**

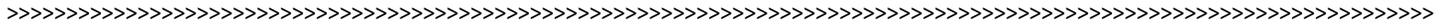
Used to denote a fund that is actively managed. This is to make sure investors are aware that there is a person actively making decisions that may cause their investment to diverge from the underlying market (Positively or negatively).

4. **Hidden Fees**

The hidden fees flag is used to denote funds with underlying costs inherent in their strategy or structure. These fees or costs will not be blatantly stated in documentation for the funds but should be something that an investor is aware of. Some negligible while others may be notable.

a. **Examples:**

- i. Funds that implement some sort of hedging/shorting in their underlying strategy. There are additional costs in shorting/borrowing against a security or market. Interest rate hedging and currency hedging are included here.
- ii. Funds structured as C-Corporations (C-corps), typically MLP Funds. Because these “funds” are structured as corporations, they do not have the pass through provisions provided in a typical Regulated Investment Company (RIC) under the Investment Company Act of 1940 (‘40 Act) and are taxable entities. This forces the entity to incur Deferred Tax Assets (DTAs) or Deferred Tax Liabilities (DTLs) depending on the performance of the fund. Any DTL will cause a corresponding decrease in the fund’s net asset value (NAV), and it will present as an additional cost to a fund.
 1. Funds solely invested in MLPs (Master Limited Partnerships) are structured as C-corps to avoid a specific provision from The American Jobs Creation Act of 2004. The Jobs Creation Act clarified income rules allowing the inclusion of net income from qualified publicly traded partnerships to be considered as qualified income. But, the provision also restricted RICs under the ‘40 Act from having more than 25% of their assets in qualified publicly traded partnerships. C-corps are not considered RICs.
- iii. Fund of Funds. Fund of funds have their own management and structure expenses but their investments in underlying funds also have expenses. This shows up as an Acquired Funds Fee.



5. Credit Risk

Used to denote the credit risks associated with debt instruments. Exchange Traded Notes (ETNs) are different from Exchange Traded Funds (ETFs) because they do not actually hold the underlying assets. The return of an ETN is guaranteed by the guarantor of the debt. This is typically a large bank. Thus, the returns and assets in an ETN are subject to the credit risk of the guarantor/issuer of the debt.

6. Low Trading Volume

ETFs have what is referred to as two levels of liquidity (Primary and Secondary). There is liquidity in the primary market based on the underlying holdings and the ability to use the Creation/Redemption process that is unique to ETFs. The second and more commonly known level of liquidity is “on-screen” trading volume. To analyze the secondary level of liquidity (volume) of an ETF, Average Daily Turnover (also known as ‘Traded Value’ or ‘Dollar Volume’) is used. Any ETF with an average daily turnover (past 1 year) lower than \$20,000 USD, is given a notice of “Low Trading Volume”. This may present additional costs in the form of wider spreads and/or the inability to enter or leave a position. Another risk associated with low trading volume is the possibility for the closure of the product. Limit orders should be used for products with this flag.

a. Turnover is defined as:

- i. *“The total amount traded in the security’s currency. This value represents all trade prices, multiplied by the number of shares relating to each price. This value is then summed.”*

7. Less Liquid Holdings

The ‘Less Liquid Holdings’ flag is used to denote a fund with underlying assets that are considered to be traded in an illiquid market. This is based on the second level of liquidity mentioned in the “Low Trading Volume” heading. In the event of a crisis or tail risk event, these types of ETFs are most likely to have issues with liquidity and pricing. It should also be stated that these issues would be a product of the markets being invested in. ETFs reflect their underlying market and when there are issues in the underlying market, it is likely to show in an ETF via wider spreads and other factors. If an investor does not feel comfortable investing in a market directly, they should think carefully about investing in ETFs that track that market.

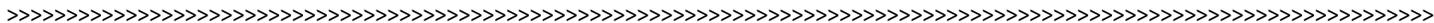
a. Examples (of these markets):

- i. High Yield Debt
- ii. Frontier Markets

8. Potential NAV Tracking Issues

ETPs flagged with NAV Tracking Issues are passively managed funds that have deviated from the returns of their underlying index over the past year. This is an alert that signifies there is potential for a form risk similar to basis risk. Basis risk is the risk that the value of a hedge (or ETF in this case) does not move in line with that of the underlying exposure (an index). This can be seen in the form of under or out-performance (Tracking Difference). Tracking difference is defined as the difference between the performance of the fund and the performance of the underlying index. This is analyzed over a 1 year time span to see how much the NAV of a fund has differed from its underlying benchmark. An ETF is flagged after satisfying two separate criteria (an absolute and a relative criterion). For the system’s purposes, the adjusted tracking difference is used (adjusted after adding back expense ratio costs) as the absolute measure. If the adjusted tracking difference is at least **0.5%**, the first criterion is met. The second criterion is that the performance difference must amount to at least **25%** of the absolute value of the underlying index return. If these are satisfied, an ETF will

BI ETFS – TRAFFIC LIGHT



be flagged as having “Potential NAV Tracking Issues”. In the event that the Index performance was lower than the absolute value of **0.2%**, the adjusted tracking difference (inclusive of expense ratio) is used and the fund must have an absolute tracking difference greater than **0.5%**.

- a. It is important to note that a fund may be flagged in this criterion for *outperforming* its index. While this is typically good for investors, it may not be for all. ETFs can be shorted, and investors should be aware of this potential discrepancy. There are numerous reasons that a passive ETF may have been able to outperform its benchmark. To name a few examples, the fund may have deviated from the underlying index investments or the fund may have engaged in securities lending.
- b. **Example:**
 - i. An ETF with ticker ABC underperforms its index by 0.8%, but its expense ratio of 0.65% explains almost all of that underperformance. The adjusted tracking difference (inclusive of the expense ratio) is 0.15%. This 0.15% is below the 0.5% threshold and thus not flagged.
 - ii. An ETF with ticker XYZ outperforms its benchmark by 0.12% and has an expense ratio of 0.65%. This means that the ETF’s adjusted tracking difference was 0.77% which is above the 0.5% threshold. The next test is to look at the performance of the underlying index and view this on relative terms. In this example, the index returned 1.5% over that year. This ETF will be flagged with potential NAV tracking issues because the $(0.77\%) / (1.50\%) = 51.33\%$. 51.33% is greater than the 25% threshold used to view tracking on a relative basis.

9. Discount/Premium Issues

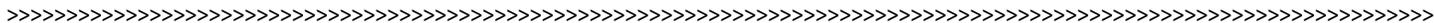
A fund is at a discount when its Price is below the Net Asset Value (NAV). A premium is the opposite situation, where the fund closes at a price higher than its NAV. This flag is used to identify ETPs with significant potential for discount and premium issues based on the historical track record of an ETP. This is analyzed in two separate ways and funds can be given a total of 2 points. The first is using the highest premium and the lowest discount to ascertain how wide the range of Discount to Premium has been for a given ETF. The system is looking for an ETP with a historical range that is at least 10% over the past two years. The second way that the funds are assessed is based on the average discount/premium percent over a given time period. This takes into account each day and gives the average premium or discount. If the absolute value of this average discount/premium is over 0.75%, it is seen as an indication that this fund may have discount/premium issues. (Internationally focused ETPs are excluded from this second discount premium criterion)

- a. Many funds given a point in this criterion are likely to have internationally traded holdings. Internationally focused ETPs are not trading at the same time as their underlying assets and because of this fact, there are often slight discrepancies in the calculation of NAV against the closing price of the ETP. This is simply a byproduct of investing in these markets. If possible, investors should be trading and buying ETPs when the underlying assets are also trading.
- i. **Example:**
 - 1. US Listed ETPs with a European geographical focus should be traded in the morning when possible because the European markets are open during the US’s morning trading hours. This allows for better price discovery and efficiency for those products.
 - 2. For exposures in Asia, trading during the underlying market hours is not possible because there is no overlap with the US’s trading hours.

10. Leverage (multiple flags)

Leverage in an ETF is created using derivative instruments such as swaps that reset on a daily basis. These funds typically diversify the counterparty risk of the underlying swaps by using multiple Banks. While leverage has the ability to potentially increase returns, it will also increase risk and volatility.

BI ETFS – TRAFFIC LIGHT



Actual Total Return: $((*.85*1.15*.85*1.15)-1) = \underline{-4.4494\%}$

Difference: **5.9476%**

The BLOOMBERG PROFESSIONAL® service and BLOOMBERG Data (the “Services”) are owned and distributed by Bloomberg Finance L.P. (“BFLP”) in all jurisdictions other than Argentina, Bermuda, China, India, Japan, and Korea (the “BLP Countries”). BFLP is a wholly owned subsidiary of Bloomberg L.P. (“BLP”). BLP provides BFLP with global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. Certain functionalities distributed via the Services are available only to sophisticated institutional investors and only where the necessary legal clearance has been obtained. BFLP, BLP and their affiliates do not guarantee the accuracy of prices or information in the Services. Nothing in the Services shall constitute or be construed as an offering of financial instruments by BFLP, BLP or their affiliates, or as investment advice or recommendations by BFLP, BLP or their affiliates of an investment strategy or whether or not to “buy”, “sell” or “hold” an investment. Information available via the Services should not be considered as information sufficient upon which to base an investment decision. BLOOMBERG, BLOOMBERG PROFESSIONAL, BLOOMBERG MARKETS, BLOOMBERG NEWS, BLOOMBERG ANYWHERE, BLOOMBERG TRADEBOOK, BLOOMBERG TELEVISION, BLOOMBERG RADIO, BLOOMBERG PRESS and BLOOMBERG.COM are trademarks and service marks of BFLP, a Delaware limited partnership, or its subsidiaries. © 2017 Bloomberg Finance L.P. All rights reserved. This document and its contents may not be forwarded or redistributed without the prior consent of Bloomberg.

Bloomberg Intelligence is a service provided by Bloomberg Finance L.P. and its affiliates. Bloomberg Intelligence shall not constitute, nor be construed as, investment advice or investment recommendations (i.e., recommendations as to whether or not to “buy”, “sell”, “hold”, or to enter or not to enter into any other transaction involving any specific interest) or a recommendation as to an investment or other strategy. No aspect of the Bloomberg Intelligence function is based on the consideration of a customer's individual circumstances. Bloomberg Intelligence should not be considered as information sufficient upon which to base an investment decision. You should determine on your own whether you agree with Bloomberg Intelligence.

Bloomberg Intelligence is offered where the necessary legal clearances have been obtained. Bloomberg Intelligence should not be construed as tax or accounting advice or as a service designed to facilitate any Bloomberg Intelligence subscriber's compliance with its tax, accounting, or other legal obligations. Employees involved in Bloomberg Intelligence may hold positions in the securities analyzed or discussed on Bloomberg Intelligence.