ASU W. P. Carey School of Business

Arizona State University

Master of Science in Finance

FIN 575: Finance Capstone

MacArthur Foundation

"In perpetuity investor, such as foundation, endowment with a tendency to stay fully invested in risky (and sometimes illiquid) assets all the time."

Current Economic Environment Analysis and Security Selection

By

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Our Investment Outlook

The Federal Reserve recently cut interest rates by 50 basis points during its September 2024 meeting. According to their projections, interest rates are expected to decline further to 4.4% by the end of this year and to 3.5% by the end of 2025. The Fed has expressed confidence that inflation is moving toward their long-term target of 2%, while remaining vigilant about the labor market to engineer a soft landing for the economy.

However, despite the Fed's optimism, several indicators suggest heightened recession risks. The bond market has flattened and un-inverted over the past few years, which has historically signaled impending economic downturns. Additionally, the unemployment rate continues to rise, indicating a weakening labor market.

Given these factors, we believe the economy is in a softening phase, with elevated risks of a potential recession. Nevertheless, amid this challenging outlook, we identify the following securities and asset classes as attractive investment opportunities:

1. **Bond Market**

The yield on the 20-year Treasury bond is approximately 4.07% at present. Traditionally, long-term bonds such as the 20-year have offered higher yields due to the term premium, which compensates investors for risks associated with longer time horizons. However, in recent years, these yields have declined from past peaks, influenced by shifts in economic conditions and monetary policy adjustments.

Long-Term Bonds Outlook

Long-term bonds play a crucial role in portfolio diversification and income generation, particularly during periods of economic uncertainty. With potential Federal Reserve rate cuts on the horizon, there is growing optimism for improved performance in high-quality, longer-maturity fixed-income investments. As interest rates decline, the prices of long-term bonds typically rise, leading to capital appreciation alongside stable yields. Additionally, bonds with longer maturities may become increasingly attractive to investors seeking consistent income, especially as market volatility or slowing growth enhances the appeal of safe-haven assets like Treasury bonds.

Furthermore, as shown in (*refer Exhibit:1*) we note that the spreads on AAA and BBB bonds relative to the 10-year yield are at historically low levels. As a result, we prefer not to allocate funds to corporate bonds or shorter-term bonds, as our foundation requires a 5% payout, and short-term rates do not provide sufficient yield to support growth in our corpus. Given our concerns about the growth trajectory of the US economy, we plan to hedge associated risks by including longer-term bond ETFs in our portfolio.

Specifically, we would allocate funds to $TLT, which targets 20-year bond maturities, and $IEF, which has a modified duration of 7.2 and invests in 7-10-year US government bonds. We believe this allocation will help us earn excess returns during down cycles and serve as a solid hedge if the economy enters a recession.

The iShares 20+ Year Treasury Bond ETF (TLT) is a widely followed exchange-traded fund that provides exposure to U.S. Treasury bonds with maturities of 20 years or longer. This ETF is particularly popular among investors seeking exposure to long-term government securities, which are considered safe-haven assets.

Recent Performance

As of 2024, $TLT has been influenced by several macroeconomic factors, primarily driven by shifts in interest rate policy and inflation expectations, as illustrated in (*refer Exhibit:2*). During periods of rising interest rates, TLT typically experiences price depreciation due to mark-to-market losses from increasing yields. Conversely, in times of falling rates or economic uncertainty, long-term Treasuries tend to perform better, offering relatively stable yields.

In recent quarters, the Federal Reserve's aggressive rate hikes aimed at combating inflation have negatively impacted TLT's performance. However, growing expectations for potential rate cuts in the near future have generated optimism for a recovery in long-term bonds.

Similarly, the iShares 7-10 Year Treasury Bond ETF (IEF) provides investors with access to U.S. Treasury bonds maturing within a 7 to 10-year window. These bonds are often viewed as a middle ground between short-term and long-term Treasuries, offering a balance between yield and interest rate sensitivity. As seen in (*refer Exhibit:3*), IEF's performance has also been shaped by macroeconomic factors, particularly the Federal Reserve's monetary policy decisions.

Interest rates have risen significantly over the past year due to the Fed's aggressive stance on inflation. Given the inverse relationship between interest rates and bond prices, this rise has negatively affected the price of bonds in IEF’s portfolio. However, with expectations of potential interest rate cuts in 2024, there is growing optimism that IEF may see price appreciation as yields decline. Intermediate-term bonds, like those in IEF, tend to benefit when interest rates stabilize or decrease, as their duration allows for a more balanced response to rate changes compared to long-term bonds.

Therefore, we prefer to invest in long-term government bonds through these two instruments to hedge against elevated recession risks, which we believe are significant at this time.

2. US Equity

We recognize that exposure to the U.S. equity market carries certain risks. While we aim to diversify across geographies, investing in the U.S. remains crucial for us—not only to give back to the community but also to hedge against currency risks that may arise from international investments.

To support this strategy, we calculated the Equity Risk Premium (ERP) as shown in *(refer Exhibit 4 & Exhibit 8)* Using the average forward earnings estimates from analysts and a long-term growth rate of 4%, we derived the implied market return. Our estimates suggest that the S&P 500 is likely to deliver a long-term return of approximately 9%, slightly below the 10% benchmark.

Given this outlook, we plan to allocate a portion of our portfolio to S&P 500 ETFs to capture passive yield. Additionally, we will invest in the Russell 2000, as we believe that while the earnings outlook has become bleak and the ERP is about 5.32%, the Russell 2000 is technically more attractive compared to the S&P 500. *(refer Exhibit:5)* illustrates that the Russell 2000 has been trading at a discount to the S&P 500 over a longer period. The Russell 2000 is currently trading at approximately a 25% discount to the S & P 500, and we intend to capitalize on this by allocating to an RTY Index ETF.

Moreover, we will invest in the U.S. through private equity and hedge funds to generate active returns.

3. Alternative Investments

Alternative investments have flourished in recent years, benefiting from an era of easy money and low interest rates. With rates now trending lower once again, we anticipate that alternative investments can continue to perform well in the foreseeable future.

Unlike traditional equity and bond investments, alternative assets such as gold, commodities, private equity, and hedge funds offer unique risk-return profiles and are driven by different market dynamics. As a result, incorporating them into the portfolio enhances diversification, while also potentially boosting returns.

In the current market cycle, we find the following alternative investments particularly attractive:

REITS

The U.S. real estate market is emerging from a challenging period over the past couple of years. Historically, real estate tends to perform well during periods of low interest rates. With mortgage rates now beginning to decline, including the 30-year U.S. mortgage rate reaching a two-year low of 6.15%, we believe a real estate revival is on the horizon.

Given this positive outlook, we see an opportunity to allocate capital to Real Estate Investment Trusts (REITs), which are well-positioned to benefit from the anticipated improvement in market conditions. Our preference is to invest in real estate through the Vanguard Real Estate ETF, which offers a low expense ratio of 0.13%. The fund has delivered a 5-year return of 5% and boasts a Sharpe ratio of 1.19. We believe investing in this ETF is particularly attractive at this point in the market cycle. *(refer Exhibit:9)* shows the holding of Vanguard ETF and *(refer Exhibit:10)* shows the performance of the ETF.

Private Credit

We have a favorable view of hedge funds and asset management companies operating in the private credit space. Historically, strong asset managers in this sector, such as the Oaktree Strategic Credit Fund, have been able to generate annual returns of 10-12%, largely due to their exceptional underwriting skills. They maintain robust, high-yielding portfolios, which we believe are particularly attractive in an era marked by low interest rates and significant government intervention. In this context, private credit stands out as an excellent asset class for generating higher returns.

We therefore believe the Oaktree Strategic Credit Fund presents a compelling investment opportunity in this space. It has a renowned asset management team and has consistently generated excess returns historically.

Hedge Funds

Volatile markets present an ideal opportunity to invest in hedge funds that can take both long and short positions, allowing them to profit from market movements in either direction. Given the current high market valuations, we believe a more dynamic and active management approach is essential.

We see pockets of excess in sectors like semiconductors while identifying deep value opportunities in pharmaceuticals. Therefore, investing in hedge funds that conduct thorough security analysis and employ a variety of active strategies is a prudent way to navigate this market environment.

As a result, we intend to continue our investments in hedge funds, capitalizing on these insights. We prefer to invest in this space through Pershing Square Holdings, a listed entity with low asset management fees. It is managed by a team of highly regarded asset managers known for their prudent investment approach. The fund's holdings are presented in *(refer Exhibit:11)*

This fund has generated an impressive annual return of 21.28% over the past five years, outperforming the S&P 500 by approximately 8%. We believe this outperformance will continue into the future, given the superior capabilities of the asset manager.

Private Equity

Private equity offers an opportunity to earn an additional illiquidity premium. We believe private equity firms across various geographies can generate significantly higher returns, particularly in a world shaped by more populist government policies and the potential return of lower interest rates.

Investing in private equity requires a focus on selecting exceptional asset managers, as specific managerial skill sets are crucial for success in this sector. Taking these factors into account, we remain bullish on private equity.

We are particularly interested in the Invesco Global Listed Private Equity Fund ($PSP), as it provides exposure to private equity firms worldwide. The fund is well-diversified, with no holding exceeding a 6% weight. It includes private equity players across various geographies and funds with different superior skill sets. We believe adding this fund to our portfolio would enhance yield generation. (*refer Exhibit.12*) shows the holding of $PSP.

Gold

Despite a significant rally in gold prices over the past year, we maintain a positive outlook on gold and plan to sustain our allocation to hedge against country-specific risks. Gold remains a vital asset in our portfolio, providing stability amidst global uncertainty.

Although the U.S. economy appears robust, we are deeply concerned about the alarming rise in government spending, which now constitutes 37% of GDP, as estimated by the IMF. This increase in spending, despite a strong economy, highlights a worrying trend that could pose risks in the future.

Furthermore, foreign central banks have begun diversifying away from U.S. dollar reserves, increasing their holdings of gold and other currencies. While this trend is not immediately alarming, it underscores a shift that warrants attention. In the current political landscape, populist policies dominate the discourse, and there is a noticeable lack of acknowledgment of the mounting risks associated with excessive spending and debt. At the moment we believe that both the political candidates of the two parties are only talking about how much they can spend and are trying to get votes on the ground of spending promises as an endeavor of appeasement.

Back in the 2008 financial crisis government bailouts became necessary due to institutions deemed "too big to fail." Fast forward to 2023, and we encountered a "too small to fail" crisis with the collapse of Silicon Valley Bank, where government intervention was once again done. These developments suggest that fiscal restraint has been abandoned, leading to an unhealthy economic environment and twisted form of capitalism.

In August 2024, the S&P 500 experienced a sharp 9% decline due to the unwinding of cross-currency yen trades, prompting major investment banks to call for emergency Federal Reserve cuts. This further reinforces our belief that the current economic environment is overly reliant on short-term stimulus measures, with spending discipline being largely forgotten.

Historically, excessive national debt has led to severe economic difficulties. In light of U.S. government's debt trajectory, which is on course to exceed $36 trillion this year, we find gold to be an especially prudent asset class. Gold's ability to hedge against the risks associated with U.S. dollar volatility, soaring debt levels, and potential political gridlock over the debt ceiling makes it an attractive investment.

Over the past 20 years, gold has outperformed the S&P 500, delivering these returns with lower volatility *(refer Exhibit:13).* Thus, including gold in our portfolio not only mitigates risk but also presents a compelling opportunity to generate alpha.

Critics of this approach may argue that gold's compound annual growth rate (CAGR) over the past 10 years has been 6.51% (as of the end of September 2024), and over the past 100 years, its CAGR has been only 2%. However, we emphasize that our investment in gold is tactical and will be reassessed once we believe the U.S. economy has stabilized and the debt burden is no longer a critical issue.

Additionally, we anticipate that interest rates may decrease in the near future. Historically, commodities, including gold, tend to perform well when yields on risk-free assets decline. This reinforces our belief that gold is well-positioned for strong performance in the short to medium term.

From a technical perspective, we observe that retail flows into gold-backed ETFs have been relatively subdued despite the recent price increases. According to behavioral finance, this is a positive indicator for future returns, as bull markets typically peak when retail investor sentiment reaches euphoric levels. Therefore, we see substantial upside potential for gold in the near future.

In conclusion, our conviction in gold is driven by its unique position as a finite resource that cannot be printed, unlike cryptocurrencies, which face constant dilution through the creation of new tokens. Gold remains a true store of value and can serve as an alternative to the U.S. dollar. Our current strategy views gold as a speculative yet tactical investment, with the potential to act as a significant hedge during economic downturns.

4. International Exposure

We believe owing to risks associated with high valuation in US equities, lower bond yields and high government debt that it is prudent to be allocated internationally. We like the following countries' equities and would like to add them to our portfolio.

Switzerland

Switzerland, with a $700 billion economy, ranks 20th globally, outperforming its Scandinavian counterparts. While offering welfare benefits comparable to Scandinavia, Switzerland maintains a more open and stable economy, lower taxes, and a streamlined government. The average Swiss income of nearly $95,000 surpasses that of the United States and significantly exceeds the average incomes in Scandinavian countries. Swiss families enjoy a net worth of around $685,000, benefiting from a stronger economic model. For instance, the healthcare system mandates that residents purchase insurance from private providers, with subsidies available for those in need. At its core, Switzerland is a capitalist powerhouse, with government spending well below the average of other wealthy nations as a percentage of GDP. The top tax rate in Switzerland is currently 45%, notably lower than countries like Denmark, where the top rate reaches 55%.

The country is home to 14 of Europe's top 100 companies. Nestlé, valued at $300 billion, dwarfs its closest Scandinavian competitor by a factor of 15. Growth is visible across various regions. Traveling from Zurich to Geneva reveals numerous iconic export hubs showcasing the nation's innovative spirit. Swiss army knives from Schwyz watches from Bern, and chocolates from Fribourg are just a few examples. Small businesses, which form the backbone of the economy, contribute 66% of the nation's jobs.

Switzerland's currency, the Swiss franc, has appreciated faster than any other nations. Normally, a rising currency would hurt exports by making them more expensive, but while most wealthy nations have seen their exports decline, Switzerland's share has grown. The quality of Swiss products allows them to command premium prices in the global market.

Furthermore, Switzerland has not faced a domestic crisis since the 1970s and weathered the 2008 global financial crisis with less damage than most developed nations. The franc's strength also protected Switzerland from the worst effects of the 2022 energy price shocks following the war in Ukraine, with inflation held at just 3.5%—well below the developed world average.

Switzerland's education system is another pillar of excellence. A meritocratic approach guides students toward their strengths early on, and world-class universities charge only about $1,000 per year in tuition, leaving graduates with far less debt than their peers in the US or UK.

Switzerland has proven that a pragmatic approach can balance a business-friendly environment with social equity. By mastering this balance, the Swiss have become the world's richest nation.

The Swiss Market Index, trading at a price-to-earnings (P/E) ratio of 19.53, is currently a value buy compared to the S&P 500.

Based on analysts' average forward earnings estimates, we estimate the equity risk premium (ERP) in Switzerland to be approximately 6.45%, indicating the potential for long-term returns exceeding 10%. Considering the global debt landscape and Switzerland's robust economic fundamentals, we believe that an allocation to Swiss markets is a sound decision at this point in the market cycle. Furthermore, as illustrated in *(refer Exhibit.14)*, Switzerland's stock market capitalization relative to GDP is historically average, reinforcing the prudence of this asset allocation strategy.

Netherlands

In our efforts to hedge against concentration risk in the United States and explore opportunities in other developed markets, we favor exposure to the Netherlands. The Netherlands benefits from strong democratic institutions, a robust rule of law, and political stability, making it an attractive investment destination. Its strategic location, well-developed infrastructure, and highly skilled workforce further enhance its appeal. Moreover, the country has no reliance on Russian energy and has largely remained insulated from the refugee crisis, adding to its stability and We estimate that the equity risk premium for the Netherlands is 7.69%, approximately 200 basis points higher than the S&P 500, based on current market prices and average analyst earnings expectations. Furthermore, as shown in *(refer Exhibit:15)*, the Netherlands has seen a correction in its market capitalization to GDP ratio over the past few years.

To capitalize on these opportunities, we recommend allocating our capital to the EWN ETF (MSCI Netherlands ETF). The holdings of this ETF are detailed in *(refer Exhibit:15)*.

Emerging markets

Emerging markets (EMs) have become increasingly attractive for investors seeking diversification and growth, particularly in light of recent global economic shifts. These markets offer the potential for higher returns due to faster GDP growth compared to developed economies, especially as countries like India, China, and Switzerland experience expanding equity markets and increased foreign capital inflows.

In September 2024, the Federal Reserve initiated a cycle of rate cuts by reducing the federal funds rate by 50 basis points, signaling a shift from its previous strategy of aggressive tightening. This relaxation, prompted by inflation nearing the Fed's 2% target, may significantly benefit developing economies. With the depreciation of the US dollar and falling interest rates, emerging markets that rely on foreign investment are likely to see improvements as their currencies stabilize or strengthen, and borrowing costs decrease. Historically, low US interest rates have led to increased investment in emerging markets, given the comparatively higher yields they offer.

Moreover, EMs provide diversification benefits, as their economic cycles often differ from those of advanced economies. Many emerging markets also boast younger populations, driving labor force expansion and consumption growth, which contribute to long-term economic prospects. With the Federal Reserve's recent rate cuts leading to a weaker US dollar, undervalued emerging market currencies and assets are poised for recovery, presenting further opportunities for currency appreciation and investment returns.

Our outlook for emerging markets remains optimistic, particularly as global inflation stabilizes and US interest rates decline. We see strong growth prospects and pockets of deep value in countries like India and China.

China

China, the second-largest economy in the world, stands out as a powerhouse among emerging markets. Despite recent economic challenges, the country continues to leverage its vast resources and technological innovations to drive growth. While facing obstacles such as regulatory tightening and declining foreign direct investment, the Chinese government remains committed to stabilizing the economy and encouraging foreign investment. China's strength in sectors like electric vehicles, artificial intelligence, and renewable energy places it at the forefront of the global shift towards sustainability and digital transformation. These cutting-edge industries, along with a growing middle class, are fueling demand for luxury goods, technology, and healthcare, creating significant opportunities for investors.

China’s investment in infrastructure, including smart cities and high-speed rail, further strengthens its position as a global manufacturing hub and offers long-term growth potential for investors. Unlike many emerging markets, China's large and diversified economy gives it a unique ability to weather global economic downturns. Additionally, recent rate cuts by the U.S. Federal Reserve and a weakening dollar enhance the appeal of Chinese assets, as lower borrowing costs and favorable exchange rate conditions attract foreign capital.

China's financial markets are also increasingly open to global investors, offering opportunities in sectors like technology and clean energy, where the country holds a significant competitive advantage. Although regulatory risks and geopolitical tensions pose challenges, China's economic transformation and strategic focus on innovation continue to make it a critical player in the global economy, presenting substantial opportunities for investors seeking long-term growth.

We anticipate that while China's growth is slowing, its markets remain highly undervalued, featuring a P/E ratio of 13.7 and a dividend yield of 3.12%. We estimate the equity risk premium (ERP) at 11.77%, which we believe adequately compensates for the associated risks. This ERP indicates that China is trading at a 600-basis point premium over the S&P 500. Furthermore, as illustrated in *(refer Exhibit:16)*, China's market capitalization to GDP ratio is at levels comparable to the 2008 bottom, enhancing its attractiveness. Consequently, we recommend allocating our portfolio to the blue-chip segment of the country through the iShares FTSE China A50 ETF.

HDFC Bank

We view India as a compelling investment story, highlighted by its position as one of the fastest-growing economies. However, we remain cautious about the country's high valuations and prefer to invest incrementally as the market corrects. As shown in *(refer Exhibit:16)*, India's market capitalization to GDP ratio stands at 125%, which historically represents peak levels. Additionally, we observe signs of potential excesses, particularly in the small-cap segment, where the BSE SME Index has achieved an impressive 66% CAGR over the past decade, indicating possible irrational exuberance.

While we are eager to maintain exposure to such a rapidly growing market, our strategy is to do so through selective investments. Consequently, we favor HDFC Bank Ltd., India’s largest private sector bank, which we believe has undergone a meaningful correction in its valuations over the past few years. *(refer Exhibit:17)* further illustrates that India’s credit cycle is just beginning to gain momentum, leading us to believe that the best is yet to come.

Finally, *(refer Exhibit:18)* highlights that HDFC Bank has experienced a significant correction in its price-to-book (P/B) ratio, especially when compared to certain public sector banks with weaker corporate governance that are currently trading at higher valuations. Given these factors, we prefer to maintain our position in HDFC Bank as part of our investment strategy.

5. Currency Overlays

We believe there is a risk of USD depreciation as U.S. interest rates decline, increasing the likelihood of a sharp unwinding of trades by foreign investors. As a result, we favor going long on the Japanese yen.

In the past, Japanese investors converted yen to USD and gained exposure to U.S. bonds, contributing to the sharp depreciation of the yen—a movement we believe is not supported by economic fundamentals. This view is reinforced by Japan’s significant drop in the Big Mac Index. Therefore, we plan to buy yen futures for December 2024.

Additionally, we find the euro attractive at this point. Europe has been steadily recovering over the past few quarters from the disruption caused by the Ukraine war. In our view, Europe has now adjusted to the impact of the disruption and is on track for continued recovery. Given these factors, we believe there is potential for a correction in the DXY index, which should be favorable for the euro. Thus, we would go long EURO futures of December 2024 to gain from this view.

6. Derivative Position

In September 2024, the yield curve turned positive, which is historically concerning as such periods are often followed by an elevated risk of recession. To hedge against this risk, we plan to purchase put options on the S&P 500 with a strike price of SPY 530, currently trading at $8, as a protective measure.

Additionally, we intend to buy out-of-the-money call options on AGG with a strike price of 99, expiring on March 21, 2024, priced at $3.4. We believe there are significant risks to unemployment, and inflation is deteriorating rapidly. This position will allow us to benefit from a potentially faster rate-cut environment than currently anticipated by the market.

Exhibits

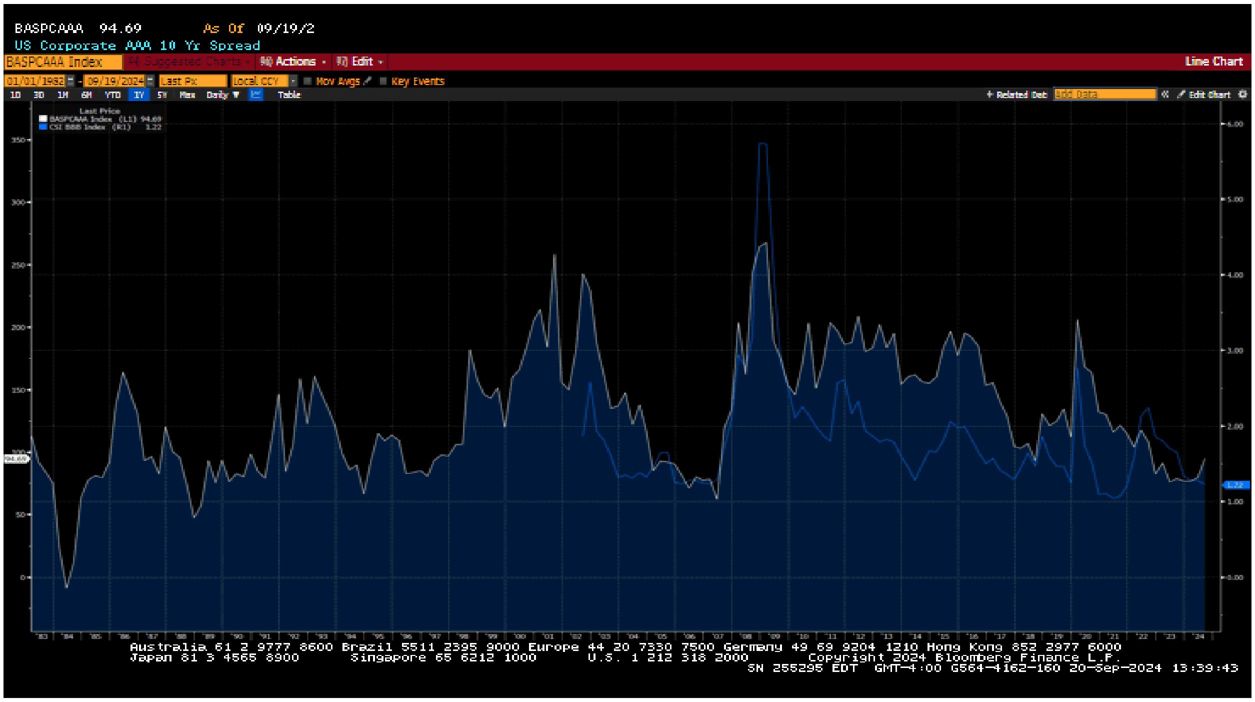

Exhibit 1 Credit Spread between AAA and BBB bonds

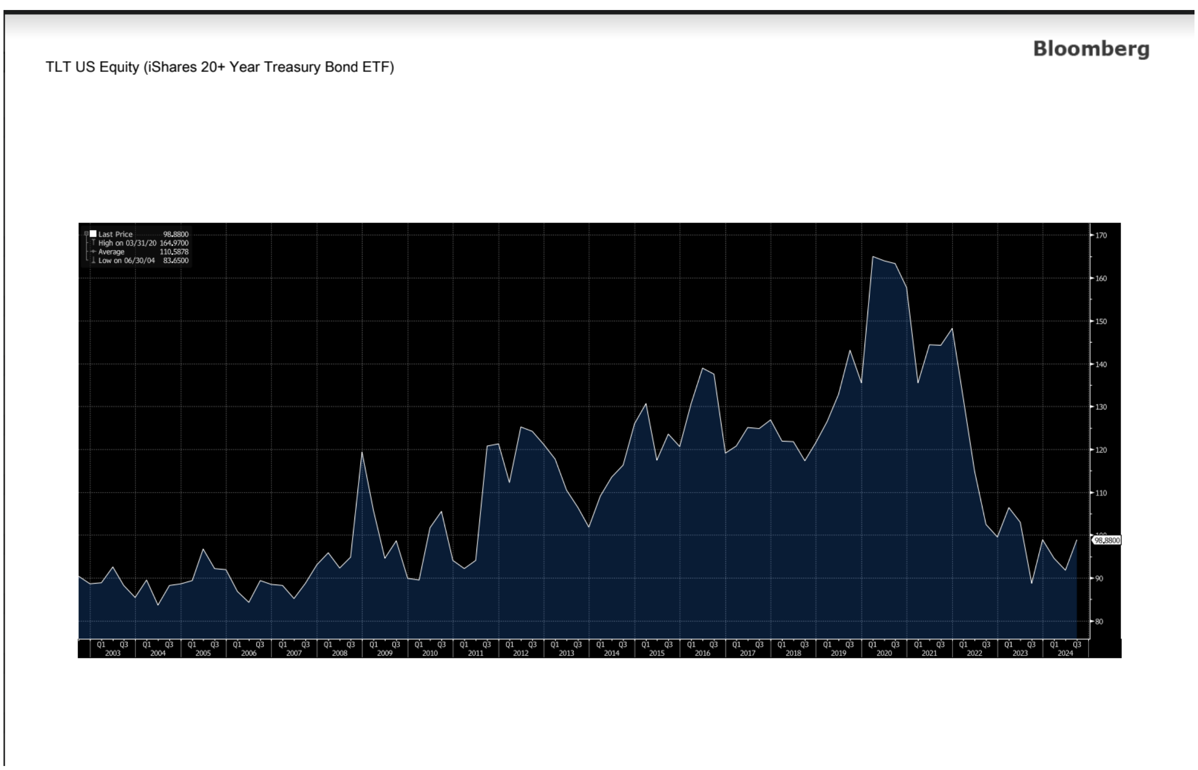

Exhibit 2:TLT Historical Performance

IEF US Equity (iShares 7-10 Year Treasury Bond ETF)

Bloomberg

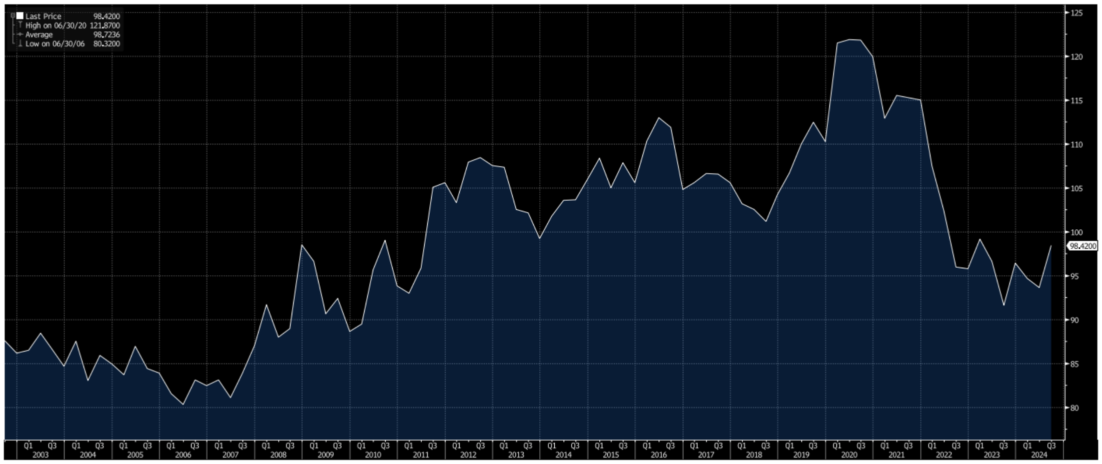

Exhibit 3: IEF US Equity Historical Performance

Russell 2000 as on Feb 1	Treasury Yield implied (10 year, long term)		Current Earnings Per Share		Terminal Growth Rate	
2229.24	3.73%		93.1737		4%	
Analyst	Forward 1 year EPS	119.92	Forward 2 year EPS	117.21		
5-year Present Value (PV) Calculation						
	Year 1	Year 2		Tv at year 2		
PV	99.08	99.7		2030.460201		
Total Value	2229.2402					
Rate of Growth (independen t, IRR)	9.05%					
Risk Premium	5.32%					

Exhibit 4: ERP of Russell 2000

Model Parameters						
AEX	**Treasury Yield implied (10 year, long term)**		**Current Earnings Per Share**		**Terminal Growth Rate**	
897.55	3.73%		55.1025		4%	
Analyst	Forward 1 year EPS	60.15	Forward 2 year EPS	63.94		
5-year Present Value (PV) Calculation						
	Year 1	**Year 2**		**Tv**		
PV	54.3972794		78.17889635		764.9730495	
Total Value	897.549225					
Rate of Growth (independent, IRR)	10.58%					
Inflation Diff expectation	-0.85%					
Risk Premium	7.69%					

Exhibit 5. ERP of AEX

SMI	**Treasury Yield implied (10 year, long term)**		**Current Earnings Per Share**		**Terminal Growth Rate**	
11934	3.73%		640		4%	
Analyst	Forward 1 year EPS	703.04	Forward 2 year EPS	768.66		
5-year Present Value (PV) Calculation						
	Year 1	**Year 2**		**Tv at year 2**		
PV	638.104794		633.2252535		10662.66995	
Total Value	11934					
Rate of Growth (independent, IRR)	10.18%					
Risk Premium	6.45%					

Exhibit.6 ERP OF SMI

Model Parameters						
Shcomp	**Treasury Yield implied (10 year, long term)**		**Current Earnings Per Share**		**Terminal Growth Rate**	
2736	3.73%		251		4%	
Analyst	Forward 1 year EPS	277.01	Forward 2 year EPS	307.62		
5-year Present Value (PV) Calculation						
	Year 1	**Year 2**		**Tv**		
PV	239.83948		410.3591429		2085.801381	
Total Value	2736					
Rate of Growth (independent, IRR)	15.50%					
Inflation Diff expectation	0.00%					
Risk Premium	11.77%					

Exhibit.7 ERP OF SHCOMP

S&P 500 Current Market Price	**Treasury Yield implied (10 year, long term)**	**Current Earnings Per Share**	
5703	3.73%	243	
EPS1	276.21	**EPS2**	303.73
Growth	4.00%		
	Year 1	**Year 2**	**Terminal value**
PV	253.15	255.1378	5194.70923
Total (NPV, target)	5703		
Rate of Growth (independent, IRR)	9.11%		
Risk Premium	5.38%		

Exhibit.8 ERP OF S&P500

VNQ U $ ↓97.79 -0.39 P97.85 / 97.86 F 167 x 2
At 17:05 Vo 3,708.36 O 97.62 H 98.06 L 97.44 Va 362.382
VNQ US Equity Export Page 3/6 Security Description: ETF
Profile | Performance | Holdings | Allocations | Organizational | ESG

6) Benchmark M2CXVGD Index

7) Top Fund Hlds | HLDR »	Net Fund	Net Index
11) Vanguard Real Estate II Index	13.399%	N.A.
12) Prologis Inc	6.983%	N.A.
13) American Tower Corp	6.164%	N.A.
14) Equinix Inc	4.373%	N.A.
15) Welltower Inc	3.707%	N.A.
16) Simon Property Group Inc	2.995%	N.A.
17) Realty Income Corp	2.962%	N.A.
18) Crown Castle Inc	2.865%	N.A.
19) Public Storage	2.802%	N.A.
20) Digital Realty Trust Inc	2.796%	N.A.

Top Index Hlds | MEMB » Net Index Net Fund

No Holdings Reported

9) View Basket | HLDR »	
Total Cash	USD 823.6
Estimated Cash	USD 826.7
Creation Unit Size	100,000
Creation Fee	USD 250.00
Create/Redeem Process	In-kind
Creation Cutoff Time	16:00 EST
Settlement Cycle	T+1
Open for New Creations	Yes

Holdings Statistics	
Rebalancing Frequency	Quarterly
Replication Strategy	Full
Fund Holdings As Of Date	07/31/2024
Fund Number Of Holdings	159
NAV Pricing Methodology	Primary Market Close

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 4565 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2024 Bloomberg Finance L.P.
SN 255295 EDT GMT-4:00 G684-4615-166 20-Sep-2024 18:13:28

Exhibit 9: Vanguard Real Estate Fund Holdings

VNQ U $ ↓97.79 -0.39 P97.85 / 97.86 F 167 x 2
At 17:05 Vo 3,708.36 O 97.62 H 98.06 L 97.44 Va 362.382
VNQ US Equity Export Page 2/6 Security Description: ETF
Profile | Performance | Holdings | Allocations | Organizational | ESG

VNQ Metrics 09/19/24 Inception Date 09/29/04 Index Returns 09/19/24

Rtn %	VNQ	M2CXVGD
1 Month	6.61%	6.63%
3 Month	18.32%	18.34%
YTD	13.46%	13.59%
1 Year	26.94%	27.11%
3 Year	1.18%	1.33%
5 Year	4.85%	4.99%

Absolute Measure - 1Yr	VNQ	M2CXVGD
Max Return	8.90	8.89
Min Return	-5.34	-5.32
Sharpe Ratio	1.19	1.21
Downside Risk	12.69	12.68
Periods Up(%)	57.69	59.62
Periods Down(%)	42.31	40.38

7) Relative Measure | BETA »	
8) Benchmark	SPX
Raw Beta 6M	.590
Adjusted Beta 6M	.727
Raw Beta 1Yr	.817
Adjusted Beta 1Yr	.878
Correlation	.561
Standard Deviation	22.760
Volatility 30 Day	10.647
9) Historical Fund Analysis	

10) Dividend | DVD »	
12 Month Yield	3.64%
Net Indicated Yield	4.22%
1 Yr Dividend Growth	-5.75%
3 Yr Dividend Growth	3.80%
5 Yr Dividend Growth	.13%
Dividend Frequency	Quarter

Period	Curr	Income	Cap. Ga..
YTD	USD	1.77	0.00
2023	USD	3.49	0.00
2022	USD	3.23	0.00
2021	USD	2.97	0.00
2020	USD	3.33	0.00
2019	USD	3.14	0.00

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Exhibit.10 Performance of VNQ US EQUITY

PSHZF US Equity Alert Settings Holder Ownership

Pershing Square Holdings Ltd/Fund Latest Available Portfolio Filing Portfolio Filing Look-Through Creation Unit

Type Fund: Closed-End Fund Asset Class Mixed Allocation

Historical View Periodicity Quarterly 2023 Q4 - 2024 Q3 Field Position

Group By None Show Asset Type All Currency USD Total Curr Mkt Val 12.6B Num of Holdings 20

	Security	Ticker	Source	Position	Pos Chg	% Out	% Net	Curr MV	Rpt MV	Filing Da..
1)	Universal Music Group NV	UMG NA	MF-GU	115,947,453	+216,588	6.34	25.52	2.99BLN	3.30BLN	12/31/23
2)	Chipotle Mexican Grill Inc	CMG US	MF-GU	36,167,650	-11.95MLN	2.64	12.78	2.06BLN	1.65BLN	12/31/23
3)	Hilton Worldwide Holdings Inc	HLT US	MF-GU	8,045,618	-800,938	3.26	11.32	1.78BLN	1.47BLN	12/31/23
4)	Alphabet Inc Class C	GOOG US	MF-GU	9,215,887	+9.22MLN	.17	10.03	1.48BLN	1.30BLN	12/31/23
5)	Restaurant Brands International Inc	QSR US	MF-GU	20,710,238	-820,557	6.53	12.50	1.47BLN	1.62BLN	12/31/23
6)	Howard Hughes Holdings Inc	HHH US	MF-GU	16,518,818	+2.64MLN	32.88	10.92	1.25BLN	1.41BLN	12/31/23
7)	Canadian Pacific Kansas City Ltd	CP US	MF-GU	13,267,340	+1,000	1.42	8.10	1.14BLN	1.05BLN	12/31/23
8)	Alphabet Inc Class A	GOOGL US	MF-GU	2,842,193	+2.84MLN	.05	3.07	454.21MLN	397.03MLN	12/31/23
9)	Restaurant Brands International LP	QSP-U CN	MF-GU	140,873	+140,873	.11	.08	9.79MLN	10.98MLN	12/31/23
	Retail	--	MF	0	0	--	1.88	0	242.83MLN	12/31/23
	Equity Options Purchased United States: Energy (cost $115575098)	--	MF	0	0	--	.44	0	57.51MLN	12/31/23
10)	Lowe's Cos Inc	LOW US	MF-GU	0	-9.06MLN	--	--	0	0	12/31/23
	United States Financial Services	--	MF	0	0	--	1.39	0	180.11MLN	12/31/23
	Other Assets and Liabilities	--	MF	0	0	--	.00	0	97,801	12/31/23
	Interest Rate Swaptions Purchased U.S. Swaptions (cost $87781387)	--	MF	0	0	--	1.68	0	217.33MLN	12/31/23
	UNITED STATES: SPECIAL PURPOSE ACQUISITION RIGHTS COMPANY: PE...	--	MF	0	0	--	.27	0	35.37MLN	12/31/23
	United States: Financial Services (cost $40813065)	--	MF	0	0	--	.26	0	33.91MLN	12/31/23
11)	Spot	USD Curncy	MF-GU	0	-1.15BLN	--	--	0	0	12/31/23
	Derivative Contracts Currency Forwards Currencies	--	MF	0	0	--	-.25	0	-31.98MLN	12/31/23
	Currency Forwards	--	MF	0	0	--	-.01	0	-904,038	12/31/23

What are the substantial changes on this fund? Hide Insights

No insights available.

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Exhibit.11 Holdings of Pershing Square

PSP US Equity Alert Settings Holder Ownership

Invesco Global Listed Private Equity ... Latest Available Portfolio Filing Portfolio Filing Look-Through Creation Unit

Type Fund: ETF Asset Class Equity Create/Redeem Fee 1000 USD

Historical View Periodicity Quarterly 2023 Q4 - 2024 Q3 Field Position

Group By None Show Asset Type All Currency USD Total Curr Mkt Val 258.3M Num of Holdings 71

	Security	Ticker	Source	Position	Pos Chg	% Out	% Net	Curr MV	Rpt MV	Filing Da..
1)	Blackstone Inc Common Shares	BX US	ETF	93,142	0	.01	5.70	14.87MLN	14.87MLN	09/19/24
2)	KKR & Co Inc	KKR US	ETF	111,802	0	.01	5.69	14.45MLN	14.85MLN	09/19/24
3)	TPG Inc Class A - Voting	TPG US	ETF	248,095	0	.26	5.64	14.39MLN	14.72MLN	09/19/24
4)	3i Group PLC	III LN	ETF	309,809	0	.03	5.19	13.29MLN	13.56MLN	09/19/24
5)	EQT AB Ordinary Shares	EQT SS	ETF	366,432	0	.03	4.99	12.70MLN	13.02MLN	09/19/24
6)	Sofina SA	SOF BB	ETF	44,034	0	.13	4.87	12.63MLN	12.72MLN	09/19/24
7)	Partners Group Holding AG	PGHN SW	ETF	8,432	0	.03	4.68	12.20MLN	12.22MLN	09/19/24
8)	Carlyle Group Inc/The	CG US	ETF	255,134	0	.07	4.35	11.36MLN	11.36MLN	09/19/24
9)	HAL Trust	HAL NA	ETF	78,022	0	.09	3.97	10.31MLN	10.37MLN	09/19/24
10)	Eurazeo SE	RF FP	ETF	119,922	0	.16	3.81	9.68MLN	9.96MLN	09/19/24
11)	Onex Corp Subordinate Voting	ONEX CN	ETF	131,014	0	.17	3.47	8.89MLN	9.06MLN	09/19/24
12)	HgCapital Trust PLC/Fund	HGT LN	ETF	1,227,553	0	.27	3.18	8.36MLN	8.31MLN	09/19/24
13)	Blue Owl Capital Inc Class A	OWL US	ETF	414,574	0	.08	2.99	7.81MLN	7.81MLN	09/19/24
14)	Bridgepoint Group PLC	BPT LN	ETF	1,489,555	0	.18	2.90	7.61MLN	7.56MLN	09/19/24
15)	Ares Capital Corp	ARCC US	ETF	348,158	0	.06	2.77	7.08MLN	7.22MLN	09/19/24
16)	Hamilton Lane Inc Class A	HLNE US	ETF	43,767	0	.11	2.70	6.94MLN	7.06MLN	09/19/24
17)	SoftBank Group Corp	9984 JP	ETF	95,274	0	.01	2.15	5.62MLN	5.60MLN	09/19/24
18)	StepStone Group Inc Class A	STEP US	ETF	97,375	0	.14	2.09	5.42MLN	5.46MLN	09/19/24
19)	Petershill Partners PLC	PHLL LN	ETF	1,751,691	0	.16	1.99	5.22MLN	5.19MLN	09/19/24
20)	Kinnevik AB B Shares	KINVB SS	ETF	572,645	0	.24	1.73	4.47MLN	4.52MLN	09/19/24
21)	Graham Holdings Co Class B	GHC US	ETF	4,050	0	.12	1.25	3.19MLN	3.26MLN	09/19/24
22)	IAC Inc Class A	IAC US	ETF	57,741	0	.07	1.21	3.16MLN	3.16MLN	09/19/24
23)	Oakley Capital Investments Ltd	OCI LN	ETF	462,500	0	.26	1.17	3.08MLN	3.06MLN	09/19/24
24)	Molten Ventures PLC	GROW LN	ETF	533,235	0	.29	1.16	2.96MLN	3.04MLN	09/19/24
25)	Gimv NV	GIMB BB	ETF	57,221	0	.20	1.04	2.72MLN	2.71MLN	09/19/24
26)	Brookfield Business Corp	BBUC CN	ETF	116,847	0	.16	1.08	2.71MLN	2.81MLN	09/19/24
27)	Ratos AB B Shares	RATOB SS	ETF	791,713	0	.33	1.04	2.69MLN	2.73MLN	09/19/24
28)	HBM Healthcare Investments AG	HBMN SW	ETF	12,397	0	.18	.98	2.55MLN	2.56MLN	09/19/24
29)	Fairfax India Holdings Corp Subordinate Voting Shares	FIH/U CN	ETF	165,929	0	.16	.95	2.49MLN	2.49MLN	09/19/24

What are the substantial changes on this fund? Hide Insights

No insights available.

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Exhibit.12 Holding of Invesco Global PE

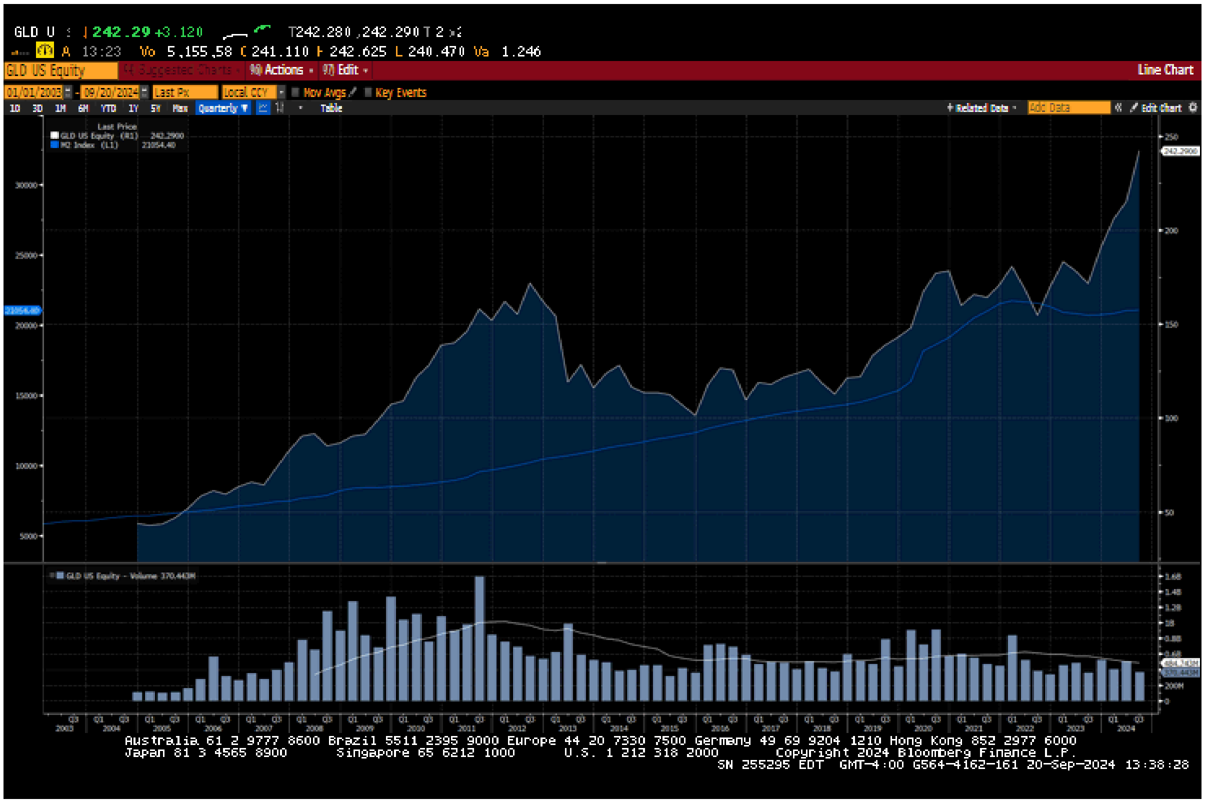


Exhibit.13 Historical Performance - Gold

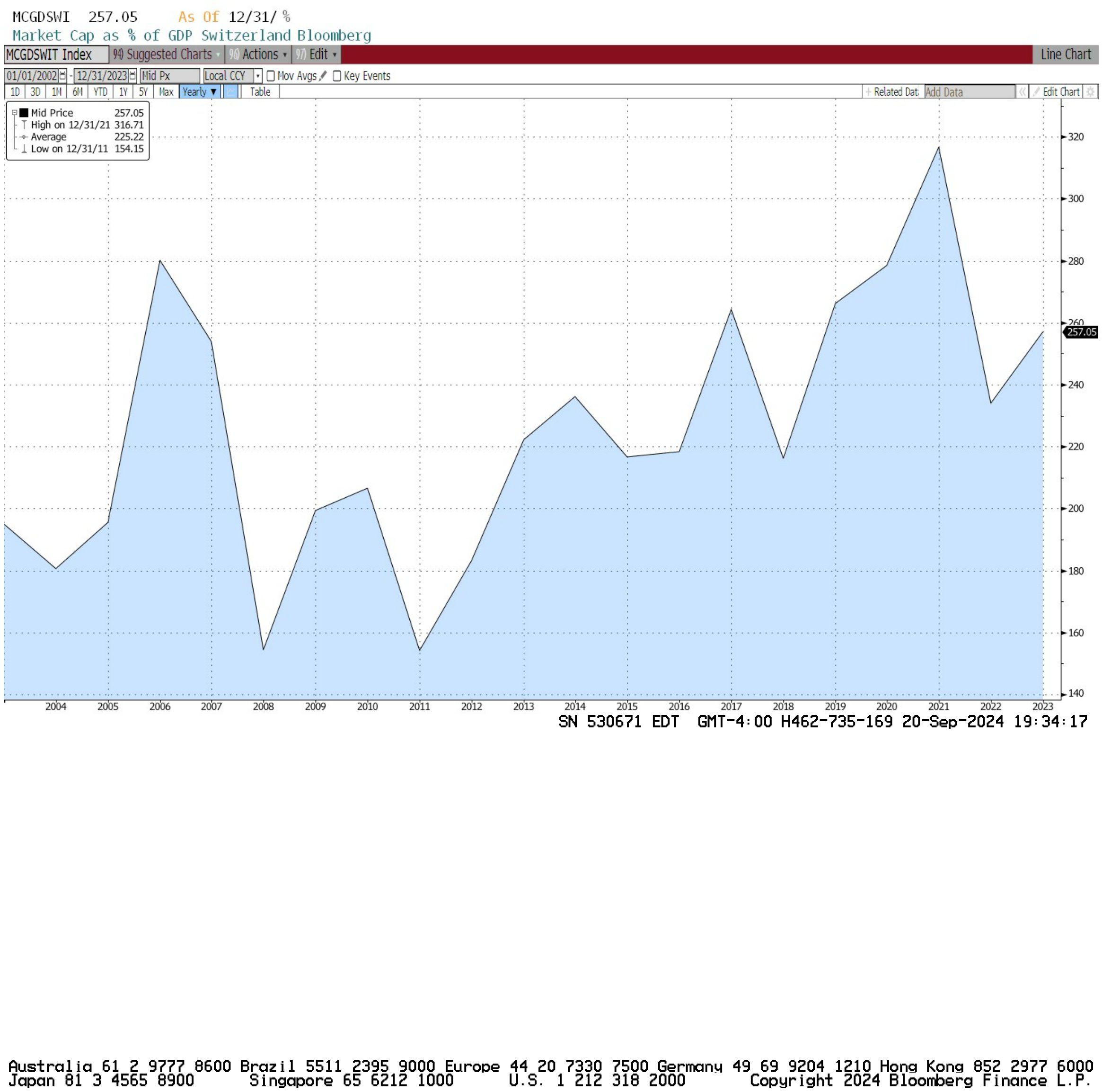


Exhibit.14 Mkt Cap of Switzerland GDP

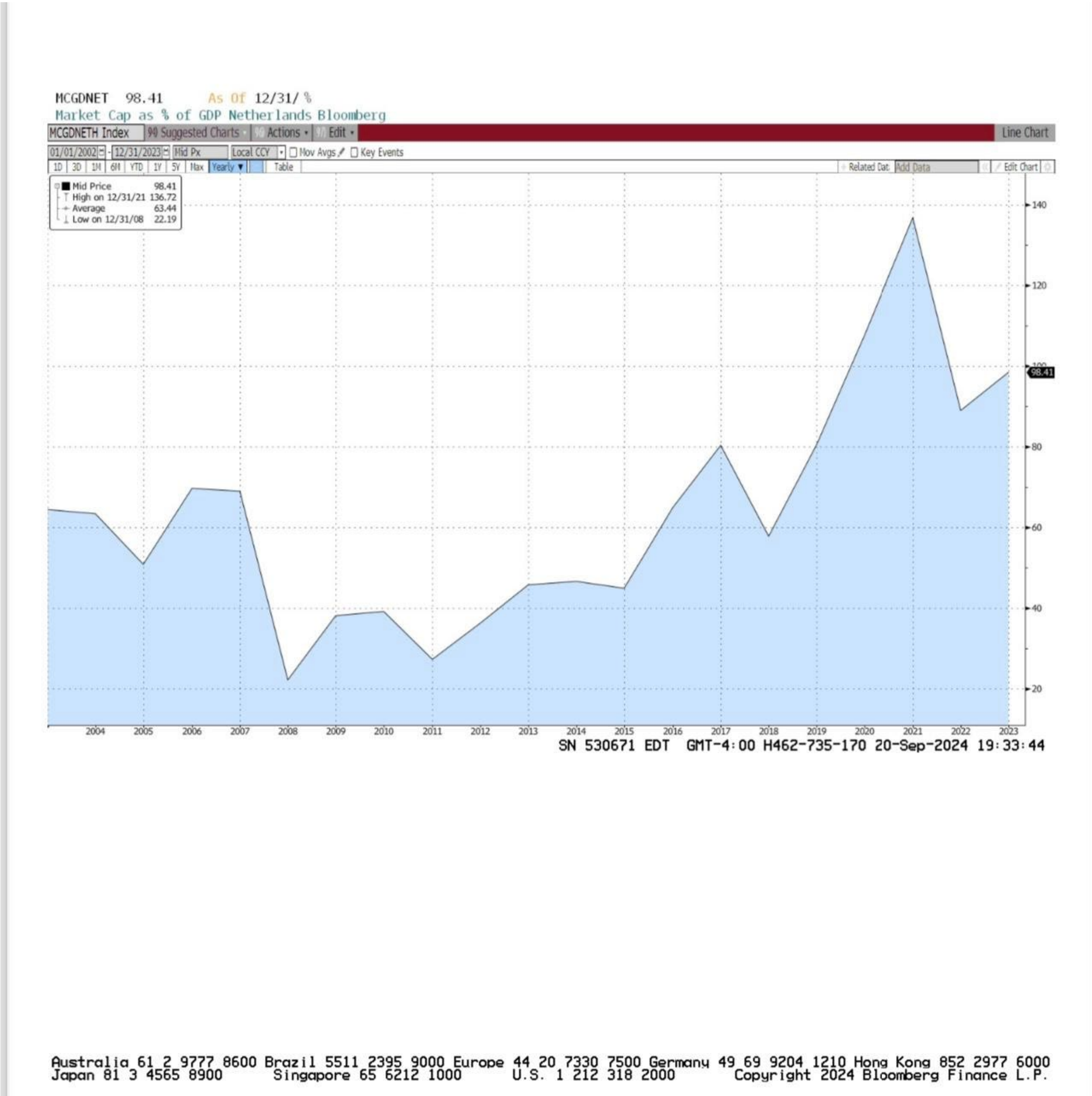


Exhibit.15 Mkt Cap of Netherlands to GDP

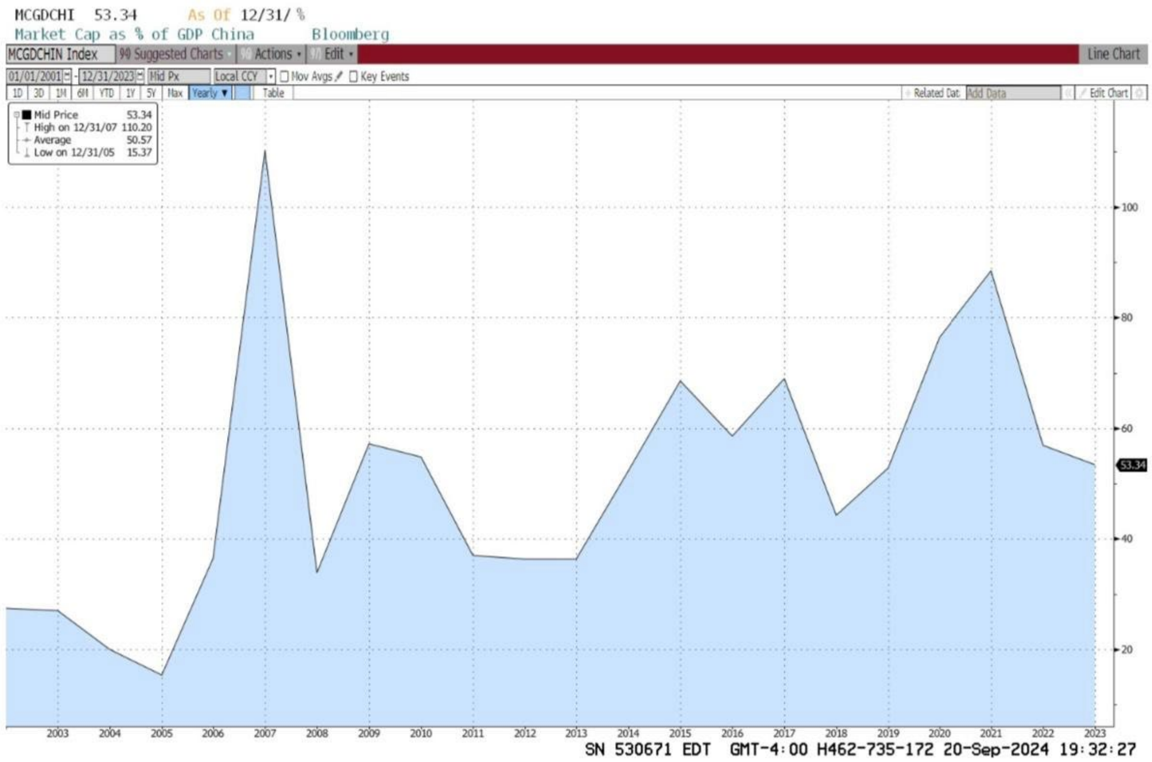


Exhibit.16 Mkt Cap of China to GDP

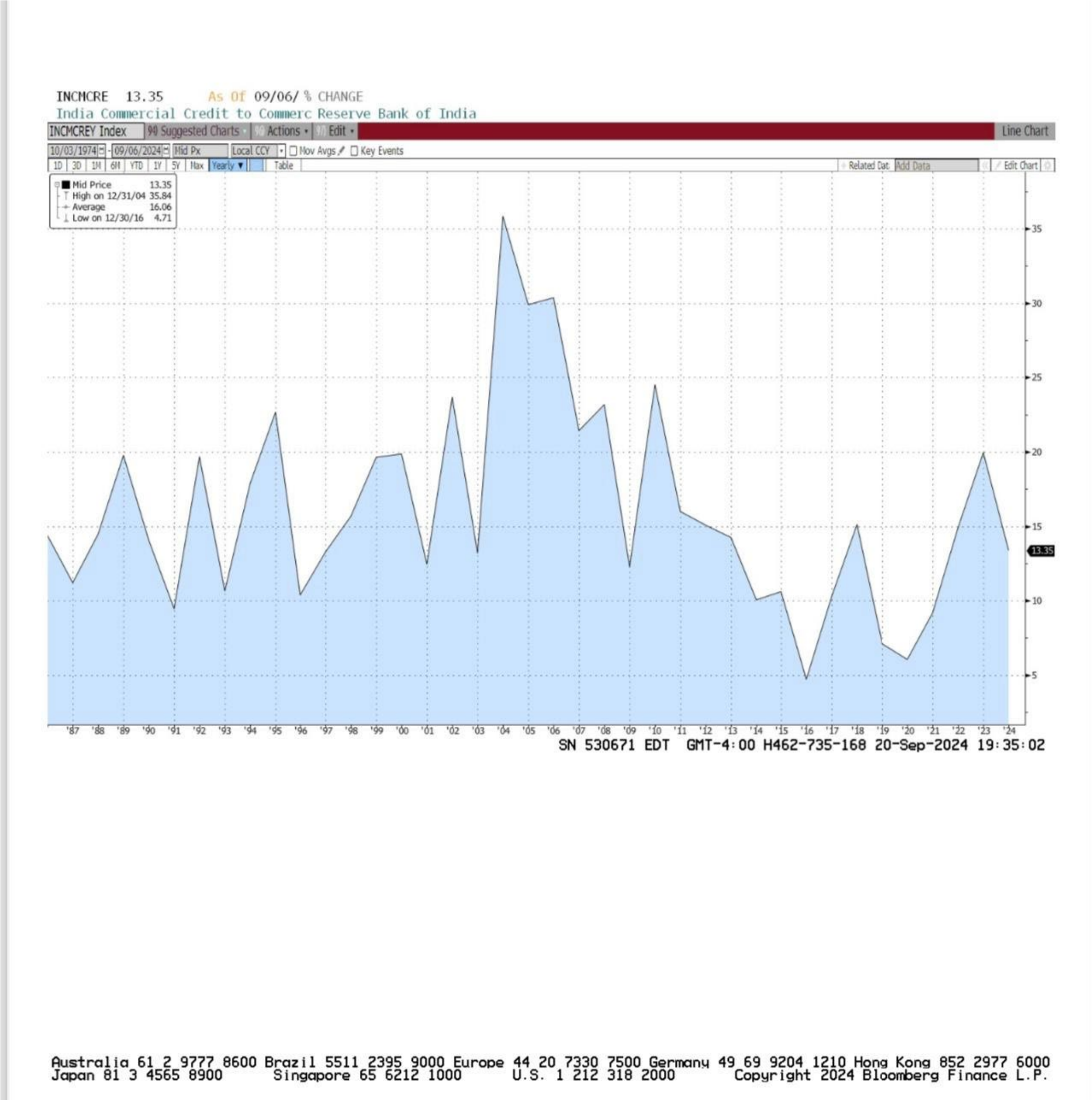
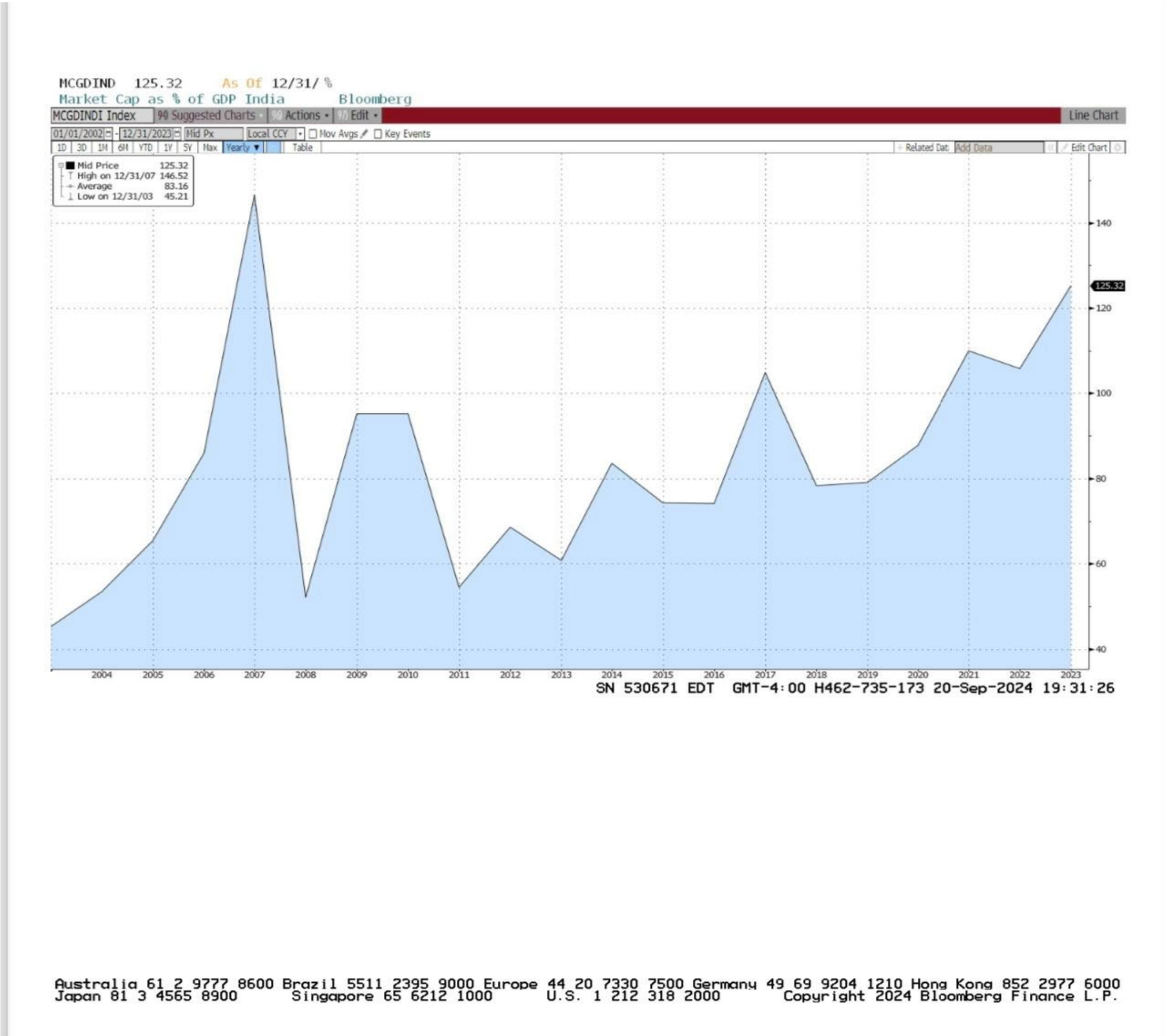


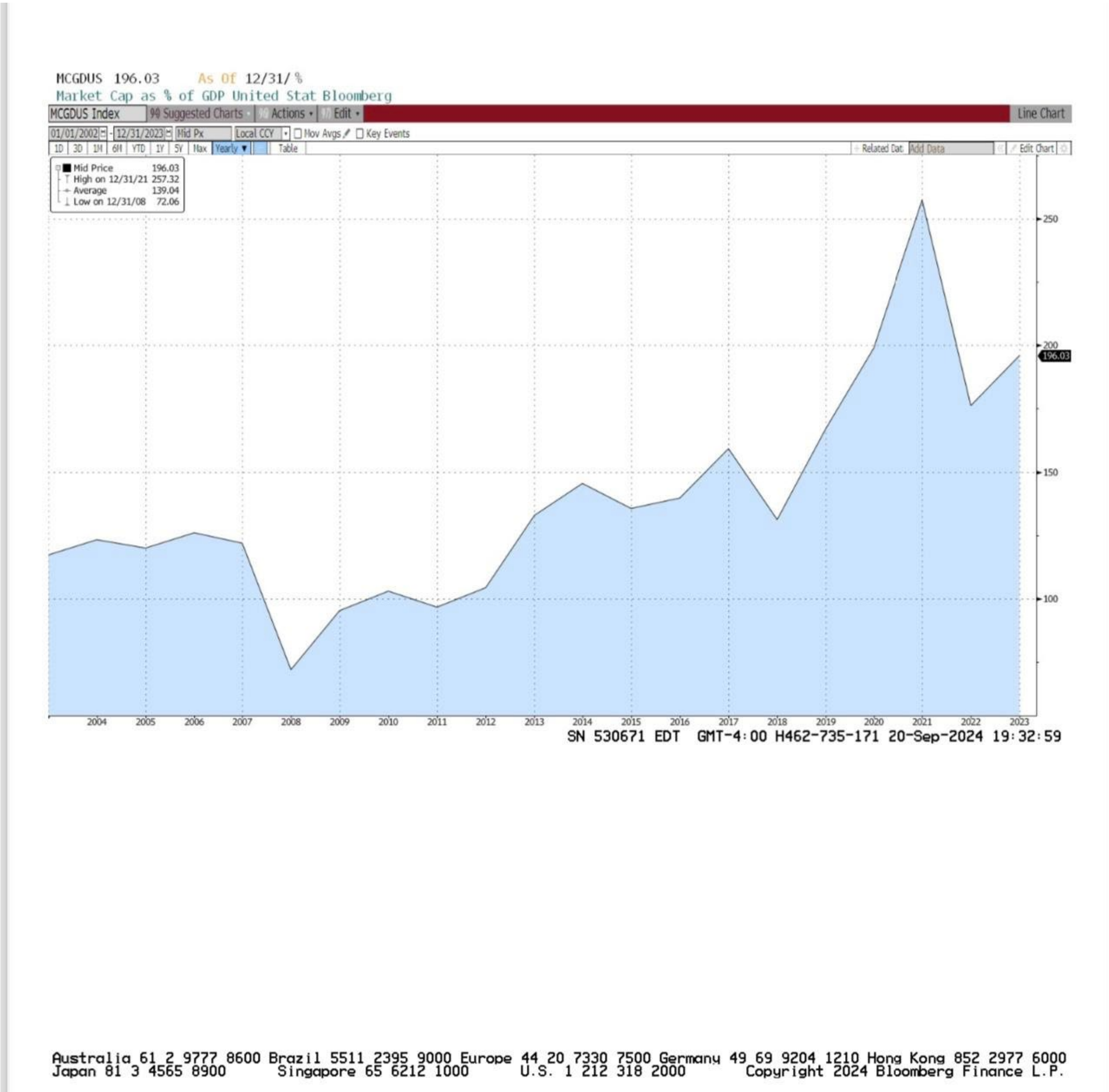
Exhibit.17 India's Credit Cycle

Exhibit.18 HDFC Bank Performance

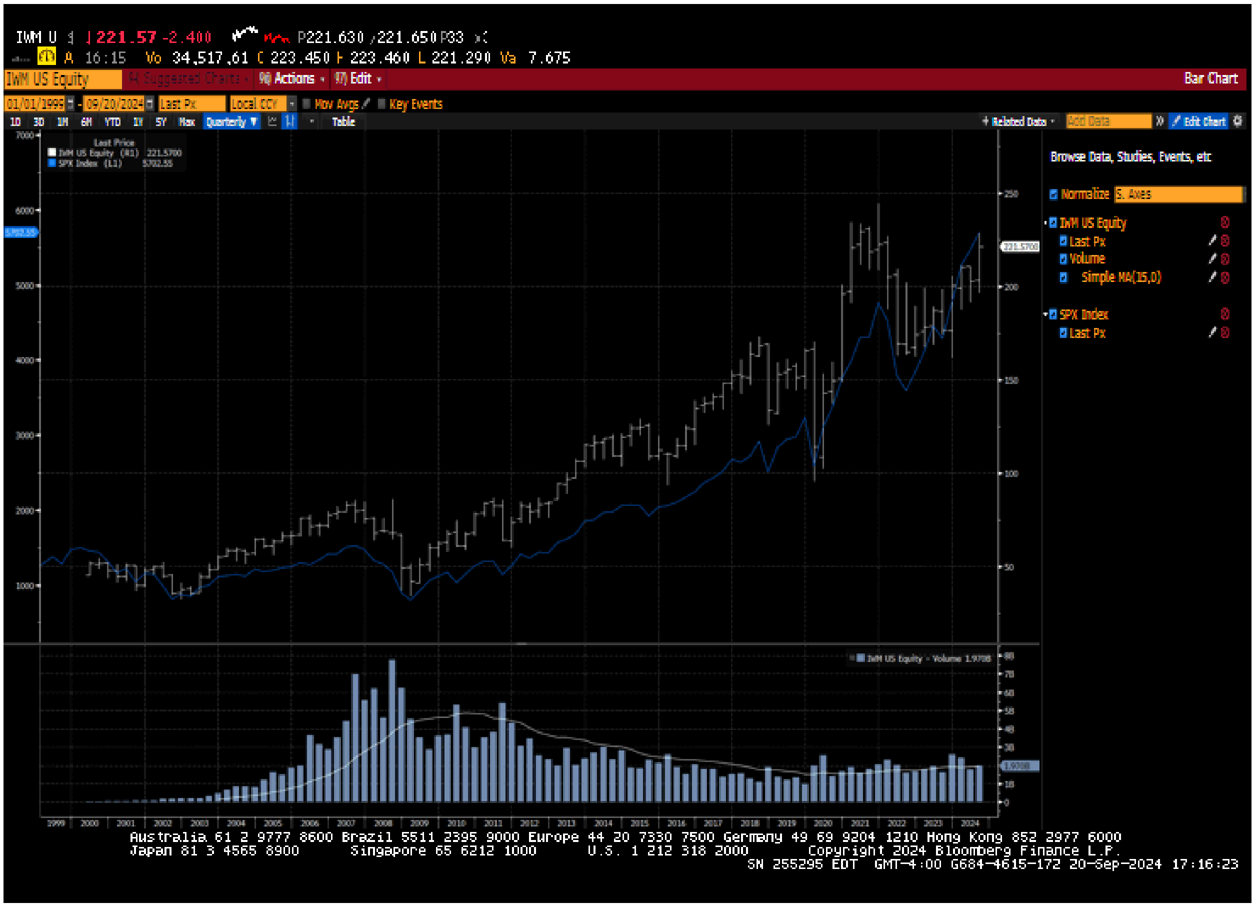
Additional Exhibits:



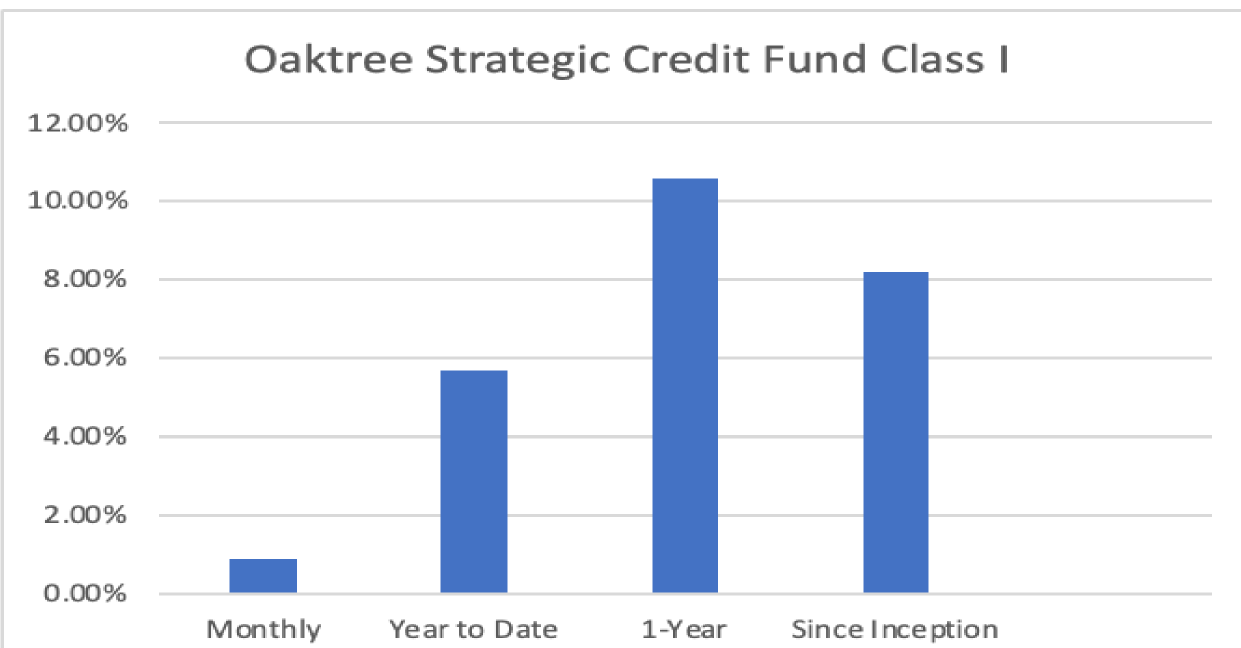
Market Cap as a % of GDP of INDIA



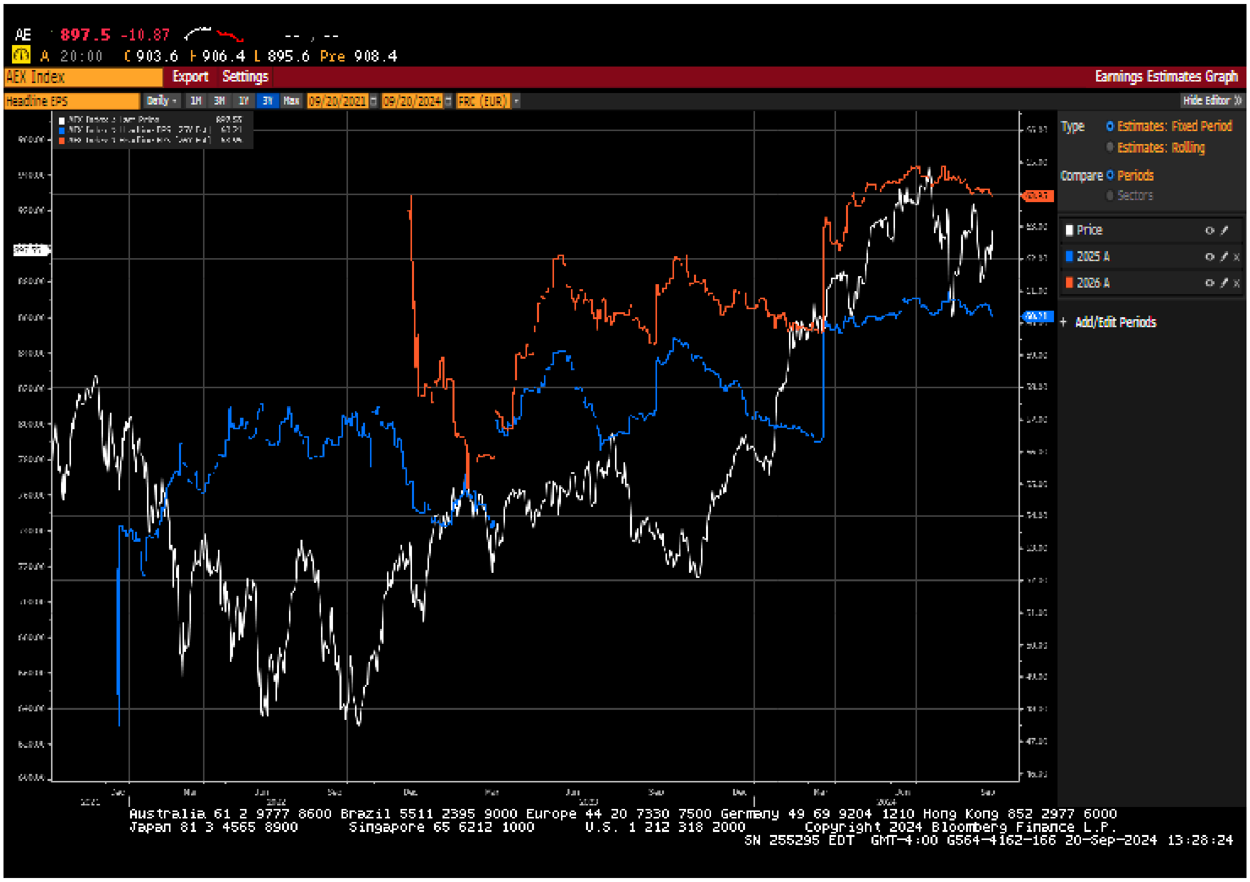
Market Cap as a % of GDP of United States



IWM US Equity Historical Performance



Oaktree Strategic Fund Historical performance



AEX Earnings Estimates Graph

HDFC Bank Performance comapred to its peers

HDFC Earnings Estimates Graph

EWN US Equity | Alert | Settings | Holder Ownership

iShares MSCI Netherlands ETF | Latest Available | Portfolio Filing | Portfolio Filing Look-Through | Creation Unit

Type Fund: ETF Asset Class Equity Cash Pos 84.93k USD Create/Redeem Fee 1000 USD

Historical View Periodicity Quarterly 2023 04 - 2024 03 Field Position

Group By None Show Asset Type All Currency USD Total Curr Mkt Val 294.5M Num of Holdings 56

	Security	Ticker	Source	Position	Pos Chg	% Out	% Net	Curr MV	Rpt MV	Filing Da..
1)	ASML Holding NV	ASML NA	ETF	71,838	0	.02	20.20	60.04MLN	60.03MLN	09/19/24
2)	ING Groep NV	INGA NA	ETF	1,200,149	0	.04	7.54	22.11MLN	22.39MLN	09/19/24
3)	Prosus NV N Shares	PRX NA	ETF	519,933	0	.02	6.67	18.90MLN	19.83MLN	09/19/24
4)	Wolters Kluwer NV	WKL NA	ETF	85,159	0	.04	4.99	14.76MLN	14.84MLN	09/19/24
5)	Koninklijke Ahold Delhaize NV	AD NA	ETF	346,566	0	.04	3.98	11.84MLN	11.82MLN	09/19/24
6)	ASM International NV	ASM NA	ETF	17,715	0	.04	3.92	11.70MLN	11.66MLN	09/19/24
7)	Adyen NV	ADYEN NA	ETF	7,761	0	.02	4.07	11.47MLN	12.09MLN	09/19/24
8)	Koninklijke Philips NV	PHIA NA	ETF	337,244	0	.04	3.52	10.48MLN	10.45MLN	09/19/24
9)	Heineken NV	HEIA NA	ETF	104,832	0	.02	3.19	9.50MLN	9.48MLN	09/19/24
10)	DSM-Firmenich AG	DSFIR NA	ETF	70,446	0	.03	3.07	9.13MLN	9.12MLN	09/19/24
11)	AerCap Holdings NV	AER US	ETF	89,251	0	.05	2.95	8.77MLN	8.77MLN	09/19/24
12)	Universal Music Group NV	UMG NA	ETF	304,269	0	.02	2.63	7.84MLN	7.81MLN	09/19/24
13)	Coca-Cola Europacific Partners PLC	CCEP US	ETF	83,694	0	.02	2.29	6.80MLN	6.80MLN	09/19/24
14)	Koninklijke KPN NV	KPN NA	ETF	1,447,202	0	.04	1.96	5.96MLN	5.83MLN	09/19/24
15)	NN Group NV	NN NA	ETF	116,112	0	.04	1.96	5.83MLN	5.82MLN	09/19/24
16)	EXOR NV Ordinary Shares	EXO NA	ETF	43,377	0	.02	1.62	4.81MLN	4.81MLN	09/19/24
17)	Akzo Nobel NV Common	AKZA NA	ETF	70,634	0	.04	1.59	4.74MLN	4.73MLN	09/19/24
18)	IMCD NV	IMCD NA	ETF	25,915	0	.05	1.51	4.50MLN	4.49MLN	09/19/24
19)	BE Semiconductor Industries NV	BESI NA	ETF	34,710	0	.04	1.52	4.35MLN	4.52MLN	09/19/24
20)	Aegon Ltd Common Shares	AGN NA	ETF	709,783	0	.04	1.51	4.33MLN	4.47MLN	09/19/24
21)	Heineken Holding NV Common A Class	HEIO NA	ETF	54,920	0	.02	1.40	4.13MLN	4.16MLN	09/19/24
22)	ABN AMRO Bank NV - Depositary Receipt	ABN NA	ETF	225,687	0	.03	1.37	4.10MLN	4.08MLN	09/19/24
23)	ASR Nederland NV	ASRNL NA	ETF	76,041	0	.04	1.25	3.63MLN	3.71MLN	09/19/24
24)	Arcadis NV	ARCAD NA	ETF	44,557	0	.05	1.07	3.11MLN	3.19MLN	09/19/24
25)	InPost SA	INPST NA	ETF	158,704	0	.03	1.04	3.09MLN	3.09MLN	09/19/24
26)	Randstad NV	RAND NA	ETF	55,709	0	.03	.93	2.72MLN	2.77MLN	09/19/24
27)	Koninklijke Vopak NV	VPK NA	ETF	54,603	0	.04	.86	2.60MLN	2.55MLN	09/19/24
28)	SBM Offshore NV	SBMO NA	ETF	132,172	0	.07	.82	2.39MLN	2.43MLN	09/19/24
29)	Aalberts NV	AALB NA	ETF	60,773	0	.05	.83	2.31MLN	2.46MLN	09/19/24

What are the substantial changes on this fund? | Hide Insights

No insights available.

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EWN US Equity ETF Holdings

RTY Index Earnings Estimates

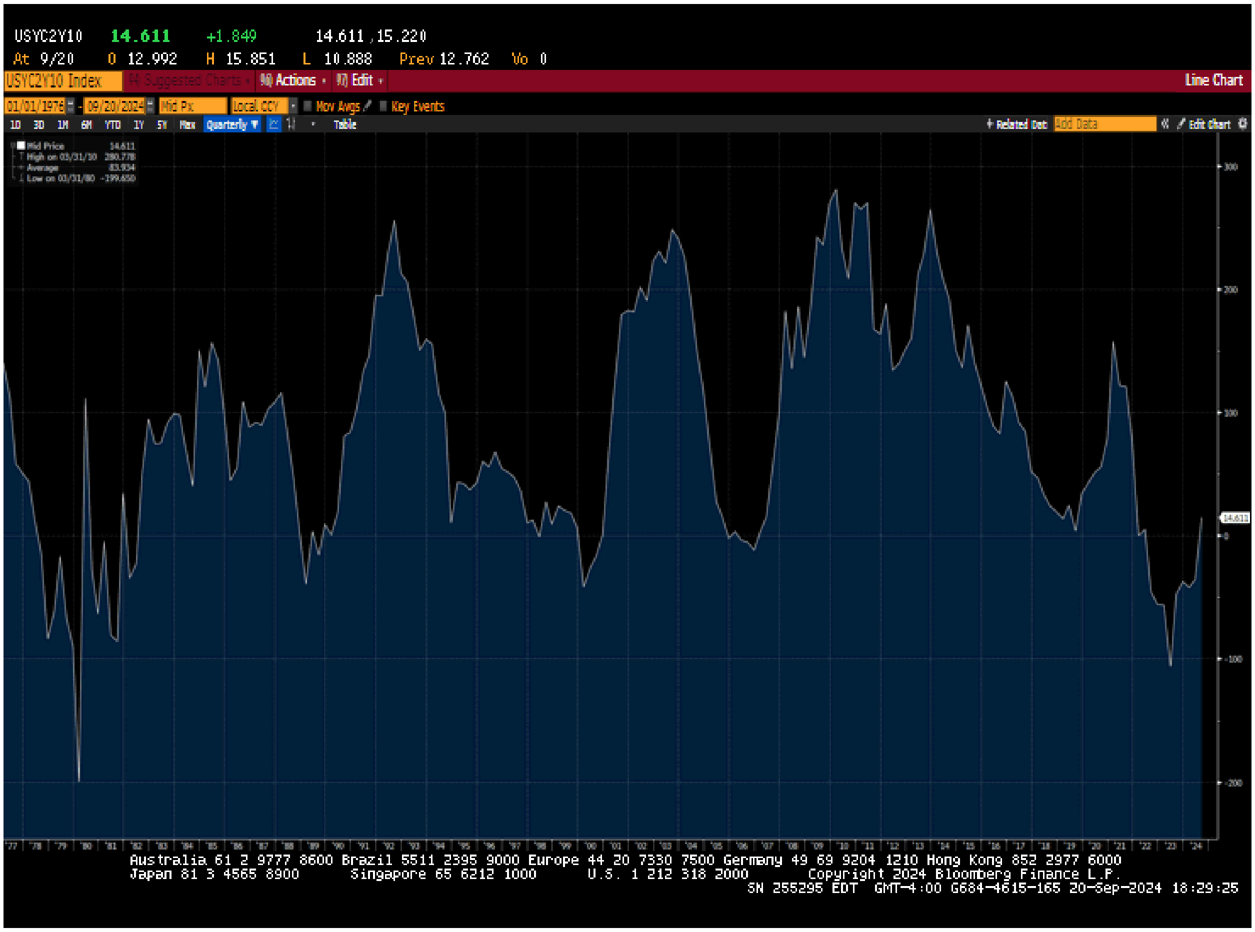
S&P500 Earnings Estimates Graph

SCHOMP Earnings Estimates Graph

SMI Index Earnings Estimates Graph

SMI Index Profile

US Treasuries 10YR and 20YR Spreads



US 2YR and 10YR Treasury Index