GROUP WORK PROJECT # 3
GROUP NUMBER: 3081

MScFE 560: FINANCIAL MARKETS

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Statement of integrity: By typing the names of all group members in the text boxes below, you confirm that the assignment submitted is original work produced by the group (excluding any non-contributing members identified with an "X" above).	
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Open-ended low-cost mutual fund that tracks a broad market index:

1. Performance: Open-ended low cost mutual funds tend to perform same like the index that they track.
2. Fees: The fees are small since they dont usually incur expenses of experts to manage the different investments in the portfolio.
3. Transparency: Open-ended low cost mutual funds disclose their holdings and portfolio composition to investors. This makes comparisons with other investment very easy.
4. Liquidity: The liquidity is high and investors can easily buy and sell their shares.
5. Professional management: The low cost arises from the fact that the funds aren't well managed. Investors make their own investment decisions.
6. Investor protections: Open-ended low-cost mutual fund are protected by SEC, thus investors can be assured of safety on their funds.

ETF:

1. Performance: ETFs of broad indexes have proved to track the performance of the index quite closely. However, due to the cost of the ETF, it will show a small underperformance most of the time.
2. Fees: The fees are small. For the most common indexes, the total expense ratio of ETFs is below 10 bps.
3. Transparency: ETFs report their holdings daily, which is attractive for investors because they can observe how is his money being invested.
4. Liquidity: ETFs are highly liquid and trade throughout the day. The bid-ask spread for ETFs that track known indexes is narrow.
5. Professiona management: ETFs are run by some of the largest asset managers. Therefore, investors can be sure that their ETFs will closely tracks the performance of the benchmark index.
6. Investor protections: The SEC regulates the emision of new ETFs.

Indexed annuity: (by Bharat Swami)

1. Performance: Performance of Indexed annuity with underlying option same as broad market index is dependent upon the performance of underlying broad market index, in our case S&P500. If the broad market index goes up Indexed annuity goes up by a multiplied participation rate, which is set in contract.
2. Fees: Indexed Annuity has lots of fees associated with it such as Commissions, Administrative Fees, Surrender Charges, Mortality Expenses, Investment Expense Ratio, Riders,Rate Spreads. Despite these numbers of fees Indexed annuity has low fee in total as compared to other types of annuity (except Fixed Annuity). It Typically varies from 1% to 4% of annual amount.
3. Transparency: Since Indexed annuity based on underlying index it is at most extent transparent. It may have some complexity based on so many fees, periods such as surrender period, etc.
4. Liquidity: They are considered as Non-Liquid investment. If an investor wants to liquidate the annuity they will be penalized for that, this charge may vary up to 7% of your withdrawal amount.
5. Professional management: These are managed by professional insurance companies by tracking the underlying market index.
6. Investor protections: All indexed annuities are regulated by state insurance commissioners,and not all Indexed Annuity are protected by the SEC and the FINRA, only

those which are classified as securities. Those which are not protected by the SEC, insurance companies set a minimum return in case the underlying index performs extremely badly.

7. Collateral-related risks and credit risk:
   a. Mutual fund:
      - Credit risk is possible in case the company invested in fails to pay back.
      - There is no specific institution that insures the payment of dividends.
      - What are the fees associated with credit guarantee
   b. ETF:
      i. There will only be credit risk if the index tracked is one of fixed income.
      ii. There are no institutions that insure that payment of dividends.
      iii. Is there enough capital to pay for the guarantees?
   c. Indexed annuity:
      i. Indexed annuities have credit risk associated with them, the insurance company may not be able to pay back. But these credit risks are small since most indexed annuities have stable underlying index, and also insurance companies set minimum payback and max participation factor for these annuities.
      ii. Insurance companies themselves protect the state paychecks (in payout period after the accumulation period). Since the insurance company invests the principal amount in investors' decided index or option and they minimize the risk of loss by setting minimum return by setting the limit on gains by factor of participation rate. This complexity of annuity ensures the constant paychecks after the accumulation period.
      iii. The question asked in the mutual fund section (Q7.a.(iii)) is answered in question 2.
      And answer for question 7.b.iii in ETF section is answered in 7.c.(ii)

8. Statistical-related risks:
   a. Mutual Fund:
      i. Medium to high correlation does not present a safe investment. This is because in case an investment in the index loses value, the rest of the investments are also likely to lose value.
      ii. Questions would be how the product is likely to perform in the market and plans to avoid risks associated with the fund in the down market.
      iii. How does correlation affect the performance of the fund?
   b. ETF:
      i. Some indexes track a particular industry. In those cases, the underlying securities are highly correlated. The investors choosing a mutual fund or ETF that track such indexes must be conscious that the ETF is not well diversified and is subject to industry risk.
      ii. Does your product offer any protection during downside markets?
      iii. Is the participation rate affected by the equity market performance?
   c. Indexed annuity:
      i. Indexed Annuity are relatively safe investments as compared to investing the index directly. They may reduce the gains by participation rate or non-liquidate investment but they also reduce the loss in a weak market. If underlying equities in index are highly correlated then the gains depend upon the market fluctuations in any one equity.
      ii. In which case the mutual funds and ETF of the underlying market index same as Indexed Annuity are better? What factors affect the gains from each investment to an investor with the same principal investment?

iii. question asked by the Mutual Fund section in 8.a.iii answered in 8.c.i.

9. Magnifying risks:
    a. Indexed Annuity has no downside. The Contract from insurance company contains minimum returns statement which prevent the loss form indexed annuity in case of bad returns from underlying market index.
    b. Indexed Annuity has upside, as underlying market index increases the return from indexed annuity increase with a factor of participation rate (which are set by insurance companies during the contact).
    c. So, what is the participation rate?, it is the rate set by the insurance company and mutually agreed between the insurance company and investor. It set the limit on our gains from indexed annuity. Since the Indexed Annuity depends upon the underlying market index, Insurance companies didn't provide all the gains from the market index, they multiply the gains by participation rate. Participation rate varies for different indexed annuity, its may be 75% or 100% or maybe even low.75% participation rate on 10% increase in underlying index give investor 7.5% gains (75%*10%). Participation rate limits the gains on the underlying market index.
10. Frictional factors:
    a. Mutual funds:
        i. Mutual funds may face large inflows or outflow of money from the investors. This can affect it's ability to buy or sell securities.
        ii. A mutual fund doesnt allow investors to buy or sell shares at any time during the day but only at the end of the day. This implies that investor dont react to market events during the day rather wait for the end of the day.
        iii. Mutual funds donot disclose all the information about the securities in the investment. This makes it hard to evaluate risks and returns on the investments.
    b. ETF:
        i. ETFs do not perfectly match the performance of their benchmark. Therefore, higher volatility could increase the spread between the index and ETF performance.
        ii. Given that most ETFs do not offer active management the management fees are low. This instruments are also cheap to trade in exchanges because they are highly liquid, the trading cost is usually on par with trading equities directly. Even though fees are low, the result of paying those fees is that ETF performance is usually below that of its benchmark.
        iii. The holdings of ETFs pay dividends according to their own choices. As a result, it would be costly for the ETF to distribute the dividends immediately to the investors. In reality, ETFs can pay dividends periodically or reinvest the dividends in the ETF. What they end up doing is stated in their prospectus.
    c. Indexed annuity:
        i. There is a big penalty in withdrawing money early from the Indexed annuity, it's typically from 7% to 10% of withdrawn money. But there is a more complex risk associated with early withdrawal, it directly affects our paychecks in the paycheck period. They may also decrease our principal amount.
        ii. The lack of control of participation rate is a very serious matter. It limits the gains of investors and insurance companies gain control on profit distribution. Add the answer from Q 9.c
        iii. Answer from question 2 Indexed Annuity section, we can see that the fee structure associated with Indexed Annuity is very complex, there are lots of fees such as Commissions, Administrative Fees, Surrender Charges, Mortality Expenses, Investment Expense Ratio, Riders,Rate Spreads. These

fees are complicated on their own. These affect the investors annual profit from this investment.For example, Surrender charges directly affect the paychecks in paycheck periods. An investor should consult and research these fees properly before investing in Indexed Annuity.

11. Regulation:
    a. Mutual Fund: The reading describes a crisis in 2003 that exposed several illegal and unethical practices between investors and mutual fund companies. These practices included late trading, market timing, illegal sales practices, and excessive fees believed to cost investors more than US $4 billion per year. The crisis damaged the reputation of the mutual industry severely. To deal with the situation, a variety of regulations were proposed in order to protect investors. The regulations include a ban on late trading which allowed some traders to trade after the market closed at favorable prices, a ban on market timing, increased disclosure requirements for mutual funds including information about fees, expenses and performance. They also set penalties for any institution that would violate the mutual funds regulations. The reading compared all these with those of Japan and it was found out that the pricing and trading of mutual funds was the same with just differences in aspects of oversight and governance. Japan also imposes stricter restrictions on the types of assets investors to invest in compared to the US. However, for both cases, these regulations were intended to prevent investors from engaging in unethical practices and also to restore confidence in the mutual fund industry.
    b. ETF: The reading describes the differences between physical and synthetic ETFs. Physical ETFs hold the securities of their benchmarks. On the other hand, synthetic ETFs use swaps or other derivatives that are linked to the return of the benchmark.
       Synthetic ETFs have the advantage of being exempt of the withholding tax because they use derivatives. In contrast, physical ETFs pay 15% tax on the dividends received. As a consequence, synthetic ETFs can outperform physical ETFs.
       Nonetheless, not all synthetic ETFs are the same. They depend on how the swap or derivative was arranged (tracking the net or total return of the index) and counterparty risk. Such differences are not included in the management fees of the synthetic ETF.
       It is worth noting that this reading does not describe any crisis or propose a specific regulation.
    c. **Indexed annuities are not suitable for everyone**:
       We may use Indexed annuities to reduce the risk as compared to investing directly in underlying market index or option but it also limits the upside of return by participation rate which are set by insurance companies during the transaction of indexed annuity. So, it is clear that Indexed Annuities are not for those who don't want the companies to cap their profit gains.
       Now, Indexed Annuity has complicated contract language and regulations which are a bit of a problem for retail investors to understand and make complete use of Indexed Annuity. Because of this complicated language some investors step back from investing in them or need brokers to consult with them, then again consulting increase the overall fee on indexed annuities and reduce the overall profit. And also consulting increases the risk of our overall portfolio by adding one more Moral Hazard in it. Brokers may provide false information, or may provide information with the best interest of themself or of their company.
       Annuities suitable for retirement portfolios to reduce risk are regulated by SEC or state insurance commissioners. But the Annuities which are based on Indexes or options are not all regulated by SEC and contain risk.
       Indexed Annuities are not suitable for those who are in regular need of cash or need to liquidate their investment. Since, Indexed Annuities contain early withdrawal fee or

surrender fee associated with them, if we withdraw some amount from these we have to compensate that with fees which are typically 4% to 10% of withdrawal amount.
Indexed Annuities are one of those investments which may be referred to as "purely long-term investment", which typically last until age of 59 and half.
There are lots of factors one has to keep in mind before investing in Indexed Annuities from their side. And SEC and NAIC (National Association of Insurance Commissioners) provide some guidelines to broker or broker firms regarding the suitability of investor for Indexed Annuities, which are following -

1. Age,
2. Annual Income,
3. Financial Situation And Needs,
4. Financial Experience,
5. Financial Objectives,
6. Intended Use Of Annuities,
7. Financial Time Horizon,
8. Existing Assets,
9. Liquidity Needs,
10. Liquid Net Worth,
11. Risk Tolerance,
12. Tax status.

As we can see all these are needed in all types of investment, but these are needed more attention in Indexed Annuities. Because these investments have Liquidate problems.
Lastly, Indexed Annuities are Low-Yield, so they are low risk low return investment which may not be suitable for high risk investment.

References:

U.S. Securities and Exchange Commission, "SEC adopts new rule to modernize regulation of exchange-traded funds." *SEC*, 26 Sep. 2019, www.sec.gov/news/press-release/2019-190

Armor, Bryan & Fredlick, Emelia. "Morningstar's guide to ETF investing." *Morningstar*, 27 Feb. 2023, www.morningstar.com/specials/morningstars-etf-guide

Kshitij Samant, "Mutual Fund Regulations & Guidelines by SEBI – Amendments, Benefits, 21 Aug 2018, www.orowealth.com/insights/blog/mutual-fund-regulations

Silvestrini, Elaine, "Indexed Annuity." *Annuity*, 2 May. 2023, www.annuity.org/annuities/types/indexed/

U.S. Securities and Exchange Commission, "Updated investor bulletin: Indexed annuities." *SEC*, 31 Jul. 2020, www.sec.gov/oiea/investor-alerts-and-bulletins/ib_indexedannuities#_ftn1