

MUTUAL FUNDS

Luigi Vena

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Liuc – Università Cattaneo

TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fund's Categories and Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

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TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fund's Categories and Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

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Mutual funds: what are?

- A mutual fund is a diversified portfolio of stocks, bonds, and or other securities run by a professional asset manager.
- Investors put their wealth into the funds aiming to obtain a good return over a sufficiently long period.
- In some cases the management processes are run by a management team.

Mutual funds

- It is not necessary to invest in a mutual funds to build up wealth over time, since each investor can manage its wealth on his own and can obtain a desirable return.
- Investing in mutual funds does not necessarily imply to obtain a strictly positive return.
- However, mutual funds have some characteristics which make them attractive.

Mutual funds

- 28% of the entire US stock market was held by mutual funds by the beginning of 2013.
- At the same period, 44% of the US households held stock in mutual funds.
- Over the last 25 years, the mutual funds industry passed from \$292 billion in assets to over \$14 trillion.

- It is opportune to remember that the fund's asset manager invests the capital but does not bear any investment risk.
- On the contrary, all the risks connected to the investment activity are borne by the investors.
- Therefore, it is necessary to offer protection to investors.
- Indeed, mutual funds structure provide several safeguards.

Mutual fund organization

- Mutual funds must be registered with the SEC.
- *Shareholders*. The fund is a trust owned by thousands of investors, the only ones that bear the investment risks.
- *Board of directors*. It is elected by shareholders; the board of directors must control the management company and/or the adviser.
The SEC requires a minimum number of independent members.

Mutual fund organization

- *Management Company.* Usually, the management company is the organizer of the fund and serve also as the investment adviser. It deals with the daily organization of the fund.
- *Investment Adviser.* It runs the portfolio in accordance with the “prospectus” (or shareholders contract). The adviser is compensated by the management fee.

Mutual fund organization

- *Independent Custodian.* This role is typically assigned to a bank. The custodian must protect shareholders against theft by management.
- *Transfer Agent.* It handles sales and redemption of fund shares, compute the daily NAV, and handles dividend and capital gain distribution
- *Fund Distributor.* The underwriter helps to distribute the fund shares across investors.

Mutual fund organization: recap

Board of Directors

Oversees the fund's activities, including approval of the contract with the management company.

Investment

Adviser

Manages the fund's portfolio according to the objectives and policies described in the fund's prospectus.

Principal Underwriter

Sells fund shares either directly to the public or through other firms

Administrator

Oversees performance of other companies provides to the fund and ensures that the fund's operation comply with applicable federal requirements.

Transfer Agent

Execute shareholders transactions, maintains records of transactions and other shareholder account activity, and sends account statement and other documents to shareholders.

Custodian

Holds the fund's assets, maintains them separately to protect shareholder interests.

Independent

Public Accountant
Certifies the fund's financial statement

The prospectus

- The prospectus describes the key features of a mutual funds.
- Potential investors can request and read the fund's prospectus before making any investment decision.
- There are two kind of prospectus:
 - ▣ **Statutory** prospectus;
 - ▣ **Summary** prospectus.

The statutory prospectus

- The statutory prospectus is the traditional, long-form prospectus with which most mutual fund investors are still familiar.
- Because of the length of the prospectus sometimes they can be tedious to wade through.
- Therefore, the SEC has simplified prospectus requirement, resulting in the Summary prospectus.

The summary prospectus

- The summary prospectus contains the same information of the statutory prospectus.
- However, the former is just few pages long while the latter can be very long and tedious.
- Both the prospectus contain important information and key features of the fund.

Prospectus content – 1 / 2

Both the prospectus contain the following information:

- Fund's investment objective.
- A description of the investment policies.
- The standard *fee table*.
- Detailed information concerning the portfolio's investment risks.
- The fund's past performances.

Prospectus content – 2/2

In addition, the statutory prospectus indicates:

- Services offered.
- Information concerning the fund's custodian and transfer agent.
- Information on the other portfolios available in the fund family.

Focus on: fund's objectives

The primary objectives of any fund would be included into one of the following three categories.

- Income. The attention is on producing a constant flow of dividend payments.
- Capital Gains. The focus is on increasing the value of the principal through the appreciation of the stocks held
- Income and Capital Gains. A combination of the first two approaches.

TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fund's Categories and Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

Advantages of mutual funds

- Professional Management.
 - As we have just told, it is not necessarily to invest in a mutual funds. However, buying a mutual fund share means to exploit the competencies, skills and experience of the fund's manager.
 - Shareholders can judge the fund management by the total returns generated.
 - Unsatisfied shareholders can replace the fund management.

Advantages of mutual funds

□ Diversification.

- Collecting small wealth from thousands of investor, the fund manager can build and invest a notable fund.
- Therefore, he can divide the portfolio across hundreds of assets, giving the investor a desirable degree of diversification.



Advantages of mutual funds

- Low Operating Cost.
 - Mutual funds incur proportionately lower trading commissions with respect to the ones incurred by individual investors.
 - Lower transaction costs may reflect into better performance.

Advantages of mutual funds

- Shareholder services.
 - Some mutual funds offer many useful shareholder services.
 - If one want to compound his wealth quickly the fund can re-invest in the fund itself all the profit generated (i.e. dividends and capital gains).
 - Another service is the possibility to switch between funds.

Advantages of mutual funds

□ Liquidity.

- It is the capability of the fund to purchase or sell an asset.
- In order to be liquid, one must not bring high transaction costs (recall that transaction costs include the hit on the price).
- To limit liquidity risk, mutual funds always keep a percentage in cash with which they satisfy the needs of the investors.

Advantages of mutual funds

- Denomination Intermediation.
 - Mutual funds allows small investors access to security they would be unable to purchase without the mutual fund.
 - Suppose that one wants to invest his \$500 but the market prices are as follow:
 - Amazon: \$695;
 - Apple: \$95;
 - Intel: \$30.
 - Ibm: \$150.

TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fund's Categories and Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

Mutual funds categories

Open-end funds.

- Open-end funds always stand ready to issue new shares to incoming investors at the current price, or NAV (“Net Asset Value”).
- Similarly, open-end funds always stand ready to repurchase or redeem shares from existing shareholders who want back their money.

Mutual funds categories

Closed-end funds.

- ❑ Closed-end funds are publicly traded investment companies.
- ❑ They do not stand ready nor to issue new shares neither to repurchase or redeem the existing shares.
- ❑ In a such a way, the managed capital is fixed during the life of the funds.
- ❑ The share price may be far from the NAV.

Net Asset Value

- What is the NAV?
- The Net Asset Value is the sum of all the assets owned by the funds net of the liabilities.
- The total net assets is then divided by the number of outstanding shares.
- The result is the “Net Asset Value” per share.

Net Asset Value

Compute the NAV and the NAV per share.

- Cash and equivalents – \$200,000.
- 10,000 shares of type A - \$50 per share.
- 20,000 shares of type B - \$30 per share.
- 50,000 shares of type C - \$08 per share.
- Liabilities – \$100,000
- # of outstanding shares – 100,000

NAV evolution over time

- Supposing that the number of outstanding shares is 1 500, compute the NAV per share of the following fund in time t and in time $t+1$.

Asset	# of shares	Price in t	Price in $t+1$
Share A	15,000	€2.00	€2.50
Share B	1,000	€50.00	€48.00
Share C	2,500	€20.00	€22.00
Cash and Equivalents	-	20,000.00	20,000.00

- What happens to the fund's NAV if in time t a new investor buy 1,000 shares? What if an existing shareholder sells his 200 shares?

Types of funds

Funds can be classified according to their managing strategy in:

□ Actively-managed funds.

vs

□ Passively-managed funds.



Types of funds

Actively-managed funds.

- The actively-managed funds are characterized by the active strategy of the manager.
- Indeed, on the basis of his expectation the asset manager constantly changes the portfolio weights.
- The return of this type of funds depend on the manager's ability to detect and invest in undervalued assets.

Types of funds

Passively-managed funds.

- The passively-managed funds are characterized by the passive strategy of the manager.
- Indeed, the portfolio manager does not constantly change the portfolio weights.
- On the contrary, the aim of the manager is to replicate perfectly another asset (or a group of assets).

Types of funds

Actively vs. passively-managed funds.

- Investing in an actively-managed portfolio means to invest in the fund manager capability.
- Indeed in such case, investors choose the funds on the basis of the track record of the manager.
- The investor expects that, whatever will be the market performance, the fund manager will be able to give him a positive “abnormal return”.

Types of funds

Actively vs. passively-managed funds.

- Investing in an passively-managed portfolio means to invest in a particular market.
- Indeed in such case, investor chooses the funds on the basis of his expectation.
- The investor expects that the fund manager will be able to give him back exactly the market return.

Types of funds

With respect to the portfolio asset class, fund can easily be classified into:

- Stock or Equity Funds;
- Money Market Funds;
- Bonds Funds;
- Hybrid Funds.

Types of funds

Equity funds.

- Equity funds invest principally in stocks.
- They can be both actively-managed and passively-managed.
- Since stocks are the the more risky asset class, investors expect the higher returns.
- Stock funds can be divided into more than ten sub-categories by objective.

Types of funds

Equity funds categories.

- **Aggressive-Growth mutual F.**
 - ▣ These funds try to obtain the maximum capital appreciation, even employing speculative strategies.
 - ▣ Because of the high expected return, the riskiness of the aggressive-growth funds is quite high.
- **Small-Company mutual F.**
 - ▣ These funds invest in company with low market cap.

Types of funds

Equity funds categories.

- **Growth mutual F.**
 - ▣ These funds invest in company with high market cap.
 - ▣ They emphasize on capital appreciation.
- **Growth and Income mutual F.**
 - ▣ These funds invest in company with high market cap.
 - ▣ They emphasize on both capital appreciation and the production of regular dividend payments.

Types of funds

Equity funds categories.

- Equity-Income mutual F.
 - These funds invest in company with high market cap and high dividend yields.
 - They emphasize on the production of regular dividend payments.
 - Because of the low riskiness of the high dividend yield company, these fund are the least volatile (or the less risky equity funds).

Types of funds

Other equity funds categories.

- Hybrid mutual F.
 - ▣ Their portfolio is partially invested in bonds.
- Specialty mutual F.
 - ▣ Have a specific investment focus (e.g. ethical funds).
- Sector mutual F.
 - ▣ The portfolio is typically invested in firms within the same industry (e.g. Housing F.; Health care F.).

Types of funds

Other equity funds categories.

- **Stock Market Index mutual F.**
 - ▣ They aims to replicate the index performance.
 - ▣ Therefore the portfolio is invested in the same stocks and with the same weights as in a specific market index.
- **International mutual F.**
 - ▣ Invest in foreign stocks, usually from several countries.

Types of funds

Money market funds.

- The money market funds invest in the less risky asset classes, namely:
 - ▣ Short Term debt instruments, such as Treasury Bill;
 - ▣ Commercial paper (short term debt instruments issued by large corporations).
- Because of the high quality of the assets, the expected return is extremely low.

Types of funds

Bond (Debt) funds.

- The bonds funds invest their capital into debt instruments. Especially, debt funds invest in:
 - ▣ Government bonds. B. issued by central government;
 - ▣ Municipal bonds. B. issued by local government;
 - ▣ Agencies. B. issued by government agencies;
 - ▣ Corporate. B. issued by corporation.

Types of funds

Bond (Debt) funds.

- The bonds asset class is riskier than the money market asset class.
- Therefore, the expected return of the debt funds is higher than the expected return of the money market funds.
- However, because bonds are less risky than stocks the expected return of a debt fund is less than the one of the equity funds.

Mutual funds fees

According to the time fees are charged, it is usual to distinguish between:

- Front-end load.
Such fees are charged at the time of purchase.
- Back-end load.
Such fees are charged at the time of sell.

Mutual funds fees

In the prospectus, fees are classified into:

- Shareholders fees, paid directly from the investment;
- Annual Fund Operating Expenses, paid each year as a percentage of the value of the investment (or, in other words, as a percentage of the NAV).

Shareholders fees

- Sales Loads. A fee charged on investors used to compensate the broker who sell the mutual fund's share. Sales loads can be classified into:
 - ▣ Front-end sales load, paid at time of purchase.
 - ▣ Back-end sales load, paid at time of sell.
- Redemption Fees. Mutual funds charge shareholders when they decide to redeem their shares. Unlike the back-end sales load, the redemption fee is paid directly to the fund, not to the broker.

Shareholders fees

- Exchange Fees. Are sometimes imposed to shareholder if they switch to another fund within the same fund group.
- Account Fees. Are sometimes imposed on investors for the maintenance of their accounts.
- Purchase Fees. It is similar to a front-end sales load. However they differ because the former is paid to the fund while the latter is paid to the broker.

Annual fund operating expenses

- Management Fees. These fees are paid from fund's assets to the fund's investment adviser, for managing the fund's investment portfolio.
- Distribution (or Services or 12b-1) Fees. These fees are paid from fund's assets to cover marketing, advertising and distribution expenses, as well as to cover the printing and mailing of prospectuses to new investors.

Annual fund operating expenses

- Other Expenses. This category contains all the expenses not included in the preceding ones, such as custodial expenses or legal expenses.
- Total Annual fund operating expenses. It represents all the fees and expenses categorized as fund's operating expenses. It is expressed as percentage of the fund's average net assets.

TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fund's Categories and Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

Exchange Traded Funds

- Exchange Traded Funds, or simply ETFs, are investment companies classified as open-end companies.
- Like any other type of investment company, the ETFs have a prospectus, which has to be delivered to investors.
- ETFs that do not deliver any prospectus must give the investors the so called Product Description.

Differences between ETFs and Mutual Funds.

- Unlike the mutual funds, only “Authorized Participants” are permitted to purchase and redeem shares directly from the ETF.
- They must trade aggregations or blocks (e.g., 50,000 ETF shares) commonly called “Creation Units.”
- A Creation Unit is a basket of financial instruments and cash that is exchanged with ETF shares.

Differences between ETFs and Mutual Funds.

- Once received the share in exchange for the creation units, Authorized Participants can sell them on the secondary market.
- Other investors can purchase and sell the ETFs shares on the secondary market at the market price.
- The market price of ETFs reflects the net asset value per share.

Differences between ETFs and Mutual Funds.

- ETFs have been historically cheaper than mutual funds.
- Mutual funds' shares are redeemable in cash while ETFs' shares are redeemable in-kind. The Authorized Participants can exchange shares for baskets of financial instruments and cash.

Focus: Authorized Participants

The tasks of the Authorized Participants include:

- The construction of the Creation Units.
- The exchange of the Creation Units with the ETFs' shares.
- The opportunity to act as arbitrageur in order to align the value of the fund's shares with the one of its portfolio assets.

TABLE OF CONTENTS

- ❑ Mutual Funds;
- ❑ Advantages of Mutual Funds;
- ❑ Fees;
- ❑ Exchange Traded Funds;
- ❑ Hedge Funds.

International Financial Markets – 05/18/2016

Hedge Funds

- Like mutual funds, hedge funds pool investors' money and invest the money in an effort to make a positive return.
- Their goal is to give investors a positive return, even if the market return is strictly negative.
- Because of their goal, hedge funds are the investment companies with the highest level of management activity.

Hedge Funds

- The aim of the hedge funds makes them the riskiest investment companies.
- Therefore, only accredited investors can purchase HF shares.
- Accredited investors include institutional investors, such as pension funds and insurance companies, and wealthy individuals.

Hedge Funds

- Unlike mutual funds, hedge funds are not subject to some of the regulations designed to protect investors.
- Moreover, despite their name, hedge funds are not immune to risk.

Funds Recap

