

INVESTMENT SYSTEM

Field of the Invention

This invention relates to an investment system and refers particularly, though not exclusively, to an investment system where a disciplined and systematic investment strategy may be followed.

Definitions

Throughout this specification "computing device" may include a server computer, desktop computer, personal computer, laptop computer, notebook computer, pocket computer, personal digital assistant, or other mobile devices having full computation facilities.

Throughout this specification a reference to an individual investor is to be taken to include small groups of individuals, or private corporations owned and controlled by small groups of individuals; but excludes institutional and large corporate investors.

Background to the Invention

Current investment methodologies and/or financial models available are usually predictive in nature. They usually embody a theoretical framework and use empirical historical data to predict the future development of financial trends so as to exact profit from the identified trend. They are distributed to trained financial personnel through individual software packages or via internet-portals. Most assume that the average investor is rational, well informed and financially literate. In reality, most individual investors are emotional, not well informed, and are financially illiterate. In most cases, inherent human traits such as greed and fear work against the individual investor. In addition, most investment methodologies/financial models generally adopt a relative-gain approach, and the investors are advised to cut losses when the trend turns against them.

It is therefore the principal object of the present invention to provide an investment system that offers the individual investor a disciplined, unemotional, investment

methodology. This may be as a software package. Preferably it is delivered in a master-web-client software format.

Summary of the Invention

With the above and other objects in mind the present invention provides an investment system wherein details of an investment portfolio are maintained on a client computing device, each investment in the investment portfolio having a predetermined sell target, the client computing device obtaining current prices for the investment portfolio from a master computing device and generating a portfolio update, and sell signals for any investment having reached its sell target; the client computing device also receiving stop-loss signals from the master computing device.

In another form, the present invention provides an investment system wherein a master computing device forwards to a client computing device prices for a plurality of investments for enabling the client computing device to obtain the prices for each investment in an investment portfolio, details of which are maintained on the client computing device; the master computer device generating stop-loss signals for forwarding to the client computing device.

For both forms, the stop-loss signals are generated in the master computing device by calculating a standard deviation of rolling averages for a fund over a predetermined period, multiplying the standard deviation by a predetermined multiplier, and setting a stop-loss target at the multiplied standard deviation from a last-known peak for the fund. The fund may be one or more of an index of funds, unit trust, mutual fund, managed fund and investment-linked policy; and the predetermined period may be three months. The predetermined multiplier may be two, and the stop-loss signals may be alerts.

The predetermined sell target may be one or more of growth, price and time; and the investment portfolio may be imperfectly correlated. When a predetermined sell target is reached, a sell alert may be generated by the client-computing device. The sell alert may be sent as a sell instruction to a sales agent enable the relevant investment to be sold. The

sell instruction may include a buy instruction. The buy instruction may be one or more of price, negative growth, and time.

All communication between the client computing device and the master-computing device may be over the Internet through at least one server.

The portfolio update may include one or more selected of total investment value, total number of accumulative units, current valuation of each unit, total profit, and percentage profit. The values may be stated in a currency of a country of residence of the client-computing device.

Each investment may be in one or more of an index of funds, unit trust, mutual fund, managed fund and investment-linked policy. There may be a plurality of servers, all data being sent to all servers by the master-computing device. Each client-computing device may log on to any one of the plurality of servers.

Description of the Drawings

In order that the invention may be readily understood and put into practical effect, there shall now be described by way of non-limitative example only a preferred embodiment of the present invention, the description being with reference to the accompanying illustrative drawings, in which:

Figure 1 is a representation of the system architecture;

Figure 2 is a representative flow chart of a preferred form of investment methodology;

Figure 3 is a representation of the functionality of the operational system in the master computing device; and

Figure 4 is a representation of the functionality of the operational system in the client-computing device.

Description of the Preferred Embodiment

As is shown in Figure 2, the system uses a methodology that has three main steps:

1. Composing an Imperfectly-Correlated Investment Portfolio

When two perfectly negatively correlated, high return, high-risk, funds are superimposed onto each other, the resultant portfolio performance is high-return no-risk. This is the negative correlated portfolio theory. Based on the negatively correlated portfolio theory, the investment portfolio may comprise multiple high-return, high-risk funds to achieve a high-return, low-risk investment portfolio. In reality it is not possible to achieve a perfectly negatively correlated investment portfolio. Most investors invest either in a haphazard, or emotional, manner.

2. Regular Investment

Prices of funds vary day-to-day. If you invest the same dollar amount regularly, you will buy more units when they are cheaper and fewer units when they are more expensive. Dollar-cost averaging eliminates the guesswork of investing. Over time, the economic dips can lower the average cost per unit. It is not possible to time the market. Based on dollar-cost averaging theory, the portfolio will have a better yield if it is invested in a sustained manner, thereby removing the inexact science of timing the market. The consistent buying reduces the emotions of greed and fear, and allows the investments within the portfolio to accumulate more units when prices are low and fewer units when prices are high.

3. Consistent Selling

Based on preset early-warning indicators for selling, it is possible to make an overall profit. The preset selling mechanism can be based on price, growth and/or time. In addition, a stop-loss mechanism is superimposed onto the preset selling mechanism, to act as a hedge against a sudden downturn before the preset selling is activated. Setting of the stop-loss mechanism is based on multiples of the standard deviation of rolling averages. This selling methodology also reduces the emotions of greed and fear, and allows the investments within the portfolio to be sold, for a profit whenever possible, thereby providing a gain.

Stop-loss mechanism:

Standard Deviation of 3-month rolling averages for individual fund/index is calculated. Alternative periods such as, for example, 2, 4 or 6 months may be used if desired. At double this Standard Deviation, there is a tight statistical prediction for events of extra-ordinary gain or loss. Consequently, the Stop-Loss target is set at double this Standard Deviation from the last-known peak for the individual fund/index. When the Stop-Loss target is met, it is assumed that an event of extra-ordinary loss is imminent, and the investments are fully exited to avoid this potential event of extra-ordinary loss.

The preset target may be set when the purchase is made. Normally, it will be based on price or growth. For unit trusts, if the buying price is, for example, \$1.01234 per unit, the price target may be \$1.4321. The units will be held until that price is achieved, no matter how long it takes, unless the preset target is changed by the user using their computing device. If desired, the target may be one of time. For example, sell in 6 months. It could be a combination of two or more of growth, price and time. For example, sell in 6 months if the price is greater than \$A. Growth may be as a rate of change or as a percentage change. For example, if a fund is growing at 10% per annum, the sell instruction may be when the growth rate drops to 5% per annum. Alternatively, it could be to sell when the value of the units has increased by, for example, 20%. Once the target or targets is reached, the investment is sold and the money invested. This may be in the same fund. There may be a delay between sell and buy. For example, the buy price of many funds rises just before a distribution, and fall just after the distribution. The target may be to sell the investment the working day before the record date for the distribution, and to buy the working day after. This may achieve a favourable price differential, as well as receiving the distribution. The distribution may be a dividend. The investment may be of any category, but particularly may be one or more of an index of funds, unit trust, mutual fund, managed fund and investment-linked policy.

The process involved once the target or targets is/are reached is that an alert is generated and sent to the client machine from the master computer via a commercial server, and using the Internet as a communication conduit.

The "system" may not implement the sale. That is up to the user, but may alert the user of the need to sell until the user records the sale. Alternatively, the user may record the agent (e.g. stockbroker, banker, insurance agents) acting for the user and, upon the alert being received by the user's machine, the client software on the user's machine automatically generates an electronic instruction to the agent to make the sale.

The alert may also be to buy. For example, if the sale was just before a distribution, an alert maybe generated the working day after the distribution to buy, if the price has fallen to a predetermined level, or by a predetermined amount.

If the target is price or growth, and there is a major downturn in the market, an alert can be sent to the user's machine so that reference can be had to the last known peak price. If the investment is profitable, it can be sold even though the target may not have been met. If not profitable and the prediction is for a major downturn over an extended period, the investment may be sold to generate income for investing elsewhere.

The information for the methodology is distributed via architecture as shown in Figure 1, where the solid arrows indicate a primary download path, and the intermittent arrows indicate an alternate download path. Unlike a conventional portal concept that maybe affected by the speed of the communication devices, bandwidth provided by service providers, security concerns of clients, and server down-time, the architecture allows extensive computing power, with little down-time. Minimum data is transmitted over the Internet, including daily prices,

subscription details, and stop-loss signals. The architecture employs the Internet as a conduit for information.

The operation of the master software is shown in Figure 3. It serves as a processor of raw data, and operator of the stop-loss mechanism. The master software works on the master-computing device. It pulls the daily prices from source and processes the prices for stop-loss targets, and updates the subscription details. Only essential processed information such as, for example, subscription details, stop-loss signals and daily prices, is uploaded onto a plurality commercial servers on the Internet that act as temporary storage facilities for the processed information. The number of processors can be as required from a minimum of two to several, to several hundred. Uploading only essential processed information ensures that minimum data is transmitted over the Internet.

The Internet acts a conduit for facilitating the transmission of the processed information. The Internet facilitates the uploading of the processed information to the commercial servers, and facilitates the downloading of this same information onto the client computing devices. Processed information is uploaded onto more than one commercial server concurrently to achieve redundancy, and should provide near-zero downtime. Preferably, there is no splitting of the processed information and the same information is uploaded onto more than one server.

The client software functions are shown in Figure 4. The client software functions as the manager of the investments. It searches and pulls the required data from one of the commercial servers and processes and updates the client subscription details. In this way it pulls the prices for each investment in the client's investment portfolio. In that way details of the portfolio are held only in the client computing device, and not on the master computing device or a server. The client-computing device then calculates:

- (1) the total investment value in the currency of the client;
- (2) the total number of cumulative units;

- (3) the current valuation of each unit in the currency of the client;
- (4) the total profit in the currency of the client; and
- (5) the profit in percentage terms for the individual funds and for the portfolio. The client may determine the currency, or it may be preset to the currency of the country of residence of the client.

Thereafter, it will provide the client with a portfolio update and concurrently send any required sell signals if the growth target is met or when the stop-loss mechanism is activated. It is also a processor of early warning indicators for selling, and the broadcaster of the stop-loss mechanism. The client software operates on the client-computing device. The essential processed information is downloaded on request at login. It is obtained from the most convenient commercial server/s via the Internet, and serves as inputs for the client software. Because the client software relies on the computing power of the resident client-computing device, the only limit on operation is the capacity of the client-computing device. In addition, as the essential information can be downloaded from more than one of the commercial servers on the Internet, there should be near-zero downtime. As the clients' information, including personal data and details of the investment portfolio, is kept on the client-computing device, there are minimal security concerns for the client.

Whilst there has been described in the foregoing description a preferred embodiment of the present invention, it will be understood by those skilled in the technology that many variations in details of design, construction or operation without departing from the present invention.

The present invention extends to all features disclosed either individually, or in all possible permutations and combinations.

The Claims

1. An investment system wherein details of an investment portfolio are maintained on a client computing device, each investment in the investment portfolio having a predetermined sell target, the client computing device obtaining current prices for the investment portfolio from a master computing device and generating a portfolio update and sell signals for any investment having reached its sell target; the client computing device also receiving stop-loss signals from the master computing device.
2. An investment system wherein a master computing device forwards to a client computing device prices for a plurality of investments for enabling the client computing device to obtain the prices for each investment in an investment portfolio, details of which are maintained on the client computing device; the master computer device generating stop-loss signals for forwarding to the client computing device.
3. An investment system as claimed in claim 1 or claim 2, wherein the stop-loss signals are generated in the master computing device by calculating a standard deviation of rolling averages for a fund over a predetermined period, multiplying the standard deviation by a predetermined multiplier, and setting a stop-loss target at the multiplied standard deviation from a last-known peak for the fund.
4. An investment system as claimed in claim 3, wherein the fund is an index of funds.
5. An investment system as claimed in claim 3 or claim 4, wherein the predetermined period is three months.

6. An investment system as claimed in any one of claims 3 to 5, wherein the predetermined multiplier is two.
7. An investment system as claimed in any one of claims 3 to 6, wherein the stop-loss signals are alerts.
8. An investment system as claimed in any one of claims 1 to 7, wherein the predetermined sell target is one or more selected from the group consisting of: growth, price and time.
9. An investment system as claimed in any one of claims 1 to 8, wherein the investment portfolio is imperfectly correlated.
10. An investment system as claimed in any one of claims 1 to 9, wherein when a predetermined sell target is reached, a sell alert is generated by the client computing device.
11. An investment system as claimed in claim 10, wherein the sell alert is sent to a sales agent as a sell instruction to enable the relevant investment to be sold.
12. An investment system as claimed in claim 11, wherein the sell instruction may include a buy instruction.
13. An investment system as claimed in claim 12, wherein the buy instruction may be one or more from the group consisting of: price, negative growth, and time.
14. An investment system as claimed in any one of claims 1 to 13, wherein all communication between the client computing device and the master computing device is over the Internet through at least one server.

15. An investment system as claimed in any one of claims 1 to 14, wherein the portfolio update includes one or more selected from the group consisting of: total investment value, total number of accumulative units, current valuation of each unit, total profit, and percentage profit.
16. An investment system as claimed in claim 15, wherein the values are stated in a currency of a country of residence of the client-computing device.
17. An investment system as claimed in any one of claims 1 to 16, wherein each investment is in one or more of the group consisting of: an index of funds, unit trust, mutual fund, managed fund and investment-linked policy.
18. An investment system as claimed in claim 14, wherein there are a plurality of servers, all data being sent to all servers by the master-computing device.
19. An investment system as claimed in claim 18, wherein each client-computing device may log on to any one of the plurality of servers.