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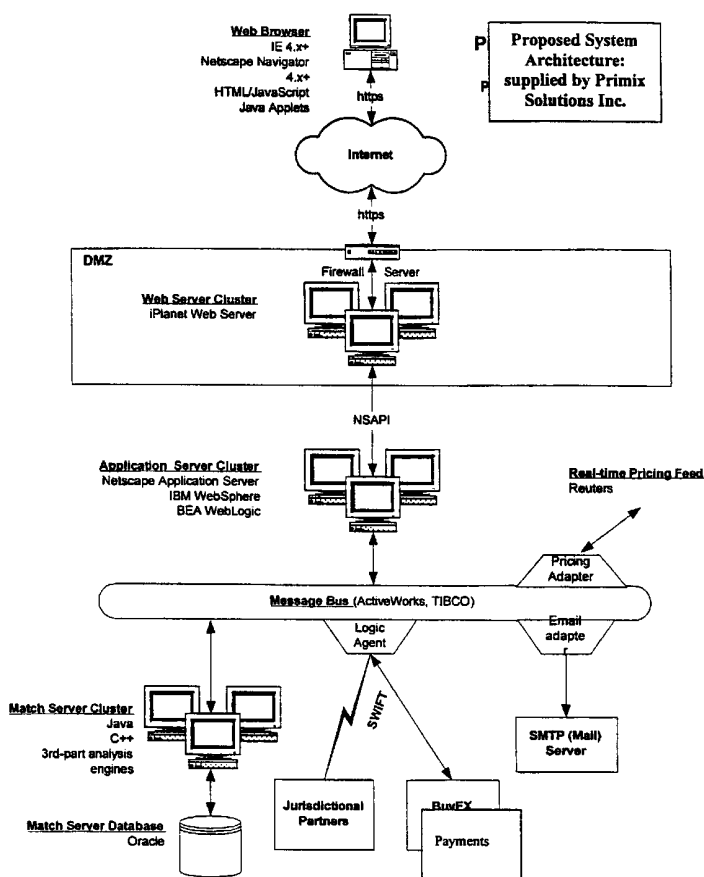
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(72) Inventor: VAN ROON, Mark [CA/CA]; 40 Hayward
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(54) Title: COMPUTER BASED SYSTEM ENABLING A PARTY AND A COUNTER-PARTY TO TAKE A FINANCIAL POSITION IN RELATION TO A FINANCIAL PRODUCT



(57) Abstract: A computer based system identifies parties and counterparties with matching, reciprocal expectations concerning the movement of a stock or share price; once a predefined trigger (e.g. a time period) has occurred, then funds previously deposited by the matched party and counterparty are returned to them, with the entity which correctly predicted the price movement also obtaining an additional amount from the funds of the other entity. Each party pays a small transaction fee. The system enables parties to take a position on whether a stock or share will rise or fall without buying the underlying stock or share, or options.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Computer Based System enabling a Party and a Counter-party to Take a Financial Position in Relation to a Financial Product

5 Field of the Invention

This invention relates to a computer-based system enabling a party and a counter-party to take a financial position in relation to a financial product.

10 Description of the Prior Art

At present, many financial instruments and/or financial contracts are negotiated subject to an indexed value used as a benchmark from which to measure performance. An example could be a "COLA" or cost of living allowance whereby wage increases are indexed to changes in inflation as measured by the change in value of some underlying benchmark "basket of consumer goods" from one year to the next. In other circumstances, returns on investments (ROIs) have been linked or tied to the rates of return on benchmark stock or bond indices. An example may be an investment certificate, which provides a minimum rate of return equal to the greater of 10 percent or the percentage increase in the Standard and Poor's 100 Equity Index or some other benchmark index. On many indices, cash settled futures and options are traded on the underlying basket; that is, a future or option, which is settled in the domestic currency of the underlying index. For example, the S&P 500 futures contract would settle only in US dollars.

Increasingly large sums of money are invested in stocks and shares on the basis that the price of those stocks or shares will rise or fall. Take a company, UKCorp, which believes that the price of a particular stock will rise, and another company, JPCorp, who believes that the price of the same stock will fall. Traditionally, these two parties would express their market views by establishing a position in the corresponding market for the security. The bullish UKCorp would typically purchase the security or buy call options on the

security if available. Call options give the right to buy a security at a predefined price for a predefined period. The bearish JPCorp would either “short sell” the security (sell stock that he does not own, in the hope that the price will fall so that he may cover his short position by repurchasing the security at the lesser price) or purchase put options, which
5 allow him to right to sell a security at a predefined price for a predefined period. Hence, if the price of the security was to fall, the value of the put option would increase subject to any number of factor inputs including the exercise price (the price at which you may sell the security), the duration of the option (the longer the time to expiry, the greater the “time value” of the option), the volatility of the security (the greater the price fluctuations, the
10 greater the option price) and the prevailing interest rates for cost of carry reasons.

In many cases, the security is beyond the economic, financial or practical reach of the purchaser or seller. That is to say, many securities do not have option and/or future contracts associated with them. Many securities do not have ADRs (American Depository
15 Receipts, in which each receipt is backed by shares of the security) or ADR equivalent status. And finally, the traditional methods of security procurement and foreign exchange hedging eliminate many potential purchasers and sellers from actively expressing their market perspective.

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Statement of the Present Invention

In accordance with a first aspect of the invention, there is a computer based system enabling a party and a counter-party to take a financial position in relation to a financial
25 product, comprising the following:

- (a) a first database recording the amount P of a deposit of funds from a party wishing to benefit if the value of the financial product rises over time;
- (b) a second database recording the amount CP of a deposit of funds from a counter-party wishing to benefit if the value of the same financial product falls over time;
- 30 (c) a computer program operable to:

(i) identify whether the party and counter-party have potentially reciprocal requirements in a bi-lateral match or as part of a multi-lateral match; and

5 (ii) calculate the actual change in value of the financial product until a pre-defined trigger event is reached so that (1) if the value has increased, then the party can be returned its amount P, together with an additional amount calculated by the program and related to the amount P and the increase in value, and the counterparty can be returned its amount CP, less the additional amount paid to the party; and (2) if the value has decreased, then the counter party can be returned its
10 amount CP, together with an additional amount calculated by the program and related to the amount CP and the decrease in value, and the party can be returned its amount P, less the additional amount paid to the counterparty.

In a second aspect of the present invention, there is provided a method enabling a party
15 and a counter-party to take a financial position in relation to a financial product, comprising the following steps:

(a) a party wishing to benefit if the value of the financial product rises over time deposits funds of amount P with an institution;

20 (b) a counter-party wishing to benefit if the value of the same financial product falls over time deposits funds of amount CP with an institution;

(c) the party and counter-party are identified by a computer based matching system as having potentially reciprocal requirements relating to an amount X;

(d) the actual change in value of the financial product until a pre-defined trigger event is reached is measured so that (i) if the value has increased, then the party is returned
25 its amount P, together with an additional amount related to the amount X and the increase in value, and the counterparty is returned its amount CP, less the additional amount paid to the party; and (ii) if the value has decreased, then the counter party is returned its amount CP, together with an additional amount related to the amount X and the decrease in value, and the party is returned its amount P, less the additional amount paid to the counterparty.

The additional amount related to the amount X is approximately that amount which would have been earned had the amount X in fact been used to purchase the financial product, including any applicable margin. Transaction fees and taxes may account for the relatively slight difference in the additional amount related to X and the amount which would have been earned had the amount X in fact been used to purchase the financial product.

In another aspect, there is provided a synthetic financial product, being the synthetic product generated through performing the above inventive method, i.e. the product (e.g. typically a contractual right) acquired in exchange for funds which have been deposited.

The invention can be best understood through an example: assume that UKCorp wants to participate in a US technology upswing and, as a result, has a view on the prospects of a particular equity in that sector. It enters the system which implements the present invention, and transfers some percentage of funds to the value of the number of shares of the security multiplied by the price of the security. The funds transfer takes place from GBP to USD. Desiring an equity upside position indicates that UKCorp is bullish about the prospects of the security. Assume, at the same time, JPCorp has an opposite view of the security in question; that is to say that it is bearish about the prospects of the security. It too transfers some percentage of funds to the value of the number of shares of the security multiplied by the price of the security. The funds transfer takes place from JPY to USD. As noted earlier, these two parties would traditionally express their market views by establishing a position in the corresponding market for the security: the bullish UKCorp could purchase the security or buy call options on the security if available, while the bearish JPCorp would either "short sell" the security or purchase put options which allow him to right to sell a security at a predefined price for a predefined period.

By contrast, with the present invention, individuals or companies can:

1. Deposit cash sums to accounts held in trust or some equivalent alternative;

2. Input their various “market views” with respect to any of a number of securities, including but not limited to equities, commodities, indices, ADRs, units, warrants, foreign exchange, bonds, bills, computer chips, futures, swaps, swaptions, options etc. (referred to as ‘financial products’ in this specification);

5

3. Be efficiently matched across a range of factor inputs which may include price expectations, duration, quantity etc.;

4. Be “cash settled or delivered of securities” on execution or expiry of the transaction.

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Hence, the present invention is predicated on the insight that the two parties described in the example above can be efficiently matched, with secured deposits in a secure environment, and can become party and counter-party to a synthetic transaction or related series of transactions by simply offsetting one another’s market perspective. Rather than entering the formal market to execute their financial perspective for the security, they are merely matched as against each other. This mitigates the volatility inherent in short selling, which, as a price discovery mechanism, is certainly controversial.

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It is clearly not essential for the party and counterparty to each deposit exactly the same amount: the lesser amount will generally determine the amount X placed at risk for a 2 party system. Also, the present approach is not limited to a 2 party system but can extend to a multi-party system in order to fully match reciprocal requirements. Hence, a party may wish to place USD1M on deposit on the basis that stock A will fall in price. That party can be thought of as buying a synthetic ‘bear’ stock A. It can be matched with 2 counterparties, each depositing USD200K and a third depositing USD600K, all of whom wish to acquire a synthetic ‘bull’ stock A. More complex scenarios involving multiple parties across multiple types of financial product and multiple currencies are also within the ambit of the present invention.

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Other advantages to embodiments of the present invention include the following:

- 5 1. A synthetic ADR can be established for those securities on which no ADR or equivalent exists, thereby allowing the position taker to foster his market expression.
2. Low cost hedging can be established in securities for which hedging is particularly difficult i.e. if no options are available or the security float is illiquid.

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Hedging can have a dramatically new dynamic, which, to this point in time, was expressed solely in terms of options, short sales or purchases. One party may accept a position, which is purposely attractive to a counterparty to obtain that counterparty position to hedge his security. For example, if UKCorp has a rather large security specific risk and wishes to
15 hedge this risk according to its market view, traditionally, UKCorp would sell the security in the open market and, dependent on the volume, cause a dramatic price change. Alternatively, UKCorp would purchase put options, if available – an expensive hedge. In one incarnation of the invention, UKCorp may post a desire to enter into a sale at terms very attractive to a counterparty such that the counterparty position, on a cash settled basis,
20 offsets the specific risk in the underlying security and may be dramatically less expensive than a derivative hedge position such as a put option. UKCorp may provide very attractive pricing to its counterparty, knowing (a) that this is desirable to “dumping” in the market and/or (b) that this is desirable to the inherent cost of hedging via options.

25 A financial institution or a series of financial institutions hold the funds in trust, and could possibly provide a rate of interest on the balances. A financial institution would service the payment and settlement of the transaction.

Detailed Description

A Numerical Example

5 UKCorp inputs a desire to hold the upside exposure on ABC Corp for a system defined period of time. JPCorp takes the opposite view on ABC Corp. Both companies connect through the Internet and the computer system efficiently matches UKCorp and JPCorp. Both companies have available funds to ensure the security of the position with each other. This can be constructed similar to a margin position in which a percentage of the value of
10 the equity is placed on account and is, at all times, the maximum amount that either side may benefit from the transaction.

Assumptions:

1. ABC Corp stock price is \$200.00 at time "t"
- 15 2. Interest is expressed in 100 board lots or 10,000 shares
3. Margin is calculated at 20 %, so that to get exposure to 10,000 shares requires 20% of \$2M, or \$400,000.
4. For this example, foreign exchange rates are constant.
5. UKCorp is seeking synthetic upside; JPCorp is seeking synthetic
20 downside.
6. Deposits receive a rate of interest (r) for the duration they are held.
7. UKCorp and JPCorp each deposit \$400,000 to a financial institution partner(s) to hold in escrow.
8. The stock price falls from to \$190.00 at time "t+1" on expiry.

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On final payment and settlement, UKCorp would be debited $10,000 * \$10.00$ or \$100,000 USD plus a nominal transaction fee and JPCorp would be credited $10,000 * \$10.00$ or \$100,000 USD less a nominal transaction fee. Both parties would receive interest on their deposit at the rate of (r) for the period of the deposit. A central depository executes the
30 payment and settlement instructions, and debits/credits the funds from/to the customer

accounts. Settlement is affected at a pre-set time and the value that changes hands is the differential between the cash price at initiation and the cash price on the value date.

5 This implementation of the invention has the effect of providing the characteristics of a call/put option without the associated costs of a call/put option. This embodiment of the invention allows short term hedging at a reduced cost and allows positions to be established for securities, which, for any number of reasons, may otherwise be unattainable.

10 This implementation has the effect of providing a "marginable" security without the inherent and unlimited risks of a margined position.

This implementation also has the effect of changing the dynamic of investment procurement. Short term, speculative positions may be undertaken quickly and inexpensively; however, the value of the exposure is limited to the appetite of the counterparty to the transaction. This invention may, for that reason, be an attractive
15 alternative to the short sale and "day trading". The long term investor, seeking long term exposure, in excess of the exposure which may be garnered from the counterparty to the transaction, would maintain an appetite for the physical securities and the various economic benefits associated with actual ownership – voting rights, dividends,
20 management input, etc.

It is envisaged that the computer-based system will be internet-based. Transactions will be executed when deposits representing sufficient margin are "on account" to ensure customer confidence regarding payment and settlement. Some form of penalty may be
25 levied by the system from one party to another for early discharge. The maximum exposure is the value of the deposit as it pertains to each transaction.

It is envisaged that the foreign exchange component of the system may be executed in any number of ways. The counterparties may elect to peg the foreign exchange rates when they
30 enter into the transaction; they may wish to bear the foreign exchange risk as it pertains to

the trade. It is envisaged that the computer system will be capable of marking the transaction to market or, simply tracking the transaction, in terms of security pricing, foreign exchange, and/or any other possible exposures. For example, UKCorp and JPCorp enter into an offsetting arrangement facilitated by the computer-based system. As a function of this transaction, both parties agree for early “automatic discharge” on the total position as it pertains to the underlying security and the foreign exchange. Automatic discharge occurs when certain thresholds or trigger points are reached in the total underlying security position, defined as the combination of security price, the foreign exchange price and/or any other possible exposure that can materially alter the value of the total position. These price fluctuations may occur against a base currency or against the counter currency (presumably the latter). Assume that the security price remains unchanged. However, the domestic currency of the security moves unfavourably against the domestic currency of the customer. When the trigger point is reached, the automatic discharge can be executed, providing for the customer a substantial “safety net” to which he does not typically have access today.

It is envisaged that the system will allow for security bundling or security baskets i.e. transactions based upon an indexed basket of securities. It is also presumed to fill a necessary liquidity and hedging role for indices, which do not have the full complement of a cash index, index options, and index futures.

Payment & Settlement

At the completion of any transaction, “Payment & Settlement” is a fundamental requirement not only to finalize the transaction through appropriate debit and credit, but to ensure credibility through timely fulfillment. It is envisaged that payment and settlement can occur in cash or through the physical delivery of the actual securities by the financial partner at the choice of the customer. It is envisaged that physical delivery of securities may

occur "in trust" for the customer as delivery is presently effected by financial institutions today.

This embodiment of the invention will allow the customer to synthesize a position, which he currently may be unable to establish in the formal markets, due to the following:

1. Size considerations – A small participant is not likely to procure less than a prescribed minimum number of securities as defined by his broker or agent. A large participant may not be able to reduce his exposure without a substantial cost and/or market impact.
2. Foreign Exchange considerations – inability to deal with foreign exchange volatility/risk and an inability to effectively manage the positions without a great deal of active participation.
3. Availability of the security – many securities have no liquidity, no options or futures, no non-domestic accessibility.
4. Availability of effective hedge positions – many securities require substantial cost maintenance to provide hedging of one form or another.

This system is envisaged to have an Internet based user interface; a transactions requirements interface; a matching interface and a back office report and database management interface. Illustrated in the attached Figure is a schematic of a possible system architecture for an embodiment.

Claims

1. A computer based system enabling a party and a counter-party to take a financial position in relation to a financial product, comprising the following:
- 5 (a) a first database recording the amount P of a deposit of funds from a party wishing to benefit if the value of the financial product rises over time;
- (b) a second database recording the amount CP of a deposit of funds from a counter-party wishing to benefit if the value of the same financial product falls over time;
- (c) a computer program operable to:
- 10 (i) identify whether the party and counter-party have potentially reciprocal requirements in a bi-lateral match or as part of a multi-lateral match; and
- (ii) calculate the actual change in value of the financial product until a pre-defined trigger event is reached so that (1) if the value has increased, then the party can be returned its amount P, together with an additional amount calculated
- 15 by the program and related to the amount P and the increase in value, and the counterparty can be returned its amount CP, less the additional amount paid to the party; and (2) if the value has decreased, then the counter party can be returned its amount CP, together with an additional amount calculated by the program and
- 20 related to the amount CP and the decrease in value, and the party can be returned its amount P, less the additional amount paid to the counterparty.
2. The system of Claim 1 in which the additional amount related to the amount X is
- 25 approximately that amount which would have been earned had the amount X in fact been used to purchase the financial product, including any applicable margin.
3. The system of Claim 2 in which the amounts returned to the party and counterparty are each reduced by a transaction fee.

4. The system of Claim 1 in which the financial product is a stock or share or a basket of stocks or shares.
5. The system any preceding Claim in which the party and counterparty transact with a central server over the Internet.
6. The system of any preceding Claim in which the trigger event is one of the following or relates to one of the following:
- (a) the elapse of a pre-defined time period;
 - 10 (b) price of the financial product;
 - (c) foreign exchange price.
7. The system of any preceding Claim in which the counter-party is comprised of several counter-parties, with deposits that collectively amount to X.
- 15 8. A synthetic financial product, being the contractual right or product provided to a party in exchange for the deposit of funds.
9. a method enabling a party and a counter-party to take a financial position in relation to a financial product, comprising the following steps:
- 20 (a) a party wishing to benefit if the value of the financial product rises over time deposits funds of amount P with an institution;
 - (b) a counter-party wishing to benefit if the value of the same financial product falls over time deposits funds of amount CP with an institution;
 - 25 (c) the party and counter-party are identified by a computer based matching system as having potentially reciprocal requirements relating to an amount X;
 - (d) the actual change in value of the financial product until a pre-defined trigger event is reached is measured so that (i) if the value has increased, then the party is returned its amount P, together with an additional amount related to the amount X and the increase in value, and the counterparty is returned its amount CP, less the additional amount paid to
 - 30

the party; and (ii) if the value has decreased, then the counter party is returned its amount CP, together with an additional amount related to the amount X and the decrease in value, and the party is returned its amount P, less the additional amount paid to the counterparty.

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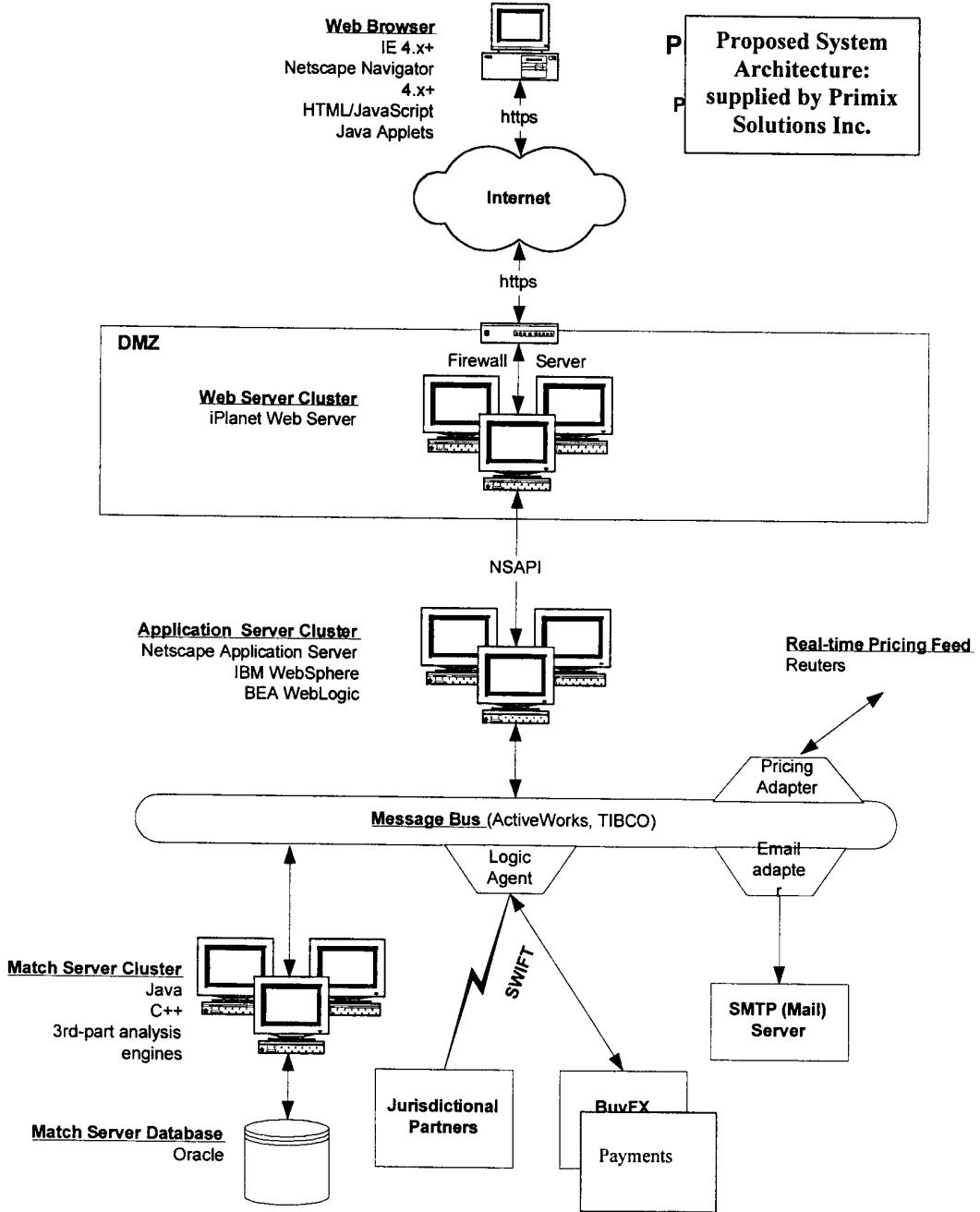


Figure 1