

## **Dimensions of the Evolution of Stock Exchanges at International Level**

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### **Abstract**

*Commodities and stock exchanges operate in a dynamic and competitive environment, due to the globalization on economic activity. Individual and institutional investors wish to derive the maximum benefit from financial markets using speculation and hedging operations. In order to gain much, investors are interested on international markets because they try to reduce the risk through portfolio diversification or to have access to innovative products launched by foreign stock exchanges. In order to meet their clients demand, the stock exchanges are in a development process, characterized by mergers and acquisitions and innovation of financial products.*

**Key words:** *stock exchanges, innovation, integration, and consolidation*

### **National and Cross-Border Mergers and Acquisitions**

The mergers and acquisitions take place at national level but also between exchanges from different countries. In Germany, Berlin Borse merged with Bremen Stock Exchange and the Hamburg Hanseatic Stock Exchange and the Lower Saxony Stock Market at Hanover merged and formed BOAG Borsen AG. In august 2002, Athens Stock Exchange and Athens Derivative Exchange was transformed in Athens Exchange. This process of national consolidation is available also in Spain, where a new holding company was created and comprise all the Spanish markets under the name of Bolsas y Mercados Espanoles [3]. In Romania, in 2005, Bucharest Stock Exchange took over the OTC market – RASDAQ and for this year, there is prepared the merger with Financial and Commodity Exchange from Sibiu. So, the consolidation process is a reality in developed and developing countries, the reason being the necessity to establish strong markets that could be able to compete with American exchanges. The mergers and acquisitions focuses not only on stock and commodity exchanges but also between exchanges and over the counter markets. Chicago Mercantile Exchange bought Swapstream, the market-leading multilateral electronic trading platform for interest rate swaps. Swapstream will operate as a wholly owned subsidiary of CME and will remain based in London.

This process of integration of stock exchanges is reinforced by the introduction of euro. Using a single currency in European Union, the companies have increased their cross border securities business, but they must reduce the cost and complexity of international trading. So, the stock exchanges are obligated to meet the needs of their clients. In order to facilitate the securities

business on Europe, in 2000, exchanges from Paris, Bruxelles and Amsterdam merged and a new stock exchange was settled up – Euronext. But the process of development continues with the acquisition of London Financial and Futures Exchange (LIFFE) in January 2002 and acquisition of stock exchange from Lisbon in February 2002. From November 2004, there is a single trading platform for spot market and for derivatives transactions. In European Union, the legal harmonization is important aspect in the achieving of an integration securities market.

Developments of information and communication technology have influenced the consolidation of securities trading. In 2003, on the European continent, it was settled up an integrated trading platform, named EDX London with offer aces to London Stock Exchange, and exchanges from Stockholm, Copenhagen and Oslo. By this platform, the investors have access to over 150 type of futures and options contract on index and stocks. This initiative was launch by OMX AB and is based on concept of linked exchanges. In his way, the investors have a facile access to spot and derivatives markets using one brokerage company, which acts on a single order from its client.

## **The Innovation Process of Financial Products**

Traditionally, the commodities and stock exchange provides spot, futures and options markets for a broad range of products like coffee, cocoa, cotton, frozen concentrated orange juice, ethanol, metals, currency, interest rate and indexes. These products are used for speculation and hedging strategies. Because, the companies indetificated many factors of risk, the exchanges try to provide adequate products for different type of investors. Listed companies can enhance their image in the eyes of investors by hedging their exposure to risk.

Chicago Mercantile Exchange has an innovative activity and there were launched Alternative Investment Products (futures and over the counter products). This products group includes weather derivatives, economic derivatives and housing futures and options. Euronext and others American exchanges try to launch similar products.

The weather can have a major economic impact on corporate cash flows, costs and earnings. The temperature swings; rainfall, snow or sunshine can affect, in different ways, companies from many industries such as farming, constructions, energy, foods, clothing, airlines, leisure or travel. It is estimated that nearly 20 percent of the U.S. economy is directly affected by the weather. In 1998, former Commerce Secretary William Daley stated that “Weather is not just an environmental issue; it is a major economic factor. At least \$1 trillion of our economy is weather-sensitive.”

In order to help companies to reduce the weather risk, weather derivatives (swap, cap, floor, collar, futures and options) are available. The first transaction using weather derivatives was made in 1997 on over the counter market, and the market has been growing ever since. In 1998 the market was estimated at \$500 million, more recently the market has grown to more than \$5 billion and has a better liquidity [1]. In Europe, the market is smaller than in the USA, but growth prospects are excellent, owing to the liberalization of energy markets and a growing appreciation of weather-related issues [8]. The development of the European market for weather products are sustained by banks and insurance companies. In addition, the over-the-counter market for weather derivatives in Europe has expanded sharply.

These derivatives are usually trading on over the counter market, but exchanges have standardized the contracts and now they are actively traded specially in USA. The first weather contract was launch in 1999 by Chicago Mercantile Exchange (CME) using the temperature from American cities. The interest of European investors determined the launching of contracts for five European cities. At 20 June 2005, the weather contracts are for 18 American cities, 9 European cities and 2 Japanese cities (Tokyo and Osaka) [8]. In fact, the weather contract traded

in exchanges are futures and options contracts that used as underlying assets different indexes for temperature, wind, rain or snow falls. For example, summer weather is measured in terms of temperatures that exceed a base of 65 degrees Fahrenheit (18 degrees Celsius in Europe) and referenced to a Cooling Degree Day (CDD) Index. Winter weather is measured in terms of how much temperatures are below 65 degrees and referenced to a Heating Degree Day (HDD) Index. Frost and snowfall are similarly measured by CME Frost and CME Snowfall Indexes.

At CME, the trade of these contracts have increased dramatically, notional value of CME Weather products in 2004 was \$2.2 billion, and grew nine-fold to \$22 billion through September 2005, with volume of 630,000 contracts traded. CME offers also Frost Day contracts (futures and options) only for Amsterdam. The underlying asset is the number of days that frost is recorded on weekdays from November through March, and can be traded in monthly or seasonal contracts. All these contracts are cash settled.

The weather derivatives are also different from “standard” derivatives. The underlying asset is not traded in a spot market. Second, unlike financial derivatives, which are useful for price hedging but not quantity hedging, weather derivatives are useful for quantity hedging but not necessarily for price hedging. Third, although liquidity in weather derivative markets has improved, it will likely never be as good as in traditional commodity markets [1]

These contracts have similarities with weather insurance, but weather derivatives cover low-risk, high probability events, while weather insurance covers high-risk and low-probability events. Weather derivatives are non-catastrophic, while weather insurances are catastrophic. In addition, in case of weather derivatives there is no need to file a claim or prove damages.

These products are use for hedging and speculation. Hedgers include companies in a wide range of industries, whose profits or budgets can be affected by weather, including: energy companies construction firms, hotels, travel, sports and entertainment companies and governments and governmental agencies. The weather derivatives could be use for speculation and diversification of portfolios because the revenue from these contracts is not highly correlated with revenues of other financial products.

CME Weather derivatives are available in monthly and seasonal strip contracts. The seasonal strip contracts enable customers to choose from two to six months in a customized “season.” The months must be consecutive and within the same general season – November through April for winter, and May through October for summer.

Homes are the major asset for investment for many people and the housing industry creates jobs and determined investments in related sectors. The US housing market is valued at \$ 21,6 trillion, being larger than the \$15 trillion equities market. The movement of process and the importance of this industry have led to creation of derivatives using index of real estate price. The idea of creation of such an index belong to Case, Shiller and Weiss which articulated the concept of real estate futures in 1992 ... “futures and options markets should be established that are cash settled based on indices of real estate prices, and there should be separate markets for each of the major geographic regions ...at present no real estate futures contract exists in the world; nor are there good substitutes for such markets.” [2]

These products are usually used for hedging, but they can be base for speculative strategies. The users could be major developers and builders, banks, mortgage lenders, home suppliers, hedge funds, commodity trading advisors (CTAs) and others.

CME Housing futures and options are cash-settled and have as underlying asset a index of U.S. real estate prices, calculated on the base of prices from specific markets in the following 10 major U.S. cities: Boston, Miami, New York, San Diego, San Francisco, Washington, D.C., Chicago, Denver, Las Vegas and Los Angeles, named also metropolitan statistical areas

(MSAs). In addition, CME lists futures and options based upon a composite index of the ten MSAs.

The S&P/Case-Shiller Home Price Indices is used as underlying asset for CME housing contracts. It is developed by Karl E. Case and Robert J. Shiller (in 2000) and it is recognized as the most reliable and authoritative measures of residential movements price [4]. These indices are calculated monthly, taking in account the movement of real estate price.

Euronext followed this initiative in 2004. Euronext and Institute de l'Épargne Immobilière et Foncière (IEIF) have launched the Euronext IEIF "SIIC France" index that is based on listed real-estate investment companies that have opted for a new tax regime known as SIIC2.[8]

CME have also launched Economic Derivatives that include futures, options and forward contracts on key USA and European economic indicators such as:

- US nonfarm payrolls (published by the US Department of Labor, Bureau of Labor Statistics);
- The Institute of Supply Management's Purchasing Manager Index (an index constructed by surveying more than 400 purchasing agents on recent trends in their orders, production, employment, delivery speeds, inventories and prices for purchased products);
- weekly initial jobless claims (published by the US Department of Labor);
- retail sales (excluding automobile sales and published by the US Department of Commerce);
- European inflation (measured by Eurozone Harmonized Index of Consumer Prices excluding tobacco, as published by Eurostat);
- the international trade balance (published by the US Department of Commerce);
- Gross Domestic Product (published by the US Department of Commerce);
- core CPI (a measure of the average price level of a fixed basket of goods and services purchased by consumers, excluding food and energy prices).

In fact, CME Eurozone HICP and CPI Futures are inflation-linked products. So, in this field, CME has not made an innovation, because the market for these products was set up in Europe. European banks have created many types of inflation-linked notes and the inflation-linked derivatives are traded on over the counter markets, especially through swap contracts. In fact, the derivatives market has grown to such an extent that it is said to be growing faster than the physical equivalent (namely the inflation linked cash bond market).

Others stock and commodities exchanges like Chicago Board Options Exchange (CBOE) or American Exchange (AMEX) have had different initiatives. So, in 1990, CBOE launched LEAPS - Long-term Equity Anticipation Securities (LEAPS). These products are long-term option contracts that allow investors to establish positions that can be maintained for a period of up to three years. At this exchange, LEAPS are available for stock and index. Others products are FLEX - FLEXible EXchange Options that are customized options on equity or index. The main characteristic is that the investor has the possibility to customize key contract terms, like exercise prices, exercise styles and expiration dates. [6]

American Exchange is a pioneer in the creation of exchange traded funds (ETFs) and the global market leader, with more than 100 listed ETFs. Exchange traded fund (ETF) is a basket of securities such as national and international stocks, corporate bonds and treasury bonds. [5] There are many types of ETFs based on

- shares issues by large-capitalization or small-capitalization companies,
- stocks of European, American or Japanese companies,
- shares of companies that activated in a specific domain like healthcare, energy,
- long-term Treasury bonds and corporate bonds.

The main advantage of these securities is the low risk because of the diversification of portfolio. The ETFs can be purchased on margin or sold short like shares or bonds.

To meet the investors' need, portfolio diversification, AMEX created HOLDRs (HOLDing Company Depository Receipts) that represent an investor's ownership in the common stock or American depository receipts of specified companies in a particular industry, sector or group.

In order to eliminate the disadvantages of equity and bond, AMEX launched equity income hybrid securities EIHSs, named also income deposit securities IDSs or equity income securities EISs. EIHS represent shares of a single company's common stock and notes combined into one security that trades like a stock. These securities pay revenue the holders on a monthly or quarterly basis composed by interest of the notes and dividend, if any, of the common stock. In fact, these securities are created by a depository trust corporation that combines them to create EIHSs. After that, the company offers the EIHSs to investors through an initial public offering. An EIHS, for example, may consist of one share valued at \$10, plus a note with \$6 principal amount; the notional value of EIHS is \$16.

## Conclusions

The competition among commodities and stock exchanges has major benefits for investors. In order to be more efficient, exchanges try to initiate a process of consolidation through mergers and acquisitions at national and regional level. Because the transactions on the over the counter markets are more developed, the exchanges bought such institutions and they have inspired in the process of launching investment products. To facilitate the transactions, nowadays, contracts like swap are available on exchanges too.

To meet the investors 'needs – portfolio diversification and risk cut – many exchanges created structured products like HOLDing Company Depository Receipts or exchange traded funds.

Specialists from American and European Exchanges have tried to launch standardized products for unstandardized aspects like weather or economic indicators or real estate prices. All these new contracts are used primarily for hedging strategies but also for speculative operations. So, exchanges try to compete with other financial intermediates like insurance companies.

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## Considerații privind evoluția burselor la nivel mondial

### **Rezumat**

*Bursele de mărfuri și de valori operează într-un mediu dinamic și competitiv, fapt datorat globalizării activității economice. Investitorii individuali și instituționali doresc să-și maximizeze profiturile înregistrate pe piețele financiare, utilizând în acest sens operații speculative și de hedging. În dorința de a câștiga mai mult, investitorii sunt interesați de piețe internaționale în încercarea de a reduce riscurile prin diversificarea portofoliilor și accesul la produse noi lansate de bursele străine. Pentru a veni în întâmpinarea clienților lor, bursele se află într-un proces de dezvoltare, caracterizat prin fuziuni și achiziții dar și inovarea de produse financiare.*