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"INSIDER TRADING: A STUDY FROM U.S. ORIGINS TO A COMPARISON WITH THE EUROPEAN DISCIPLINE"

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Abstract

The following thesis aims to analyse the issue of misuse of insider information that could give rise to contrasting phenomenon of insider trading. Subsequently, it is intended to develop a comparative study of the different legislations between the two largest areas of interest: the United States and the European Union. This analysis will be carried out from both a legal and an economic point of view by pursuing these two areas of study in parallel.

Introduction

Starting from the fundamental concept of information, which plays a very important role in the world of trading, the paper then aims to study how information is processed, distributed, and integrated into the price of securities and then to understand what effects it has on trading.

Over time, there have been several developments in the study of the role of information, thanks in part to the evolution of technological progress, which has radically changed the way information is distributed.

Underlying many of the most recent theories is one of the most famous and important studies in the history of financial markets: “Efficient Capital Market Hypothesis”, elaborated by Eugene Fama, according to which “A market in which prices always “fully reflect” available information is called “efficient” (Fama, 1970).

In the first part of this work, the intention is to analyse not only how this important theory was born and developed, but also the currents of thought opposed to ECMH.

Once the structure of financial markets and the role that information plays in them have been reconstructed, it is important to investigate the historical origins of the insider trading phenomenon and the subsequent emergence of regulation in this area.
The U.S. experience with insider trading is what led to the development of increasingly precise and entrenched trading legislation. It subsequently also inspired legislative models in Europe and around the world, thus becoming a starting point.
Chapter 2, in fact, aims to cover the main stages of the U.S. legislative process, which have led to the construction of the current regulatory framework governing the world of trading and the issue of insider trading: from the establishment of the Securities and Exchange Commission (SEC) and the enactment of the "Securities and Exchange Act" 1934 (SEA 34), up to the subsequent reforms of section 10b5, with the analysis of some important cases.
Having analysed the path of the U.S. discipline, it is possible to fully understand the path of one of the other major areas where financial markets are more rooted, Europe, by developing an inevitable comparison in Chapter 3.
In Europe, various Community directives have described the legislative process: Directive 79/279 (for listing requirements and information required by the market), Directive 80/390 and Directive 89/298 (for further training obligations), Directive 89/592/CEE (on the coordination of regulations concerning transactions carried out by persons in possession of inside information). The long process of insider trading has recently been enriched with the approval of Market Abuse Regulation 596/2014 (MAR) and Market Abuse Directive 2014/57 (MADII). Finally, a look is taken at the Italian path on insider trading and the role Consob plays as a supervisory authority.
Finally, Chapter 4 sets out to analyse an interesting topic, bringing forward a discussion regarding the extent to which the regulatory framework on insider trading protects outside investors from this illicit practice.

Chapter 1 - The function of information and the development of financial theories

1.1 The role of information in the financial markets

Financial markets live on information and the players within them, who may be investors, brokers or other operators, make their buying or selling decisions on the basis of the information at their disposal. On the other hand, prices are nothing more than information expressed with numbers, and it is precisely on prices that most of the actions taken in trading are based. The role of information and how it intrudes into financial markets is so fundamental that it is also possible to consider information itself as an actor in the trading world.

But how does this information appear to the human eye? The common imagery of today's stock exchange is represented by a series of displays filled with an infinity of numbers and symbols. Micky Lee translates this expectation through a very clear image: "*Inside the Nasdaq Building in Times Square in New York is a broadcast studio whose curved wall is lined up with dozens of electronic screens, each of them displaying the 'real time' trading price of a major stock or commodity. The centre of the screen shows the most prominent information: the change in price and percentage. A price in green means upward movement and a price in red means downward. The less prominent information occupies the bottom of the screen: the trading price is on the left; the volume traded is on the right*."[1]

Before we get to all this, the story tells us that the most important information was generated by so-called stock tickers and "*men in top hats gathered around a machine that made a 'tick, tick, tick' sound when it printed out stock prices on a long strip of paper unwound from a wheel inside the machine*." (Lee, 2019, p. 93).

From this, the term tick still represents the minimum upward or downward movement in the price of a security and it is still the standard upon which the price of a security may fluctuate.

[1] Lee, M. (2019) Bubbles and machines: gender, information and financial crises. London: University of Westminster Press.

The first stock ticker was invented in 1867, so even before this, information about the prices of shares traded in the financial market travelled thanks to 'runners', carrying slips of paper with the latest transactions and prices and the corresponding buy or sell orders written on them for the brokers.

Without forgetting that information in financial markets is characterised by brevity and can therefore be useless within a 'tick', the adoption of the ticker could certainly make a difference as it shortened the time of the runner's 'run', in addition to the fact that the different speeds of the runners and human errors led to price inaccuracy and time differentiation. However, one of the great limitations of the ticker was to focus information on the performance of individual stock rather than the market as a whole.[2]

This is precisely one of the reasons why Dow Jones Co. did not immediately adopt the ticker, because the founders were less interested in reporting individual stock prices than in describing how the market was in order to predict what the market would be. In order to pursue this objective, the daily dissemination of the Dow Jones Co. bulletins at the close of the Wall Street exchange, initially through hand-written pages carried by the runners and then through the Wall Street Journal (1889), was an attempt to prepare information in order to study future market trends.

This is where a first distinction between 'hard' and 'soft' information starts to emerge, where the former are considered accurate information due to knowledge of a given fact, the latter are based on predictions or estimates derived from a given piece of information, and are therefore considered unreliable.

After the press, telephone networks became the essential tool for negotiating and exchanging information. Indeed, the telephone became the primary means of placing orders through brokers, in addition to the fact that it enabled Over The Counter (OTC) trading to be competitive with that which took place in the markets.[3]

Subsequently the emergence of the first electronic networks, at the end of the 1970s, made it possible to compare all the offers displayed on the main exchanges. Up to the

[2] Neal, L. (2000) The Great Game: The Emergence of Wall Street as a World Power 1653–2000. By John Steel Gordon. New York: Scribner, 1999. The Journal of economic history. [Online] 60 (3), 912–913.

[3] Seligman, J. (1995) The Obsolescence of Wall Street: A Contextual Approach to the Evolving Structure of Federal Securities Regulation. Michigan law review. [Online] 93 (4), 649–702.

usage of fibre optic and computer, which initially acted as simple trade facilitators and later as decision makers.[4]

Development and technological progress completely revolutionised the network of financial news reporting, and in particular "*Technologies had been invented to narrow spatiotemporal differentiation, yet they created new temporalities and spatialities instead of eliminating it (...). The co-existence of multiple technologies created markets in which different qualities of financial information circulated*." (Lee, 2019, pp. 93-106).

Therefore, when we now speak of markets, we should not think of "physical places", but rather of computerised trading platforms or electronic information circuits, specialised by type of financial instrument and/or issuer, to which financial intermediaries and other persons authorised to operate on them have access.

All this certainly made it possible to create interconnections between markets around the world but, in many ways, it has depersonalised negotiations.

In the Article 4 "*Definitions*" of the Directive 2014/65/EU[5] it is possible to read the definition of algorithmic trading:

> "(...) *trading in financial instruments where a computer algorithm automatically determines individual parameters of orders such as whether to initiate the order, the timing, price or quantity of the order or how to manage the order after its submission,* ***with limited or no human intervention****, and does not include any system that is only used for the purpose of routing orders to one or more trading venues or for the processing of orders involving no determination of any trading parameters or for the confirmation of orders or the post-trade processing of executed transactions*" (...); or even the definition of high-frequency algorithmic trading technique that "*means an algorithmic trading technique characterised by:*

[4] Lupoi, A. (2020) La struttura del mercato ed i riflessi giuridici. CEDAM. p. 8.

[5] The Directive 2014/65/EU is also referred to as MiFID II, meaning Markets in Financial Instruments and amends Directive 2002/92/EC and Directive 2011/61/EU

(a) infrastructure intended to minimise network and other types of latencies, including at least one of the following facilities for algorithmic order entry: co-location, proximity hosting or high-speed direct electronic access;
(b) system-determination of order initiation, generation, routing or execution ***without human intervention*** *for individual trades or orders; and*
(c) high message intraday rates which constitute orders, quotes or cancellations."

An example of algorithmic trading is represented by High-Frequency-Trading (HTF), the success of which derives mainly from the ability of electronic models to simultaneously read, process and capitalise on trading opportunities derived from large volumes of intraday data much faster than human traders. It is characterized by the use of computer algorithms to analyse quote data and detect and exploit trading opportunities. This system differs from other types of algorithmic trading in a matter of degree and trading conventions. In fact, HFT firms usually liquidate their entire portfolios on a daily basis rather than taking positions overnight. As a result of liquidating all their positions before the end of each trading day, HFT firms do not tend to take risk positions for substantial amounts of capital, or do not tend to use high levels of leverage. In fact, the estimated average net profit margin for high-frequency traders in the U.S. stock market is only about 0.1 cents per share traded, necessitating very rapid turnover.

The result of the adoption of all these technologies in trading is undoubtedly an increase in the amount of information available, but, as Peress (2005) also pointed out, "*finding relevant, quality information in this ocean of facts and commentary is a daunting task*".[6]

However, the fact that more information is available does not mean that all traders are equally well informed, as this depends on several factors, including the distribution of information or the cost of acquiring it. Actually the distribution of information among traders is a function of information costs and many familiar market institutions, such as investment banks, serve the function of reducing information costs, in order to facilitate

[6] Peress, J. (2005) Information vs. Entry Costs: What Explains U.S. Stock Market Evolution? Journal of financial and quantitative analysis.

the distribution. The information cost includes all activities undertaken by investors to improve their assessment of a security's performance.
Broadly speaking, it is possible to distinguish two macro types of traders: the traders that can form reliable opinions about whether instruments are fundamentally undervalued or overvalued, the so-called Informed traders, and those that do not know whether instruments are fundamentally undervalued or overvalued and cannot form reliable opinion about values, so for these reasons are called Uninformed traders (such as utilitarian traders or futile traders). The informed traders manage to acquire information and profit from it gaining by taking value away from the uninformed traders (or noise traders).

But besides differentiating the types of players in the trading world and influencing investors' decisions, why does information play such an important role in financial markets?

1.2 The evolution of Efficient Capital Market Hypothesis developed by Eugene Fama

Starting from one of the studies that has most revolutionised the way we look at markets and at their functionality, it can already be seen that information has an effect on both the prices of securities and the efficiency of the markets themselves.
This is why firstly we need to talk about the role of information to subsequently understand how financial markets work.
This theory, the Efficient Capital Market Hypothesis (subsequently referred to as ECMH), has been the subject of numerous subsequent studies, some of which have taken it as a basis for developing further theories, while others have tried to disprove it. However, as Professor Jensen stated: "*there is no other proposition in economics which has more empirical evidence supporting it than the efficient markets hypothesis*."[7]

Anyway, it is necessary to understand how the winner of the Nobel Prize for Economics in 2013 came to develop the ECMH.[8]

[7] Jensen, M. C. (1978) Some Anomalous Evidence Regarding Market Efficiency. Journal of Financial Economics. Vol. 6. 95-101
[8] Sewell, M. (2011) History of the Efficient Market Hypothesis. UCL Research Note RN/11/04

Eugene Fama trained his valuable economic intellect at the University of Chicago and through the writing of his thesis he was inspired by the two professors who followed him and worked with him, Merton Miller and Harry Roberts. Thereafter he started working on the general theme of how prices incorporate new information in 1962, leading to the ECMH. The other branch he focused on is what we call the asset pricing models, starting to think about how risk is measured and what is the relationship between risk and expected return. These are the two main branches of asset pricing that Eugene Fama has been working on for the last 53 years.[9]

With the article *Behavior Walks in Stock Market Prices*, in the Journal of Business of 1965[10], Eugene Fama defined the efficient market for the first time, while in the same year, in the Industrial Management Review, Samuelson developed the first formal economic argument for efficient markets as well with the *Proof that properly anticipated prices fluctuate randomly*[11]. In a nutshell, Samuelson's hypothesis stated that price changes would be not forecastable whether the market is efficient, or rather, whether prices reflect all the information and expectations of the market. Ensuing that prices fluctuate randomly if news were announced randomly.

In 1970, Eugene Fama published the first complete paper of his research, *Efficient Capital Markets: A review of theory and empirical work*, in accordance to which (...) *security prices at any time "fully reflect" all available information. A market in which prices always "fully reflect" available information is called "efficient."*[12].

Like many mathematical and economic theories, the ECMH is also based on some important assumptions in order to determine sufficient conditions for capital market efficiency.

These assumptions are listed below:

I. There are a large number of investors interecting in the market for profit.

II. There are no transactions costs in trading securities.

[9] Klein, D. B. (2018) Eugene F. Fama. Econ journal watch. 15 (3), 365–.

[10] Fama, E. (1965) The Behavior of Stock-Market Prices. The Journal of Business, 38(1), 34–105. http://www.jstor.org/stable/2350752

[11] Samuelson, P. A. (1965), Proof that properly anticipated prices fluctuate randomly, Industrial Management Review 6(2), 41–49.

[12] Fama, E. (1970) Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of finance New York. [Online] 25 (2), 383–417.

III. All available information can be used at no cost by all actors in the market.

IV. All agree on the implications of current information for the current price and distributions of future prices of each security.

Certainly in a market with these characteristics, it can be argued that a security fully reflects all relevant information. However and fortunately these conditions are sufficient for market efficiency, but not necessary, as they hardly correspond to a market we are likely to encounter.

Eugene Fama, also thanks also to Samuelson's work, took into consideration the fact that available information corresponds to unpredictable information; as a consequence, stock prices (which change on the basis of new information) are unpredictable as well.
At this point it makes sense to relate the efficient market hypothesis to the concept of random walk (which was widely studied in the past, even before Fama's paper), according to which a price series, where all subsequent price changes, represent random departures from previous prices.[13]

Consequently, neither past analysis, which is the study of past stock prices in an attempt to predict future prices, nor even fundamental analysis, which is the analysis of financial information such as company earnings and asset values to help investors select "undervalued" stocks, would enable an investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individual stocks, at least not with comparable risk.
Therefore, it can be said that Fama implemented the Random walk theory by creating a mathematical model of price formation: the Expected Return (or Fair Game) Model. According to the model the expected value definitely depends on today's security price, on the rate of returns for security in the future and on the set of information reflected in the price at the initial time period.

[13] Delcey, T. (2017) Efficient Market Hypothesis, Eugene Fama and Paul Samuelson: A reevaluation. hal-01618347v1

1.2.1 Different forms of Market Efficiency

During his argumentation at a conference on "Stock Market Price Behaviour", Fama stressed that market efficiency is first and foremost about how information is incorporated into the prices of securities, thus making a distinction between three different forms of market efficiency.

According to the weak-form efficiency, the security prices incorporate all information contained in past price changes. This form of efficiency is not in line with Random walk theory, as mentioned above.

This implies that no investor can devise a trading rule based solely on past price performance to obtain abnormal returns, since from current prices the investor is unable to receive any information about future prices. Cross (1973)[14] and French (1980)[15] provided an explanation of this form of efficiency by analysis of the so-called day of the week effect. In fact, a pattern of trends in stock returns has been found to exist, whereby these returns are correlated with the particular day of the week. The last trading days of the week, particularly Friday, are characterized by positive and substantially positive returns, while Monday, the first trading day of the week, differs by even producing negative returns. Putting the focus on trading strategies, which are fundamental for every investor, and following this reasoning, negative returns are expected for securities bought on Friday with the aim of selling them on Monday when the markets open.

Several studies have proven the existence of the weak form of efficiency in financial markets: Dickinson and Muragu (1994) studied market efficiency in the Nairobi Stock Exchange, concluding that a small market, such as the Nairobi Stock Exchange, provides empirical results consistent with weak form efficiency; Groenewold and Kang (1993) conducted tests of weak and semi-strong efficiency of the Australian stock market using aggregate stock price indexes and found the data consistent with weak form efficiency.[16]

[14] Cross, F. (1973) The Behavior of Stock Prices on Fridays and Mondays. Financial analysts journal. [Online] 29 (6), 67–69.

[15] French, K. (1980) Stock returns and week-end effect. Journal of financial economics.

[16] Poshakwale, S. (1996) Evidence on Weak Form Efficiency and Day of the Week Effect in the Indian Stock Market. Finance India. 10 (3), 605-616

The semistrong-form efficiency asserts that, in addition to information on past price trends, prices also reflect all publicly available information, that includes all public news, past prices and volumes in all securities and contracts. In this situation, it seems to be sub-understood that there is no possibility for traders to gain extra-returns. Furthermore, it is assumed that all traders are equally well informed about the various securities. In other words, any search for fundamental value to compare with market price to determine whether a stock is undervalued or overvalued is wrong. This is because either there are no cheap or expensive stocks, or they cannot be identified from public information.[17]

According to Findlay and Williams 's study (2000), in a semi-strongly efficient market, an investor who has no private information would engage in reasonable behavior if he or she decided to "*free ride*" the market analysis without conducting any independent analysis and simply accept the offered price.[18]

The empirical evidence suggests that markets generally are semistrong-form efficient with respect to easily obtained and easily interpreted public information.

Strong-form efficiency, instead, provides for the absorption in prices also of private information inside companies, as well as the absorption of past information and public ones. This type of information may be held by so-called insiders of companies, such as market analysts, who should get a higher return on their portfolios than the average return of other investors (even if this is not always true). At the same time, such information could reach the ears of other types of investors, thus giving rise to the phenomenon of insider trading.

Since informed traders can never profit in these types of efficient markets, the only strong-form efficient markets are those which trade instruments for which values are commonly known (it is possible to say that such markets are rarely interesting).

However, Chau and Vayanos (2008) developed an analysis in sharp contrast to the previous literature, showing that although the market converges to strong-form

[17] Thompson, J. R. et al. (2003) Models for investors in real world markets. New York: John Wiley & Sons, Inc. 107-144

[18] Findlay, M. C. & Williams, E. E. (2000) A Fresh Look at the Efficient Market Hypothesis: How the Intellectual History of Finance Encouraged a Real 'Fraud-on-The-Market'. Journal of post Keynesian economics. [Online] 23 (2), 181–199.

efficiency, insider returns do not converge to zero. This implies that although markets are close to efficiency, they can offer significant returns to information acquisition.[19]

The three traditional definitions of market efficiency only consider the degree of information and do not recognize that acquiring and acting on information is costly. However if we consider the market microstructure issues, it is more accurate to say that in an efficient market prices reflect all information that tarders can acquire and profitably trade upon.

In 1991 Eugene Fama published the second of his three review papers about this theory, in which the tests of return predictability for the weak-form efficiency were extended by taking into account not only past returns, but also other variables, such as the dividend-price ratio, earnings-price ratio, book-to-market ratio and different measures of the interest rates. This review showed an infinite number of correlations between the predictability of returns with past variables, but as he stated, the results obtained could be artificial.

Seven years later, Fama ended his work with the third review, ensuring that market efficiency survives the challenge from the literature on long-term return anomalies of under- and over-reactions to information.

1.3 Informational efficiency studies in favour of ECMH

After presenting Fama's main steps in developing the Efficient Capital Market Hypothesis, a step back to discover the deeper and more historical origins of this theory is necessary.

The step backwards to be taken is about a hundred years, up to 1900, when Bachelier began to hypothesise that the movement of stock prices followed a Brownian motion, the name is due to the discoveries of the botanist Robert Brown, who noticed the rapid oscillatory motion of a few pollen grains on the surface of the water.

As a mathematician, Bachelier was able to combine his numerical studies with economic interests and deduced that the mathematical expectation of a speculator is zero. In his PhD thesis *Théorie de la Spéculation* (1900) he also stated that the small

[19] Chau, M. & Vayanos, D. (2008) Strong-Form Efficiency with Monopolistic Insiders. The Review of financial studies. [Online] 21 (5), 2275–2306

fluctuations in price, over a short time interval, should be independent of the current value of the price, as well as they should be independent of past behaviour of the process.
The idea that the future stock price could not be predicted on the basis of past information would have been a bombshell, but Bachelier's work was too far ahead of its time and therefore went unnoticed, although it was nevertheless the starting point and reference point for many scholars such as Einstein, Samuelson and Karl Pearson.

In 1923, Keynes published the first formulation of the theory of futures contracts by stating, in short, that investors gained because of the risk bearing and not because they were able to predict better than the market what the future would show them.

Precisely due to the difficulty in testing Bachelier's thesis in practice, it was taken up by several researchers and, in particular, the idea was picked up 50 years later by a statistician, Maurice G. Kendall. By examining 22 UK stock and commodity price series, in 1953 Kendall[20] documented that they follow a random walk, and few years later this hypothesis was strengthened by the demonstration that returns were unpredictable in competitive markets with rational risk-neutral investors.

All the way to the long-awaited intervention by Fama outlined above, but after him the evolution on the issue of financial market efficiency did not stop, in fact other theories and clashes arose. For example, in 1980 Grossman and Stiglitz[21] shown that information, if acquired, is revealed by the equilibrium price but only partially because some noise traders render the supply of stocks random. Active investors use their private information to adjust their holdings of the index and cash relative to that of passive investors.

[20] Kendall, M. G. (1953) The analysis of economic time-series—Part I: Prices, Journal of the Royal Statistical Society. Series A (General) 116(1), 11–25.
[21] Grossman, S. J. & Stiglitz, J. E. (1980) On the Impossibility of Informationally Efficient Markets. The American economic review. 70 (3), 393–408.

1.3.1 A special relationship between agreements and disagreements: Fama & Samuelson

The 1965 is the year that links the two economists who have contributed to the development of ECMH, albeit through two independent paths and publications: Eugene Fama with *Behavior of Stock Market Prices* and with *Random Walk in Stock Market Price*; Paul Samuelson with *Proof that properly anticipated prices fluctuate randomly*.
As already known, Fama was the first to introduce the notion of efficient market, continuing, in a sense, to examine the two main conclusions of his PhD thesis, i.e., the probabilistic distribution of stock prices has a fat-tail and changes in stock prices are almost independent.
In the explanatory process of the concept of independence of price changes, Fama relies on the Random Walk theory, as explained above, as a good approximation and description of price behaviour in financial markets.
In addition to the notion of market efficiency, Eugene Fama talked about the concept of Intrinsic value, by asserting *"(...) actual prices at every point in time represent very good estimates of intrinsic values"*[22], representing it as the earning prospects of the company which in turn are related to economic and political factors.
So, summing up, according to Fama, an efficient capital market is a competitive market, where price converges to the fundamental value, explaining the random character of price.

On the other side, Samuelson also undertook the study and argued the random character of price variations, but the substantial difference lies in the probabilistic model used by the two economists. Indeed, Paul Samuelson suggested an alternative stochastic process: the Martingale model[23].
Samuelson, in his article, criticised the relation between competition and the Random Walk model used by Fama, by stating "[Random Walk], if it is one, is not particularly related to perfect competition or market anticipations." (Samuelson, 1965)[24].

[22] Fama, E. F. (1965) The Behavior of Stock-Market Prices. The Journal of business (Chicago, Ill.). [Online] 38 (1), 34–105.
[23] The martingale model will be introduced independently the same year by Mandelbrot (1965)
[24] Samuelson, P. A. (1965), Proof that properly anticipated prices fluctuate randomly, Industrial Management Review 6(2), 41–49

Therefore, while supporting the competition assumption, he rejected the relation with the Random Walk, by replacing it with the Martingale model and by focusing on the relation between future price and the spot price of an asset.
More in detail, according to Samuelson, if a sequence of price follows a martingale, thereby, the best estimation of tomorrow's price, based on the information available, is today's price. This representation respects the idea that the price is unforeseeable and especially the fact that the chartist analysis is useless.[25]

In conclusion, beside these methodological differences, the characterization of the investors' behavior by Fama and Samuelson are nearly the same: investors have a rational behavior and they are in competition.

1.4 Opponents and new currents of thought

Having set out the evolution of Efficient Capital Market Hypothesis together with the random walk theory, it is equally important to present the oppositions and criticisms of this line of thought, because as Eugene Fama himself said in an interview with the *Chicago Booth Review* on 30 January 2016: *It is a model, it is not entirely always true, but it is a good working model for most practical uses*[26].
Especially at the beginning of the 21st century, the intellectual dominance of the Efficient Market Hypothesis had become much less universal.
What is most criticised is the idea that stock markets are characterised by an absence of memory, while the hypothesis that the stock prices are at least partially predictable is beginning to be accepted by many economists and staticians.
As early as 1999, the work of Lo and MacKinlay was published. They found that short-term serial correlations are not zero and that there are "too many" successive movements in the same direction. This allowed them to reject the hypothesis that stock prices behave like true random walks.[27]

[25] Delcey, T. (2017) Efficient Market Hypothesis, Eugene Fama and Paul Samuelson: A reevaluation. hal-01618347v1
[26] Fama, E. and Thaler, R. H. (2016) Are Markets Efficient? Chicago Booth Review. Interviewed by Hal Weitzman
[27] Malkiel, B. G. (2003) The Efficient Market Hypothesis and Its Critics. The Journal of economic perspectives. [Online] 17 (1), 59–82.

Let's start with one of the first critics of the theory of efficient markets, defining Fama's theory "*elegant but incorrect*" and wanting to emphasise that this approach could no longer be defined as the only one traders should use for their investment choices. Benoit Mandelbrot is a mathematician best known as the inventor of fractal geometry which, when applied to economic and financial issues, led him to question some of the foundations of the theory of market efficiency and random walk.
Through econometric and statistical analyses, Mandelbrot, together with other researchers, identified a characteristic of long dependency between price changes in some time series of commodity prices, thus coming to counteract the statistical independence of price changes.

In his book, *The (Mis)Behavior of Markets: A Fractal View of Risk, Ruin, and Reward*, Mandelbrot (2004)[28] applies the tools of fractal geometry to the financial markets, trying to replace the ECMH with a new alternative model. More specifically, he develops his model of price changes based on phenomena observed in the real world, starting with some of the simplest data such as cotton and wheat prices and long-term share prices of private companies. Mandelbrot observes that the distribution of price changes are characterised by fat tails, he finds a long-term dependence of a share price on the events of its history, and explains market volatility through the use of multifractal time.
An important fixed point in Benoît Mandelbrot's model is to argue that the price movements of a stock today have memory and are influenced by past movements.

1.4.1 The Behavioral Finance: birth and developments

From the 1950s onwards, but with greater success only from the mid-1970s onwards, the theory of behavioral finance was developed. It not only undermines some pillars of random walk theory, but also impacts on some aspects of market efficiency, given that economists and psychologists find such short-run momentum to be consistent with psychological feedback mechanisms.

[28] Mandelbrot, B. B. (2004) The (mis)behavior of markets: a fractal view of risk, ruin and reward. New York: Basic Books.

Behavioral finance, originated as a study applying psychology to finance, is an attempt to explain and interpret various actions taken by the agents themselves. By analysing the evolution of financial markets, it is possible to see that the behavior of market agents (professionals and non-professionals) is far from rational. This means that financial markets are far from being "efficient".

Among the various exponents, who advanced the so-called Behavioral Finance, were Daniel Kahneman, Amos Tversky and Richard Thaler, who wanted to overcome the rigidity of the Random Walk theory and to try to explain the real phenomena occurring in financial markets.
In a few words, behavioral theory is based on the following simple scheme: “the market has grown, therefore it will continue to grow”, i.e. individuals see the price of shares rising and are therefore drawn into the market.

The performance consequences of this behavior are enormous. For example, Shiller (2000)[29] describes the rise in the U.S. stock market during the late 1990s as the result of psychological contagion leading to irrational exuberance.
It is necessary to make a brief parenthesis on Schiller's studies that even earlier, in 1981[30] to be precise, developed one of the studies that most seemed to undermine the randomness hypothesis. He argued that, if it is possible to calculate the price of a share in t+1 by means of expected and actual dividends, one can of course compare these predictions with the corresponding ex post prices and dividends and analyse whether or not the rational expectations correspond to reality.
His results tell us that the price volatility does not match the volatility of the underlying fundamental values, demonstrating an inconsistency in the market efficiency hypothesis.

In order to sum up, it is interesting to ask a question: is there any point of encounter between ECMH and Behavioral finance?

[29] Shiller, R. J. (2000), Irrational Exuberance, Princeton University Press, Princeton, NJ.
[30] Shiller, R. J. (1981) The Use of Volatility Measures in Assessing Market Efficiency. The Journal of finance (New York). [Online] 36 (2), 291–304

A discussion published in 2005 in Malkiel et al.[31] seems to suggest the absence of any compromise between advocates of ECMH and advocates of behavioral finance.

However, in 2004 Andrew W. Lo tried to offer a reconciliation between the two oppositions and he proposed a new framework: the Adaptive Markets Hypothesis (AMH), according to which "*the traditional models of modern financial economics can co-exist alongside behavioral models in an intellectually consistent manner*." (Lo, 2005)[32]

The hypothesis of adaptive markets, also taking a cue from Darwinism, is shaped by the influence of the emerging discipline of "evolutionary psychology", under which the degree of market efficiency is also related to factors in the market environment, such as the number of competitors in the market, the extent of profit opportunities available and the adaptability of market participants. More specifically:

> *(...) the Adaptive Markets Hypothesis can be viewed as a new version of the EMH, derived from evolutionary principles. Prices reflect as much information as dictated by the combination of environmental conditions and the number and nature of "species" in the economy or, to use the appropriate biological term, the ecology. By species, I mean distinct groups of market participants, each behaving in a common manner.* (...)
>
> *If multiple species (or the members of a single highly populous species) are competing for rather scarce resources within a single market, that market is likely to be highly efficient, e.g., the market for 10-Year US Treasury Notes, which reflects most relevant information very quickly indeed. If, on the other hand, a small number of species are competing for rather abundant resources in a given market, that market will be less efficient, e.g., the market for oil paintings from the Italian Renaissance. Market efficiency cannot be evaluated in a vacuum, but is highly context-dependent and dynamic* (...). (Lo, 2004).[33]

[31] Malkiel, B. et al. (2005) Market Efficiency versus Behavioural Finance. Journal of Applied Corporate Finance. [Online] 17 (3), 124–136.

[32] Lo Andrew W. (2005) Reconciling Efficient Markets with Behavioral Finance: The Adaptive Markets Hypothesis. *Journal of Investment Consulting* 7(2): 21–44

[33] Lo Andrew W. (2004) The adaptive markets hypothesis: market efficiency from an evolutionary perspective. Journal of Portfolio Management 30: 15–29

To conclude, the main "opponents" distanced themselves from what was the neoclassical concept, according to which individuals maximise expected utility by having rational expectations. All this because it has been recognised over time that individuals are naturally limited in their degree of rationality and, rather than maximising utility, they seek "satisfaction", which guides their choices, even and especially in the financial sphere.

1.5 The role of Fundamental and Technical Analysis

In order to steer the choices of individuals towards a choice that is as "right" as possible, a very useful tool could be technical analysis and fundamental analysis.

More in detail, technical analysis is the study of past stock prices in an attempt to predict future prices, while fundamental analysis is the analysis of financial information such as company earnings and asset values.
It is therefore not important for a technical analyst to understand the why of a certain market movement, rather he aims to try to be on the right side at the right time to minimise losses and maximise profits. This is done through the systematic study of the behaviour of financial markets, especially through the study of charts that identify price trends and the right timing to act. The main risk in exclusively following this type of analysis is that the individual tries to anticipate the future trend according to his own expectations derived from his own information, so the main reason for loss is the occurrence of an exceptional event.[34]

On the other hand, the fundamentalist aims to calculate the theoretical price of a stock in order to act accordingly on the basis of the current market price. In order to develop a suitable fundamental analysis, it is necessary to consider various econometric and mathematical models, as well as providing for the study of various factors, such as the macroeconomic environment of reference, the competitiveness that characterises the environment in which the company operates, its financial and asset potential through the careful study of company balance sheets, possible effects of national or foreign

[34] Petrusheva, N. & Jordanoski, I. (2016) Comparative analysis between the fundamental and technical analysis of stocks. Journal of Process Management. New Technologies. [Online] 4 (2), 26–3

regulations and much more. Being a detailed and time-consuming type of analysis, the risk in this case is to conclude one's analysis when the price movement is already finished and has already been fully integrated into the market.

Although theoretically these two tools seem to be at odds with each other, in reality it would be optimal to know how to use both properly. In particular the use of fundamental analysis is more appropriate for the study of stocks in the long term, while for short-term operations, technical analysis seems preferable in order to focus on the right timing.

But, considering again the two opposing theories analysed above (ECMH and Behavioral finance), how can these analytical tools interfere and be useful?
Following in the wake of the efficient markets hypothesis, according to which news spreads very quickly and is incorporated into the prices of securities without delay, none of these analyses can help the investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individual stocks.
This is because the current value of a share on the market will be equal to the theoretical value that the fundamentalist could determine through his studies. So in short, there could be no under- or over-valuated security in the market.
While following in the wake of behavioural finance, which does not foresee the complete and rigid efficiency and rationality of markets, but rather predicts the presence of emotional factors, there is a possibility of a return for investors, who make use of such analytical tools. Given that the market tends to express this theoretical value in the quotation more or less quickly, the analyst will have to take buying or selling action if the asset is under- or over-valued: when the current price is lower than the theoretical price a purchase is made; when the theoretical price is reached a sale is made.

Chapter 2 - Study of the phenomenon of insider trading under U.S. law

This section, after a brief description of the structure of trading industry, will delve into the economic legal concept of Market Abuse, leading to a deeper analysis of the phenomenon of insider trading.
The aim is therefore to outline the legal path of the United States in trying to limit this phenomenon and increasingly regulate the financial markets.

2.1 The structure of the trading industry

The trading industry is the economic sector devoted to trade financial instruments that could be exchange on the organized platform.
It is composed by two parts: buy side and sell side (that do not concern with the action of buying and selling financial instruments). In particular:

I. Buy side includes all trader types that could at both time buying and selling financial instruments, but it is called "buy side" because it is composed by the buyers of exchange services. This part of the trading industry is mainly looking for liquidity (not money or cash, but availability to trade when they want to trade) and it is willing to pay commissions in order to obtain the availability to trade.

II. Sell side is made by all financial institutions and subjects that provide exchange services (liquidity) to the buy side. In the sell side of the trading industry it is possible to find three main types of subjects: dealers, who accommodate trades that their clients want to make by trading directly with them; brokers, who arrange trades that their clients want to make by finding other traders who will trade with their clients, however they never trade directly with their customers, they trade to execute an order they receive from their customers; warehouses, that are financial institutions (i.e. investment banks) that offer to their costumers both dealing and brokerage activities.[35]

[35] Harris, L. (2003) Trading and Exchanges: Market Microstructure for Practitioners. Oxford University Press.

After having repeatedly emphasised, in the first chapter, the importance of information in financial markets, it is now possible to see how the degree of information can also become a key element distinguishing trader from each-others.
Nevertheless, it is always useful to remember that information is difficult to analyse in order to obtain the fundamental value[36] of an instrument. In any case, two macro categories can be identified:

I. Informed traders can form reliable opinions about whether instruments are fundamentally undervalued or overvalued, knowing that a fundamental value is only a theoretical concept.
II. Uninformed traders do not know whether instruments are fundamentally undervalued or overvalued. This category includes utilitarian traders, futile traders, and some types of profit-motivated/oriented traders.

Between the two opposing sides of the trading industry (buy-side and sell-side) it is possible to find so-called trade facilitators that help traders trade. For example, exchanges, which provide forums where traders meet to organise exchanges that nowadays all take place via online platforms which, as mentioned in the first chapter, make it possible to shorten the distances between different markets. As trade facilitators one can also mention clearing and settlement agents or depositories and custodians, which are all figures that facilitate trading by helping traders settle the trades they have arranged, as well as preventing problems that can arise when some traders are not trustworthy or creditworthy[37].

These are just a few macro categories of the many actors that make up the financial markets, which, instead, are composed of an infinite number of parties and as many different kinds of financial instruments that are traded. It is therefore necessary to lay down precise rules within this world of actors and instruments, and it is precisely here

[36] The fundamental value of an instrument is the value that all traders would agree if they knew all available information about the instrument and if they could properly analyse this information. The fundamental value could be forecasted or estimated, but never measured exactly and this imply a certain level of error. Lower is the error and greater is the probability to win, but everything turn around the level of information that a trader has.
[37] Harris, L. (2003) Trading and Exchanges: Market Microstructure for Practitioners. Oxford University Press.

that laws and legislatures play a crucial role, now even more so that the organisation of markets has evolved and become increasingly computerised.
It is worth pointing out that there is therefore a difference between the rules of the past, when trading took place on the "trading floor", where brokers, dealers and specialists met, and today, where the same players are connected to a computer network that spans the globe and where the speed of capital movements has reached unimaginable heights. Along with these changes, regulations must also adapt.

2.2 The role of market regulation

First of all, it should be specified that good regulation helps ensure that traders communicate effectively with each other, that people do not defraud others, and that all things are generally as they appear.
Most traders believe that financial markets work best when they are well regulated, but not excessively regulated.
In this scenario, regulators are of paramount importance, because they create and enforce rules that facilitate trading. Consequently, it almost goes without saying that regulations must be imposed in the pursuit of the common good and in the interests of the markets. But is this always true? It is not so obvious to state that some regulations might give certain privileges to certain types of traders, brokers, or exchanges, trivially trying to protect domestic markets from foreign competition, or, on the contrary, by restricting the domestic market (for example, governments might tax trading to raise money for the national treasury).[38]
It is possible to summarise everything by simply saying that regulators set the rules of the game, seeking to achieve the public interest. However, the definition of what is in the public interest may be vague.

Most countries divide the responsibility for regulating markets among different regulatory agencies, thanks to the fact that legislatures enact laws that delegate their legislative powers to these agencies. In this way agencies can write regulations that have the force of law and, then, they enforce their regulations through judicial proceedings.

[38] Harold Mulherin, J. (2007) Measuring the costs and benefits of regulation: Conceptual issues in securities markets. Journal of corporate finance (Amsterdam, Netherlands). [Online] 13 (2), 421–437.

These organizations have a specific range of duties and responsibilities that allow them to act independently of each other while working towards similar objectives, among these, for example, prevent and investigate fraud, keep markets efficient and transparent, and make sure customers and clients are treated fairly and honestly.

One of the most comprehensive and powerful agencies that regulate trading is the *Securities and Exchange Commissions* (SEC) in U.S., that covers the regulation of the U.S. stock exchanges, options markets, and options exchanges as well as all other electronic exchanges and other electronic securities markets. In Italy, instead, the competent authority responsible for regulating the Italian financial markets is Consob (*Commissione Nazionale per le Società e la Borsa*). Table 1 lists some of the agencies selected from ordinary members of International Organization of Securities Commissions (IOSCO).[39]

COUNTRY	AGENCY
Argentina	Comisión Nacional de Valores
Australia	Australian Securities and Investments Commission
Austria	Financial Market Authority
Belgium	Financial Services and Markets Authority
China	China Securities Regulatory Commission
Denmark	Danish Financial Supervisory Authority
France	Autorité des marchés financiers
Germany	Bundesanstalt für Finanzdienstleistungsaufsicht
Greece	Hellenic Capital Market Commission
Hong Kong	Securities and Futures Commission
India	Securities and Exchange Board of India
Indonesia	Indonesia Financial Services Authority
Ireland	Central Bank of Ireland
Italy	Commissione Nazionale per le Società e la Borsa (Consob)
Korea	Financial Services Commission/Financial Supervisory Service
Luxembourg	Commission de Surveillance du Secteur Financier
Malaysia	Securities Commission
Maldives	Capital Market Development Authority
Mexico	Comisión Nacional Bancaria y de Valores
Netherlands	The Dutch Authority for the Financial Markets
Palestine	Palestine Capital Market Authority
Peru	Superintendencia del Mercado de Valores
Poland	Polish Financial Supervision Authority
Portugal	Comissão do Mercado de Valores Mobiliários
Qatar	Qatar Financial Markets Authority
Russia	The Bank of Russia
Saudi Arabia	Capital Market Authority
Singapore	Monetary Authority of Singapore
Spain	Comisión Nacional del Mercado de Valores
Switzerland	Swiss Financial Market Supervisory Authority
Tunisia	Conseil du marché financier
Turkey	Capital Markets Board
Ukraine	National Securities and Stock Market Commission
United Arab Emirates	Securities and Commodities Authority
United Kingdom	Financial Conduct Authority
United States of America	SEC + Commodity Futures Trading Commission

Table 1: Selected regulatory agencies belonging to IOSCO

[39] International Organization of Securities Commissions (IOSCO). Ordinary Members of IOSCO. https://www.iosco.org/about/?subsection=membership&memid=1

In addition to the objectives of transparency, efficiency and market development, these authorities also have the task of protecting investors.

But protect them from whom or from what?
This is where we get to the heart of the analysis of the phenomenon under study in this thesis. The supervisory authorities of financial markets have been trying for years to crack down on so-called market abuse phenomena in every way possible, developing procedures to detect it in real time.

2.3 Market abuse phenomenon

The concept of market abuse is mainly based on the existence of certain opportunistic behaviours that violate the integrity of the markets.
It typically consists of insider dealing, unlawful disclosure of inside information, and market manipulation of the financial markets which could arise from distributing false information, distorting prices or improper use of insider information.

It is necessary to make a distinction between two behaviours that are usually categorised as market abuse:

- Insider trading consists, essentially, in trading on financial markets with a view to exploiting information which is not yet publicly available (privileged or inside information) and which, if made public, would probably have a significant effect on the prices of the securities in question. (This topic will be explored further in later sections).
- The aim of the market manipulation, instead, is to change its price or market participants' perception of its underlying value.

2.3.1 Market manipulation

Looking at the cases that fall into the category of market manipulation, a further classification between two well-defined strategies was proposed by Allen and Gale

(1992)[40]: action-based manipulation and trade-based manipulation. The former is based on actions that affect the stock price with the goal of achieving a higher profit, also through false declarations, i.e., a manipulator acquires shares in a company and announces a takeover bid. The consequence of this is an increase in the share price of the company, after which the manipulator drops the offer and sells the shares at the higher price, making a profit. The latter, on the other hand, is carried out directly on financial markets by means of transactions and games that are based on cheating mainly involving trading volumes, which lead many other traders to misinterpret market prices.

In addition to the above-mentioned classification proposed by Allen and Gale, the following forms that manipulation can take are now more widely discussed:

1. Bear-raiding is a strategy based on trying to push down the price of a stock through concentrated short selling, while spreading negative and false news. The bear raider makes profit from their short positions by selling short in advance and on the basis of the fake news being spread. This causes a reaction in other traders who follow the wave of selling by lowering the price even more.
   While short selling is legal, coordinated short selling is viewed as market manipulation by the Securities and Exchange Commission (SEC) due also to the circulation of false rumours.
2. Churning is an illegal practice carried out by brokers or fund managers with the aim of increasing their commissions by increasing trade activity on behalf of their clients. A possible warning sign to detect this type of violation is the frequent buying and selling of shares that does little to meet the client's investment objectives.
3. Cornering the market refers to the situation where the market has been backed into a corner, as the term suggests. This can be done by acquiring enough shares of a particular security type, such as those of a firm in a niche industry, or to hold a significant commodity position to be able to manipulate its price. By controlling so much, they can dictate what others must pay for it.
4. Wash trading is a process in which a trader simultaneously buys and sells a security for the explicit purpose of making that security more attractive than it is in the eyes of others. As stated by Thomas Krysa, Associate Director of

[40] Allen, F. & Gale, D. (1992) Stock-Price Manipulation. The Review of financial studies 5 (3), 503–529.

Enforcement in the SEC's Denver Regional Office: "Wash trading is an abusive practice that misleads the market about the genuine supply and demand for a stock."[41]

5. The pump-and-dump scheme aims to boost the price of a stock through fake recommendations. With these manipulation attempts, one simply wants to try to attract others into the market for these shares so that they can be sold at a higher price, thus making a profit.[42]
6. The poop-and-scoop scheme is less well known and works almost in reverse to the previous one. In this case, the false disclosures are aimed directly at the stocks so that their price falls and they can be bought by the manipulators at a lower price.

The latter is the scheme most frequently used by manipulators, but there are many others, and more and more types are being implemented.

However, in the *Security and Exchange Act* of 1934 there is Section 9, known as the "*Prohibition against manipulation of security price*", which prohibits any person by any means from engaging in practices that attempt to manipulate the market.

An example is clarified in Section 9 (2), which quotes as follows:

> *It shall be unlawful for any person, directly or indirectly, by the use of the mails or any means or instrumentality (...)*
> (2) *To effect, alone or with 1 or more other persons, a series of transactions in any security registered on a national securities exchange, any security not so registered, or in connection with any security-based swap or security-based swap agreement with respect to such security creating actual or apparent active trading in such security, or raising or depressing the price of such security, for the purpose of inducing the purchase or sale of such security by others.*

[41] Citation referred to the SEC Enforcement Division investigation case against Paul Pollack and Montgomery Street Research in December 2014. Pollack and Montgomery Street Research were accused of wash trading practices after raising more than $2.5 million from 11 investors after being hired by a company.
[42] Huang, Y. C. & Cheng, Y. J. (2013) Stock manipulation and its effects: pump and dump versus stabilization. Review of quantitative finance and accounting. [Online] 44 (4), 791–815.

The following points specify the different cases considered illegal and therefore prohibited by law.

For each of these diversifications it is difficult to give a precise definition of what actually happens in practice, but it is appropriate to give a smattering of what are the main categories that fall under market abuse, in order to be able to actually identify them when they are implemented.
In addition, it must be said that it is not always clear when certain topics are actually illegal and when they are lawful. Consequently, it also becomes difficult for regulators to detect improper and manipulative behaviour in advance.

2.4 Insider trading: historical origins and theories compared

Let us now turn to another type of market abuse on which the paper will focus more closely: the insider trading.
The intention is therefore to start from the historical origins of this practice by analysing the different categories that belong to it and, subsequently, to go on to study the US legislation in detail.
It therefore seems appropriate, before analysing the most important stages of the regulatory development on insider dealing, to frame the phenomenon from a descriptive point of view.

The term "insider trading", which originated in the United States, refers to the usage of inside information, not yet known to the investing public, by persons who have acquired it. Such information can be acquired mainly in two ways: either as part of one's professional duties or as a result of improper disclosure by an insider. [43]
This conduct is therefore based on a note of disloyalty deriving from the abuse of a cognitive advantage not available to the generality of investors.
For an even clearer picture, American doctrine usually compares the practice of insider trading to that of someone who places a bet knowing in advance the name of the winning horse[44].

[43] Linciano, N. & Macchiati, A. (2002) Insider trading. Una regolazione difficile. Il Mulino, 13-
[44] Amati, E. (2012) Abusi di mercato e sistema penale. Itinerari di Diritto Penale. G. Giappichelli Editore. Torino

But since when has insider trading intruded into the stock markets? Practically always, since the presence of information asymmetry, due to insiders, has always characterised this world, but with the difference that historically this practice was not condemned.

In fact, it was Dean Henry Manne himself, in his 1966 book "Insider Trading and the Stock Market", who described a world in which insider trading, although considered ubiquitous in the stock markets at the turn of the century, was not universally condoned, but rather accepted. More precisely according to Manne's view insider trading is a fair and inexpensive method of entrepreneurial compensation which may be "fundamental to the survival of our corporate system" (Manne, 1966, p. 110)[45]

In the following decades, several debates focused precisely on the fairness of the practice in listed companies. Many subsequent exponents of the Chicago liberal school, following Manne's consequentialist approach, have argued that requiring parity of information among participants is impractical and reduces incentives to acquire information. According to this line of thought, therefore, the explanation for the ban lies in a public choice, because prohibiting corporate officers from trading gives an advantage to the insiders' main commercial rivals, the securities market professionals.[46]

However, as Malkiel stated after studying Manne's book and reviewing it, "Unfortunately, neither support for Manne's conclusion is convincing. While Manne attempts to provide theoretical underpinnings for his argument that stockholders are not harmed by insider trading, he fails to build an adequate model of market behavior to deal with the problem."[47]

In fact, contrary to Manne's view, the prevailing international doctrine supports the positive aspects of an anti-insider trading regime. Such as the theory of market egalitarianism, which is based on the principle of equal access, according to which all investors should have equal access to data that can influence their choices.

However, as also mentioned in the first chapter, the idea of achieving investor equality of knowledge, which guides the market towards full efficiency and which form the basis

[45] Manne, H. G. (1966) Insider trading and the stock market, Free Press. New York

[46] Haddock, D. D. & Macey, J. R. (1987) Regulation on Demand: A Private Interest Model, with an Application to Insider Trading Regulation. The Journal of law & economics. [Online] 30 (2), 311–352.

[47] Malkiel, B. G. (1968) MANNE, HENRY G. Insider Trading and the Stock Market (Book Review). The Journal of Business 41 p.264.

of the prohibition of insider trading, although suggestive on a theoretical level, is belied by empirical data.
The purpose of the insider trading discipline is not to punish the diversity of information between players (because situations of information asymmetry are a physiological feature of the market), but to punish the exploitation of an illegally acquired position of advantage.
In this respect it is therefore condemned as a criminal offence, since it constitutes, or may constitute, the instrument through which the market is manipulated, preventing the trading of securities from taking place in a transparent manner and without detriment to investors.

Needless to say, therefore, despite the debates initiated by Manne and his successors, jurisdictions have moved to condemn the practice of insider trading. In relation to this practice, the punitive option is now found on a global level. However, up to 1990, in the one hundred and three countries with a stock market, insider trading was regulated in only thirty-four countries (among which the United States), a number that had risen to eighty-seven by 1998.

2.5 The emergence of early legislation in the USA

In examining the evolution of the regulatory framework on insider trading and the primary role it has assumed within the current legal debate, the North American experience cannot be ignored, both for historical reasons and because it has directly influenced all the rules subsequently introduced in other legal systems, including that of the European Union.

It is possible to say that the spark from which everything started was the 1929 crisis. In order to restore investor confidence in the immediate aftermath of this crisis, Congress enacted the Securities Act in 1933, which introduced a number of requirements for investor disclosure procedures.
However, on the subject of market abuse, the year to remember for the United States is 1934, when the Securities Exchange Act was signed (June 6), which, among its many objectives, also had the aim of preventing market abuse.

As mentioned in Table 1, the enforcement of these acts was left to the SEC, which was created by Congress in 1934 as the first independent federal government regulatory agency of the securities markets.

> *"The mission of the SEC is to protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation. The SEC strives to promote a market environment that is worthy of the public's trust."*[48]

For the first chairmanship of the SEC, President Roosevelt supported Joseph Kennedy, who channelled the powers granted to the SEC to change the way Wall Street operates.

How? First, the SEC required greater disclosure and established strict reporting programmes. All companies offering securities to the public had to register and report regularly to the SEC. The SEC also paved the way for civil charges against companies and individuals found guilty of fraud and other security breaches. Both of these innovations were well received by investors who were hesitant to return to the market after the crisis. This is done through a series of successive acts such as: the Public Utility Holding Company Act (1935), the Trust Indenture Act (1939), the Investment Advisers Act (1940), and the Investment Company Act (1940).

The Securities and Exchange Commission has five Commissioners (one of whom is designated as chair, Gary Gensler is the actual chair since 2021) who are appointed by the President of the United States with the advice and consent of the Senate.

The SEC is organized in six Divisions and twenty-four Offices. All parties contribute to the common objectives of protecting investors, maintaining market integrity and efficiency, and facilitating capital formation, by taking enforcement action on securities laws, issuing new rules and providing oversight of credit institutions. On the other side each Division has a specific objective. For a more detailed view:

- The Division of Corporation Finance seeks, on the one hand, to ensure that investors receive material information to make informed investment decisions and, on the other hand, also provides interpretative assistance to companies

[48] U.S. Securities and Exchange Commission (SEC). "About the SEC" https://www.sec.gov/about.shtml Modified: Nov. 22, 2016

regarding SEC rules and forms (i.e. by means of Accounting and Financial Reporting Guidance).

- The Division of Economic and Risk Analysis aims to integrate financial economics and rigorous data analysis into the core mission of the SEC, in order to provide detailed and high-quality economic and statistical analysis to the Commission and other Divisions.
- The Division of Enforcement was created as an "enforcement body" and to conduct investigations into possible violations of the federal securities laws, as well as to discuss the Commission's civil enforcement proceedings in federal courts and administrative proceedings.
- The Division of Examinations conducts the SEC's National Exam Program. Its mission focuses on ensuring market integrity, including through fraud prevention, and responsible capital formation through risk-focused strategies. The results of the Division's examinations are used by the SEC to inform regulatory initiatives, identify and monitor risks, improve industry practices, and prosecute misconduct.
- The Division of Investment Management has primary responsibility for administering and overseeing investment companies (e.g., mutual funds, business development companies, unit investment trusts, variable insurance products and exchange-traded funds) and other investment services, through the Investment Company Act of 1940 and the Investment Advisers Act of 1940.
- The Division of Trading and Markets, assisting the Commission in maintaining fair, orderly, and efficient markets, oversees the major securities market participants on a daily basis: the securities exchanges, securities firms, self-regulatory organizations (SROs), securities information processors, and credit rating agencies.[49]

For a broader and neater view, it is possible to consult the SEC Organization chart in Figure 1 in Appendix B.

[49] U.S. Securities and Exchange Commission (SEC). "SEC Divisions Homepages" https://www.sec.gov/divisions.shtml Modified: July 6, 2021

2.5.1 "Security Act" 1933

Returning to what was the turning point after the crisis of '29 in terms of regulation, it is important to reiterate that it was President Franklin D. Roosevelt himself who, in the summer of 1933, commissioned Secretary of Commerce Roper to form a commission with the aim of regulating markets on a national level. The Rooper Report spoke of a serious need for federal regulation of markets, while also stressing the need to avoid making the mistake of congesting markets through stringent regulation. For these reasons, it was decided to embrace the idea of a balance between a federal framework for legislation and the establishment of a new, dedicated agency capable of dynamically regulating markets (the SEC).[50]

We can therefore say that two historical moments in market regulation are thus defined: the moment before the crisis of 1929 and the era after the enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934 (later also called SA33 and SEA34). The former era was characterised by markets with no uniformity in regulating the information to be provided to investors; the latter, after the enactment of the two above-mentioned laws, characterised by a degree of uniformity dictated by the introduction of clear disclosure requirements.

One of the first information needs that emerged concerned the first issuance of shares and bonds and the placement of these securities with the investing public.

This is where the SA33 intervened, which, in addition to requiring the information for admission to listing and the information required throughout the period during which a company remains listed, introduced the obligation to register the prospectus at least twenty days before offering the securities to investors. At the federal level, the rule also establishes liability for anyone who reports false or misleading information in the prospectus (which is another reason why this law is often referred to as the "*truth in securities*" law).[51]

We are therefore talking about real registration forms and, in particular in Section 7 (a) of the SA33 "*Information Required in Registration Statement*", talks about the

[50] Lupoi, A. (2020) La struttura del mercato ed i riflessi giuridici. CEDAM. 51-74

[51] Simon, C. J. (1989) The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues. The American economic review. 79 (3), 295–318.

information required by these forms and refers to two formats: *Schedule A* and *Schedule B.*

> "*The registration statement, when relating to a security other than a security issued by a foreign government, or political subdivision thereof, shall contain the information, and be accompanied by the documents, specified in Schedule A, and when relating to a security issued by a foreign government, or political subdivision thereof, shall contain the information, and be accompanied by the documents, specified in Schedule B.*"[52]

In Appendix C it is possible to read in detail what exactly is stated in the Security Act of 1933 regarding Schedule A and Schedule B. However, we can summarise the information required in the registration forms as follow:

- A description of the company's properties and business
- A description of the security to be offered for sale
- Information about the management of the company
- Financial statements certified by independent accountants.

As explained in the previous paragraph, the main purpose that should guide the SEC's activity is to protect the average investor, who is not part of the club of "insiders", through a market that ensures a "fair game". The term "fair" is intended to mean the level playing field that must be guaranteed to all those who participate in market trading.

In this respect, the introduction of SA33 has certainly brought this goal closer. However, the innovations introduced by SEA34, such as the "listing requirements and publicity" for companies wishing to be listed and for those already listed, also contribute to this.

2.5.2 "Security and Exchange Act" 1934

Let's start by giving an initial macro view of what SEA34 represents. For this purpose, Section 10 helps to frame this law by defining, so to speak, its general scope. Indeed, it

[52] So reads the general part of Section 7 Security Act of 1933

states that the regulations enacted, and the subsections written into that Act, prohibit fraud, manipulation or insider trading.
It is therefore possible to state that it constitutes the origin of the anti-insider trading discipline.

The Act identifies and prohibits certain types of conduct in the markets and provides the Commission with disciplinary powers over regulated entities and persons associated with them, as well as providing the SEC with the power to require periodic disclosure of information by companies with listed securities.

One of the first points to be considered in SEA34, in order to crack down on insider trading, is found in Section 16(b) with reference to trading by corporate insiders or shareholders with more than ten per cent of shares.[53]
As stated in that section:

> *(b) For the purpose of preventing the unfair use of information which may have been obtained by such beneficial owner, director, or officer by reason of his relationship to the issuer, any profit realized by him from any purchase and sale, or any sale and purchase, of any equity security of such issuer (other than an exempted security) or a security-based swap agreement involving any such equity security within any period of less than six months, unless such security or security-based swap agreement was acquired in good faith in connection with a debt previously contracted, shall inure to and be recoverable by the issuer, irrespective of any intention on the part of such beneficial owner, director, or officer in entering into such transaction of holding the security or security-based swap agreement purchased or of not repurchasing the security or security-based swap agreement sold for a period exceeding six months.*[54]

[53] In Section 16(a) the actors referred to are better specified:
Section 16(a)(1) DIRECTORS, OFFICERS, AND PRINCIPAL STOCKHOLDERS REQUIRED TO FILE. - Every person who is directly or indirectly the beneficial owner of more than 10 percent of any class of any equity security (other than an exempted security) which is registred pursuant to section 12, or who is a director or an officer of the issuer of such security (...).
[54] Security and Exchange Act of 1934. SEC. 16. DIRECTORS, OFFICERS, AND PRINCIPAL STOCKHOLDERS. (b).

The Securities Exchange Act 1934 thus eliminated any possible convenience of buying and selling (within a six-month period) securities by directors, officers and partners.
On this first limitation, however, some shortcomings relating to insider trading must be noted.
As is evident in the words of the SEA34 quoted here, reference is made exclusively to three categories of insiders (Directors, Officers and principal Stockholders), however, in a broader view, one should also consider those transactions carried out, on the basis of inside information, by persons who did not hold one of the three positions strictly provided for by the rule.
Moreover, it is worth noting that the rule only penalised transactions carried out in respect of the securities of the company to which it belonged, ignoring the fact that, precisely by virtue of the position held within a company, one could also have access to confidential information concerning the securities of different companies, thus widening the scope of the persons harmed by the improper use of information.
The last small detail is the time limit of 6 months after which stakeholders may resume practices prohibited by Section 16.[55]

It is important to point out that one of the shortcomings of this section is the automatic exclusion of other subspecies of insiders: *tippee* and *misappropriator*.
Trivially, we can define *tippees* as those who receive confidential information from insiders. While a person may be called a *misappropriator* if he or she is an outsider who receives information from a person other than the issuer, in violation of the promise that that information would remain confidential.
Consequently, it only remains to define a person as an insider if he has some kind of fiduciary relationship that requires him to treat certain information as confidential.
The Supreme Court qualifies the relationship between the corporate insider and the company as one in which the former is subject to a series of "fiduciary duties", including loyalty, to the latter. It is therefore readily apparent that the use of privileged information acquired in the course of the fiduciary relationship by the insider constitutes an act of fraud and "*deceptive device*"[56].

[55] Carriero, G. (1992) Informazione, mercato, buona fede: il cosiddetto insider trading. Giurisprudenza commerciale-Quaderni. Giuffrè, Milano.
[56] Terms used in Section 10 (b) of SEA34.

Where does the definition of the relationship between corporate insiders and companies come from? From Rules 10b-5, which we will analyse in the next paragraph.

2.5.3 The analysis of Rules 10b-5

In 1942, the Securities and Exchange Commission issued Rule 10b-5, thus increasing the scope and implementing Section 10(b) of the SEA34.

The following is a comparison between what we read in Section 10(b) of SEA34 and Rule 10b-5 (in this connection, for ease of reading, the parts of interest of the two rules are given below).

Between the lines of Section 10(b) we read that "*It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce or of the mails, or of any facility of any national securities exchange* (...) (b) *To use or employ, in connection with the purchase or sale of any security (...) any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors*."[57]

On the other hand, the Rule 10b-5 states that "*It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange, (a) To employ any device, scheme, or artifice to defraud, (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security*."

Just with a first reading and a simple visual analysis, it is not difficult to see that in both cases there is no explicit reference to insider trading or the use of privileged information. The broad and general wording of Section 10 thus suggests a delegation to

[57] Security and Exchange Act of 1934. SEC. 10B - POSITION LIMITS AND POSITION ACCOUNTABILITY FOR SECURITY-BASED SWAPS AND LARGE TRADER REPORTING.

the SEC to issue a rule prohibiting certain conduct that may give rise to criminal liability.[58]

Moreover, while Section 10 speaks of prohibiting the use of manipulative and deceptive devices or other contrivances, Rule 10b-5 is more specific about what is considered illegal "in connection with the purchase or sale of security". In fact, in addition to mentioning the use of scheme and artifice with the intent to defraud, the Rule 10b-5 specifies that also misrepresentation and any practice that creates deception represent illegal acts.

The particularity of Rule 10b-5 is therefore that it is an extremely flexible rule: it is constructed in such a way that it can be applied to a theoretically unlimited number of cases both with regard to the range of taxable persons and with regard to the type of conduct affected (which is why it is defined as catch all provision).

However, it was only in 2000, after various pronouncements and rulings, that sections were added to this rule, such as 10b5-1. In fact, it is in paragraph (a) of this rule that we read:

> "*The "manipulative and deceptive devices" prohibited by Section 10(b) of the Act (15 U.S.C. 78j) and § 240.10b-5 thereunder include, among other things, the purchase or sale of a security of any issuer, on the basis of material nonpublic information about that security or issuer, in breach of a duty of trust or confidence that is owed directly, indirectly, or derivatively, to the issuer of that security or the shareholders of that issuer, or to any other person who is the source of the material nonpublic information.*"

Although the modification of content is not so radical, as the concept was clear from Section 10 of SEA34 (i.e. declaring the illegality of practices that undermine the integrity of markets by manipulating and putting other investors at risk), a number of fundamentally important aspects need to be analysed, in order to understand the amount of change that this rectification has brought.

[58] Bainbridge, S. M. (2004) An Overview of Us Insider Trading Law: Lessons for the EU? Research Paper No. 05-5. University of California, Los Angeles School of Law Law & Economics Research Paper Series.

Firstly, as anticipated, the use of the expression "on the basis of material nonpublic information". It is necessary to provide a number of definitions in order to better understand this expression.

- Information is material if "there is a substantial likelihood that a reasonable shareholder would consider it important" in making an investment decision.
- Information is nonpublic if it has not been disseminated in a manner making it available to investors generally.[59]

Furthermore, in Rule 10b5-1 itself, the definition of "on the basis of" is given in paragraph (b), which reads as follows:

> "*(...) a purchase or sale of a security of an issuer is "on the basis of" material nonpublic information about that security or issuer if the person making the purchase or sale was aware of the material nonpublic information when the person made the purchase or sale.*"

Another aspect that should not be underestimated is precisely that put forward by this definition. Until 2000, it was not immediately clear that the causal relationship had to be between the knowledge of the inside information and the decision to trade the shares.

In other words, the first part of Rule 10b5-1 seeks to clarify disagreement among courts as to the insider's culpable level of knowledge and use of nonpublic information.[60]

It is therefore possible to answer the following question: in order for a person to be liable of insider trading, is it sufficient that the trader was "in possession" of inside information at the time he/she traded? Thanks to the definition provided in paragraph 2 of Rule 10b5-1 it is possible to give an affirmative answer to this question, because he/she is liable for trading while in "knowing possession" of the information. Certainly, the Rule allows exclusions in situations where trade takes place under the circumstances

[59] Final Rule: Selective Disclosure and Insider Trading. SECURITIES AND EXCHANGE COMMISSION. 17 CFR Parts 240, 243, and 249
Release Nos. 33-7881, 34-43154, IC-24599, File No. S7-31-99

[60] For a look at contrary decisions at the time, compare *United States v. Teicher*, 987 F.2d 112, 120–21 (2d Cir. 1993) (stating that knowing possession is sufficient to find liability and the simplicity of standard recognizes the informational advantage a trader with inside information has over others) with *SEC v. Adler*, 137 F.3d 1325, 1337 (11th Cir. 1998) (concluding that use of information is required to find liability, but proof of possession equates to a strong inference of use), and *United States v. Smith*, 155 F.3d 1051, 1067 (9th Cir. 1998) (stating that government must prove use of information in a criminal case).

just described but with a pre-existing plan, contract or instruction which has been made in good faith. The Rule also provides specific guidance (in order to facilitate corporate insiders) on how a person may plan future transactions at a time when they are unaware of material non-public information without fear of incurring liability[61]. All of this is detailed in paragraph c of the Rule 10b5-1.

However, in 2021, the SEC is proposing an amendment, specifically related to paragraph (c) of Rule 10b5-1, which would strengthen the requirements for accessing the affirmative defense to insider trading and improve relative transparency around insider transactions in the company's securities.

According to the basic idea of the Rule 10b5-1, executives could sell stock if they had a written plan in place to do so at a future date. The hope, linked to the idea just described, was that the transactions would happen after the rest of the shareholders became aware of the material non-public information. Nonetheless, the Rule 10b5-1 exposes real gaps in the insider trading enforcement regime. Consequently, this prompted the SEC to propose, on 15 December 2021, some changes to the rule to restore trust and confidence in the system.

1. First change concerns with how long those company insiders have to wait between creating the plan, on one hand, and selling the shares, on the other hand. Before this modification, an executive could actually adopt a plan in the morning and sell the shares in the afternoon. So, SEC proposes that insiders should only be able to sell using plans putting out the sale four months in the future to get past the next time the company releases its quarterly figures.
2. The second change that SEC proposes is that executives should have to publicly disclose when they enter into these plans.
3. Then insiders only be allowed to have one plan at a time. With the previous rule, there are no limits on the number of plans that insiders can adopt. Meaning that they could, possibly adopt multiple plans and only follow through on the one most advantageous, based upon possibly material non-public information.

[61] Veliotis, S. (2010) Rule 10b5-1 Trading Plans and Insiders' Incentive to Misrepresent. American business law journal. [Online] 47 (2), 313–359.

A further aspect to be analysed is, as mentioned above, that of the fiduciary relationship which is included in Rule 10b5-1, which reads precisely "in breach of a duty of trust or confidence".

The case *SEC v. Texas Gulf Sulphur Co*.[62], somehow focuses on this relationship of trust, confirming at a jurisprudential level the principle of market egalitarianism, which is based on the disclose or abstain rule[63]. This rule imposes on insiders in the proper sense, and on all those who might be equated with them, the choice between disclosing knowledge before trading on the stock exchange or abstaining from trading in securities. The decision adopted by the Court of Appeal in this case resulted in a prohibition of insider trading focusing on the mere possession of inside knowledge (possession test), while the subjective qualification of insider gradually faded away.
In this regard, mention should also be made of Rule 14e-3 (which implements Section 14e of the SEA34[64]), which prohibits anyone from using inside information, even in the absence of a fiduciary relationship with the source of the information.[65] However, due to the similarities in language and legislative intent between Rule 10b-5 and Rule 14e-3, it has led some courts to favour the interpretation of Section 10(b) and Rule 10b-5 in order to properly draw on precedent.

[62] 401 F.2d 833 (2d Cir. 1968)
[63] Shin, J. (1996) The Optimal Regulation of Insider Trading. Journal of financial intermediation. [Online] 5 (1), 49–73
[64] Security Exchange Act of 1934. Section 14(e) It shall be unlawful **for any person** to make any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made, in the light of the circumstances under which they are made, not misleading, or to engage in any fraudulent, deceptive, or manipulative acts or practices, in connection with any tender offer or request or invitation for tenders, or any solicitation of security holders in opposition to or in favor of any such offer, request, or invitation. (...)
[65] 17 C.F.R. § 240.14e-3(a) (1997). Rule 14e-3(a) states: (a) If any person has taken a substantial step or steps to commence, or has commenced, a tender offer (the "offering person"), it shall constitute a fraudulent, deceptive or manipulative act or practice within the meaning of Section 14(e) of the Act for any other person who is in possession of material information relating to such tender offer which information he knows or has reason to know is nonpublic and which he knows or has reason to know has been acquired directly or indirectly from: (1) The offering person, (2) The issuer of securities sought or to be sought by such tender offer, or (3) Any officer, director, partner, or employee or any other person acting on behalf of the offering person or such issuer (...)

2.5.4 The case Chiarella v. United States[66]

It has not always been easy to categorise what arises from fiduciary obligations. In fact, while there is no doubt about the fiduciary duties that corporate insiders owe to the company, they may not owe them to third parties with whom they have transacted.
To stick to the market concept of "fair game" and the concept of equity, it seems to go without saying that any informational advantage, resulting from an illegal activity, should be sanctioned, even in the absence of a fiduciary relationship. However, a historical precedent-setting case such as *Chiarella v. United States* seems to have moved away from this concept. Indeed, following the case it is understood that the duty to disclose or abstain is not linked to the mere possession of non-public inside information, but rather that such a duty arises precisely from the fiduciary relationship between the parties, which requires the party in possession of information to disclose it to the other party. In the present case, Vincent Chiarella acquired material non-public information during his employment in the printing works in New York. After acquiring this information, he purchased shares based on it. However, Chiarella, as a corporate outsider and completely unrelated to the sellers of the shares, had no duty to disclose the information to the seller. In March 1980, the Supreme Court found in *Chiarella v. United States* that parties in securities transactions cannot violate Rule 10b-5 due to their nondisclosure of material non-public information unless there is a breach of a fiduciary or confidential relationship between the parties to the transaction.
Therefore, the need to formulate the so-called "misappropriation theory" arose in order to avoid excluding from liability for insider trading those who had obtained the information from a person unrelated to the company to which the information referred, or in any case from persons with respect to whom the violation of a fiduciary duty could not have been configured.

Although there is no definition of what may constitute misappropriation of confidential information. The key seems to be deception. In other words, the responsibility lies with the person who has misled those who have entrusted him with confidential information. The indicated theory greatly expands the category of individuals who may be liable for insider trading.

[66] 445 U.S. 222 (1980)

2.5.5 United States v. O'Hagan: A case based on misappropriation

As is well known, in a common law system, such as the U.S., case law pronouncements also help create precedents and thus help shape the legal framework.

Even in the case of the "misappropriation theory", it was the Supreme Court that upheld the validity through a landmark case, *U.S. v. O'Hagan*[67].

Grand Metropolitan PLC (Grand Met) was planning a takeover bid for Pillsbury Company and had engaged the law firm Dorsey & Whitney to represent them. Defendant O'Hagan was a partner in the law firm and, upon learning of Grand Met's planning, began buying Pillsbury's shares and call options. When Grand Met made public its intention to launch a public offering on Pillsbury, the latter's stock skyrocketed and O'Hagan achieved profits of $4.3 million.

Among the various charges against O'Hagan is that he defrauded his law firm and his client, Grand Met, by misappropriating for commercial purposes material nonpublic information related to the tender offer. He won the case in the Court of Appeal, Eighth Circuit, claiming that he was not liable for insider trading as he had not obtained the information as a member of the issuer (the Pillsbury).

According to many scholars on the subject, the Eighth Circuit erred in finding the misappropriation theory incompatible with § 10(b) for two main reasons. First, the court interpreted the misappropriation theory as requiring neither misrepresentation nor nondisclosure. However, it was O'Hagan's failure to disclose his personal trading to Grand Met and Dorsey, in violation of his duty to do so, that made his conduct "deceptive", consequently, as the court explained, misleading failure to disclose is essential to liability under § 10(b). Second, the Eighth Circuit misunderstood the Court's precedents when it ruled that under *Chiarella v. United States*, only a breach of duty to the parties to a securities transaction, or at most other market participants such as investors, is sufficient to give rise to § 10(b) liability.[68]

The government then obtained Supreme Court review of the case. Therefore, O'Hagan's liability under Rule 10b-5 was established on the basis of misappropriation of

[67] United States v. O'Hagan, 521 U.S. 642, 658 (1997)

[68] United States v. O'Hagan, 521 U.S. 644 (1997). Justia US Supreme Court. Syllabus. https://supreme.justia.com/cases/federal/us/521/642/

confidential data obtained from a person other than the issuer. The court stated that "*a person commits fraud 'in connection with' a securities transaction, and thereby violates section 10(b) and Rule 10b-5, when misappropriates confidential information for securities trading purposes, in breach of a duty owed to the source of the information*"[69].

In ruling on the case, the Court affirmed the importance of two requirements under Section 10, "deceptive means or contrivance" and "in connection with", both of which were present in O'Hagan's case.[70]

It is therefore possible to draw a line, consisting of precedents and pronouncements, that allows to understand the evolution of the interpretation given to Section 10(b) and Rule 10b5.

In 1977 with Santa Fe Industries v. Green, the Supreme Court ruled that "*the complaint failed to alleged a material misrepresentation or material failure to disclose*" and held that "*the transaction, if carried out as alleged in the complaint, was neither deceptive nor manipulative and therefore did not violate either Section 10(b) of the Act or Rule 10b-5*"[71].

In the Chiarella case, it was then established that it is not enough to be in possession of privileged information to apply the "disclose or abstain" principle, but rather established that the duty to disclose on the part of the one who is in possession of the information arises at the moment when the other party has the right to know because of the presence of a fiduciary and trust relationship. Since the accused independently derived the information from documents to be photocopied, according to the above reasoning, he was not bound by the duties of disclosure and was not deceptive in violation of Section 108b) and Rule 10b-5. So, the mere fact of trading while in possession of confidential information does not make the printer responsible for insider trading. Three years after the Chiarella case, the *Dirks v. SEC*[72] case also further confirmed this same principle

[69] United States v. O'Hagan, 521 U.S. 642, 652 (1997)

[70] Randall W Quinn (2003) The misappropriation theory of insider trading in the Supreme Court: A (brief) response to the (many) critics of United States v. O'Hagan. Fordham journal of corporate & financial law. 8 (3), 865–.

[71] 430 U.S. 474

[72] 463, U.S. 646 (1983). Dirks was a financial analyst specializing in insurance stocks who received reports about possible accounting fraud involving a listed company. Dirks began to investigate, and in addition to speaking with various executives and employees of the company, he also heard from several professionals in the field in order to gather as much data as possible. He actually discovered the presence

that in order to be liable for insider trading under Section 10b and Rule 10b-5, there must be a fiduciary relationship between the parties.

However, these cases "move away" from strengthening market fairness. The SEC, on the other hand, was seeking to broaden the cases to be brought under insider trading and for this reason took up again the concept proposed by misappropriation theory. The theory was subject to much criticism and opposition because it left open many questions and many doubts of interpretation about future cases. With the *O'Hagan* case, the scope of application of this theory is defined, clarifying what should be meant by "deceptive" and "in connection with", the two basic requirements on which the case was decided.[73] Moreover, the application of this principle allows for an advancement toward the so coveted market integrity and efficiency.

In order to sum up, precisely because of the Supreme Court's acceptance of the misappropriation theory, to date a person who improperly uses confidential information obtained from another issuer can be liable for insider trading. So *Chiarella's* case itself could be decided differently, in that he could be charged with telephone fraud or mail fraud for wrongfully misappropriating information entrusted to him by his employer. Consequently, the only case in which it would rule in *Chiarella's* favour is whether the employee obtained the information without breach of any fiduciary duty from anyone.

Instead, what follows is a look at a more recent case based on the application of the misappropriation theory.

On September 21, 2020, the Commission indicted Yinghang "James" Yang senior index manager at a globally recognized index provider, and his friend Yuanbiao Chen, manager of a sushi restaurant, for misappropriation of material non-public information on which they and/or others then traded. The insider trading scheme enacted generated more than $900,000 in illicit profits.[74]

But how was this scheme constructed? According to the SEC, between June and October 2019, the two accused individuals repeatedly purchased call or put options of

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of irregularities, and although Dirks and his firm did not trade on the company's stock during the period of investigation, people informed of his discovery began selling the stock before Dirks' report was published and before the value collapsed.

[73] Simon, K. A. (1998) The Misappropriation Theory: A Valid Application of Section 10(B) to Protect Property Rights in Information. The journal of criminal law & criminology. [Online] 88 (3), 1049–1086.

[74] Press Release 2020-217, SEC Charges Index Manager and Friend With Insider Trading (Sept. 21, 2020). https://www.sec.gov/news/press-release/202 0-217

publicly traded companies hours before the public announcement that those companies would be added to or removed from a popular stock market index that Yang helped manage. Subsequently, once the options increased in value after the announcements, Yang and Chen liquidated their option positions thereby making a substantial profit.

As it is possible to read in the Complaint against Defendants in item 42: "*Yang owed a duty of trust and confidence to Company A.* (...) *Yang was obligated to maintain the confidentiality of that information and to refrain from trading based on that information or tipping that information to others in exchange for a personal benefit*."[75]

By virtue of the conduct described above, the two individuals have violated Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder. In addition, under Exchange Act Section 21A(a), the Defendants are required to pay civil monetary penalties.

Richard R. Best, Director of the SEC's New York Regional Office, said of the action: "*Financial professionals and other employees entrusted with confidential, market-moving information are prohibited from using that information for personal gain* (...) *As alleged in our complaint, Yang abused that trust when he used the information to enrich himself and Chen. Their attempts to disguise the unlawful trades by using Chen's account did not prevent the SEC from uncovering their scheme*."[76]

A critical element in preventing illegal trading is sound corporate controls and compliance policies on the use and safeguarding of material nonpublic information. In fact, even in the Yang and Chen case, the existence of a well-defined policy regarding the use of nonpublic information by employees is mentioned.[77] It is important, therefore, to place increasing attention on the development of these policies by companies.

[75] Words taken from the document attached to the press release "SEC Complaint".

[76] Press Release 2020-217, SEC Charges Index Manager and Friend With Insider Trading (Sept. 21, 2020). https://www.sec.gov/news/press-release/2020-217

[77] As it is reported in the "SEC Compliant," Company A's Code of Business Ethics ("COBE") provides the following for employees: "During the course of performing your job you may learn Material Non-Public Information about [Company A] or other companies that is not known to the public. You must never use Material Non Public Information to trade in securities, or share this information with others to trade in securities either for their or your benefit. This violates the law and the COBE; it is unethical and is known as insider trading. Material Non-Public Information is the kind of information a reasonable investor would consider important in deciding whether to buy or sell a security."

Chapter 3 - Study of the phenomenon of insider trading under European law

After understanding the nature of insider trading, as an illegal practice that undermines market transparency and investor confidence, and after analysing the US legal discipline that has been refined year by year to counter this phenomenon, this chapter will analyse the European insider trading and market abuse framework and a natural comparison with the American one will be made.

3.1 The Role of Information in the European Marketplace

Recalling the approach of this paper, which starts precisely from the importance of the role of information in the financial markets, it can be observed how the theme recurs as the starting point of all the topics addressed.
Before delving into the facts of the case and the EU Directives that have been developed to counter the phenomenon of market abuse and insider trading, it is only fair to point out the first aspect that all markets have in common: disclosure obligations.
Certainly, also in this aspect, the experience and approach of the United States has been followed by most markets around the world. It is therefore on the basis of the Security Act of 1933 (previously analysed) and other American regulations that Europe, too, introduced a number of disclosure requirements from the 1980s onwards.

Directive 79/279 introduces listing requirements together with a scheme identifying the information to be provided to the market and the public. Two Schedules A and B are annexed to this Directive[78], listing respectively the conditions for admission of shares to official stock exchange listing and the conditions for admission of bonds to official stock exchange listing. These include, for example, the duration of existence of the company: the company must have published or filed, in accordance with national law, its annual accounts for the three financial years preceding the application for admission to official listing.

With the subsequent Directives 80/390 and 89/298, additional disclosure requirements were introduced both for information aimed at the admission of an issuer

[78] See Appendix D and E to read the two annexes to the Directive 79/279

to listing and for the offer of financial products by means of a prospectus, which must contain the information necessary to understand the issuer's assets and liabilities and financial situation. Subsequent Directives, on the subject of disclosure of information, aim to broaden the types of products subject to disclosure requirements.[79]

The purpose of these obligations is common to all markets, namely to provide the basis for the creation of a coherent and transparent market system, and, of course, to ensure the protection of all investors and the efficiency of the markets.
As is also expressed in the preamble of Directive 89/592/EEC, transactions carried out by persons in possession of inside information, which enable them to take advantage of it to the detriment of other investors, constitute a threat to the functioning of securities markets, as they undermine the principle of a level playing field between investors and consequently also investor confidence.

As has been said many times before, the regulation by the supervisory authorities of a subject, such as information, which is particularly sensitive to the continuous evolution of the markets, and of the media, is always evolving.
In spite of this, there are grey areas, of uncertain or absent regulatory coverage, between regulatory provisions and operational reality.
This is also one of the reasons that prompted the creation of a Corporate Reporting Forum in Italy in 2001 and the drafting by Borsa Italiana of a "*Guida per l'informazione al mercato*", which contains principles for improving information on listed companies. It is therefore a set of principles on the subject of the various types of information on listed companies, and the different occasions and methods of dissemination. The thread linking the various principles is the fairness of the exercise of the market's information function.[80]

3.2 The European path towards an EU anti-insider trading discipline and the Directive 89/592/EEC

Going by order in analysing the path that led the European Union and subsequently Italy to develop their own anti-insider trading discipline suitable to deal with this

[79] Lupoi, A. (2020) La struttura del mercato ed i riflessi giuridici. CEDAM. 123-126
[80] Borsa Italiana – Italian Exchange (2002) Guida per l'informazione al mercato.

phenomenon, the first Directive to be analysed was adopted by the EEC on 13 November 1989 (Directive 89/592/EEC). In Italy, the directive was implemented two years later with Law 157/1991, which recognised the unlawfulness of the phenomenon of insider trading and emphasised the criminal relevance of the phenomenon of insider trading, thus flanking it with administrative sanctions.

The European directive was a major step towards EU-wide coordination, which was particularly needed because the internationalisation of financial transactions was becoming increasingly important. Moreover, since the phenomenon was not yet regulated (as in Italy) or was regulated differently in the various countries of the European Community, the EU legislator pushed for the massive and timely adoption of the Directive.[81]

It was precisely the attempt to unify all regulatory differences that was one of the points of difficulty during the negotiations, as we are talking about substantial differences, such as the definition of insider or the qualification of insider trading.

In particular, the United Kingdom's position was inspired on the one hand by a rather narrow conception of insider trading, limited to the breach of fiduciary relationship vis-à-vis only the company whose securities are the subject of inside information (as we saw initially also in the US regulation), and on the other hand by common law principles that are difficult to transfer to the legal realities of other Community countries. In France, there was a discipline based on criminal sanctions. Germany had a set of rules of conduct voluntarily shared by the majority of German listed companies that pledged not to exploit inside information (self-regulation code).[82]

In order to overcome these difficulties, the text leaves it up to the individual Member States to regulate in their own sphere, in a manner consistent with their own legal systems, those aspects relevant to criminal law and criminal procedure, which, moreover, fall outside the scope of the EEC Treaty.

The following is also stipulated in Article 6 of the Directive 89/592/EEC:

[81] Carcano, G. (1989) La direttiva CEE sull'«insider trading», in Rivista delle società

[82] Tizzano, A. & Godano, G. (1990) Cronache Comunitarie: La direttiva comunitaria sull'Insider trading. Il foro italiano. 11341/42–47/48.

"*Each Member State may adopt provisions more stringent than those laid down by this Directive or additional provisions, provided that such provisions are applied generally. (...)*"

This provision, even if it constitutes a less "Community" solution in the sense that it lowers the level of harmonisation, has allowed agreement to be reached on certain qualifying points of the directive, such as the subjects to which it applies and the definition of privileged information.

In spite of this "openness", the Directive provides the basis from which each country can create more stringent provisions, but they cannot "lighten" these basic principles. Some essential definitions are provided in this regard:

"Article 1 For the purposes of this Directive:

1. 'inside information' shall mean information which has not been made public of a precise nature relating to one or several issuers of transferable securities or to one or several transferable securities, which, if it were made public, would be likely to have a significant effect on the price of the transferable security or securities in question;"

Furthermore, the main categories of insiders are identified in Article 2:

"*Each Member State shall prohibit any person who:*

- *by virtue of his membership of the administrative, management or supervisory bodies of the issuer,*
- *by virtue of his holding in the capital of the issuer, or*
- *because he has access to such information by virtue of the exercise of his employment, profession or duties,*

possesses inside information from taking advantage of that information with full knowledge of the facts by acquiring or disposing of for his own account or for the account of a third party, either directly or indirectly, transferable securities of the issuer or issuers to which that information relates."

It becomes important at this point to draw attention to the typologies identified by the above-mentioned article, as a comparison with what has already been discussed above with regard to the US discipline is spontaneous.

In fact, those identified in Article 2 can be defined as primary insiders, as they are bound by a fiduciary relationship with the issuer. As already pointed out, this approach excludes from the directive as many actors that could exploit inside information to the detriment of other market participants. For this reason, secondary insiders, i.e., those who trade securities on the basis of information received from primary insiders, also fall within the scope of the Directive.[83]

It is important to note that the First Directive, just described in its general aspects, does not expressly refer to market efficiency, but rather to a level playing field and investor confidence. In fact, the recitals read as follows:

> "*Whereas the smooth operation of that market depends to a large extent on the confidence it inspires in investors;*
> *Whereas the factors on which such confidence depends include the assurance afforded to investors that they are placed on an equal footing and that they will be protected against the improper use of inside information;*
> *Whereas, by benefiting certain investors as compared with others, insider dealing is - likely to undermine that confidence and may therefore prejudice the smooth operation of the market;*"[84]

Equal access is therefore one of the main focuses of the European Community Council. This principle of equal market access had already been addressed in the United States 20 years earlier but was then superseded by the famous Chiarella case ruling in 1980. From a different point of view, this concept can be analysed in another way: the choice of the Community legislator is in the sense of eliminating only the disparity of position between the Insider and the other operators resulting, in other words, from the impossibility for the operators themselves to legitimately obtain that information which the Insider possesses because of his position vis-à-vis the company. Thus, one can draw the conclusion that the Community legislation, rather than guaranteeing a hypothetical equality of access to the market, aims at repressing possible abuses of position by

[83] Article 4 - Each Member State shall also impose the prohibition provided for in Article 2 on any person other than those referred to in that Article who with full knowledge of the facts possesses inside information, the direct or indirect source of which could not be other than a person referred to in Article 2
[84] COUNCIL DIRECTIVE of 13 November 1989 coordinating regulations on insider dealing (89/592/EEC)

certain subjects in relation to their possibility of (privileged) access to certain knowledge.

Despite the premises and the strong need to want to coordinate market abuse regulation at European level, the directive did not fully achieve the desired effects. The reasons can be summarised in two main points:
First of all, from the point of view of regulatory content, since the directive in question sanctioned only one of the conducts belonging to the category of market abuse (i.e. insider trading), and then granted too much discretion to the States as to the identification of unlawful conducts and sanctioning mechanisms.[85] This is a point of difference with the first US rules, which were presented in a more general form of sanctioning market abuse without mentioning the more specific phenomenon of insider information.
Secondly, from a phenomenological point of view, since the applications of technological developments in the financial markets had resulted in an increase in the volume of transactions and the evanescence of the notion of market territoriality.[86]

3.3 The Directive 2003/6/EC

Faced with these new issues, the Commission felt the need to dictate further rules. These intentions were duly implemented in Directive 2003/6/EC of January 2003, which brought together the previous rules on insider trading and the new rules on market manipulation.[87]

One of the first aspects to be analysed, in view of what has been pointed out above with Directive 89/592/EEC, is in this case the introduction of the concept of efficiency, right from the first lines.

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[85] Megliani, M. (2006) La direttiva comunitaria sugli abusi di mercato e il nuovo sistema sanzionatorio, in Diritto del commercio internazionale, p. 272.
To confirm this, reference can be made to Article 2(3) of the directive, which provided the option for states not to apply the insider trading ban to acquisitions or disposals of securities made without the intervention of a professional outside a regulated market.
[86] Megliani, M. (2006) La direttiva comunitaria sugli abusi di mercato e il nuovo sistema sanzionatorio, in Diritto del commercio internazionale, p. 272.
[87] Amati, E. (2012) Abusi di mercato e sistema penale. Itinerari di Diritto Penale. G. Giappichelli Editore. Torino, p. 43

"*Whereas (...) (2) An integrated and efficient financial market requires market integrity. The smooth functioning of securities markets and public confidence in markets are prerequisites for economic growth and wealth. Market abuse harms the integrity of financial markets and public confidence in securities and derivatives*."

The importance of the principle of efficiency as a necessary condition for a functioning market and as a basis for investor confidence is thus beginning to be understood.

Directive 2003/6/EC was the first of the instruments to follow the approach of the Financial Services Action Plan established by the Council at its meeting of 17 July 2000[88]. The final report proposed the introduction of new legislative techniques based on a four-level approach: framework principles, implementing measures, cooperation and enforcement. This approach was proposed to make the regulatory process for Community securities legislation more efficient and transparent.

"*The existing Community legal framework to protect market integrity is incomplete. Legal requirements vary from one Member State to another, leaving economic actors often uncertain over concepts, definitions and enforcement. In some Member States there is no legislation addressing the issues of price manipulation and the dissemination of misleading information*." (Recital number 11).

According to this reasoning, in addition to the now familiar definition of inside information, the definition of market manipulation is also provided in Article 1, which reads as follows:

"'Market manipulation' shall mean:
(a) transactions or orders to trade:
— which give, or are likely to give, false or misleading signals as to the supply of, demand for or price of financial instruments, or
— which secure, by a person, or persons acting in collaboration, the price of one or several financial instruments at an abnormal or artificial level, (...)

[88] High-Level Group on Financial Supervision in the EU, chaired by banker Jacques de Larosière. (2009). REPORT. Brussels.

(b) transactions or orders to trade which employ fictitious devices or any other form of deception or contrivance;

(c) dissemination of information through the media, including the Internet, or by any other means, which gives, or is likely to give, false or misleading signals as to financial instruments, (...)"

Thus, encapsulating in this definition all the types of market manipulation described in the previous chapter.

Obviously, the possibility of proving that the motives of the person who carried out the transactions or gave the orders to trade are legitimate and thus not fall under the sanctions always remains in force. Due to the fact that the acquisition or disposal of financial instruments implies a prior decision made by the person undertaking one or other transaction, so that the mere carrying out of such an acquisition or disposal cannot in itself imply the use of inside information or the engagement in market manipulation.

Recital 24 provides some suggestions and techniques to stop market abuse covered by the Directive:

"Prompt and fair disclosure of information to the public enhances market integrity (...). Professional economic actors should contribute to market integrity by various means. Such measures could include, for instance, the creation of 'grey lists', the application of 'window trading' to sensitive categories of personnel, the application of internal codes of conduct and the establishment of 'Chinese walls'. Such preventive measures may contribute to combating market abuse only if they are enforced with determination and are dutifully controlled. (...)"[89].

Another aspect to be analysed and which constitutes a significant part of Directive No. 2003/6/EC was certainly the indication of the sanctions that Member States were required to adopt in relation to the offences of insider trading and market manipulation. In fact, the previous Directive No. 89/592/EEC left substantial freedom to the States on the sanctioning side. The criminal sanction option, at first sight the most appropriate for repressive purposes, had however led to several problems in its concrete

[89] Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) [2003]

implementation, since it was extremely difficult to prove the psychological element of the offence (so-called mens rea) at trial.

To remedy this, Directive 2003/6/EC therefore required the Member States, with a view to a common playing field of sanctions, to adopt administrative measures or sanctions against those who violated the provisions of the directive, leaving national legislators a free hand as to the "an, quomodo and quantum" of criminal sanctions.[90]

In doing so, powers of investigation and prosecution were transferred to the administrative market surveillance authority, with the result that supervisory and enforcement tasks were centralised in the hands of a single body.

3.4 Towards the current scenario against market abuse in Europe: MAD and MAR

The landscape of the Directives was therefore slowly widening over time, wanting to include as many actions as possible that could harm the integrity of the market.

In this regard, it is possible to subdivide interventions on the subject into two categories: the Market Abuse Directive (MAD) and the Market Abuse Regulation (MAR).

The interventions listed above have increased the requirements and expectations of the regulator on those responsible for detecting and reporting suspicions of market abuse.

The parties responsible for monitoring market abuse are the National Competent Authorities (NCAs), venues and companies, all of which have access to different types of data, but which put together, it is hoped, will form a comprehensive market abuse machine capable of detecting market manipulation and insider trading in any form. Considering the data and the conditions of each of these monitoring parts, it is clear that the current solution has shortcomings that need to be identified, addressed and remedied.[91]

[90] Foffani, L. (2011) Verso un'armonizzazione europea del diritto penale dell'economia: la genesi di nuovi beni giuridici economici di rango comunitario, il ravvicinamento dei precetti delle sanzioni. Studi in onore di Franco Coppi, Torino, vol. II, p. 1005

[91] Nylén, P. (2020) Challenges in market-abuse monitoring: Post MiFID. Journal of securities operations & custody. 12 (4), 367–376.

The first MAD was implemented in 2005 and laid the foundation for the current regulatory framework (represented by MADII) on market abuse with common definitions of insider dealing, market manipulation and the newly introduced obligation to report suspicious transactions.
MAD has been enforced differently in different Member States, but in general, the obligation to report suspected market abuse has affected fewer market participants than under the current legislative framework. With the advent of more fragmented, automated and high-frequency trading, there has been a need for updated guidance (published in 2012 by ESMA, providing the first step in closing the drawbacks of MAD) from the regulator on how firms and venues should organise and approach their efforts regarding the detection, investigation and reporting of suspected market abuse[92].

This project materialised on 16 April 2014, the date on which the European Parliament and the Council of the European Union adopted Regulation No. 596/2014 (MAR) and Directive No. 2014/57/EU (MADII), which still represent the current EU legislation on insider trading and market manipulation. The former was intended to replace the previous Directive No. 2003/6/EC; instead, the directive was decisively aimed at strengthening the rules of individual legal systems by providing for the obligation to introduce criminal sanctions for insider trading and market manipulation hypotheses, having noted the inadequacy of administrative sanctions to deal with these phenomena.

Within the emerging regulatory environment, the increasingly central position given to supervisory authorities in ensuring the concrete alignment of the European financial market regulatory system was evident. As formulated in the 25 February 2009 report of the High-Level Group on Financial Supervision in the EU, chaired by banker Jacques de Larosière, in Recommendation 6:

> "*The Group considers that:*
> *- Competent authorities in all Member States must have sufficient supervisory powers, including sanctions, to ensure the compliance of financial institutions with the applicable rules;*

[92] European Securities and Markets Authority (ESMA). "MARKET ABUSE" https://www.esma.europa.eu/policy-activities/market-abuse

- Competent authorities should also be equipped with strong, equivalent and deterrent sanction regimes to counter all types of financial crime."[93]

More specifically, the EU legislature entrusted (and still do) the new supervisory authorities with the power to dictate legally binding technical standards for national authorities in how they interpret and apply EU rules. With regard to supervisory practice and methods, however, the European authorities may issue recommendations and guidelines that are not legally binding on national authorities, but for which the principle of "comply or explain" applies.

3.4.1 Market Abuse Regulation (MAR) - Regulation 596/2014

As explained in the previous paragraph, MAR replaced the Directive 2003/6/EC. Consequently, the first question that arises is why we have moved from a Directive to a Regulation.[94] The answer is clearly provided by Recital 5 of the MAR: a regulation is necessary to establish a uniform interpretation and to eliminate divergences between national regulations, which can lead to barriers to trade and significant distortions of competition.

"(...) *Shaping market abuse requirements in the form of a regulation will ensure that those requirements are directly applicable. This should ensure uniform conditions by preventing diverging national requirements as a result of the transposition of a directive. This Regulation will require that all persons follow the same rules in all the Union.* (...)"[95]

The second question is what does it aim to improve by making changes?
The MAR aims to update and strengthen the existing regulatory framework on market abuse, extending its scope to new markets and trading strategies and introducing new requirements. MAR does not limit its scope to financial instruments admitted to trading only on regulated markets or for which a request for admission to trading on a

[93] High-Level Group on Financial Supervision in the EU, chaired by banker Jacques de Larosière. (2009). REPORT. Brussels.
[94] D'Alessandro, F. (2014), Regolatori del mercato, enforcement e sistema penale, Torino, p. 79
[95] Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC

Regulated Market (RM) has been made. It also refers to all Multilateral Trading Facilities (MTFs) and Organised Trading Facilities (OTFs).
In fact, as the tenth Recital of the MAR explains, the price of a financial instrument traded on a trading venue may derive its value from another financial instrument (a derivative for example) that is not traded on one of the venues provided for by law. Therefore, it is intended to extend the effects of the regulation also to the non-traded instrument that, however, has a relationship to the price of the traded instrument.

A point of continuity with Directive 6/2003 concerns the provision to safeguard the investor who carries out the transaction for legitimate reasons (upon demonstration) and in accordance with market practices accepted by the competent authority (referred to as "Accepted Market Practices" or AMP), on which ESMA (European Securities and Markets Authority) is required to issue an opinion[96]. In this regard, cooperation between the regulatory authorities of the various jurisdictions, as well as between the individual national authorities and ESMA, is also strengthened. In particular, under Article 23 (2) MAR the national competent authority has specific supervisory and investigatory powers (e.g. can access any document and data, request the freeing or sequestration of assets, refer matters for criminal investigation)

On the other hand, the structure of the MAR for insider trading builds on the basic structure of Directive 89/592, thus starting with a definition of inside information, moving on to the identification of the subjective characteristics of the insider[97], and ending with the description and definition of unlawful conduct.

Thus, starting by analysing what the Regulation means by inside information, Article 7 formulates:

> "*1. For the purposes of this Regulation, inside information shall comprise the following types of information:*
> *(a) information of a precise nature, which has not been made public, relating, directly or indirectly, to one or more issuers or to one or more financial instruments, and which, if it were made public, would be likely to*

[96] European Securities and Markets Authority (ESMA). "MARKET ABUSE" https://www.esma.europa.eu/policy-activities/market-abuse

[97] One of the most significant differences with the U.S. system is in the identification of the subjective profile of the insider.

have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments; (...)"[98]

Jumping back to what was described in Chapter 1 concerning the effects of price information and the relevant theories, it is important to highlight how this Regulation emphasises this phenomenon and how the economic-mathematical theories have also gained a foothold in case law, which increasingly takes them into account when designing its regulations.

According to the general design of the legislator, it can be deduced that a market is all the more efficient the less privileged information remains. In other words, the less time a piece of information remains privileged, the more efficient the market is, since the information loses its characteristic of being privileged the moment it becomes public and is reflected in the price.
Obviously, from the perspective of combating market abuse, the sooner information loses the attribute of privilege, the greater the prevention of insider trading will be, precisely because one of the requirements described in Article 1 of the Regulation is dissolved.[99]

The passage outlining a novelty, in comparison with Directive 2003/6/EC, is described in paragraph 2 of Article 7, which defines the character of "accuracy" with regard to information, as well as taking into consideration the eventuality that the realisation of a particular circumstance requires a prolonged process to materialise[100]. Along these lines, even the latter case, when it determines a particular circumstance or future event, that future circumstance or future event, as well as the intermediate steps in that process, can be regarded as information of a precise nature.
However, the transition is not straightforward; in fact, paragraph 3 specifies that intermediate steps in a protracted process may be considered to be of a precise character and thus give rise to privileged information if, in addition to the element of precision mentioned here, the other typical features of privileged information also materialise.

[98] Article 7 of Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse.
[99] Lupoi, A. (2020) La struttura del mercato ed i riflessi giuridici. CEDAM. p. 159
[100] Assonime, Note e Studi 11/2019, La revisione del Regolamento sugli abusi di mercato: la posizione di Assonime.

Regarding the profiling of the subjective characteristics of the insider, we refer to Article 8 of the MAR. In general, a person in possession of inside information commits an abuse when he uses that information by acquiring or disposing of, for his own account or for the account of a third party, directly or indirectly, the financial instruments to which that information relates. But more specifically, paragraph 4 of this article states that:

> *"(...) any person who possesses inside information as a result of:*
> *(a) being a member of the administrative, management or supervisory bodies of the issuer or emission allowance market participant;*
> *(b) having a holding in the capital of the issuer or emission allowance market participant;*
> *(c) having access to the information through the exercise of an employment, profession or duties; or*
> *(d) being involved in criminal activities. (...)"*

Thus, identifying the first categories of insiders we have already defined as primary. It is then also added:

> "*This Article also applies to any person who possesses inside information under circumstances other than those referred to in the first subparagraph where that person knows or ought to know that it is inside information*."

In other words, in order to recognise the insider's general intent, it is sufficient to recognise that he should have known that the information was privileged.

The point of departure from the American system is that of "fiduciary duty'". In fact, the EU approach makes it clear that, from a legal point of view, the rule has nothing to do with the theory of fiduciary duties. This, in a way, also affects the possible identification between primary insider and secondary insider (an issue not to be underestimated for the purposes of applying sanctions).

On this issue, the judgment of the Supreme Court of Cassation Sec. 5 No. 39999 of 15 April 2019[101] provides an example of the problems associated with such categorisation.

According to the indictment, Respigo R.A., by virtue of his position as a senior partner in the Transaction Services area of Deloitte Financial Advisory Services (FAS), a company engaged in financial advisory activities, came into possession of confidential information on projects relating to the launch of a takeover bid and used that knowledge acquired in the course of his professional activities to purchase shares in those companies, the share prices of which, in the light of that information, would reasonably have increased. One of the grounds on which R. appealed was the subjective qualification of primary insider, whereas the defence argued that, since R. had acquired the relevant information not as an assignee of the due diligence assignment, but as a senior partner of the consulting firm, he should be classified as a mere secondary insider (for example as tippee), subject only to the administrative liability provided for in Article 187-bis.

It must also be considered that since the person is not on the company's insider register, the person should qualify as a secondary insider. This practice is laid down in Article 18 of the Regulation, which deals with regulating lists of persons with access to inside information. In fact, according to recital 56: "*Insider lists are an important tool for regulators when investigating possible market abuse*".

The Court of Cassation included the appellant among the primary insiders because he had acquired the information by reason of his particularly qualified role within the consulting company, thus exploiting an information asymmetry dependent on the performance of a particular work activity.

It has to be said that, in this case, the American judge would have immediately considered the person to be on an equal footing with those who were directly engaged in the consulting profession, given the fiduciary duty that bound him to the company, the other colleagues and the client.

[101] Court of Cassation, Sec. V, judgment of 15 April 2019 (dep. 27 September 2019), No. 39999, President Vessichelli, Rapporteur Brancaccio, appeal brought by Respigo

Currently, in addition to insider dealing, the MAR provides for two other types of abuse, unlawful disclosure of inside information (Article 10) and market manipulation (Article 12).
The former "*arises where a person possesses inside information and discloses that information to any other person, except where the disclosure is made in the normal exercise of an employment, a profession or duties*".
In the Regulation, the unlawful disclosure of inside information (so-called tipping) thus acquires its own independence from the abuse of inside information.

Article 12, on the other hand, as announced, provides a generic list of activities that are considered market manipulation, including for example entering into a transaction that may send false or misleading signals about the transaction, initiating a transaction that may affect the price of one or more financial instruments, using artifice or any other form of deception or expedient or the conduct of one or more persons acting in collaboration to acquire a dominant position over the supply of or demand for a financial instrument.
Since it is not possible to list all possible forms of manipulation, the regulation provides, in Annex I, a non-exhaustive list of indicators related to the use of artifice or any other form of deception or contrivance and a non-exhaustive list of indicators related to false or misleading signals and price fixing.[102]

3.4.2 Market Abuse Regulation (MAR) - The introduction of lawful conduct

An institution that contains new elements compared to the previous regime is provided by the "Legitimate behaviour" cases, contained in Article 9 of the Regulation.
In particular, this Article states in its first paragraph that it cannot be inferred that a legal person in possession of inside information has committed an abuse within the meaning of the Regulation itself, where that legal person:

> "*a) has established, implemented and maintained adequate and effective internal arrangements and procedures that effectively ensure that neither*

[102] Annex I of the Regulation is reproduced in Appendix F

the natural person who made the decision on its behalf to acquire or dispose of financial instruments to which the information relates, nor another natural person who may have had an influence on that decision, was in possession of the inside information; and

(b) has not encouraged, made a recommendation to, induced or otherwise influenced the natural person who, on behalf of the legal person, acquired or disposed of financial instruments to which the information relates."[103]

For the purposes of the recognition of exoneration from possible liability, the legal person in respect of which the possession of inside information has been established, where it has carried out transactions involving the purchase or sale of financial instruments to which that information relates, must prove:

a) It has adopted internally every possible solution (so-called Chinese walls) suitable to prevent the natural person who made the decision on its own behalf from coming into possession of and being able to use the privileged information.
b) That it has not helped to shape the will of the natural person.[104]

This approach is also confirmed and clarified by Recital 30 of the Regulation, which states several situations that should not constitute market abuse:

"*Where legal persons have taken all reasonable measures to prevent market abuse from occurring but nevertheless natural persons within their employment commit market abuse on behalf of the legal person, this should not be deemed to constitute market abuse by the legal person*."

The same recital also mentions the protection that the Regulation wants to give to market makers, i.e. those who are authorised to act as counterparties or persons authorised to execute orders on behalf of third parties. In fact, it is possible to read the following:

"*The mere fact that market makers or persons authorised to act as counterparties confine themselves to pursuing their legitimate business of buying or selling financial instruments or that persons authorised to execute*

[103] Article 9 of Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse

[104] Annunziata, F. (2016). Riflessi organizzativi della rinnovata disciplina in materia di market abuse. Le società, vol. I, p. 172

orders on behalf of third parties with inside information confine themselves to carrying out, cancelling or amending an order dutifully, should not be deemed to constitute use of such inside information."

However, this protection established by this regulation does not include clearly prohibited activities including, for example, the practice commonly known as "front-running", which consists of an illegal practice engaged in by a financial trader who, having received a buy or sell order from a client capable of influencing the price of a security, enters into a transaction for his own account.

3.5 A glance at Italian legislation

Having reached this point, it is appropriate to take a legal look at what has happened in Italy on the subject of market abuse and insider trading, through an analysis of the most relevant stages that have marked the evolution of Italian legislation up to the discipline currently in force.

In Italy, it was only in the 1990s that the European Directive 89/592/EEC was transposed with Law 157/1991, which recognised the illegality of the insider trading phenomenon and emphasised its criminal relevance, combining it with administrative sanctions. This law punished, in Article 2, the carrying out of buying or selling transactions, or other transactions, including through intermediaries, in securities where confidential information was possessed. The prohibition was then extended, by Article 2(2), also to the disclosure to third parties of such information in the absence of a justified reason (so-called tipping) and the recommendation to third parties to carry out such transactions without disclosing to them the inside information possessed (so-called tuyautage).

The punitive structure of Law 57/1991, therefore, took its cue from the American-style disclose or abstain rule, which forced insiders to disclose information before trading on the stock exchange or to abstain altogether from trading in securities.

With the passage of time, it gave way to the Draghi Law of 1995, later the Consolidated Law on Financial Matters, more commonly known as the TUF (Legislative Decree No. 58 of 1998).[105]

The Testo Unico della Finanza was undoubtedly a turning point for the country's financial market. This monumental regulatory volume, enacted on 24 February 1998, brought together, simplified and improved the many laws that previously regulated the world of the stock market and investment. It must also be said that, compared to the first drafted version, the one we read today has undergone several changes to incorporate and adapt to European regulations.

Just to give an idea of the context in which the TUF was born, it is worth recalling that it represented an attempt to adapt the legal system to the changed conditions of finance and was part of a model of market capitalism in which finance was at the service of industry to support its development. Consequently, regulation had to regulate the markets and their organisation in such a way as to enable their development in the European and international context, while ensuring adequate investor protection.

As anticipated, the TUF underwent numerous amendments over the years, most of which resulted from the need to implement EU directives. These directives were issued on the basis of Financial Services Action Plan (FSAP), which aimed to harmonise regulation and increase the integration of financial markets in Europe.

The Plan led to the formation of a new body of rules (rulebook) for the financial markets consisting mainly of the following measures: International Accounting Standards Regulation (2002); Prospectus Directive (2003); Company Transparency Directive (2004); Markets in Financial Instruments Directive (MiFID) (2004); UCITS IV Directive (2009). The new rules led to corresponding reforms of the TUF in the following years.[106]

Returning to the central issue, i.e. the rules on insider trading, the articles of interest within the TUF are those between 180 and 187 contained in Title I-Bis “Abusi di mercato”. This part identifies the wording of the basic offences, the accessory sanctions

[105] Longo, M. (2018). I 20 anni dalla legge Draghi: così la Borsa è cambiata. Il Sole 24 Ore. https://www.ilsole24ore.com/art/i-20-anni-legge-draghi-cosi-borsa-e-cambiata-AEBeP26D

[106] Consob (2019) A 20 anni dal TUF (1998-2018): verso la disciplina della Capital Market Union? Atti del convegno Banca d’Italia – Consob. Roma, Banca d’Italia, 6 novembre 2018. Quaderni giuridici.

and the procedural rules, including the powers granted to Consob in investigating the offence in question.

Compared to the first legislation in the field, Law 57/1991, with the drafting of the TUF a common line was maintained with regard to the type of prohibited conduct, however, on the other hand, distance was taken with regard to the disclose or abstain rule, which was then abandoned and replaced by a model centred on the causal connection between unlawful conduct and the possession of privileged information. In this way, there was a transition from a punishment based on the mere possession of inside information to one based on the actual exploitation of the information.
Moreover, with the 1998 reform, a difference in sanctioning treatment between those who fall into the category of primary insiders and those who fall into the category of secondary insiders began to be defined, thus following the route of EU legislation, which in turn took its cue from the American route.
Although it was only with the entry into force of the 2004 EU law (implemented in Italy by Law 62/2005) that these differences were tightened up: penalties for the criminal conduct of primary insiders are punishable by imprisonment of one to six years and a fine of up to EUR 3 million (which may be increased by the judge up to three times or up to the greater amount of ten times the product or profit obtained from the crime); the act committed by secondary insiders was instead downgraded from a crime to an administrative offence.

Finally (so to speak since the changes to the TUF do not stop with the implementation of MAR and MADII), the EU landscape on insider trading was then innovated by Regulation (EU) No. 596/2014 and Directive No. 57/2014 (which, in Italy, was implemented by Legislative Decree No. 107/2018).
In particular, the regulatory pair, while retaining several elements that already characterized the previous discipline, resulted in a significant reversal of the relationship between criminal and administrative sanctions.

As mentioned, these articles also outline the powers in the hands of Consob (more precisely in Chapter IV from Article 187-octies).

3.5.1 The role of Consob as supervisory authority

In Italy, the body in charge of supervising the financial market and stock market transactions is Consob. In this regard, CONSOB is the competent authority to ensure the transparency and fairness of the conduct of financial market participants, the full disclosure of complete and accurate information to the investing public by listed companies, the accuracy of the facts represented in prospectuses relating to the public offering of securities, as well as to investigate potential violations of the law on insider trading and market manipulation.
Going into more detail of this authority's action toward market abuse, Article 187-octies paragraph 3 reports that Consob may:

a) Request news, data or documents in any form;
b) Request any existing records relating to telephone conversations, communications electronic and data exchange;
c) Conduct personal hearings;
d) Proceed to seize assets in accordance with Article 187-sexies;
e) Proceed with inspections;
f) Proceed with searches.

In addition to carrying out other activities listed in paragraph 4 of the same article.

In order to take stock of the situation, Consob, in addition to imposing the administrative sanctions provided for by law, carries out an ex-ante control, being able to perform all the acts necessary to ascertain the violation of the provisions.
The measure by which Consob imposes the pecuniary sanction constitutes an enforcement order and, once the time limit for payment has expired unsuccessfully, it proceeds to recover the sum in accordance with the rules laid down in respect of collection.

Returning to the ex-ante control carried out by Consob, it is increasingly a need to define a procedure that prevents and precedes unlawful acts constituting market abuse. Obviously, attempting to anticipate the occurrence of these phenomena, thus proving that a given subject is intent on committing an act of insider trading or market manipulation, is extremely difficult and probably of little legal value. However, in terms

of safeguarding market integrity and efficiency, it would be an activity that could drastically change the market.

In order to be able to develop a real method to detect market abuse phenomena in real time, the aid of probability theory and accurate and precise mathematical models (which will not be studied in this paper) is certainly required. However, we would like to point out how, according to certain Market Abuse Detection procedures developed by various scholars, it is possible to detect the potential presence of market abuse phenomena through the study of a series of alerts. What is therefore examined and monitored are mainly the information flows related to securities trading on the financial markets available to the Supervisory Authority (such as trading volumes of the security and stock returns or static and dynamic market concentration).
In identifying this set of alerts to be monitored, supervisory experience and empirical observation of the various market abuse phenomena detected by Consob was also crucial.

Consob's experience also derives from the use of increasingly refined analytical tools, which aim to assess the economic impact of unlawful conduct on market integrity and the possible harm caused to investors. Such analyses are not completely disconnected from the legal reasoning that leads to the formation of laws; indeed, it is important to remember that the sanction to be imposed on agents, who engage in market abuse conduct, cannot disregard assessments of the economic-financial effects that such conduct has on markets and on investors.[107] For insider trading cases, for example, once the inside information has been identified, its price sensitivity must be assessed, as well as the value of the information the various insiders appropriate to the detriment of the market.[108]

[107] Minenna M. (2003). L'individuazione dei fenomeni di abuso di mercato nei mercati finanziari: un approccio quantitativo. Quaderni di Fiananza n. 54, Consob.
[108] Minenna M. (2002). Inside Insider trading. Risk, March 2002, pp. 93-97
Minnena proposes a new probabilistic methodology to analyse insider trading cases and calculate the proper amount of disgorgement, ie, the amount the insider should have to pay in order to relinquish (or disgorge) his capital gain from taking advantage of preferential information.

Chapter 4 - An investigation into the protection provided to investors

This chapter seeks to investigate the ability of regulations, examining the US discipline given its earlier advent than others, to protect investors from the market abuses that have been analysed in previous chapters.
By making this type of analysis, we aim to arrive at an understanding of the possible problems of regulation on the topic and whether regulation of insider trading can be effective.

4.1 Brief reminder on the theories for and against market abuse restrictions

In Chapter 2 Section 4 ("Insider trading: historical origins and theories compared") of this paper, the various theories for or against restrictions on phenomena such as insider trading have already been presented. Indeed, the literature has shown that such conduct can produce both positive and negative effects.
It is possible to therefore briefly summarise the reasons for opposing restrictions and limitations on insider trading practices together with the arguments that, on the other hand, are in defence of such anti-insider trading regulations.

The main reasons in favour of anti-insider trading regulations and restrictions imposed by law can be summarised in the following points:

I) As emphasised several times during the research, one of the main objectives of financial market regulation is precisely to increase investor confidence. This is something that should not be left as a mere theoretical concept, as increased investor confidence will increase the funds they will invest in shares, raising prices and reducing companies' costs of capital.
If this strand is also joined by the line of thought that is based on market egalitarianism, it is not difficult to deduce that many people are in favour of regulations restricting insider trading partly because they believe that these regulations help to create fair markets, which reward traders for the in-depth research that anyone could do rather than for the personal connections that only some people have.

This leads to a market in which investors profit more or less based on their greater or lesser ability to perform market analysis, and not because of a highly asymmetric distribution of information, allowing all traders to compete on a similar basis.

II) One aspect that I did not dwell on much earlier concerns why it is necessary to maintain investor confidence and protect outsiders (among whom are uninformed traders) from these practices. The answer may seem somewhat obvious, but in fact the role played by this class of actors is crucial in keeping the game of financial markets alive. Indeed, they improve market liquidity and, by removing an important class of informed traders from the game, this liquidity is not slowed down.

Insider trading, therefore, hurts traders who provide liquidity, consequently increasing dealer bid-ask spreads and transaction costs for uninformed or limit order traders.

III) What about corporate control? Not trying to eliminate this practice would encourage dishonest managers to take decisions based on their own interests, maximising their only advantage as informed traders, and not on those of the company, which may face a decrease in its value. Insider trading rules help to ensure that managerial labour markets operate efficiently and that managers do not abuse their positions within companies.

The most damaging effect of unrestricted insider trading is that it makes insiders reluctant to share information, even with directors and shareholders. As a result, it is more difficult for directors to evaluate and monitor company managers, and more difficult for shareholders to evaluate their own investments.

Let us now look at the other side of the same coin, analysing some reasons for allowing insider trading:

i) From the perspective of the investigation that must be put in place by supervisors to detect possible cases of market abuse, the costs involved in implementing efficient investigation systems could be significant. Even these costs may exceed the economic value that would be gained by applying the penalties provided by law.

The generally low probability of detection means that no reasonable punishment will deter unethical people from illegal insider trading. It is, therefore, considered unproductive to have laws that cannot be effectively enforced.

ii) Insiders are obviously well-informed traders, which has an impact on the prices of their orders, which push prices towards their fundamental values. From a certain point of view, it can therefore be said that restrictions on insider trading make prices less informative.

iii) In Chapter 2, we anticipate the view of Henry Manne (1966), who argued that insider trading incentivises managers to engage in entrepreneurial behaviour. How does it work? managerial compensation is based on the fact that managers with valuable and innovative ideas can create their own reward by buying shares in their company before the idea becomes public knowledge and, then, selling the shares when their price reflects the value of the new idea. People's entrepreneurship is developed in this way (we are not talking about a scheme only for managers but for all employees).

However, one must also bear in mind the risks associated with this scheme: although the reward (resulting from insider trading) for implementing a good idea can be very great, on the other hand the insider also risks losing if share prices fall.

From the company's point of view, it is obvious that it must try to hold on to such employees because if employees with good ideas cannot profit from them, they might quit and take them elsewhere, thus losing both the business idea and a greater competitive position.

I wanted to take up, through the main points, the two opposing positions (in the past, but probably also today) on the subject of insider trading with the aim, in the following paragraphs, of investigating how and from what exactly the legislation protects investors.

This will be done by means of a twofold analysis: first by trying to understand how the authorities seek to detect insider trading cases, and then by analysing the effectiveness regulatory framework in place.

4.2 Some numerical and statistical evidence

Before delving into a more detailed analysis of the techniques used to detect insider trading cases, I think it is important to show some numbers and statistics that tell the story of the market abuse phenomenon over the years.

Looking at fiscal year 2021 (ended Sept. 30, 2021), enforcement statistics showed a 7 percent increase from the previous year, from 405 stand-alone actions in 2020 to 434 in 2021.

However, "*The agency filed 697 total enforcement actions in fiscal year 2021, including the 434 new actions, 120 actions against issuers who were delinquent in making required filings with the SEC, and 143 "follow-on" administrative proceedings seeking bars against individuals based on criminal convictions, civil injunctions, or other orders. This represented a 3 percent decrease over the total actions filed in fiscal year 2020.*" as is reiterated in the press release "SEC Announces Enforcement Results for FY 2021"[109].

In these numbers, one cannot avoid considering the presence of the pandemic situation brought by Covid-19, which thus affected both FY 2020 and 2021. Therefore, if one goes to compare the completed year of 2021 with the fiscal year of 2019, one can see a very substantial decrease of more than 17 percent in stand-alone enforcement actions (434 in 2021 vs. 526 in 2019).

It should also be specified that the new chairman of the SEC, Gary Gensler, did not come on board until April 2021, while the new director of the Division of Enforcement, Gurbir S. Grewal, arrived at the end of July, two months before the end of the fiscal year. These transition events also partly affected the numbers described above.

Taking a broader timeline to the past, as can be seen from Chart 1 and Table 1[110] below, the total number of actions taken by the SEC's Enforcement Division in 2021 was the lowest in the last five fiscal years. Also not escaping from this trend are the stand-alone enforcement actions initiated in 2021, which, although they increased from 2020 as mentioned earlier, were lower than in any year since 2016.

[109] U.S. Securities and Exchange Commission (SEC) (2021). "SEC Announces Enforcement Results for FY 2021". https://www.sec.gov/news/press-release/2020-266

[110] The data are derived from the "Addendum to Division of Enforcement press release Fiscal Year 2021"

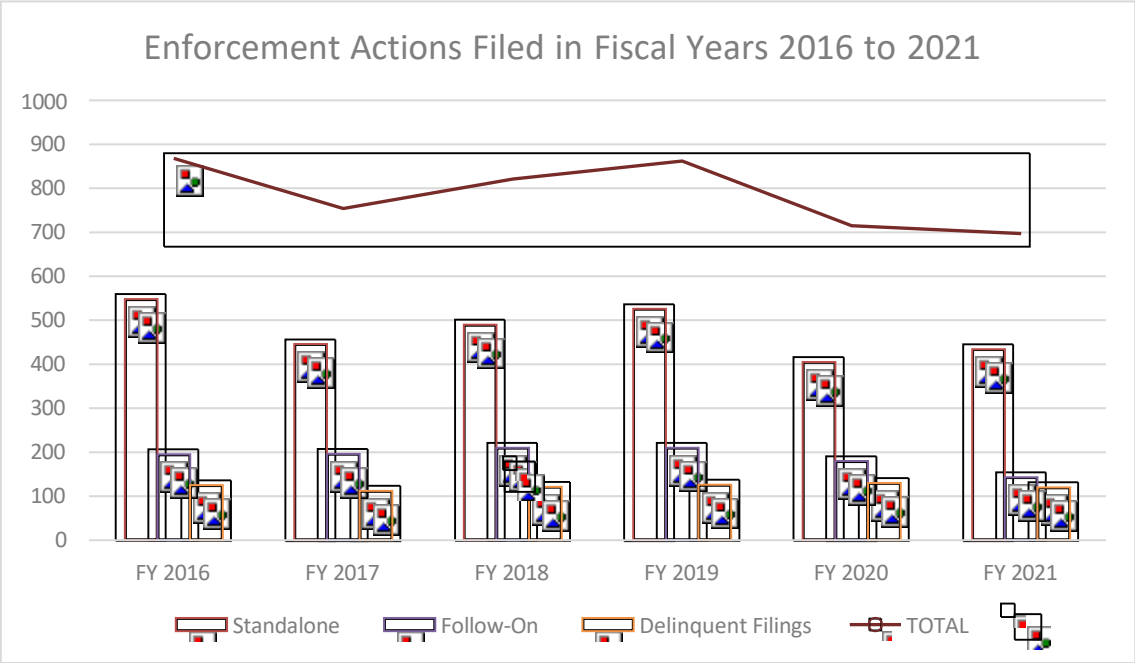


Chart 1: Enforcement Actions Filed in Fiscal Years 2016 to 2021

Enforcement Actions Filed in Fiscal Years 2016 to 2021

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Standalone Enforcement Actions	548	446	490	526	405	434
Follow-On Admin. Proceedings	195	196	210	210	180	143
Delinquent Filings	125	112	121	126	130	120
TOTAL ACTIONS	**868**	**754**	**821**	**862**	**715**	**697**

Table 1: Data related to Chart 1

For a better focus on market abuse cases, the Addendum provided by the SEC highlights a division of cases by subject matter.

In FY2021, SEC Enforcement actions focused on insider trading cases total 28, while market manipulation cases total 31.

Appendix I contains details of a primary classification of enforcement actions for FY 2021 provided by the Addendum to Press Release 2021-238.
Aggregating the data provided by the Annual Reports of the SEC Enforcement Division, I wanted to extrapolate the numbers related to actions taken on insider trading and market manipulation from fiscal year 2018 to 2021, as is depicted in Table 3.
It can be seen that the number of actions taken on market manipulation remains fairly stable over the years, while the actions on insider trading are more fluctuating, in particular there was a surge of actions in 2018, with a total of 51 actions (37 of which correspond to Civil actions and the remainder are Stand-alone Administrative Proceedings).

Enforcement Summary Chart by Primary Classification in FY 2018 to 2021

	FY 2018	FY 2019	FY 2020	FY 2021
Insider Trading	51	32	33	28
Market Manipulation	33	33	28	31
TOTAL	**84**	**65**	**61**	**59**

Table 2: Enforcement Summary Chart by Primary Classification in FY 2018 to FY 2021

4.3 Monitoring and detection of insider trading cases

Therefore, starting with the first aspect, we will analyse the methodologies used, in the past and to date, by the SEC to monitor and detect possible cases of insider trading.
The work carried out by the SEC is taken as a reference because, again, the supervisory authorities operating in other markets have taken their cue from the moves and studies carried out by the SEC.

In "*An Empirical Analysis of Illegal Insider Trading*" (Meulbroek, 1992)[111], the techniques used by the SEC to detect illicit phenomena are explained.
In particular, the main sources from which the SEC starts its investigation are identified during the analysis. Thus, public complaints emerge as the main sources of

[111] Meulbroek, L. K. (1992) An Empirical Analysis of Illegal Insider Trading. The Journal of finance (New York). [Online] 47 (5), 1661–1699.

investigations, followed by stock exchange reports. Moreover, are also taken into account all indications from press reports, memoranda or telephone conversations, broker reports and so on.[112]

To try to reinforce the help that comes from information from complaints and "tips" from the public, in 1988 Congress even gave authority to the SEC to promote a programme that rewards whistleblowers who lead to the recovery of a civil penalty from an insider.

It is indeed possible to read the following words reported in the "*Insider Trading and Securities Enforcement Act of 1988*":

> "*(...) there shall be paid from amounts imposed as a penalty under this section and recovered by the Commission or the Attorney (General, such sums, not to exceed 10 percent of such amounts, as the Commission deems appropriate, to the person or persons who provide information leading to the imposition of such penalty. Any determinations under this subsection, including whether, to whom, or in what amount to make payments, shall be in the sole discretion of the Commission, except that no such payment shall be made to any member, officer, or employee of any appropriate regulatory agency, the Department of Justice, or a self-regulatory organization. Any such determination shall be final and not subject to judicial review.*"[113]

The one described above represents another type of mechanism adopted to prosecute insider trading. It can almost be compared to a bounty placed over the heads of those who engage in insider trading, in true American style. However, in the first few years of application, the program did not seem to be very successful as the numbers did not show an increase in indictments or a decrease in insider trading; however, with the passage of time and increasing application of the program, the first important numbers began to be seen (see paragraph 4.3.1).

In addition, it is well known that the insider acts to fill his or her portfolio, keeping in mind the possible penalties he or she faces and carefully considering whether it is worthwhile to engage in insider trading, and it therefore becomes difficult to assess the

[112] The Appendix G shows the table reported in the paper of Meulbroek, L. K. (1992) (Table VII: Source of SEC Case Investigation by Number and Percent of Insider Trading Episodes)

[113] Insider Trading and Securities Enforcement Act of 1988, November 19, 1988, Public Law 100-704 100th Congress. Sec 21A (e), H.R. 5133

extent to which such a program would be effective in deterring the insider from carrying out his or her actions.

However, what the various studies in this field have in common is their focus on one particular aspect that characterises insider trading: the unusual price movements that the phenomenon triggers in the market.

The idea behind this concept is that the stock market detects and imprisons information in the share price, hence insider trading is associated with immediate price movements and rapid price discovery. Obviously also thanks to these movements, insiders might be able to make a not inconsiderable profit, buying at a lower price and reselling at a higher price, when by then the information has been incorporated into the price.

It is therefore possible to say that an ambiguous movement observed in the market (prior to the announcement of a merger or acquisition, a corporate event, or other significant news that actually causes a sudden movement in the stock price when it becomes public) is a red flag that should stir the supervisors. Investigative actions based on circumstantial evidence are referred to at this point.

To get a clearer idea of how the mechanism for detecting and prosecuting insiders based on circumstantial evidence works, consider, for example, observing trading volumes in a financial market. If the trading volume numbers of a trader all of a sudden spurt upward, we can call it “abnormal” compared to its usual, therefore, the regulator will consider that such a transaction was made on the basis of insider information and start the thorough investigation. Likewise, if it is a matter of observing “ambiguous” price movements before the information related to such movements becomes public.

Observed parameters are not defined as abnormal on a subjective basis, but rather on the basis of certain thresholds, established a priori by regulators with statistical data in hand.

It is also true that this methodology is not without its flaws; in fact, it is not difficult to imagine that once insiders become aware of the parameters set by regulators, based on which they begin to suspect, they will strategically modify their behaviour to avoid investigation.[114]

[114] Spiegel, M. & Avanidhar, S. (1995), The Efficacy of Insider Trading Regulation. University of California at Berkeley, Institute of Business and Economic Research WP 257

Insiders with more accurate insider information will then adapt their trading strategy by avoiding, for example, reaching trading volumes above the threshold set by the regulator. On the other hand, however, another consideration must be made, namely that individuals with less accurate information have less ability/possibility to predict the magnitude of stock price changes resulting from their transactions, consequently they will be more likely to trigger investigations. Thus, one conclusion is reached: when the regulation of insider trading relies on statistical evidence to detect and prosecute insider trading, the population of individuals who will be prosecuted will essentially consist of individuals who have been trading on the basis of less relevant and accurate information.

Spiegel and Subrahmanyam's research thus seems to provide an explanation for why insider trading regulation cannot be effective in deterring insiders from trading on material non-public information when based solely on circumstantial evidence.

4.3.1 Development of new methods and new technologies in the area of investigation.

As argued throughout this paper, technological developments have radically changed the market structure, bringing improvements in several respects. For example, investors can more easily access a wider range of information and trade in the market online through the platforms that have developed. At the same time, however, the ways in which market abuse is carried out have also adapted to the changes. In short, these technological developments have necessitated a radical change in the methods of investigation and prevention.

In today's fast-moving, complex, and changing marketplace, the SEC's scope of action has been to strengthen on two aspects that have become of utmost importance with the advent of technology: on the one hand, increasing speed and efficiency through the use of advanced analytical data, which enable the rapid detection of insider trading cases; on the other hand, the SEC has also begun to place increasing emphasis on small violation cases, i.e., those involving fewer people and modest profits. This is to achieve the goal of zero tolerance.

First of all, an organizational change was made in the SEC in 2010, precisely in order to move closer in every way to the new goals. Specialized units were created within the enforcement division, including the Market Abuse Unit (MAU). Through it came the development of a platform to study traders' decisions, that is, how they use information to make trading decisions and how the flow of information moves from trader to trader. As a result, MAU personnel were able to refine how suspicious activity was identified and to modify tactics and strategies for investigation.

In a speech given by former SEC Chair Mary Jo White in October 2013, this initiative, of wanting to focus on even small violations, was called "*Broken Windows*. It is based on the idea that if a broken window is repaired, then a signal of non-tolerance and strength is given; on the contrary, a signal of weakness and little interest in smaller damages is perceived.

> "*The same theory can be applied to our securities markets – minor violations that are overlooked or ignored can feed bigger ones, and, perhaps more importantly, can foster a culture where laws are increasingly treated as toothless guidelines. And so, I believe it is important to pursue even the smallest infractions. Retail investors, in particular, need to be protected from unscrupulous advisers and brokers, whatever their size and the size of the violation that victimizes the investor.*"[115]

It is possible to note the results of the strategies anticipated in Mary Jo White's speech already in the report "Securities Enforcement 2014 Year-End Review" covering the year 2014[116]. Indeed, it is illustrated through a pie chart, shown in Figure 2 below, that in FY 2014, the SEC filed a total of 755 enforcement actions, which was a record compared to previous years. In fact, in FY 2014, the SEC filed 69 more enforcement actions than in FY 2013 (when a total of 686 were filed) and 21 more actions than in FY 2012 (when a total of 734 were filed). This increase certainly reflects the continued implementation of the efforts envisioned by the "Broken Windows" enforcement philosophy that the former SEC chairman mentioned.

[115] Speech of Chair Mary Jo White (2013). Remarks at the Securities Enforcement Forum. Washington D.C. https://www.sec.gov/news/speech/spch100913mjw
[116] Shearman & Sterling LLP (2015). Securities enforcement 2014 Year-End Review.

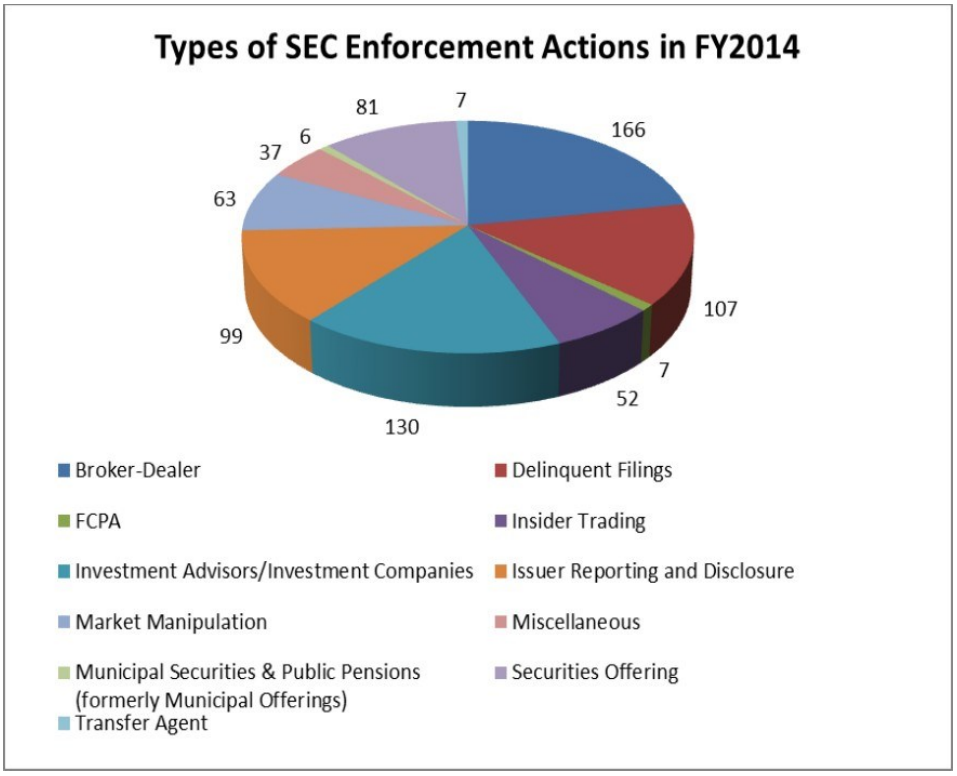


Figure 1: Chart reported in the "Securities Enforcement 2014 Year-End Review"

Putting together the numbers involving market manipulation and insider trading cases, it came to a total of 115. The data in the report provide more details regarding the changes from previous years: market manipulation cases increased by 26 percent compared to 2013, while insider trading cases experienced an increase of 18 percent.

In addition, it is also noted that FY 2014 showed a significant increase in civil penalties and reparations. In fact, the SEC obtained $4.16 billion in damages and civil penalties, up from the $3.4 billion and $3.1 billion obtained in FY 2013 and FY 2012, respectively.

In the speech of Mary Jo White, the main points of reinforcement put in place to detect any form of illicit activity, regardless of size, are announced. It is then emphasized that in order to ferret out even the smallest forms of violations, regulators must certainly improve market presence, making the most of the National Exam Program of examinations and resources at registered entities, such as brokers and dealers or investment advisers, to improve compliance and monitor the latest risks that only those in direct contact with investors can see.

The whistleblower reward program, introduced in 1988 by Congress, despite criticism, is being retained because the evidence of possible wrongdoing provided by these figures is considered too crucial to be overlooked by authorities.

Through the incentive program, more and more whistleblowers are expected to provide information regarding possible wrongdoing, and, in addition, such tips are expected to be increasingly specific and timely.

In FY2014, the SEC issued nine whistleblowers awards, totalling over $31 million.

As of year-end 2021, the SEC has awarded approximately $1.2 billion to 236 individuals since issuing its first award in 2012.

From the chart below taken from the 2020 annual report, it is possible to see how the program has progressed by comparing the number of whistleblowers awarded and the amount awarded in millions over the years.[117]

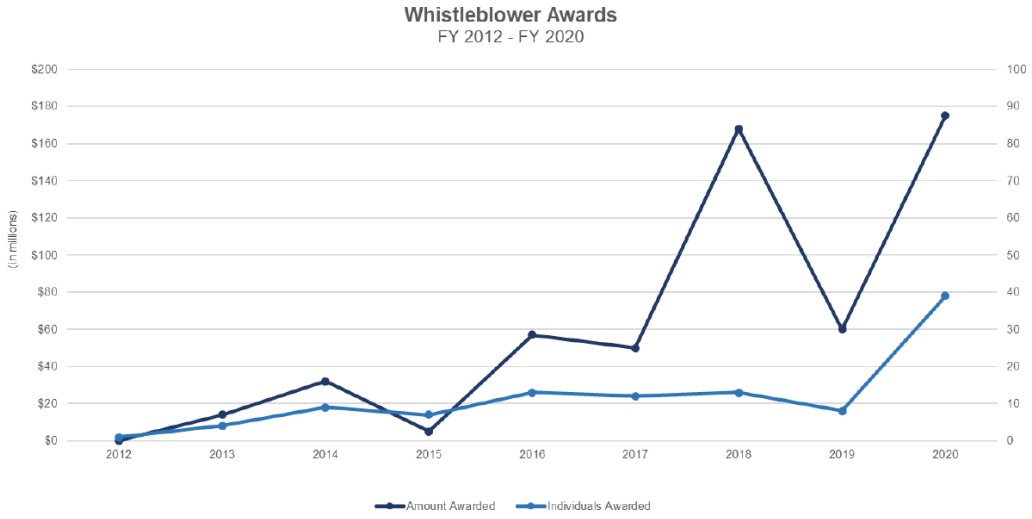


Figure 2: Chart reported in the "Enforcement Annual Report 2020"

This program is being pursued because, although sources may not always be reliable and lead to the actual indictment of an insider, it discourages potential offenders and causes them to have to worry about who is watching and whether they can carry out the wrongdoing safely.

[117] U.S. Securities and Exchange Commission (SEC) (2020). "SEC Division of Enforcement Publishes Annual Report for Fiscal Year 2020". https://www.sec.gov/news/press-release/2020-274

A further step forward has been taken through the development of technology, particularly with the so-called Advanced Bluesheet Analysis Program (ABAP). The program enables computers to analyse both data that are provided by market participants and data in systems related to specific securities transactions. It then identifies what is suspicious before market events occur. In addition, it shows the relationships among the different players involved in trading, relationships that may not have been apparent at first.

This turns out to be a trader-based approach, which is opposed to the approach described earlier that was based instead on securities.

It in fact examines or extracts "blue-sheet" data to identify and analyse individual and institutional traders and determine which securities they trade. It then creates a detailed analysis of the traders and their behaviour to look for how they move and subsequently try to anticipate them.[118]

> Mary Jo White also added in the speech:
> "*We are using data analytics and related technology to enable us to conduct predictive analysis and spot trends, streamline our investigative efforts and leverage new data sources such as Form PF, which collects information from private funds – hedge funds, private equity funds – on, among other things, the type and size of assets they hold.*"

Other technologies have subsequently been deployed in the area of financial fraud. These include the Aberrational Performance Inquiry, which looks for suspicious returns published by hedge fund advisers to identify candidates for examination or investigation; and the Accounting Quality Model, which looks for anomalies in financial statements to identify potential financial fraud.

[118] Ehret, T. (2017). SEC's advanced data analytics helps detect even the smallest illicit market activity. Financial Regulatory Forum. https://www.reuters.com/article/bc-finreg-data-analytics-idUSKBN19L28C

4.4 The effectiveness of the regulatory framework

Having understood what the tools used by the SEC's Enforcement Division to detect and investigate insider trading cases have been and how they have evolved, we now turn to the second aspect of the analysis, which is to try to understand whether the regulatory framework for market abuse is effective.

In creating the existing regulatory framework in the United States on market abuse, and more specifically on insider trading, the regulator was faced with several issues related to the subject.
Indeed, one of the problems that the regulator had to and still has to deal with is the nature of information, which characterizes it as an intangible good. As such, it is difficult to observe its flow and therefore, compared to a physical good, no physical barrier can prevent its circulation.

The circulation of information becomes an additional problem to be solved, since even if the insider refrains from trading the insider information in his or her possession, it is not certain that he or she will not disclose it to third parties. This problem is exacerbated when there is more than one person who has access to the information, as happens on a daily basis in corporations, where there are several people who regularly come across insider information. This then creates a chain of communication that is difficult for regulators to break, or in any case it is difficult to trace back to the source, that is, who started the circulation of the information.

Finally, the more complex the network through which information flows, the more chance there is that it will be subject to transformation. In other words, as individuals interpret differently from one another, information flowing through the network will arrive at the end of the stream differently from how it started out in its original form. Consequently, even if the regulator has succeeded in identifying a potential illegal transaction based on insider information, it still has to identify what insider information the potential wrongdoer has based his transaction on.
This aspect can lead to unexpected price swings and considerably divert uninformed traders trying to chase what is happening in the market.

But it is important to understand how the law has acted to limit phenomena such as insider trading.

Having before us the U.S. regulatory framework, analysed in previous chapters, it can be said that the regulator has used two main swords to strike, or at least limit, insider trading: one stems from Rule 10b5 and the other from Section 16b. The former imposes the most notorious limit, by prohibiting all traders from profiting from private information (Section 10b5 of the Securities Exchange Act of 1934). Section 16b (Securities Exchange Act of 1934) is one of the first that intervened to regulate the phenomenon at the federal level. In fact, it prevents insiders from profiting from "short-swing" trades, within the defined time frame of 6 months. Thus, any profit from buying transactions followed by selling (or vice versa) must be returned to the company. In addition to the fact that insiders must report all transactions to the U.S. Securities and Exchange Commission (SEC) on Forms, so violations of this mechanical rule are obvious and quickly remediable.

Starting with Rule 10b5, it is important to know that regulators have done several restorative works on it even after witnessing several insider trading scandals that occurred in the 1960s. They then wanted to broaden the scope of the Rule to apply it to securities transactions by corporate insiders. It is good to remember that in order for insiders to be held liable under 10b5, two important factors must be established: the first is guilt or fraudulent intent, which plaintiff/plaintiff must prove by establishing that the insider knowingly used private and material information to profit from transactions with outsiders; the second factor concerns the characteristics of the information, which must be private and material.

As mentioned above, among the difficulties that come before the regulator to prosecutors are the requirements of Rule 10b5. Indeed, it can be seen that these cases are infrequent in the sense that it is more difficult for the SEC to initiate enforcement actions under Rule 10b5. Similarly, civil parties also appeal less under this rule when they file insider trading class actions.[119]

[119] Comolli, R., and S. Starykh. Recent Trends in Securities Class Action Litigation: 2014 Full-Year Review. New York, NY: NERA Economic Consulting (2015).

Thus, although on the one hand the Rule may be criticized for being difficult to use in bringing lawsuits, on the other hand it is sometimes credited for curbing high insider trading profits by itself, without mentioning Section 16(b).

According to findings published by Roger M. White in the "Journal of financial and quantitative analysis"[120], the presence of a clear rule prohibiting insiders from profiting from short-term transactions, through thus Section 16(b), is extremely necessary to counter the illicit phenomenon.

The usefulness and effectiveness of Section 16(b) of SEA34 has been the subject of several debates in the world of securities law literature; however, in these debates, it has often been forgotten to describe its importance. As in any debate there are opponents, such as O'Connor[121], who see it as irrational and of little use compared to the rest of the regulations in place, stating that "*new weapons in the insider trading arsenal have rendered section 16(b) obsolete*" (O'Connor, 1989) and countering this are the supporters (Macchiarola (2014)[122] of this part of the law, which is thus seen as fundamental to achieving the purpose of investor protection.

In contrast to the Rule 10b5, in this case we are looking at a very different situation. The short-swing prohibition provides a clear, rule-based restriction that is easy to observe and enforce, and, therefore, we do not encounter the difficulty (as with Rule 10b5) of having to prove particular actions or characteristics. This is also why it is more difficult to keep track of the number of legal actions taken under Section 16b, since most of them are not even filed in court (due to the ease of assigning liability they are often resolved quickly before filing).

To emphasize the importance of Section 16b in the regulatory framework against insider trading, Roger M. White in "Insider Trading: What Really Protects U.S.

[120] White, R. M. (2020) Insider Trading: What Really Protects U.S. Investors? Journal of financial and quantitative analysis. [Online] 55 (4), 1305–1332.

[121] O'Connor, M. A. (1989) Toward a more efficient deterrence of insider trading: the repeal of Section 16(b). Fordham law review. 58 (3), 309–.

[122] Macchiarola, M. C. "Tilting at Insider Trading Windmills." University of Pennsylvania Law Review Online, 163 (2014), 61–74.

Investors?"[123] develops a reverse analysis, i.e., examines the performance of the regulatory framework in the absence of that Section.

Based on an examination of what profits from insider trading practices would look like in an environment without Section 16b, he comes to understand the effect of the remaining regulatory framework on the protection of outside investors. If then these profits (in the Section 16b-free context) turn out to be similar to those in conventional contexts, then it can be concluded that the rest of the rules provide good protection and cover most of the protection required for outsiders.

The results of the analysis lead to the understanding that the prohibition imposed by Section 16b is necessary in order to provide greater protection to outside investors. This does not mean that without it the system collapses, but it is as if a piece of the puzzle is missing. Indeed, as this empirical study suggests, when the short-swing insider trading ban is not binding, the remaining investor protection system does not provide adequate protection to outside investors in some cases.

Jhinyoung Shin's analytical study[124], in seeking what the optimal level of regulation should be, among several variables also takes into consideration that which concerns competition between insider traders and market professionals[125]. This is because the insider is not the only trader who trades on the basis of information about the firm, the difference is that the market professional uses resources and skills to re-capture that information that allows him to profit.

In the presence of stricter regulatory policy, the insider tries to adopt a less aggressive trading strategy through smaller order sizes, so as not to arouse the authorities' suspicion, even if this results in a lower expected profit. As a result, the market professional is given more room to act and thus trades more aggressively, expecting a higher profit.

[123] White, R. M. (2020) Insider Trading: What Really Protects U.S. Investors? Journal of financial and quantitative analysis. [Online] 55 (4), 1305–1332.

[124] Shin, J. (1996) The Optimal Regulation of Insider Trading. Journal of financial intermediation. [Online] 5 (1), 49–73.

[125] The term ‘‘market professional’’ used by Shin was taken from Fishman and Hagerty (1991) and Haddock and Macey (1987). Market professionals, unlike insiders, owe no fiduciary duty to the firms they study, and their trading on the information about the firms is not subject to regulation.

The presence of these types of traders also discourages outsiders from participating. However, they are not subject to the regulatory restrictions because the information they rely on they manage to obtain legitimately with efforts and resources at their disposal.
Thus, pursuing the goal of minimizing the trading losses of outsiders (who should not be forgotten that they provide liquidity to the market), it is necessary to unearth the right balance of regulation of insider trading, while also taking into consideration the competition between insider traders and market professionals (trying to maximize it).
As Jhinyoung Shin's analysis suggests, if market professionals are induced to improve the accuracy of their information by a stricter regulatory policy, then tolerance of some insider traders is the optimal regulatory policy, to balance the playing field between insiders and market professionals.

To conclude, if the rules are taken individually one by one, it can be said that none of them provide sufficient protection for investors, indeed there is always some kind of gap to be filled. On the other hand, if the legal framework as a whole is considered, each piece cooperates in building a puzzle and creating a synergy, which seems to have its effects in achieving the goals of greater confidence and protection of outside investors.

Conclusions

At the conclusion of this paper, there is now a need to fully highlight the most relevant aspects of what has been said so far.

The set of rules, regulations, guidelines and best practices, although they differ in some aspects according to the countries of reference, actually all converge toward a common discipline: the law is a tool to strive for market efficiency.

The idea of an intact market needs to be guarded and strengthened, both from an economic and cultural point of view. Accordingly, anything that threatens market integrity and efficiency should be eliminated. In this respect, the United States was the first to intervene with a comprehensive regulatory framework. To follow, other countries also emulated the U.S. path toward market regulation on market abuse and insider trading.

Arguments have been made both for and against insider trading, but it is now generally agreed that insider trading should be sanctioned because it undermines market efficiency by generating distrust and mistrust among traders.

So following the steps of the U.S. system, Europe has also developed anti-insider trading discipline. It was analysed how the need was also felt in Italy to regulate the securities market sector and to formulate a dedicated discipline through the development of the TUF.

Through numbers and statistics, it was intended to take a step toward studying how regulators in charge detect and monitor cases of insider trading and the effectiveness of the current regulatory framework in protecting outside investors.

Although the presence of well-funded securities regulators is a valuable protection, it is not sufficient unless accompanied by a clear rule prohibiting certain conduct that abuses the market and undermines it. The results illustrate that dissolving a single element of this regulatory framework could greatly increase the ability of insiders to extract wealth from uninformed outside investors.

It is good to remember that what these rules have most strengthened is investor confidence in the markets. This is something that should not be underestimated, since in the greatest moments of crisis that have occurred in history, lack of confidence in the markets has often been a key element to which a solution can be found. It is therefore

mainly thanks to the rules imposed and the increased attention of the supervisory authorities that the stock market has achieved its current success.

And it is with a quote from one of the chairmen of the SEC, Arthur Levitt, that I want to conclude this thesis:

> *"Our markets are a success precisely because they enjoy the world's highest level of confidence. Investors put their capital to work – and put their fortunes at risk because they trust that the marketplace is honest. They know that our securities laws require free, fair, and open transactions".*[126]

[126] Arthur Levitt, (1998) A Question of Integrity: Promoting Investor Confidence by Fighting Insider Trading, Remarks of Chairman Arthur Levitt to the "SEC speaks" Conference, Washington D.C.

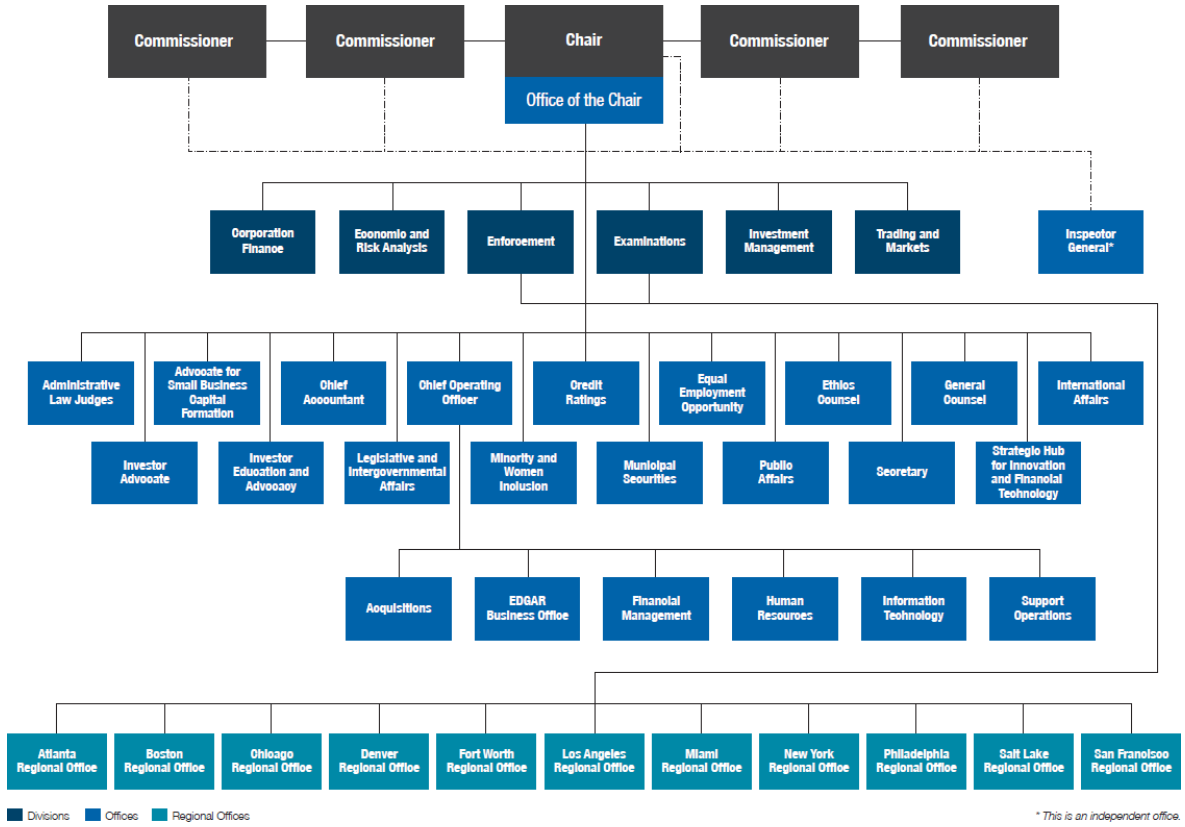
APPENDIX A

Table 1: Selected regulatory agencies belonging to IOSCO

COUNTRY	AGENCY
Argentina	Comisión Nacional de Valores
Australia	Australian Securities and Investments Commission
Austria	Financial Market Authority
Belgium	Financial Services and Markets Authority
China	China Securities Regulatory Commission
Denmark	Danish Financial Supervisory Authority
France	Autorité des marchés financiers
Germany	Bundesanstalt für Finanzdienstleistungsaufsicht
Greece	Hellenic Capital Market Commission
Hong Kong	Securities and Futures Commission
India	Securities and Exchange Board of India
Indonesia	Indonesia Financial Services Authority
Ireland	Central Bank of Ireland
Italy	Commissione Nazionale per le Società e la Borsa (Consob)
Korea	Financial Services Commission/Financial Supervisory Service
Luxembourg	Commission de Surveillance du Secteur Financier
Malaysia	Securities Commission
Maldives	Capital Market Development Authority
Mexico	Comisión Nacional Bancaria y de Valores
Netherlands	The Dutch Authority for the Financial Markets
Palestine	Palestine Capital Market Authority
Peru	Superintendencia del Mercado de Valores
Poland	Polish Financial Supervision Authority
Portugal	Comissão do Mercado de Valores Mobiliários
Qatar	Qatar Financial Markets Authority
Russia	The Bank of Russia
Saudi Arabia	Capital Market Authority
Singapore	Monetary Authority of Singapore
Spain	Comisión Nacional del Mercado de Valores
Switzerland	Swiss Financial Market Supervisory Authority
Tunisia	Conseil du marché financier
Turkey	Capital Markets Board
Ukraine	National Securities and Stock Market Commission
United Arab Emirates	Securities and Commodities Authority
United Kingdom	Financial Conduct Authority
United States of America	SEC + Commodity Futures Trading Commission

APPENDIX B

Figure 1: SEC Organization Chart



APPENDIX C

Details of Schedule A and Schedule B in the Security Act of 1933 (p. 64-69)

SCHEDULE A [77AA] (1) THE NAME UNDER WHICH THE ISSUER IS DOING OR INTENDS TO DO BUSINESS;

(2) the name of the State or other sovereign power under which the issuer is organized;

(3) the location of the issuer's principal business office, and if the issuer is a foreign or territorial person, the name and address of its agent in the United States authorized to receive notice;

(4) the names and addresses of the directors or persons performing similar functions, and the chief executive, financial and accounting officers, chosen or to be chosen if the issuer be a corporation, association, trust, or other entity; of all partners, if the issuer be a partnership; and of the issuer, if the issuer be an individual; and of the promoters in the case of a business to be formed, or formed within two years prior to the filing of the registration statement;

(5) the names and addresses of the underwriters;

(6) the names and addresses of all persons, if any, owning of record or beneficially, if known, more than 10 per centum of any class of stock of the issuer, or more than 10 per centum in the aggregate of the outstanding stock of the issuer as of a date within twenty days prior to the filing of the registration statement;

(7) the amount of securities of the issuer held by any person specified in paragraphs (4), (5), and (6) of this schedule, as of a date within twenty days prior to the filing of the registration statement, and, if possible, as of one year prior thereto, and the amount

of the securities, for which the registration statement is filed, to which such persons have indicated their intention to subscribe;

(8) the general character of the business actually transacted or to be transacted by the issuer;

(9) a statement of the capitalization of the issuer, including the authorized and outstanding amounts of its capital stock and the proportion thereof paid up, the number and classes of shares in which such capital stock is divided, par value thereof, or if it has no par value, the stated or assigned value thereof, a description of the respective voting rights, preferences, conversion and exchange rights, rights to dividends, profits, or capital of each class, with respect to each other class, including the retirement and liquidation rights or values thereof;

(10) a statement of the securities, if any, covered by options outstanding or to be created in connection with the security to be offered, together with the names and addresses of all persons, if any, to be allotted more than 10 per centum in the aggregate of such options;

(11) the amount of capital stock of each class issued or included in the shares of stock to be offered;

(12) the amount of the funded debt outstanding and to be created by the security to be offered, with a brief description of the date, maturity, and character of such debt, rate of interest, character of amortization provisions, and the security, if any, therefor. If substitution of any security is permissible, a summarized statement of the conditions under which such substitution is permitted. If substitution is permissible without notice, a specific statement to that effect;

(13) the specific purposes in detail and the approximate amounts to be devoted to such purposes, so far as determinable, for which the security to be offered is to supply funds, and if the funds are to be raised in part from other sources, the amounts thereof and the sources thereof, shall be stated;

(14) the remuneration, paid or estimated to be paid, by the issuer or its predecessor, directly or indirectly, during the past year and ensuing year to (a) the directors or persons performing similar functions, and (b) its officers and other persons, naming them wherever such remuneration exceeded $25,000 during any such year;

(15) the estimated net proceeds to be derived from the security to be offered;

(16) the price at which it is proposed that the security shall be offered to the public or the method by which such price is computed and any variation therefrom at which any portion of such security is proposed to be offered to any persons or classes of persons, other than the underwriters, naming them or specifying the class. A variation in price may be proposed prior to the date of the public offering of the security, but the Commission shall immediately be notified of such variation;

(17) all commissions or discounts paid or to be paid, directly or indirectly, by the issuer to the underwriters in respect of the sale of the security to be offered. Commissions shall include all cash, securities, contracts, or anything else of value, paid, to be set aside, disposed of, or understandings with or for the benefit of any other

persons in which any underwriter is interested, made, in connection with the sale of such security. A commission paid or to be paid in connection with the sale of such security by a person in which the issuer has an interest or which is controlled or directed by, or under common control with, the issuer shall be deemed to have been paid by the issuer. Where any such commission is paid the amount of such commission paid to each underwriter shall be stated;

(18) the amount or estimated amounts, itemized in reasonable detail, of expenses, other than commissions specified in paragraph (17) of this schedule, incurred or borne by or for the account of the issuer in connection with the sale of the security to be offered or properly chargeable thereto, including legal, engineering, certification, authentication, and other charges;

(19) the net proceeds derived from any security sold by the issuer during the two years preceding the filing of the registration statement, the price at which such security was offered to the public, and the names of the principal underwriters of such security;

(20) any amount paid within two years preceding the filing of the registration statement or intended to be paid to any promoter and the consideration for any such payment;

(21) the names and addresses of the vendors and the purchase price of any property, or good will, acquired or to be acquired, not in the ordinary course of business, which is to be defrayed in whole or in part from the proceeds of the security to be offered, the amount of any commission payable to any person in connection with such acquisition, and the name or names of such person or persons, together with any expense incurred or to be incurred in connection with such acquisition, including the cost of borrowing money to finance such acquisition;

(22) full particulars of the nature and extent of the interest, if any, of every director, principal executive officer, and of every stockholder holding more than 10 per centum of any class of stock or more than 10 per centum in the aggregate of the stock of the issuer, in any property acquired, not in the ordinary course of business of the issuer, within two years preceding the filing of the registration statement or proposed to be acquired at such date;

(23) the names and addresses of counsel who have passed on the legality of the issue;

(24) dates of and parties to, and the general effect concisely stated of every material contract made, not in the ordinary course of business, which contract is to be executed in whole or in part at or after the filing of the registration statement or which contract has been made not more than two years before such filing. Any management contract or contract providing for special bonuses or profit-sharing arrangements, and every material patent or contract for a material patent right, and every contract by or with a public utility company or an affiliate thereof, providing for the giving or receiving of technical or financial advice or service (if such contract may involve a charge to any party thereto at a rate in excess of $2,500 per year in cash or securities or anything else of value), shall be deemed a material contract;

(25) a balance sheet as of a date not more than ninety days prior to the date of the filing of the registration statement showing

all of the assets of the issuer, the nature and cost thereof, whenever determinable, in such detail and in such form as the Commission shall prescribe (with intangible items segregated), including any loan in excess of $20,000 to any officer, director, stockholder or person directly or indirectly controlling or controlled by the issuer, or person under direct or indirect common control with the issuer. All the liabilities of the issuer in such detail and such form as the Commission shall prescribe, including surplus of the issuer showing how and from what sources such surplus was created, all as of a date not more than ninety days prior to the filing of the registration statement. If such statement be not certified by an independent public or certified accountant, in addition to the balance sheet required to be submitted under this schedule, a similar detailed balance sheet of the assets and liabilities of the issuer, certified by an independent public or certified accountant, of a date not more than one year prior to the filing of the registration statement, shall be submitted;

(26) a profit and loss statement of the issuer showing earnings and income, the nature and source thereof, and the expenses and fixed charges in such detail and such form as the Commission shall prescribe for the latest fiscal year for which such statement is available and for the two preceding fiscal years, year by year, or, if such issuer has been in actual business for less than three years, then for such time as the issuer has been in actual business, year by year. If the date of the filing of the registration statement is more than six months after the close of the last fiscal year, a statement from such closing date to the latest practicable date. Such statement shall show what the practice of the issuer has been during the three years or lesser period as to the character of the charges, dividends or other distributions made against its various surplus accounts, and as to depreciation, depletion, and maintenance charges, in such detail and form as the Commission shall prescribe, and if stock dividends or avails from the sale of rights have been credited to income, they shall be shown separately with a statement of the basis upon which the credit is computed. Such statement shall also differentiate between any recurring and nonrecurring income and between any investment and operating income. Such statement shall be certified by an independent public or certified accountant;

(27) if the proceeds, or any part of the proceeds, of the security to be issued is to be applied directly or indirectly to the purchase of any business, a profit and loss statement of such business certified by an independent public or certified accountant, meeting the requirements of paragraph (26) of this schedule, for the three preceding fiscal years, together with a balance sheet, similarly certified, of such business, meeting the requirements of paragraph (25) of this schedule of a date not more than ninety days prior to the filing of the registration statement or at the date such business was acquired by the issuer if the business was acquired by the issuer more than ninety days prior to the fiing of the registration statement;

(28) a copy of any agreement or agreements (or, if identical agreements are used, the forms thereof) made with any under-

writer, including all contracts and agreements referred to in paragraph (17) of this schedule;

(29) a copy of the opinion or opinions of counsel in respect to the legality of the issue, with a translation of such opinion, when necessary, into the English language;

(30) a copy of all material contracts referred to in paragraph (24) of this schedule, but no disclosure shall be required of any portion of any such contract if the Commission determines that disclosure of such portion would impair the value of the contract and would not be necessary for the protection of the investors;

(31) unless previously filed and registered under the provisions of this title, and brought up to date, (a) a copy of its articles of incorporation, with all amendments thereof and of its existing bylaws or instruments corresponding thereto, whatever the name, if the issuer be a corporation; (b) copy of all instruments by which the trust is created or declared, if the issuer is a trust; (c) a copy of its articles of partnership or association and all other papers pertaining to its organization, if the issuer is a partnership, unincorporated association, joint-stock company, or any other form of organization; and

(32) a copy of the underlying agreements or indentures affecting any stock, bonds, or debentures offered or to be offered.

In case of certificates of deposit, voting trust certificates, collateral trust certificates, certificates of interest or shares in unincorporated investment trusts, equipment trust certificates, interim or other receipts for certificates, and like securities, the Commission shall establish rules and regulations requiring the submission of information of a like character applicable to such cases, together with such other information as it may deem appropriate and necessary regarding the character, financial or otherwise, of the actual issuer of the securities and/or the person performing the acts and assuming the duties of depositor or manager.

SCHEDULE B

(1) Name of borrowing government or subdivision thereof;

(2) specific purposes in detail and the approximate amounts to be devoted to such purposes, so far as determinable, for which the security to be offered is to supply funds, and if the funds are to be raised in part from other sources, the amounts thereof and the sources thereof, shall be stated;

(3) the amount of the funded debt and the estimated amount of the floating debt outstanding and to be created by the security to be offered, excluding intergovernmental debt, and a brief description of the date, maturity, character of such debt, rate of interest, character of amortization provisions, and the security, if any, therefor. If substitution of any security is permissible, a statement of the conditions under which such substitution is permitted. If substitution is permissible without notice, a specific statement to that effect;

(4) whether or not the issuer or its predecessor has, within a period of twenty years prior to the filing of the registration statement, defaulted on the principal or interest of any external security, excluding intergovernmental debt, and, if so, the date,

amount, and circumstances of such default, and the terms of the succeeding arrangement, if any;

(5) the receipts, classified by source, and the expenditures, classified by purpose, in such detail and form as the Commission shall prescribe for the latest fiscal year for which such information is available and the two preceding fiscal years, year by year;

(6) the names and addresses of the underwriters;

(7) the name and address of its authorized agent, if any, in the United States;

(8) the estimated net proceeds to be derived from the sale in the United States of the security to be offered;

(9) the price at which it is proposed that the security shall be offered in the United States to the public or the method by which such price is computed. A variation in price may be proposed prior to the date of the public offering of the security, but the Commission shall immediately be notified of such variation;

(10) all commissions paid or to be paid, directly or indirectly, by the issuer to the underwriters in respect of the sale of the security to be offered. Commissions shall include all cash, securities, contracts, or anything else of value, paid, to be set aside, disposed of, or understandings with or for the benefit of any other persons in which the underwriter is interested, made, in connection with the sale of such security. Where any such commission is paid, the amount of such commission paid to each underwriter shall be stated;

(11) the amount or estimated amounts, itemized in reasonable detail, of expenses, other than the commission specified in paragraph (10) of this schedule, incurred or borne by or for the account of the issuer in connection with the sale of the security to be offered or properly chargeable thereto, including legal, engineering, certification, and other charges;

(12) the names and addresses of counsel who have passed upon the legality of the issue;

(13) a copy of any agreement or agreements made with any underwriter governing the sale of the security within the United States; and

(14) an agreement of the issuer to furnish a copy of the opinion or opinions of counsel in respect to the legality of the issue, with a translation, where necessary, into the English language. Such opinion shall set out in full all laws, decrees, ordinances, or other acts of Government under which the issue of such security has been authorized.

APPENDIX D

Details of Schedule A in the Directive 79/279 (ANNEX [3])

CONDITIONS FOR THE ADMISSION OF SHARES TO OFFICIAL LISTING ON A STOCK EXCHANGE

I. Conditions relating to companies for the shares of which admission to official listing is sought

1. *Legal position of the company*

The legal position of the company must be in conformity with the laws and regulations to which it is subject, as regards both its formation and its operation under its statutes.

2. *Minimum size of the company*

The foreseeable market capitalization of the shares for which admission to official listing is sought or, if this cannot be assessed, the company's capital and reserves, including profit or loss, from the last financial year, must be at least one million European units of account.

However, Member States may provide for admission to official listing, even when this condition is not fulfilled, provided that the competent authorities are satisfied that there will be an adequate market for the shares concerned.

A higher foreseeable market capitalization or higher capital and reserves may be required by a Member State for admission to official listing only if another regulated, regularly operating, recognized open market exists in that State and the requirements for it are equal to or less than those referred to in the first paragraph.

The condition set out in the first paragraph shall not be applicable for the admission to official listing of a further block of shares of the same class as those already admitted.

The equivalent in national currency of one million European units of account shall initially be that applicable on the date on which the Directive is adopted.

If, as a result of adjustment of the equivalent of the European unit of account in national currency, the market capitalization expressed in national currency remains for a period of one year at least 10 % more or less than the value of one million European units of account the Member State must, within the 12 months following the expiry of that period, adjust its laws, regulations or administrative provisions to comply with the first paragraph.

3. *A company's period of existence*

A company must have published or filed its annual accounts in accordance with national law for the three financial years preceding the application for official listing. By way of exception, the competent authorities may derogate from this condition where such derogation is desirable in the interests of the company or of investors and where the competent authorities are satisfied that investors have the necessary information available to be able to arrive at an informed judgment on the company and the shares for which admission to official listing is sought.

II. **Conditions relating to the shares for which admission to official listing is sought**

1. *Legal position of the shares*

The legal position of the shares must be in conformity with the laws and regulations to which they are subject.

2. *Negotiability of the shares*

The shares must be freely negotiable.

The competent authorities may treat shares which are not fully paid up as freely negotiable, if arrangements have been made to ensure that the negotiability of such shares is not restricted and that dealing is made open and proper by providing the public with all appropriate information.

The competent authorities may, in the case of the admission to official listing of shares which may be acquired only subject to approval, derogate from the first paragraph only if the use of the approval clause does not disturb the market.

3. *Public issue preceding admission to official listing*

Where public issue precedes admission to official listing, the first listing may be made only after the end of the period during which subscription applications may be submitted.

4. *Distribution of shares*

A sufficient number of shares must be distributed to the public in one or more Member States not later than the time of admission.

This condition shall not apply where shares are to be distributed to the public through the stock exchange. In that event, admission to official listing may be granted only if the competent authorities are satisfied that a sufficient number of shares will be distributed through the stock exchange within a short period.

Where admission to official listing is sought for a further block of shares of the same class, the competent authorities may assess whether a sufficient number of shares has been distributed to the public in relation to all the shares issued and not only in relation to this further block.

However, by way of derogation from the first paragraph, if the shares are admitted to official listing in one or more non-Member States, the competent authorities may provide for their admission to official listing if a sufficient number of shares is distributed to the public in the non-Member State or States where they are listed.

A sufficient number of shares shall be deemed to have been distributed either when the shares in respect of which application for admission has been made are in the hands of the public to the extent of a least 25 % of the subscribed capital represented by the class of shares concerned or when, in view of the large number of shares of the same class and the extent of their distribution to the public, the market will operate properly with a lower percentage.

5. *Listing of shares of the same class*

The application for admission to official listing must cover all the shares of the same class already issued.

However, Member States may provide that this condition shall not apply to applications for admission not covering all the shares of the same class already issued where the shares of that class for which admission is not sought belong to blocks serving to maintain control of the company or are not negotiable for a certain time under agreements, provided that the public is informed of such situations and that there is no danger of such situations prejudicing the interests of the holders of the shares for which admission to official listing is sought.

6. *Physical form of shares*

For the admission to official listing of shares issued by companies which are nationals of another Member State and which shares have a physical form it is necessary and sufficient that their physical form comply with the standards laid down in that other Member State. Where the physical form does not conform to the standards in force in the Member State in which admission to official listing is applied for, the competent authorities of that State shall make that fact known to the public.

The physical form of shares issued by companies which are nationals of a non-member State must afford sufficient safeguard for the protection of the investors.

7. *Shares issued by companies from a non-member State*

If the shares issued by a company which is a national of a non-member State are not listed in either the country of origin or in the country in which the major proportion of the shares is held, they may not be admitted to official listing unless the competent authorities are satisfied that the absence of a listing in the country of origin or in the country in which the major proportion is held is not due to the need to protect investors.

APPENDIX E

Details of Schedule B in the Directive 79/279 (ANNEX [3])

SCHEDULE B

CONDITIONS FOR THE ADMISSION OF DEBT SECURITIES TO OFFICIAL LISTING ON A STOCK EXCHANGE

A. ADMISSION TO OFFICIAL LISTING OF DEBT SECURITIES ISSUED BY AN UNDERTAKING

I. **Conditions relating to undertakings for the debt securities of which admission to official listing is sought**

Legal position of the undertaking

The legal position of the undertaking must be in conformity with the laws and regulations to which it is subject, as regards both its formation and its operation under its statutes.

II. Conditions relating to the debt securities for which admission to official listing is sought

1. *Legal position of the debt securities*

The legal position of the debt securities must be in conformity with the laws and regulations to which they are subject.

2. *Negotiability of the debt securities*

The debt securities must be freely negotiable.

The competent authorities may treat debt securities which are not fully paid up as freely negotiable if arrangements have been made to ensure that the negotiability of these debt securities is not restricted and that dealing is made open and proper by providing the public with all appropriate information.

3. *Public issue preceding admission to official listing*

Where public issue precedes admission to official listing, the first listing may be made only after the end of the period during which subscription applications may be submitted. This provision shall not apply in the case of tap issues of debt securities when the closing date for subscription is not fixed.

4. *Listing of debt securities ranking* pari passu

The application for admission to official listing must cover all debt securities ranking *pari passu.*

5. *Physical form of debt securities*

For the admission to official listing of debt securities issued by undertakings which are nationals of another Member State and which debt securities have a physical form, it is necessary and sufficient that their physical form comply with the standards laid down in that other Member State. Where the physical form does not conform to the standards in force in the Member State in which admission to official listing is applied for, the competent authorities of that State shall make that fact known to the public.

However, the physical form of debt securities issued in a single Member State must conform to the standards in force in that State.

The physical form of debt securities issued by undertakings which are nationals of a non-member State must afford sufficient safeguard for the protection of the investors.

III. Other conditions

1. *Minimum amount of the loan*

The amount of the loan may not be less than 200 000 European units of account. This provision shall not be applicable in the case of tap issues where the amount of the loan is not fixed.

Member States may, however, provide for admission to official listing even when this condition is not fulfilled, where the competent authorities are satisfied that there will be a sufficient market for the debt securities concerned.

The equivalent in national currency of 200 000 European units of account shall initially be that applicable on the date on which this Directive is adopted.

If as a result of adjustment of the equivalent of the European unit of account in national currency the minimum amount of the loan expressed in national currency remains, for a period of one year, at least 10 % less than the value of 200 000 European units of account the Member State must, within the 12 months following the expiry of that period, amend its laws, regulations and administrative provisions to comply with the first paragraph.

2. *Convertible or exchangeable debentures, and debentures with warrants*

Convertible or exchangeable debentures and debentures with warrants may be admitted to official listing only if the related shares are already listed on the same stock exchange or on another regulated, regularly operating, recognized open market or are so admitted simultaneously.

However, Member States may, by way of derogation from the first paragraph, provide for the admission to official listing of convertible or exchangeable debentures or debentures with warrants, if the competent authorities are satisfied that holders have at their disposal all the information necessary to form an opinion concerning the value of the shares to which these debt securities relate.

B. ADMISSION TO OFFICIAL LISTING OF DEBT SECURITIES ISSUED BY A STATE, ITS REGIONAL OR LOCAL AUTHORITIES OR A PUBLIC INTERNATIONAL BODY

1. *Negotiability of the debt securities*

The debt securities must be freely negotiable.

2. *Public issue preceding admission to official listing*

Where public issue precedes admission to official listing, the first listing may be made only after the end of the period during which subscription applications may be submitted. This provision shall not apply where the closing date for subscription is not fixed.

3. *Listing of debt securities ranking* pari passu

The application for admission to official listing must cover all the securities ranking *pari passu.*

4. *Physical form of debt securities*

For the admission to official listing of debt securities which are issued by a Member State or its regional or local authorities in a physical form, it is necessary and sufficient that such physical form comply with the standards in force in that Member State. Where the physical form does not comply with the standards in force in the Member State where admission to official listing is applied for, the competent authorities of that State shall bring this situation to the attention of the public.

The physical form of debt securities issued by non-member States or their regional or local authorities or by public international bodies must afford sufficient safeguard for the protection of the investors.

APPENDIX F

Annex I of Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014

ANNEX I

A. **Indicators of manipulative behaviour relating to false or misleading signals and to price securing**

For the purposes of applying point (a) of Article 12(1) of this Regulation, and without prejudice to the forms of behaviour set out in paragraph 2 of that Article, the following non-exhaustive indicators, which shall not necessarily be deemed, in themselves, to constitute market manipulation, shall be taken into account when transactions or orders to trade are examined by market participants and competent authorities:

(a) the extent to which orders to trade given or transactions undertaken represent a significant proportion of the daily volume of transactions in the relevant financial instrument, related spot commodity contract, or auctioned product based on emission allowances, in particular when those activities lead to a significant change in their prices;

(b) the extent to which orders to trade given or transactions undertaken by persons with a significant buying or selling position in a financial instrument, a related spot commodity contract, or an auctioned product based on emission allowances, lead to significant changes in the price of that financial instrument, related spot commodity contract, or auctioned product based on emission allowances;

(c) whether transactions undertaken lead to no change in beneficial ownership of a financial instrument, a related spot commodity contract, or an auctioned product based on emission allowances;

(d) the extent to which orders to trade given or transactions undertaken or orders cancelled include position reversals in a short period and represent a significant proportion of the daily volume of transactions in the relevant financial instrument, a related spot commodity contract, or an auctioned product based on emission allowances, and might be associated with significant changes in the price of a financial instrument, a related spot commodity contract, or an auctioned product based on emission allowances;

(e) the extent to which orders to trade given or transactions undertaken are concentrated within a short time span in the trading session and lead to a price change which is subsequently reversed;

(f) the extent to which orders to trade given change the representation of the best bid or offer prices in a financial instrument, a related spot commodity contract, or an auctioned product based on emission allowances, or more generally the representation of the order book available to market participants, and are removed before they are executed; and

(g) the extent to which orders to trade are given or transactions are undertaken at or around a specific time when reference prices, settlement prices and valuations are calculated and lead to price changes which have an effect on such prices and valuations.

B. **Indicators of manipulative behaviour relating to the employment of a fictitious device or any other form of deception or contrivance**

For the purposes of applying point (b) of Article 12(1) of this Regulation, and without prejudice to the forms of behaviour set out in paragraph 2 of that Article thereof, the following non-exhaustive indicators, which shall not necessarily be deemed, in themselves, to constitute market manipulation, shall be taken into account where transactions or orders to trade are examined by market participants and competent authorities:

(a) whether orders to trade given or transactions undertaken by persons are preceded or followed by dissemination of false or misleading information by the same persons or by persons linked to them; and

(b) whether orders to trade are given or transactions are undertaken by persons before or after the same persons or persons linked to them produce or disseminate investment recommendations which are erroneous, biased, or demonstrably influenced by material interest.

APPENDIX G

Table reported in the paper of Meulbroek, L. K. (1992) (*Table VII: Source of SEC Case Investigation by Number and Percent of Insider Trading Episodes*)

Table VII

Source of SEC Case Investigation by Number and Percent of Insider Trading Episodes

An "Insider Trading Episode" is one or more defendants trading in a given stock using specific information, such as information about an impending takeover. "SEC investigation" is the case origin when the SEC begins an investigation without an outside referral. "Issuer" refers to the firm that is the subject of the inside information. "Another SEC case" is the case origin when the SEC investigates a company for another reason, for example, financial fraud, and discovers insider trading violations in addition to the other securities violations. The source of the SEC case investigation is missing for some insider trading episodes.

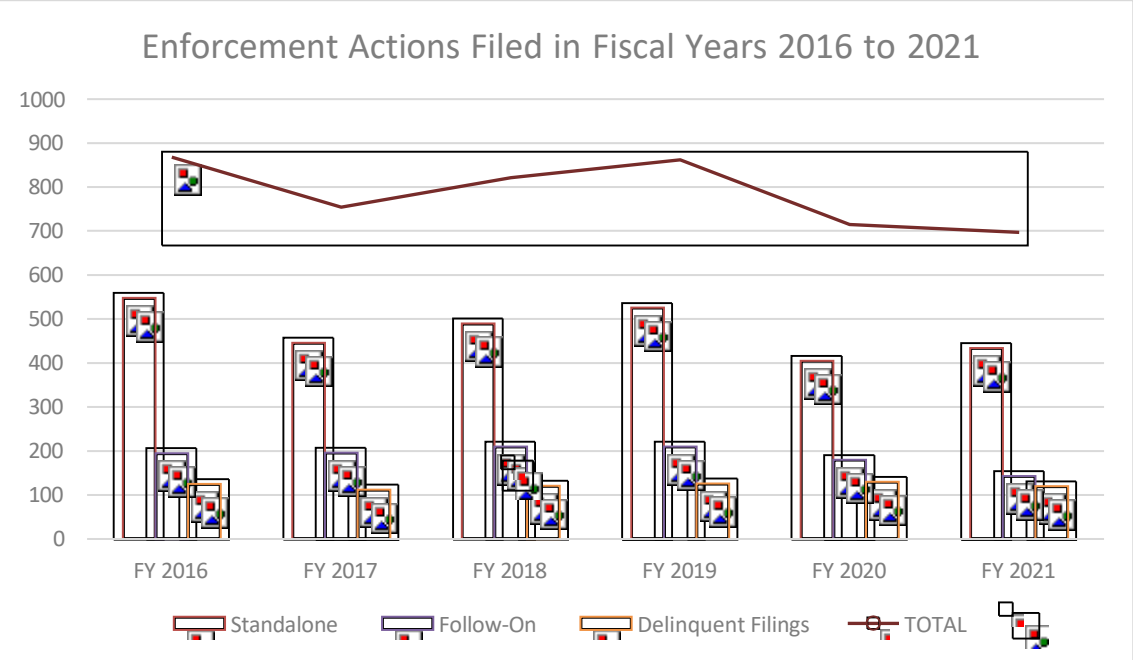
Source of Case	Number of Insider Trading Episodes	Percent of Total
Public complaint	71	41
All exchange referrals	55	31
NASD	19	11
AMEX	15	9
NYSE	15	9
Regional	3	2
CBOT	3	2
SEC investigation	16	9
Press story	16	9
Issuer	5	3
Another SEC case	1	1
Broker	3	2
Bidder	1	1
Other	5	3
Total	174	100

APPENDIX H

Chart 1: Enforcement Actions Filed in Fiscal Years 2016 to 2021

Table 1: Data related to Chart 1

The data are derived from the "Addendum to Division of Enforcement press release Fiscal Year 2021"



Enforcement Actions Filed in Fiscal Years 2016 to 2021

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Standalone Enforcement Actions	548	446	490	526	405	434
Follow-On Admin. Proceedings	195	196	210	210	180	143
Delinquent Filings	125	112	121	126	130	120
TOTAL ACTIONS	**868**	**754**	**821**	**862**	**715**	**697**

APPENDIX I

Table reported in the SEC's Addendum to Press Release 2021-238 (*Enforcement Summary Chart for FY 2021 by Primary Classification*)

Enforcement Summary Chart for FY 2021 by Primary Classification

Primary Classification	Civil Actions	Standalone AP	Follow-On AP	Delinquent Filings	Total	% of Total Actions	% of Civil and Standalone APs
Broker Dealer	10 (23)	26 (32)	74 (77)	0 (0)	110 (132)	16%	8%
Delinquent Filings	0 (0)	0 (0)	0 (0)	120 (120)	120 (120)	17%	0%
Foreign Corrupt Practices Act	0 (0)	5 (8)	0 (0)	0 (0)	5 (8)	1%	1%
Insider Trading	19 (37)	9 (10)	0 (0)	0 (0)	28 (47)	4%	6%
Investment Advisers / Investment Companies	33 (85)	87 (108)	39 (40)	0 (0)	159 (233)	23%	28%
Issuer Reporting / Audit & Accounting	11 (26)	42 (61)	17 (17)	0 (0)	70 (104)	10%	12%
Market Manipulation	23 (71)	3 (6)	5 (5)	0 (0)	31 (82)	4%	6%
Miscellaneous	3 (3)	4 (5)	0 (0)	0 (0)	7 (8)	1%	2%
NRSRO	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)	0%	0%
Public Finance Abuse	2 (3)	10 (12)	0 (0)	0 (0)	12 (15)	2%	3%
Securities Offering	123 (398)	19 (32)	8 (8)	0 (0)	150 (438)	22%	33%
SRO / Exchange	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)	0%	0%
Transfer Agent	1 (2)	1 (1)	0 (0)	0 (0)	2 (3)	0%	0%
Total	**226 (649)**	**208 (277)**	**143 (147)**	**120 (120)**	**697 (1,193)**	**100%**	**100%**

Each action initiated has been included in only one category listed above, even though many actions involved multiple allegations and may fall under more than one category. The number of defendants and respondents is noted parenthetically.

APPENDIX L

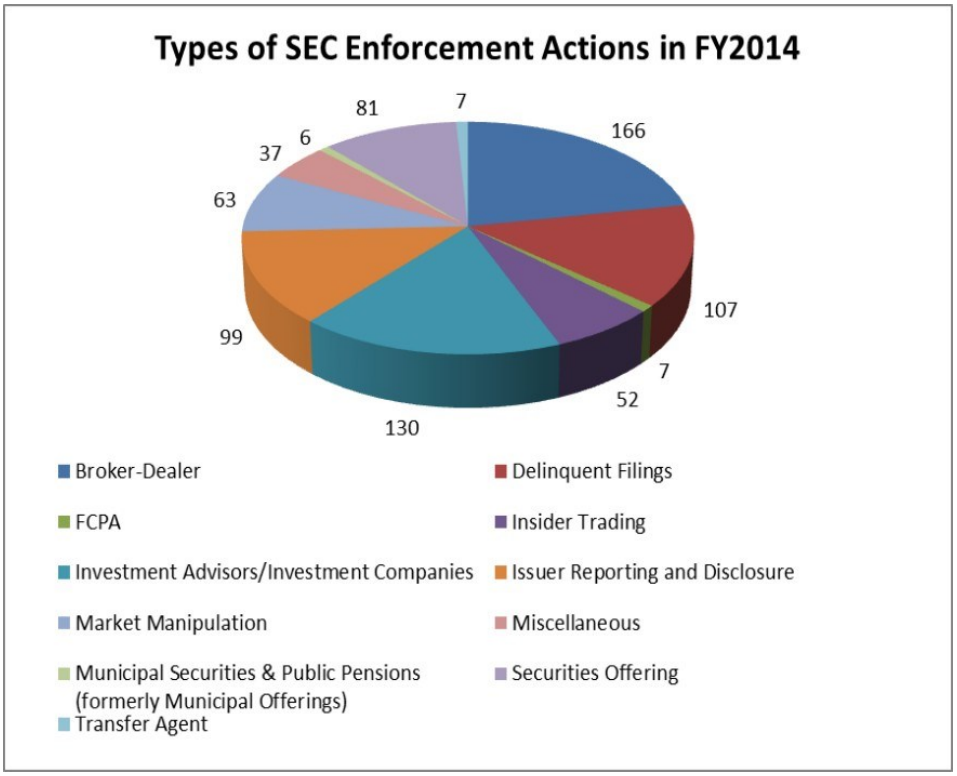
Table 2: Enforcement Summary Chart by Primary Classification in FY 2018 to FY 2021

Enforcement Summary Chart by Primary Classification in FY 2018 to 2021

	FY 2018	FY 2019	FY 2020	FY 2021
Insider Trading	51	32	33	28
Market Manipulation	33	33	28	31
TOTAL	**84**	**65**	**61**	**59**

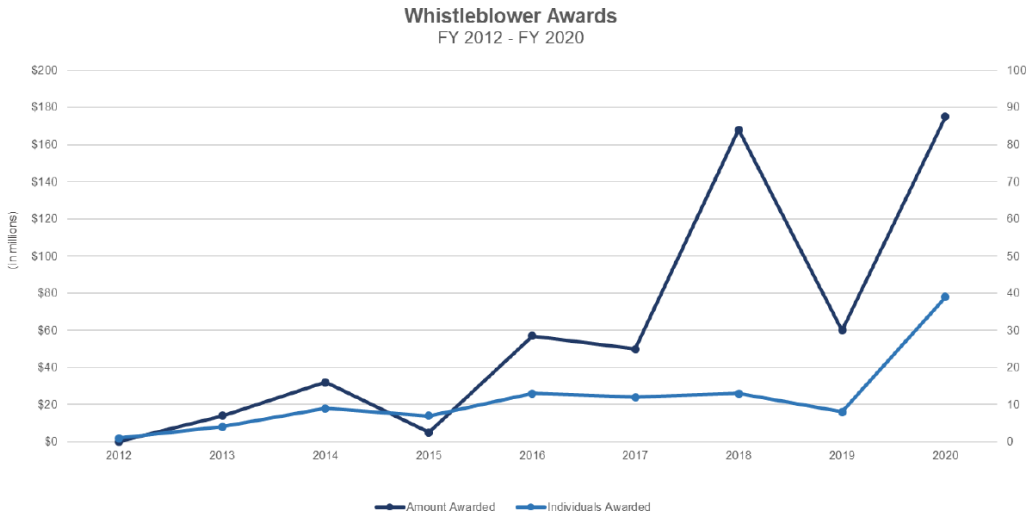
APPENDIX M

Figure 1: Chart reported in the "Securities Enforcement 2014 Year-End Review"



APPENDIX N

Figure 2: Chart reported in the "Enforcement Annual Report 2020"



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