



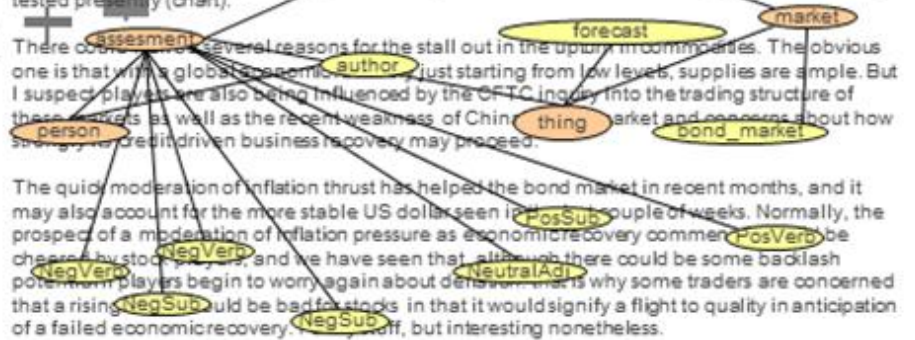
# FIRST

Large scale information extraction and integration  
infrastructure for supporting financial decision making.

My inflation pressure gauge rose at a good clip over the first half of this year on the strength of a rally in the commodity market. **commodity\_market** seasonally adjusted, increased by 2.7% for the year through Aug. However, the pressure gauge has flattened out in recent months as the rally in commodities has stalled. In fact, **NeutralAd** and in the commodities market for '09 is being tested presently (chart).

There could be several reasons for the stall out in the upward momentum. The obvious one is that with a global economic **author** just starting from low levels, supplies are ample. But I suspect players are also being influenced by the OFTC ingoing into the trading structure of these markets as well as the recent weakness of China **thing** market and concerns about how strongly credit driven business recovery may proceed.

The quick moderation of inflation thrust has helped the bond market in recent months, and it may also account for the more stable US dollar seen in **PosSub** couple of weeks. Normally, the prospect of a moderation of inflation pressure as economic recovery commences **PosVerd** be cheered by stock **NegVerd**, and we have seen that although there could be some badlash potential, players begin to worry again about **NeutralAd** why some traders are concerned that a rising **NegSub** could be bad for stocks in that it would signify a flight to quality in anticipation of a failed economic recovery. **NegSub** itself, but interesting nonetheless.



## *Breaking the mould: New approaches to capital markets compliance*

*Wolfgang Fabisch, CEO b-next group*



**1989**

**Bobby Junger**  
Bond Trader

**170,000,000 €**

**2008**

**Jerome Kerviel**  
Société Générale

**4,900,000,000 €**

**2011**

**Kweku Adoboli**  
UBS London

**2,300,000,000 \$**



**1994**

**Nick Leasson**  
Bearing Bank

**1,400,000,000 \$**

**2009**

**Raj Rajaratnam**  
Galleon

**49,000,000 \$**

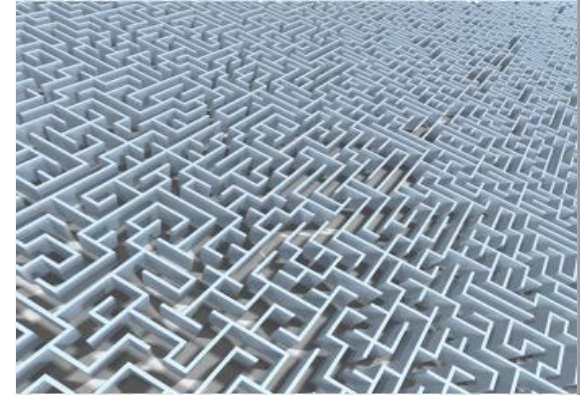
## Speed



## Data volume

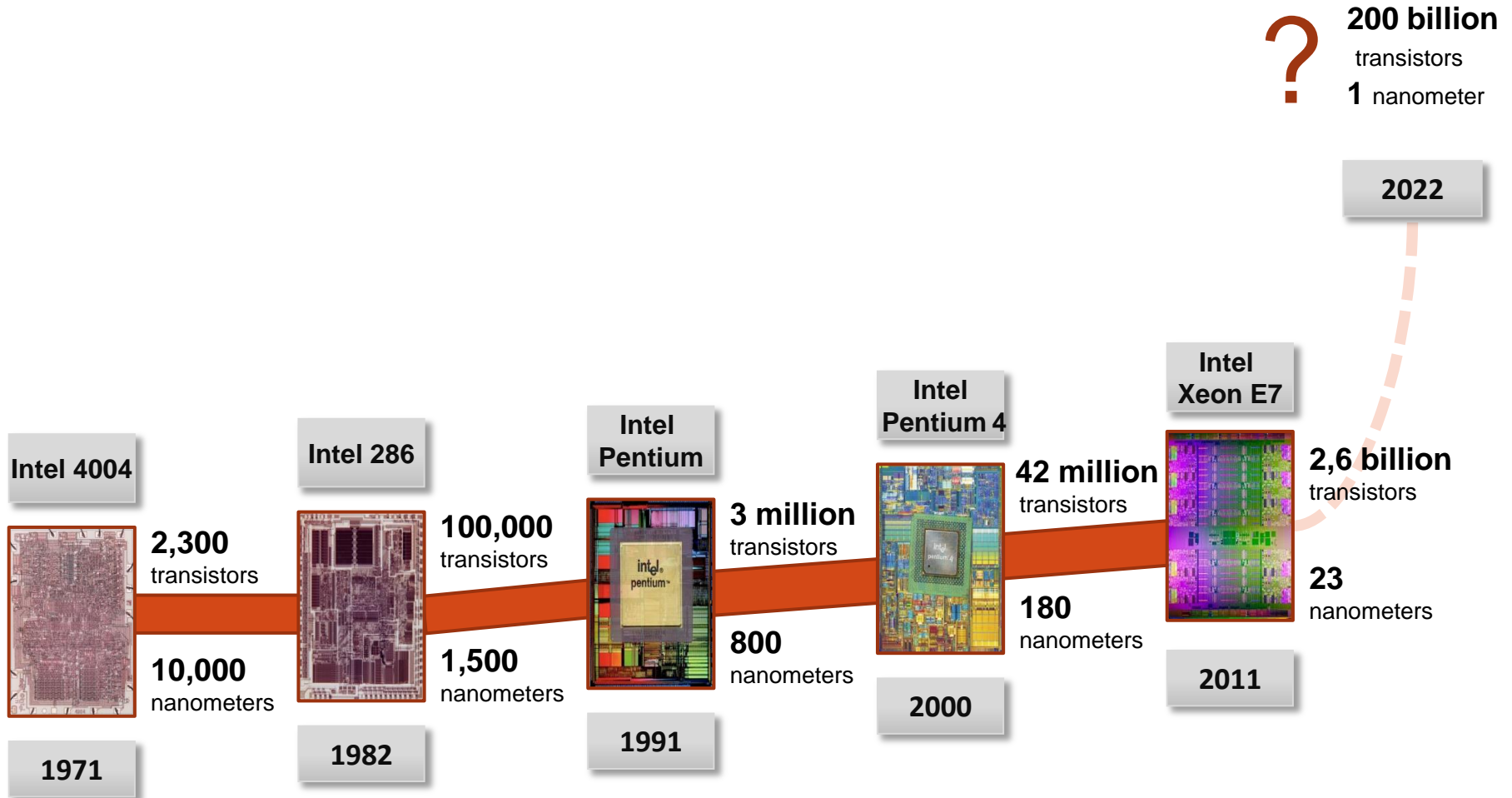


## Data structure





# Moore's Law



The blink of an eye takes about 100 ms

## Algomachines

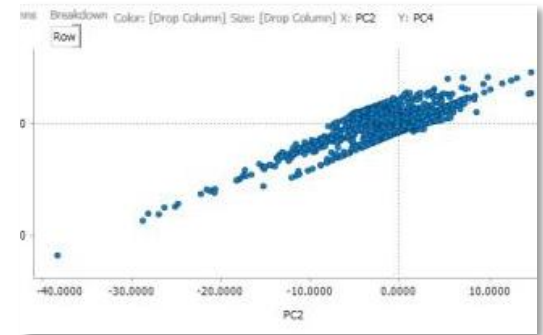
- 10  $\mu$ s for 1 transaction
- 10,000 transactions in the blink of an eye
- Approx. 2,000 algomachines are in use all over the world



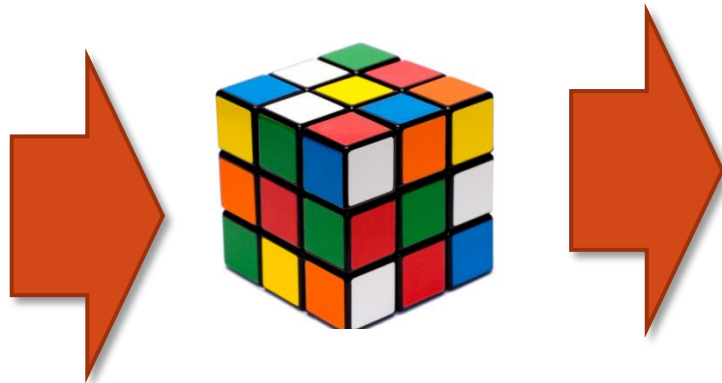
Theoretical number of transactions contemplated by algomachines during this presentation:

**300,000,000,000**

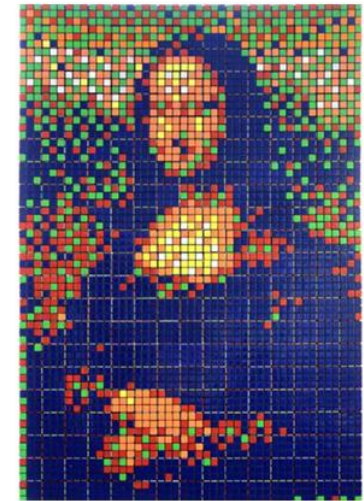
- Rapid growth of the data volume available in the financial markets
- Linking data to identify patterns and distinguish marks
- New approaches such as Sentiment Analysis, Principal Component Analysis,...



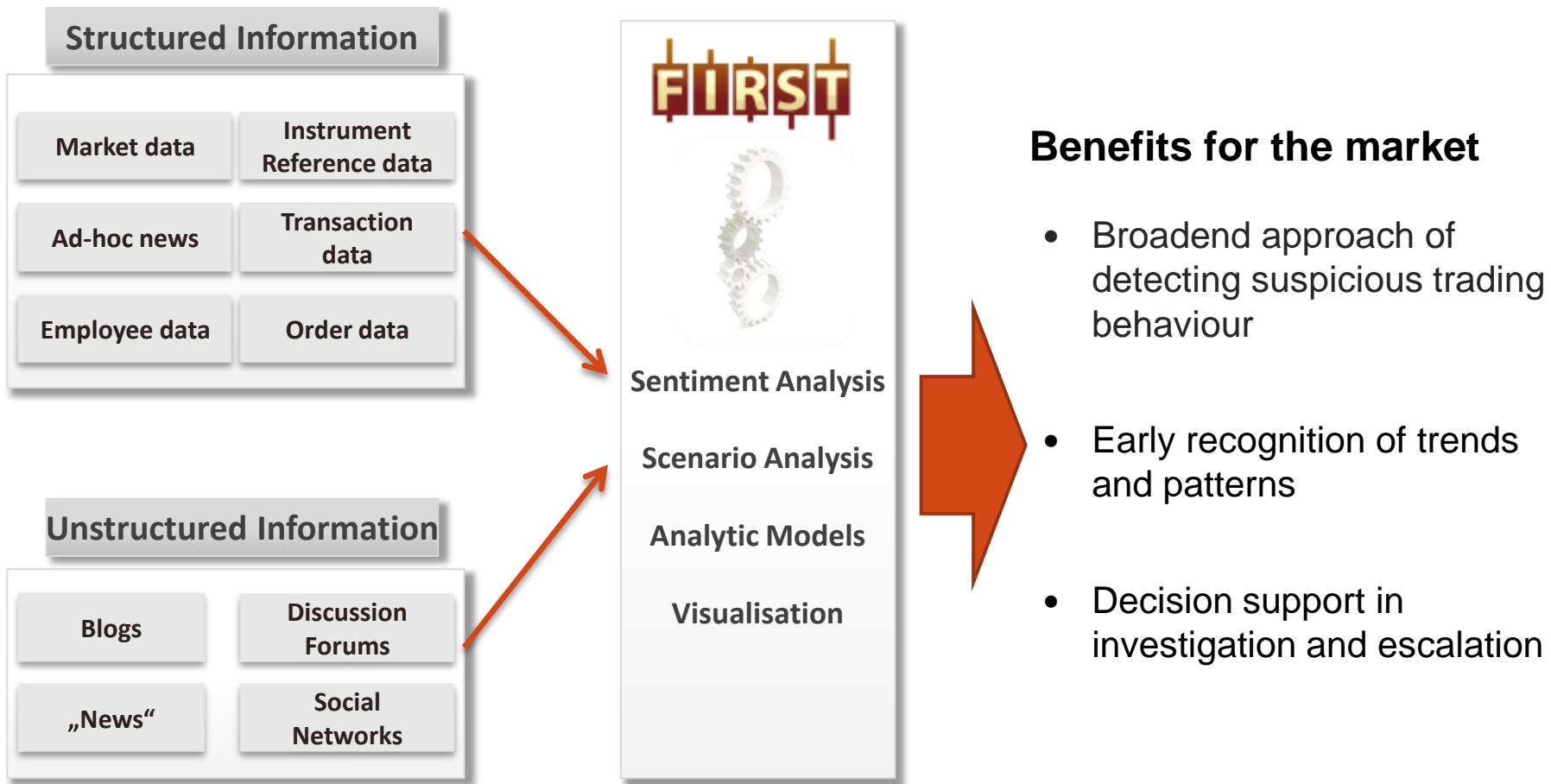
- Transaction data
- Instrument reference data
- Employee data
- Order data



- Unstructured Data
- News
- Blogs
- Tweets







## Market Abuse Analysis

Specific pieces of true or untrue information may be misused to illegally manipulate financial markets. Some examples of these are:

- False information
- Gross exaggeration
- Insider knowledge
- Rumours

The objectives and specific characteristics of these different forms of information-based abuse can be typified in various scenarios.

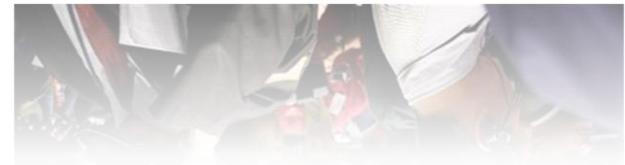
- Scenario 1: Market sounding
- Scenario 2: Pump and dump

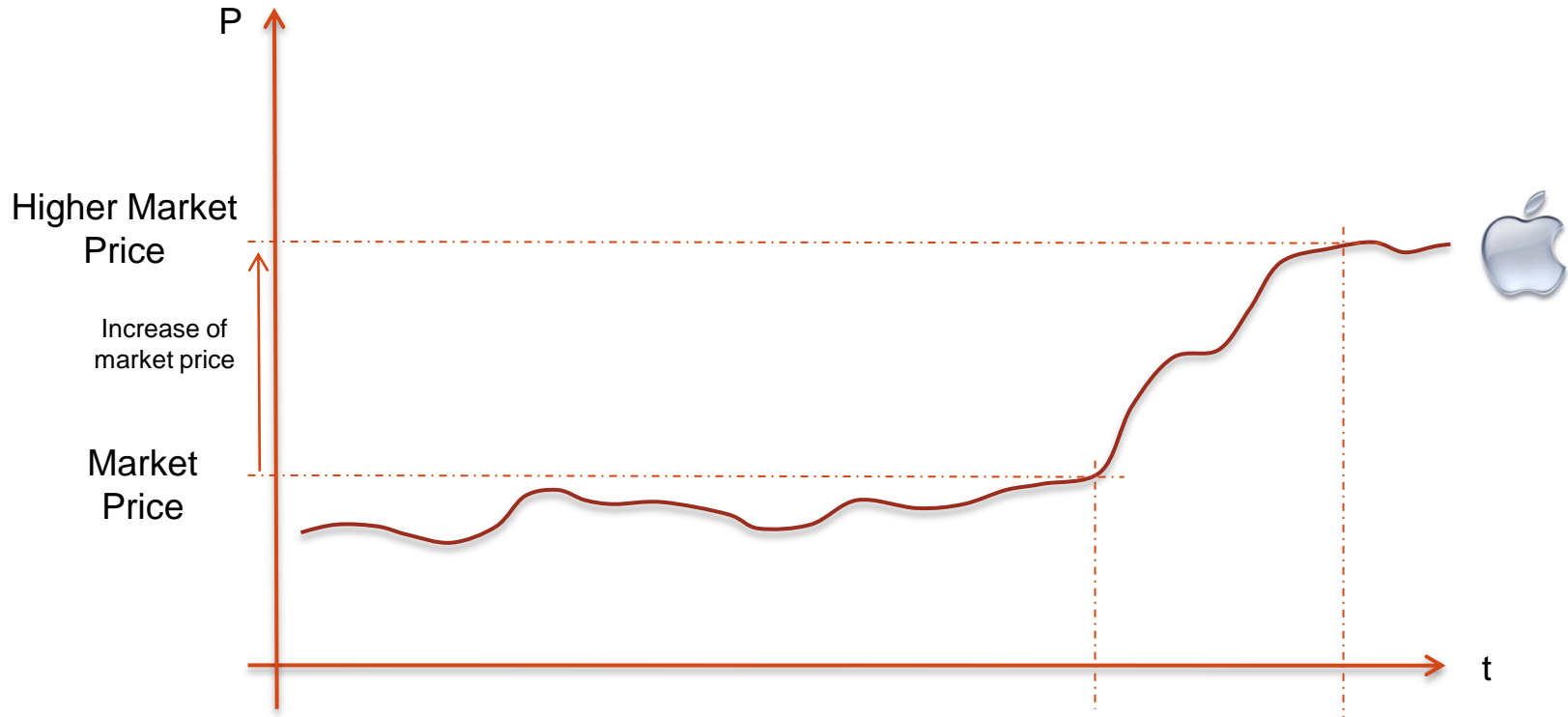


**Goal:** Generating profit by selling a stock position of a certain company

Typical behaviour:

- Distribution of false positive information related to a company whose shares are tradable
- Information will encourage other market participants to buy stock of that company
- Increased demand will increase the market price to an artificial price level
- Selling a position in that shares





Apple Stock is going to rocket up in the next few days no matter what. I have full confidence in it. I've been fully concentrated on this stock since last year and even though I bought it high, it never let me down. I know a few people that work in/with apple. And I know a lot about their software. Trust me when I say **BUY BUY BUY!!!** Get it quick before it goes up!



Selling Position

Distribution of information

► INSTRUMENT COCKPIT

Logo MusterBank



LONDON ► SELECT ANOTHER LOCATION

► MAY 18th 2011

1D 1W 2W 1M 3M Y YTD

SELECT ADDITIONAL VENUE

VENUES

RESET

XETRA



LSE



MIL



NEX



SELECT ANOTHER INSTRUMENT

SUSPICIOUS INSTR.

RESET

NO	INSTRUMENT	ISIN
01	NOKIA	FI0009000681
02	BRITISH AIRWAYS	GB0001290575
03	SIEMENS	DE0007236101
04	FRANCE TELECOM	FR0000133308
05	MICROSOFT	US5949181045
06	NOKIA	FI0009000681
07	BRITISH AIRWAYS	GB0001290575

FI0009000681 NOKIA

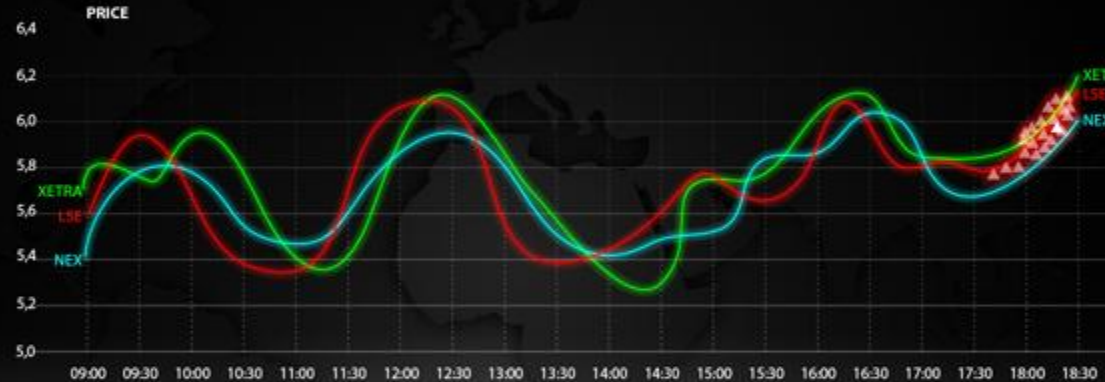
NARROW DOWN INFORMATION

PRICE CHART | 1 DAY

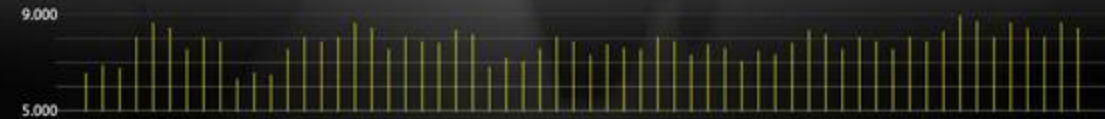
SEARCH FOR ISIN

SCENARIOS

RESET



Sentiment documents



NO	SCENARIO	ALERTS
01	Pump and Dump	12
02	Phantom orders	10
03	Wash Trades	9
04	Pre Arranged Trades	6
05	Spoofing	5
06	Reference price manipulation	4
07	Naked Short Sales	4

TRADER/DESK

RESET

NO	NAME	ALERTS	TRADES
00	All	12	
01	Neill Glad	6	115
02	Stefan Queck	4	095
03	Greg Mills	1	486
04	Stephen Letter	1	879
05	Mike Colling	0	332
06	Jim Jones	0	218

COUNTERPARTY

RESET

CHECK TO SHOW  TRADES  SUSPICIOUS TRADES  ORDERS  CANCELLATIONS  ADHOC

RESET TO DEFAULT

TO INSTRUMENT COCKPIT

- Requirements for effective capital market surveillance are growing at a rapid pace
- New directives such as ESMA, MADII, MiFID Review require significant investments in compliance systems
- Higher speeds are achieved in the field of market surveillance by using e.g. complex event processing
- Graphical visualisation as well as linking and cross-referencing of information will play a decisive role in identifying market manipulating trading patterns
- New methods of analysis such as principal component analysis
- Integration of unstructured data in the market surveillance analysis





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## Acknowledgement

*The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n°257928.*

# THANKS