# AI, Machine Learning and Crowd Intelligence Applied to Financial Markets

Wie können digitale Technologien die Investorenkommunikation revolutionieren?

Vienna, 26 April 2018

# Agenda

Sentifi

WINNER OF THE
SWISS
FINTECH
AWARD
—— 2016 ——

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# AI, Machine Learning and Crowd Intelligence

## Definitions for the Age of Analytics

**Artificial Intelligence (AI)**
AI is the science and engineering of making intelligent machines, especially intelligent computer programs.
Today´s Connectionist AI approach is data intensive.

Example for AI from our daily life: Virtual Personal Assistants (i.e. Alexa)

**Machine Learning (ML)**
ML is a subdomain of AI. ML is the science of getting computers to act without being expicitly programmed.

Examples for ML from our daily life:  Recommendation Engines (Netflix),  Self-driving Cars, etc.

**Crowd Intelligence (CI)**
CI is the collective (shared or group) intelligence of a massive amount of autonomous individuals.
It seamlessly integrates human and machine intelligence at a large scale, i.e. via the internet.

Example for CI from our daily life: Wikipedia

# AI, Machine Learning and Crowd Intelligence

How to train Algorithms for your Purpose?

# AI, Machine Learning and Crowd Intelligence

## How to make Algorithms work for your Purpose

**Training the machines**
- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning

**Recognition of patterns**

# AI, Machine Learning and Crowd Intelligence

Pattern Recognition

# AI, Machine Learning and Crowd Intelligence

Pattern Recognition

# AI, Machine Learning and Crowd Intelligence

How to make Algorithms work for your Purpose

Training the machines
- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning

Recognition of patterns

Rule-like behaviour

Machines do not forget things they learned

# AI, Machine Learning and Crowd Intelligence

Pattern recognition and detection applied to financial markets

**Event: Credit Rating**

**Grammar:** ${ListedCompanies} {T}[6] #{Credit} AND #{Rating}

Topic     Tokenizer     Lexicals
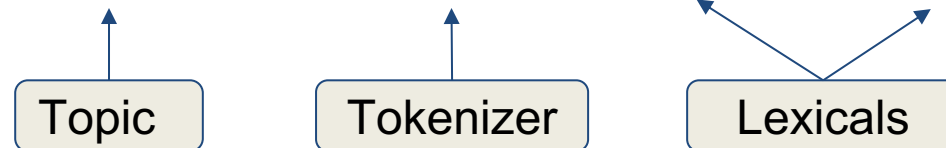
*Does Microsoft Deserve a Triple A Credit Rating?* → ✔

*Microsoft's new Xbox game gets a 10/10 rating.* → ✘

# SENTIFI LISTENING TO THE FINANCIAL CROWD

**Basing investment decisions** on only 10% of available information leads to missed opportunities

**Sentifi Analytics complete the picture, based on millions of alternative data**

## TRADITIONAL FINANCIAL INFORMATION MARKET

### NEWS ANALYSES
Bloomberg, Reuters, WSJ and other media

**10%**

CNN   THE WALL STREET JOURNAL

Bloomberg   REUTERS
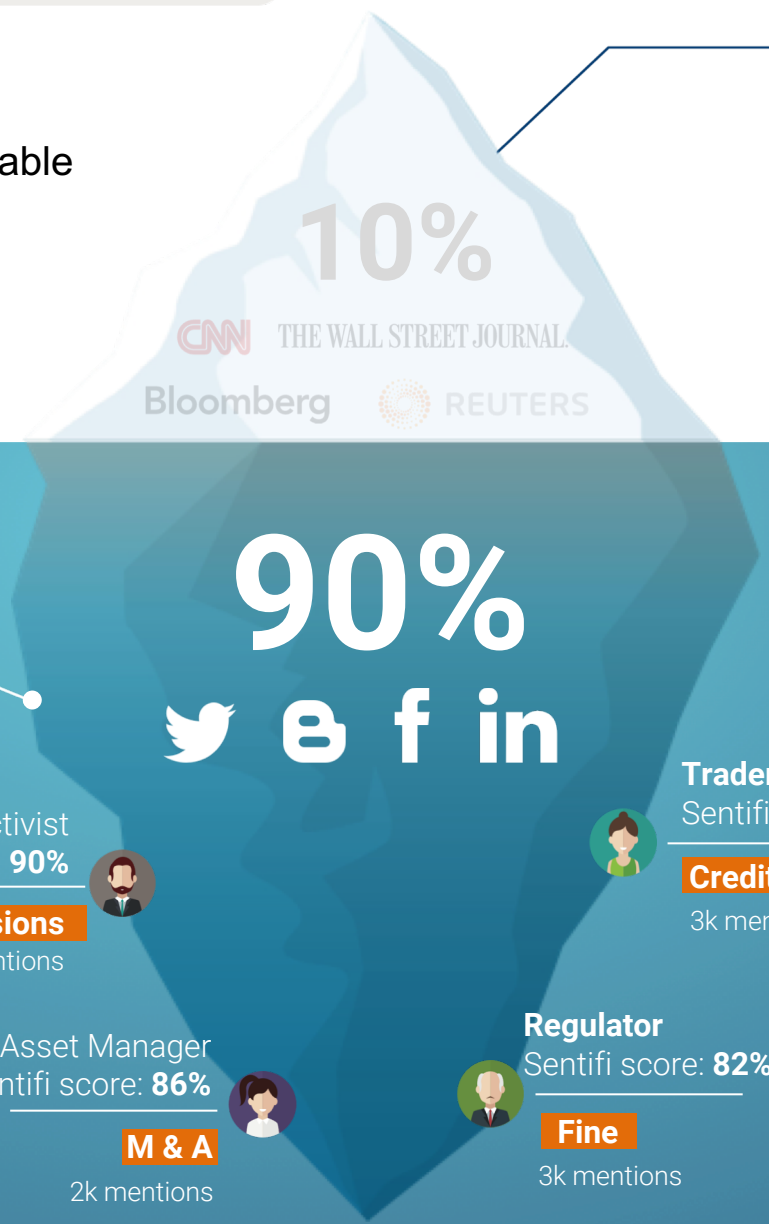
## CROWD INTELLIGENCE

- Relevant actionable Analytics based on Millions of influencer data

- Sentifi Crowd today: 15 Mio Influencers

**90%**

**Activist**
Sentifi score: **90%**

**Diesel Emissions**

1k mentions

**Trader**
Sentifi score: **88%**

**Credit risk**

3k mentions

**Asset Manager**
Sentifi score: **86%**

**M & A**

2k mentions

**Regulator**
Sentifi score: **82%**

**Fine**

3k mentions

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# AI, Machine Learning and Crowd Intelligence

Identifying Financial Influencers
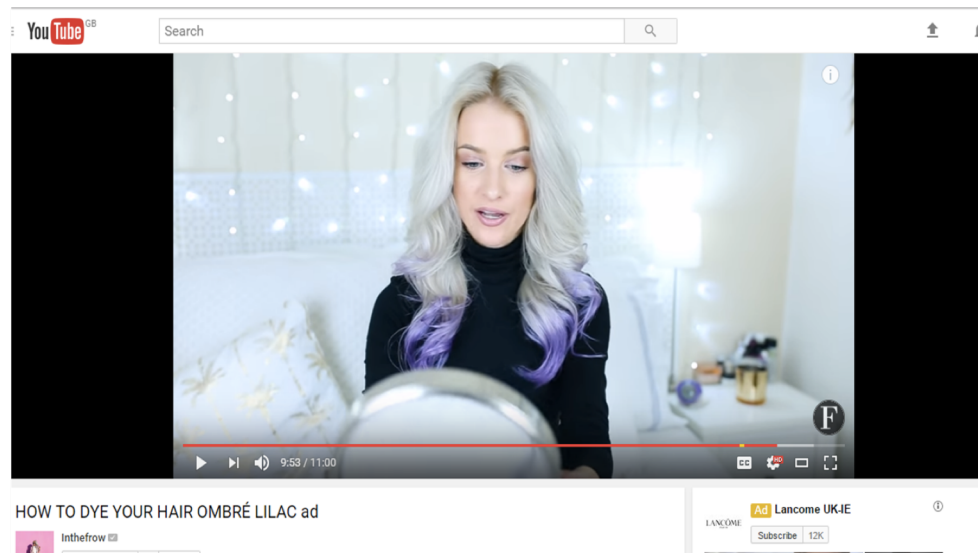
VS

# How do we apply AI to find profiles:

**Profile Score Drivers**
Context, Mkt Contribtion
Interaction, Search & Popularity

SCORE DRIVER OF WEEK 05/2017

■ CONTEXT ■ MKT CONTRIBUTION ■ INTERACTION ■ REACH & POPULARITY

**Profile Scoring**
High relevance to finance sector detected
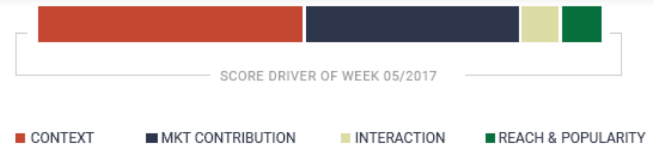
**S 90**

**Profile Classification**
News Media profile detected

**FT**

**Profile Qualification**
High quality profile (score)

**Bot detection**
Bot not detected

**Financial Times** ✓
@FT
News stories, features and updates from the FT. For headlines follow @financialtimes. Our customer service team is @FTcare.

📍 London
🔗 ft.com
📅 Joined January 2009

✒ Tweet to Financial Times

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# How do we use AI to find topics and events:

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**Language detection**
English detected

**Event recognition**
Financially relevant event detected

**Blacklist filter**
No swear words detected

**Impact**
Potential impact to stock identified

Abdul M
@silverbacklieve

+ Follow

Apple surpasses $800bn valuation mark - as US broker suggests it could be worth more than $1 trillion for first time ...

**Financial relevance scoring**
Financially relevant message

**Picking the best message**
High relevance to finance sector detected

**Novelty**
Original message content

# How to use alternative Data for Communication with Investors and Financial Markets

## Pillars of Applied AI

**Profiles** **Topics** **Events**

**Profile**

(**ABC NEWS**, NEW YORK) — The Food and Drug Administration is warning the public that more than 400,000 pacemakers in the U.S. are in danger of being hacked.

**Topic**

The agency issued an alert stating that the company producing these pacemakers — **Abbott**, formerly known as St. Jude Medical — is taking "corrective" action.

**Event**

The voluntary **recall** affects 465,000 radio frequency-enabled implantable pacemakers. It covers several models, including Allure, Accent, Anthem, Accent MRI, Accent ST and Assurity.

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# AI for the Monitoring of Trends and Risks



**AI** detects and categorizes events that are potential drivers or risks for listed companies and their stock prices. The events and insights can help to discover trends early and to stay ahead of the market.

# **Attention** monitor



**Attention Monitor:**

**Track the attention** from the crowd around your company and your industry peers.

**Identify influencers** of your company and competitors and find out **who is talking about which topics** around those companies.

# **Themes** monitor



**Themes Monitor:**

**Track and discover topics** (dividends, ESG, Industry 4.0) that are discussed in connection with your company and peers within the financial crowd.

**Identify topics early,** monitor message perception / sentiment and act accordingly.
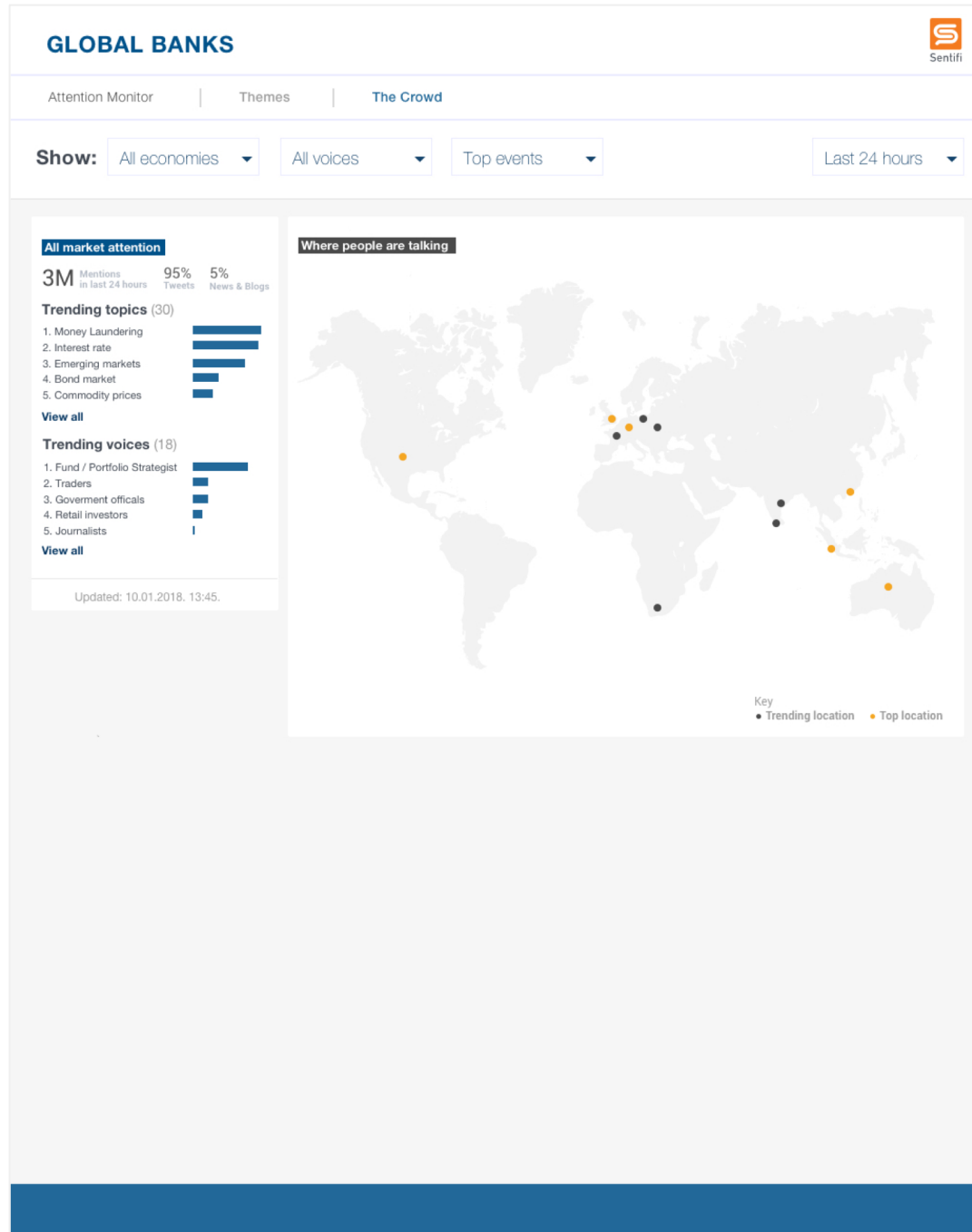
# Crowd monitor



**Crowd Monitor:**

Find out in which **geographies** the influencers talk about your company and your peers.

Find out about **macro topics** within selected geographies.

# Risk and Sentiment monitor
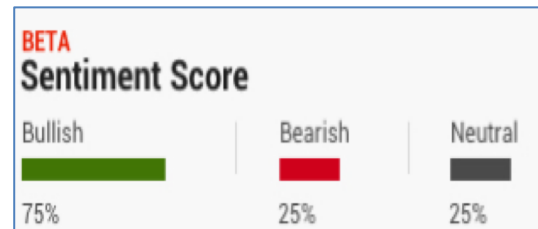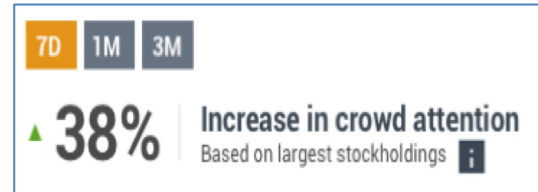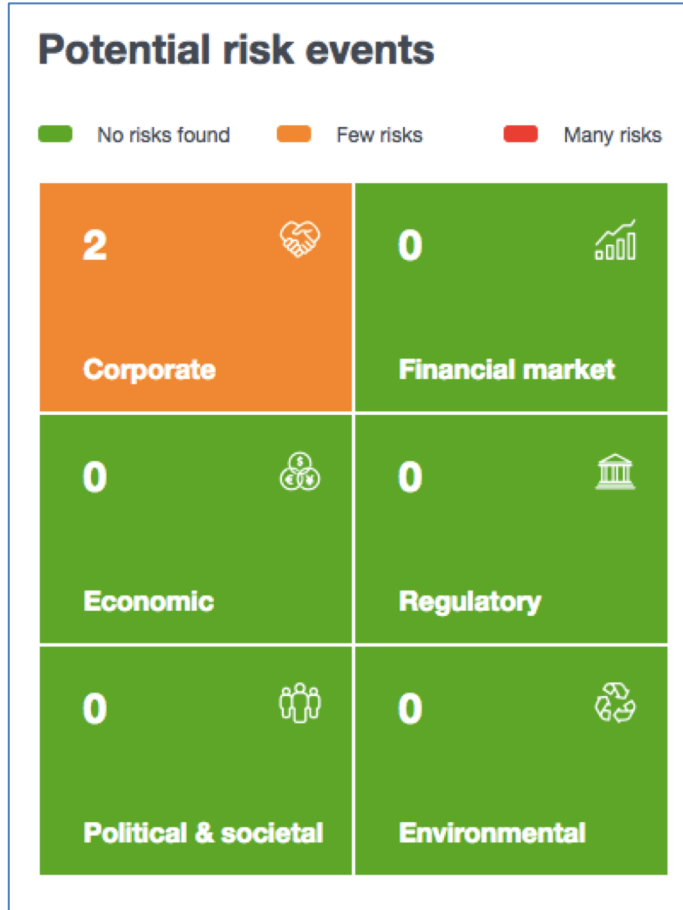
**Sentifi**

## Potential risk events

- 🟩 No risks found
- 🟧 Few risks
- 🟥 Many risks

| 2 🤝 Corporate | 0 📈 Financial market |
|---|---|
| 0 💰 Economic | 0 🏛 Regulatory |
| 0 👥 Political & societal | 0 ♻ Environmental |

**7D** 1M 3M

▲ **38%** | **Increase in crowd attention**
Based on largest stockholdings ℹ

**BETA**
**Sentiment Score**

| Bullish | Bearish | Neutral |
|---|---|---|
| 75% | 25% | 25% |

Risk Monitor:

Find out about potential risk events and use early discovery & monitoring for your risk assessment.

Crowd Sentiment:

Crowd sentiment analytics
- Asset Allocation sentiment
- Topic Related sentiment
- Financials sentiment
- ESG performance sentiment

Thank you.

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