Case Study by Causality Link: Moody's Downgrade of Ford on 9/8/2019

Causality Link is a Fintech company dedicated to building a model of the forces acting on financial markets and surfacing key trends explaining market movements.

The Causality Link SaaS platform reads millions of documents (in 17 languages) in real time and automatically extracts causal relationships to build a dynamic worldwide model of the forces acting on securities, commodities and economies.

This model can be leveraged by portfolio managers, analysts and quants to improve their ability to understand and predict the evolution of markets.

This case study focuses on the recent downgrade of Ford by Moody's which had a negative influence on Ford's stock the next day (September 9th, 2019). We will be using the Causality Link SaaS platform as a financial analyst would, to demonstrate how the platform provides timely and insightful information in a volatile and evolving market.

The Causality Link platform is described in more detail at www.causalitylink.com.

One of the essential features of this SaaS research platform is its ability to go back in time and present only the information that was available by the end of any given date. This "Time Machine" feature enables a fair analysis of the information that was available to the decision makers on that day.

For this case study, we have set the time to Friday September 6, 2019.

1- The Ford Dashboard

The platform enables users to manage and supervise portfolios, which are comprised of companies, industries, commodities or countries. In this case, Ford is one of the assets in the analyst's portfolio and the analyst is monitoring Ford's dashboard, a daily task. The dashboard presents the relevant "key performance indicators" used to describe the financial position of Ford such as Demand, Production, Prices, Revenue, etc...

			Reports are being shown for sep 6, 2019. Use the time relative to adjust of resources			
\odot	Causality Link Portfolio Analysi	s Knowledge Other			× He	lp ▼ Pierre Haren ▼
<u>م</u> آم	Indicators of: Ford				То	ggle Filters 🗡
	Indicators by Mentions ÷ ?	Recent ? Mentions	Recently Discussed 😧	Causal Links	😯 Forecast 😧	
1	Ford Production		Brazil Plants 16 China Production capacity 6 China Plants 6	64	54	
2	Ford Revenue	63	China Sales 31 China Automobiles Sales 6 Sales 5	160	27	
3	Ford Stock price	45	Stock price 42 200 day moving average 3	116	44	_
4	Ford Employment	36	Brazil Employment 14 Brazil Employees 7 Sao paulo Employment 4		14	_
5	Ford Profit	34	Profit © China Profitability 6 Net income 3	285	7	0
6	Ford Market		China Market 6 Automobiles Market 4 Market 3		50	_
7	Ford Market share		China Automobile manufacturers Market share 5 Automobile manufacturers Market share 3 Ford automotive China Market share 3		29	-
8	Ford Prices		Prices 6 Usa Prices 3 Automobiles Prices 2	34		80
9	Ford Capital return	14	Dividend 8 Dividend yield 4 Yield 1	61	_	75
10	Ford Taxes	10	Brazil Automobiles Taxes 6 China Automobile manufacturers Taxes 3 Europe Automobile manufacturers Import taxes	15	29	
		2	3	4	5	

The analyst has decided that indicators should be ranked by decreasing number of recent mentions in the texts analyzed by the system.

- 1. Key Performance Indicators (KPI): The key metrics used in the analyzed text to describe the performance of the company's business. The metrics shown here are grouped with similar, more specific concepts to simplify analysis. For example, within the "Production" KPI, underlying concepts include "Plants" and "Production Capacity".
- 2. Recent Mentions: The number of times the KPI grouping has been mentioned in the last week.
- 3. Recently Discussed: The most recently mentioned specific KPIs, with the number of mentions.
- 4. Causal Links: The number of explanations or "drivers" cited in text for the KPI.
- 5. Forecast: The Causality Link sentiment value, indicating the percentage of positive trends mentioned about that indicator in the current month. A forecast of 50 indicates a split consensus. Below 50 is a bearish sentiment, above 50 is a bullish sentiment.

The attention of our analyst is attracted to the rather bearish sentiment (27) about the revenue of Ford.

The analyst selects this forecast bar and expands the 27 to understand better. (6)

2- The Ford Revenue Dashboard



As the analyst expands the "Ford Revenue" forecast, he is now presented with a series of pie charts about the different descriptors of Ford Revenue: Company (Ford has several subsidiaries), Location, Industry, Segment, Products and KPI (Key Performance Indicator). The size of the descriptor in each pie chart is linked to the volume of mentions of that descriptor in the corpus analyzed over the displayed time frame (about two years). (1)

The bar chart under the pie charts indicates the Causality Link sentiment value (with a confidence interval dependent on the number of mentions detected) (2). We see that 27 is the sentiment value of the bar to the far right – an extremely bearish signal. (3)

At a glance, it seems that the sentiment on Ford revenue had recovered in August but took a nosedive in September. (4)

Because the display KPI "Revenue" is mostly depending on the base KPI "Sales", the analyst clicks on "Sales" in the far-right pie chart and filters instantly the results on specific mentions of "Sales". (5)

3- The Ford Sales Dashboard



This dashboard indicates an even stronger plunge of the base indicator "Ford Sales". Our analyst is now curious about the reasons for that recent plunge and selects the bar chart to access the documents whose analysis led to such a negative sentiment. (1)

-2 F	ord Production	67	Brazil Pla	ants 16	China Production capacity 6 China Plants 6		63	100		
3 F			Pric	Tren	ds of Ford Revenue - filtered in 2019-09				80	
4 F			Usa							
5 F			Chin	# [Detailed Indicator	Mentions		27		
Co	mpany - Location	- Industry		1, 1	Ford China Automobile manufacturers Sales	14			0	
	Ford Chine Usa) (Pe	sugeol, Dongfeng agnee to restructuring plan for Chinese venture ugeol is one of several global automaken, including Ford Motor Co(FM), that have been forced to retrench China have turblied. Published on 201					
				2	Ford Automobile manufacturers Passenger car Sales					
			1	SH mi	U-turn, Ford ditches plan to unify China solies system after partners push back MMGMUDCTROIT Ford Motor has scrapped a plan to create a unified national solies company for China th should of the automater at its joint venture partners and contributed to a spectacular collapse in sales in th grant car market.	e world's				
	0.6				Published on 201	9-09-05				
	0.4			3	Ford Automobile manufacturers Sales					
					U-turn, Ford ditches plan to unify China sales system after partners push back e slide in Ford's sales has been unprecedented for a major global automaker in China.					
			to an		Published on 201	2		Between 0.37% and 6.67%		
6 F			Chin		rora osa Automobile manufacturers Prickop utucki sales					
			Chin		ugust auto sales "better than expected," Evercore says e analysis estimated that General Motors Co. GM, sales rose 17% on the strength of its pickup truck sales .	and Ford	Market share			

4- The explanations of Ford Sales sentiment

The analyst is now presented with a list of recent quotes coming from the analyzed texts which triggered the current estimation of the sentiment about Ford Sales. The analyst notices that the

second text mentions a change in policy of Ford about its Chinese operations. The analyst selects the quote and is brought directly to the original text. (1)

5- Text about Ford's policy change in China

BUSINESS In U-turn, Ford ditches plan to ur	ss turn, Ford ditches plan to unify China sales system after partners push back					
05 Sep 2019 08:35AM (Updated: 05 Sep 2019 09:21AM) –	SHANGHAI/DETROIT: Ford Motor has scrapped a plan to create a unified national sales company for China that stoked mistrust of the automaker at its joint venture partners and contributed to a spectacular collapse in sales in the world's biggest car market.					
Bookmark	On the face of it, the plan announced by Ford in June last year to combine sales channels for vehicles manufactured with Chongqing Changan Automobile Co and Jiangling Motors Group made sense. It would promote operational efficiency at its loss-making China operations and is standard practice in most other markets.					
	But it ignored realities on the ground. Chinese automakers, often in 50–50 partnerships with foreign car makers, are reluctant to lose control over sales decisions, rarely willing to trust each other and loyal to local provinces that are fiercely competitive in their quest for economic growth and tax revenues from vehicle sales.					
	"I would say there was a lack of deep understanding on how relationships work in China," Anning Chen, who in October took over as Ford's third China chief in two years, said in an interview in Shanghai.					
	It is the first time that Ford, grappling with a host of problems in China that					

The text from ChannelNewsAsia, which is one day old, highlights a new policy decision of Ford that reverses a previous one, and its consequences for the future sales of Ford in China.

At this point, the analyst is alarmed by this new development, and decides to check on a more specific indicator in his/her dashboard, the Ford Sales in China.

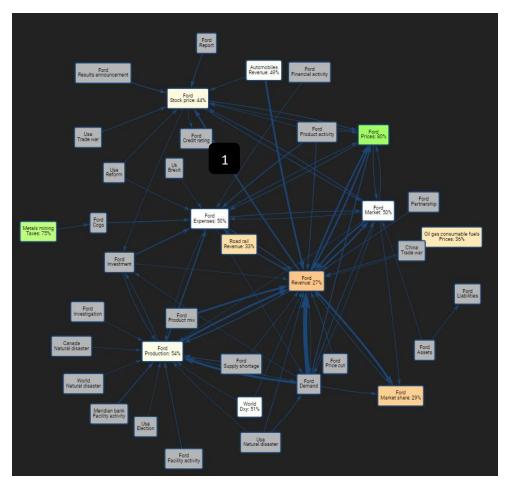
For further analysis about this topic, the analyst selects "China" in the Location pie chart.

6- The Ford Sales in China Dashboard



The picture is extremely bearish. It seems that the woes of Ford in China have been mentioned for quite some time, and that the recent development are a step in the wrong direction.

At this point, the analyst is becoming increasingly worried about the impact of these negative news from China will have on Ford's stock price. The analyst decides to go back to the global causal model of Ford, which is available in two clicks.



7- Ford's causal model on Friday September 6, 2019

The model shows the relations that have been extracted over time in the different texts describing the causal relationships between different Ford indicators, as well as macro indicators (Metal Taxes, US inflation rate), and events such as the US Trade War, the US election, etc...

The analyst notices that one of the indicators is "Ford's credit rating" and knows that Ford's large investment program in electric vehicles and China requires a fair amount of cash, so he/she decides to probe further. (1)

The analyst gets back to Ford's dashboard, selects the Credit Rating element and gets the next screen.

8- Ford Credit Rating Dashboard

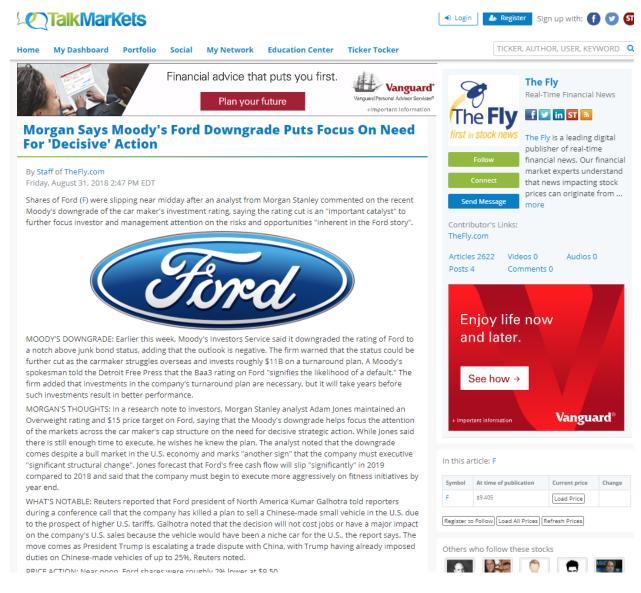
12	Ford Cogs	•	•					14	•	
13	Ford Credit rating									
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14	Ford Cash flow		Cash flow 1							
15	Ford Operating expenses		Brazil Automobiles Inc	entive spending 6 Usa Em	ployee benefits 1					
16	Ford Inventory	3	Dealer inventory 3					6		

The picture is rather distressing given there are no positive trends relating to Ford's Credit Rating, and browsing on the texts, the analyst is reminded of the bad news related to Ford's Credit Rating in August 2018.

9- Ford Credit Rating Quotes August 2018

← → C (@ prototype.causalitylink.co	m/indicators/ford				x 0 0 🜄 0 💷 🔋 i
10 Ford Expenses		Canado			
11 Ford Assets			Trends of Ford Credit rating in 2018-08		
12 Ford Cogs			Detailed indicator	Mentions	
13 Ford Credit rating			Ford Automobile manufacturers Moodys It rating	17	
Company + Location	- Industry	1	Morgan Says Moody's Ford Downgrade Puts Focus On Need For 'Decis Morgan Says Moody's Ford Downgrade Puts Focus On Need For 'Decisiv' Action (road Nom		
Ford			2 Ford credit company Usa Retail banking Moodys It rating		
o		-	"Fallen Angel" Alert Is Ford's Downgrade The "Spark" That Crashes The And as, with everyone lying in wait for the provedual spark that lights the fee' are crash, vasterday Moody's may have been playing with fee when the string agency was to just one notch above just, making it the baggest single" Tallen angel" could "East other	leads to the next inevitable bond downgraded Ford Motor's credit rating	
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Burg		*ð14.		Published on 2018-08-01 Forecast end 2018-08-01	5. ¹⁰ 16
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The analyst's attention is attracted to the Morgan Stanley quote, and brings up the text in one click. (1)



These are not good news. The required "Decisive Action" before another Moody's downgrade does not appear to have panned out in China.

The analyst decides to issue an urgent warning to the portfolio manager based on the strong negative signals discovered in the Causality Link platform. The rest is history...

10- Conclusions

We have shown in this case study how an analyst uses the Causality Link SaaS platform to be informed about the latest developments for a company in a structured way.

The analyst uses a real-time dashboard of the drivers of the company, analyzes very precisely the information about every driver and puts it back into a global perspective. In the course of the analyst's research, his attention is brought to a small number of documents precisely selected among millions of such documents, thus enabling him/her to save time and gain an edge over his competitors.

This ability to leverage the knowledge included in millions of documents is unique and essential to the correct understanding of the forces acting on the markets. And it sure beats spending hours reading these texts from all these sources around the world!

If you want to know more about how Causality Link can help you outperform the competition, please contact us on our web site www.causalitylink.com.