

## How Complexity Anticipates Black Swans – the 2020 Market Crash.

April, 26th 2020

The 2020 stock market crash was a global stock market crash that began on 20 February 2020. On 12 February, the Dow Jones Industrial Average, the NASDAQ Composite, and S&P 500 Index all finished at record highs (while the NASDAQ and S&P 500 reached subsequent record highs on 19 February).

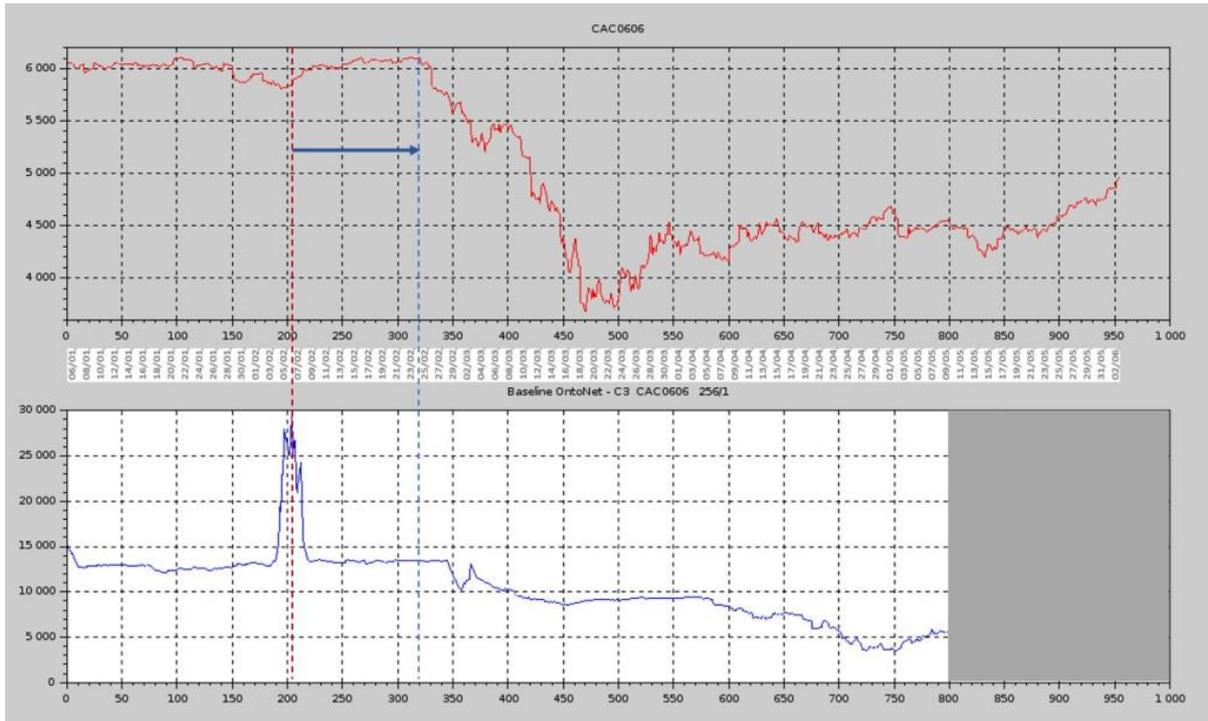
From 24 to 28 February, stock markets worldwide reported their largest one-week declines since the 2008 financial crisis, thus entering a correction. Global markets into early March became extremely volatile, with large swings occurring in global markets. On 9 March, most global markets reported severe contractions, mainly in response to the COVID-19 pandemic and an oil price war between Russia and the OPEC countries led by Saudi Arabia. This became colloquially known as Black Monday. At the time, it was the worst drop since the Great Recession in 2008.

During March 2020, global stocks saw a downturn of at least 25%, and 30% in most G20 nations. Complexity tends to peak, or increases rapidly, prior to a crisis. Financial markets are no exception.

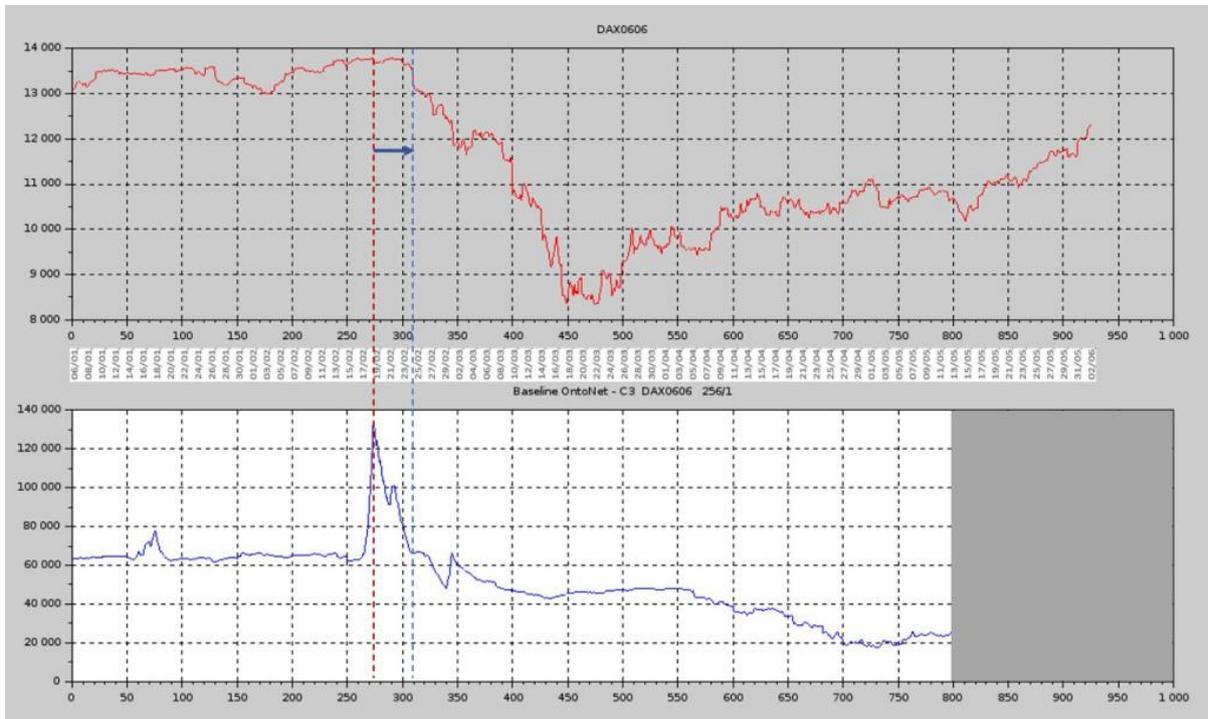
We have devised new complexity-based indices for anticipating Black Swans. One such index, which we call C3, has worked egregiously in major European markets, offering early warnings ranging from 40 to 220 hours before the February 2020 collapse.

Below are the charts of the said indices together with the corresponding C3 index. The dashed red line indicates when C3 peaks, triggering a shorting signal, while the blue dashed line coincides with the commencing of the downfall. Similar information is very useful in shorting markets, purchasing, for example, put options. Time is always money.

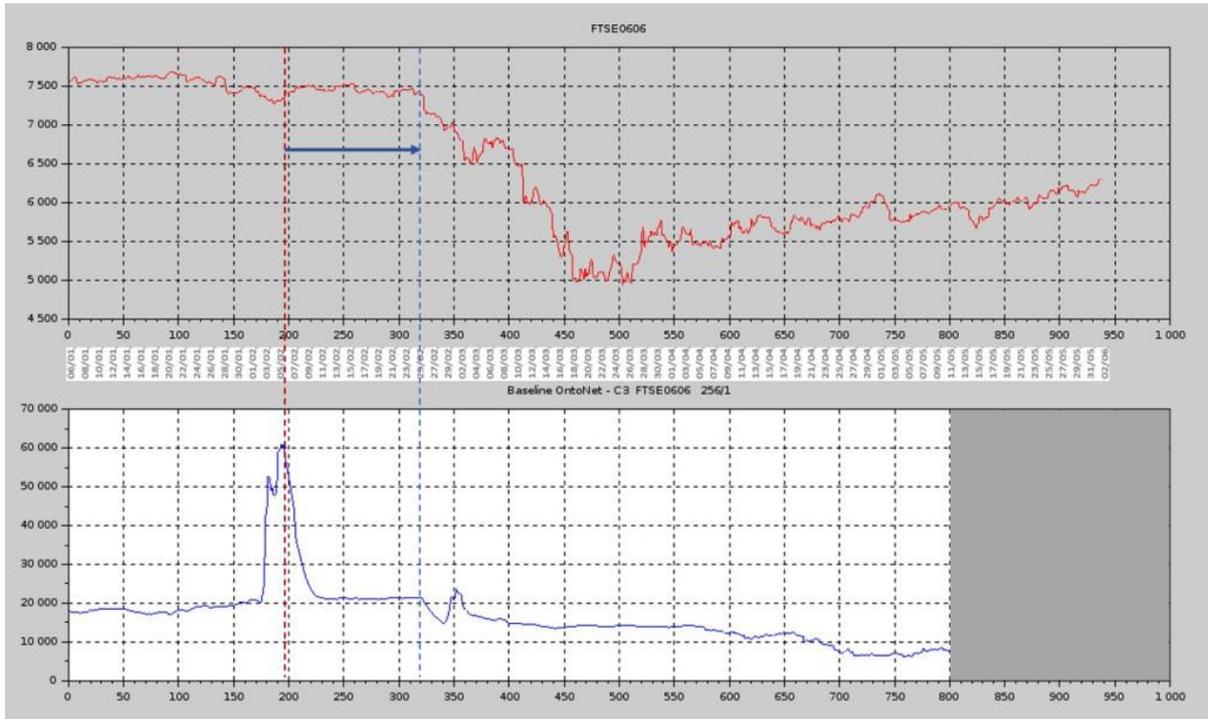
CAC 40



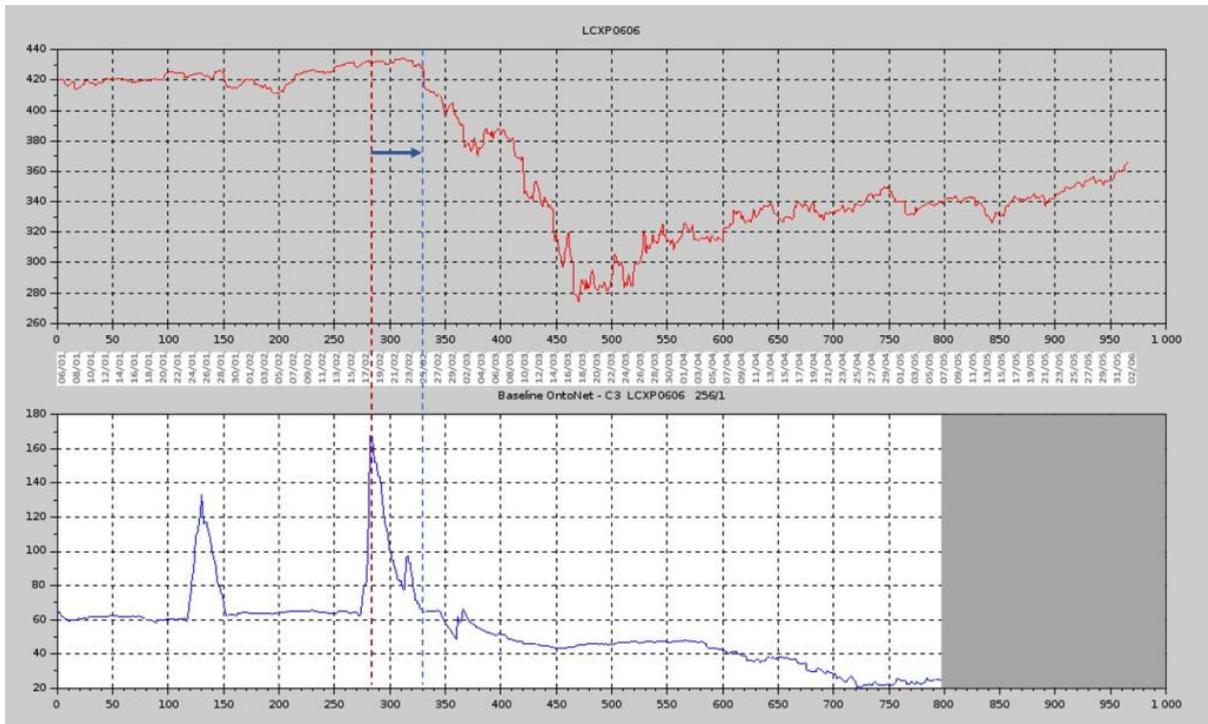
DAX 30



FTSE 100



EUROSTOXX



For obvious reasons we have grayed out the C3 signal after early May 2020. If C3 peaks again soon we will be looking at a W-shaped crisis. What will it be?

---

Optimum Complexity Ltd.  
1 Mayfair Pl, W1J 8AJ  
London, United Kingdom

E-mail: [dc@optimumcomplexity.com](mailto:dc@optimumcomplexity.com)

Website: [www.optimumcomplexity.com](http://www.optimumcomplexity.com)

Phone: +44 7808 763 348

Disclaimer

The Adviser Optimum Complexity Ltd. is an appointed representative of Atlantide Asset Management Limited which is authorised and regulated by the Financial Conduct Authority

The concepts and methods presented in this document are for illustrative purposes only and are not intended to be exhaustive. This document is not intended as a recommendation, an offer or solicitation for the purchase or sale of any securities or other financial instruments. It is not intended to serve as the basis of any future investment decision and should not be considered as a recommendation or investment advice. No investment decision should be made on the basis of this document in whole or in part. No warranty is made as to the accuracy or reliability of any estimates, opinions, conclusions, recommendations (which may change without notice whether in writing or otherwise) or other information contained in this document and, to the maximum extent permitted by law, all liability and responsibility for any direct or indirect loss or damage which may be suffered by any recipient through relying on anything contained in or omitted from this document is disclaimed without reservation. This document has been published by Optimum Complexity Ltd. based on information provided to it. Optimum Complexity Ltd. has taken care in the preparation of this document to ensure that it accurately reflects the current state of the development of the project, though no representation or warranty is provided as to its accuracy. Certain information contained in this presentation has been obtained from public sources prepared by other parties. No responsibility is assumed for the accuracy or completeness of any information in this document. Any reproduction or distribution of this document, in whole or in part, without the prior written consent of Optimum Complexity Ltd. is prohibited. Reverse-engineering of the concepts, methods or ideas contained in this document is strictly forbidden. The methods described in the present document are protected by US patents. This document should not be accessed by any person in any jurisdiction where it is unlawful to do so. This document is for the intended recipient only and is provided on the condition that it be kept confidential and that it is not copied or circulated in whole or in part.