2. Forecasting the consequences of the “Crash of 2008” on space activities

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2.1. Introduction

On 20 April 1961, 8 days after the mission of Yuri Gagarin, President J.F. Kennedy issued a memorandum to the Chairman of the Space Council (the U.S. Vice-president) asking him to come up as soon as possible with a spectacular proposal to “beat the Russians” in a space programme.\(^{527}\) Noteworthy in this memorandum is that the options given were:

- To build a laboratory in space;
- To land on the Moon;
- To make a trip around the Moon;
- To land a rocket with men onboard on the Moon and return them to Earth.

It was partly the entrepreneurial spirit of the U.S. but certainly also the unique opportunity to advance space exploration with a gigantic step that obviously drove the NASA administrator to propose the most challenging of these options.

It seems very evident from this reaction that the main driver for such a programme was geopolitical. Still we cannot ignore that the order was given during a time of healthy economic growth which enabled the U.S., at the peak of expenditure, to allocate not less than 0.8% of its GDP alone to NASA to execute the Apollo programme. If we add to this other (military) space expenditure, we note that at its highest level, in 1967, space expenditure reached more than 1% of U.S. GDP that year, a level never reached again.

This geopolitical framework has been used by the OECD Futures Project group in its study to forecast space activities for the year 2030. In an interim report, three scenarios are developed based upon geopolitical, socio-economic and energy forecasts:\(^{528}\)

- “Smooth Sailing”, based upon the assumption that a global world order will be implemented under the benevolent guidance of international organisations and
where free markets and democracy become gradually the acceptable universal model for national institutions.

- “Back to the future”, under this scenario three major economic powers will strive to dominate the world (United States, Europe and China).
- “Stormy Weather”, where strong disagreements between major powers lead to a gradual erosion of international institutions and increasing conflicts.

It is evident that there will be considerable differences and shifts between civil, commercial and military space expenditure under these three scenarios. For the final predictions in the report it was decided to base further work on the first scenario. Nevertheless the strong diversification and effects of the other scenarios clearly indicate the interrelationships between space activities and geopolitical as well as socio-cultural factors.

One of the elements that was certainly not taken into account was the stock market crash of 2008. Historically, crashes of this nature happen often. The first well-documented crash was in the 17th century and was based upon speculation on... tulips. Between 1634 and 1637 the price of tulips rose by a factor of 50. The price even tripled in one week at the highest point of the “bubble” and, similar to later crashes, the over-speculative market collapsed in February 1637, with prices dropping 95% resulting in a serious financial crisis.

In general, such crashes happen after periods of excessive economic optimism and continuously rising stock prices and often follow very speculative stock market bubbles. Some more recent major crashes were the Wall Street Crash of 1929 (with a cumulative drop of not less than 89%) and the 1987 crash, also known as the Black Monday Crash, with a drop of 22.6% in one day.

The Crash of 2008 clearly had its origins in the (equity) financial and banking sector, symbolised by the failure of Lehman Brothers. It quickly led to the collapse of 14 other banks in the U.S. that year and then expanded internationally.

At this stage it is difficult to predict when the effects of this latest crash will smooth out on economies in general and on the space sector in particular, but some elements are worth noting when comparing the 2008 crash with the Black Monday Crash of 1987:

- The total drop in stock prices was not as severe as in 1987.
- The crash of 1987 did not result in a subsequent “bear market” of constantly declining stock values.
- A full recession seems to have been avoided (at the time of writing, this point is strongly debated as many economists do not exclude a second wave).