PEAK – AOD FALL INTERVALS AS AN INDICATOR OF US STOCK MARKET CORRECTIONS

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A US crash was forecast to happen in the four months to December 20, 2017, based on extrapolations from the Decennial Cycle and the 60 Year October panic intervals (McMinn, 2017). The actual event arrived later than expected in early February 2018 with two one day falls over -4.00% in the Dow Jones Industrial Average (DJIA). At the time, the slump was only expected to be a temporary correction based on historical precedent. All major annual one day (AOD) falls (≥ -4.00%) that that occurred shortly after a record high, happened in a brief correction. This trend has persisted over the past 120 years and was first proposed by McMinn (1997). In contrast, large AOD falls taking place well after a record peak, usually indicated the beginning of a bear market. Both trends were very consistent throughout DJIA history.

NB: The annual one day (AOD) rise or fall was taken as the biggest one day percentage movement in the DJIA during the year beginning March 1. The analysis was always based on the closing values of the DJIA. For some market slumps, the low occurred on the day of the AOD fall (e.g.: 1901 (May), 1987, 1997, 1998), whereas the post-crash low (PCL) was the low after the AOD fall.

DJIA Corrections

Large AOD falls (≥ -4.00%) occurring shortly after a record peak have always happened within a correction (see **Table 1**). The interval between peak and fall can be up to about three weeks, whereas the AOD fall – Post Crash Low was nearly always lasted less than three weeks (one anomaly - 1988). The early February 2018 market distress followed the overall trend very well and thus the large one day falls on February 5 and 8 were not expected to be the harbingers of a full-fledged bear market.

Table 1
DJIA CORRECTIONS WITH INTERVALS OF LESS THAN 23 DAYS BETWEEN THE RECORD HIGH & MAJOR AOD FALL (≥ -4.00%)

Record Peak	Interval Days	AOD Fall	Interval Days	Post Crash Low	Correction Decline
Jan 26, 2018	10	Feb 05, 2018 -4.61%	4	Feb 09, 2018	-10.4%
Feb 02, 1946 (a)	23	Feb 25, 1946 -4.21%	1	Feb 26, 1946	-10.1%
Apr 12, 1988 (b)	2	Apr 14, 1988 -4.82%	39	May 23, 1988	-8.0%
Apr 30, 1915	7	May 07, 1915 -4.54%	7	May 14, 1915	-15.9%
May 01, 1901	8	May 09, 1901 -6.05%	5	May 14, 1901	-11.3%
Jun 12, 1950 (c)	14	Jun 26, 1950 -5.65%	17	Jul 13, 1950	-13.5%
July 14, 1919	21 24	Aug 04, 1919 -4.79% Aug 07, 1919 -4.71%	16 13	Aug 20, 1919	-12.3%

Sep 04, 1986	07	Sep 11, 1986 -4.61%	18	Sep 29, 1986	-8.6%
Sep 23, 1955	03	Sep 26, 1955 -6.54%	14	Oct 11, 1955	-10.0%
Oct 09, 1989	04	Oct 13, 1989 -6.91%	24	Nov 06, 1989	-8.0%
Nov 28, 1928	10	Dec 08, 1928 -5.06%	1	Dec 09, 1928	-13.0%

(a) This was the high after the July 1932 secular low - not a record high.
(b) This was the high after December 1987 low - not a record high.
(c) A post 1946 high – not a record high.
NB: The correction percentage fall based on interval between the high and the lowest DJIA value in the cycle. This could be either the AOD fall or the post crash low.
Abbreviation: PCL – Post crash low. The low after the AOD fall.

There were remarkable parallels between the corrections of 1901 and 1915. The tops, AOD falls/rises and the post-crash lows all took place at the same time of year (see **Table 2**).

Table 2
1901 & 1915 MAY CORRECTIONS

Record High	Days	AOD Fall	Days	AOD Rise	Days	PCL
Apr 30, 1915	7	May 07, 1915 -4.54%	4	May 11, 1915 +4.16%	3	May 14, 1915
May 01, 1901	8	May 09, 1901 -6.05%	1	May 10, 1901 +6.37%	4	May 14, 1901

Abbreviation: PCL – Post crash low. The low after the AOD fall.
Source: McMinn, 2017.

AOD falls happened shortly after record peaks in the autumns of 1955, 1986 and 1989 and each occurred during a brief correction lasting less than 28 days (see Table 3). The 1927 correction (AOD fall -3.65%) was also included in the table because it closely paralleled the 1955 correction. Both lasted about 18 days with a peak – AOD fall interval of about four days.

Table 3
1955, 1986 & 1989 AUTUMN CORRECTIONS

Record High	Interval Days	AOD Fall	Interval Days	PCL
Sep 04, 1986	07	Sep 11, 1986 -4.61%	18	Sep 29, 1986
Sep 23, 1955	03	Sep 26, 1955 -6.54%	14	Oct 11, 1955
Oct 09, 1989	04	Oct 13, 1989 -6.91%	24	Nov 06, 1989
Oct 03, 1927	05	Oct 08, 1927 -3.65%	14	Oct 22, 1927

Abbreviation: PCL – Post crash low. The low after the AOD fall.

The 2018 correction may best be compared with its 1928 counterpart, both of which happened in summer, had a peak – AOD fall interval of 10 days and involved an overall decline of about 12% (see Table 4). They also occurred during the late stages of a surging bull market.

Table 4 1928 & 2018 CORRECTIONS				
Record Peak	**Interval Days**	**AOD Fall**	**Interval Days**	**PCL**
Nov 28, 1928	10	Dec 08, 1928 -5.06%	1	Dec 09, 1928
Jan 26, 2018	10	Feb 05, 2018 -4.61%	4	Feb 09, 2018
Abbreviation: PCL: Post crash low. The low after the AOD fall.				

The 1916-1917 Experience

The 1916 events would have given a false warning of an emerging correction. The record high was reached on November 21, 1916, which was followed three weeks later by major one day falls on December 12 and December 14 (see Table 5). Peace fears gripped the market, with panic selling in companies profiting from the war in Europe. The mood quickly changed to anxiety that the US would soon enter WWI, after the Secretary of State commented that the US was on the "verge of war.". Such dramatic one day falls so soon after a record high would have indicated that the slump was only going to be a correction. However, the AOD fall happened on February 1, 1917, when Germany announced that it would attack neutral shipping. This would support the bear market option as it took place well after the high. The DJIA finally reached a low in late 1917 after a -40.3% decline from the peak.

Table 5 THE 1916-1917 BEAR MARKET		
Date	**DJIA OD Falls**	**Event**
Nov 21, 1916		Record high
Dec 12, 1916	-4.13%	Peace fears
Dec 14, 1916	-4.27%	
Dec 21, 1916	-5.13%	Fears USA may enter WWI
Feb 01, 1917	-7.24%	Germany to attack neutral shipping AOD fall
Dec 19, 1917		Bear market low
Abbreviation: OD – One day.		

Discussion & Conclusions

If a major AOD fall (≥ -4.00%) took place within 23 days after a record high, than it always fell within a brief correction. Such falls do not occur often in financial history, but they can be an important indicator at certain times. If the AOD fall occurred within 6 months after a major peak, then it usually happened in a bear market (see Appendix 1). There were two exceptions to this finding with the 1997 and 2015 corrections (highlighted in **red** in the appendix).

For AOD falls of less than -4.00%, the effect becomes less accurate and anomalies arise. In 1897 and 1990, the AOD falls happened shortly after record highs, but the downturn still extended into bear markets (see Table 6). In contrast, the peak – AOD fall interval was 97 days in 2015, but only a moderate correction was experienced. The interval in 1991 was 28 days and therefore suggesting the beginnings of a bear market. Such a presumption would have been invalid as 1991 only recorded a weak slump of -6.9%.

Table 6 ANOMALIES FOR AOD FALLS < -4.00%					
Record Peak	**Interval Days**	**AOD Fall**	**Interval Days**	**Post Crash Low**	**Decline**
Sep 12, 1897	09 30	Sep 21, 1897 -3.95% Oct 12, 1897 -3.90%	155 134	Mar 25, 1898	-24.8%
Jul 16, 1990	21	Aug 06, 1990 -3.30%	66	Oct 11, 1990	-21.2%
Oct 18, 1991	28	Nov 15, 1991 -3.91%	25	Dec 10, 1991	-6.9%
May 19, 2015	97	Aug 24, 2015 -3.39%	11	Sep 04, 2015	-15.90%

Peak – AOD fall intervals can be a predictor of a large stock market decline and thus something similar may also be evident for significant market lows. This was explored extensively. Although AOD falls can occur around market lows, no consistent trends could be deciphered and thus no conclusions may be drawn.

The findings are of great interest and can be useful to forecast financial activity at certain times. Alas, the causal basis of these observations remained unknown. Lunar phase, AOD falls and major DJIA peaks can all be interlinked (McMinn, 2000, 2015). Thus, Moon Sun cycles offer the best prospect for further exploration. Hopefully other researchers will take up the challenge and offer an explanation of why peak – AOD fall intervals are so important in financial activity.

References

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Appendix 1 DJIA BEAR MARKETS WITH INTERVALS OVER 23 DAYS BETWEEN RECORD HIGHS & MAJOR AOD FALLS (≥ -4.00%)			
Beginning of Bear Market	**Biggest % Fall in 6 Mths After Peak**	**% Fall ≥ -4.00%**	**% Fall of BM (a)**
Sep 04, 1895	Dec 20, 1895	-6.61	(b)
Sep 05, 1899	Dec 18, 1899	-8.72	-31.8
Jun 17, 1901	Sep 06, 1901	-4.43	-46.1
Sep 30, 1912	Jan 20, 1913	-4.90	-43.5
Nov 21, 1916	Feb 01, 1917	-7.24	-30.3

Sep 03, 1929	Oct 28, 1929	-12.83	-89.2 (c)
Feb 05, 1934	Jul 26, 1934	-6.62	-22.8
May 29, 1946	Sep 03, 1946	-5.56	-24.1
Dec 13, 1961	May 28, 1962	-5.71	-27.1
Aug 25, 1987	Oct 19, 1987	-22.61	-22.6
Aug 06, 1997	**Oct 27, 1997**	**-7.18**	**-13.9**
Jul 17, 1998	Aug 31, 1998	-6.63	-19.9
Jan 14, 2000	Apr 14, 2000	-5.64	-19.9
May 21, 2001	Sep 11, 2001	(d)	-27.4
Mar 19, 2002	Jul 19, 2002	-4.64	-31.5
Oct 09, 2007	Jan 21, 2008	(e)	-54.1
Apr 29, 2011	**Aug 08, 2011**	**-5.55**	**-15.9**

(a) Peak to trough of the bear market.
(b) No percentage fall may be given. The 1895 data was based on the 12 Stock Average and post May 1896 data on the DJIA.
(c) Based on the July 7, 1932 secular low.
(d)The market did not open on September 11, due to the WTC terrorist attack. It was still regarded as the AOD fall for the year.
(e) Worldwide stock market panics occurred on January 21, 2008. The US market was closed on the day due to the MLKJnr holiday. Even so, it was taken as the AOD fall for 2007.
NB: Corrections have been highlighted in **red**.