Episode 11 – Wednesday July 20, 2022, 3PM EDT

If winning isn't everything, why do they keep score?
- Vince Lombardi

Episode 11-1

A comprehensive statistical study on scoring categories of the Men's NCAA D1 Championship Tournaments. The study includes two 5-year periods (1988-1992 & 2017-2022). MatStats analyzes yearly changes, weight class differences, and scoring changes as the rounds progress through the tournament. A great way to learn about changes in the sport in the last 30 years.

How much data is in this study?

This study is done over two separate 5-year periods 30 years apart. 3366 Wrestlers & 6060 Bouts were used for the scoring analysis.

Period	Wrestlers	Bouts
1988-1992	1717	2862
2017-2022	1649	3198
Total	3366	6060
Mean	336.6	606.0

Where does the data come from? What data is studied? How many wrestlers and matches per year are studied?

- The scoring was derived from two NCAA D1 Men's Wrestling Championship tournaments.
- The two periods used are 1988-1992 and 2107-2022.
- All bouts in the tournaments were used.
- The scoring us for individuals only, no team scoring has been analyzed in this study.
- We have results broken down by year, weight, and round.
- In 1988-1992 there were 34.34 wrestlers per weight class and 57.24 bouts per weight class.
- In 2017-2022 there were 32.98 wrestlers per weigh class and 63.96 bouts per weight class.
- We have winner's, loser's, total, and margin points per match, pin percentage, OT percentage, and default percentage.
- We do NOT have the points prior to pins or defaults. These matches are not counted in points per match.
- MatStats uses all this data and time frames to compare and contrast the scoring and make observations on the scoring trends in the sport.
- MatStats used enough years and matches to draw accurate conclusions. The time periods are 30 years apart from each each other, so we have a big enough window to see scoring trends in the sport from the Men's D1 NCAA Tournaments.

What major rules have changed during this 34-year period?

- Three major rule changes
- 1) Back Points
- 2) OT rules
- 3) you must lose twice (except 2nd & 3rd place) to be eliminated.

- These 3 rule changes came in between the two 5-year periods?
- Back points????????

Section #1 – Changes in scoring through the years at the Men's NCAA D1 Tournament.

Episode 11-5

- In the first of our three sections on scoring, we discuss the changes through the years.

- We use the two 5-year time periods we selected – 1988 to 1992 & 2017-2022

- We look at the arithmetic means (average), standard deviations, normal curve distributions, correlations between the years and categories and the increases and decreases in these categories.

How is the scoring distributed through the 1988-1992 years?

The scoring categories from 1988-1992 all fall into a Normal Curve(The symmetrical bell-shaped curve of a normal distribution)

1988-1992	W	L	Total	Pin	OT	DEF	Margin
1988	8.95	3.45	12.40	10.26%	6.03%	0.02	5.50
1989	8.28	3.47	11.75	10.53%	7.02%	0.02	4.81
1990	8.16	3.57	11.70	8.95%	5.41%	0.01	4.59
1991	8.55	3.44	12.00	10.30%	5.90%	0.02	5.11
1992	8.30	3.66	11.96	10.71%	5.72%	0.01	4.64
Mean	8.45	3.52	11.96	10.15%	6.02%	0.0181	4.93
STD DEV	0.280497	0.082214	0.247931	0.006195	0.005438	0.005367	0.335408
+2 (95%)	9.01	3.68	12.46	11.39%	7.10%	0.03	5.60
+1 (68%)	8.73	3.60	12.21	10.77%	6.56%	0.02	5.26
Mean	8.45	3.52	11.96	10.15%	6.02%	0.0181	4.93
-1 (68%)	8.17	3.44	11.71	9.53%	5.47%	0.01	4.59
-2 (95%)	7.89	3.35	11.46	8.91%	4.93%	0.01	4.26

2017-2022 scoring categories are also all normal curves. This shows a normal distribution of random variables.

Episode 11-7

2017-22	W	L	Total	Pin	OT	DEF	Margin
2017	8.18	2.88	11.05	10.94%	5.78%	0.02	5.30
2018	8.13	3.08	11.21	10.94%	8.28%	0.02	5.05
2019	8.08	2.97	11.05	9.84%	7.97%	0.00	5.11
2021	7.74	2.77	10.51	9.38%	8.75%	0.02	4.97
2022	7.24	2.85	10.09	9.22%	8.13%	0.02	4.39
Mean	7.87	2.91	10.78	10.06%	7.78%	0.0147	4.96
STD DEV	0.350334	0.106938	0.418554	0.007435	0.010336	0.006889	0.305208
+2	8.58	3.12	11.62	11.55%	9.85%	0.03	5.58
+1	8.22	3.02	11.20	10.81%	8.81%	0.02	5.27
Mean	7.87	2.91	10.78	10.06%	7.78%	0.0147	4.96
-1	7.52	2.80	10.37	9.32%	6.75%	0.01	4.66
-2	7.17	2.70	9.95	8.58%	5.71%	0.00	4.35

Correlations between scoring categories through the years. Correlation is a stats term that measures a relationship or connection between two or more things.

Episode 11-8

Correlation By Year	2017-22	1988-92
OT & Margin	-0.50	+0.16
OT & Pin %	-0.60	+0.54
W Pts & Margin	+0.96	+0.98
L Pts & Margin	+0.28	-0.74
Pin % & Margin	+0.71	+0.27
Total Pts & Margin	+0.87	+0.89
W Pts & Total	+0.98	+0.96
L Pts &Total	+0.71	-0.35

The average scoring through the years and the mean for the ten years.

Episode 11-9

Year	W	L	Total	Pin	OT	DEF	Margin
1988	8.95	3.45	12.40	10.26%	6.03%	0.02	5.50
1989	8.28	3.47	11.75	10.53%	7.02%	0.02	4.81
1990	8.16	3.57	11.70	8.95%	5.41%	0.01	4.59
1991	8.55	3.44	12.00	10.30%	5.90%	0.02	5.11
1992	8.30	3.66	11.96	10.71%	5.72%	0.01	4.64
2017	8.18	2.88	11.05	10.94%	5.78%	0.02	5.30
2018	8.13	3.08	11.21	10.94%	8.28%	0.02	5.05
2019	8.08	2.97	11.05	9.84%	7.97%	0.00	5.11
2021	7.74	2.77	10.51	9.38%	8.75%	0.02	4.97
2022	7.24	2.85	10.09	9.22%	8.13%	0.02	4.39
Mean	8.16	3.21	11.37	10.11%	6.90%	0.02	4.95

Correlations between years and categories from 1988 to 2022.

Episode 11-10

Correlation		1988-92	2017-2022	Total
Year	W	-0.52	-0.93	-0.73
Year	L	+0.66	-0.57	-0.95
Year	Total	-0.37	-0.92	-0.90
Year	Pin	+0.15	-0.95	-0.12
Year	OT	-0.45	+0.67	+0.75
Year	Margin	-0.59	-0.86	-0.03

Scoring has decreased noticeably from 1988 to 2022 in the Men's NCAA D1 Tournament.

Episode 11-11

Year	W	L	Total
1988	8.95	3.45	12.40
1989	8.28	3.47	11.75
1990	8.16	3.57	11.70
1991	8.55	3.44	12.00
1992	8.30	3.66	11.96
2017	8.18	2.88	11.05
2018	8.13	3.08	11.21
2019	8.08	2.97	11.05
2021	7.74	2.77	10.51
2022	7.24	2.85	10.09
Mean	8.16	3.21	11.37
Percent Change 1988 to 2022	-13.46%	-19.78%	-15.22%

The correlation between year and scoring is very strongly negative (inverse).

Episode 11-12

Year	W	L	Total
1988	8.95	3.45	12.40
1989	8.28	3.47	11.75
1990	8.16	3.57	11.70
1991	8.55	3.44	12.00
1992	8.30	3.66	11.96
2017	8.18	2.88	11.05
2018	8.13	3.08	11.21
2019	8.08	2.97	11.05
2021	7.74	2.77	10.51
2022	7.24	2.85	10.09
Mean	8.16	3.21	11.37
Correlations			
Year & Winner Points	-0.73		
Year & Loser Points		-0.95	
Year & Total Points			-0.90

What categories if any have no correlation to the years?

There is NO Correlation between Years and Pin Percentage or Scoring Margin.

Episode 11-13

Year	Pin	Margin
1988	10.26%	5.50
1989	10.53%	4.81
1990	8.95%	4.59
1991	10.30%	5.11
1992	10.71%	4.64
2017	10.94%	5.30
2018	10.94%	5.05
2019	9.84%	5.11
2021	9.38%	4.97
2022	9.22%	4.39
Mean	10.11%	4.95
Correlations		
Year & Pin Percentage	-0.12	
Year & Scoring Margin		-0.03

Did any category have a positive correlation over the years?

There is a strong Positive Correlation between Year and OT Percentage.

Year	OT
1988	6.03%
1989	7.02%
1990	5.41%
1991	5.90%
1992	5.72%
2017	5.78%
2018	8.28%
2019	7.97%
2021	8.75%
2022	8.13%
Mean	6.90%
Correlations	
Year & OT Percentage	+0.75

Section #2 – Scoring by weight class through the years at the Men's NCAA D1 Tournament.

Episode 11-15

- In the second of our three sections on scoring, we discuss the scoring by weight class through the years and how they compare to other weight classes.

- We use the two 5-year time periods we selected – 1988 to 1992 & 2017-2022

- We look at the arithmetic means (average), standard deviations, normal curve distributions, correlations between the years and categories and the increases and decreases in these categories.

Scoring categories by weight class from 1988-1992.

Episode 11-16

1988-92		W	L	Total	Pin	OT	DEF	Margin
118	125	8.91	3.59	12.50	8.15%	6.08%	0.01	5.32
126	133	9.72	4.02	13.74	12.35%	5.40%	0.02	5.70
134	141	9.13	3.98	13.05	8.72%	6.29%	0.02	5.15
142	149	8.30	3.56	11.86	9.85%	5.85%	0.02	4.74
150	157	7.85	3.24	11.09	10.02%	5.61%	0.01	4.60
158	167	8.55	3.80	12.35	7.44%	7.41%	0.01	4.74
167	174	8.13	3.39	11.52	11.15%	6.17%	0.02	4.75
177	184	9.15	3.62	12.76	12.43%	5.31%	0.02	5.53
190	197	8.12	3.35	11.47	5.72%	5.66%	0.03	4.78
275	285	6.62	2.64	9.27	15.67%	6.39%	0.02	3.98
Mean		8.45	3.52	11.96	10.15%	6.02%	0.02	4.93

Scoring Categories by weight class 2017-2022.

Episode 11-17

2017-22		W	L	Total	Pin	OT	DEF	Margin
125		8.29	2.94	11.23	12.19%	6.25%	0.02	5.35
133		8.25	3.02	11.27	9.69%	5.63%	0.03	5.23
141		8.07	3.14	11.21	9.38%	7.81%	0.01	4.94
149		7.58	3.09	10.68	8.75%	8.75%	0.01	4.49
157		7.78	2.96	10.74	8.44%	8.75%	0.02	4.82
165		7.87	2.86	10.73	8.44%	7.19%	0.02	5.01
174		7.80	2.88	10.69	11.56%	9.38%	0.02	4.92
184		8.42	3.02	11.44	7.81%	8.13%	0.00	5.40
197		7.33	2.82	10.15	11.56%	6.25%	0.01	4.51
285		7.37	2.38	9.75	12.81%	9.69%	0.02	5.00
Mean		7.87	2.91	10.78	10.06%	7.78%	0.01	4.96

Scoring categories by weight class for all ten years (1988-1992 & 2017-2022) in the study.

Episode 11-18

1988-92	&	2017-22		Total				
		W	L	Total	Pin	OT	DEF	Margin
125	118	8.60	3.27	11.87	10.17%	6.16%	0.01	5.33
133	126	8.98	3.52	12.50	11.02%	5.51%	0.02	5.47
141	134	8.60	3.56	12.13	9.05%	7.05%	0.01	5.04
149	142	7.94	3.33	11.27	9.30%	7.30%	0.01	4.62
157	150	7.81	3.10	10.91	9.23%	7.18%	0.02	4.71
165	158	8.21	3.33	11.54	7.94%	7.30%	0.02	4.88
174	167	7.97	3.13	11.10	11.35%	7.77%	0.02	4.84
184	177	8.78	3.32	12.10	10.12%	6.72%	0.01	5.47
197	190	7.73	3.09	10.81	8.64%	5.96%	0.02	4.64
285	275	7.00	2.51	9.51	14.24%	8.04%	0.02	4.49
Mean		8.16	3.21	11.37	10.11%	6.90%	0.02	4.95

Correlations of scoring categories by weight class.

Episode 11-19

Correlation by Weight Class	2017-22	1988-92	Total
Pin & margin	-0.02	-0.16	-0.10
Total & weight	-0.79	-0.82	-0.84
Pin & weight	+0.44	+0.52	+0.64
OT & weight	+0.53	+0.15	+0.52
Margin & weight	-0.13	-0.71	-0.56
Tot & weight no HWT	-0.54	-0.50	-0.54

Do the weight classes have a normal distribution?

The scoring categories except for 275/285 are a tight normal curve from 1988-1992. Including 275/285 some categories are borderline not normal distributions.

1988-92		W	L	Total	Pin	OT	DEF	Margin
118	125	8.91	3.59	12.50	8.2%	6.1%	0.01	5.32
126	133	9.72	4.02	13.74	12.4%	5.4%	0.02	5.70
134	141	9.13	3.98	13.05	8.7%	6.3%	0.02	5.15
142	149	8.30	3.56	11.86	9.9%	5.9%	0.02	4.74
150	157	7.85	3.24	11.09	10.0%	5.6%	0.01	4.60
158	167	8.55	3.80	12.35	7.44%	7.4%	0.01	4.74
167	174	8.13	3.39	11.52	11.1%	6.2%	0.02	4.75
177	184	9.15	3.62	12.76	12.4%	5.3%	0.02	5.53
190	197	8.12	3.35	11.47	5.7%	5.7%	0.03	4.78
275	285	6.62	2.64	9.27	15.7%	6.4%	0.02	3.98
Mean		8.45	3.52	11.96	10.15%	6.0%	0.02	4.93
STD DEV		0.819521	0.380146	1.178232	0.027326	0.005826	0.005934	0.479567
+2	95%	10.09	4.28	14.32	15.62%	7.18%	0.03	5.89
+1	68%	9.27	3.90	13.14	12.88%	6.60%	0.02	5.41
Mean		8.45	3.52	11.96	10.15%	6.0%	0.02	4.93
-1	68%	7.63	3.14	10.78	7.42%	5.43%	0.01	4.45
-2	95%	6.81	2.76	9.60	4.69%	4.85%	0.01	3.97

The scoring categories from 2017-2022 are more normal distributions than 1988-1992.

Episode 11-21

2017-22		W	L	Total	Pin	OT	DEF	Margin
125		8.29	2.94	11.23	12.19%	6.25%	0.02	5.35
133		8.25	3.02	11.27	9.69%	5.63%	0.03	5.23
141		8.07	3.14	11.21	9.38%	7.81%	0.01	4.94
149		7.58	3.09	10.68	8.75%	8.75%	0.01	4.49
157		7.78	2.96	10.74	8.44%	8.75%	0.02	4.82
165		7.87	2.86	10.73	8.44%	7.19%	0.02	5.01
174		7.80	2.88	10.69	11.56%	9.38%	0.02	4.92
184		8.42	3.02	11.44	7.81%	8.13%	0.00	5.40
197		7.33	2.82	10.15	11.56%	6.25%	0.01	4.51
285		7.37	2.38	9.75	12.81%	9.69%	0.02	5.00
Mean		7.87	2.91	10.78	10.06%	7.78%	0.0147	4.96
STD DEV		0.359662	0.201406	0.503354	1.7105	1.3365	0.009249	0.294069
+2	95%	8.59	3.31	11.79	0.1348	0.1045	0.03	5.55
+1	68%	8.23	3.11	11.29	0.1177	0.0912	0.02	5.26
Mean		7.87	2.91	10.78	10.06%	7.78%	0.0147	4.96
-1	68%	7.51	2.71	10.28	0.0835	0.0644	0.01	4.67
-2	95%	7.16	2.51	9.78	0.0664	0.0511	0.00	4.38

Scoring categories from 1988-1992 & 2017-2022 are basically normally distributed.

Episode 11-22

1988-92	&	2017-22		Total				
		W	L	Total	Pin	OT	DEF	Margin
125	118	8.60	3.27	11.87	10.17%	6.16%	0.01	5.33
133	126	8.98	3.52	12.50	11.02%	5.51%	0.02	5.47
141	134	8.60	3.56	12.13	9.05%	7.05%	0.01	5.04
149	142	7.94	3.33	11.27	9.30%	7.30%	0.01	4.62
157	150	7.81	3.10	10.91	9.23%	7.18%	0.02	4.71
165	158	8.21	3.33	11.54	7.94%	7.30%	0.02	4.88
174	167	7.97	3.13	11.10	11.35%	7.77%	0.02	4.84
184	177	8.78	3.32	12.10	10.12%	6.72%	0.01	5.47
197	190	7.73	3.09	10.81	8.64%	5.96%	0.02	4.64
285	275	7.00	2.51	9.51	14.24%	8.04%	0.02	4.49
Mean		8.16	3.21	11.37	10.11%	6.90%	0.0164	4.95
STD DEV		0.565606	0.279459	0.820262	0.016996	0.007663	0.004571	0.344026
+2	95%	9.29	3.77	13.01	13.51%	8.43%	0.03	5.64
1	68%	8.73	3.49	12.19	11.81%	7.67%	0.02	5.29
Mean		8.16	3.21	11.37	10.11%	6.90%	0.0164	4.95
-1	68%	7.60	2.93	10.55	8.41%	6.13%	0.01	4.60
-2	95%	7.03	2.66	9.73	6.71%	5.37%	0.01	4.26

The trends we learned from the annual section hold true by weight classes. One exception 275/285.

Episode 11-23

		% Change from 1988-92 to 2017-2022						
		W	L	Total	Pin	OT	DEF	Margin
125	118	-7%	-18%	-10%	+50%	+3%	+1.81	+1%
133	126	-15%	-25%	-18%	-22%	+4%	+0.71	-8%
141	134	-12%	-21%	-14%	+7%	+24%	-0.65	-4%
149	142	-9%	-13%	-10%	-11%	+50%	-0.67	-5%
157	150	-1%	-9%	-3%	-16%	+56%	+1.05	+5%
165	158	-8%	-25%	-13%	+13%	-3%	+0.31	+6%
174	167	-4%	-15%	-7%	+4%	+52%	-0.08	+4%
184	177	-8%	-16%	-10%	-37%	+53%	-1.00	-2%
197	190	-10%	-16%	-11%	+102%	+10%	-0.78	-6%
285	275	+11%	-10%	+5%	-18%	+52%	-0.15	+26%
Mean		-7%	-17%	-10%	-1%	+29%	-0.19	+1%

Changes in scoring categories from 1988-1992 to 2017-2022 by weight class mimic that of the scoring changes we learned earlier by year.

Episode 11-24

- Changes from 1988-92 to 2017-2022.
- Scoring for winner's points <7%>, loser's points <17%>, and total points <10%> are all down.
- Pin Percentage <1%> and scoring margin +1% are basically unchanged.
- OT percentage is up noticeably +29%.

Scoring is down across all weight classes for winner's, losers, and total points (except 275/285 winner's and total).

Episode 11-25

	% Change	From 1988-1992	to 2017-2022	
		W	L	Total
125	118	-7%	-18%	-10%
133	126	-15%	-25%	-18%
141	134	-12%	-21%	-14%
149	142	-9%	-13%	-10%
157	150	-1%	-9%	-3%
165	158	-8%	-25%	-13%
174	167	-4%	-15%	-7%
184	177	-8%	-16%	-10%
197	190	-10%	-16%	-11%
285	275	+11%	-10%	+5%
Mean		-7%	-17%	-10%

Pin Percentage & Scoring Margin have remained unchanged overall, but there are some drastic changes in different weights, this is known as regression to the mean (if one sample of a random variable is extreme, the next sampling of the same random variable is likely to be closer to the mean).

Episode 11-26

	Percent Change from	1998-1992 to 2017-2022	
		Pin	Margin
125	118	+50%	+1%
133	126	-22%	-8%
141	134	+7%	-4%
149	142	-11%	-5%
157	150	-16%	+5%
165	158	13%	+6%
174	167	+4%	+4%
184	177	-37%	-2%
197	190	+102%	-6%
285	275	-18%	+26%
Mean		-1%	1%

Percentage of OT is up at every weight class from 1988-1992 to 2017-2022 except 158/165.

Episode 11-27

	Percent Change from 1988-1992 to 2017-2022	
		OT
125	118	+3%
133	126	+4%
141	134	+24%
149	142	+50%
157	150	+56%
165	158	-3%
174	167	+52%
184	177	+53%
197	190	+10%
285	275	+52%
Mean		+29%

The percentage of each weight class above/below the mean for all 10 weights for all matches from 1988-1992 & 2017-2022.

Episode 11-28

1988-92	&	2017-22		Weight vs Mean		Percentage		
		W	L	Total	Pin	OT	DEF	Margin
125	118	+5%	+2%	+4%	+1%	-11%	-0.23	+8%
133	126	+10%	+9%	+10%	+9%	-20%	+0.51	+10%
141	134	+5%	+11%	+7%	-10%	+2%	-0.27	+2%
149	142	-3%	+4%	-1%	-8%	+6%	-0.23	-7%
157	150	-4%	-4%	-4%	-9%	+4%	-0.01	-5%
165	158	+1%	+4%	+1%	-21%	+6%	+0.01	-1%
174	167	-2%	-2%	-2%	+12%	+13%	+0.39	-2%
184	177	+8%	+3%	+6%	+0%	-3%	-0.36	+10%
197	190	-5%	-4%	-5%	-15%	-14%	+0.04	-6%
285	275	-14%	-22%	-16%	+41%	+17%	+0.24	-9%
Mean		8.16	3.21	11.37	10.11%	6.9%	1.6%	4.95

Section #3 – Scoring by tournament rounds through the years at the Men's NCAA D1 Tournament.

Episode 11-29

- In the third of our three sections on scoring, we discuss the scoring by round of the tournament through the years and how they compare to other rounds.

- We use the two 5-year time periods we selected – 1988 to 1992 & 2017-2022

- We look at the arithmetic means (average), standard deviations, normal curve distributions, correlations between the years and categories and the increases and decreases in these categories.

Scoring categories by round for both time periods in the study.

Episode 11-30

		1988-92	&	2017-22				
		W	L	Total	Pin	OT	DEF	Margin
CH1		9.31	3.30	12.61	13%	5%	0.01	6.00
CH2		8.76	3.37	12.13	9%	8%	0.01	5.38
Quarters		7.80	3.28	11.08	10%	10%	0.01	4.52
Semis		7.26	3.06	10.32	9%	12%	0.00	4.20
Finals		6.71	2.92	9.63	5%	10%	0.00	3.79
CH Mean		8.72	3.27	11.99	11%	7%	0.01	5.45
CO1		8.16	3.23	11.22	8%	5%	0.01	4.94
CO2		7.80	3.14	10.94	10%	7%	0.02	4.66
CO3		6.96	3.01	9.97	11%	8%	0.01	3.95
CO4		7.62	3.39	11.02	7%	11%	0.03	4.23
CO5,6, Place		7.02	3.02	10.04	7%	6%	0.04	3.99
CO Mean		7.46	3.13	10.59	9%	7%	0.02	4.33
Overall Mean		8.16	3.21	11.37	10%	7%	0.02	4.95

Matches get closer and more competitive as rounds progress. Consolation bracket has more parity than the Championship bracket.

Episode 11-31

- Scoring decreases as the rounds progress.
- Scoring is higher in the championship bracket.
- Pin Percentage decreases as rounds progress.
- Higher pin percentage in the Championship round.
- OT more likely as rounds progress.
- OT percentage the same in championship and consolation rounds.
- Matches get closer as rounds progress.
- Consolation bracket scoring margin lower than championship rounds.

What changes have we seen from 1988-1992 to 2017-2022?

Scoring is down across the board (except 275/285 in CO 5,6, place rounds). Pins down CH, up CO. OT up in both. Margin down CH, up CO. Basically, all rounds follow the overall trends from the 2 time periods we studied.

		% Difference from 1988-92 to 2017-2022						
		W	L	Total	Pin	OT	DEF	Margin
CH1		-9%	-26%	-14%	-24%	+72%	-49%	1%
CH2		-12%	-15%	-13%	-21%	+33%	0%	-9%
Quarters		-22%	-32%	-25%	+92%	+44%	-33%	-14%
Semis		-20%	-17%	-19%	+100%	+9%	#DIV/0!	-22%
Finals		-11%	-26%	-16%	-33%	+50%	#DIV/0!	1%
CH Mean		-11%	-23%	-15%	-11%	+50%	-26%	-3%
CO1		-7%	-15%	-6%	162%	+93%	#DIV/0!	-1%
CO2		-2%	-18%	-7%	19%	+52%	-70%	11%
CO3		-2%	-8%	-4%	-4%	0%	0%	2%
CO4		0%	-12%	-4%	0%	+15%	-33%	11%
CO5,6, Place		+5%	+2%	+4%	+22%	-13%	8%	8%
CO Mean		2%	-9%	-1%	+20%	+8%	-12%	+11%
Overall Mean		-7%	-17%	-10%	-1%	+29%	-19%	+1%

An easier way to see the scoring category effects as the rounds progress as compared to the overall mean.

Episode 11-33

	% of Overall Mean 1988-92 & 2017-2022						
	W	L	Total	Pin	OT	DEF	Margin
CH1	114%	103%	111%	124%	69%	85%	121%
CH2	107%	105%	107%	93%	114%	46%	109%
Quarters	96%	102%	97%	94%	141%	76%	91%
Semis	89%	95%	91%	89%	167%	0%	85%
Finals	82%	91%	85%	49%	145%	0%	77%
CH Mean	107%	102%	105%	108%	97%	54%	110%
CO1	100%	100%	99%	78%	71%	88%	100%
CO2	96%	98%	96%	98%	96%	99%	94%
CO3	85%	94%	88%	111%	116%	30%	80%
CO4	93%	106%	97%	69%	156%	152%	86%
CO5,6, Place	86%	94%	88%	72%	93%	235%	81%
CO Mean	91%	97%	93%	90%	105%	142%	87%
Overall Mean	8.16	3.21	11.37	10.11%	6.9%	1.6%	4.95

What did MatStats learn from this extensive study?

The 8 biggest lessons to learn from the MatStats Scoring Study.

- 1) The scoring annually and by weight classes are normally distributed.

- 2) Scoring down over the years & across weight classes (except 275/285).

- 3) Over the years - Margin held firm. So did pin percentage. By weight class there is regression to the mean.

- 4) OT percentage up over the years & by weight class.

- 5) As rounds go by the matches get closer and have lower scoring.

- 6) In a huge study like this there will be anomalies in random categories. This is how numbers work. We are not all identical. If we were the world would be boring.

- 7) If you try and make too much out of a random anomaly it reminds a statistician of what Shakespeare said, "a tale told by an idiot, full of sound and fury, signifying nothing.

- 8) MatStats hopes this study helps wrestlers, coaches, and fans understand scoring in the world's oldest and greatest sport.

Next MatStats Episode Wednesday August 17th, 2022 3PM EDT.

Episode 11-35

- Episode 12 will deal with team scoring.
- Episode 12 will use the massive data accumulated from episode 11 to see what could and should be done with team scoring.
- Episode 12 will try and offer suggestions to make the dual meet more exciting and hopefully help the fans experience at the old-fashioned allure of the dual meet.