

A close-up, slightly angled view of a green table football table. The table has white lines for the field, including a center circle and a vertical line. Several player figures are attached to the table's rods. Two red and white player figures are visible in the center, facing each other. Yellow and blue player figures are also visible on the left and right sides. The background is a solid green color.

College Football ELO Ratings

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Inspired by FiveThirtyEight

What are ELO Ratings?

- Eh-hh-low? Eeeee-low? E-L-O?
- Relative score for players/teams in various sports or competitions



Why ELO?

- Consistent methodology
- Easy to trend and compare
- Predictions
- It's fun!



How does ELO Work?

Every team...

- Starts with a rating of 1500
- Scores rise and fall based on victory/defeat and margin
- K-Factor
- At the end of the season, scores regress to the average of their conference by one-third
- Independents and FCS schools

Examples



#2 Penn State: 2,292

Probability of Winning

Home-Field Advantage

Margin of Victory
(or loss)



Model Pitfalls



Model Limitations

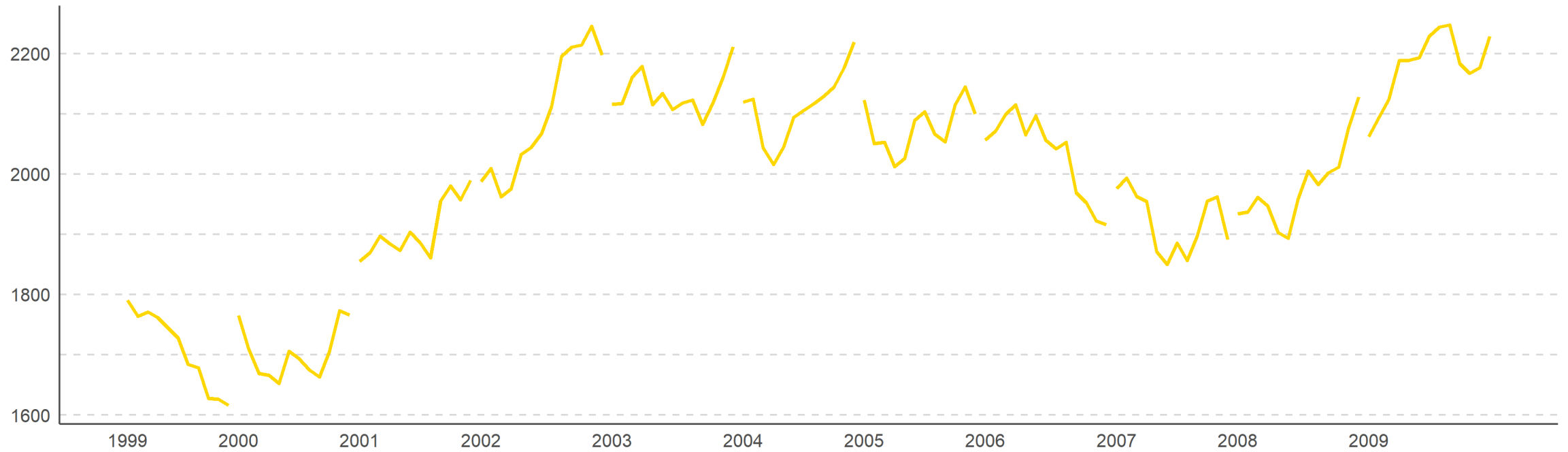
- Data scrapping
- Bias against the late season
- Conference bias
- Future realignment



Team History

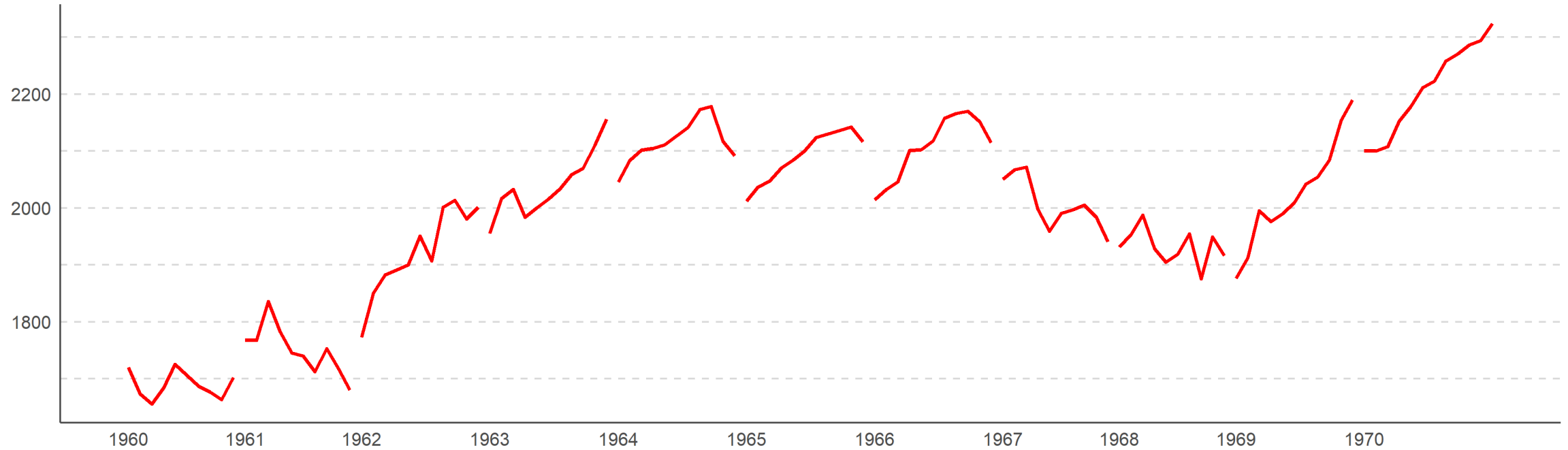
Iowa

The Rise and Fall (and Rise again) of Iowa
1999-2009



Nebraska

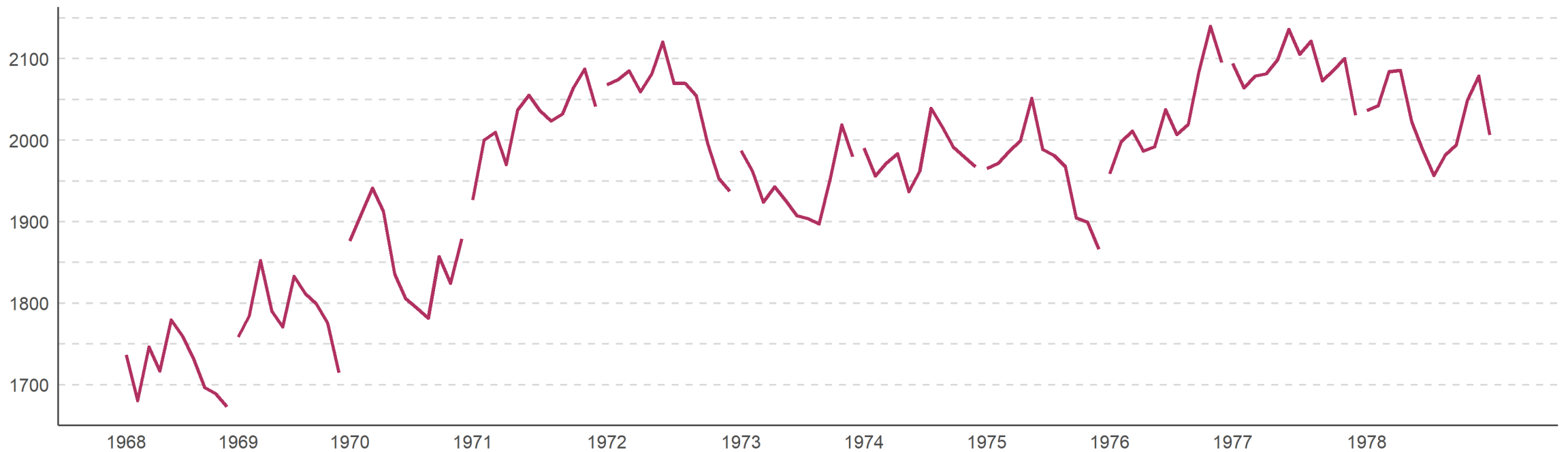
Bob Devaney Kicked-Off Nebraska's Turnaround
1987-1997



Iowa State

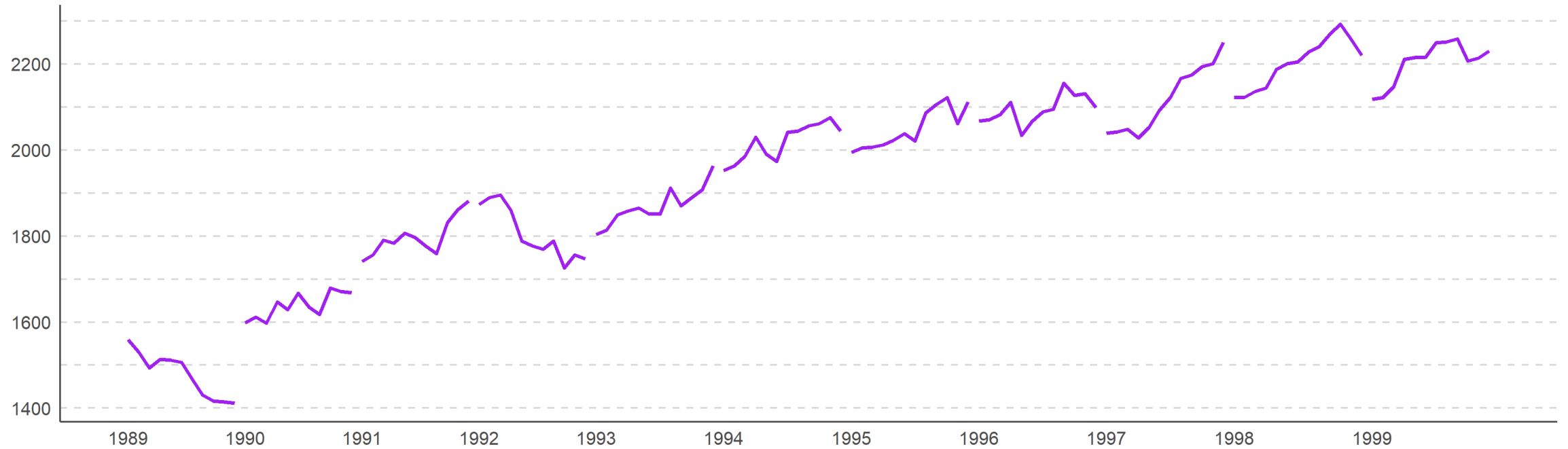
ISU was Competitive During the 70s

1968-1978



Kansas State

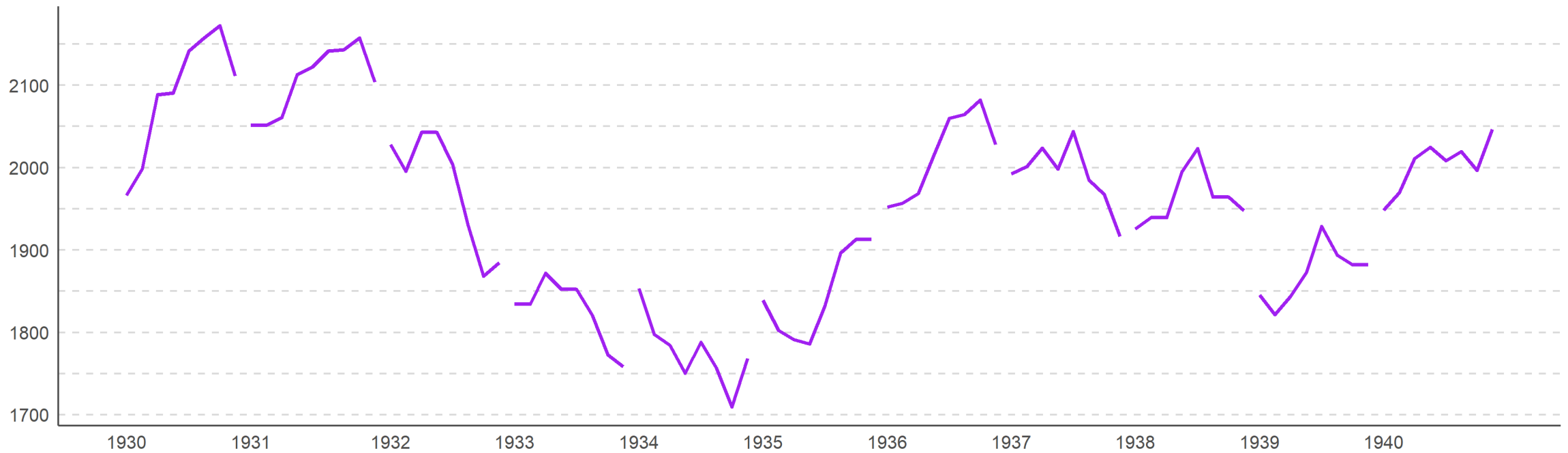
Bill Snyder's Rebuild at Kansas State was Tremendous
1989-1999



Northwestern

Northwestern Dominated in the 1930s

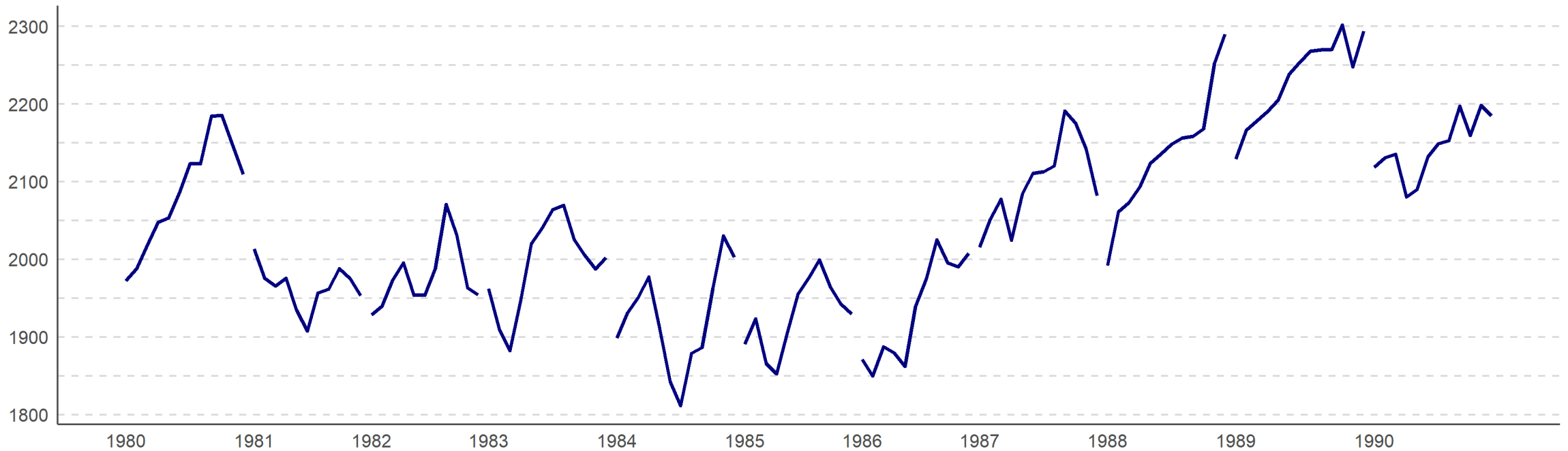
1930-1940



Notre Dame

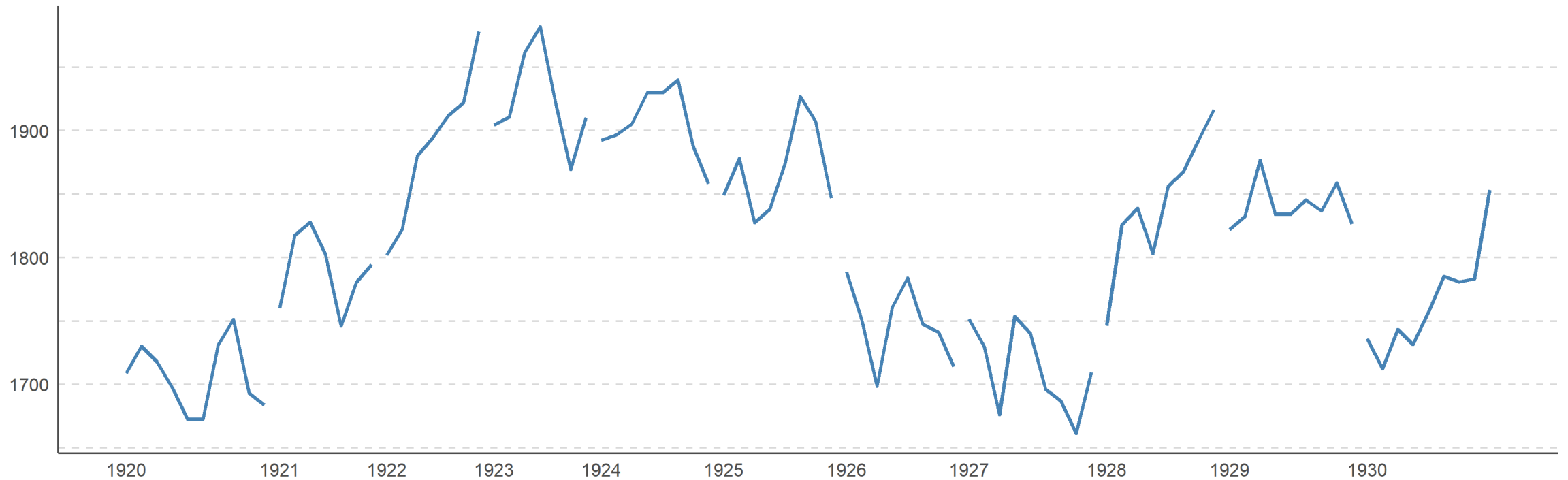
1988-1989 remain Notre Dame's Best Seasons

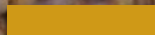
1980-1990



Drake

1922 is the Only Year Drake Went Undefeated





Upsets



Biggest Upsets Since 1945

Season	Week	Winner	Loser	Score	Probability	ELO Points
2012	2	Louisiana-Monroe	Arkansas	34-31	1.20%	41
2013	1	North Dakota State	Kansas State	24-21	1.29%	41
2007	1	Appalachian State	Michigan	34-32	1.45%	32
1949	6	Tulsa	Villanova	21-19	1.46%	32
2016	2	South Alabama	Mississippi State	21-20	1.52%	21
2010	1	Jacksonville State	Mississippi	49-48	1.67%	21
2016	4	North Dakota State	Iowa	23-21	1.72%	33
2010	2	James Madison	Virginia Tech	21-16	1.85%	54
1998	8	Temple	Virginia Tech	28-24	1.86%	48
1946	2	Cincinnati	Indiana	15-6	1.91%	69

Biggest Upsets Since 1945

Season	Week	Winner	Loser	Score	Probability	ELO Points
1997	4	UCLA	Texas	66-3	18.94%	121
2018	14	Wake Forest	Duke	59-7	17.24%	117
1950	15	Denver	Hawaii All-Stars	76-6	26.53%	116
1973	13	Colgate	Rutgers	42-0	12.52%	114
1970	9	San Jose State	Pacific	48-7	11.63%	114
1995	9	Army	Boston College	49-7	13.41%	114
1951	4	Denver	Montana	55-0	23.39%	113
2020	1	Brigham Young	Navy	55-3	22.93%	112
1947	5	California	Wisconsin	48-7	15.15%	112
1957	5	Rutgers	Colgate	48-6	17.30%	111



Most Improved Teams