NOAA FISHERIES

GOA pollock:

ADMB vs SS smackdown

Objective

- Develop an SS application for GOA pollock that is a similar as possible to the ADMB model for GOA pollock

- Compare SS model results to the current assessment (i.e., model validation)…

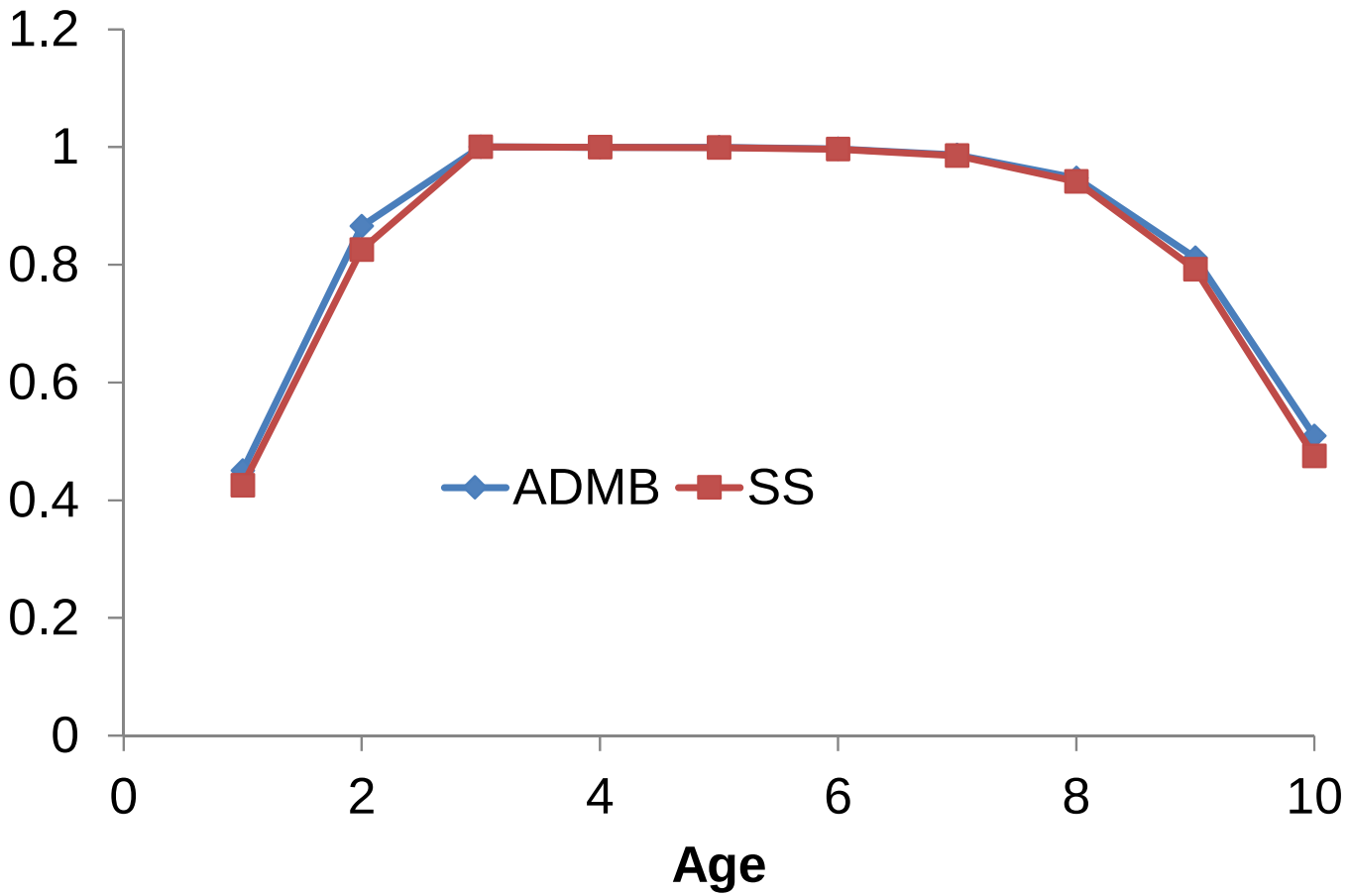
- From NS2 guidelines: "Validation refers to the testing of analytical methods to ensure that they perform as intended. Validation should include whether the analytical method has been programmed correctly in the computer software, the accuracy and precision of the estimates is adequate, and the estimates are robust to model assumptions."

And…

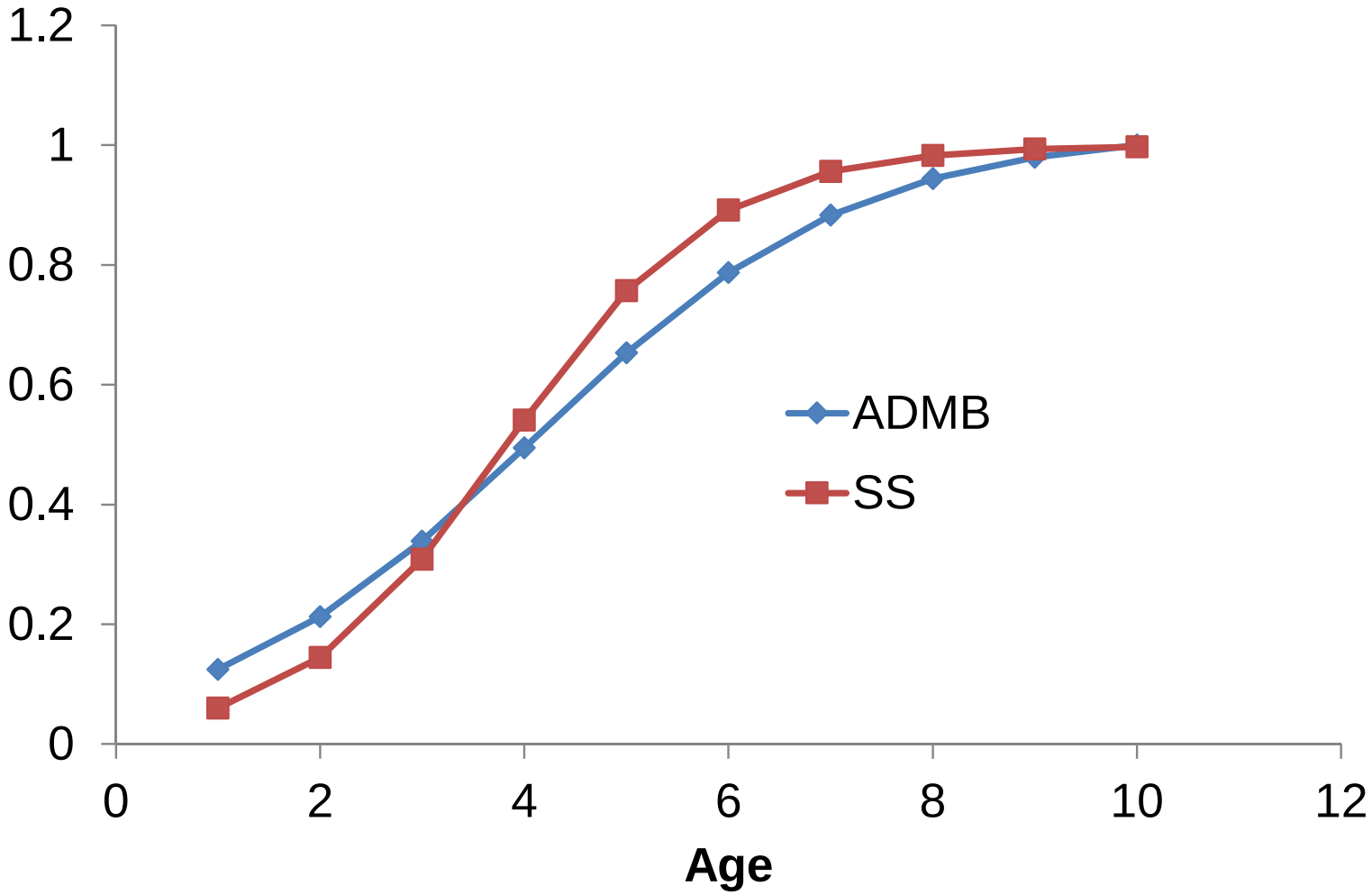
SS setup

- SS3 Version 3.24U
- Invoke empirical weight at age option
- Steepness = 1, σ_R = 1
- Estimate R1 offset for SR relationship
- But SS always starts with numbers at age matrix at with age-0 recruits but ADMB starts at with age-1 recruits. So start model in 1969, rather than 1970.

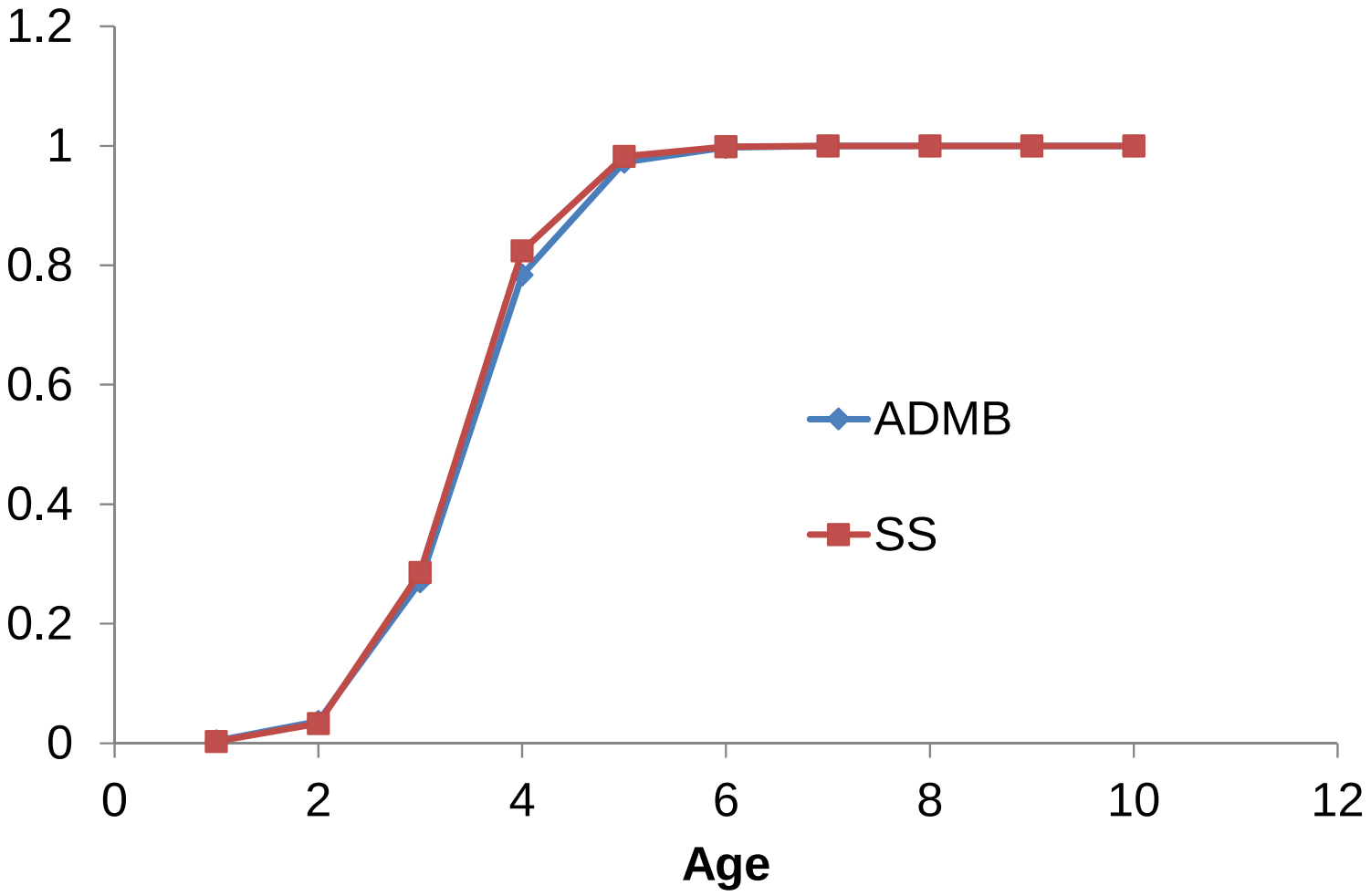
Acoustic selectivity



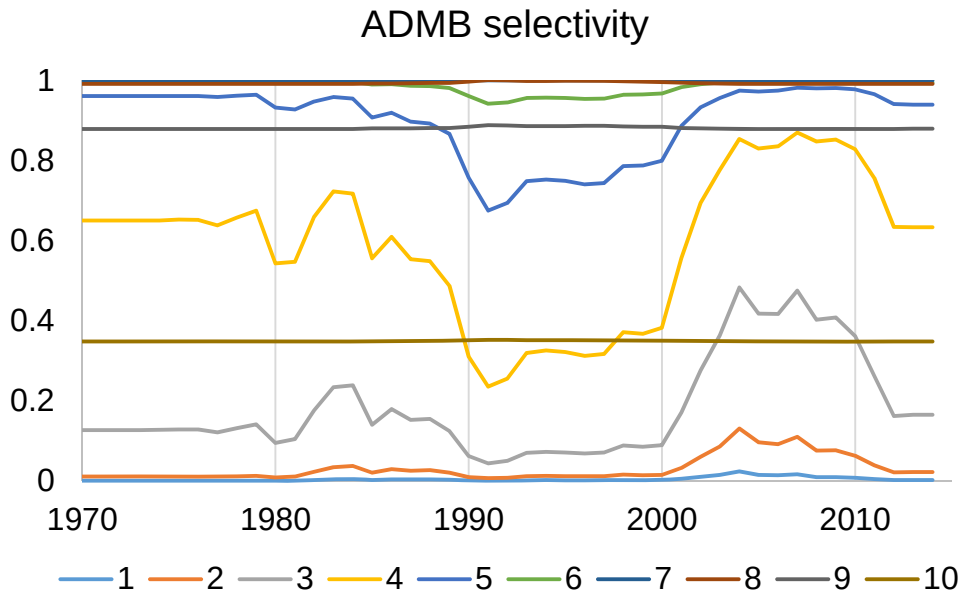
Bottom trawl selectivity

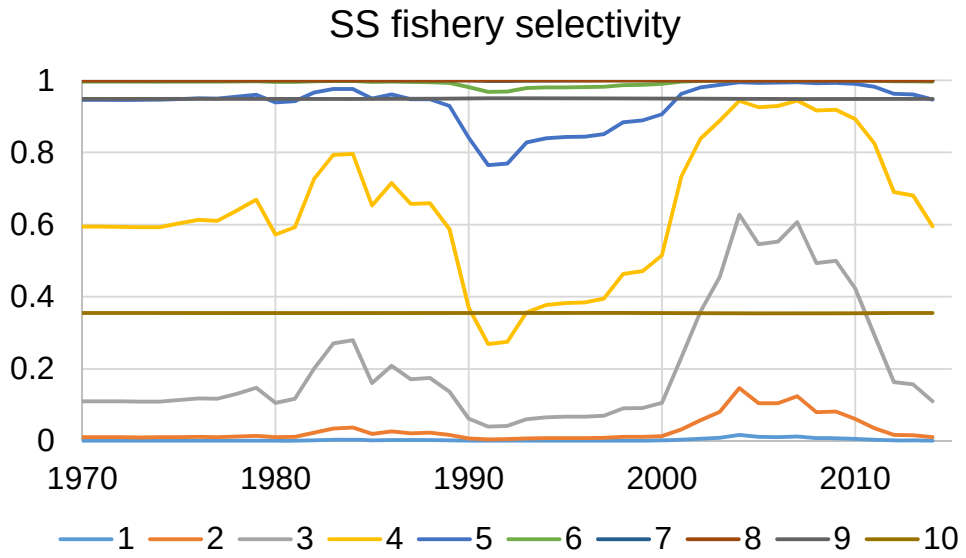


ADFG trawl selectivity

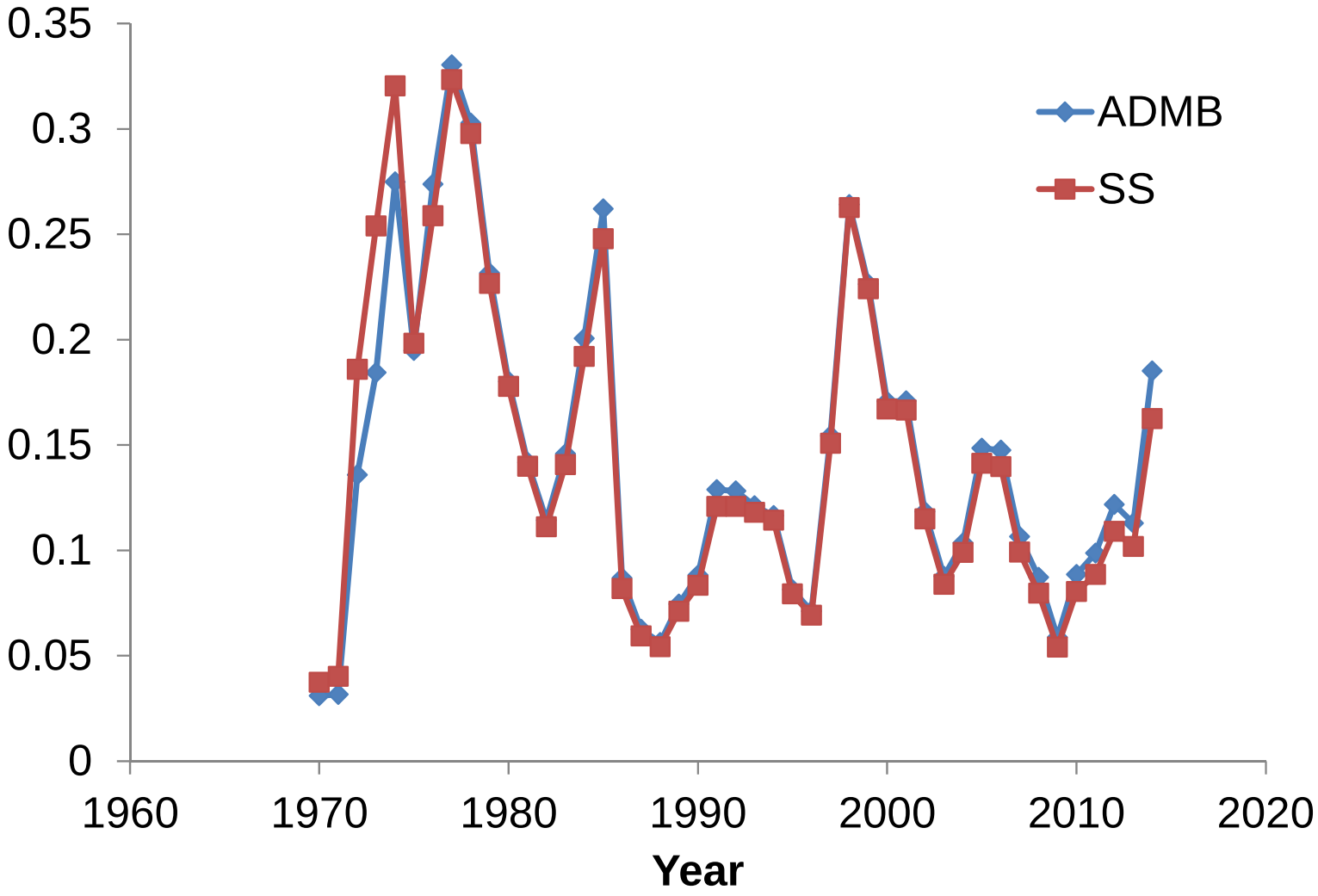


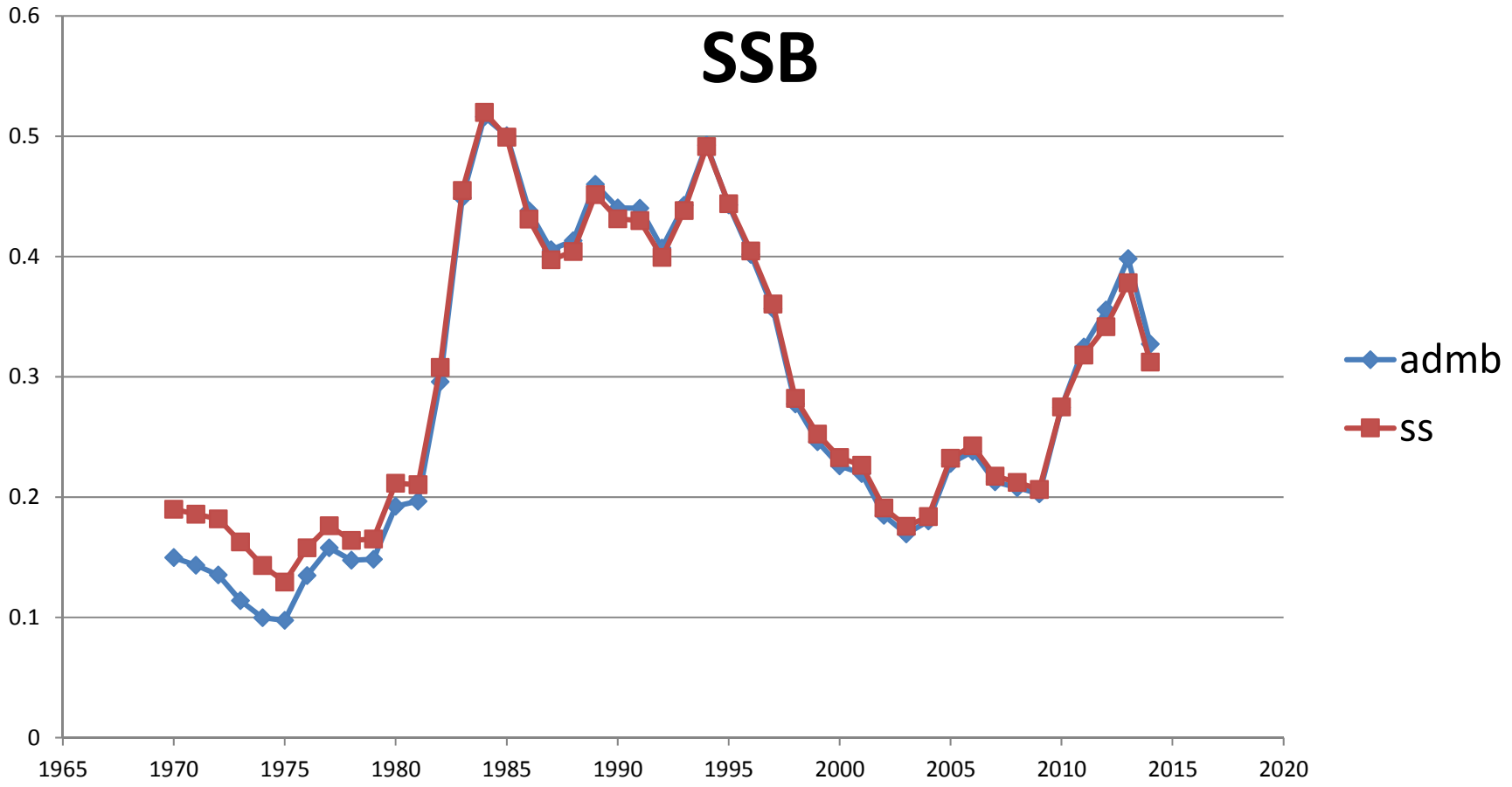
Fishery selectivity

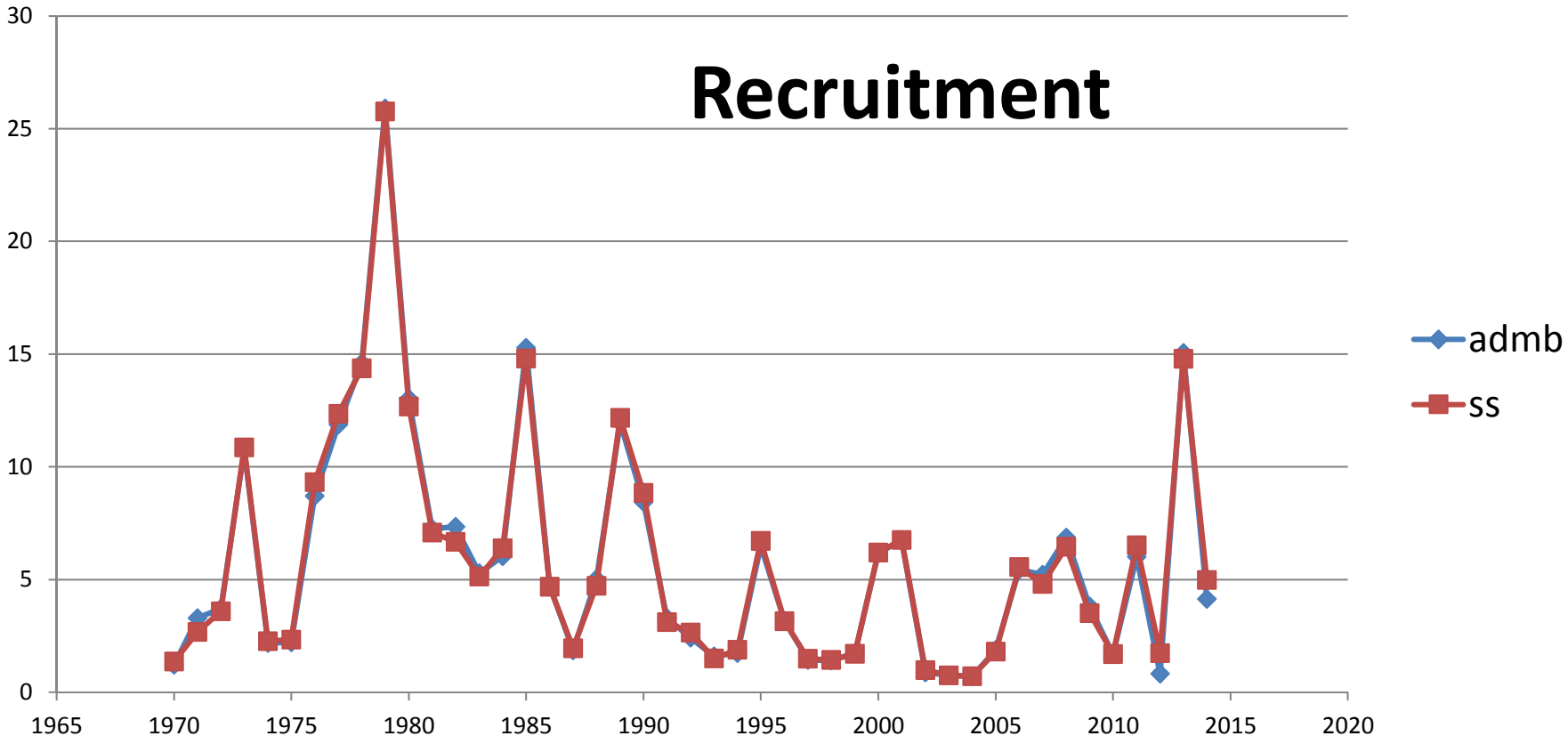




Fishing mortality




SSB
0.6
0.5
0.4
0.3
0.2
0.1
0
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
admb
ss


Recruitment
30
25
20
15
10
5
0
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
admb
ss