

## **U.S. Striped Bass Commercial Landings, Aquaculture Production, and Dockside and Farm-gate Values**

### **Abstract**

In this issue, Dr. Posadas describes the long-term trends in commercial striped landings, aquaculture production, and dockside and farm-gate values. Linear regression equations were estimated to measure the direct economic impacts of past recessions and fishing moratorium on dockside and farm-gate values. Results showed that economic recessions significantly dampened both dockside and farm-gate values. Dockside and farm-gate values are expected to decline significantly due to the global Covid-19 pandemic. Fisheries managers imposed fishing moratoriums in the past when the fishery stocks were below sustainable levels.

### **Citation:**

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## U.S Commercial Striped Bass Landings and Dockside Values

The primary striped bass producing states since 2010 were Maryland (35%), Virginia (29%), New York (12%), Rhode Island (4%), North Carolina (3%), and Delaware (3%). The annual commercial landings of striped bass in the U.S. reached its peak in 1973 at almost 15 million pounds. After that, landings continued to slide until it reached its trough in 1989 with 221,000 pounds. As a result, fisheries managers imposed fishing moratoriums from 1985 to 1990 to allow fish stocks to recover to their sustainable levels. Slowly fish stocks started to recover, and between 2005 to 2012, annual landings were about seven million pounds. However, yearly landings started declining again, reaching less than five million pounds in 2019 (Fig. 1).

The striped bass annual landing values continued to climb from 1950 until 1981, reaching less than \$6 million. Dockside values continued to fall starting in 1982, posting its lowest in 1989 at \$324,000. With the fishing moratorium, fish stocks began to recover. In 1990, annual dockside values began to rise, recording another peak of over \$22 million in 2017.

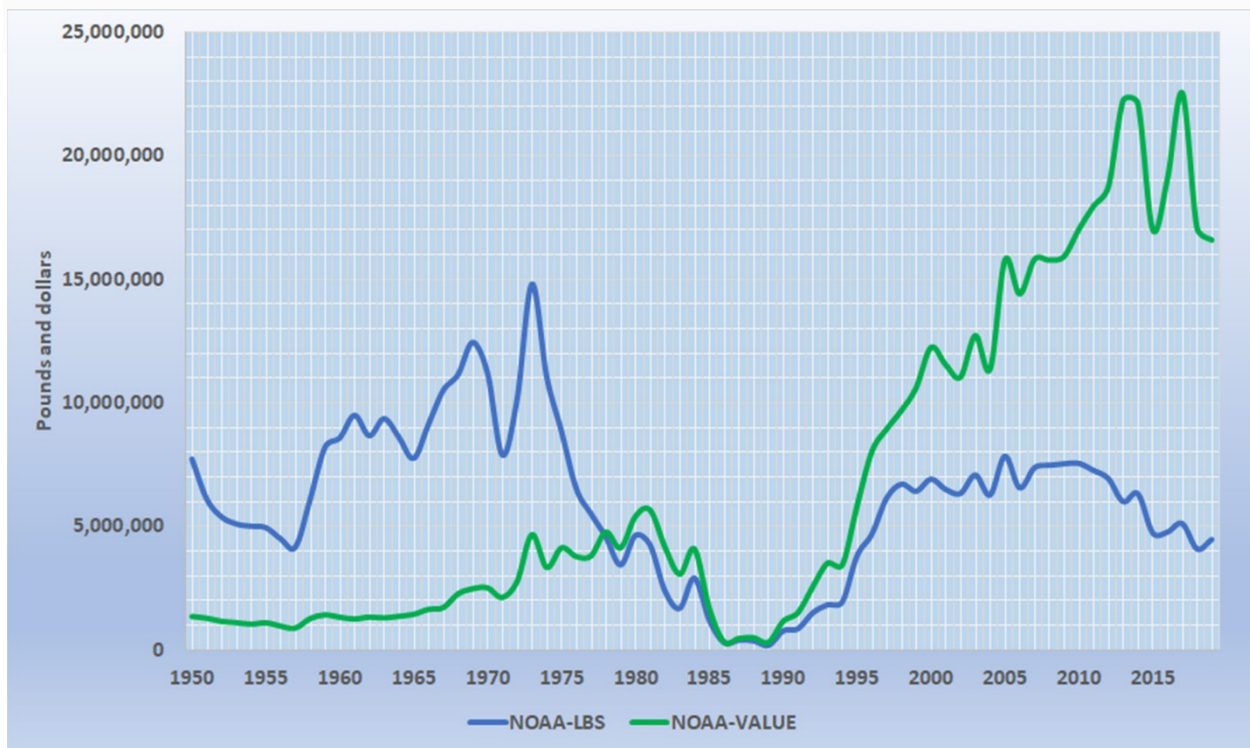


Figure 1 shows the U.S. striped bass yearly commercial landings (NOAA-LBS) and dockside values (NOAA-VALUE). The source of raw data was NOAA Fisheries at <http://www.st.nmfs.noaa.gov/>.

The estimated regression equation explained 93 percent of the variations in the deflated dockside values of commercial striped bass landings (Fig. 2). Significant drops in dockside values were seen during past recessions and when fishing moratoriums were imposed. Since the global Covid-19 pandemic resulted in an economic slowdown in 2020, large reductions in dockside values are expected this year.

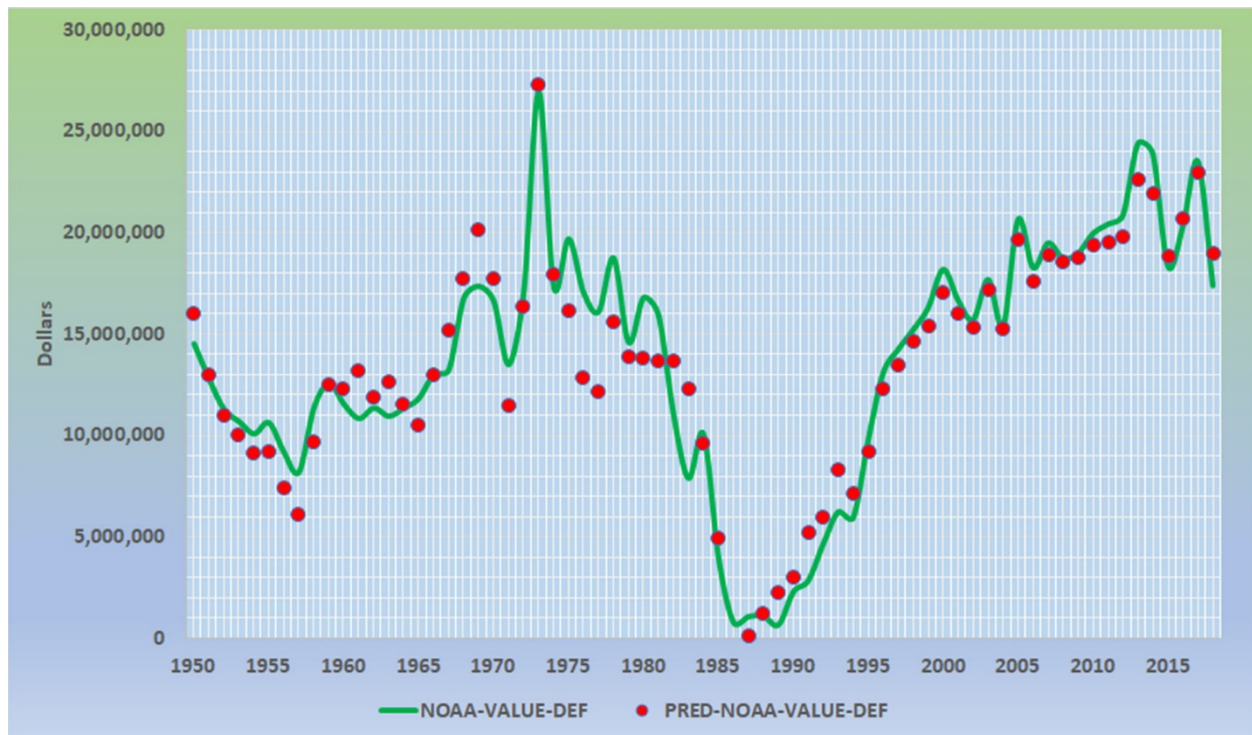


Figure 2 shows the annual (NOAA-VALUE-DEF) and predicted (PRED-NOAA-VALUE-DEF) U.S. commercial dockside values of striped bass.

## U.S Hybrid Striped Bass Aquaculture Production and Farm-Gate Values

The annual statistics on commercial aquaculture production of hybrid striped bass were reported starting in 1986. There was a huge tank culture in Southern California and a pond operation in North Carolina. Later, another large tank operation was started in Coastal Mississippi. Another pond operation was also opened in North Mississippi.

There was a large hybrid striped bass fish farm in Coastal Mississippi in the late 1980s. It was one of those capital-intensive and partially-automated fish farms established to supply hybrid striped bass in the U.S. domestic market. It raised the fish successfully in 48 deep, circular, concrete tanks. It was great watching the two-inch fingerlings grow into two-pound fish in a year. The fish tasted good, had a nice flavor, and the flesh was firm. The entire fish farm started producing at least one-half million pounds per year. Attempts to increase stocking densities to double annual production were met with some difficulties, primarily fish diseases. Eventually, farm management shifted to another species and folded operations after Hurricane Katrina.

Aquaculture production peaked in 2005 and leveled off after that. However, in 2018, a large drop was reported to less than two million pounds. The annual farm-gate values were on an upward trend, reaching its peak in 2017 to almost \$38 million (Fig. 3).

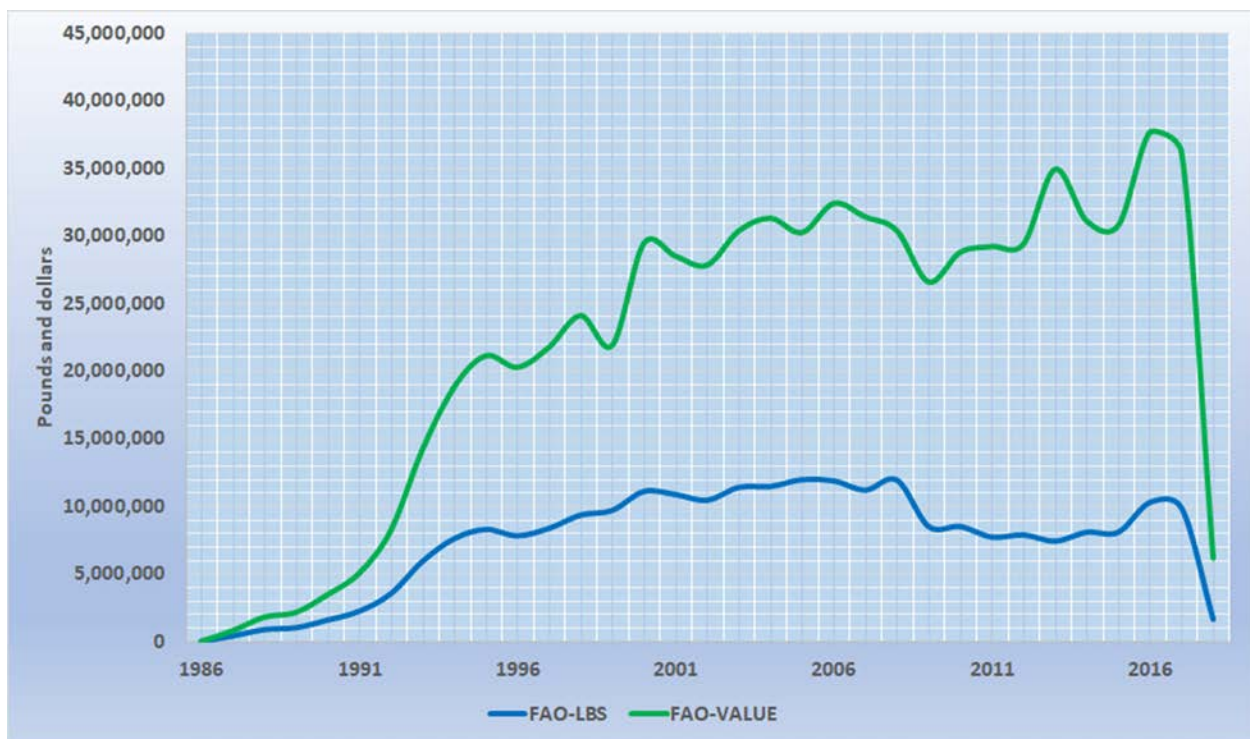


Figure 3 shows the U.S. hybrid striped bass aquaculture production (FAO-LBS) and farm-gate values (FAO-VALUE). The source of raw data is FAO-FISHSTAT.

The estimated regression equation explained 99 percent of the variations in the deflated farm-gate values of commercial aquaculture hybrid striped bass production (Fig. 4). Significant reductions in farm-gate values were ascertained during previous recessions. Since the global Covid-19 pandemic caused an economic recession in 2020, considerable reductions in dockside values are expected this year.

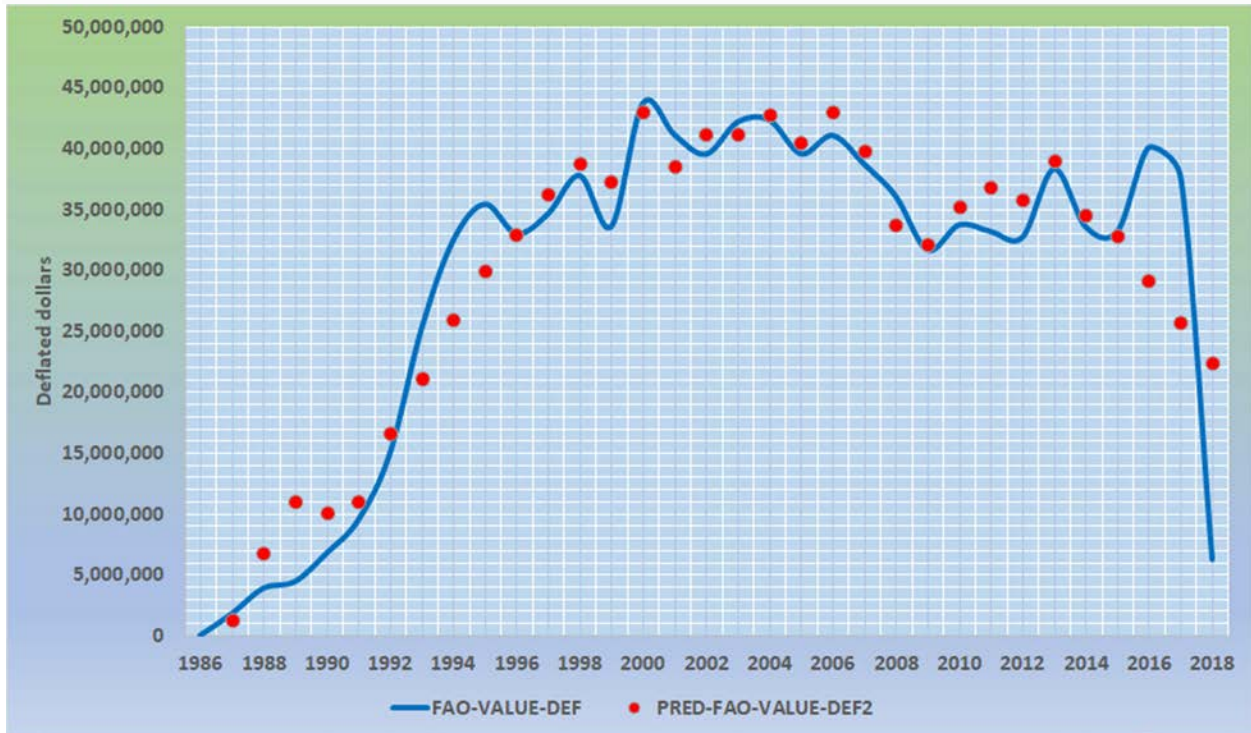


Figure 4 shows the U.S hybrid striped bass aquaculture annual (FAO-VALUE-DEF) and predicted (PRED-FAO-VALUE-DEF2) farm-gate values.

## U.S Striped Bass Commercial Landings and Aquaculture Production and Values

The combined commercial landings and aquaculture production of striped bass in the U.S. reached its peak between 2000 and 2009 with 19 million pounds. After that, total pounds continued to slide until it reached its trough in 2018 with less than six million pounds (Fig.5).

The combined striped bass dockside and farm-gate values were on an upward trend, reaching more than \$58 million in 2017. In 2018, a huge decline in total values was observed (Fig. 5).

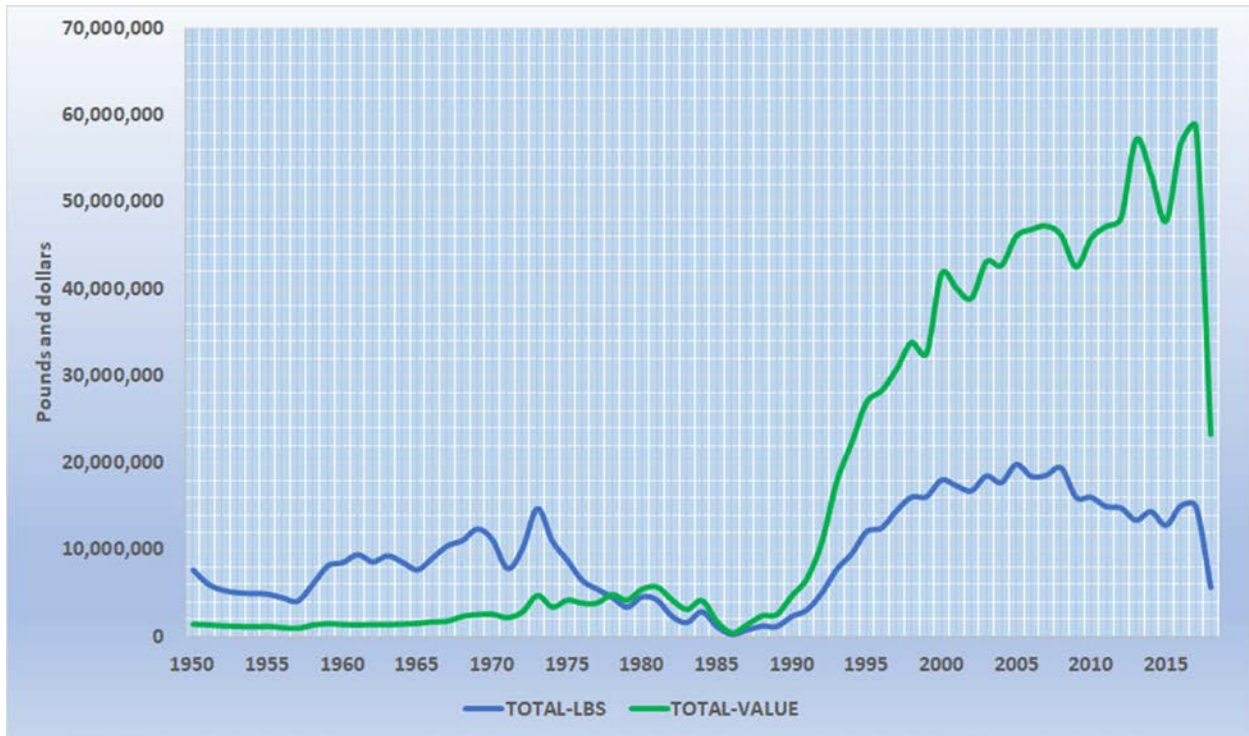


Figure 5 shows the combined U.S. commercial landings and aquaculture production (TOTAL-LBS) and dockside and farm-gate values (TOTAL-VALUE) of striped bass and hybrid striped bass. The sources of raw data are Figures 1 and 3.

The estimated regression equation explained 98 percent of the variations in the combined deflated dockside and farm-gate values of striped bass commercial landings and aquaculture production (Fig. 4). Substantial decreases in total values were observed during previous recessions. Since the global Covid-19 pandemic led to an economic recession in 2020, significant reductions in dockside values are expected this year.

Recent national surveys of the U.S. aquaculture industry provided insights on the impacts of Covid-19 on the industry. The primary concern cited by the growers was lost sales in the domestic and international markets. The global pandemic also constrains

the supply of inputs and services crucial to the industry. Several aquaculture businesses are struggling to operate even below break-even points and nearing shut-down points.

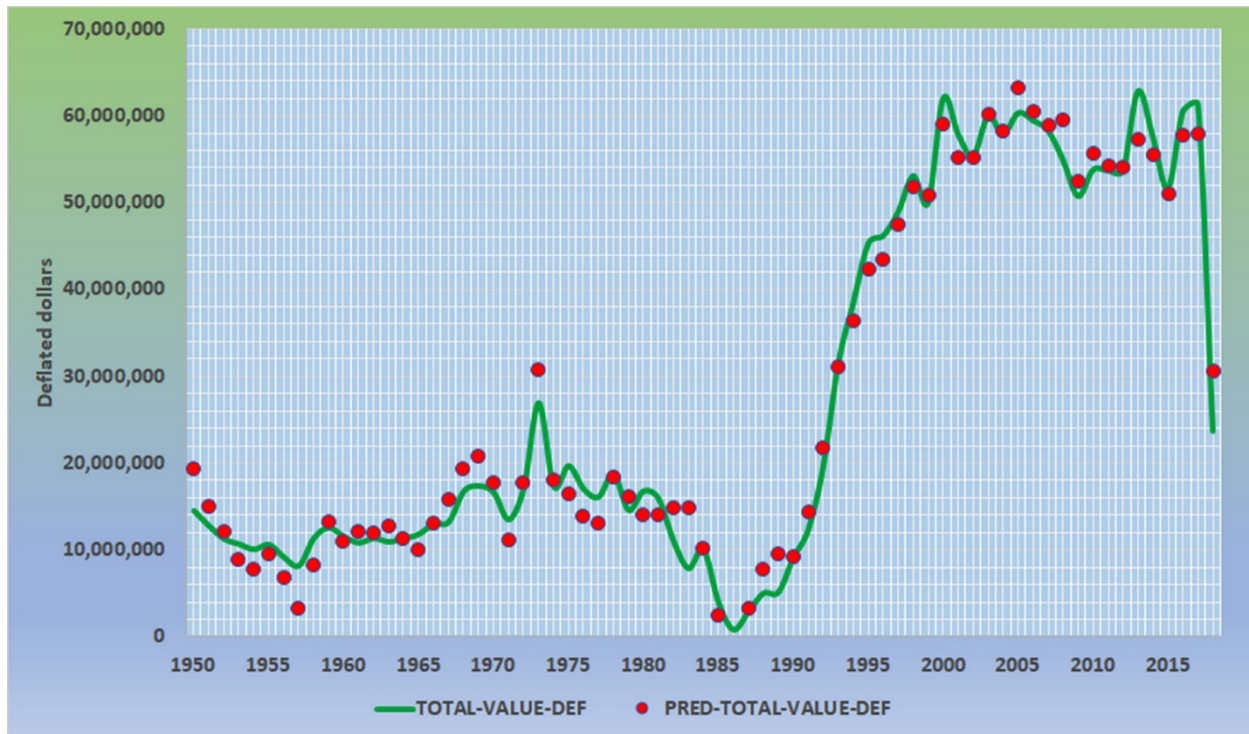


Figure 6 shows the combined U.S. annual (TOTAL-VALUE-DEF) and predicted (PRED-TOTAL-VALUE-DEF) of striped bass dockside values and hybrid striped bass farm-gate values.

## My Striped Bass Publications

1. Posadas, Benedict C. **U.S. Striped Bass Commercial Landings, Aquaculture Production, and Dockside and Farm-gate Values**. Mississippi MarketMaker Newsletter, Vol. 10, No. 10. October 20, 2020.  
<http://extension.msstate.edu/newsletters/mississippi-marketmaker>.
2. Posadas, Benedict C. 2020. **Potential Impacts of Covid-19 on U.S. Striped Bass Commercial Landings and Aquaculture Production**. Horticulture, Marine, and Disaster Economics Outreach. Mississippi State University Coastal

Research and Extension Center, Biloxi, Mississippi.

<https://youtu.be/hdAznquScZk>.

3. Posadas, Benedict C. 1994. **Monthly Wholesale Price Analysis of Hybrid Striped Bass**. Final Report. Mississippi State University, Coastal Research and Extension Center, Biloxi, Mississippi.
4. Posadas, Benedict C., and Jurij Homziak. 1991. **Survey of Hybrid Striped Bass Fry and Fingerling Producers**. In *Aquaculture Magazine*, 17(1): 39-45.
5. Posadas, Benedict C., and Jurij Homziak. 1991. **Commercial Output and Price of Striped Bass and Hybrids**. Final Report. Mississippi State University, Coastal Research and Extension Center, Biloxi, Mississippi.