

**NOAA  
FISHERIES**

Tab D, No. 4(a)

# Economics of the Federally- permitted Gulf Shrimp Fleet

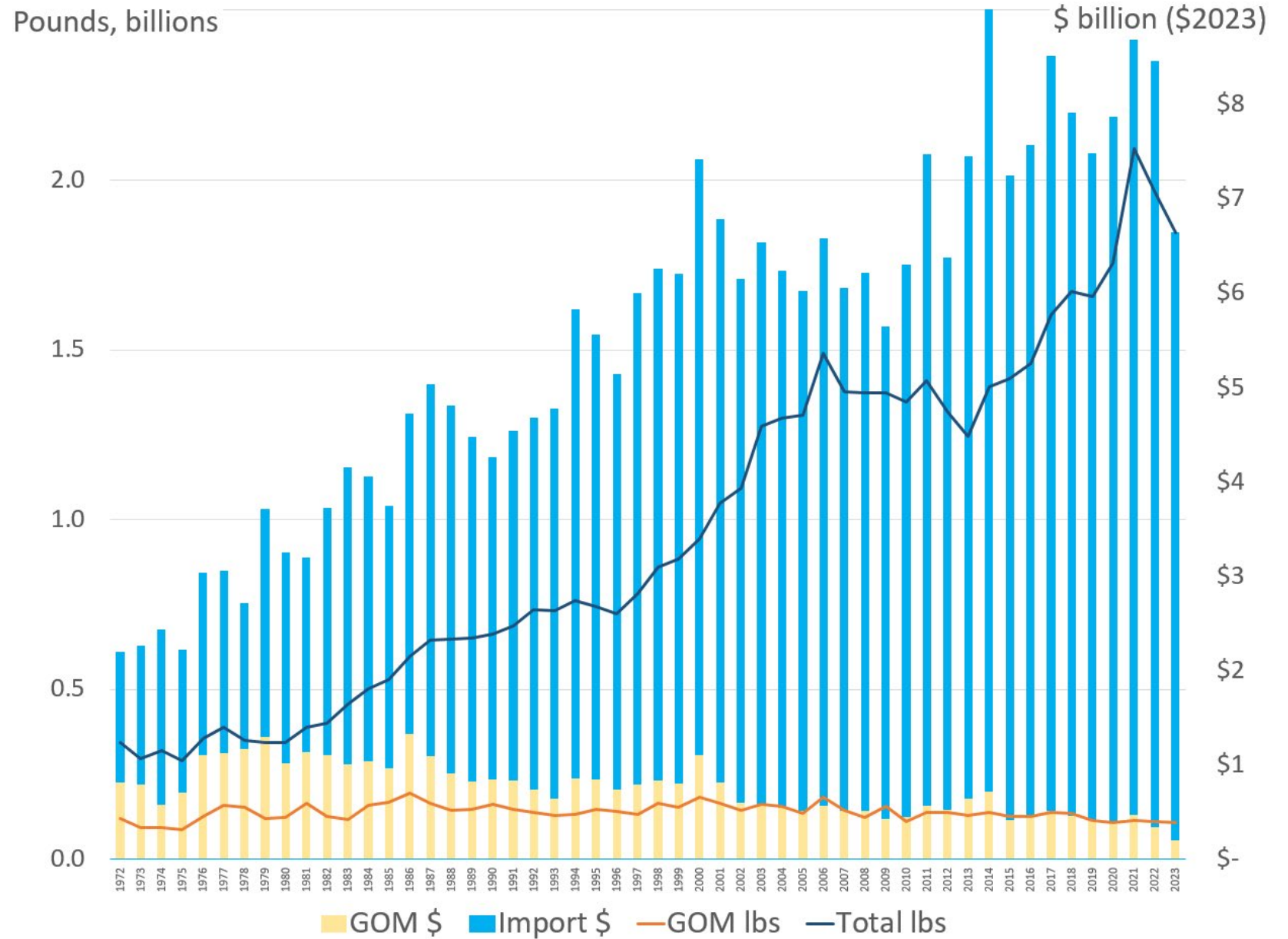
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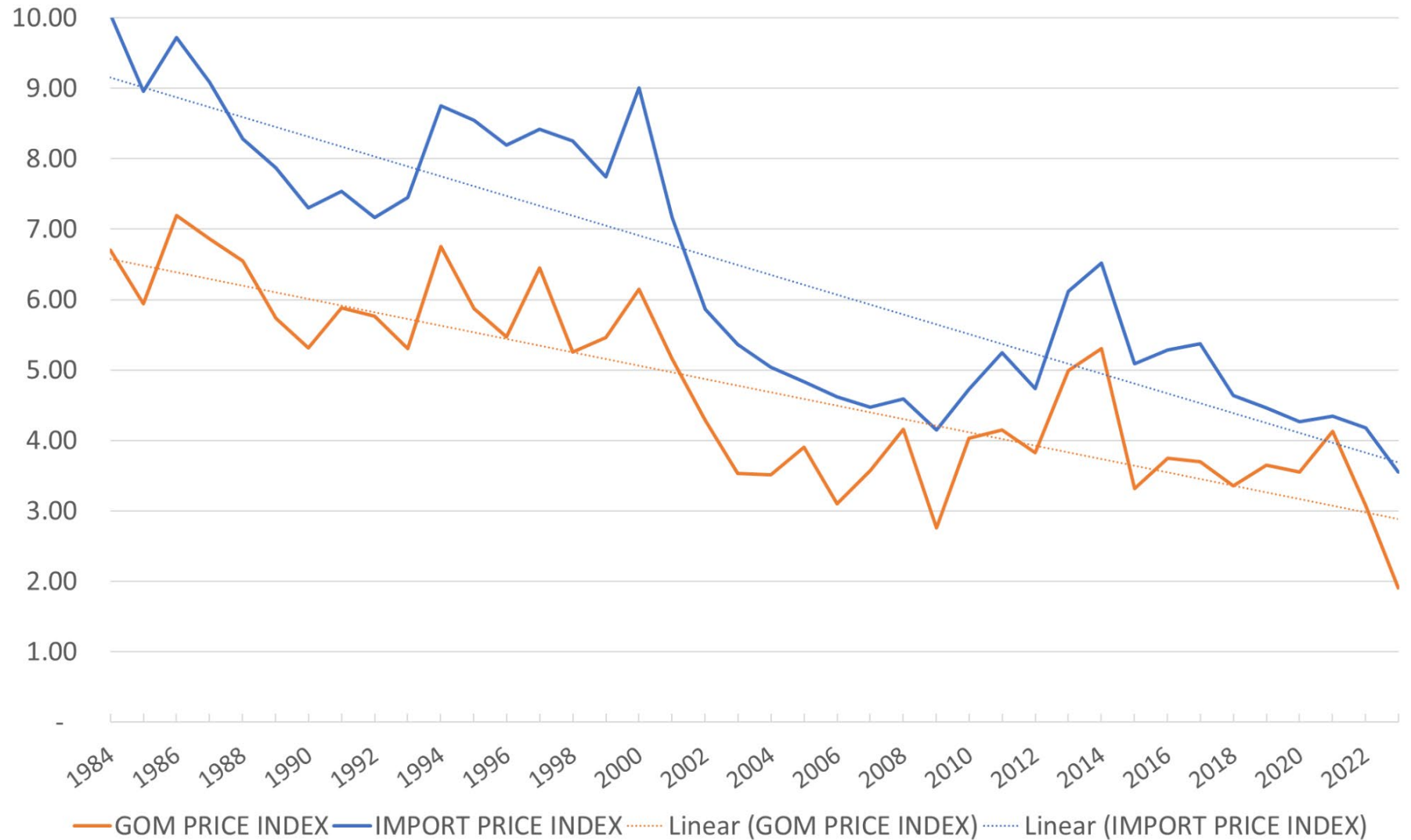
# Outline

- Background
- Results and Trends
- Shrimp prices by size

# The Gulf shrimp fishery as part of the U.S. shrimp market (1972-2023)



# Prices of Imported and Gulf Shrimp 1984 - 2023 (mean, inflation-adjusted)



# The Gulf Shrimp Fleet

	2019	2020	2021	2022	2023
<u>Total Gulf shrimp fishery</u>					
Number of active vessels	3,558	3,348	3,154	2,971	2,467
Landing (lbs, heads off)	115 million	109 million	114 million	111 million	107 million
Gross revenue (nominal USD)	420 million	385 million	471 million	341 million	204 million
Average Price	4.29	4.12	4.58	3.19	1.91
<u>Gulf shrimp vessels WITH federal SPGM permit</u>					
Number of active vessels	1,020	981	950	919	790
Landing (lbs, heads off)	76 million	76 million	80 million	74 million	72 million
Gross revenue (nominal USD)	319 million	307 million	373 million	260 million	161 million
Average Price	4.93	4.66	5.18	3.64	2.23

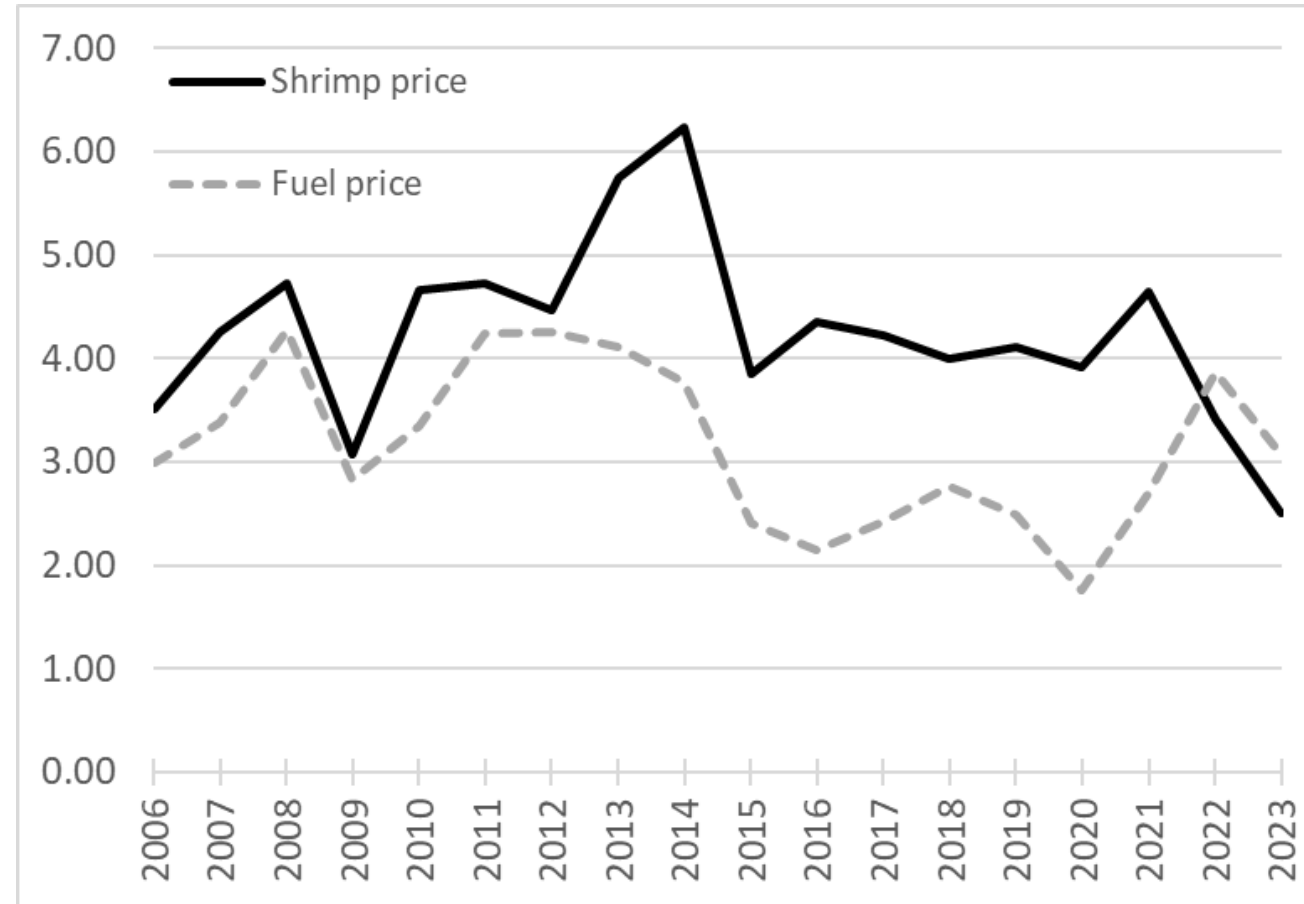
# Results and Trends

Averages for the **Active** Federally-Permitted Gulf Shrimp Fleet

# Vessel Operation

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
Owner-operator	51%	42%	45%	45%	44%	41%	42%	41%	41%	32%
Crew number	3.22	3.28	3.23	3.26	3.27	3.32	3.29	3.29	3.24	3.30
Actively shrimping	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Days at sea - Gulf shrimping	167	166	172	170	168	168	156	160	127	125
Shrimp landed	73,893	87,761	79,043	92,867	99,309	82,294	81,613	94,350	91,647	93,517
Fuel use (gallons)	45,378	48,497	52,306	47,668	52,608	51,447	50,703	50,279	36,302	34,262

# Fleet Averages - Prices



	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	386	388	383	348	332	368	370	293	344	325	319	365	324	268	274	271	238	204
Shrimp price	3.51	4.25	4.72	3.08	4.67	4.72	4.47	5.75	6.23	3.85	4.35	4.22	3.99	4.10	3.91	4.64	3.41	2.50
Fuel price	3.00	3.38	4.28	2.83	3.36	4.24	4.25	4.12	3.77	2.41	2.15	2.42	2.77	2.49	1.77	2.70	3.87	3.07

# Income Statement and Returns

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
<b>Revenue from Operations</b>	<b>471,141</b>	<b>351,927</b>	<b>356,455</b>	<b>401,837</b>	<b>400,805</b>	<b>342,207</b>	<b>324,548</b>	<b>441,829</b>	<b>313,347</b>	<b>241,334</b>
<b>Costs of Operations</b>	<b>424,456</b>	<b>341,279</b>	<b>358,383</b>	<b>361,691</b>	<b>375,647</b>	<b>341,288</b>	<b>314,662</b>	<b>398,331</b>	<b>328,963</b>	<b>255,969</b>
<i>Variable costs - Non-Labor (fuel, supplies)</i>	49.2%	45.3%	43.2%	43.4%	48.4%	47.4%	40.4%	44.8%	51.7%	50.5%
<i>Variable costs - Labor (hired, owner)</i>	32.5%	30.6%	30.9%	35.0%	30.8%	30.0%	33.8%	33.7%	26.4%	25.1%
<i>Fixed costs (maint., repair, insure, overh., depreci.)</i>	18.3%	24.1%	25.9%	21.5%	20.8%	22.6%	25.8%	21.5%	21.9%	24.3%
<b>Net Revenue from Operations</b>	<b>46,685</b>	<b>10,648</b>	<b>(1,928)</b>	<b>40,146</b>	<b>25,157</b>	<b>918</b>	<b>9,887</b>	<b>43,497</b>	<b>(15,616)</b>	<b>(14,635)</b>
<b>Profit or Loss (before tax)</b>	<b>51,655</b>	<b>69,745</b>	<b>82,294</b>	<b>43,094</b>	<b>29,619</b>	<b>14,824</b>	<b>17,122</b>	<b>48,519</b>	<b>(15,930)</b>	<b>(14,324)</b>
Margin (on shrimping)	9.9%	3.0%	(0.5%)	10.0%	6.3%	0.3%	3.0%	9.8%	(5.0%)	(6.1%)
Economic return (from shrimping)	15.0%	3.1%	(0.6%)	11.8%	6.5%	0.2%	2.9%	11.2%	(4.3%)	(4.4%)
Return on Equity	18.0%	22.0%	26.9%	13.5%	8.2%	4.2%	5.5%	13.6%	(4.8%)	(4.6%)

# Shrimp Prices by Size

Imports and Gulf landings

# Prices by Size of Shrimp Imports (inflation-adj)

(Warm-water shrimp, frozen shell-on)

Size - Count	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<15	8.51	9.59	10.27	9.45	9.09	8.87	8.11	8.15	7.15	6.67	7.06	6.47
15/20	5.37	7.41	8.12	6.15	6.27	6.34	5.36	5.27	4.97	4.99	4.87	3.91
21/25	4.88	6.63	7.12	5.23	5.55	5.58	4.73	4.57	4.32	4.40	4.16	3.44
26/30	4.69	6.21	6.65	4.89	5.09	5.16	4.36	4.08	3.95	4.06	3.83	3.22
31/40	4.25	5.76	5.95	4.50	4.60	4.69	3.96	3.53	3.31	3.43	3.20	2.71
41/50	3.96	5.19	5.38	4.03	4.21	4.19	3.61	3.21	2.96	3.13	2.81	2.41
51/60	3.70	4.70	5.09	3.74	3.97	4.02	3.39	3.07	2.99	3.19	2.80	2.34
61/70	3.57	4.43	4.73	3.42	3.74	3.77	3.19	2.85	2.74	2.82	2.49	2.11
>70	3.18	3.75	4.27	3.39	3.36	3.32	3.01	2.85	2.65	2.92	2.58	2.25

# Share of Shrimp Imports by Size

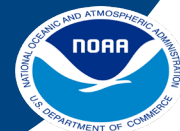
(Warm-water shrimp, frozen shell-on)

Size - Count	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<15	15%	12%	13%	16%	15%	15%	16%	17%	19%	19%	21%	24%
15/20	12%	13%	13%	14%	15%	16%	16%	17%	19%	18%	17%	17%
21/25	13%	16%	16%	18%	19%	21%	21%	26%	22%	22%	24%	22%
26/30	16%	15%	15%	14%	14%	14%	14%	13%	16%	15%	13%	13%
31/40	18%	19%	17%	17%	16%	16%	15%	14%	13%	13%	14%	15%
41/50	11%	11%	10%	10%	9%	8%	9%	7%	6%	6%	6%	5%
51/60	8%	8%	8%	6%	6%	6%	5%	4%	4%	4%	3%	3%
61/70	4%	4%	4%	3%	3%	2%	2%	1%	1%	1%	1%	1%
>70	3%	2%	3%	2%	2%	2%	2%	1%	1%	1%	1%	1%

## Prices by Size of Gulf Shrimp Landings (inflation-adj)

Size - Count	2015	2016	2017	2018	2019	2020	2021	2022	2023
<15	3.99	5.23	6.07	6.01	6.54	7.63	8.96	7.98	5.21
15/20	5.64	6.75	5.71	5.37	5.58	5.72	6.92	5.50	3.70
21/25	4.81	5.52	5.16	4.82	5.12	5.09	6.42	4.62	2.93
26/30	3.98	4.45	4.64	4.39	4.44	4.12	5.33	3.49	2.34
31/40	3.70	3.93	4.30	3.99	4.06	3.46	4.26	2.83	1.72
41/50	3.02	3.37	3.89	3.51	3.41	2.81	3.65	2.23	1.36
51/67	2.52	2.93	3.24	2.91	2.93	2.51	3.23	2.00	1.20
68+	1.74	1.84	1.76	1.54	1.72	1.91	2.17	1.41	1.05

Questions?



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# The Gulf Shrimp Fleet

		2019	2020	2021	2022	2023
<u>Total Gulf shrimp fishery</u>						
Number of active vessels		3,558	3,348	3,154	2,971	2,467
Landing (lbs, heads off)		115 million	109 million	114 million	111 million	107 million
Gross revenue (nominal USD)		420 million	385 million	471 million	341 million	204 million
Average Price		4.29	4.12	4.58	3.19	1.91
<u>Gulf shrimp vessels WITH federal SPGM permit</u>						
Number of active vessels		1,020	981	950	919	790
Landing (lbs, heads off)		76 million	76 million	80 million	74 million	72 million
Gross revenue (nominal USD)		319 million	307 million	373 million	260 million	161 million
Average Price		4.93	4.66	5.18	3.64	2.23
<u>Gulf shrimp vessels WITHOUT federal SPGM permit</u>						
Number of active vessels		2,538	2,367	2,204	2,052	1,677
Landing (lbs, heads off)		39 million	32 million	34 million	37 million	35 million
Gross revenue (nominal USD)		101 million	79 million	98 million	81 million	43 million
Average Price		3.04	2.84	3.18	2.29	1.24

# Vessel Characteristics

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
Length (feet)	68	71	69	69	70	70	70	71	71	70
Gross tons	103	111	105	106	111	111	110	112	113	110
Horse power	544	581	551	582	575	574	580	600	583	574
Year built	1988	1989	1988	1988	1988	1990	1990	1990	1990	1990
Hull material - Steel	77%	84%	77%	79%	78%	83%	82%	85%	84%	84%
Refrigeration - Freezer	62%	66%	69%	68%	71%	76%	73%	73%	76%	79%

# Balance Sheet

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
<b>Assets</b> - Market value of vessel and permit	<b>\$312,076</b>	<b>\$343,398</b>	<b>\$331,456</b>	<b>\$338,970</b>	<b>\$384,838</b>	<b>\$370,112</b>	<b>\$346,222</b>	<b>\$389,621</b>	<b>\$364,444</b>	<b>\$331,303</b>
<i>Original value of vessel (purchase price)</i>	\$325,568	\$355,865	\$327,344	\$332,217	\$347,347	\$356,854	\$323,473	\$345,817	\$338,662	\$319,281
<i>Implicit permit value</i>	\$71,690	\$43,070	\$28,756	\$42,538	\$36,182	\$49,515	\$36,024	\$32,832	\$25,864	\$27,012
<b>Liabilities</b> - Loan on vessel	<b>\$25,575</b>	<b>\$26,711</b>	<b>\$25,438</b>	<b>\$18,906</b>	<b>\$25,220</b>	<b>\$20,076</b>	<b>\$35,215</b>	<b>\$32,871</b>	<b>\$32,899</b>	<b>\$22,321</b>
<i>% of vessels with loan</i>	20%	22%	19%	16%	18%	10%	15%	15%	16%	16%
<b>Equity</b> - Owner's equity in vessel	<b>\$286,501</b>	<b>\$316,687</b>	<b>\$306,018</b>	<b>\$320,065</b>	<b>\$359,618</b>	<b>\$350,036</b>	<b>\$311,007</b>	<b>\$356,751</b>	<b>\$331,545</b>	<b>\$308,982</b>
<i>Insurance coverage (% of vessels)</i>	39%	46%	42%	38%	46%	47%	45%	41%	40%	40%

# Cash Flow Statement

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
<b>Inflow - Total</b>	<b>478,447</b>	<b>412,591</b>	<b>441,792</b>	<b>405,978</b>	<b>406,492</b>	<b>356,777</b>	<b>332,748</b>	<b>447,461</b>	<b>313,750</b>	<b>242,796</b>
Shrimp revenue	459,818	338,696	344,616	391,822	399,401	337,957	318,951	439,906	312,923	235,275
Non-shrimp revenue	11,324	13,231	11,839	10,015	1,403	4,250	5,598	1,923	424	6,059
Government payments	653	610	458	63	612	102	8,081	5,576	402	783
DWH/non-operating paym	6,652	60,053	84,879	4,078	5,076	14,468	119	56	0	680
<b>Outflow - Total</b>	<b>407,945</b>	<b>334,653</b>	<b>347,063</b>	<b>352,629</b>	<b>368,745</b>	<b>329,665</b>	<b>301,212</b>	<b>387,039</b>	<b>321,688</b>	<b>247,682</b>
Fuel	170,940	116,840	112,437	115,423	145,653	128,244	89,501	135,650	140,490	105,167
Other supplies	37,889	37,910	42,335	41,705	36,058	33,402	37,545	42,814	29,618	24,172
Crew & captain (hired)	119,345	91,606	96,509	113,058	103,762	91,285	95,306	122,627	77,871	58,121
Regular maintenance	29,722	31,095	34,224	30,332	32,085	29,714	29,527	38,215	26,358	22,150
Major repair & haul-out	11,016	12,358	14,463	14,044	10,483	14,013	12,178	12,283	11,428	8,439
Insurance	8,955	11,106	9,940	9,338	11,088	11,109	10,675	12,036	11,207	10,248
Overhead	17,242	18,431	23,905	17,334	16,862	14,783	16,972	14,207	14,872	12,288
Interest payments made	2,335	1,566	1,115	1,193	1,226	665	964	610	717	1,151
Principal payments made	5,357	6,659	4,732	4,652	4,596	2,655	3,741	3,530	3,162	2,879
New investments	5,143	7,081	7,403	5,550	6,933	3,795	4,803	5,066	5,966	3,066
<b>Net Cash Flow (excl tax)</b>	<b>70,502</b>	<b>77,938</b>	<b>94,729</b>	<b>53,348</b>	<b>37,747</b>	<b>27,112</b>	<b>31,537</b>	<b>60,422</b>	<b>(7,938)</b>	<b>(4,885)</b>

# Income Statement

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
<b>Revenue from Operations</b>	<b>471,141</b>	<b>351,927</b>	<b>356,455</b>	<b>401,837</b>	<b>400,805</b>	<b>342,207</b>	<b>324,548</b>	<b>441,829</b>	<b>313,347</b>	<b>241,334</b>
<b>Costs of Operations</b>	<b>424,456</b>	<b>341,279</b>	<b>358,383</b>	<b>361,691</b>	<b>375,647</b>	<b>341,288</b>	<b>314,662</b>	<b>398,331</b>	<b>328,963</b>	<b>255,969</b>
<i>Variable costs - Non-Labor (fuel, supplies)</i>	49.2%	45.3%	43.2%	43.4%	48.4%	47.4%	40.4%	44.8%	51.7%	50.5%
<i>Variable costs - Labor (hired, owner)</i>	32.5%	30.6%	30.9%	35.0%	30.8%	30.0%	33.8%	33.7%	26.4%	25.1%
<i>Fixed costs (maint., repair, insure, overh., depreci.)</i>	18.3%	24.1%	25.9%	21.5%	20.8%	22.6%	25.8%	21.5%	21.9%	24.3%
<b>Net Revenue from Operations</b>	<b>46,685</b>	<b>10,648</b>	<b>(1,928)</b>	<b>40,146</b>	<b>25,157</b>	<b>918</b>	<b>9,887</b>	<b>43,497</b>	<b>(15,616)</b>	<b>(14,635)</b>
<b>Profit or Loss (before tax)</b>	<b>51,655</b>	<b>69,745</b>	<b>82,294</b>	<b>43,094</b>	<b>29,619</b>	<b>14,824</b>	<b>17,122</b>	<b>48,519</b>	<b>(15,930)</b>	<b>(14,324)</b>

# Fleet Returns

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
Margin (on shrimping)	9.9%	3.0%	(0.5%)	10.0%	6.3%	0.3%	3.0%	9.8%	(5.0%)	(6.1%)
Economic return (from shrimping)	15.0%	3.1%	(0.6%)	11.8%	6.5%	0.2%	2.9%	11.2%	(4.3%)	(4.4%)
Shrimp price	6.23	3.85	4.35	4.22	3.99	4.10	3.91	4.64	3.41	2.50
Fuel price	3.77	2.41	2.15	2.42	2.77	2.49	1.77	2.70	3.87	3.07
MFP index	0.81	0.92	0.79	0.98	0.99	0.83	0.86	0.98	1.28	1.35