



# What Makes the Med Fuel Oil Market Tick

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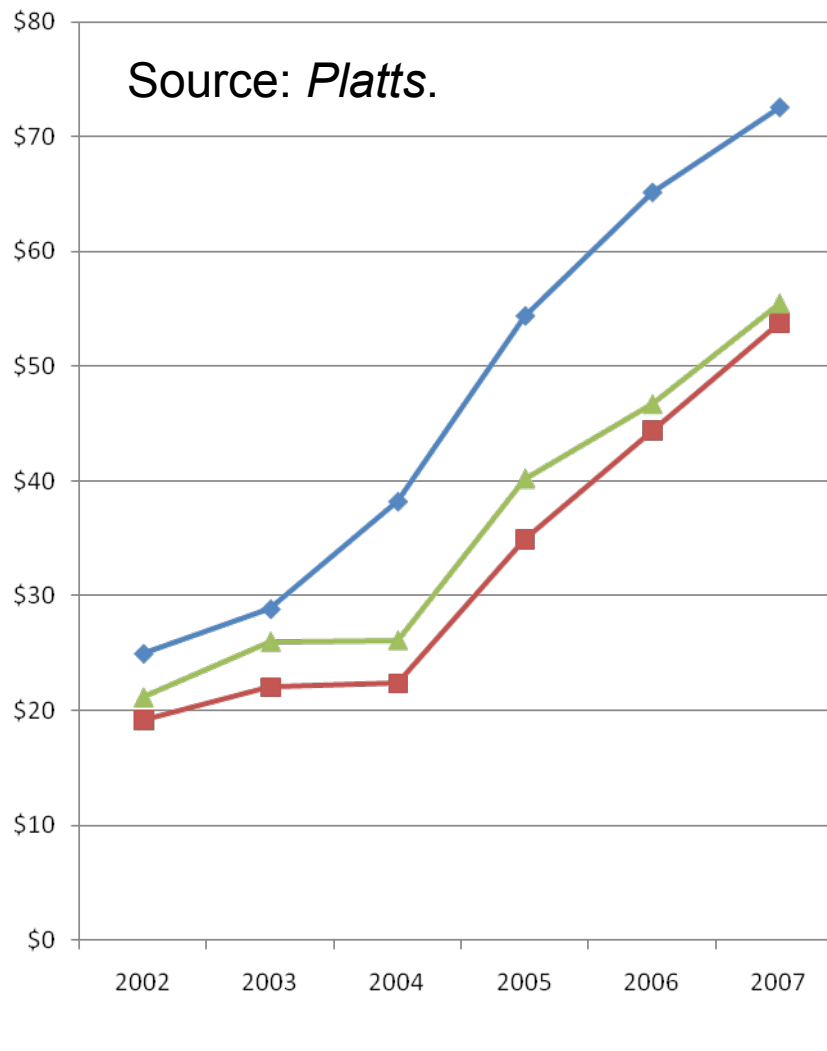
# What Makes the Med Fuel Oil Market Tick

- Overview
  - Price Relationships
  - Trade Patterns
  - Bunkering
  - Storage

# Price Relationships:

## Brent and Med Fuel Oil Prices (\$/bbl)

	Dated Brent (\$/bbl)	3.5% FOB Med (\$/bbl)	1.0% FOB Med (\$/bbl)
2002	24.98	19.20	21.19
2003	28.85	22.04	26.03
2004	38.21	22.39	26.15
2005	54.38	34.95	40.21
2006	65.14	44.40	46.69
2007	72.52	53.82	55.44
1 Q 07	57.75	39.49	39.10
Ap-May 07	67.37	48.88	49.77
1 Q 08	96.90	69.71	76.06
Ap-May 08	115.85	80.51	89.70



Source: *Platts.*



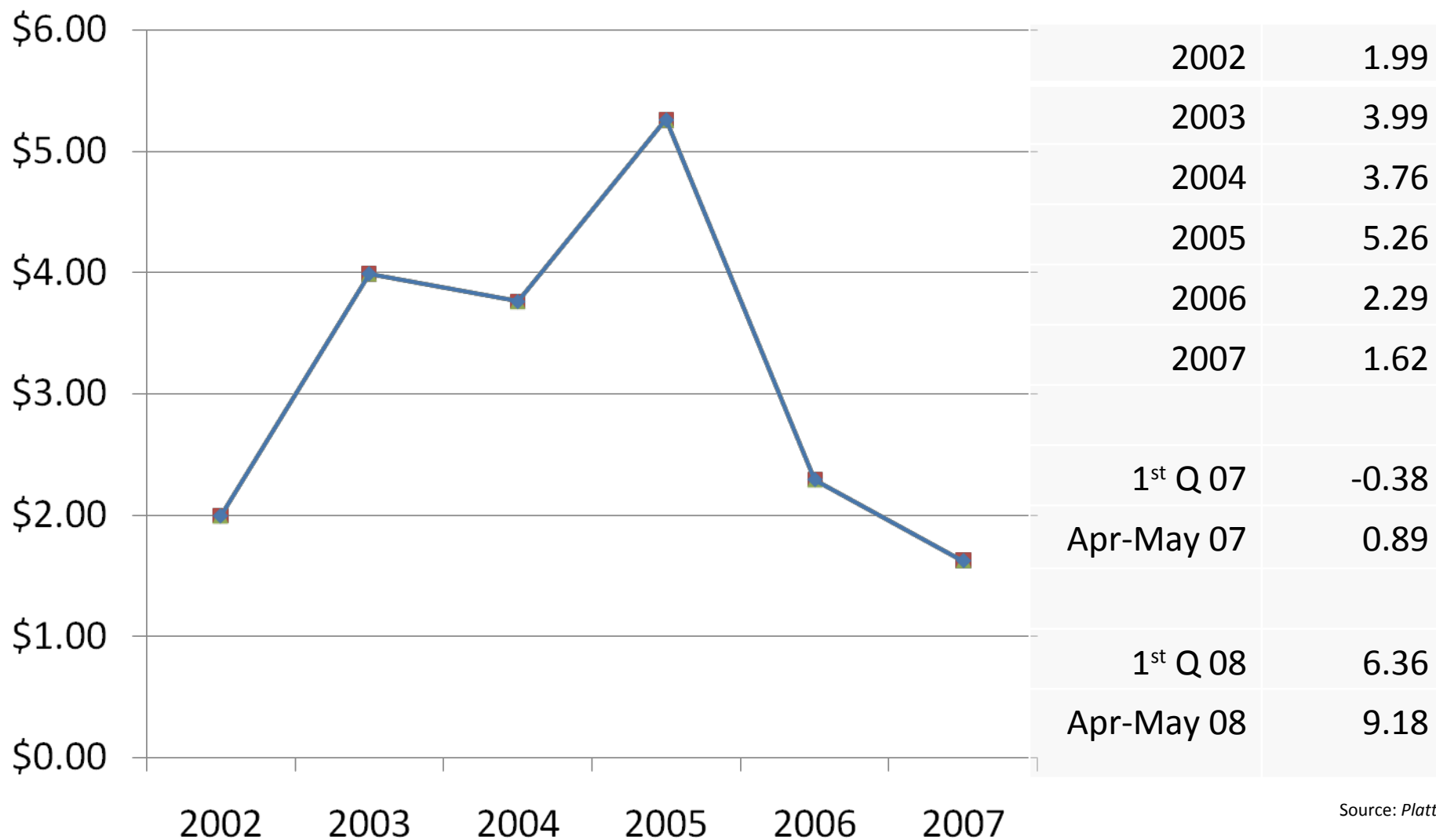
# Med Fuel Oil-to-Crude Ratios

	<b>3.5%S/ Brent</b>	<b>1.0%S/ Brent</b>
	<b>(%)</b>	<b>(%)</b>
2002	76.8%	84.8%
2003	76.4%	90.2%
2004	58.6%	68.4%
2005	64.3%	73.9%
2006	68.2%	71.7%
2007	74.2%	76.5%
1 Q 07	68.4%	67.7%
Ap-May 07	72.6%	73.9%
1 Q 08	71.9%	78.5%
Apr-May 08	69.5%	77.4%



Source: Platts.

# Med Hi-Lo Spreads (\$/bbl)



Source: Platts.

# Med HSFO Arbitrage (\$/bbl)

	<b>Med HSFO Less NWE HSFO</b>	<b>Med Sing HSFO Less USGC HSFO</b>	<b>HSFO Less Med HSFO</b>
2002	0.86	-1.50	3.38
2003	0.75	-1.98	3.89
2004	0.70	-2.36	5.11
2005	1.33	-1.47	4.75
2006	1.35	-1.16	3.57
2007	2.76	0.74	3.59
1 Q 07	3.32	0.41	5.15
Ap-May 07	2.83	0.45	3.72
1 Q 08	1.96	-0.07	4.34
Ap-May 08	2.87	0.59	5.24

Source: Platts.

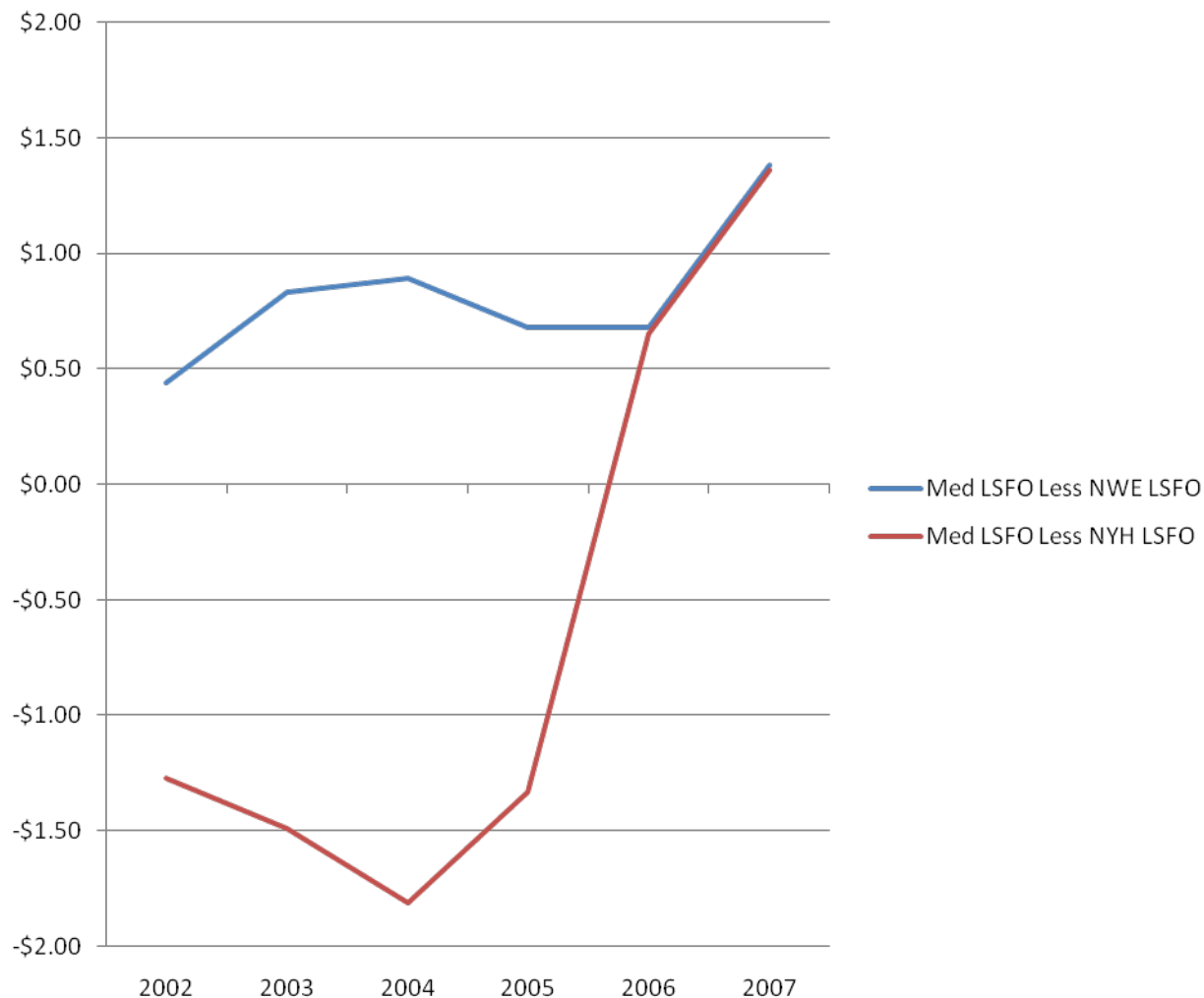




# Med LSFO Arbitrage (\$/bbl)

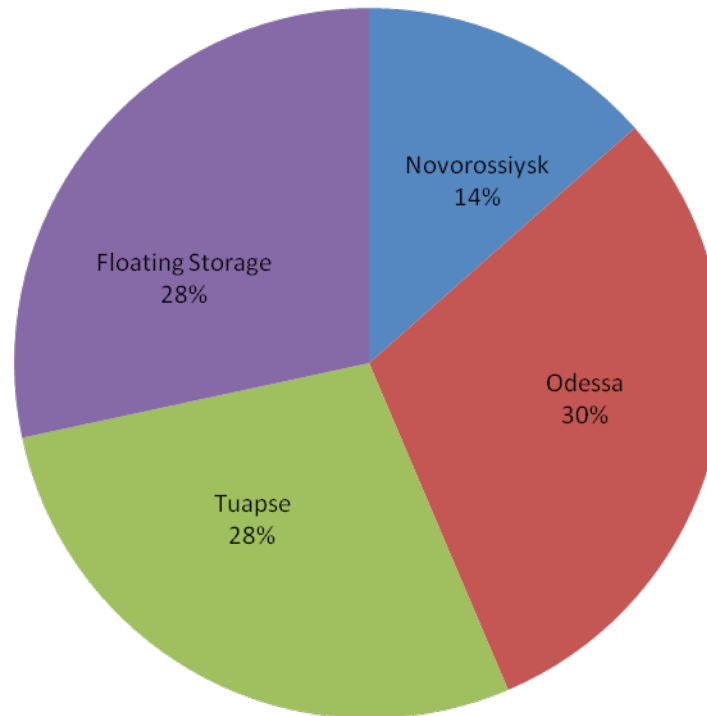
	<b>Med LSFO Less NWE LSFO</b>	<b>Med LSFO Less NYH LSFO</b>
2002	0.44	-1.27
2003	0.83	-1.49
2004	0.89	-1.81
2005	0.68	-1.33
2006	0.68	0.65
2007	1.38	1.36
1 Q 07	1.21	-0.87
Ap-May 07	1.83	-0.04
1Q 08	1.63	3.51
Ap-May 08	1.50	4.69

Source: *Platts*.



# Trade Patterns: Black Sea Fuel Oil Exports

Total: 11.1 million mt/yr





# Med HSFO - Longs

- Morocco
  - Disappearing SR HSFO
- Greece
  - Shift to LSFO for PowerGen
- Italy
- Israel (900 kt/yr)
- Turkey (2.7 million mt/yr)



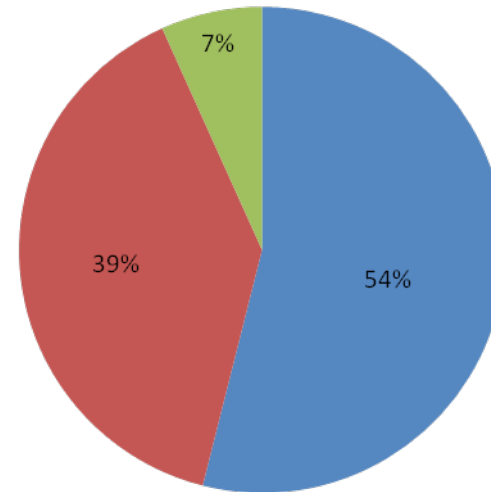
# Med HSFO - Shorts

- Tunisia (775 kt/yr)
  - Exchange for SR LSFO
- Syria (2 million mt per year)
  - Shift from exporter to importer

# Med LSFO - Longs

Total: 8.9 million mt/yr

■ Algeria ■ Libya ■ Tunisia



- SRFO
  - Algeria
  - Libya
  - Tunisia
- LS Blendstock
  - Egypt (600 kt/yr)

# Med LSFO – Shorts

- Lebanon (Imports of 1.5 million mt/yr)
  - Industry
  - Power
- Greece Power (1.6 million mt/yr)
  - Shift from HSFO
- Cyprus Power (1.0 million mt/yr)
  - No longer using 2%S fuel oil

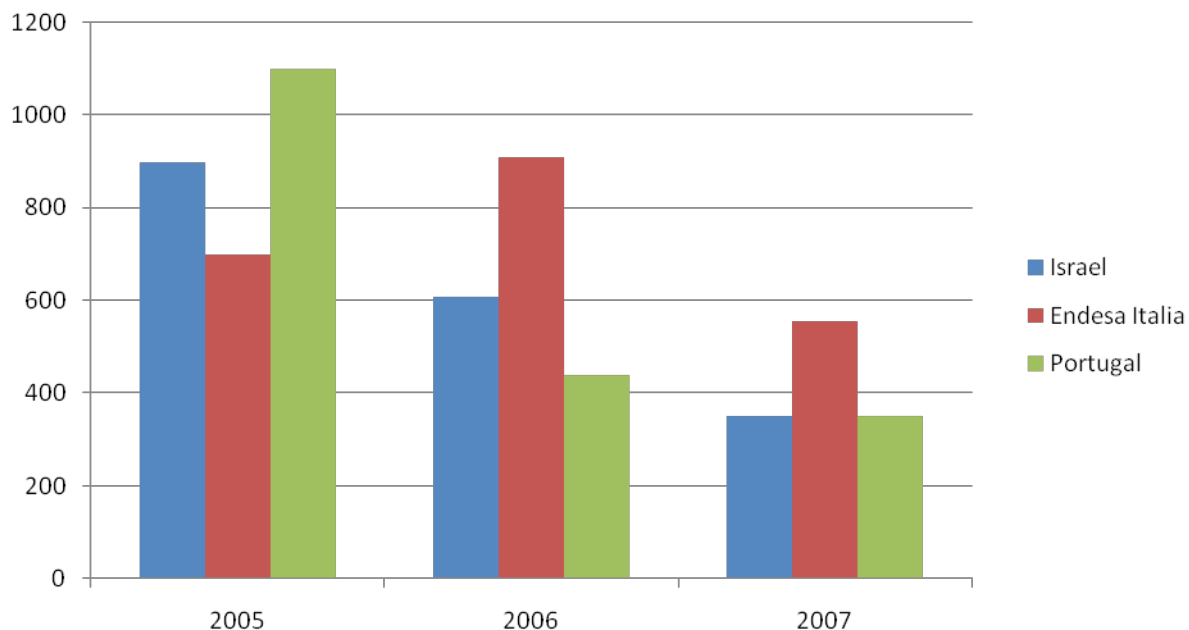
## Med LSFO - Shorts (Cont'd)

- Malta Power (600 kt/yr)
  - .7% / 1.0%S
- Israel Power (350 kt/yr)
  - 0.5%S
- Italy Power (Secular decline from 1990s)
  - 3.6 million mt/yr (78% LSFO / 22% HSFO)

# LSFO for Power in Med

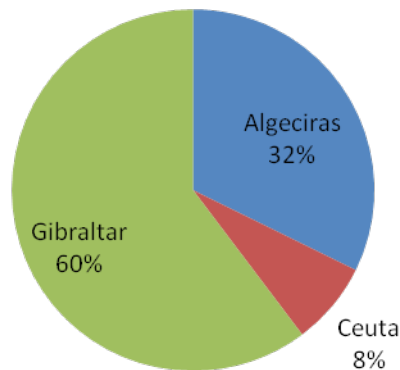
(Thousand Metric Tons)

	<u>Israel</u>	<u>Endesa Italia</u>	<u>Portugal</u>
2005	900	699	1,100
2006	608	909	440
2007	350	557	350



# Med Bunkering

- Greece (2.9 million mt/yr)
- Italy (3.0 million mt/yr)
- Malta (800 kt/yr)
- Total Gibraltar Straits (7.2 million mt/yr)





# Fuel Oil Storage

- Limited Third-Party Storage:
  - Tunisia (310 k cbm, including black oil)
  - Malta (526 k cbm total / 150 k cbm black oil)
  - Turkey (300 k cbm total / 150 k cbm black oil)
- Planned Capacity:
  - Turkey (300 k cbm, including black oil)
  - Morocco (370 k cbm, including black oil)



# Conclusion

- New Price Relationships
- Changing Trade Patterns
  - HSFO
  - LSFO
- Growing Bunker Demand
- Rising Storage Capacity

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