1.

FORECASTING TURNING POINTS IN SHIPPING FREIGHT RATES –

LESSONS FROM 30 YEARS OF PRACTICAL EFFORT

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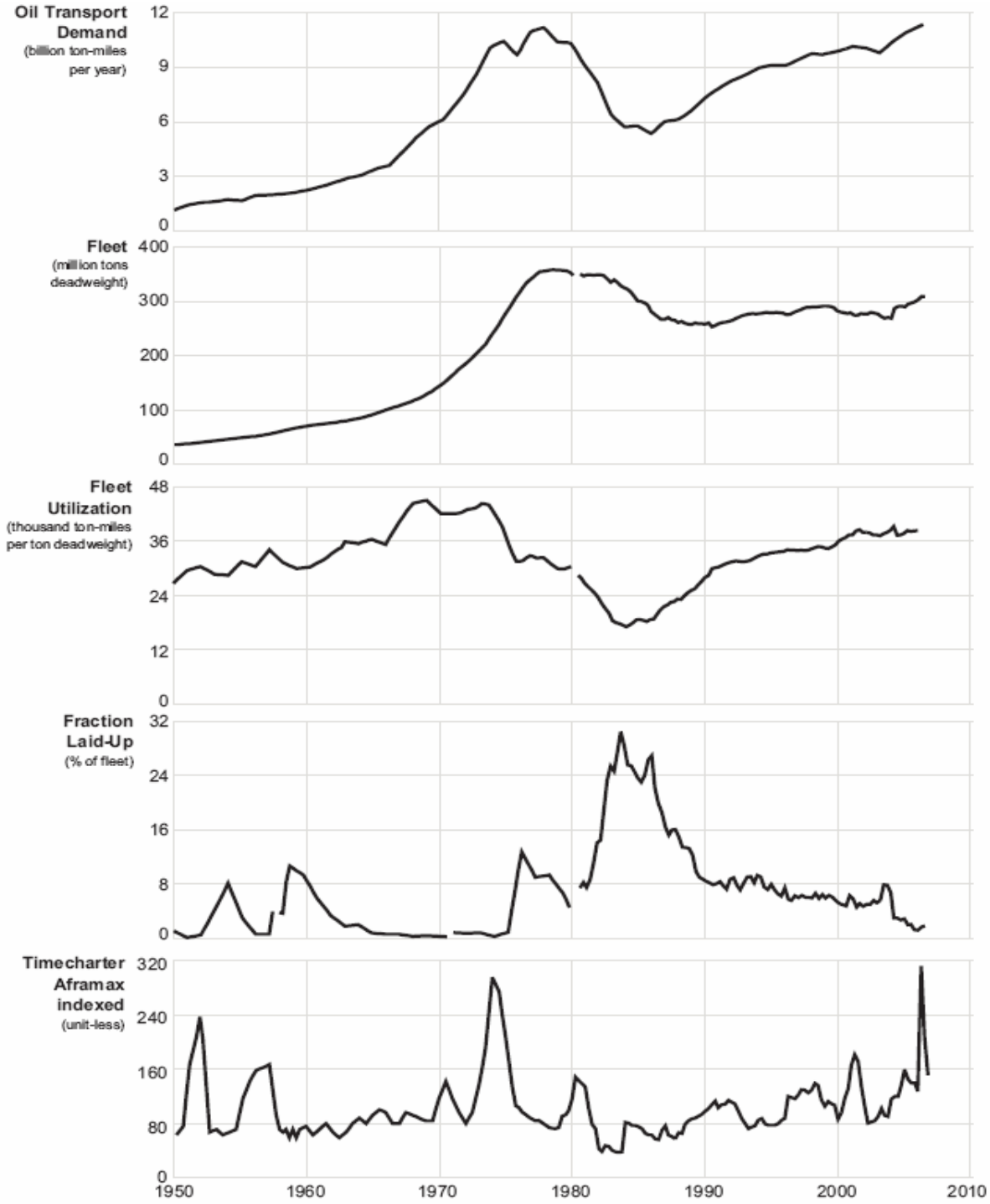
2.

The oil tanker market consists of some 3.000 ships competing for freight in a free market.

Freight rates vary spectacularly over time.

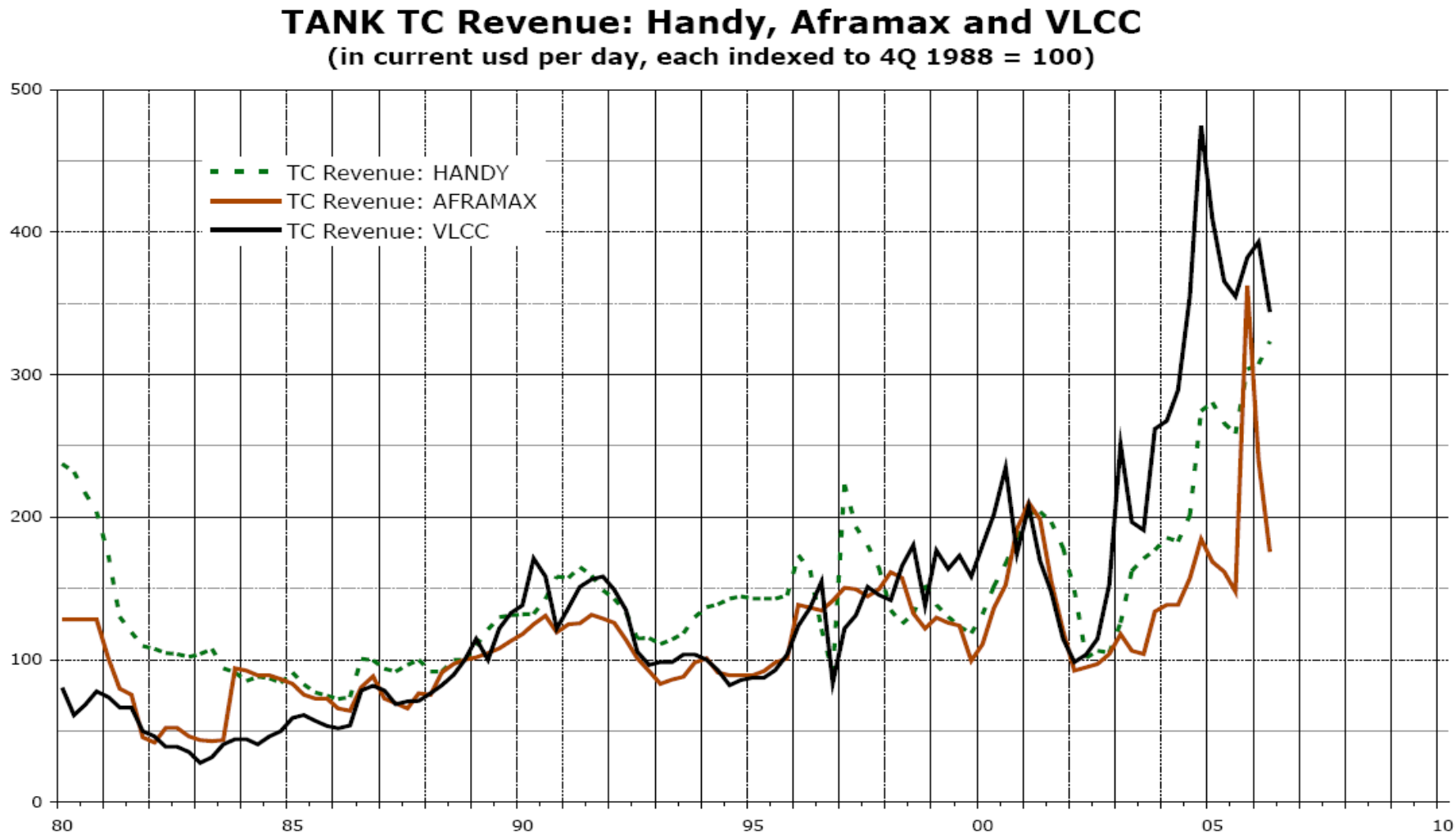
Much money can be made by correct forecasting of future freight rates.

3.
The
tanker
market
has
had
a
tumultuous
history
since
1950.



4.

The submarkets have shown strong correlation.



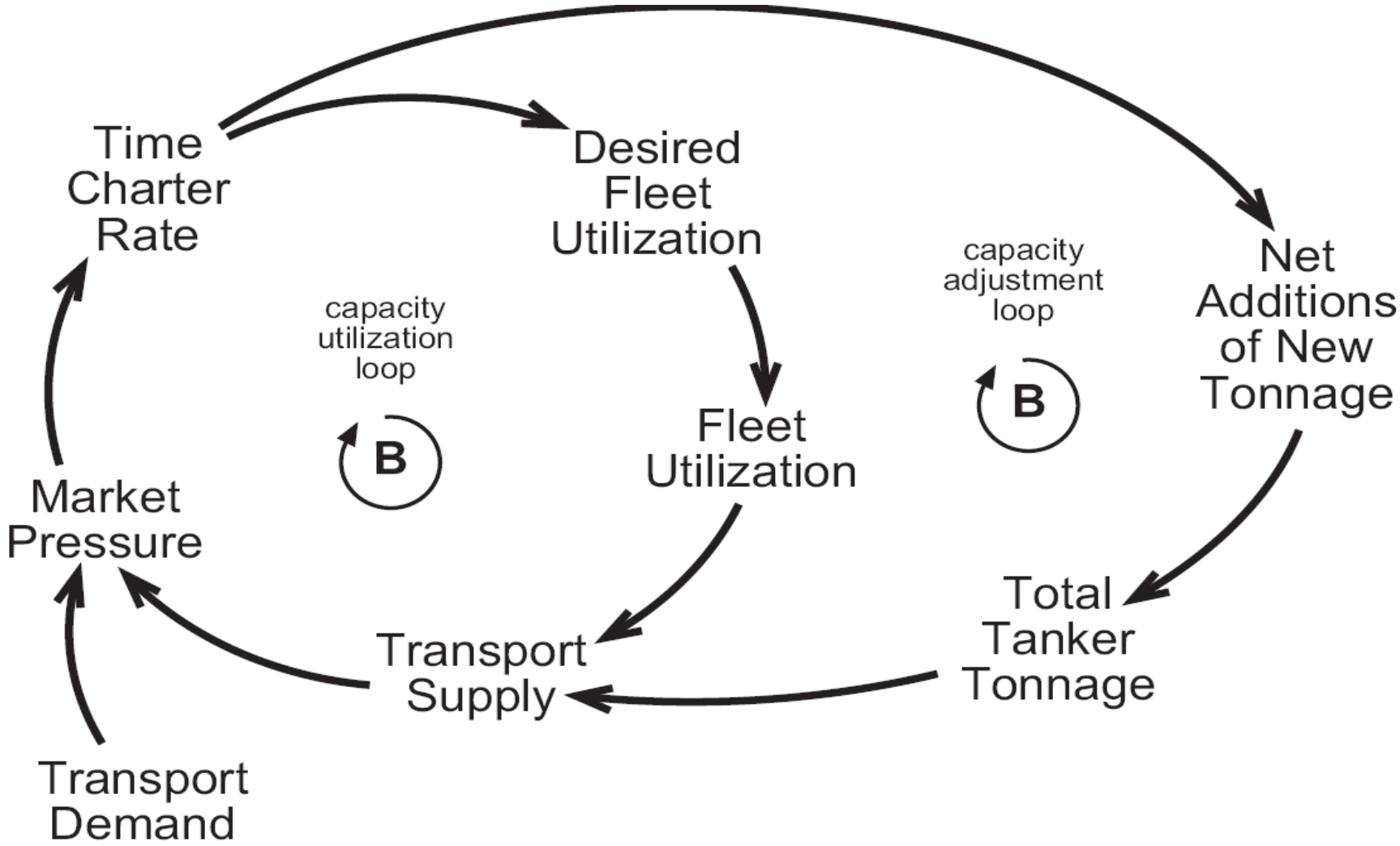
5.

The (typical and average) freight rate exhibits an interesting reference mode.

Can be seen as the sum of a “4”-year cycle and a “20”-year wave.

6.

The (hypothesized and simple) basic mechanisms behind the reference mode.



7.
A simple model incorporating the basic mechanisms.

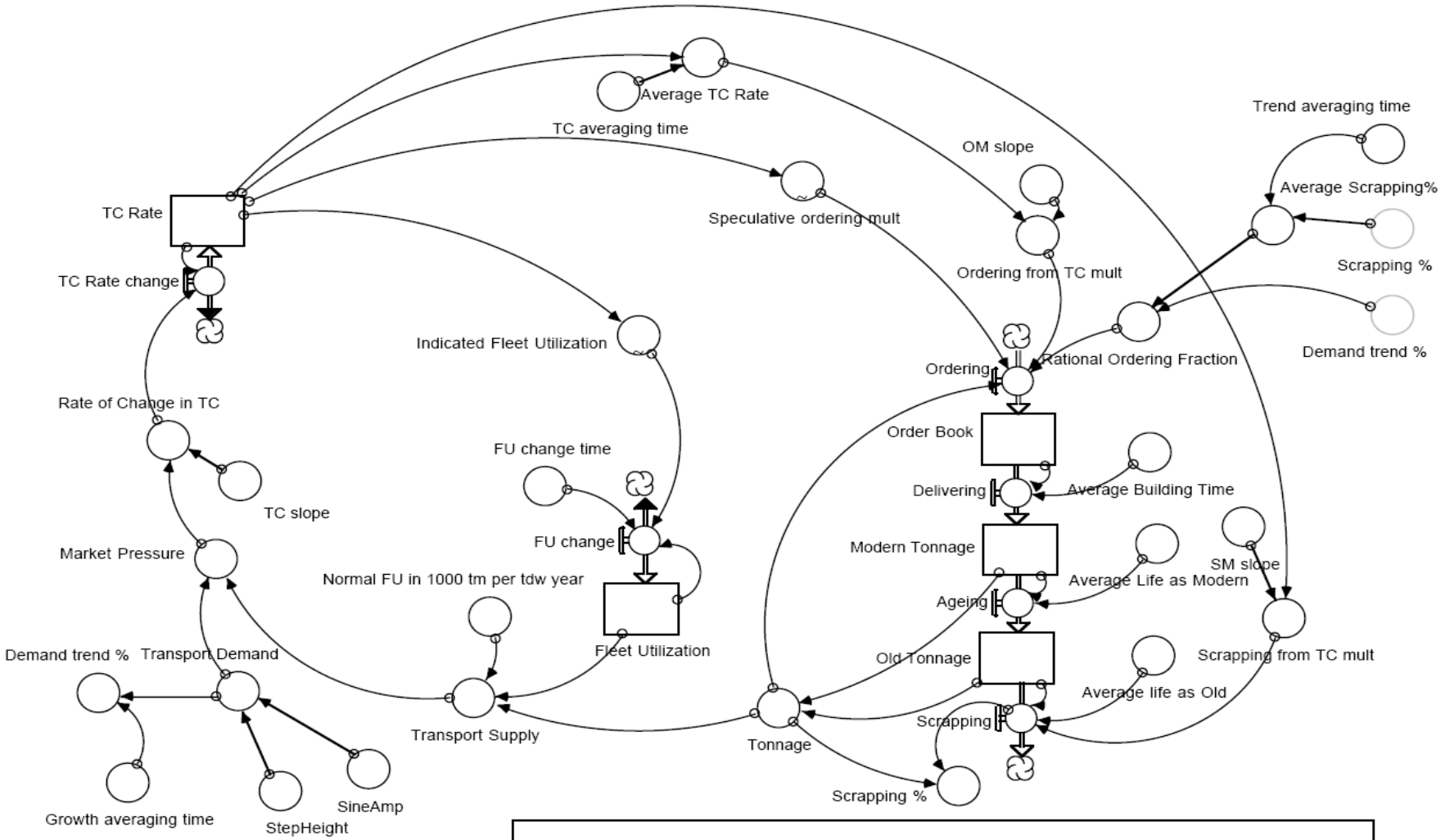
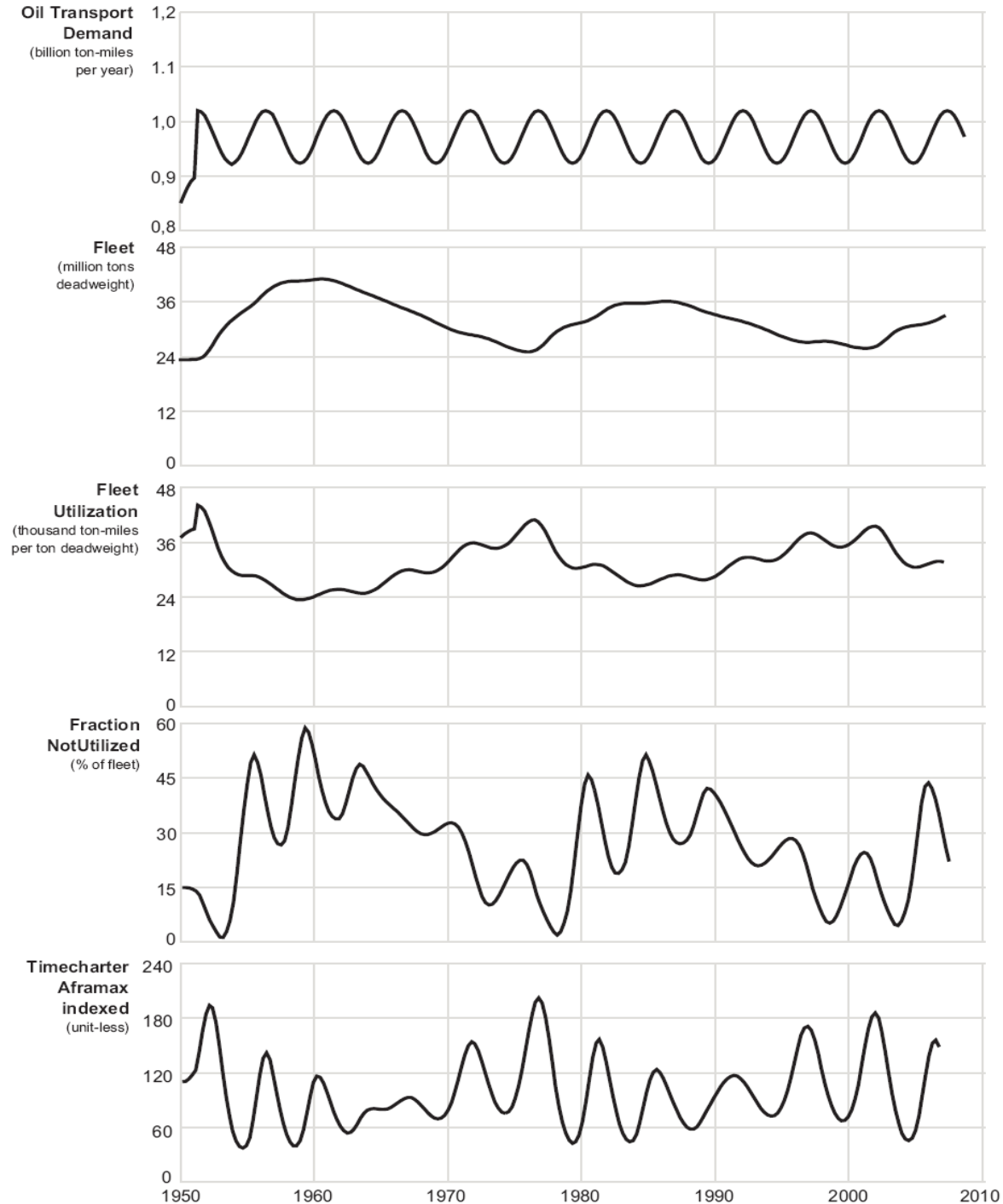
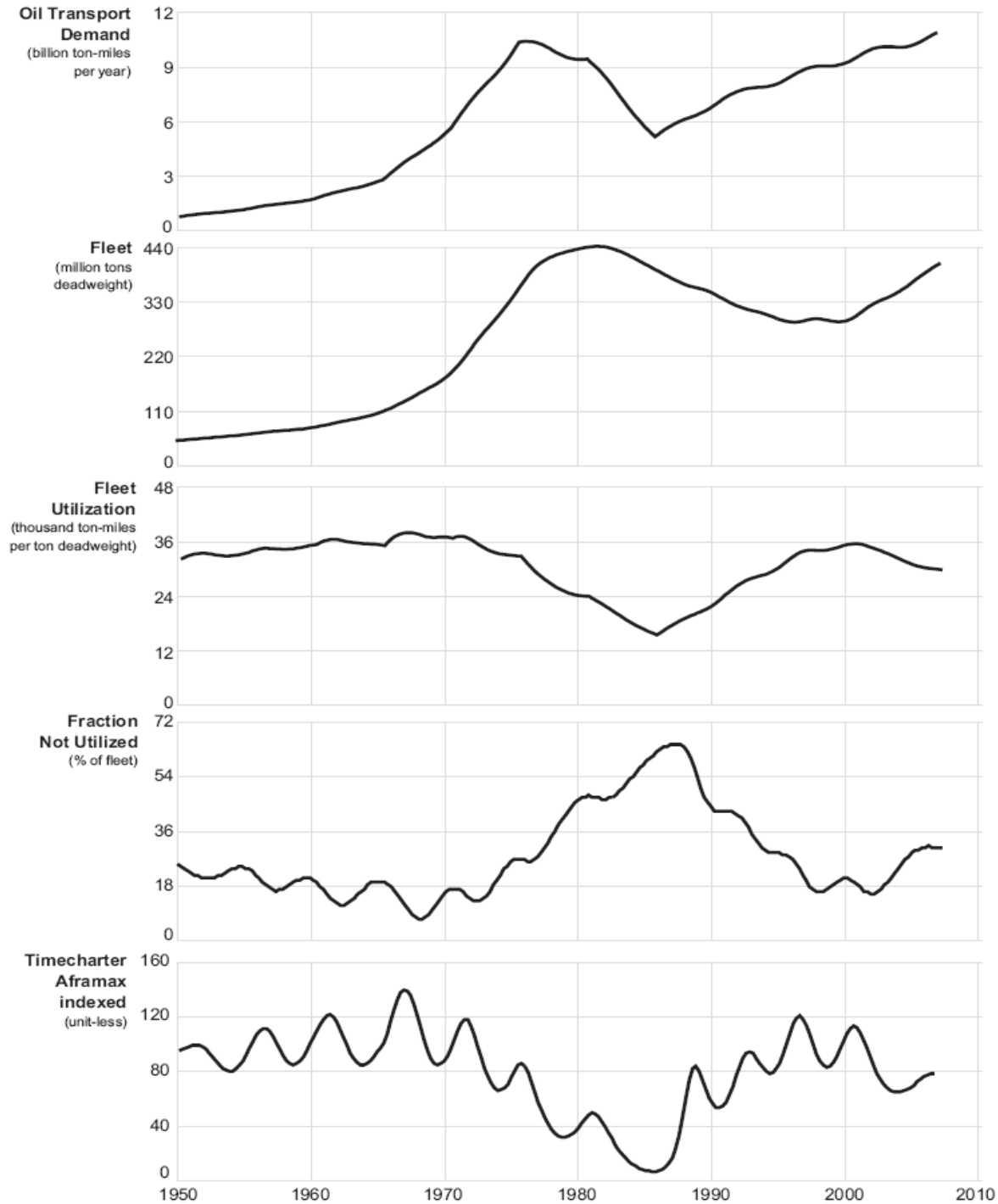


Figure 4. The simple model we use for forecasting.
Source: www.futuremappers.com/Figure4-SimpleModel2003.stm.zip

8.
The simple model can recreate the reference mode (when driven by a sinusoid).



9. The simple model can recreate history (when driven by historical demand trends and a sinusoid).



10.
Future freight rates can be forecast:

a)
as the sum of 4-year cycle and a 20 year wave,

or, better,

b)
by using the simple model driven by assumed future demand.

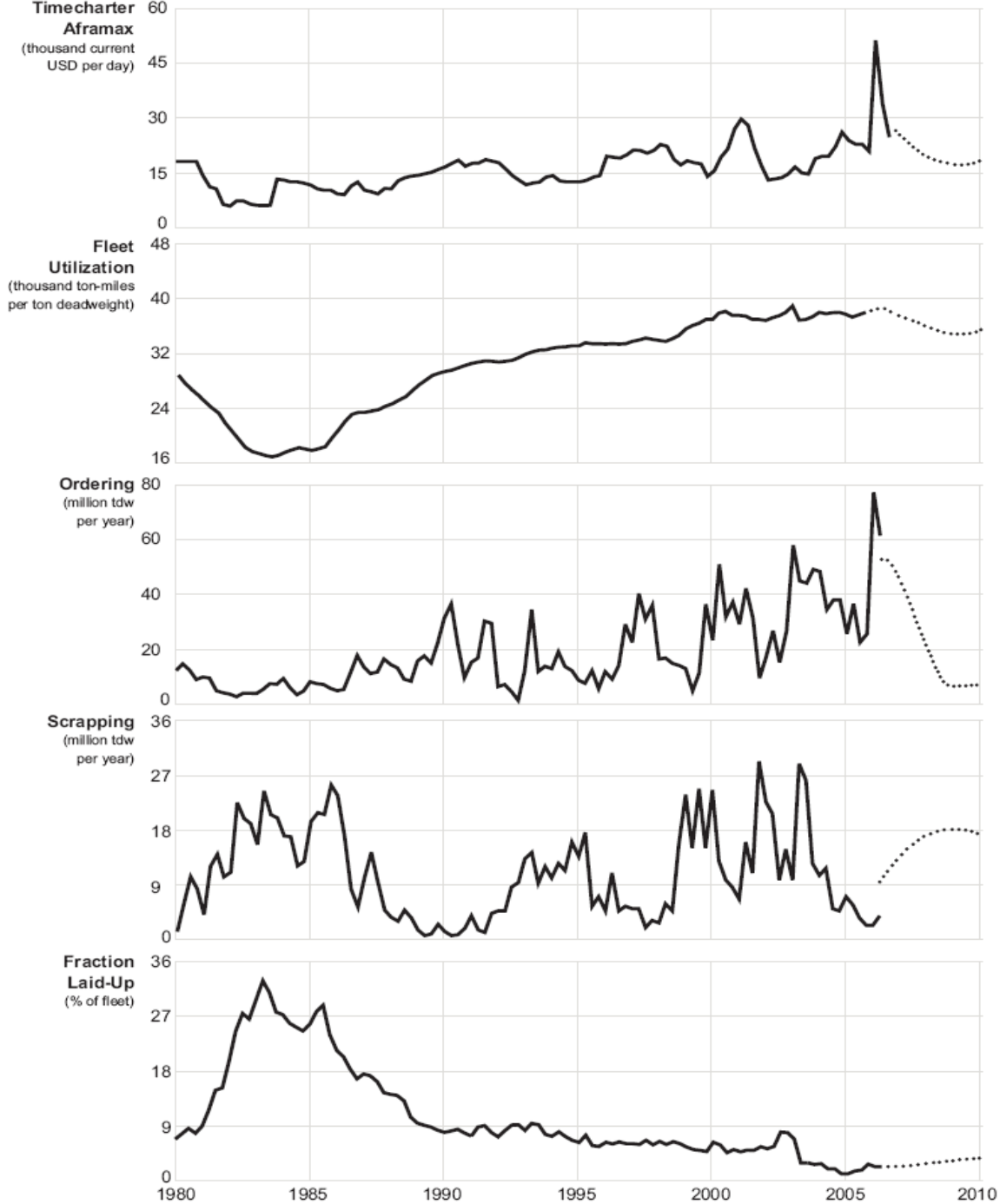


Figure 9 An example of the forecasts that we sell to our users: Model Output
Source: FMSM Base Case Scenario, 2006 using www.futuremappers.com/Figure9-Model2006.stm.zip

11. Such forecasting has been successful in the past.

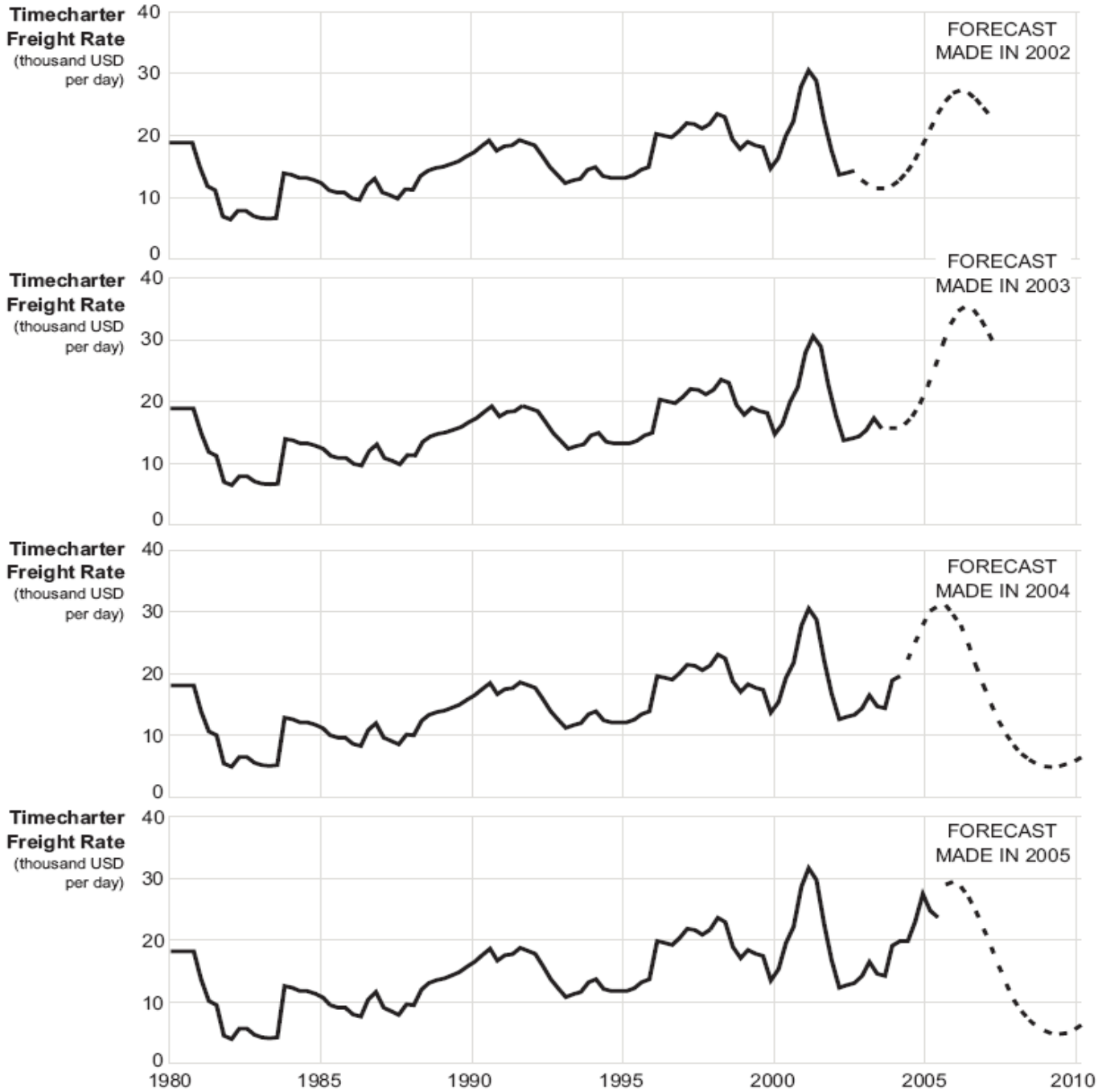


Figure 11. An example of how the simple model forecast the bottom in the timecharter freight rate for Aframax tankers in 2003 and the peak in 2006, several years in advance. History with solid line, forecast is dashed.

12. CONCLUSIONS

A. Freight rates are strongly influenced by tanker supply
(that is by the ship-owners' own actions)
not only by demand.

B. Turning points in freight rates can be forecast
with reasonable precision
some years ahead of time.

The full paper will appear in System Dynamics Review 2007.