Harnessing the Power of Financial Markets for the Public Good

FINANCIAL POLICY FORUM

Derivatives Study Center

Inventories, Derivatives and Volatility:

What if Joseph Had Used Derivatives?

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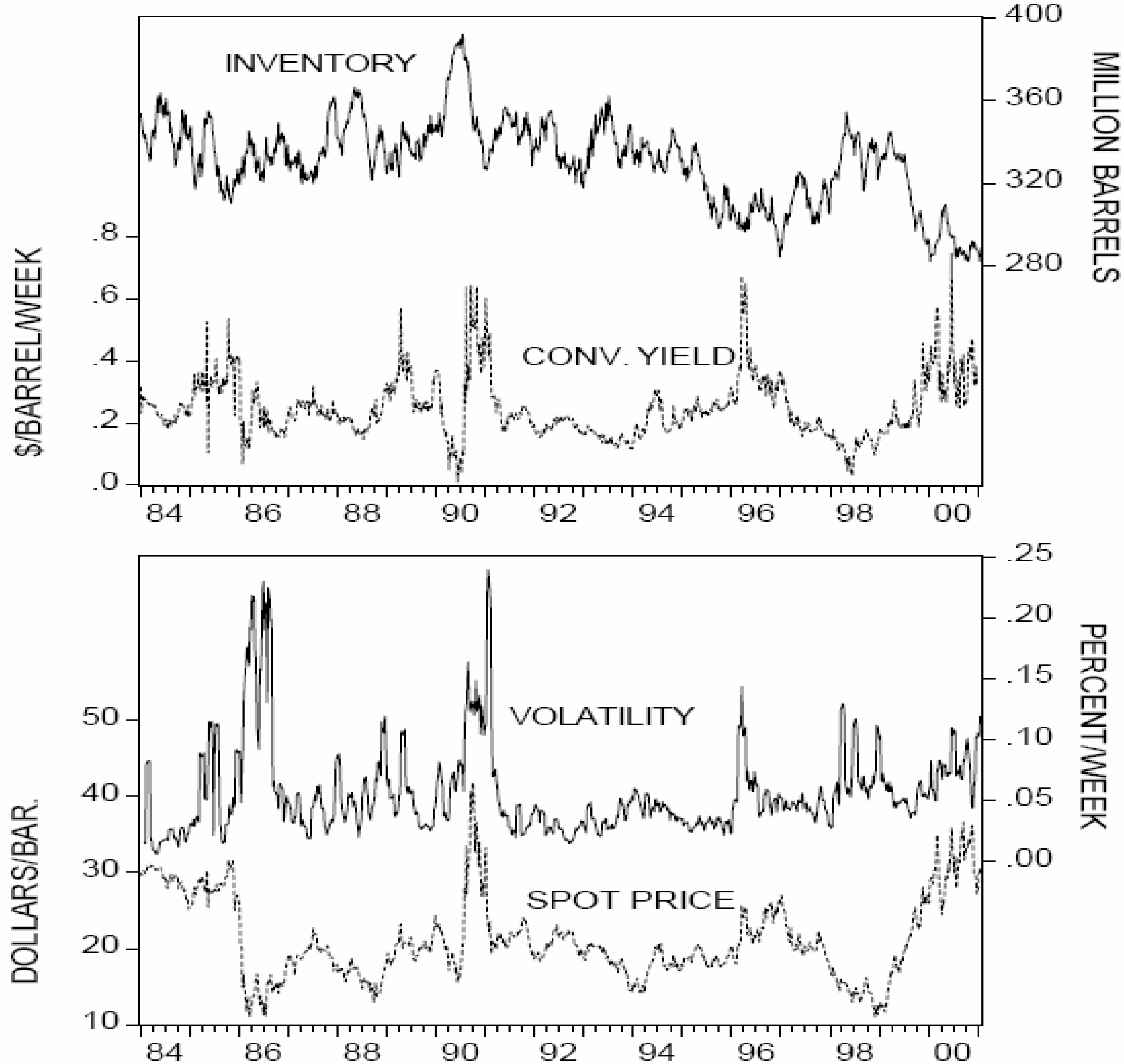
OUTLINE

- Overview – explain energy price dynamics
- Financialization of energy markets
  - New financial instruments
  - New market participants
- Logic of price determination process
  - Exogenous shocks
  - Volatility
  - Demand for physical energy commodities in storage
  - Participation by non-commercial market participants
  - Changes in spot prices and the forward curve
  - Excess price volatility

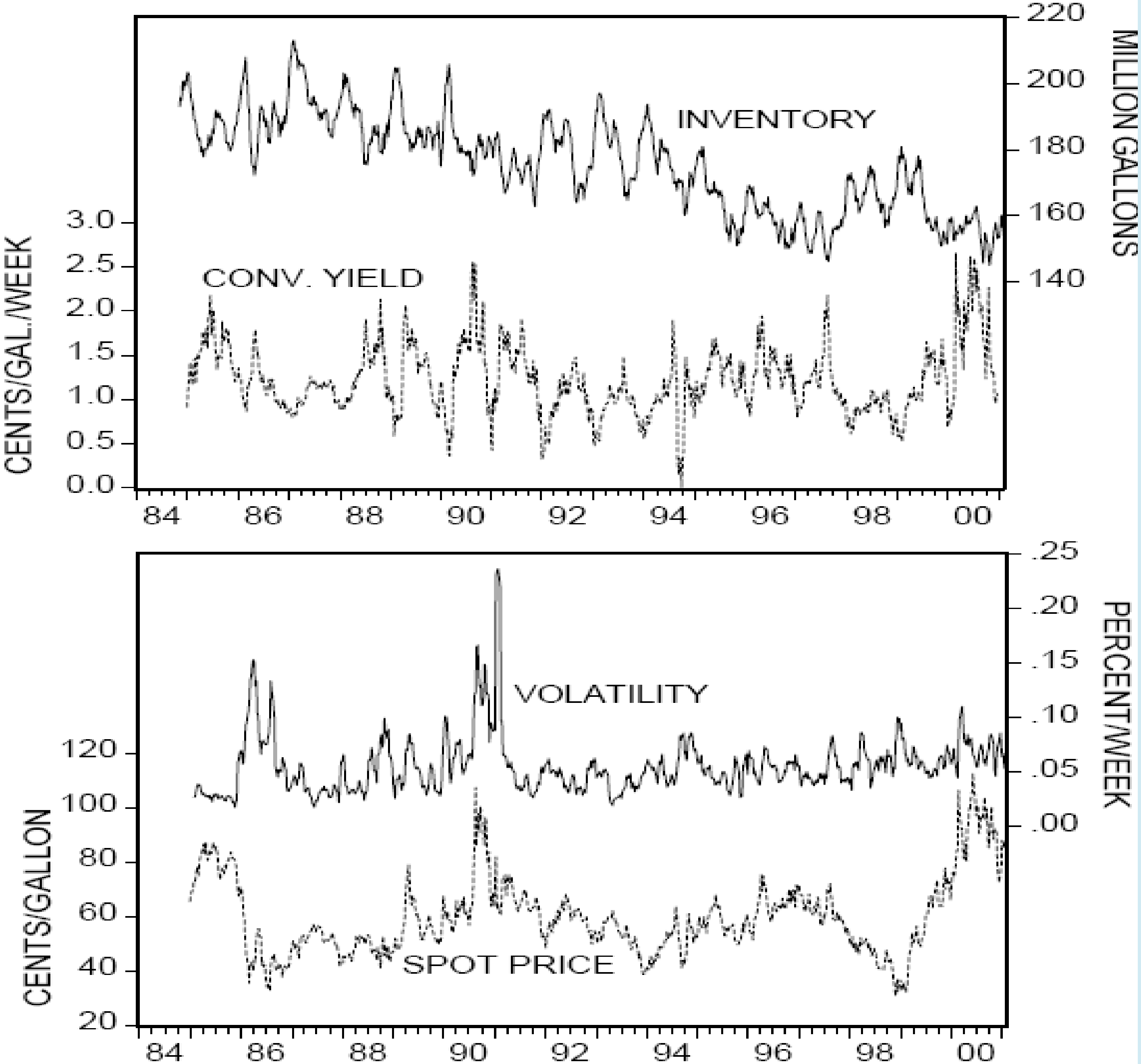
Proposed Policy Recommendations

CRUDE OIL



INVENTORY
CONV. YIELD
MILLION BARRELS
$/BARREL/WEEK
400
360
320
280
.8
.6
.4
.2
.0
84
86
88
90
92
94
96
98
00
VOLATILITY
SPOT PRICE
PERCENT/WEEK
DOLLARS/BAR.
.25
.20
.15
.10
.05
.00
50
40
30
20
10

GASOLINE



INVENTORY
CONV. YIELD
MILLION GALLONS
CENTS/GAL./WEEK
220
200
180
160
140
3.0
2.5
2.0
1.5
1.0
0.5
0.0
84
86
88
90
92
94
96
98
00
VOLATILITY
SPOT PRICE
PERCENT/WEEK
CENTS/GALLON
.25
.20
.15
.10
.05
.00
120
100
80
60
40
20
84
86
88
90
92
94
96
98
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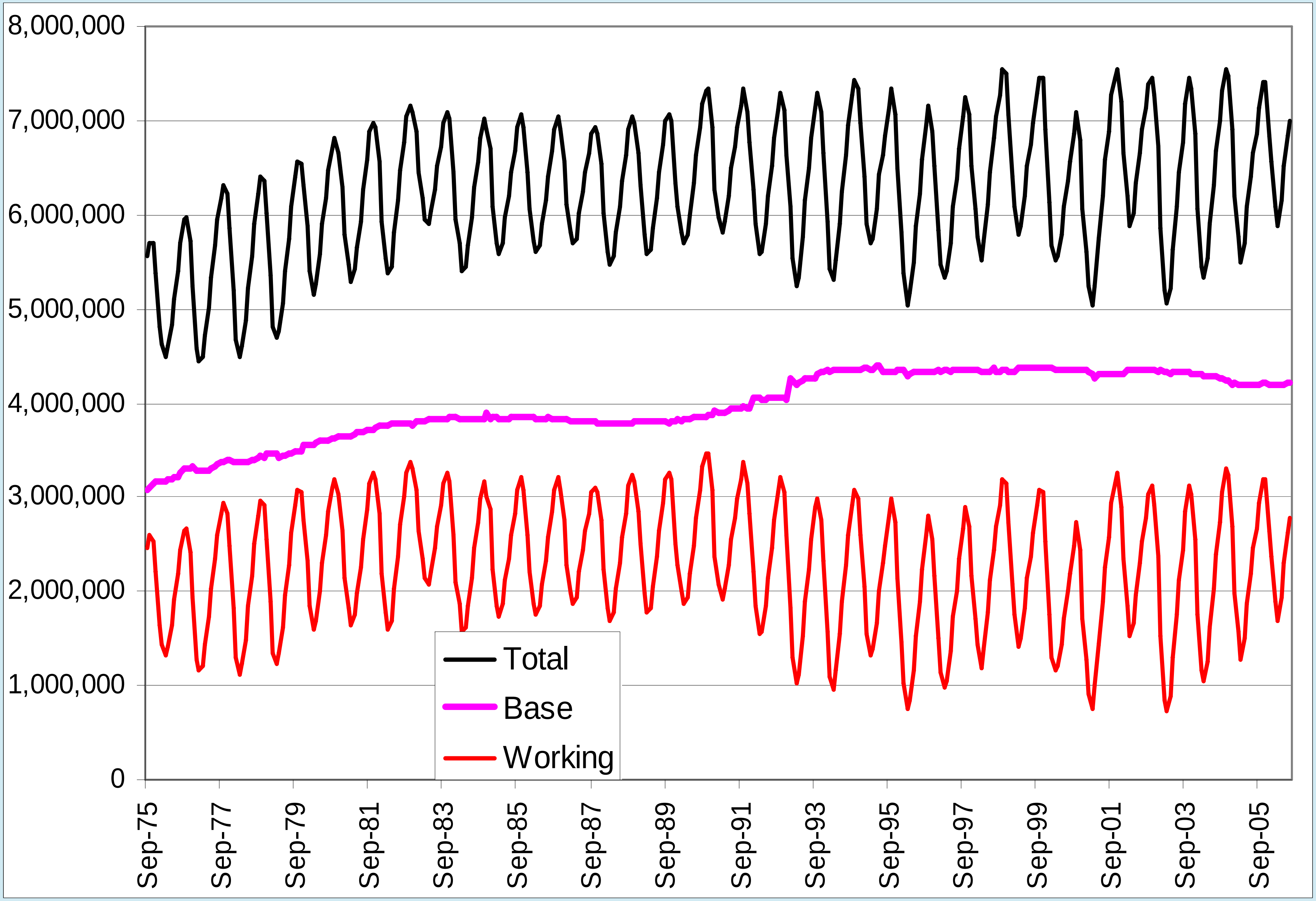

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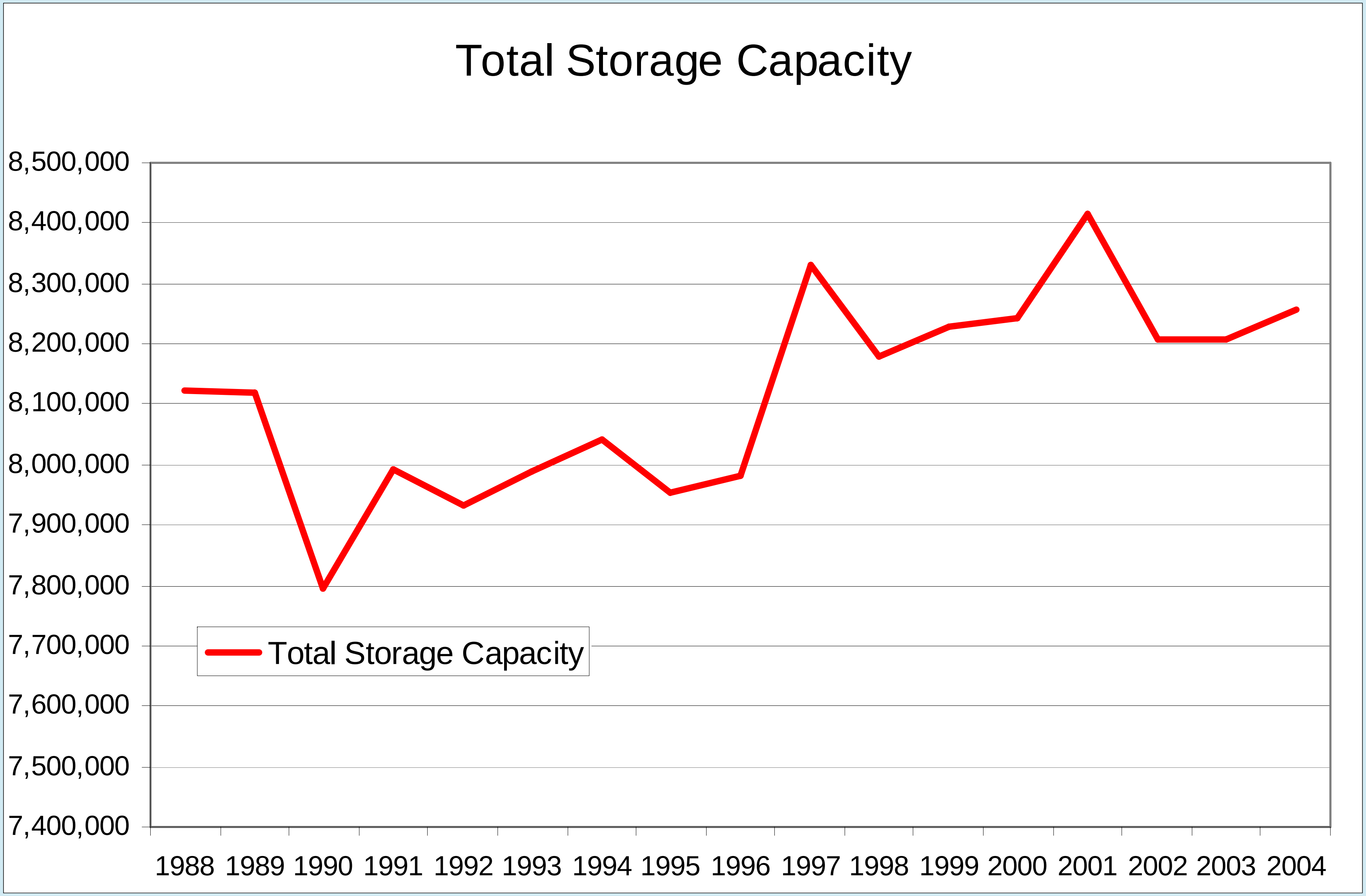

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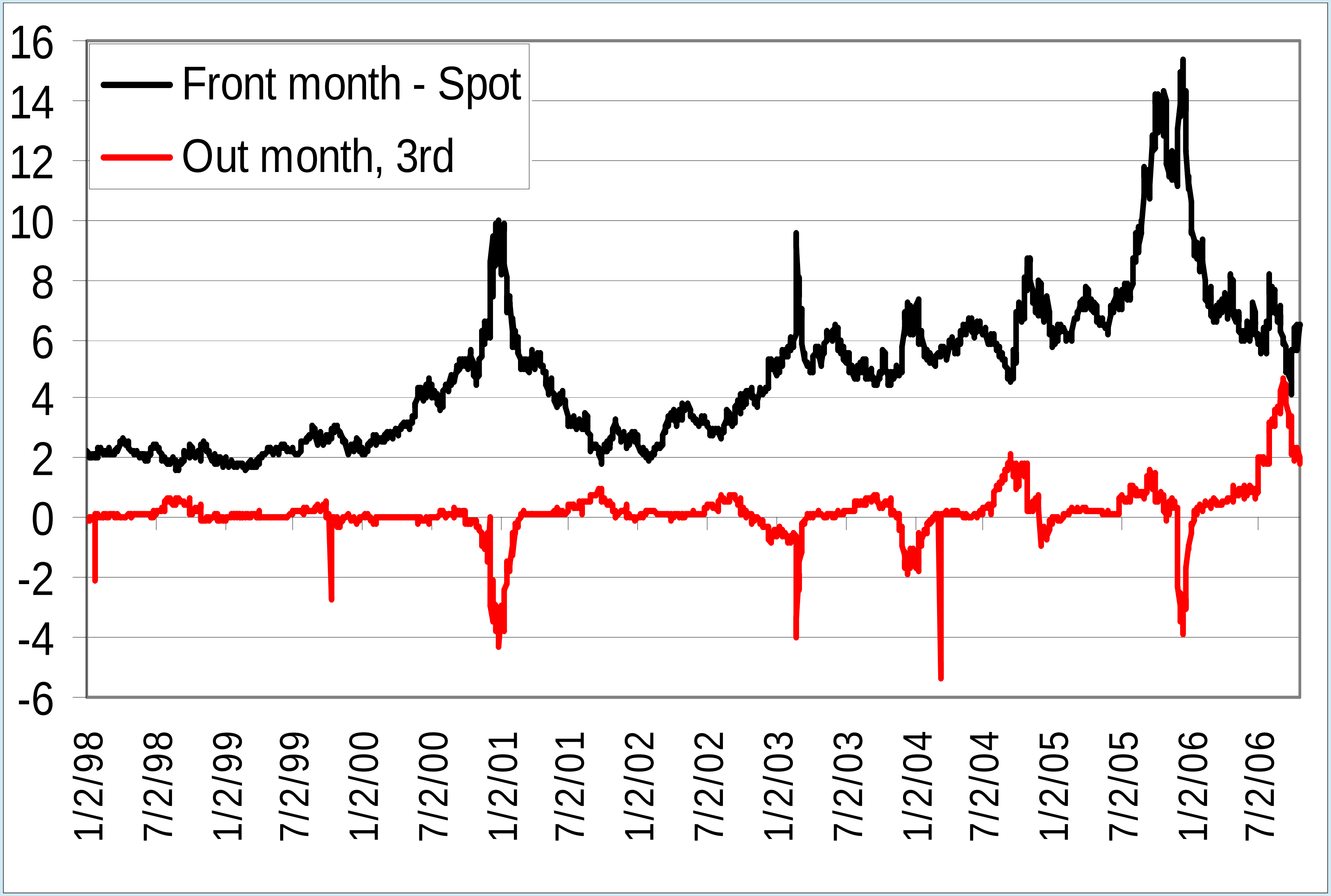

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Policy Responses

Prudential measures to promote hedging and reduce instability

1. Registration and reporting requirements
2. More liquid markets
   - – make dealers act as dealers by requiring them to maintain bid/ask quotes throughout trading day
   - – establish adequate capital and collateral rules to stabilize credit standards for trading in derivatives market
3. “Swap Facility” – publicly managed inventory facility that will offer ‘swap’ or actually repurchase agreements in physical energy products that will augment private storages when price