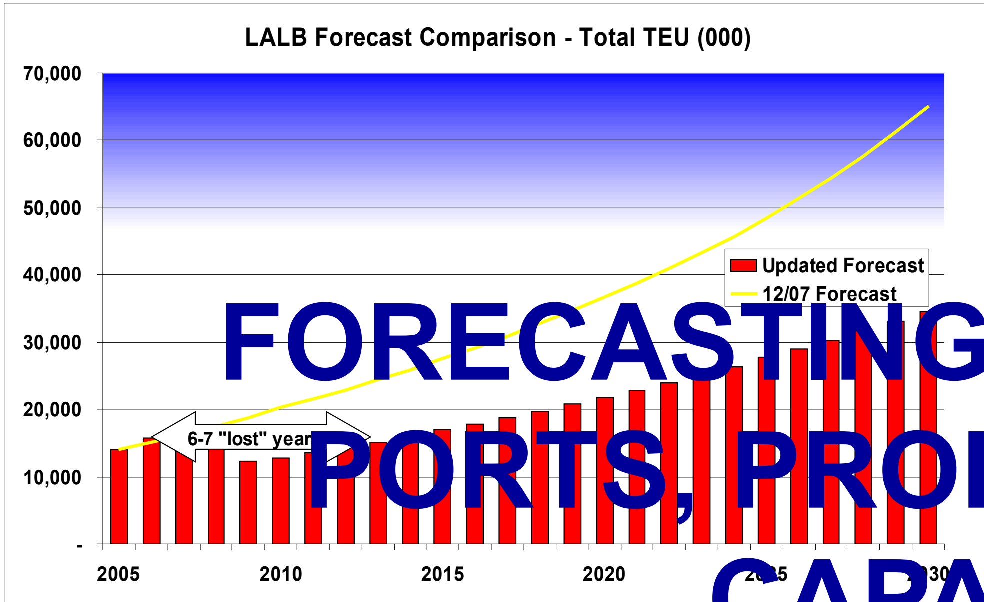


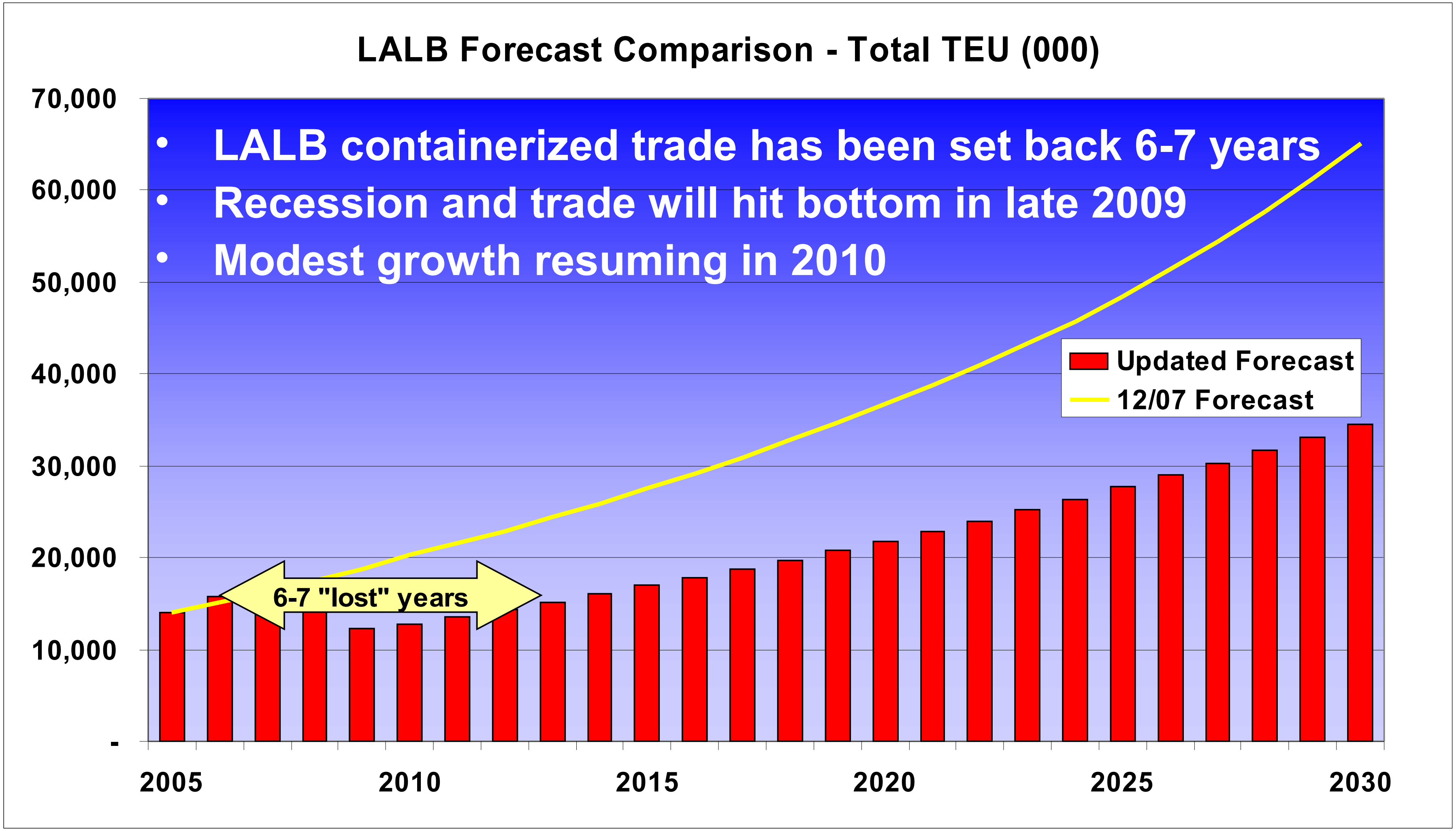
FORECASTING THE FUTURE: PORTS, PRODUCTIVITY, & CAPACITY

Dan Smith, Principal, The Tioga Group

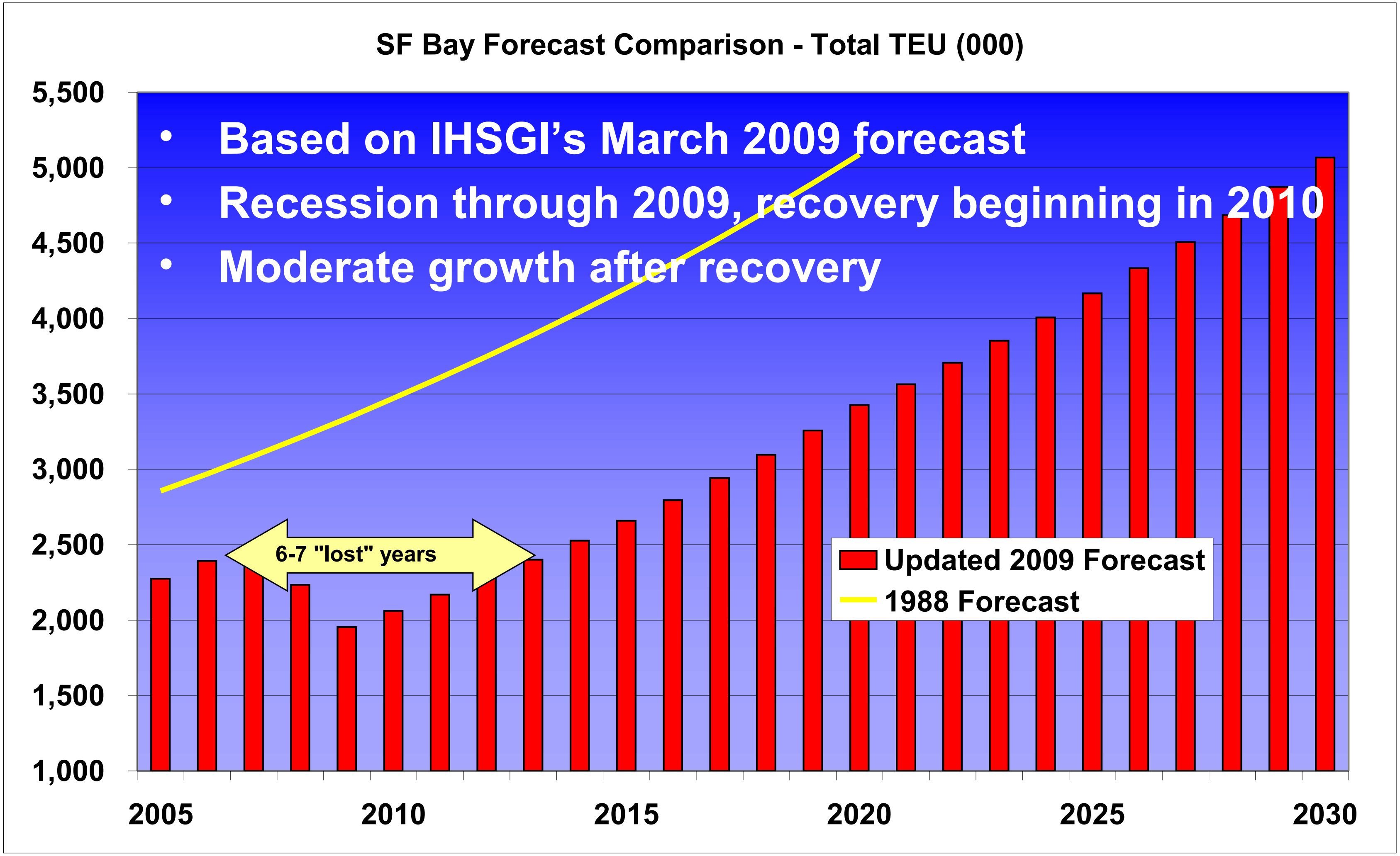
Presentation to the Association of Pacific Ports November 2009

Tioga

Updated LALB Forecast: Welcome to 2003!



Updated SF Bay Forecast: Welcome to 2003!



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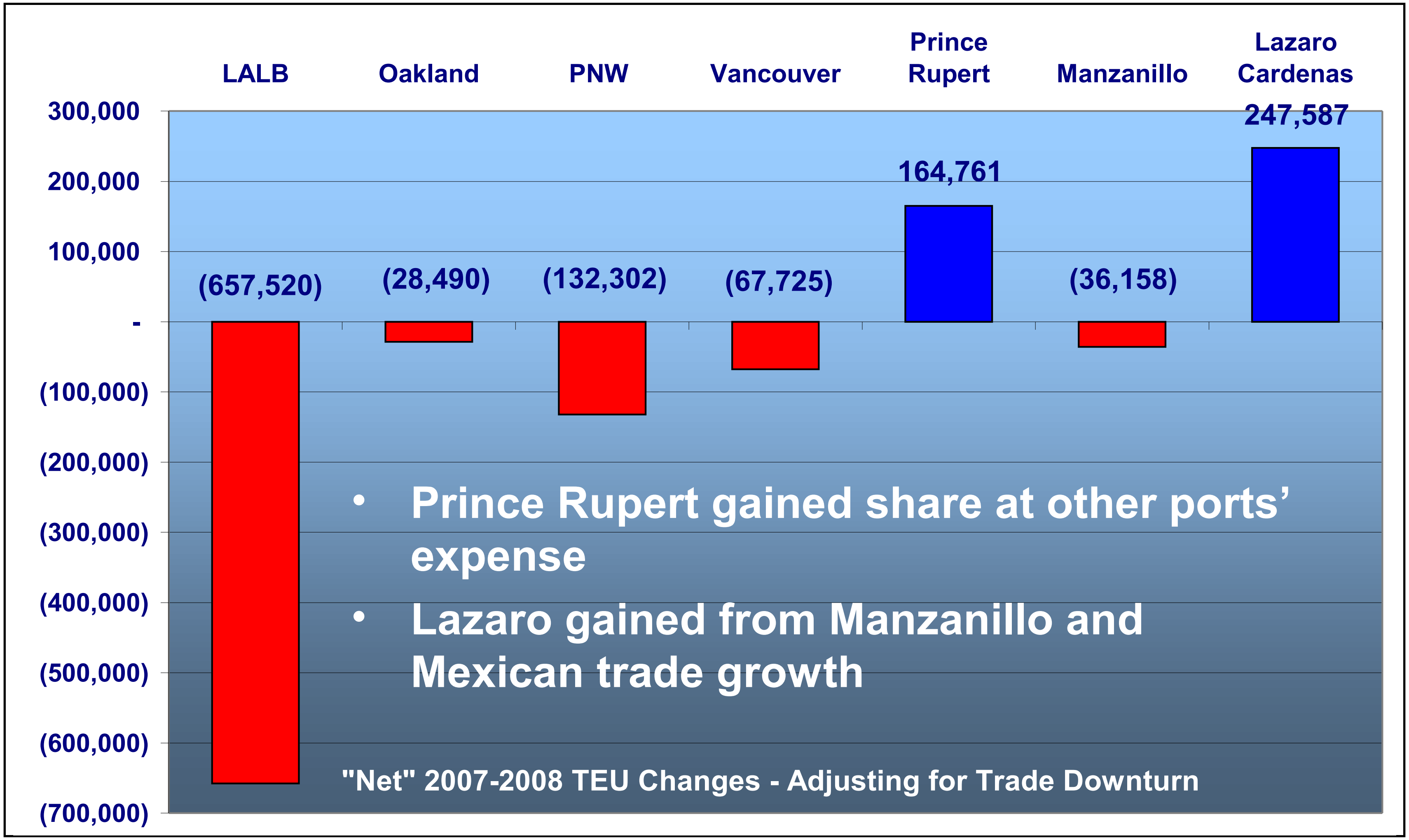
What happened in 2008?



- Prince Rupert gained share at other ports' expense
- Lazaro gained from Manzanillo and Mexican trade growth

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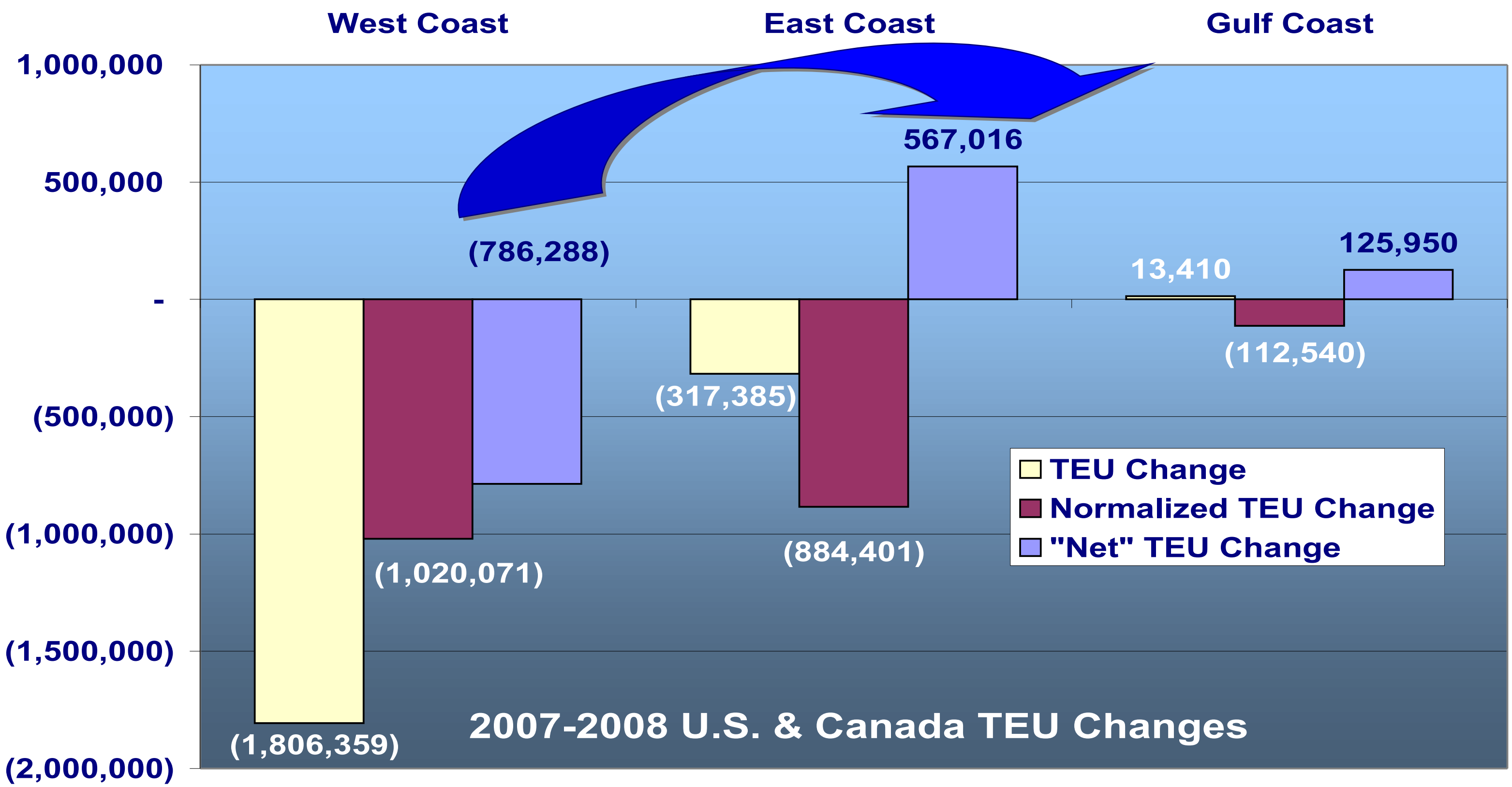
Where did it go? East, as expected.

After normalizing for the overall trade slump, the West Coast lost about 786,000 TEU **(3%)** to the East and Gulf in 2008



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Have we lost our competitive edge?

- Containers flat in 2007, down in 2008, worse in 2009
- Importers complaining about Southern California
- Trade shifting to the East and Gulf Coasts
- Rail intermodal volume down
- Some “experts” spreading doom and gloom

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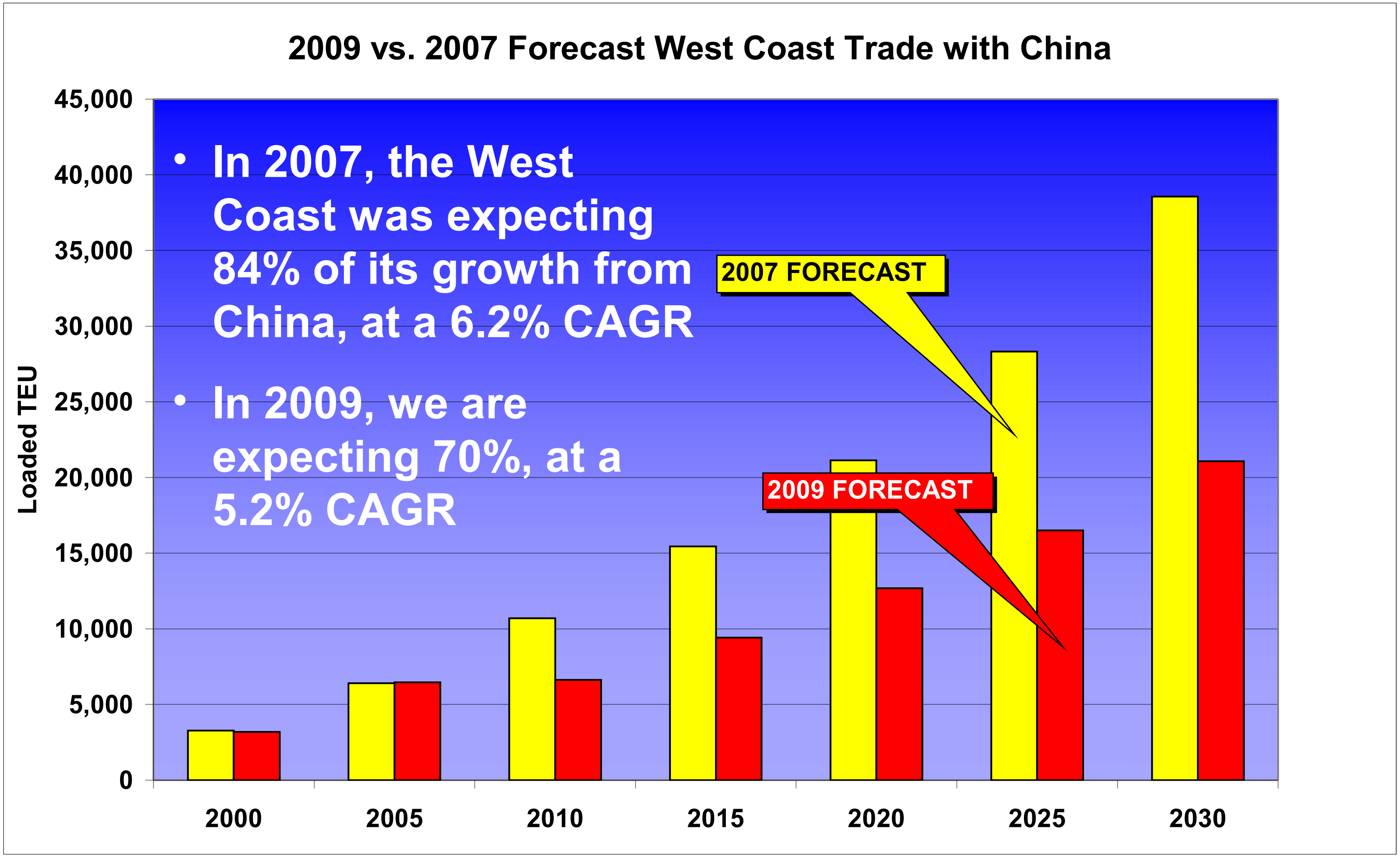
Much less trade with China



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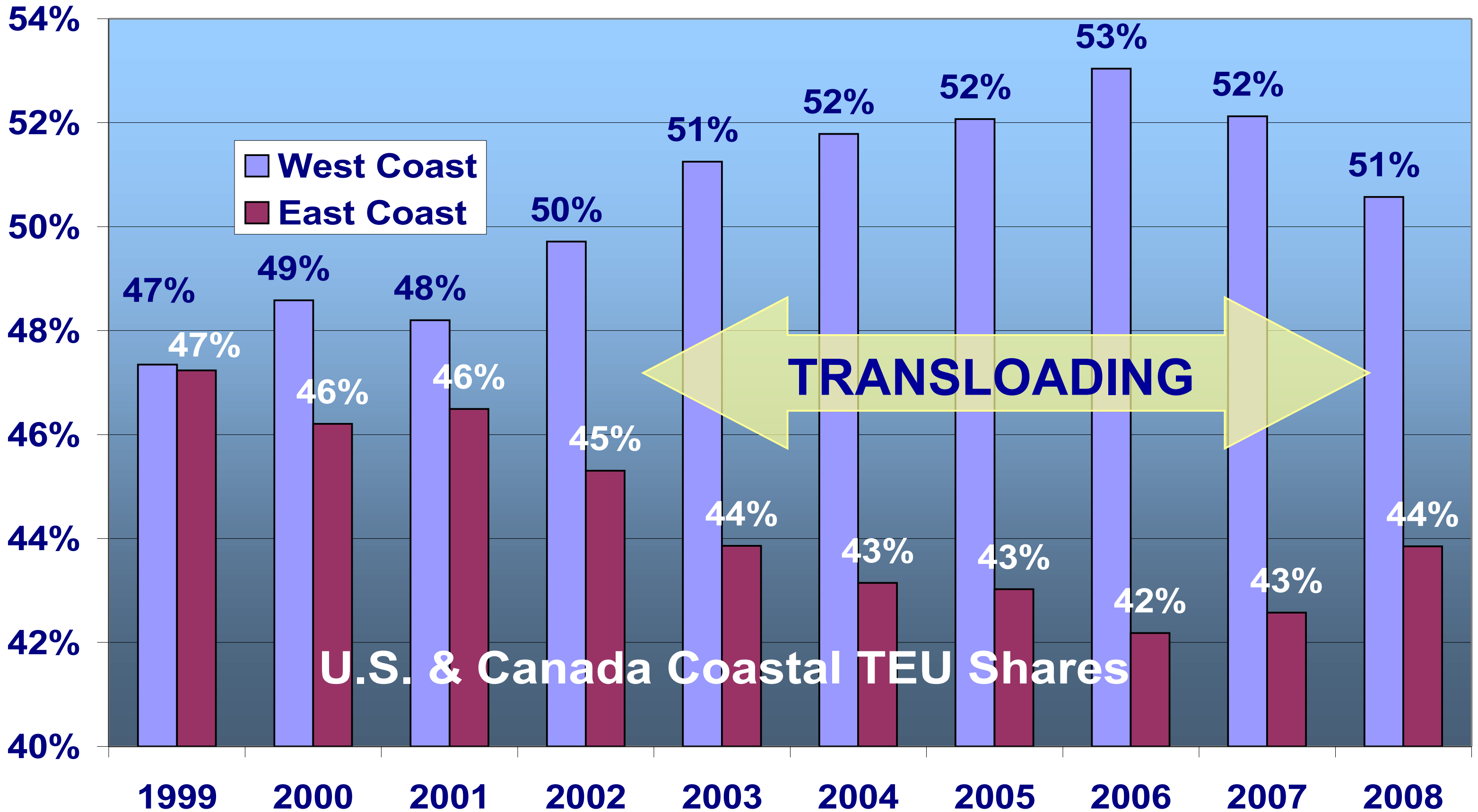
Coastal shares – the Pendulum Swing

The share swing back to the East Coast corresponds to the rise and fall of Southern California transloading



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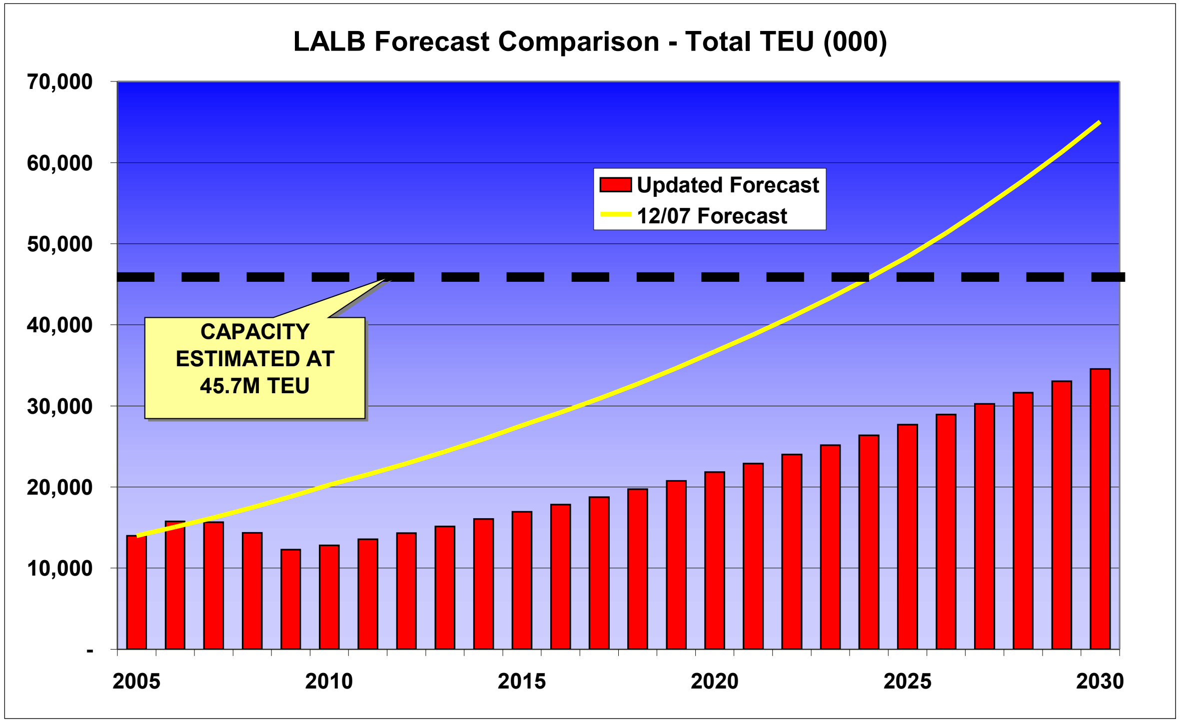
Should we panic? No.

- California ports remain the **first choice** for importers
- East and Gulf Coast port developments will expand capacity, but not alter competitive positions
- All-water options have always been available for specific market segments, but are price sensitive
- Long-term port and inland capacity issues are serious **– on <u>both</u> coasts.**
- Most East Coast ports cannot handle large ships
- East Coast DCs **supplement** West Coast DCs
- Neither BNSF nor UP will give up the Midwest market

2003 Volumes with 2009+ Capacity

- No congestion anywhere – peak or no peak
- No diversion due to capacity issues
- No need for new ports



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Tough Choices for Ports

Competition will be intense

- Carriers are hurting, and will be looking to cut costs and rationalize wherever they can.
- Liner industry consolidation could reduce the number of port clients and strengthen the bargaining leverage of the remainder.

If we invest for the long term, how do we survive the near term?

- If we hunker down now, where will we be when the trade recovers?
- Revenue is down and will not recover quickly

Capacity projects are hard to justify

- Even if you build it, they won't come for a while yet.
- But if we don't invest now, will the window close?

Who is the customer? What does he want?

Better, faster cheaper…

- Ocean carriers want faster vessel turn times, low stevedoring and port costs, high reliability
- BCOs want fast overall transit time, low overall costs, and high reliability
- Regional planners and regulators want low emissions, minimal truck congestion, and low carbon.

That means….

- Crane and labor efficiency – moves per crane hour, moves per man-hour
- Low container dwell times
- Zero berth congestion – versus higher utilization?
- Doing it all "greener"

Productivity = Efficiency x Utilization

- With abundant short-term capacity, ports and terminals will be competing on **cost and productivity**.
- Container terminals will be under-utilized for several years, especially the newest and largest ones.
- Fewer vessel strings will mean lower berth utilization.
- Innovations and technology to increase throughput capacity may be hard to justify for the near future.
- **Innovations that reduce costs, reduce vessel turn time, improve utilization, and extend the life of current infrastructure will pay off.**

Success will be a Balancing Act

The winners will be the ports and terminals that emerge from the recession with…

- Enough capacity to handle near-term growth
- Competitive productivity
- Improvement and expansion plans in place
- Financial strength to resume capital programs
- Clear inland corridors
- Green credentials to operate and expand