

# InterPro Advisory LLC Presents:

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## The New Chassis World...



*...Operational and Commercial Changes, and the Impact to Your Supply Chain Cost*

*June 27, 2014*

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Principal

InterPro Advisory LLC

# Topics

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- Brief Historical overview of U.S. Marine chassis market
- Ocean carriers' exit from the chassis market & rise of lessors as majority chassis suppliers
- Chassis Models Current and Emerging, Explained
- A Comparison of Chassis Models
  - Logistics
  - Price/Cost
- Shipper Chassis Strategy Considerations
- Q & A

# InterPro Advisory LLC

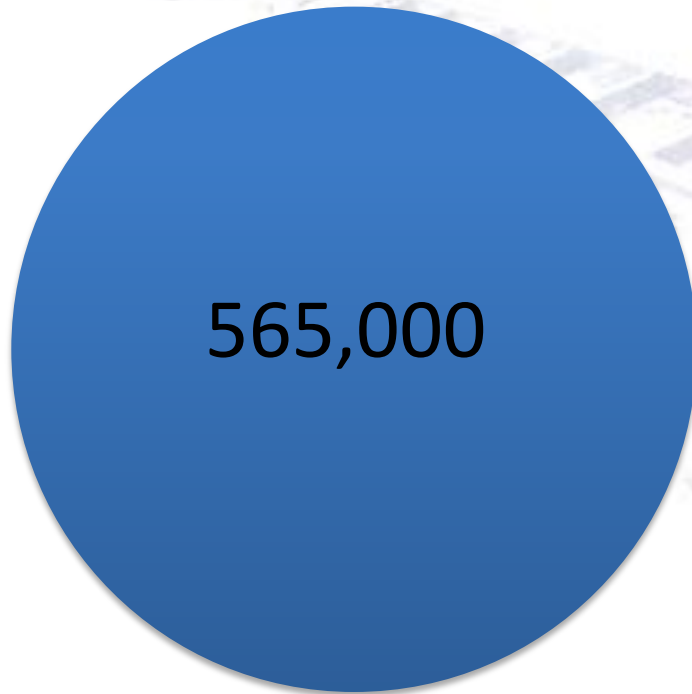
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- Boutique Intermodal Advisory Services Firm Founded in 2011
- Specializing in Intermodal Strategy and Contract Procurement & Negotiations
- Clients Include Port Authorities, Terminal Operators, Ocean Carriers, Motor Carriers, Logistics Companies, Equipment Leasing Companies, and Chassis Pool Operators
- Co-Authored 2012 Transportation Research Board Publication “Assessing Evolving International Container Chassis Supply Models” (Note: Referenced Herein as “TRB Study”)

# North American Chassis Market

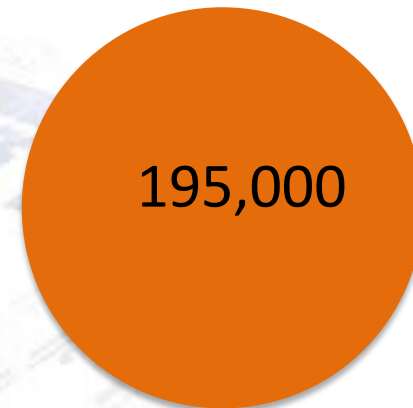
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**Marine**  
**20-, 40-, 45-foot**



Maersk, APL, Mediterranean Shipping, NYK Line, etc

**Domestic (Rail only)**  
**53-Foot**



JB Hunt, Pacer, Hub, Etc.

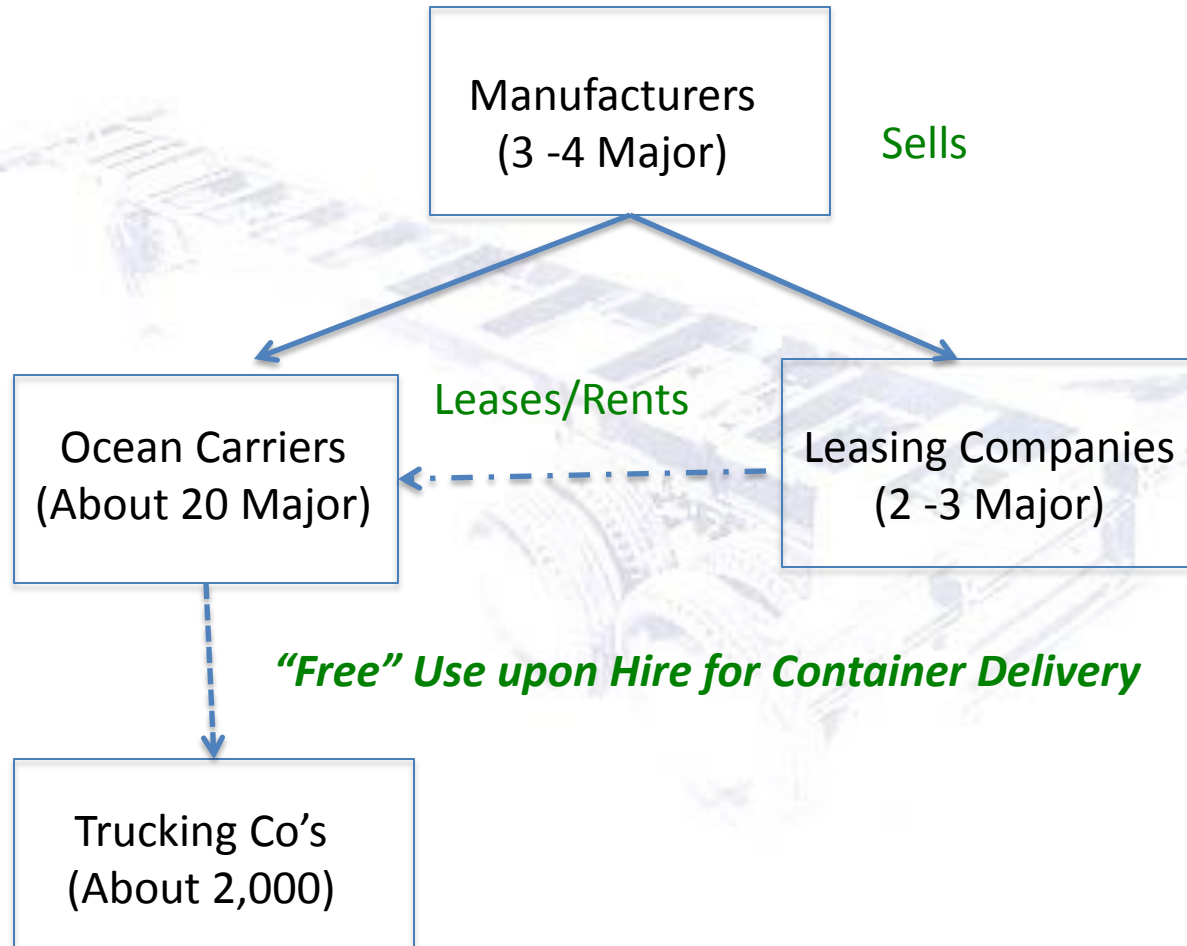
# U.S. Marine Chassis Fleet, By the Numbers

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- Approximate Book Value: \$1.5 Billion
- Approximate Market Value: \$2.0 Billion
- Approximate Replacement Value: \$5 Billion
- Approximate Cost of Support Services  
(Maintenance, Storage, etc): > \$1 Billion

# “Traditional” U.S. Chassis Business Model

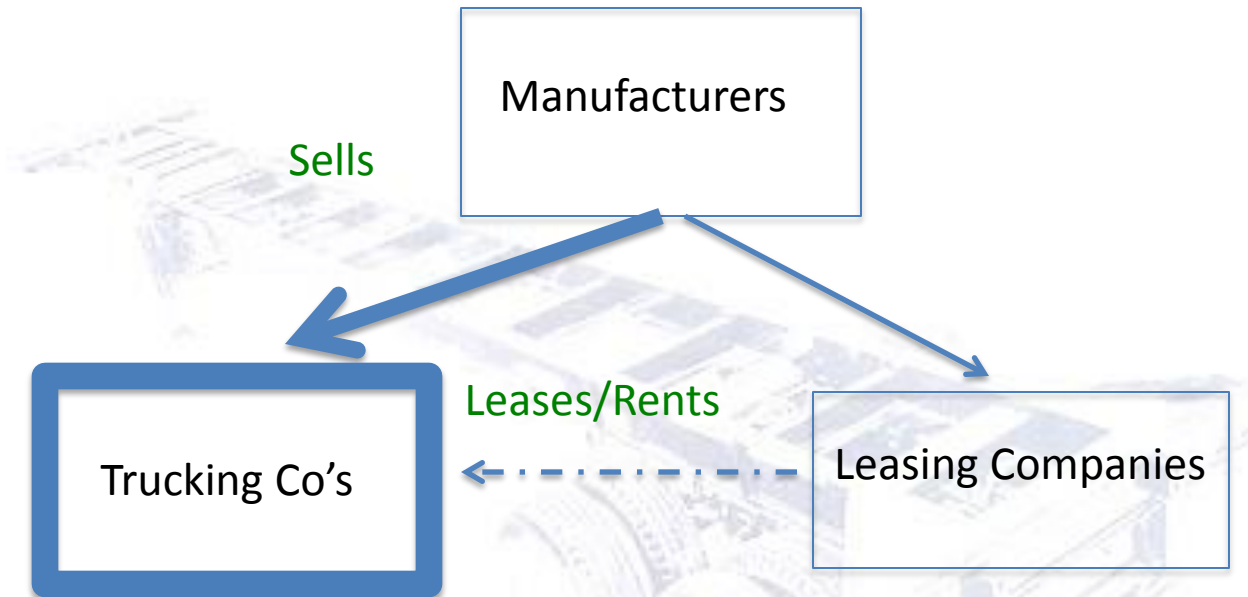
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# *“The Rest of the World”*

## Chassis Business Model

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# Not All Chassis are Created Equally

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## U.S. Standard Design

## vs. Europe/Asia/Canada Standard



- Lightweight (6,600 lbs)
- Import-focused
- Federal Road Weight limits: 80,000 lbs
- Low-velocity (high free-time)
- Box-size specific (20'/40'/45')
- Low cost/Basic Quality
  - Bias tires
  - no auto-inflation
  - no ABS systems

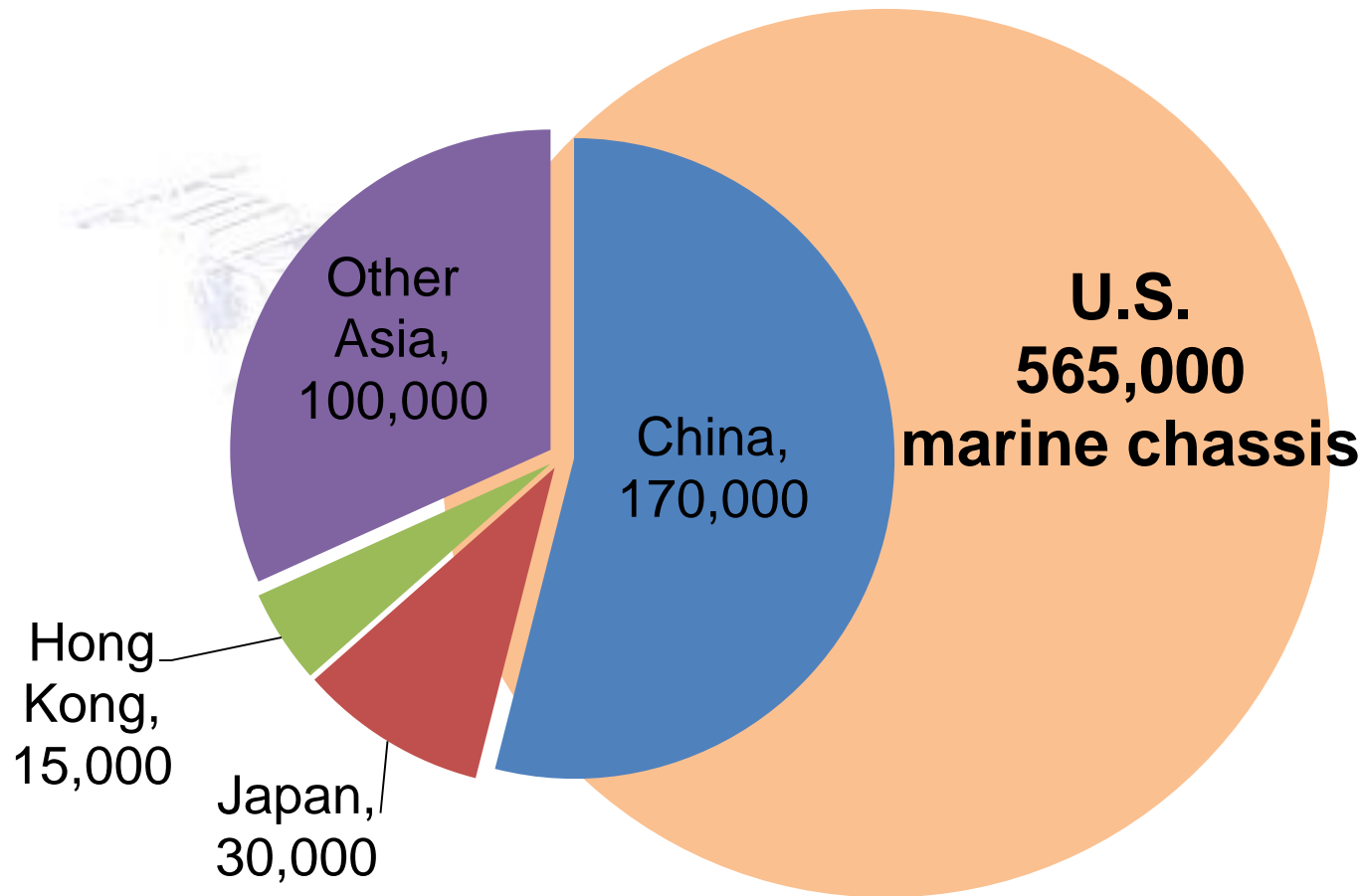


- Heavier (8,250 – 10,000 lbs)
- Export/ multi-trade-focused
- Road weights up to 100,000 lbs
- High-velocity (multiple turns/week)
- Multi-size capable
- Higher cost/High Quality
  - Radial tires
  - ABS systems



# Chassis Count -- U.S. vs. Asia: More is NOT Better

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# Why is the U.S. So Inefficient with Chassis?

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- LD TEU to Chassis Ratio (approximate) \*
  - Asia : 300:1
  - U.S. : 52: 1
- Main Differences:

Factor	U.S.	Europe/Asia
Ownership	Steamships/Lease Co	Motor Carriers
Motor Carriers	Asset Light	Asset Heavy
Terminals	Rails – Wheeled Marine Terminal – Mixed	Grounded
Delivery Logistics (Majority)	Drop n Pick	Live Load/Unload

\* source: JOC 2011 full year stats; Sea-Axis global trade share

# Marine Chassis Ownership Change - U.S.

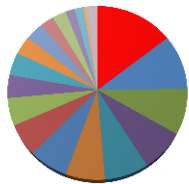
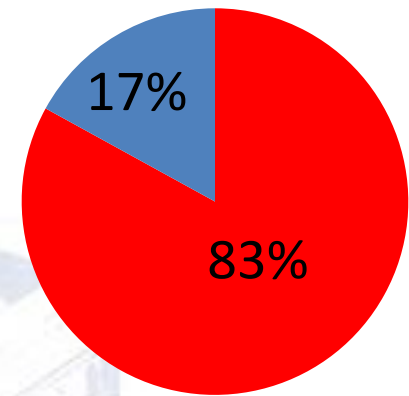
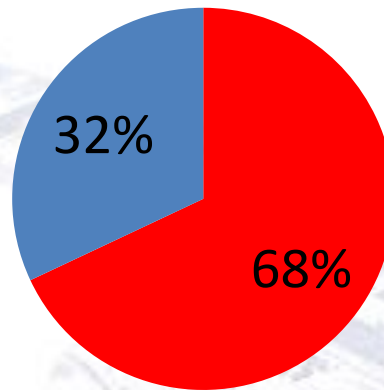
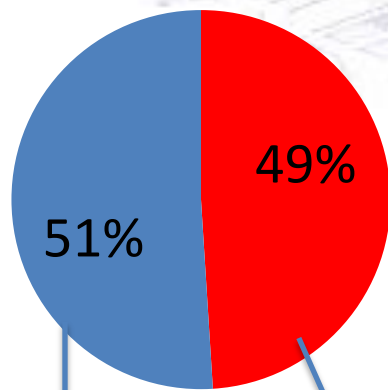
 Ocean Carriers

 Leasing Companies

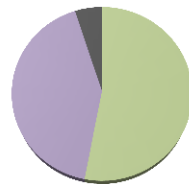
**2009**

**2012**

**2013 (Approx)**

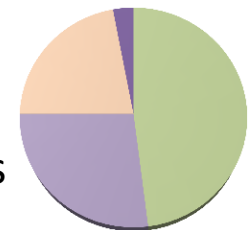


Ocean Carriers



Leasing Companies

Leasing Companies



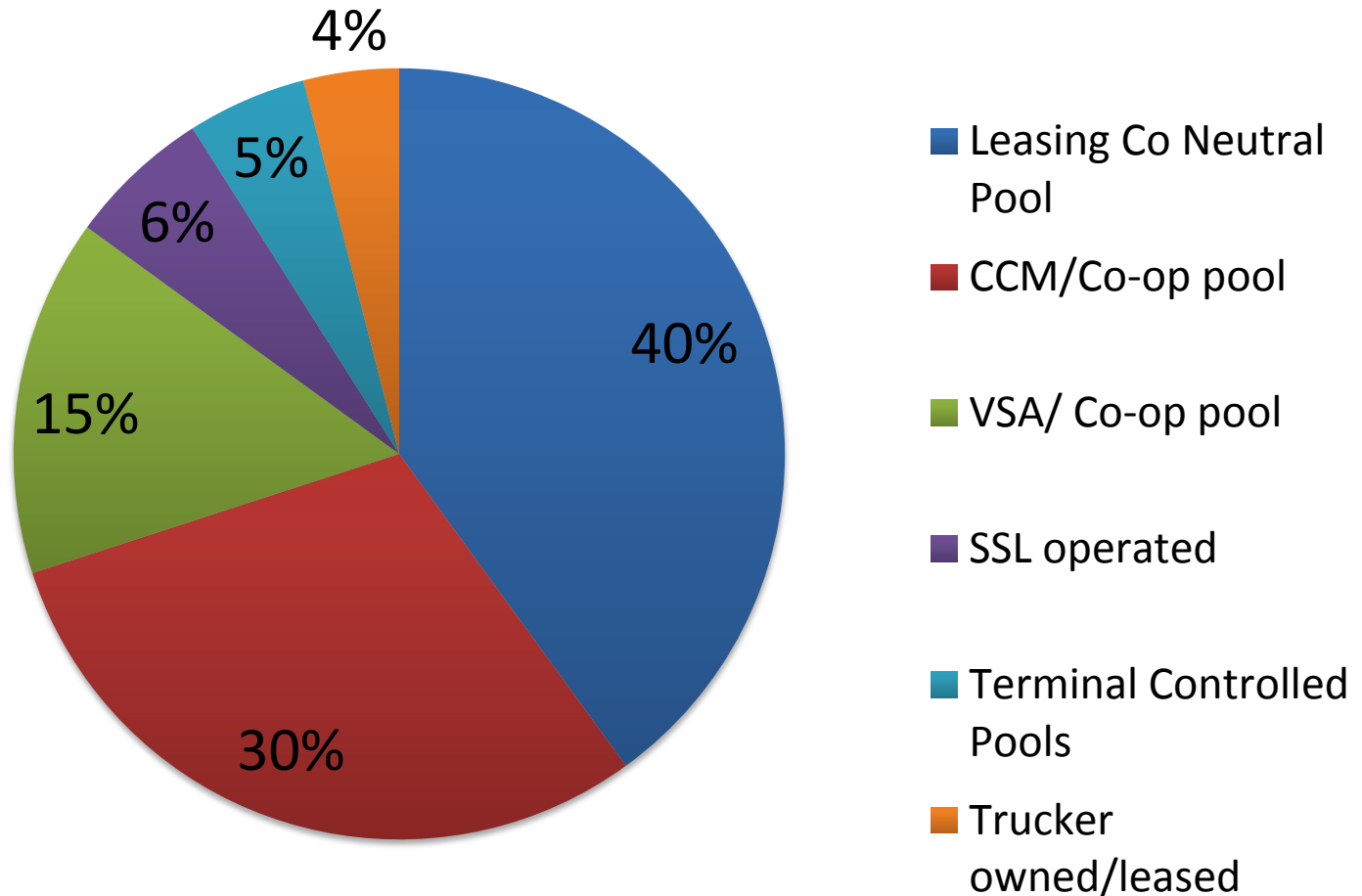
# U.S. Chassis Models – Brief Description

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- “Traditional” Ocean Carrier Controlled
  - Quickly Dying
- Co-operative Chassis Pool
  - Ocean Carrier-Owned: CCM, VSA (e.g. G-6 in west coast)
  - Terminal Owned (Hampton Roads)
- Leasing Company Pool
  - Predominant in NY/NJ
- Trucker Controlled

# U.S. Chassis Model Market Share, est.

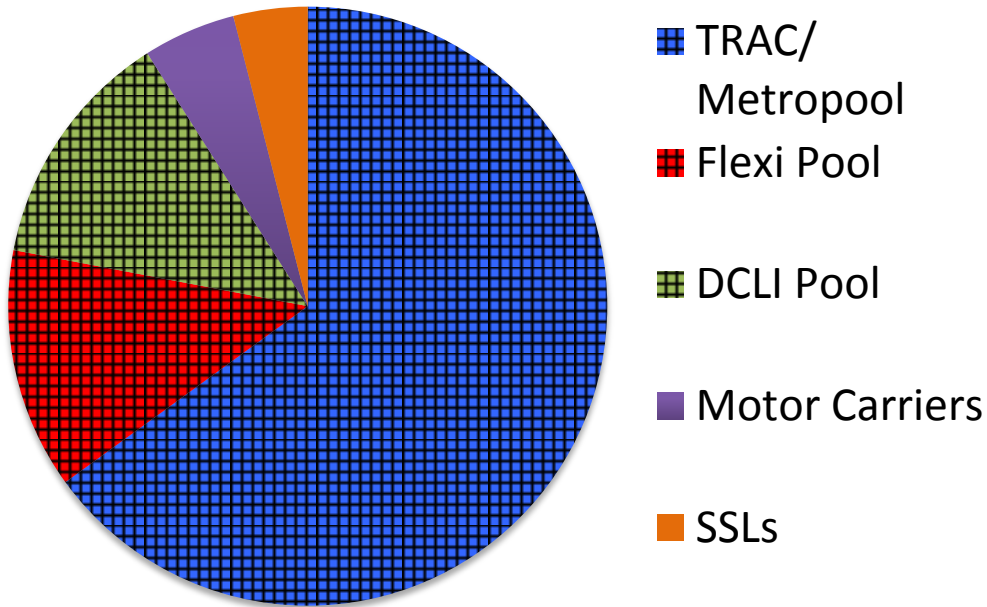
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# Regional Chassis Models: Northeast

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Market Share



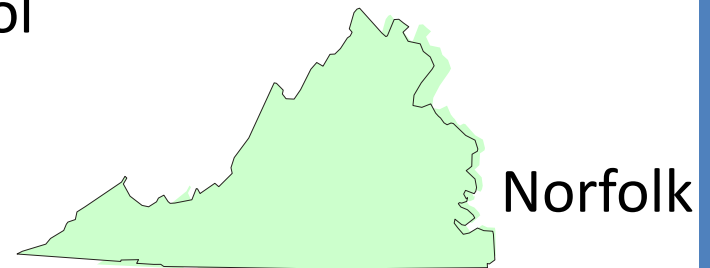
Approximately 50,000 Chassis

***Shaded Areas Represent Leasing Companies' Pools***

# Regional Chassis Models: *Norfolk*

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- Terminal-Owned Co-op Chassis Pool (Port of VA)
- SSLs Contribute (Minority); Port Leases Majority
- Motor Carriers Rent Directly from Pool
- Approximately 13,000 Chassis



# Regional Chassis Models: *South Atlantic*

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- Single Regional Co-Op Chassis Pool (Owned by CCM)
- TRAC, Flexi, DCLI are Contributors as well as Several SSLs
- Approximately 51,000 Chassis

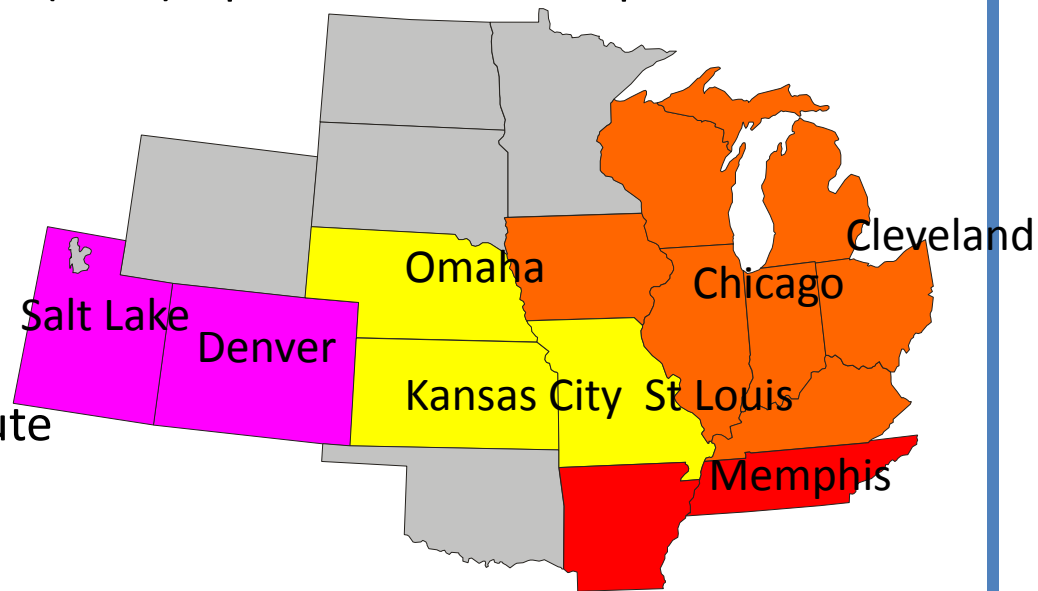




# Regional Chassis Models: *Mid West*

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- Consolidated Chassis Management (CCM) Operates Four Co-Op Chassis Pools:
  - Chicago & Ohio Valley
  - Memphis/Nashville
  - St.Louis/Kansas City/Omaha
  - Denver/Salt Lake
  - Serves ALL RR Ramps
- TRAC, Flexi, DCLI, NACPC Contribute As well as Several SSLs
- TRAC, DCLI and Flexi Also Operate Proprietary Pools in Some Areas – Serves only SOME RR Ramps
- Wheeled Terminals Pose Challenges for Trucker Chassis



# Regional Chassis Models: *West Coast*

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- **LA/LGB**

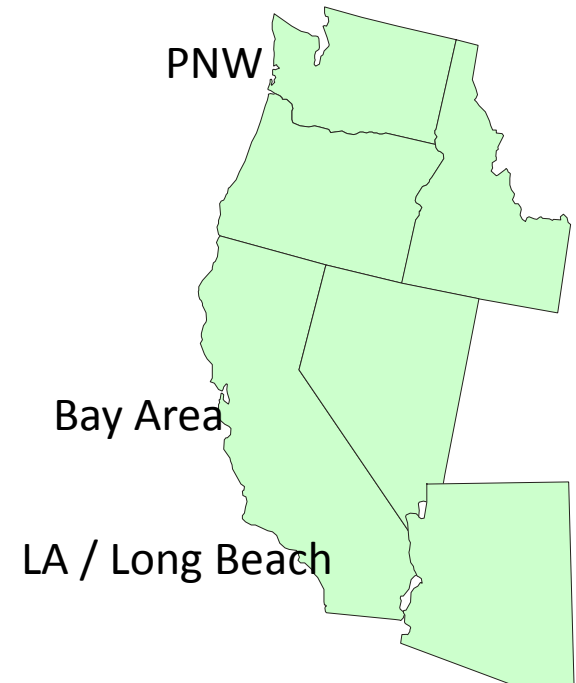
- Ports' Chassis Operations Group Report Due Soon
- G-6 "Pooling" Has Begun (DCLI manages)
- 4 Separate Pools
- About 100,000 Chassis
- New Development:
  - DCLI/Flexi-Van Attempting to Start New Arrangement

- **Bay Area**

- FlexiVan Pool (BACP) Dominates
- Approximately 28,000 Chassis

- **PNW**

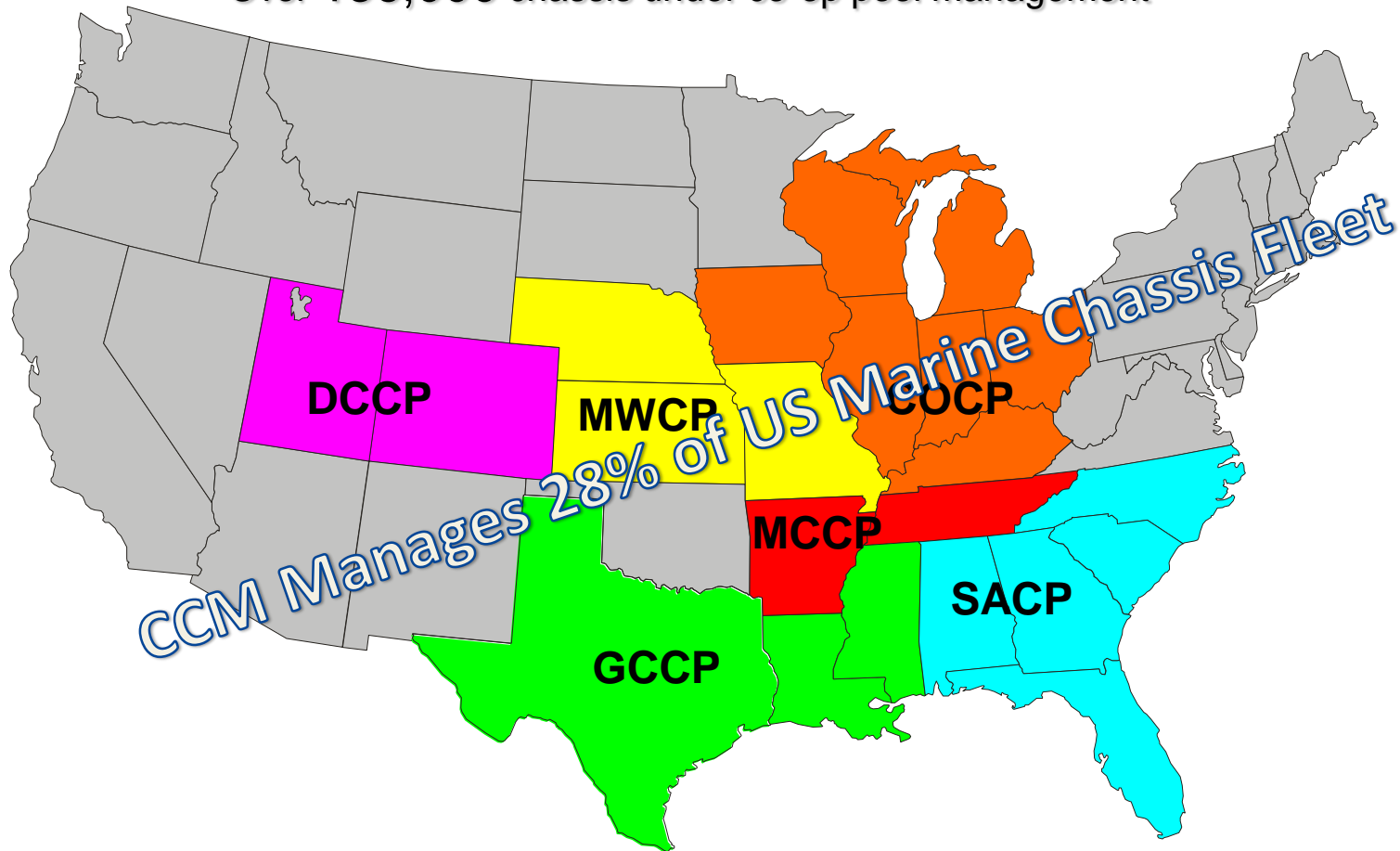
- G-6 Pool Started (TRAC managed)
- At least 3 other fleets (some SSL)
- Approximately 25,000 Chassis



# The CCM Program Today

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- Six regional co-op pools operating at over 240 intermodal locations
- Over 136,000 chassis under co-op pool management



# Role of Consolidated Chassis Management & CCM Pools

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- **CCM is a Chassis Management Company; it does not own chassis**
- Wholly Owned by Ocean Carriers; managed by separate management company with full-time chassis pool professionals
- “Cooperative” - chassis owners contribute chassis into a “pool” which may be used by any member (aka “Gray”). SSLs, Leasing Co’s, Motor Carriers, Shippers (BCOs or NVOs)
- Operating costs are allocated to members; “non profit”
- The role of CCM is to improve chassis utilization and terminal efficiency,
- Goal: open system; low barriers to entry

# What is the “New” Chassis Operating Model?

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- Ocean Carriers’ No Longer Providing Chassis “For Free” – Sometimes
  - Carrier vs. Merchant Haulage
  - Exception by Contract
- Shippers / Motor Carriers Responsible for Procuring Chassis
- Most Ocean Carriers Have Now Sold Their Chassis; No Further Chassis Investment by them
- Ocean Carriers Continue to “Own” Chassis Pools in CCM System to Facilitate Smooth Transition and Promote Transition

# Why Are Ocean Carrier's Changing the Chassis Operating Model?

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- Not Core Competency
  - Capital Constraints
  - Expense
    - Operating
    - Administrative
  - Liability and Insurance
  - Asset Never Really Under Carrier Physical Control
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# Can You Spot the Difference the New Chassis Paradigm Makes??

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*Before*



*After*



# The New Chassis Leasing Business Model: Wholesale Becomes Retail

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Feature	“Old Model”/ Wholesale Approach	“Emerging Model”/ Retail Approach
Buyers	20 Ocean Carriers	2,000 Trucking companies
Business Scope	National	Local or Regional
Quantity of Transaction	Thousands	Dozens
Type of Transaction	Long-term Lease	Daily Rental
Credit Quality	Relatively Higher	Relatively Lower
Lease Co Admin Infrastructure	Light	Heavy
Utilization Risk	Limited (Cyclical)	Exposed (Structural – only earn Rev when used)



# Chassis Market Transition Points & Impacts

## *Nation-wide*

Point	Impact
What are the key challenges?	<ul style="list-style-type: none"><li>• Trucker and Shippers Still Not Fully Engaged</li><li>• Invoice Confusion</li><li>• Ocean Carriers Will Remain Vested in Chassis</li></ul>
Commercial Rules and billing arrangements currently used by Ocean Carriers and Leasing Companies Are Confusing	<ul style="list-style-type: none"><li>• High Rate of Invoice Inaccuracy</li><li>• Increased Costs of Administration</li><li>• Trucker Frustration</li><li>• To some extent caused by business arrangements with shippers and leasing co's</li></ul>
Data Quality Becomes a Necessity, not a Luxury	Movement Data is a Revenue Event, not only an Inventory Event
How Much Longer?	Likely "Transitional State" to last 2 or 3 More Years

# Other Considerations

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- Average Age = 15 yrs; Useful life about 20 yrs
- No New Marine Chassis Built in 5+ Years
  - Who Will (Re-)invest in Chassis? What Type?
  - Who's Upgrading Chassis?
  - What Are the Cost Implications?
  - Declining Supply and Increasing Volumes
- What Will Happen to the Chassis Models in the Short Term? In the Long Term?
- Will the Chassis Changes Impact the Supply Chain?

# Chassis Provision Options

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- 1. Shipper or Its Contracted Motor Carrier Lease or purchase chassis and operate privately**
  - M&R, roadability regulations, labor
  - Need Storage facility
  - FEW load-back synergies
  - Wheeled terminals can be problematic
  - Right-sizing the fleet for size; volume peaks & valleys
  - Example: Lowe's/ Flexi-van;
  - ***Complex; some risk; requires investment ;***

# Chassis Provision Options

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## 2. Shipper or Its Contracted Motor Carrier “Day lease” from chassis rental company

- Daily rental rates include M&R
- Limited scope of pickup & returns
- Example: Flexi-Day, TRAC Titan, DCLI, “ChassisFinder.com”

***Low risk; no investment; high price***

# Chassis Provision Options

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- 3. **Shipper or Its Contracted Motor Carrier Contract with one of CCM's customers**
  - Example: MC Contracts w/ DCLI in CCM Pool
    - Pay “All-inclusive” rate
  - Shipper/Motor Carrier is NOT a Pool Member
  - *CCM Has Market Competition System for Shipper/MC to Select Leasing Company on a shipment-by-shipment basis*

***No investment; Minimal risk***

# Chassis Provision Options

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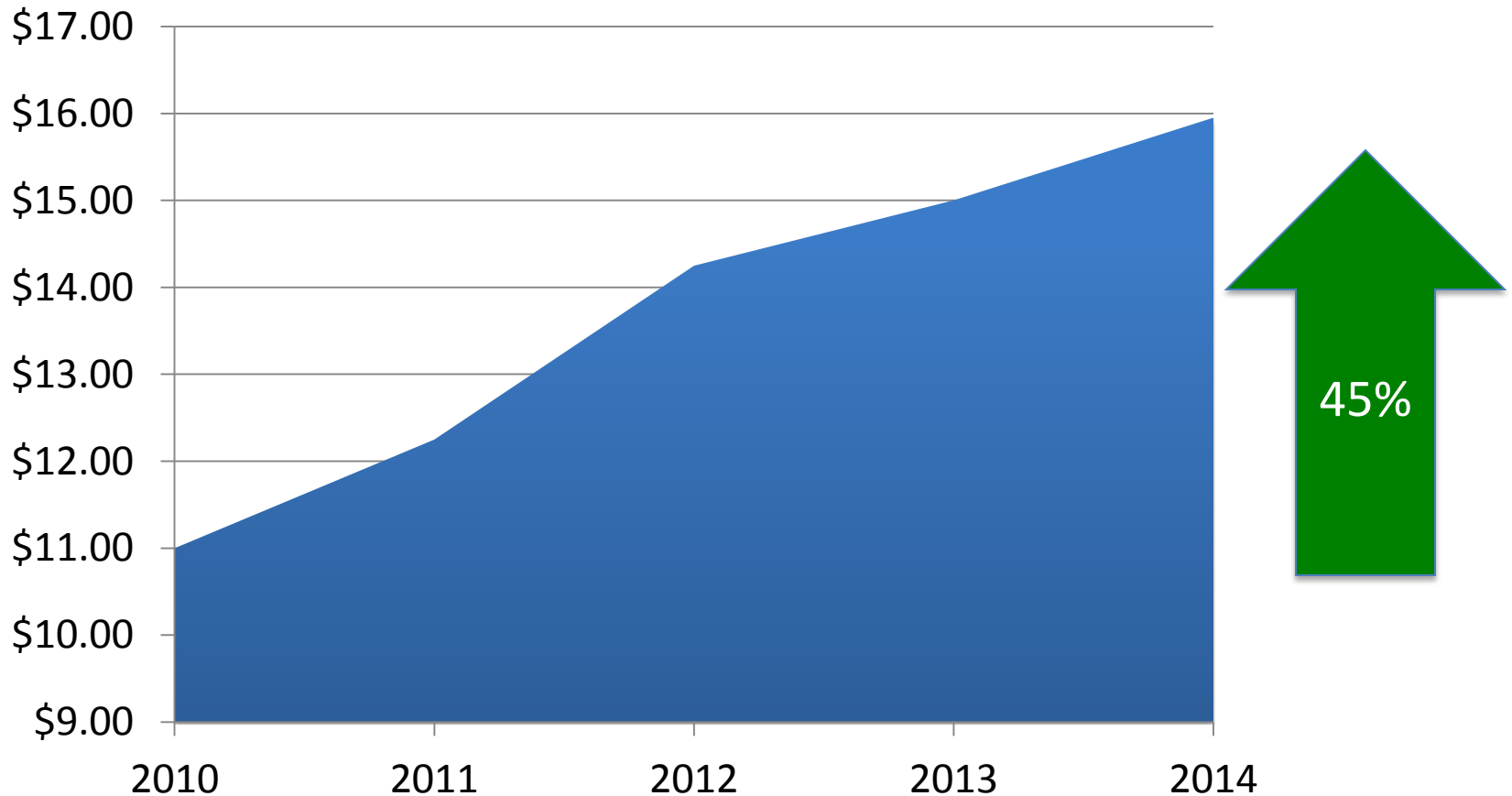
4. **Become a CCM Pool Member: Shipper or Its Contracted Motor Carrier Lease or purchase chassis and contribute chassis into a chassis pool**
  - Gain synergies with other members
  - Extensive scope of coverage
  - No responsibility for M&R operations or FMCSA regulatory requirements
  - Subject to Other Pool Members' Contribution/Utilization
  - Example: Contribute to CCM S. Atlantic Pool

***Requires investment or lease***

# Chassis Daily Rental Prices

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## Historical Trend, S. Atlantic



# Illustrative “Ball Park” Cost Analysis of Chassis Options

Structure		Own Operate	Long-Term Lease Operate	Own/LT Lease Pool	Day Rent Pool	Day Rent Operate
Daily Cost	Asset Cost	\$2.35	\$3.50	\$3.50	\$15.95	\$15.75
	M&R	\$1.75	\$2.75	\$4.00	\$0.35	\$1.00
	storage / gate			\$0.13		
	admin	\$1.00	\$1.00	\$0.35		\$0.25
	repositioning			\$0.47		\$50.00
	insurance	\$0.05	\$0.05	\$0.02		
<b>cost subtotal</b>		<b>\$5.15</b>	<b>\$7.30</b>	<b>\$8.47</b>	<b>\$16.30</b>	<b>\$67.00</b>

Chassis Days/Shipment	<i>Chassis Cost Per Shipment</i>				
3	\$22.09	\$31.31	\$31.76	\$48.90	\$101.00
7	\$51.55	\$73.05	\$74.11	\$114.10	\$169.00
10	\$73.64	\$104.35	\$105.88	\$163.00	\$220.00
14	\$103.10	\$146.10	\$148.23	\$228.20	\$288.00

## Assumptions

### Utilization

operate: 70%

pool: 80%

**Chassis Price** \$10,000, w/ radial, ABS, LED



# Chassis Provision Options

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## **Next steps:**

Analyze your operations

- Number of moves / chassis
- Measurement of use (in days)
  - include dwell or idle times

Review options that “fit”

- Establish value of chassis provision

**THANK YOU!!**

**QUESTIONS?**