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Alacero 58

Latin American Steel Conference

Cancun, Mexico

Steel's Technological

Leap-Frog FROG:

Jump On or Croak

November 7, 2017

Peter F. Marcus

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Jump on!



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STEEL'S in TIME WARP!

Persistence of old equipment



First Continuous Hot Strip Mill



Part I

THE HOT-ROLLED BAND EXPORT PRICE ROLLERCOASTER

**Subtitle: Forewarned is
Forearmed**

Part II

STEEL's

CHALLENGING NEW

“INDUSTRIAL STRUCTURE”

**Subtitle: The “Age of
Management”**

Part III

**OPPORTUNITIES FOR LATIN
AMERICAN
STEEL**

**Subtitle: Time to re-take the
baton from the Chinese?**

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PART I: HRB PRICE ROLLERCOASTER



HRB Export Price Rollercoaster

Next six weeks:

**HRB down \$35/tonne
to \$525/tonne.**

HRB Export Price Rollercoaster

Early 2018:

Spike to \$700-750/tonne.

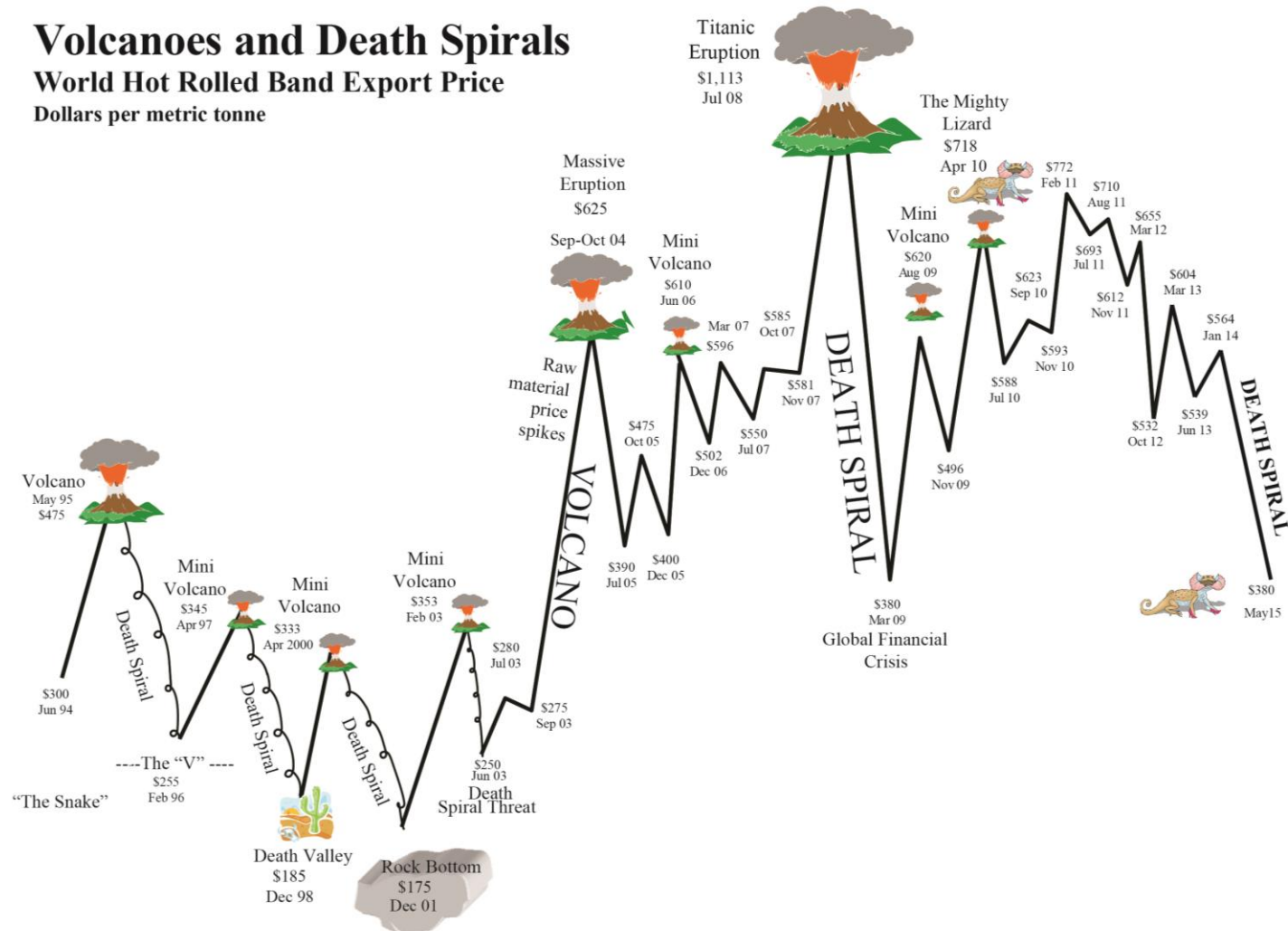
VOLCANO!

Volcanoes and Death Spirals

Volcanoes and Death Spirals

World Hot Rolled Band Export Price

Dollars per metric tonne



Note: SteelBenchmarker™ prices since 2007

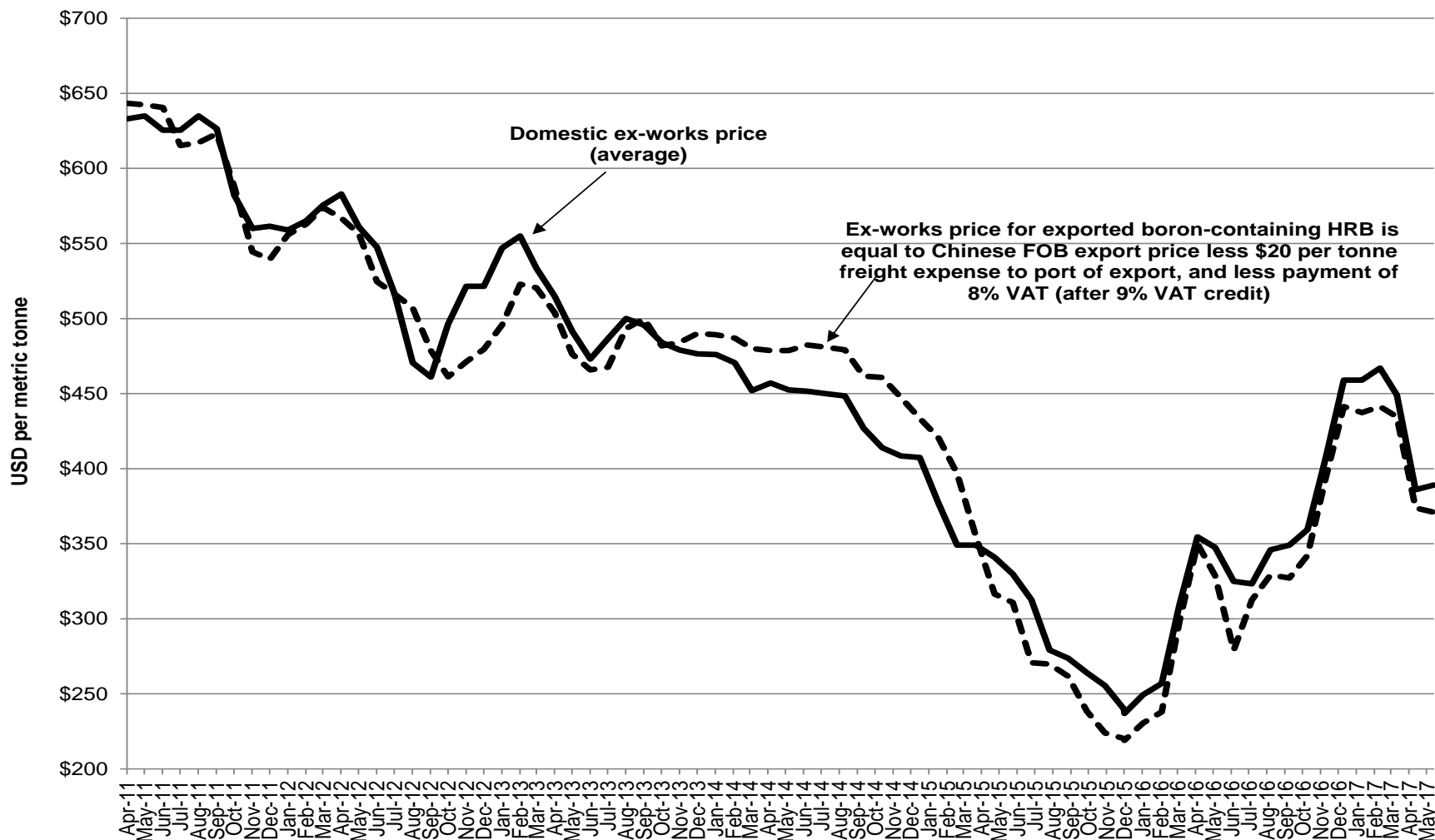
HRB Export Price Rollercoaster

Summer of 2018
The party's over!

HRB down to \$525/tonne.
“Death spiral” risk

CHINESE STEEL MILLS'
ACHILLE'S HEEL

Chinese Ex-Works HRB Export Price versus Domestic Ex-Works Price



Source: WSD's WCC for Flat Rolled Sheet and SteelBenchmarker

Challenging New Steel "Industrial Structure"

STEEL INDUSTRY "DRIVING FORCES"	Rating
Chinese policymakers driving the steel industry bus	8
Shifting global steel trade – Chinese exporting armada defeated	10
Major advances steel's technological revolution	4
Extreme price volatility	3
THE FUTURE: Liquid steel futures curves outside of China	9
No change in global steel production by 2025	1
Extreme M&A activity	9
Massive Chinese steel scrap recovery	4
Tightening of third-party steel slab market	7
Steel's new "Age of Protectionism"	9
Global steel production is crashing into the ECO-Capacity wall	9
AVERAGE	6.8

#1

**Chinese policymakers
driving
the industry bus.**

Rating = 8

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Chinese iron ladies no more?



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Asian Infrastructure Investment Bank Chinese Financial Colonial Empire



#2**Shifting steel trade flows****- - -****Chinese STEEL EXPORTING
ARMADA defeated****Rating = 10**

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Chinese steel encountering avalanche of trade suits



#3

**Major advances in
the steel and global
technological revolution**

Rating = 4

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Machines replace men

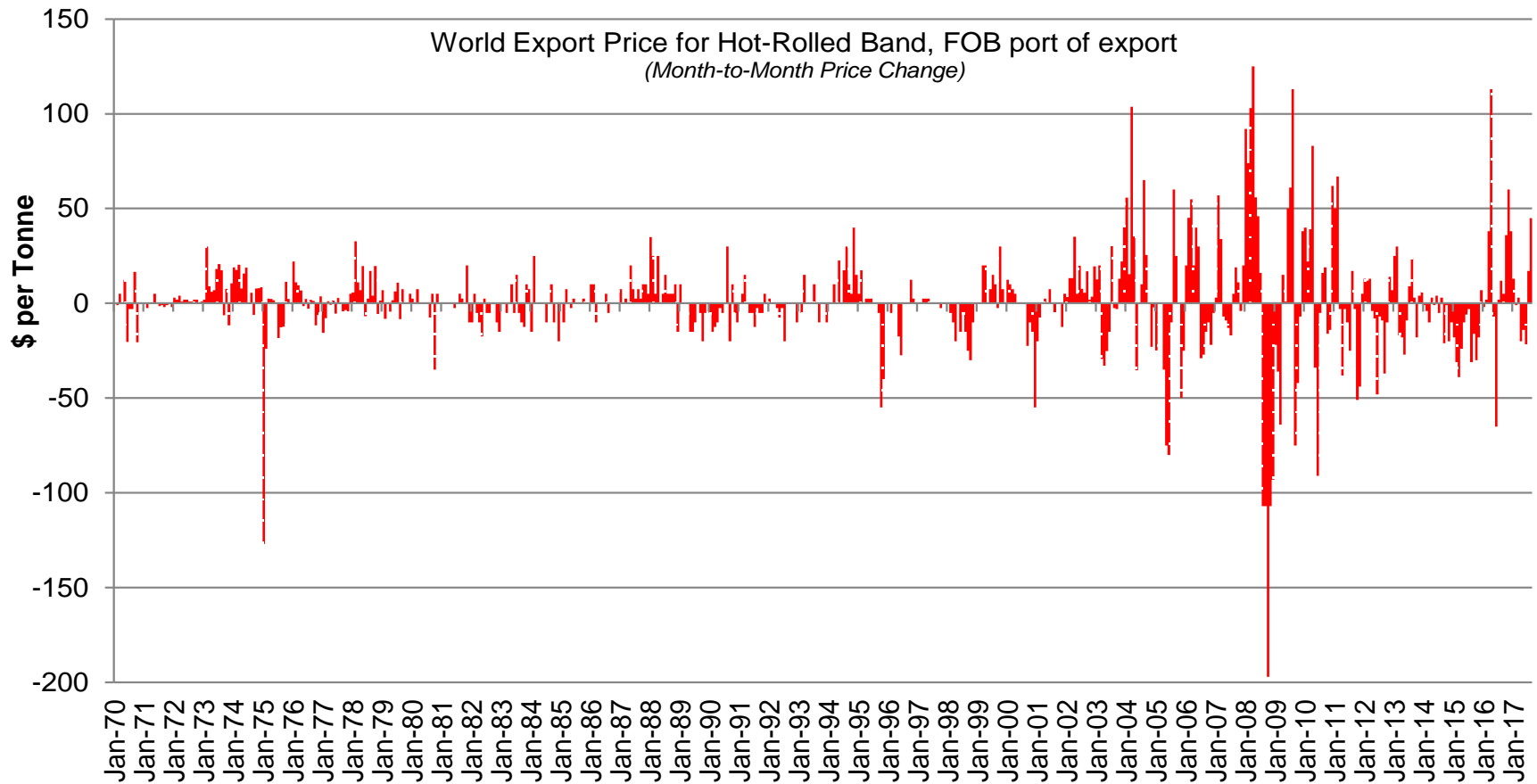


#4

**Extreme price volatility
for steel products
and steelmakers’
raw materials**

Rating = 3

Steel Buyer/Seller Cardiac Arrest



#5

**THE FUTURE =
Liquid steel futures curves
outside of China**

Rating = 9

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**No need for a fortune teller if
there's a futures curve**



#6

Huge Negative!
Global steel production
unchanged in 2025

Rating = 1

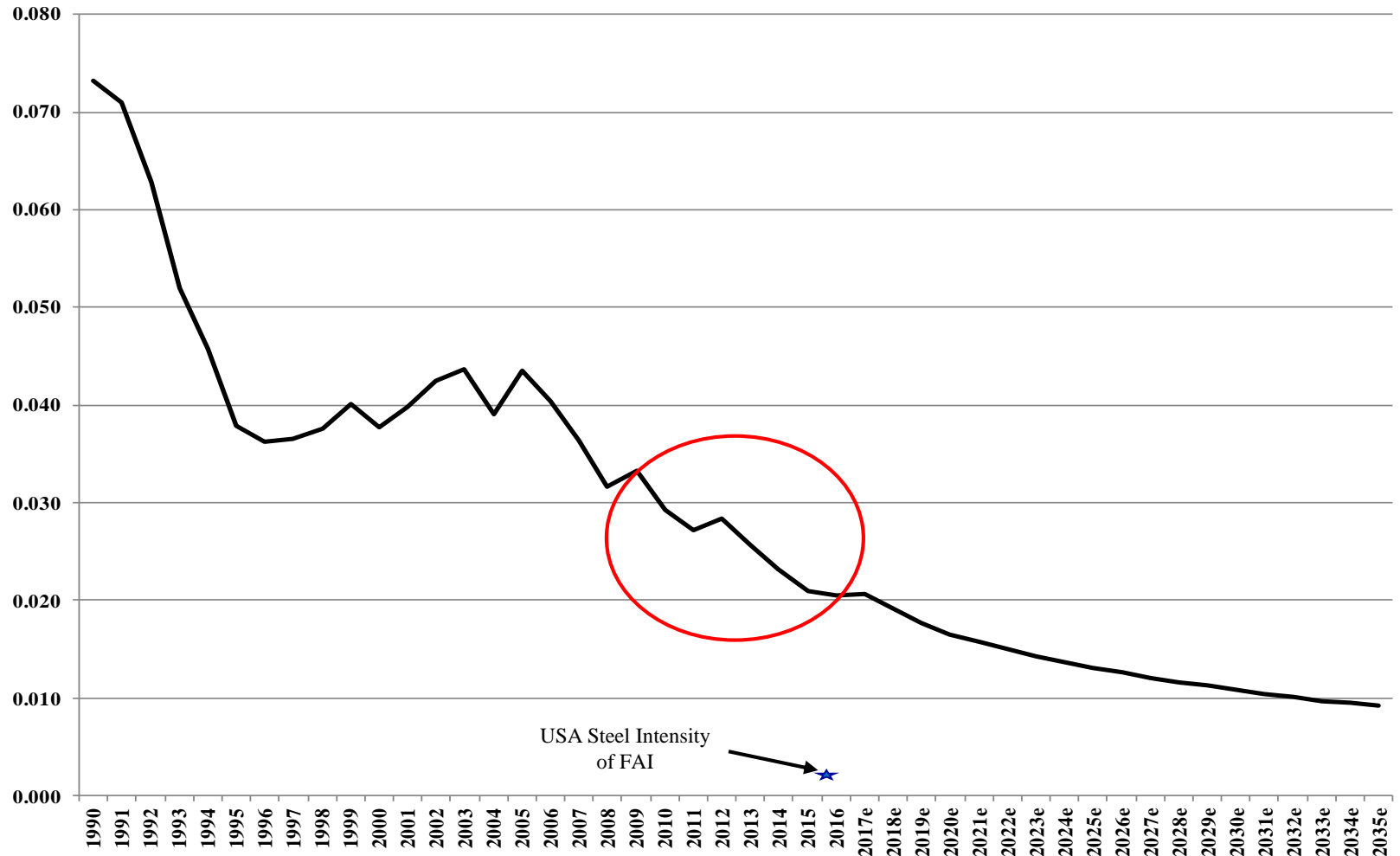
Global Steel Stagnation

MILLION TONNES

	2017	2025
China	839	709
Advanced Countries	457	476
Latin America	64	81
Rest of World	<u>329</u>	<u>413</u>
Total	1,689	1,679

China's FAI steel intensity is declining rapidly

Steel Consumption Intensity of FAI
million tonnes per billion RMB



#7**Extreme
M&A activity****Rating = 9**

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M&A Prowess



#8**Huge surge in China's
steel scrap recovery****Rating = 4**

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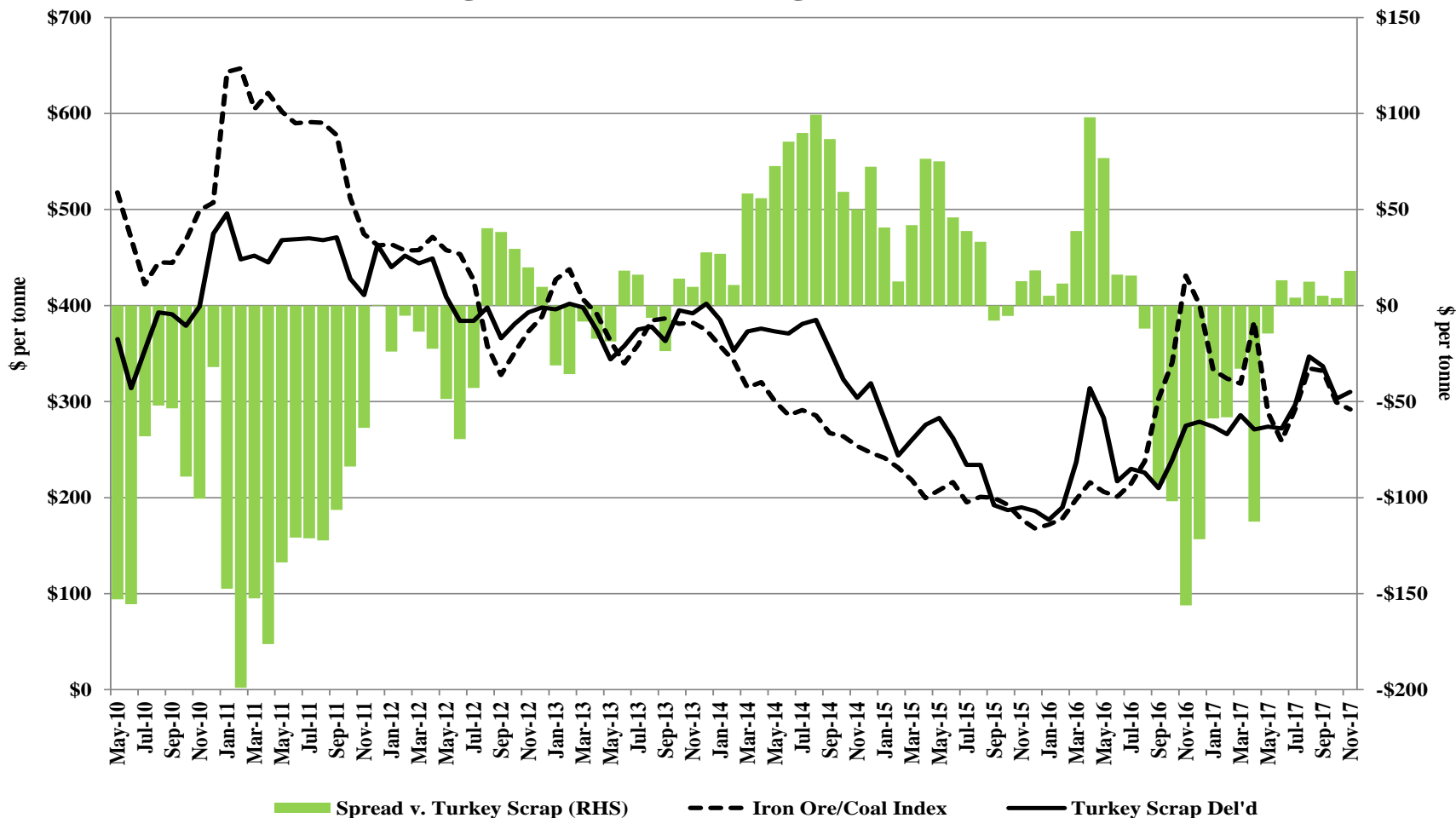
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CHINESE SCRAP GROWS ON TREES



Scrap battling iron ore and coking coal for a share of BOF metallics

**Turkey scrap HM 80/20 versus
Weighted Iron Ore/Coking Coal Price Index**



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Integrated mills 'scrap threat.
Must pay less for iron ore



#9**Tightening of third-party
steel slab market****Rating = 7**

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Steel slab demand heating up



#10**Steel's new
“Age of Protectionism”****Rating = 9**

Steel's new “Age of Protectionism”



Average Score = 6.8

**More than sufficient for
well-positioned and
well-managed companies
to be winners**

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SUBMARINE COMMANDER and WOLFPACK



With depth charges, guns and ammunition from British factories Allied submarines have wrought havoc among Axis shipping in the Mediterranean.

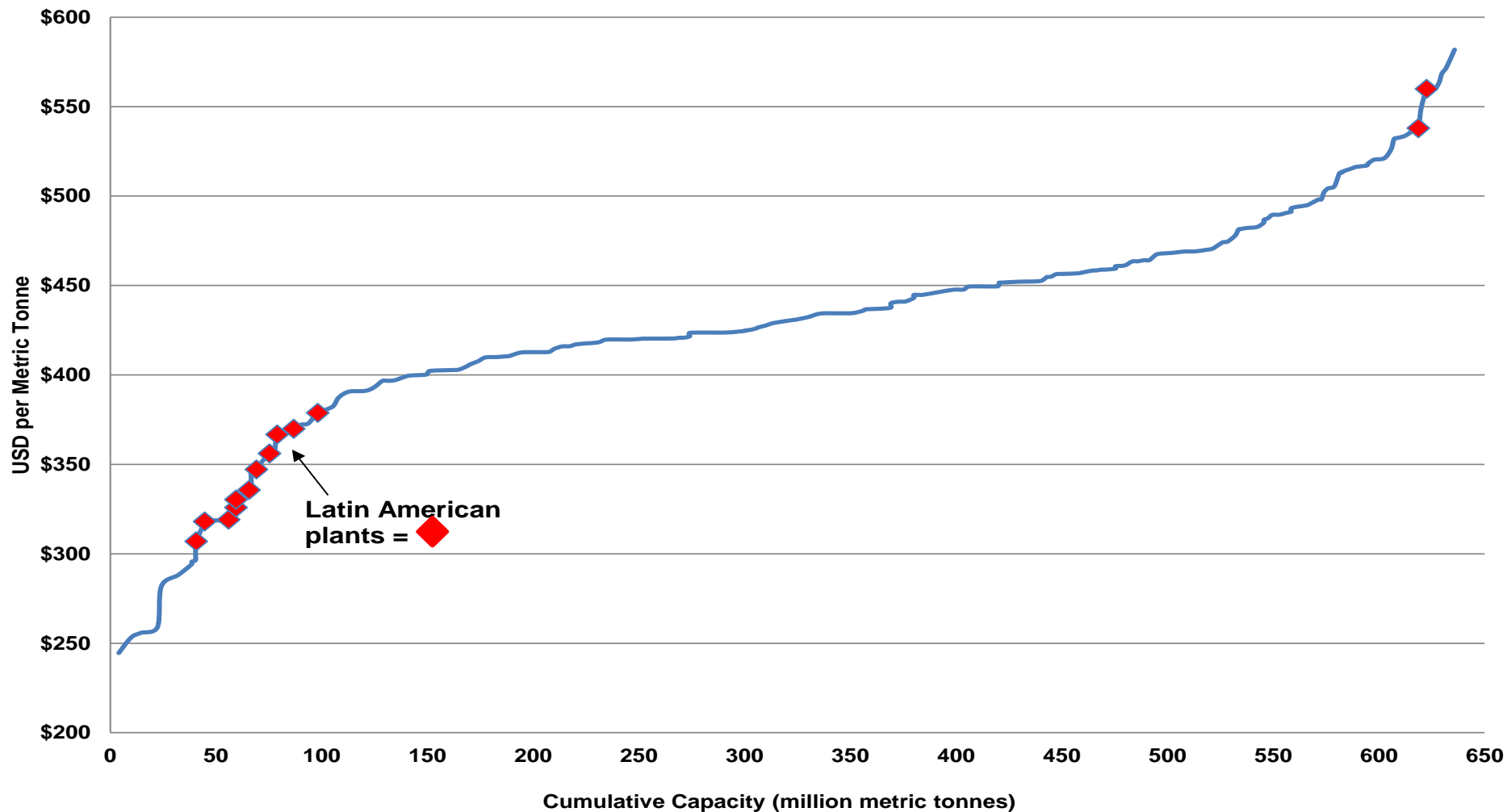
THE ATTACK BEGINS IN THE FACTORY

KEY POSITIVES

- o Low costs**
- o Concentrated markets**
- o Protected markets**
- o Good demand growth prospect**
- o Solid profitability**
- o Capable management**

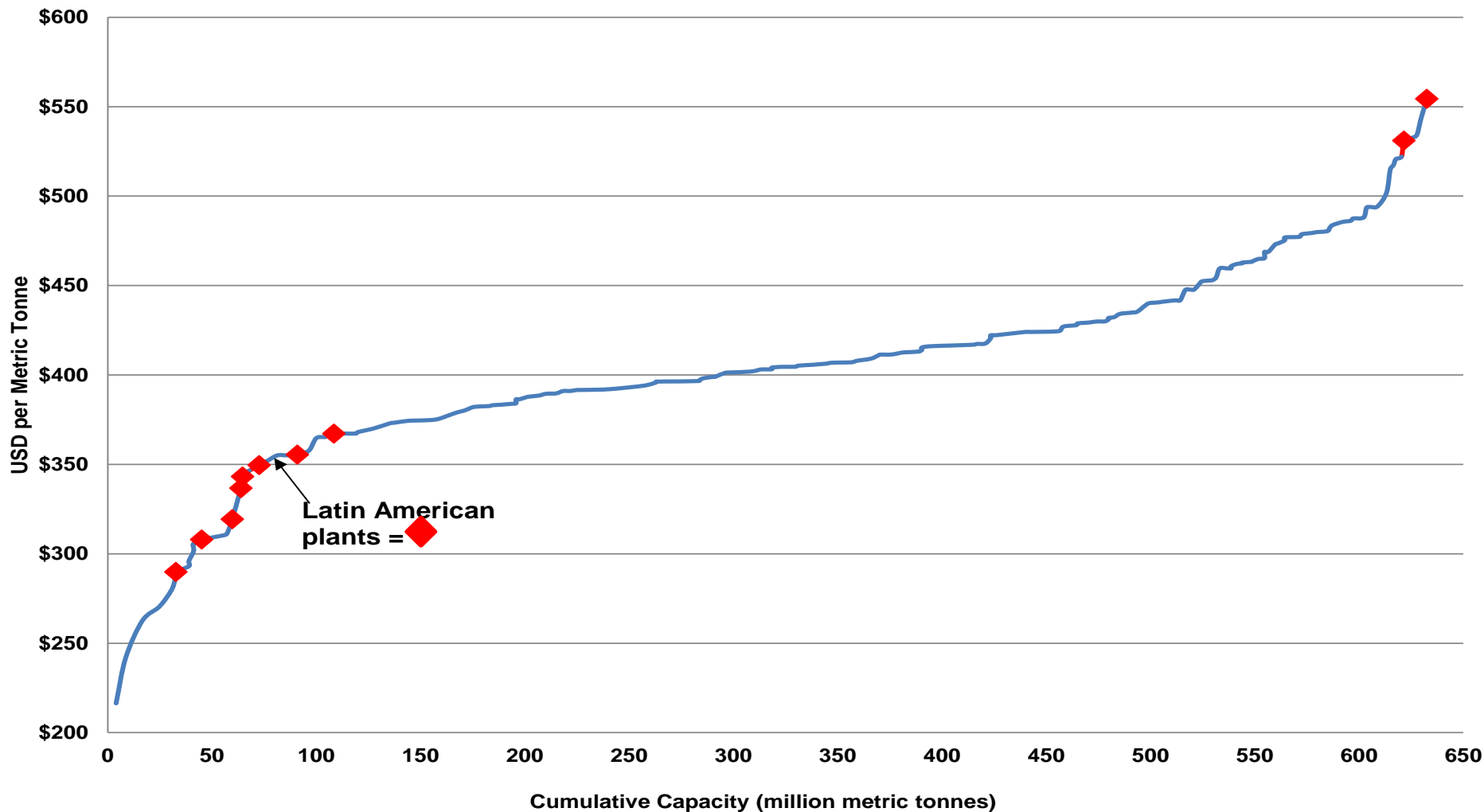
WCC -- Operating cost Latin American Plants

World Cost Curve for Hot-rolled Band
(\$ per metric tonne, operating cost)
October 2017



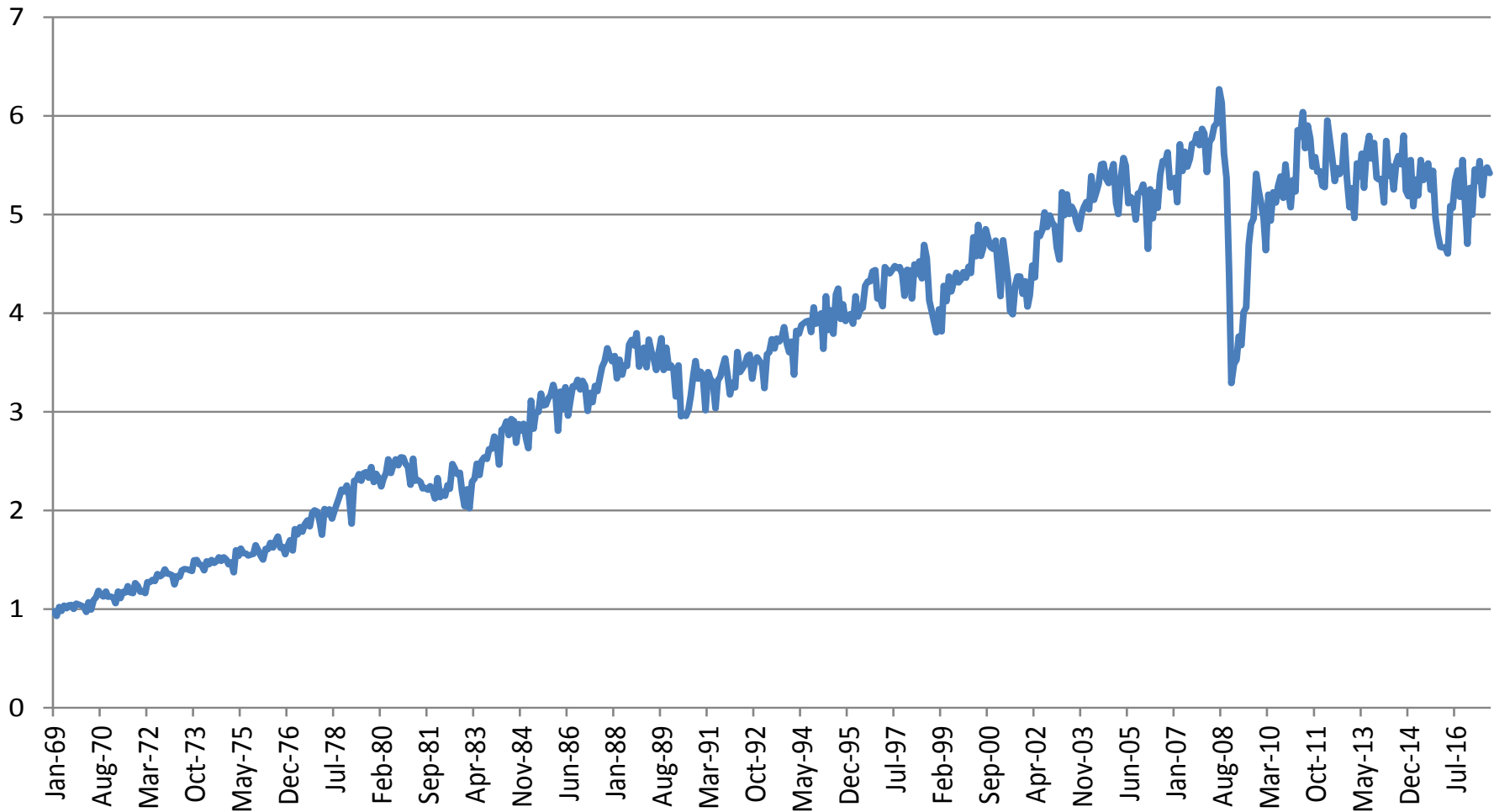
WCC -- Marginal Cost Latin American Plants

World Cost Curve for Hot-rolled Band
(\$ per metric tonne, marginal cost)
October 2017



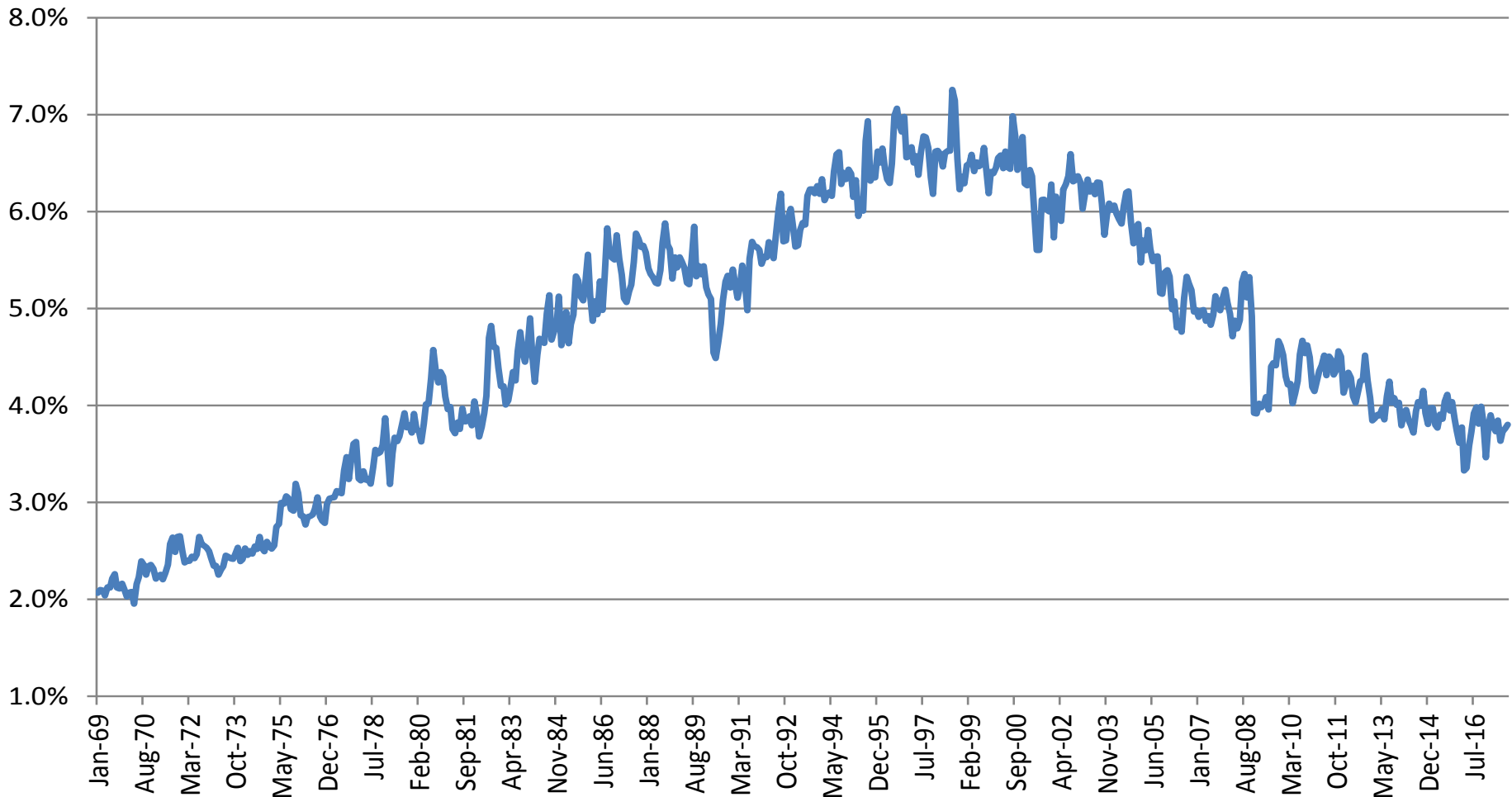
Latin America Crude Steel Production

Latin American Crude Steel Production (million tonnes)



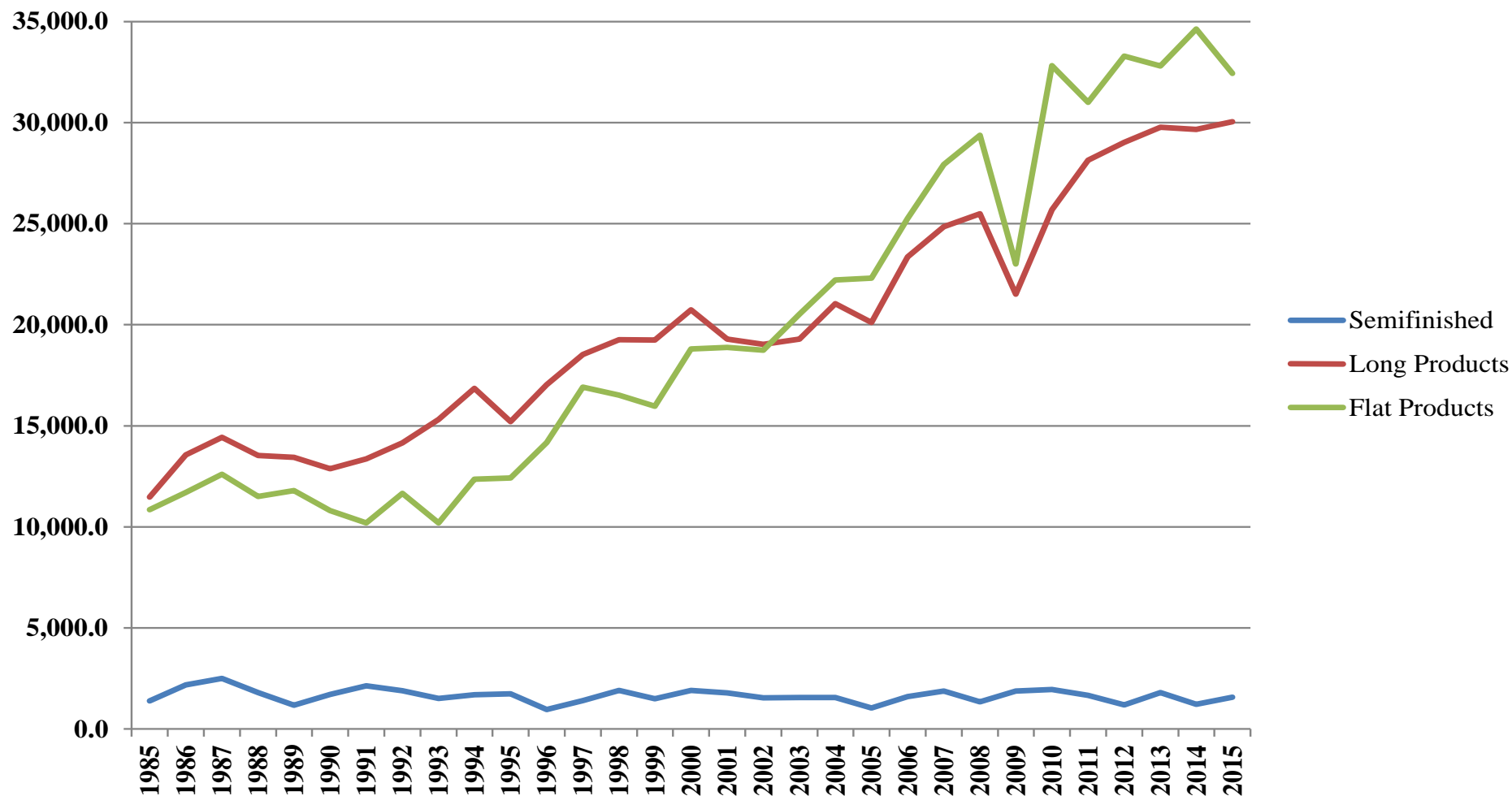
Latin America Crude Steel Production; percent of World

Latin American Crude Steel Production as percent of World



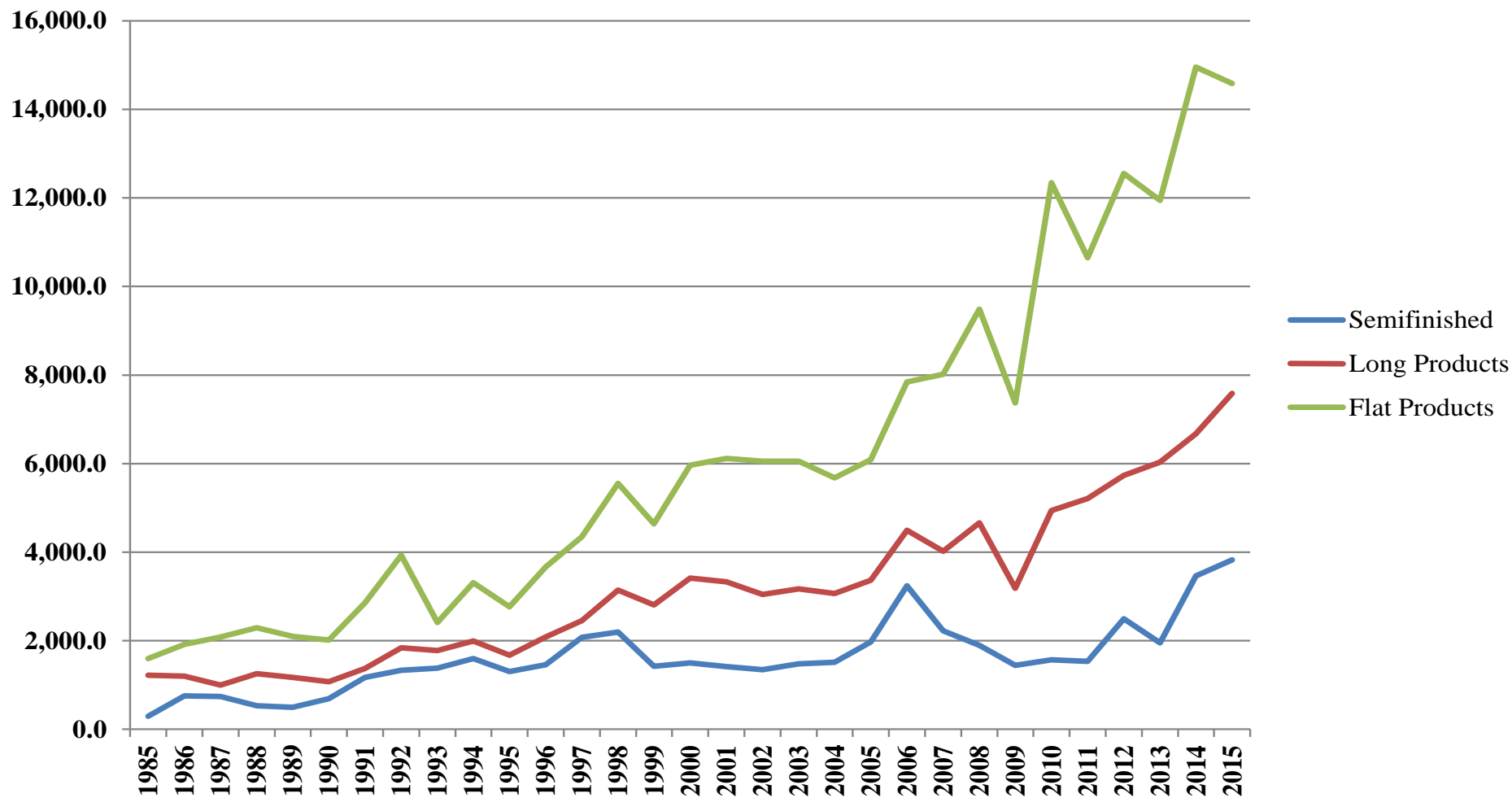
Latin America: Steel Consumption

Latin America: Steel Consumption (in thousand tonnes)



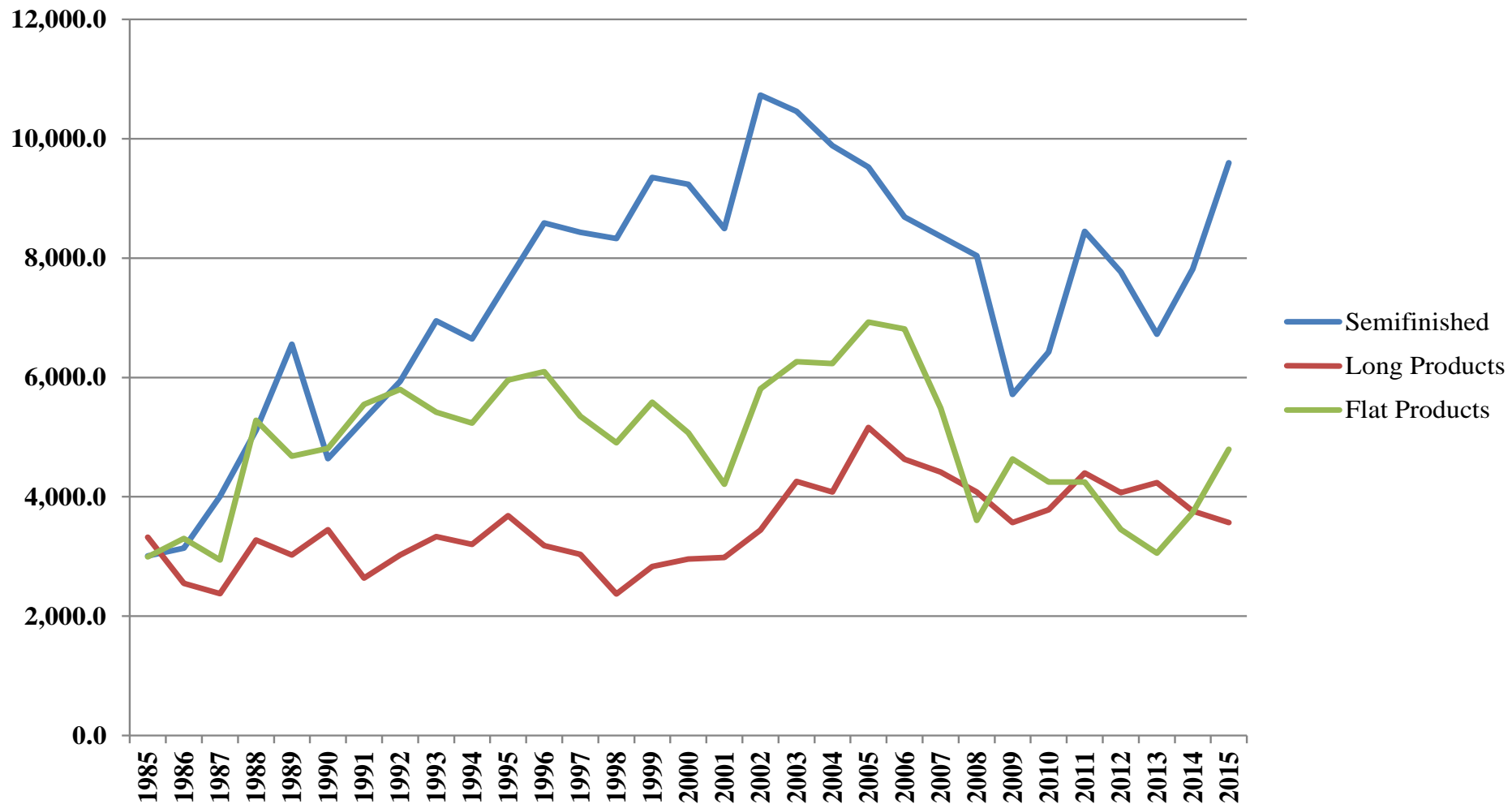
Latin America Steel Imports

Latin America: Steel Imports (in thousand tonnes)



Latin America: Steel exports

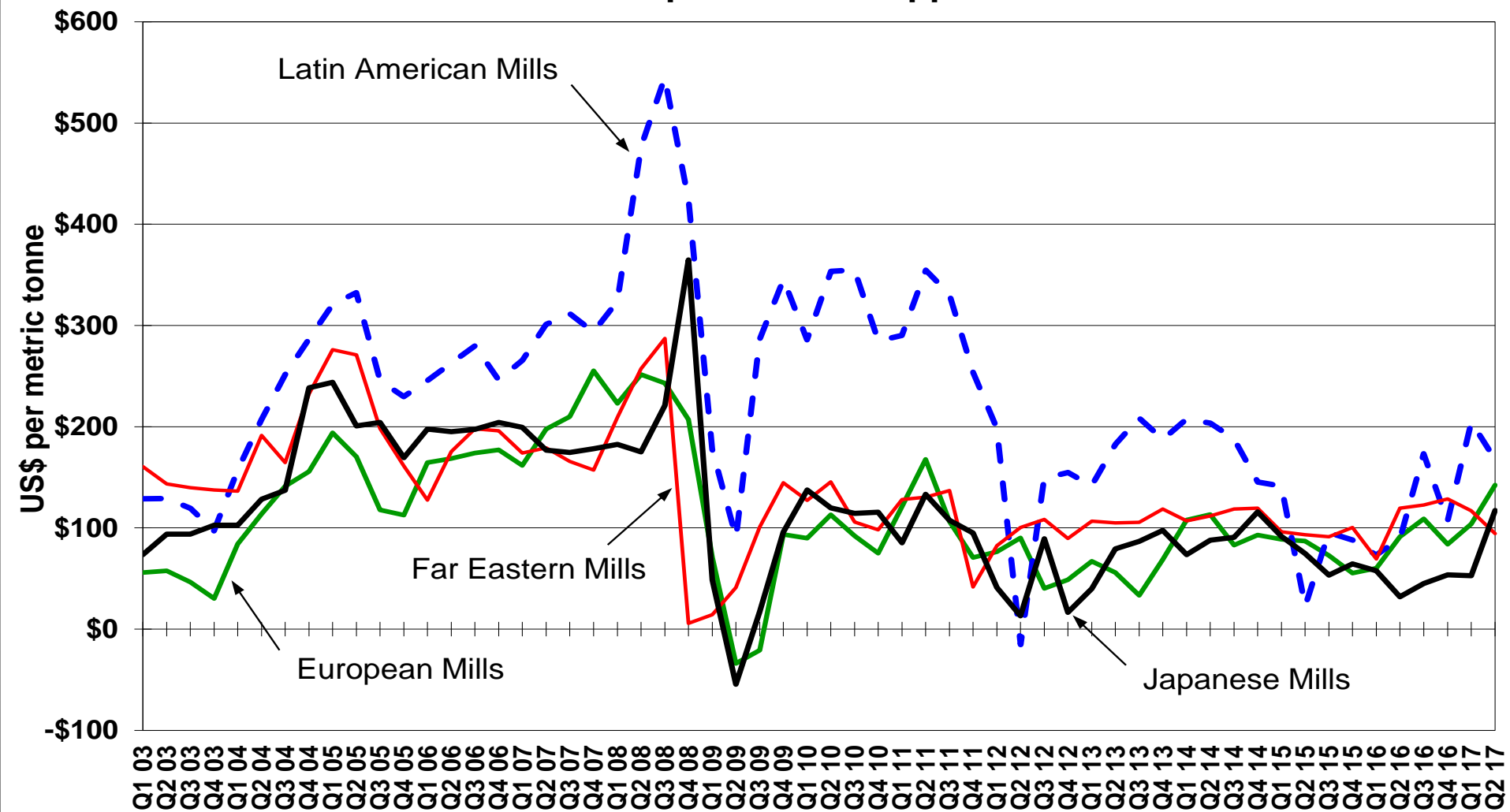
Latin America: Steel Exports (in thousand tonnes)



EBITDA

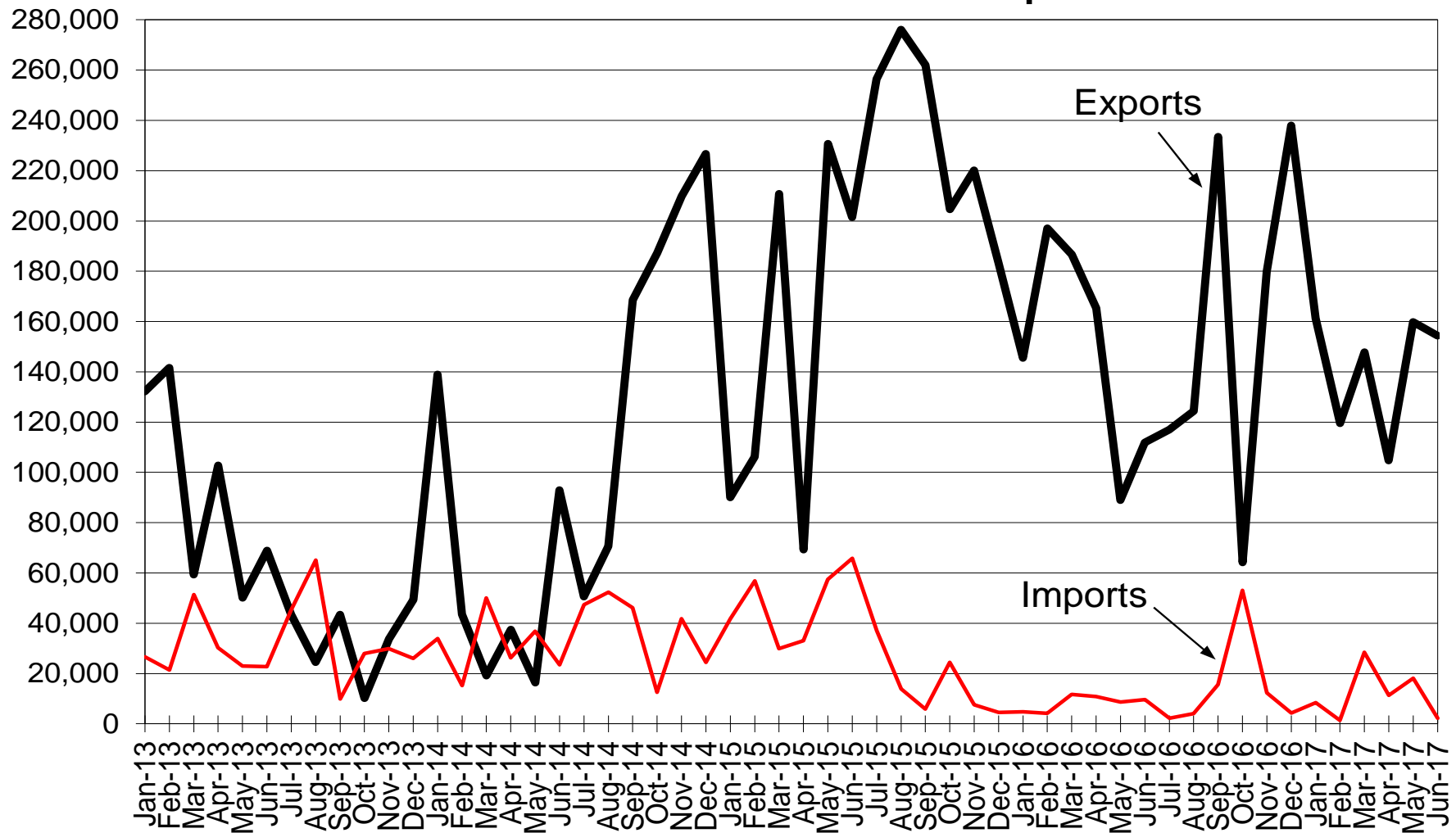
Latin American Plants

EBITDA per Tonne Shipped



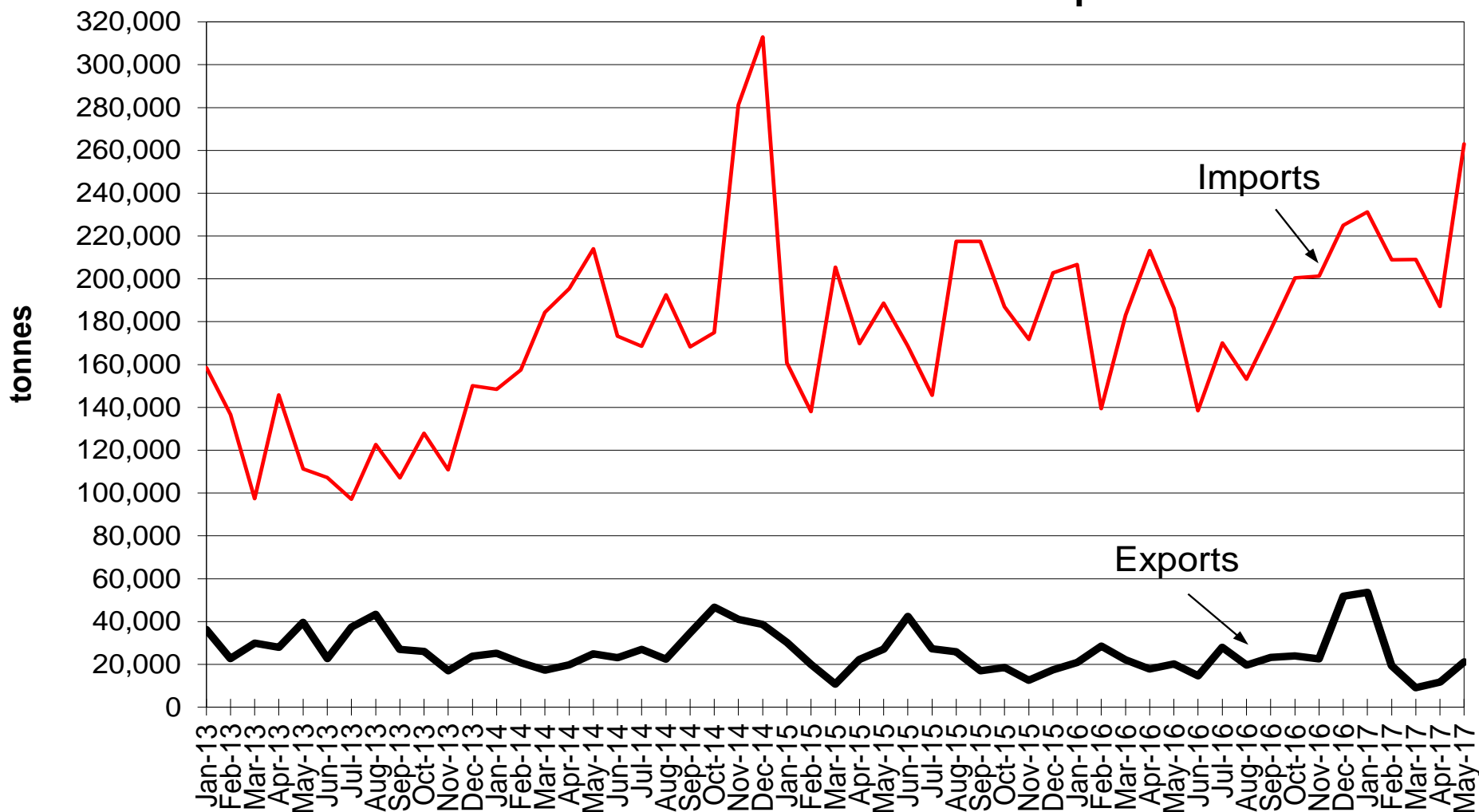
Brazil: Wide Hot-Rolled Band Trade

Brazil Trade for Hot Rolled Wide Strip



Mexico Wide Hot Band Trade

Mexico Trade for Hot Rolled Wide Strip



HUGE NEGATIVE

High country risk.

FORECAST

Problem to solved by globalization!

**The INFO and TECHNO Revolutions
know no boundaries**

Make use of WSD.

***Improve your speed, your
ideaphoria and the accuracy of
your competitive response.***

***Please call us: 201 503-0902
pmarcus@worldsteeldynamics.com***

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Wolf Pack

