



Recovered Paper Outlook in the Aftermath of Recession

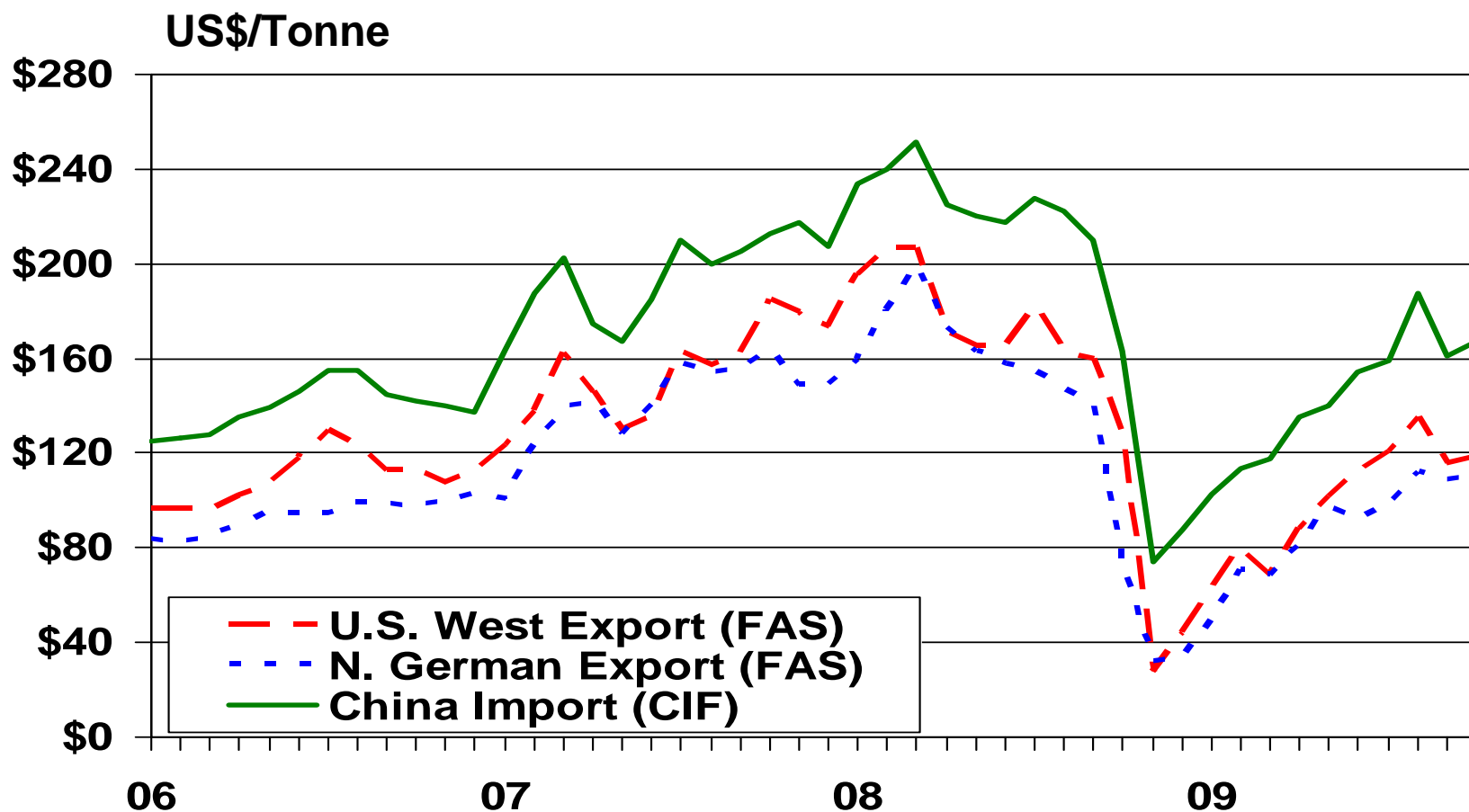
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Overview

- ▶ Recent Market Developments
 - Surging Chinese Demand Leads Rebound
- ▶ Prospects for Demand Growth Through 2011
 - Developing Countries at the Forefront
- ▶ What About Supply?
 - Rising Recovery Rates Around the World
- ▶ Market Dynamics Suggest Upward Pressure on Pricing
 - Reaching Further into the Waste Stream

Old Corrugated Prices Rebounded Quickly from Late-2008 Swoon

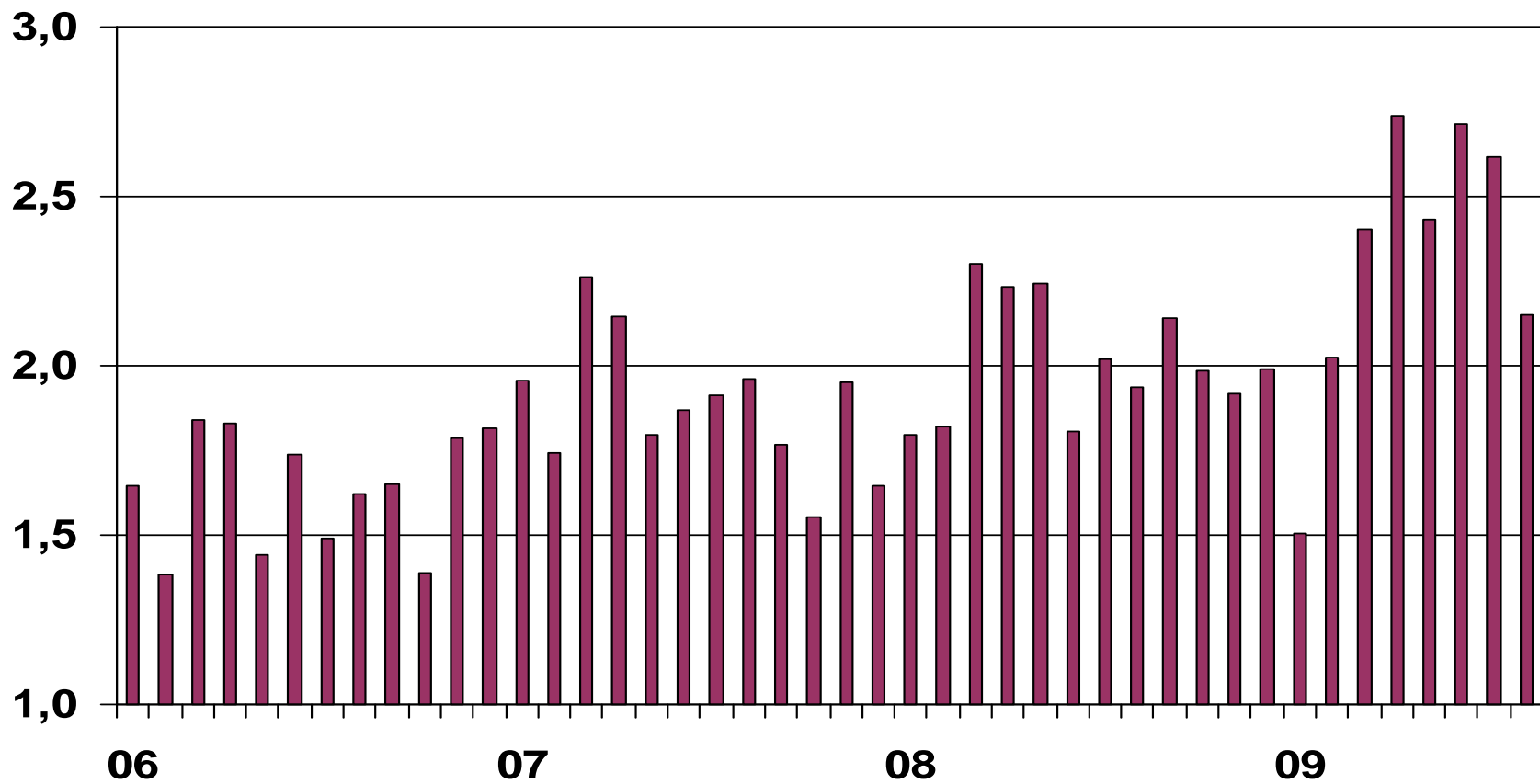


Demand and Supply Sides Have Supported Market in 2009

- ▶ Chinese Demand Has Surged Since January
 - Inventory Rebuild after Drawdown in Second-Half 2008
 - Upswing in Domestic Paper and Board Demand
 - Cheap Imports Substitute for Domestic Supplies
- ▶ Demand in Developed World Started to Rebound at Mid Year
- ▶ Supplies of Recovered Paper Have Been Severely Restricted
 - Plunging Paper and Board Demand in Developed World
 - Shakeout of Suppliers Following Price Collapse

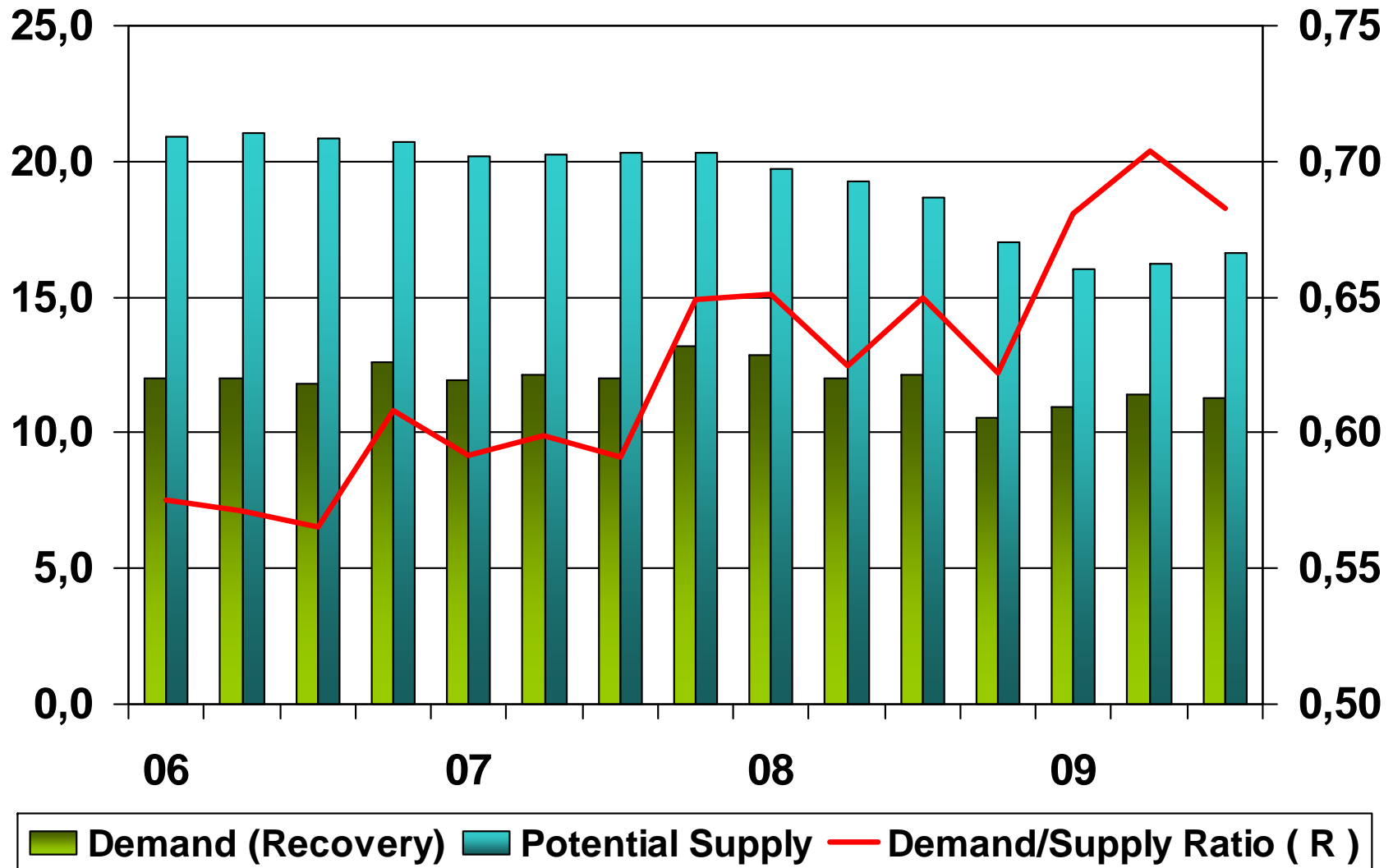
Chinese Recovered Paper Imports

Million Tonnes



US Recovered Paper Demand and Supply

Million Tonnes

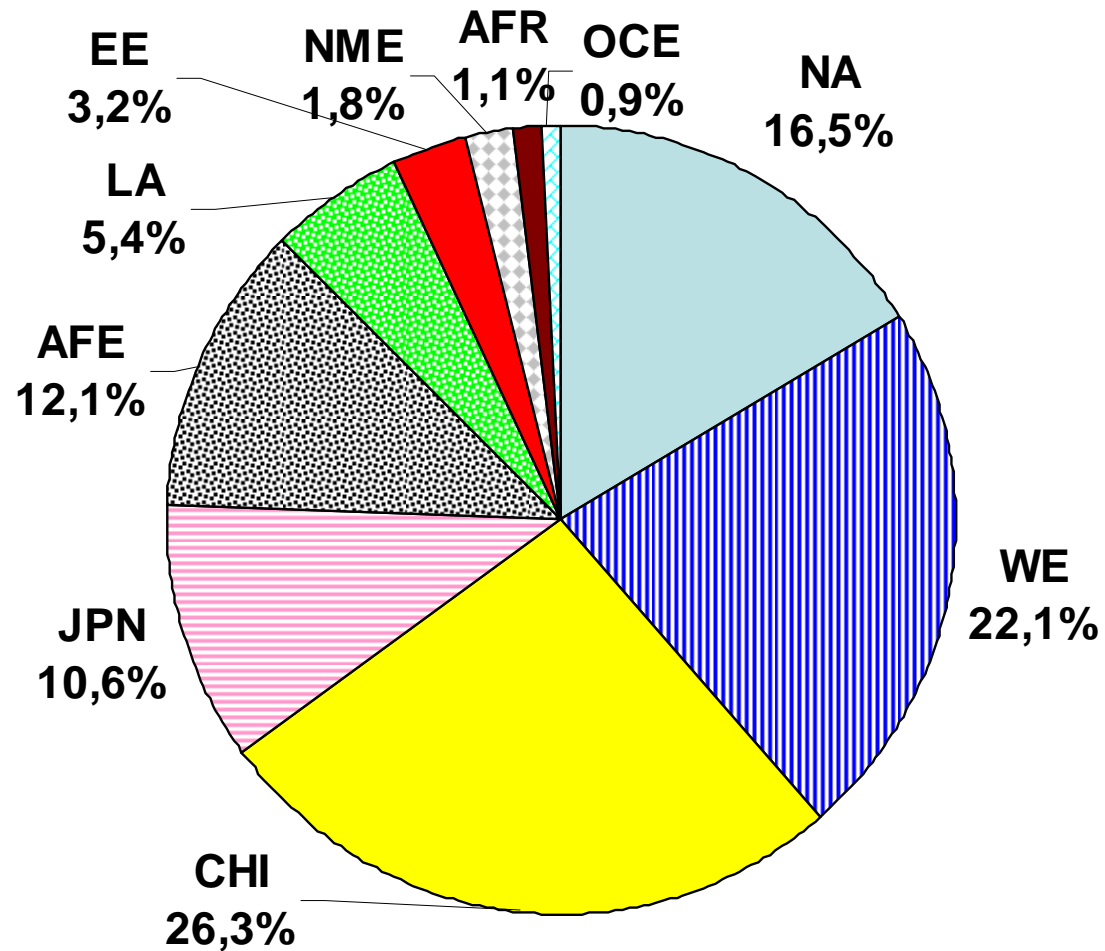


World Recovered Paper Usage Will Return to Strong Growth in 2010-2011

- ▶ After Dropping in 2009 for the First Time in at Least 30 Years
 - As a Result of the “Great Recession”
- ▶ Containerboard Will Account for 70% of the Total Increase
 - While Tissue Will Post the Fastest Growth
 - Newsprint Will Represent a Declining Market
- ▶ OCC Will Continue to Register the Largest Tonnage Gains
 - With High Grades and Mixed Growing Faster

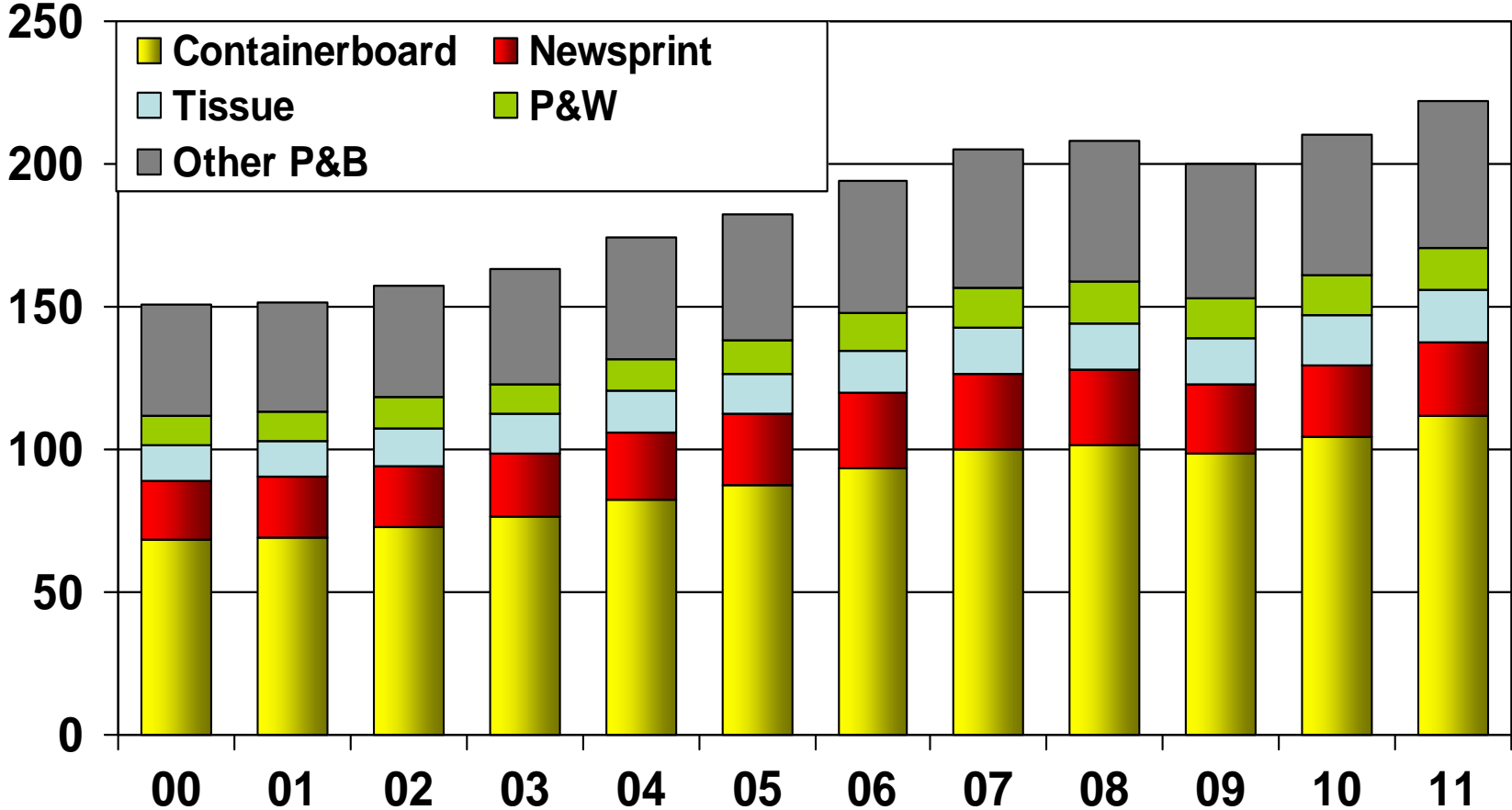
World Recovered Paper Consumption 2008

Global consumption 211million tonnes



World Recovered Paper Consumption by End Use

Million Tonnes

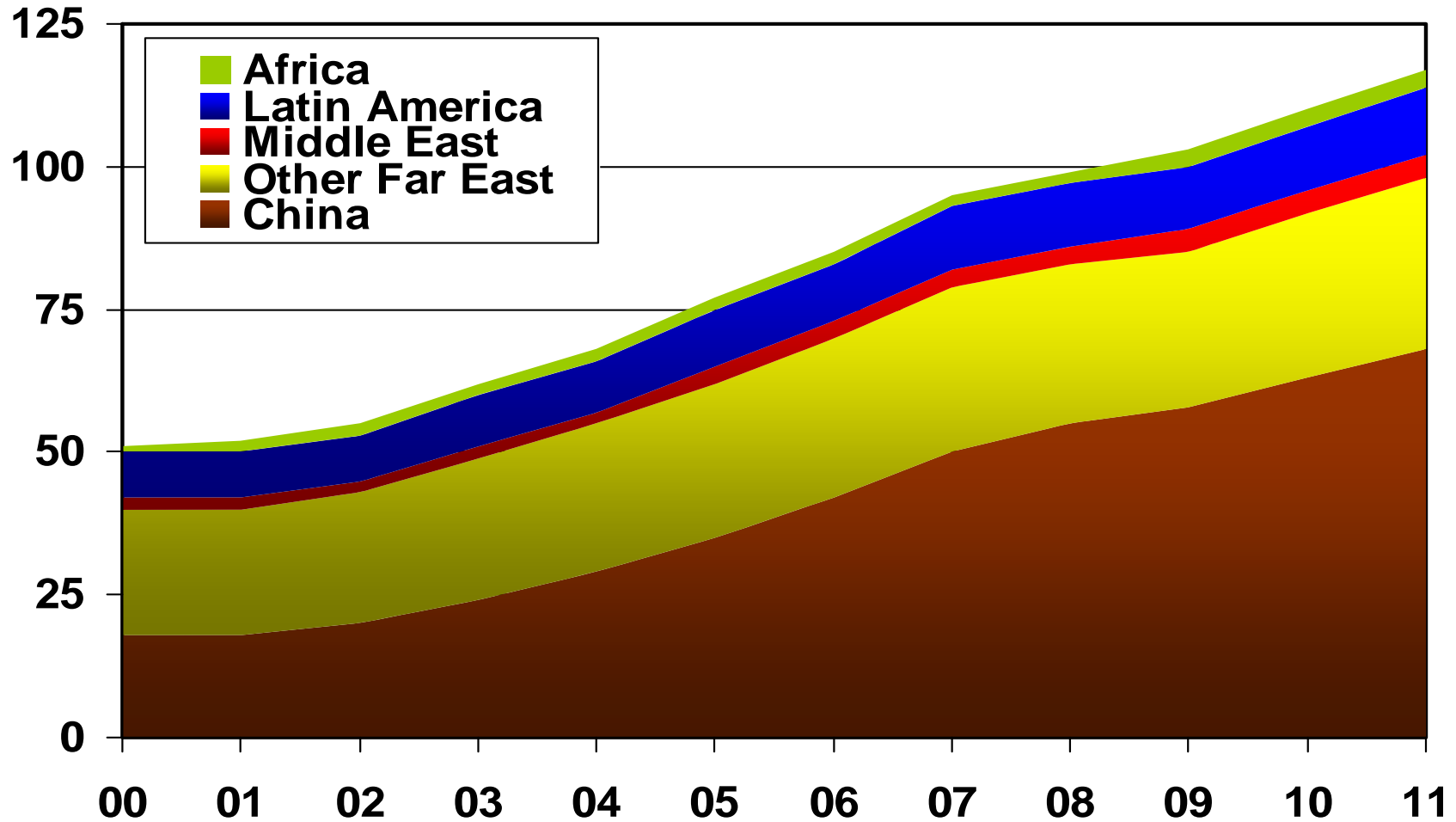


Developing Regions Will Account for Nearly All of the Demand Growth

- ▶ China Will Continue to be at the Forefront
 - Strong Growth in Domestic Paper and Board Demand
 - Limited Supplies of Virgin Fiber
 - Large Additions to the Recycled Capacity Base
- ▶ Remainder of Asia Outside of China and Japan
 - Will Generate Substantially More Usage, Also

Recovered Paper Usage in Developing World Regions

Million Tonnes

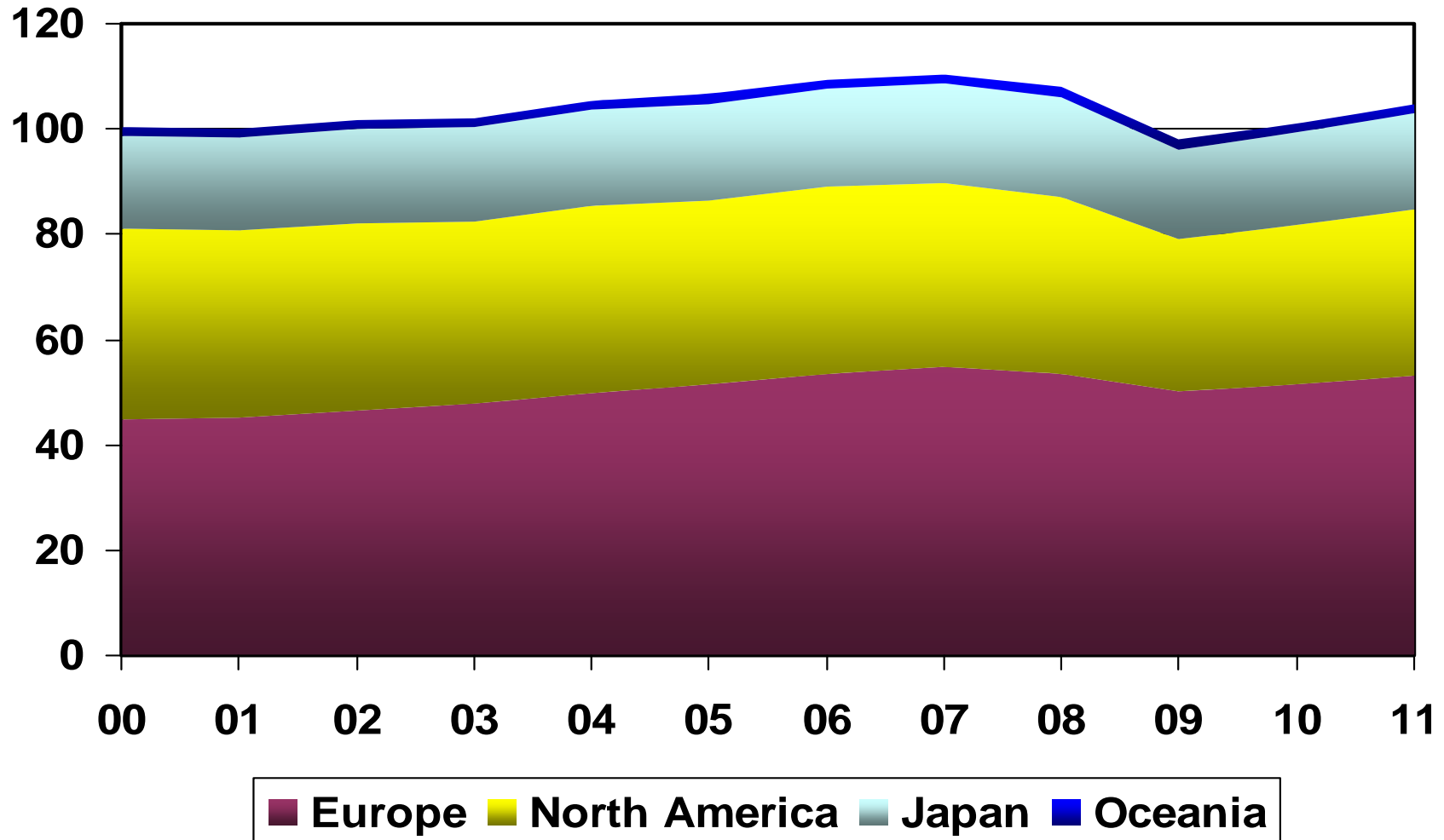


Developed Regions Will Generate Virtually No Demand Growth

- ▶ European Consumption Will Return to 2008 Levels by 2011
 - Mainly due to Increases in the East
- ▶ North American and Japanese Usage Still Lower than 2008 in 2011
 - Although Rebounding from This Year's Trough
 - Reduced Paper and Board Output the Main Constraint
 - Along with Virgin Fiber Availability in North America

Recovered Paper Usage in Developed World Regions

Million Tonnes

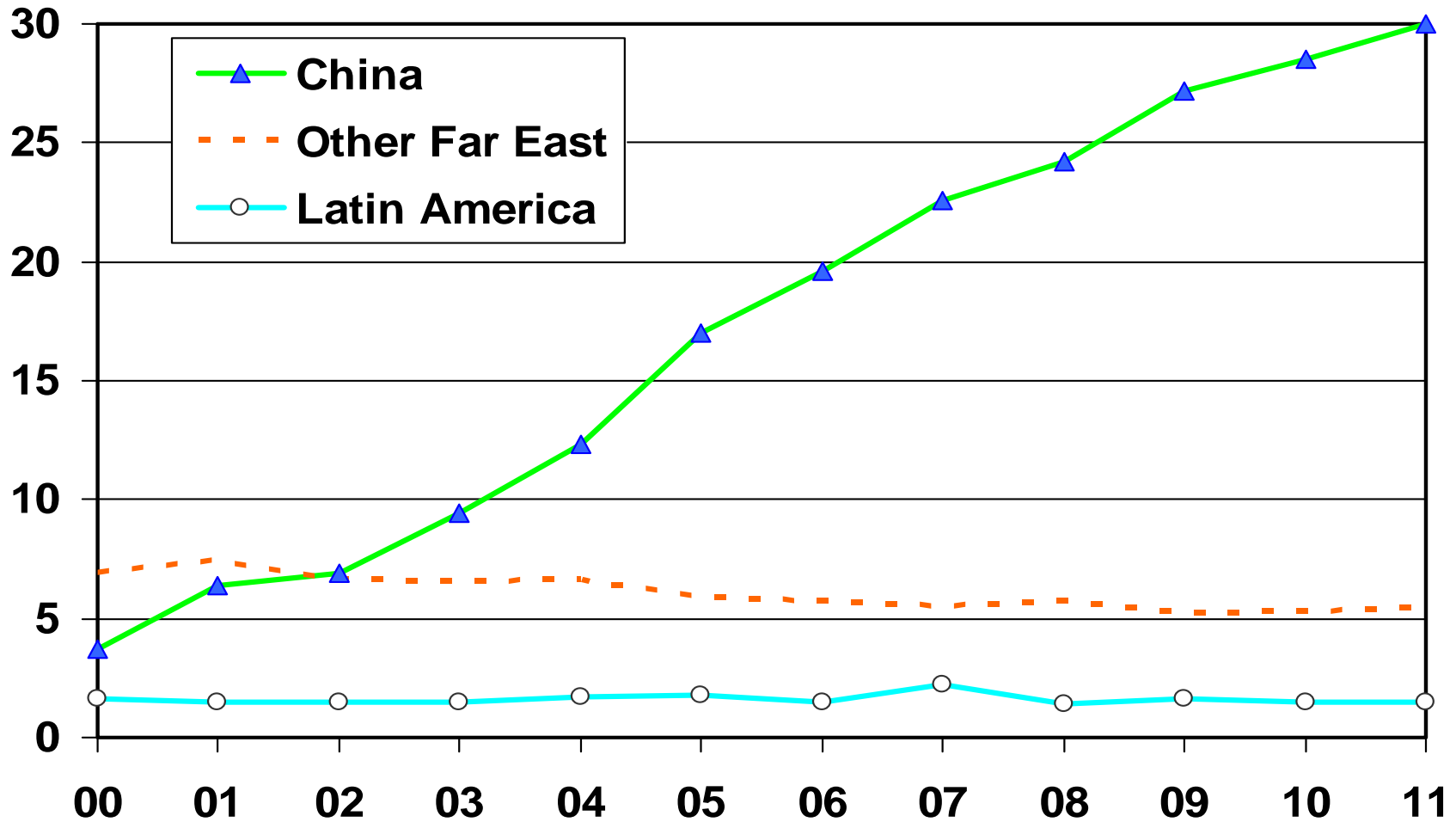


Surging Chinese Demand Will Mean Further Import Expansion

- ▶ Redoubled Efforts by Government and Companies to Boost Domestic Supplies
 - Will Only Meet 55% of Chinese Demand Growth in 2009-2011
 - Resulting in Another 6 Million Tonnes of Imports Over This Period
- ▶ Other Developing Countries in the Far East Will Generate a Trade Deficit
 - But Not Showing an Upward Trend
- ▶ Latin America Will be in the Same Position as the Other Far East
 - While Middle East and Africa are Self Sufficient

Net Imports of Recovered Paper

Million Tonnes

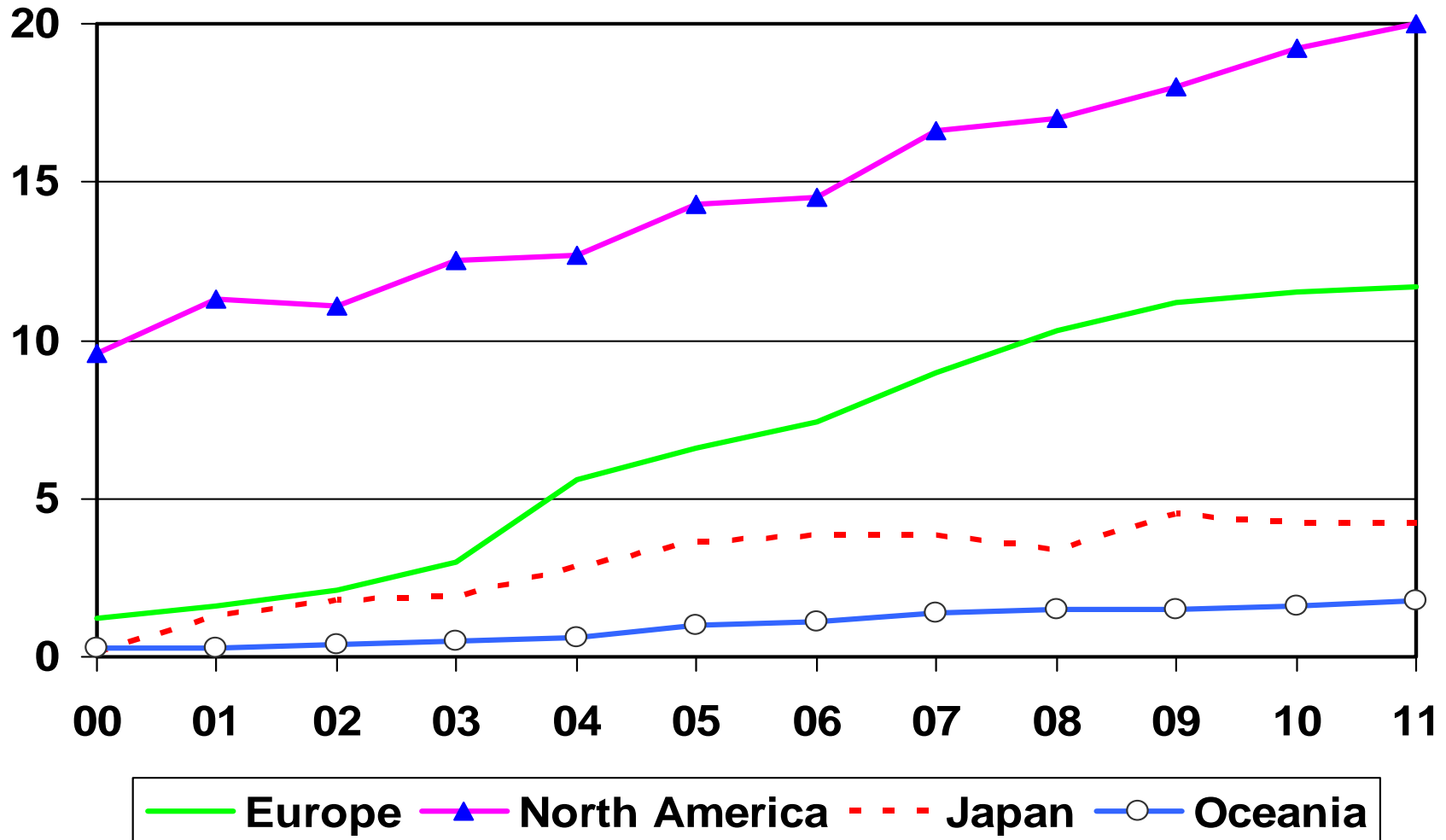


All Developed Regions Will be Called on to Provide More Exports

- ▶ Chinese Papermakers Will be Scouring the Globe for Supplies
 - Reaching into Interior Areas of Europe and North America
 - Japan May be Close to Being Tapped Out
- ▶ Government Policies Geared Toward Increasing Recovery in Europe
 - North America Not Seeing the Same Push from Government
 - Although Public Appears to be More Recycling Oriented

Net Exports of Recovered Paper

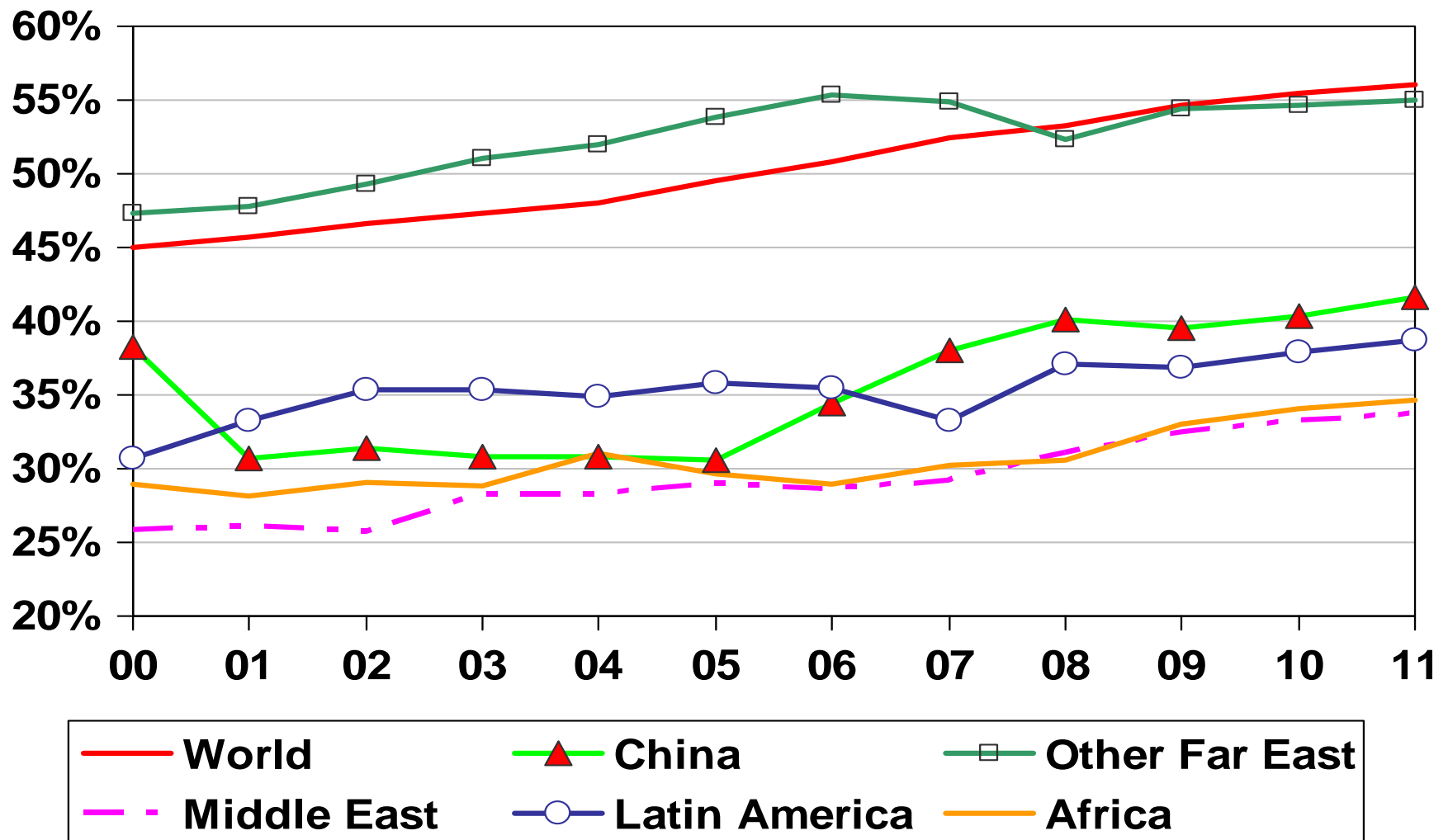
Million Tonnes



Recovery Rates Rising on a Worldwide Basis in 2009-2011

- ▶ Strong Demand in the Developing World, Especially China
 - Combined with Weak Paper and Board Demand in the Developed World
 - Exert Steady Upward Pressure on Available Supplies
- ▶ Still Appears to be Plenty of Room for Higher Recovery in Developing World
 - Although Underestimate in China Due to Net Exports of Packaged Products
 - Alternative Uses of Paper in the Waste Stream, Such as Packaging

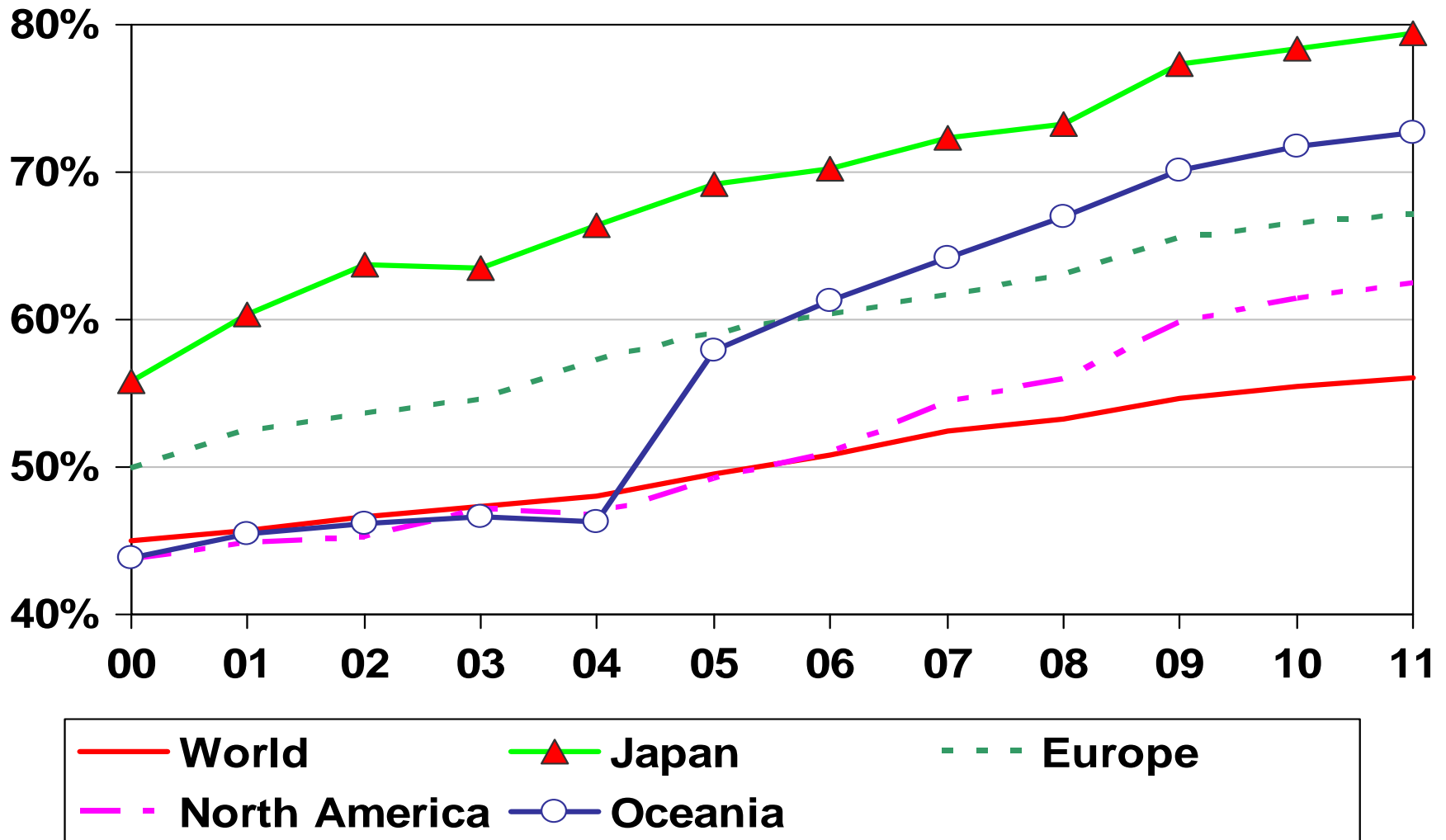
Recovery Rates in Developing World Versus World Average



Recovery Rates in Developed World Moving Ever Higher

- ▶ Japan at the Top End of the Spectrum
 - Driven by Dense Population and Government Incentives
- ▶ Europe Limited by Inclusion of Eastern Countries
 - Western Part Much Closer to Japanese Level
- ▶ North America at Bottom End of Developed-World Spectrum
 - Less Government Intervention and Lower Population Density

Recovery Rates in Developed World Versus World Average



Rising Recovery Rates Translate into Upward Pressure on Prices

- ▶ Generators Can Charge More for Their Material
 - Increasing Incentive to Recycle
- ▶ Collectors Can Reach Further into the Waste Stream
 - Recovering Lower-Quality Material
 - Spreading Out to More Remote Locations
- ▶ Processors Will Experience Higher Costs
 - With Lower-Quality Material Coming Through the Door

Summary

- ▶ Strong Rebound from Debacle of Late 2008
 - Led by Resurgent Chinese Demand and Weak Supplies from Developed World

- ▶ World Demand Will Continue Upward in 2010-2011
 - Boosted by the Startup of More Recycled-Based Capacity

- ▶ Chinese Demand Will Overwhelm Domestic Supply Potential
 - Developed World Will be Called on for More Exports -- and that with consumption base lower than before the recession

- ▶ Recovery Rates Will Rise on a Worldwide Basis
 - Creating Upward Pressure on Recovered Paper Pricing