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# Component Pricing & Counterfeiting

Price Trends and the Relationship to Counterfeiting

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April 2012

# Counterfeits Impact Commercial Electronics



**IHS iSuppli Table 1: Top-5 Most Counterfeited Semiconductors in 2011 (Percentage of Counterfeit Part**

**Majority of counterfeit incidents reported were from the commercial sector**

Rank	Commodity Type	Reported Inci
#1	Analog IC	25.2%
#2	Microprocessor IC	13.4%
#3	Memory IC	13.1%
#4	Programmable Lo	8.3%
#5	Transistor	7.6%

Source: IHS Parts Management 2012

**IHS iSuppli Table 2: Percentage of Market Revenue for Most Commonly Counterfeited Product Types by Application Market in 2011 (Percentage Share of Revenue in Millions of U.S. Dollars)**

Part Type	Industrial	Automotive	Consumer	Wireless	Wired	Compute	Other
Analog IC	14%	17%	21%	29%	6%	14%	0%
Microprocessor IC	4%	1%	4%	2%	3%	85%	0%
Memory IC	3%	2%	13%	26%	2%	53%	1%
Programmable Logic IC	30%	3%	14%	18%	25%	11%	0%
Transistor	22%	12%	25%	8%	10%	22%	0%

Source: IHS iSuppli March 2012

# Challenges facing the semiconductor industry in 2012

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## Opportunities for Growth

- Growth of media tablets
- Ongoing migration to Smart phones
- Improved notebook sales
- Emergence of Ultrabook PC
- Strong energy and environmental opportunities
- Resolution among Memory manufacturers
- US Presidential election

## Threats to Growth

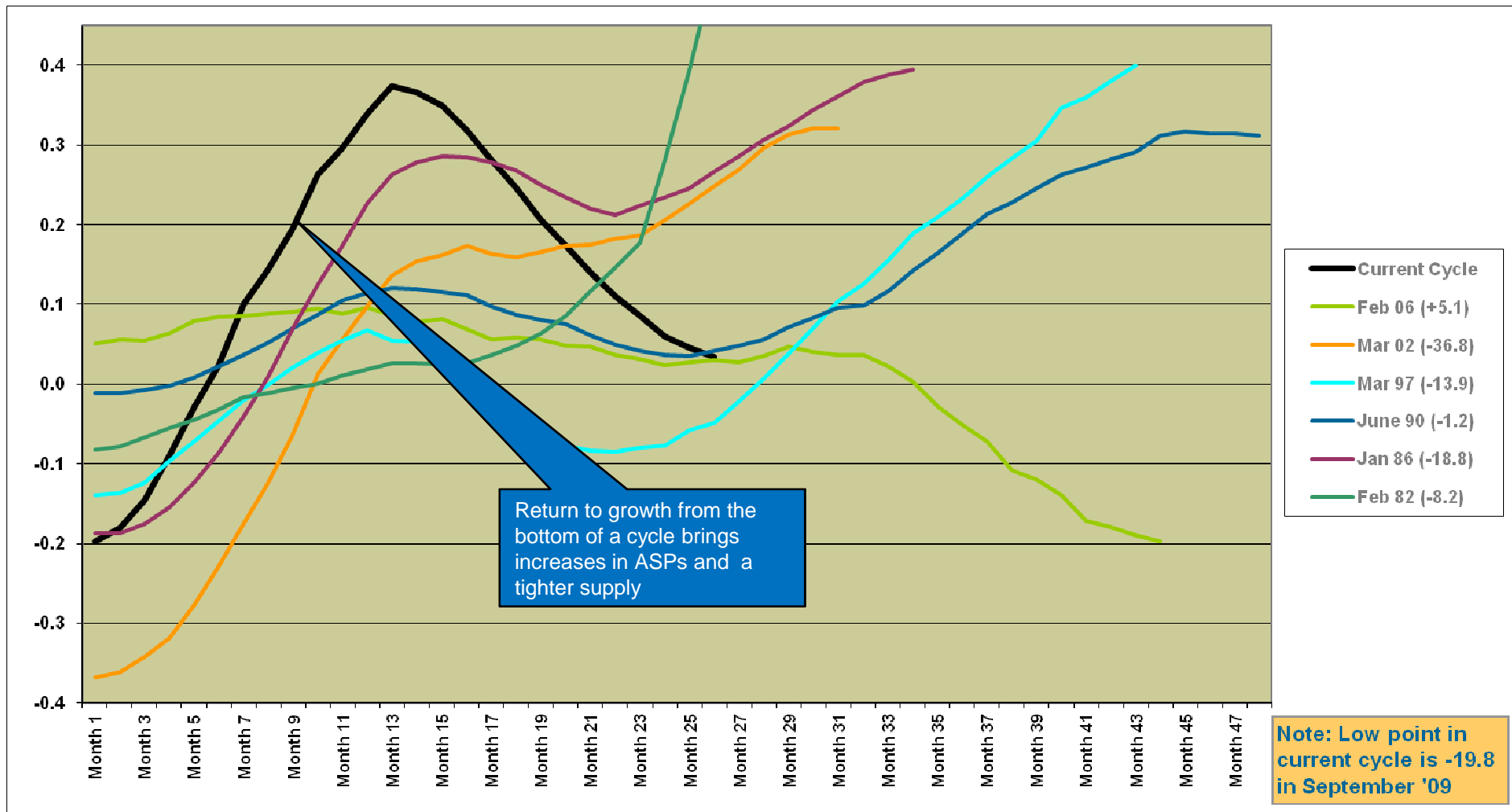
- Uncertain global economy
- Reluctance of consumers to incur additional debt
- Inventory management
- Counterfeit Growth

# Historical Cyclical Behavior Indicates Bottom Reached in 2012



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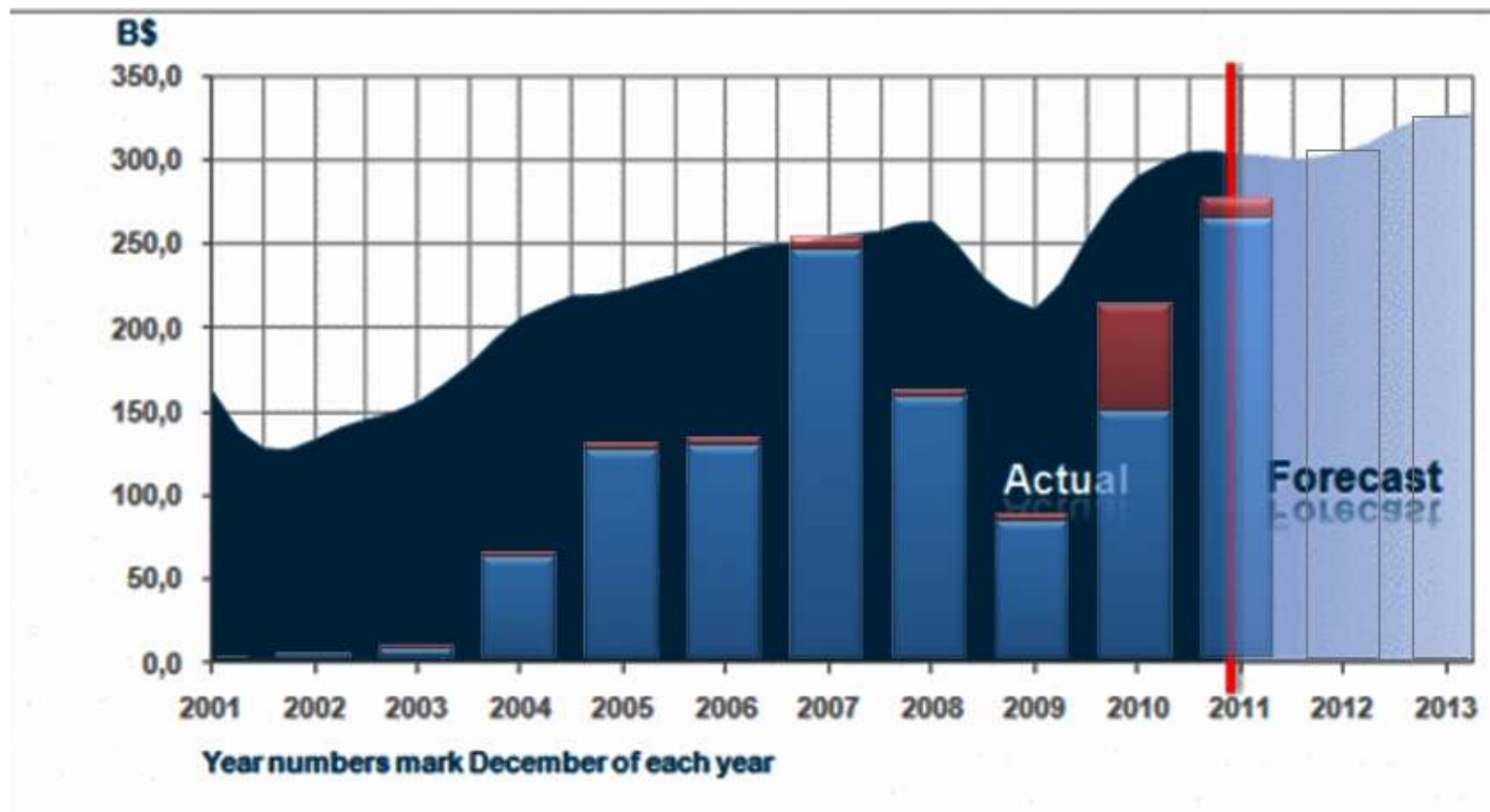
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Source – WSTS

# Insight: Counterfeit Incidents vs. Revenues 2001 – 2011



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ERAI Accounted for Over 90% of High Risk and Suspect Counterfeit Parts Verified and Reported from 2001-2011

Majority of counterfeit incidents reported were from the commercial sector

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# Component Pricing on the Rise

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- Signs are appearing that a rise in semiconductor component pricing is in effect
- While broad-based price increases are not uncommon in the semiconductor industry, most electronic components are entering a phase of some sort of price increase
- This pricing situation should continue through 2012 – with some exceptions
- When pricing trends upward, lead times tend to extend as well moving out beyond normal levels
- This type of price & availability environment is the perfect scenario for counterfeit components to thrive..

# Risk Scenario

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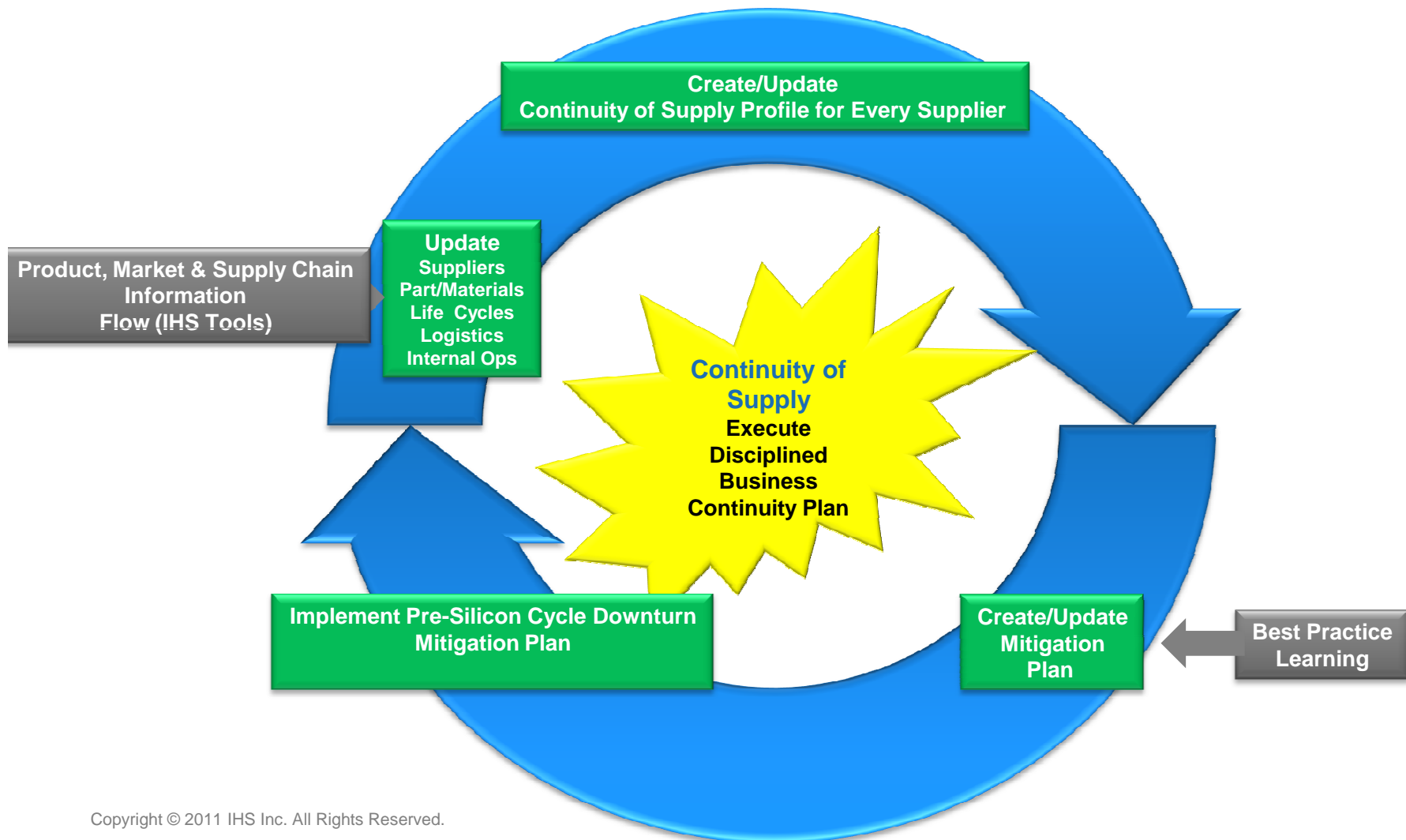
- Semiconductor “Silicon Cycle” Effect
- Demand Soars, Prices and Lead-Times Increase
- Ensuring Continuity of Supply Becomes Number One Priority
- Shortage of Critical Components Occurs
- Best in Class Procurement Breaks from Disciplines and Procures Components Outside of Qualified Supply Chain
- This Environment and Subsequent Actions Continue to Fuel the Counterfeit Component Market and Give Rise to the Growth

# Develop a Continuity of Supply Plan



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## 2012 Pricing Outlook Shows Change



- Suppliers reporting recent positive book-to-bill
  - This is a sign of a return to growth and suppliers will adjust their pricing strategies accordingly
- Manufacturing run rates will increase as bookings increase
  - Orders are being placed now to replenish channel inventory
- Companies are focusing on Continuity of Supply and Inventory Management

## Summary

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- Global economics will remain the most influential factor affecting the semiconductor industry in 2012.
  - Consumer purchases will drive revenue increases in second half of 2012.
- Inventory management throughout the supply chain has brought the industry back to a position where manufacturing run rates should start to increase.
- Capital expenditure announces are based on a conservative sales forecast. Companies have the potential for a 10 – 15% upside depending on timing.
- Wireless applications will dominate foundry / industry growth in 2012 and beyond
  - Next generation Ultrabooks are still one year away

## Conclusions

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- Counterfeit Suppliers are in Lock-Step with the Market
  - As the market tightens for specific components, counterfeit will saturate it
  - Capacity for counterfeit manufacturing has been expanded to meet current demand
- Constant Vigilance and Discipline are Critical
  - 24/7 Monitoring of the Global Market and Trends are Mandatory
  - Key Performance Indicators such as Price, Availability and Part Life Cycle Maturations Provide Critical Market Intelligence into specific “at-risk” products