

Welcome & Introduction

“IFS2007-MT” Annual Semiconductor Industry Forecast Seminar

Malcolm Penn, Chairman & CEO



Seminar Agenda (10:30am - 4:00pm)

10:00 AM Registration (with tea/coffee and pastries)	1:45 PM Key Application Markets Chris Ryan, Industry Analyst
10:30 AM Welcome & Introduction Malcolm Penn, Chairman & CEO	2:30 PM Coffee Break
10:45 AM Economic Outlook Chris Ryan, Industry Analyst	2:45 PM European Chipless & Fabless IC Design Chris Ryan, Industry Analyst
11:15 AM Semiconductor Industry Outlook Malcolm Penn, Chairman & CEO	3:30 PM European Semiconductor Market Malcolm Penn, Chairman & CEO
12:00 AM Industry Capacity Malcolm Penn, Chairman & CEO	3:45 PM Forecast Summary & Closing Remarks Malcolm Penn, Chairman & CEO
12:30 PM Seminal Lunch (included in the seminar fee)	4:00 PM Seminar Conclusion



House Keeping Remarks

- Switch Off/Mute All Mobile Phones**
- No Smoking In The Meeting Room**
- Lunch In The Restaurant (Designated Area)**



Thank You



Seminar Materials

Hard Copy Of All The Seminar Slides

- Booklet-Style Format**

CD-ROM Contains

- PowerPoint Copy Of All Seminar Slides**
- Samples Of Our Research Reports**
- **Copies Of Our Reports Are Also On Display**
- **If You Like Them ... Buy Them! ... If You Don't ... Tell Us Why**
- **We Welcome Your Feedback & Ideas For Improvement**

Seminar Evaluation Form

- Please Fill This Out At The End Of The Proceedings**
- Return It To Us As You Depart From The Seminar**
- We Value Your Feedback & Ideas For The Future**

Your Passport To Future Horizons



The
Economy

Unit
Demand

Fab
Capacity

IC
ASPs

**Europe's Leading
Semiconductor Industry
Analyst**

Future Horizons Chronology & Background

- 1989 - Established Operations In Europe
- 1991 - Established Research Operations In Moscow
- 1998 & 2000 - Major Research Expansions
- Worldwide Semiconductor Industry Focus
- Proprietary East & West European Industry Database
- Market Research, Industry Analysis & Training
- Custom Consulting, Marketing Studies, Design Support
- Business Development Opportunities & Contacts

**Investment, Design, Manufacturing & Business Development Support
...With Committed Professionalism, Insight & Analysis**

Research Team

Malcolm Penn
(ITT/Dataquest)
Founder, Chairman & CEO
SC Industry Analysis &
Executive Support

Chris Ryan
(GEC Plessey)
Industry Analyst
IC Design Companies
End-Use Applications

Mike Bryant
(HP/Fujitsu/Westell/Soundcraft)
Chief Technology Officer
IC & System Design
Analysis & Support

Clare Gambles
Conference & Executive Manager
Forums & Seminars
Executive Support

Sergey Orlov
Research Analyst
Russia/CIS Operations
Business Opportunity Development

Jean Evans - Administration Assistant

**Over 100 Man-Years Of SC Industry Experience ...
From The First Commercial IC To SoC Integration**



7

Europe's Leading Semiconductor Industry Analyst

Malcolm Penn (Founder) - Chairman & CEO

40+ Years Experience In The Electronics Industry

1962-66 Electronics Degree (London University)
1966-70 Electronic System Design (Test & Measurement)
1970-80 ITT Semiconductors (Logic, DRAM, ASSP)
1980-82 System House (ITTE Component Engineering)
1982-89 Founded Dataquest Europe (Market Research)
1989 Founded Future Horizons (Industry Analyst)



8

Europe's Leading Semiconductor Industry Analyst

Mike Bryant - Chief Technology Officer

30+ Years Experience In The Electronics Industry

Hewlett Packard, Telecommunications Division

Audio & PCM Test Equipment/ Large-Scale System Performance Monitoring Software

Fujitsu Microelectronics

Analogue & Digital VLSI ICs For ISDN, Voice Data Compression, X.25, Frame Relay Controllers & Telecommunications Systems / HDL & Logic Synthesis

Westell

ADSL and HDSL modems, high performance ATM switching & network interface cards, SNMP based management system (DSLAM)

Soundcraft

Professional audio mixing equipment using high-performance DSP/24 bit A-D and D-A, with Ethernet, ATM, USB, Firewire, Bluetooth, ADAT and TDIF interfaces

European Commission

External Expert Project Reviewer



Chris Ryan - Industry Analyst

30+ Years Experience In The Semiconductor Industry

Materials Scientist Developing Infrared Detectors At The Plessey Allen Clark Research Centre, Towcester

Production Control & IC Test Management At Plessey Semiconductors, Swindon

Marketing Manager At GEC-Plessey Semiconductors

Research Responsibility For Applications, Fabless & IP

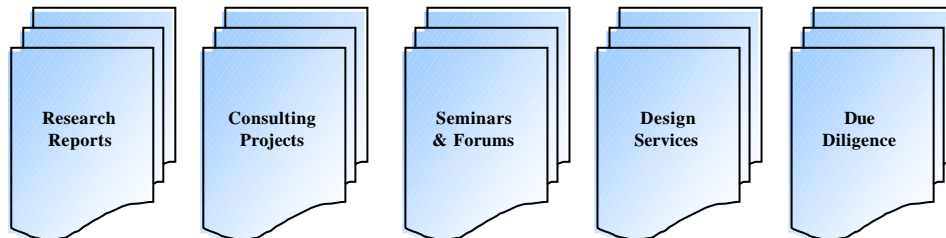
Degree in Physics from the University of Hull

MBA from the University of Bath

Chartered Engineer & Member of the IEE



Future Horizons Organisation & Products



- Off-The-Shelf Research Reports & Industry Intelligence/Analysis
- Bespoke Research Assignments - From Proof Of Concept To Full Market Development
- Due Diligence Analysis - From Seed Funding Through IPO
- Competitive Benchmarking & Positioning - From the Basic IC Design & Technology Up
- Unique Combination Of Chip Design Know-How With Market & Business Insight

Global Organisation, Headquartered In Sevenoaks, Kent, UK
Regional Offices In The UK & Russia - Affiliates In The USA, Russia & Japan



Future Horizons Research Methodology

- Focus On The Basic Industry Fundamentals**
- Look For Changes In Industry Characteristics**
- Analyse Deviations From Long-Term Trends**
- Analyse Cause Of Cycles, Not 'Best Historical Fit'**
- Sales Value = Units Sold x Price Sold For**
- Markets Don't Buy Chips - Only Customers (Who's Buying?)**
- All Markets Are Finite - They Eventually Saturate**
- Over Capacity => Meltdown => Revenue Downturn**
- Look For The Facts Not Hype, Fashion Or Denial**
- Past Industry Cycles Are A Poor Indicator Of The Future**
- Nothing Beats Good Old-Fashioned Common Sense**
(Slide Rule Sanity Check Mentality)



Future Horizons Forecast Track Record

What We Said In January vs What Actually Happened (12 Months Later)

IFS2002 Analysis - No Chance For Recovery:

Forecast 1.4% vs Consensus 'Bounce Back' View (Actual 2.0%)

IFS2003 Analysis - Weak 1H With Strong 2H Recovery

Forecast 18.0% vs Consensus 'Single-Digit' View (Actual 18.8%)

IFS2004 Analysis - Continuing Strong Recovery

Forecast 32.0% vs Consensus 'Low Double-Digit' View (Actual 28.0%)

IFS2005 Analysis - Pause Not Recession, 2003 Re-Run

Forecast 15.0% vs Consensus 'Minus-Low Growth View (Actual ~8%)

IFS2006 Analysis – Continuing Strong Recovery, 2004 Re-Run

Forecast 20.0% vs Consensus 'Low Growth' View (Actual ~10%)

- Our Methodology Is To Analyse The Industry Fundamentals
- We Don't Run With The Pack, Just Our Analysis & Experience
- We Report What We Believe Not What People Want To Hear



13

Europe's Leading Semiconductor Industry Analyst

FH Market Research Deliverables

- Market Research Reports - *Covering Basic Industry Statistics*
- Dedicated Studies - *For a More Focused Analysis*
- Informed Analysis - *From Industry Experts*
- Monthly Newsletters - *For The Latest News & Information*
- Dedicated Research - *For Added Insight & Analysis*
- Flexible Resource Support - *A Few Hours To Custom Study*
- Clearly Defined Objectives - *You Get Exactly What You Want*
- Controlled Budget - *Pay Only For What You Want*
- Insight & Analysis - *From Seasoned Industry Veterans*

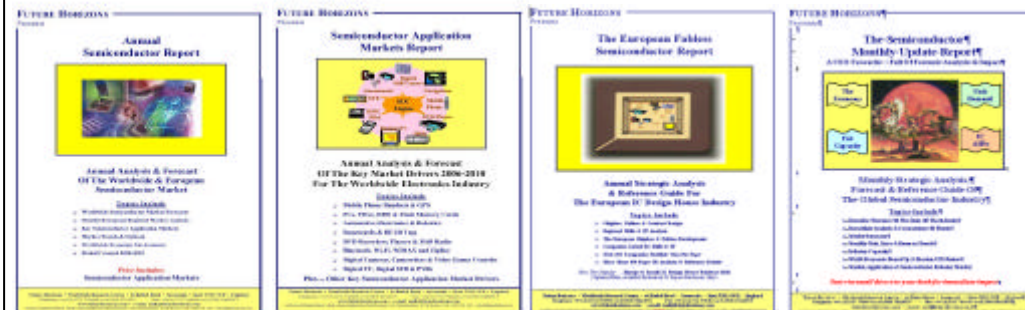
top-quality-analysis@reasonable-prices.now



14

Europe's Leading Semiconductor Industry Analyst

Research Reports



- Full Analysis Of The Key Worldwide Semiconductor Application Markets
- Complete Reference Source On The European Semiconductor Industry
- Monthly Industry Analysis To Keep In Touch With The Underlying Trends
- Fraction Of The Cost of Service Type, Subscription Alternatives
- Convenient Report Format – E-Mail (PDF), Printed (Binder) Or CD-ROM



Forums & Seminars

17th International Electronics Forum
IEF2008 – Dubai, UAE
May 07-09, 2008

5th International Fabless Forum
IFF2007 – Prague, Czech Republic
Oct 10-12, 2007

Silicon Chip Industry Training Seminar
London 2007/2008
Sep 03 / Nov 26 / Mar 17 / Jun 09

Annual Industry Forecast Seminar
London 2008
Jan 29/ Jul 22

(All Seminars Can Be Held In-House If Preferred – Please Call For Details)



Contact Details

www.futurehorizons.com

e-mail: mail@futurehorizons.com

Tel: +44 (0)1732 740440 or (0)7000 TELFUT

Fax: +44 (0)1732 740442 or (0)7000 FAXFUT

**Head Office; Blakes Green Cottage, Stone Street, Near Seal,
Sevenoaks, Kent TN15 0LQ, England**

**Worldwide Research Centre; 44 Bethel Road, Sevenoaks,
Kent TN13 3UE, England**

Plus Affiliates In Japan, Russia & The USA



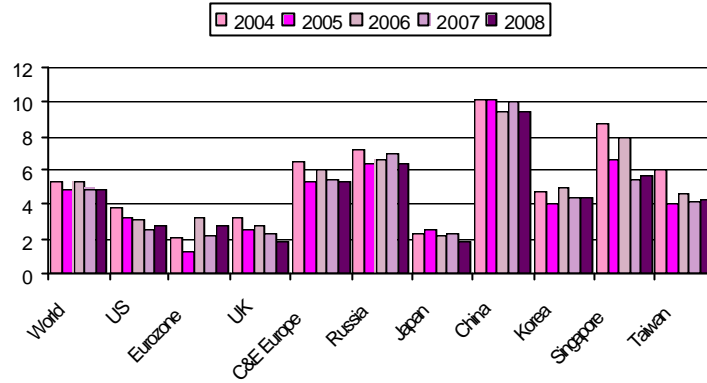
Global Economic Review

**“IFS 2007-MT”
Annual Semiconductor
Industry Forecast Seminar**

Chris Ryan, Industry Analyst



World GDP Regional Trends, 2004-2008



- ❑ Five Successive Years Of Well Above Average Growth Since 2001 “Recession” (2003-07)
- ❑ Global Economy Remains On Track

Continued Robust Growth in 2007 & 2008

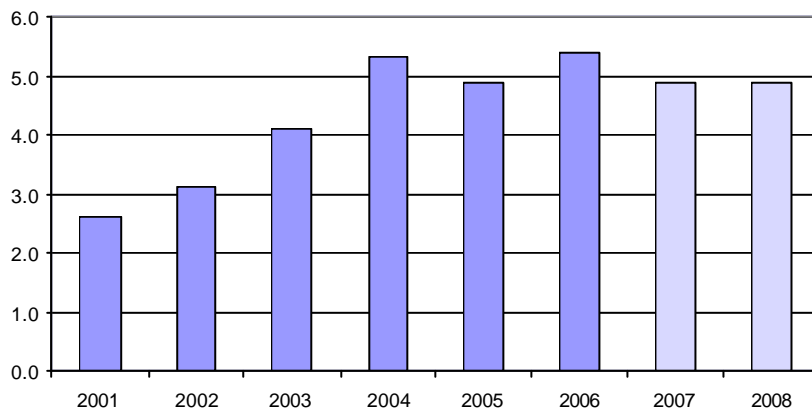
Source: IMF



19

Europe's Leading Semiconductor Industry Analyst

World GDP Growth Trends, 2004-2008



2006 Much Stronger Than Originally Forecast (5.4%)
Continuing Strong In 2007 & 2008 (At 4.9%)
Long-Term Average = 3.4%

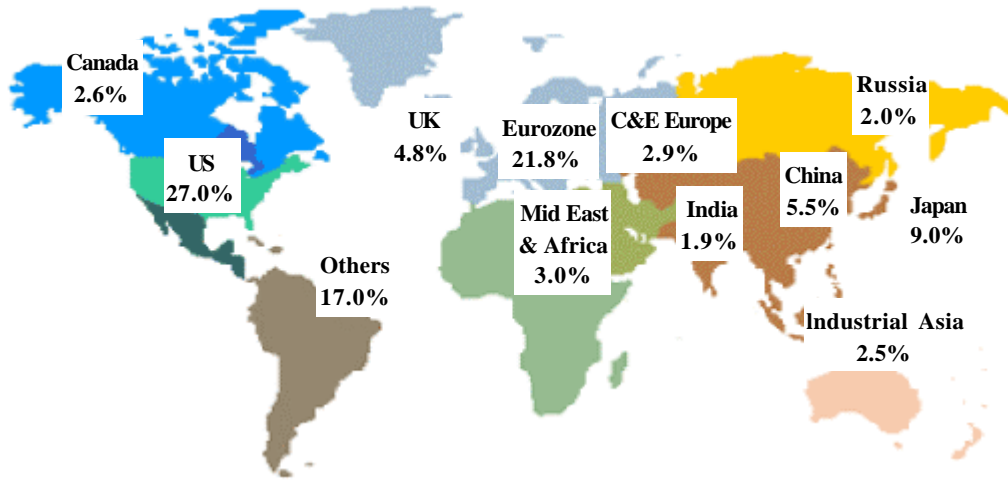
Source: IMF



20

Europe's Leading Semiconductor Industry Analyst

World GDP Country Contributions



2006 World Output (GDP) = US\$48 Trillion

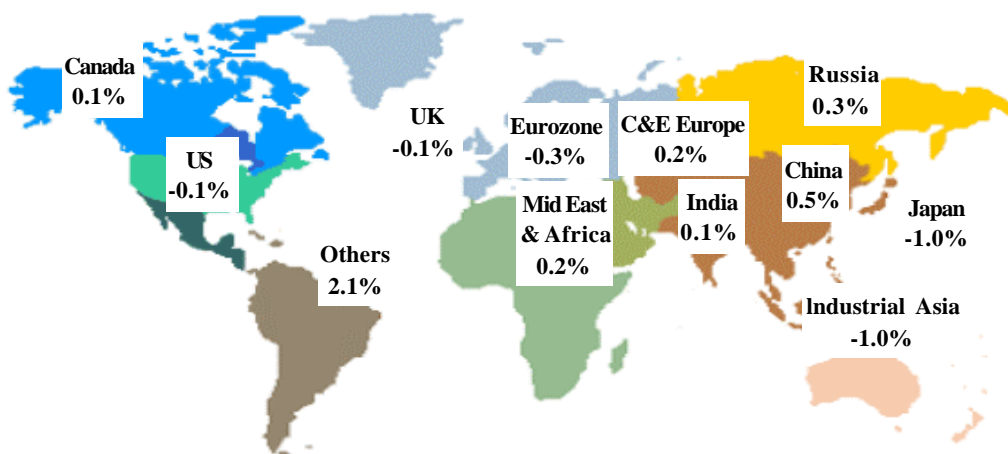
Source: World Bank



21

Europe's Leading Semiconductor Industry Analyst

Percentage Change In Regional GDP Share, 2005-2006



US\$44 Trillion (2005) To US\$48 Trillion (2006)
New Economies Growing At Expense Of Established Regions

Source: World Bank



22

Europe's Leading Semiconductor Industry Analyst

2007 World Economic Outlook

2006 Was 5.4% (Up From 5.1% Sept 2006 Forecast)

May 2007 IMF Forecast Now 4.9% (Up From 4.7% In Sept 2006)

- Despite:**
- Higher Oil Prices
 - Inflation Pressures (Central Banks Intervention)
 - Increasing Interest Rates
 - World Political Uncertainties (Particularly Middle East)
 - Slowing Growth In USA

- Because:**
- Continuing Strength From Emerging Regions
(2-3x Growth Rate Of Established Economies)

Most Recent OECD Reports Project Same Positive Global Outlook

Source: IMF



23

Europe's Leading Semiconductor Industry Analyst

Longer-Term World GDP Growth Issues

- Inevitable Transition To More Flexible Exchange Rate In China
- Sustainability Of Current Chinese (& Other SE Asian) Growth Rates
- Potentially Over-Heated Chinese Stock Market
- Stubbornly High Oil Prices (Compared With US\$20 BC)
- Aging Population (Especially In Established Economies)
- Rising Globalisation Resistance (From Established Economies)
- Environmental Consequences (Of Fast-Growing Emerging Economies)
- Potential Lack Of Fiscal Discipline (In New-World Regions)

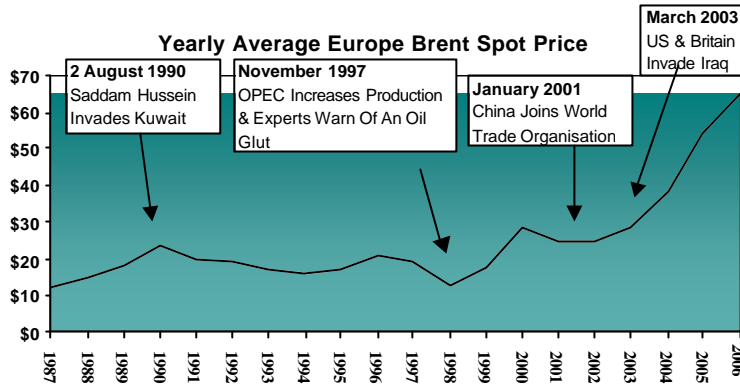
**Nagging GDP Doubts ... Not Yet Impending Disasters
But One Day The Party Will End (Question Is When?)**



24

Europe's Leading Semiconductor Industry Analyst

Historical Oil Price Trend 1987-2006



**Steady Rise In Oil & Other Commodity Prices
(Due To Strong Global Market Demand)**

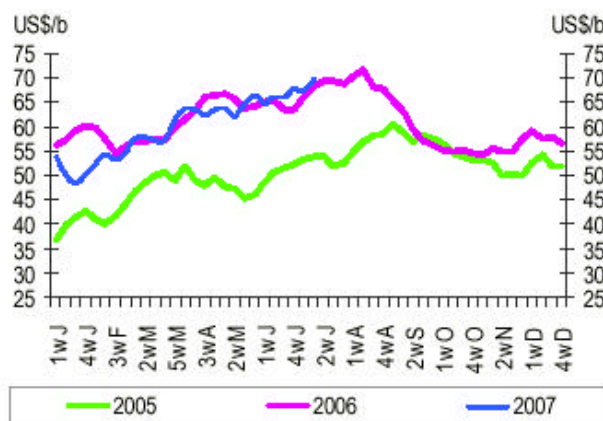


25

Europe's Leading Semiconductor Industry Analyst

Weekly Spot Price Crude Oil

Oil Prices Over US\$78 Per Barrel July 2007



High & Volatile Oil Prices Remain A Significant Global "Worry"

Source: OPEC Monthly Oil Market Report

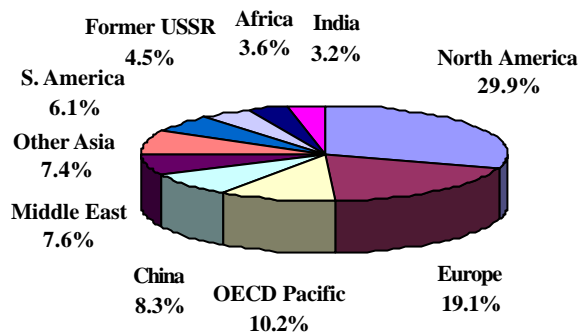


26

Europe's Leading Semiconductor Industry Analyst

Global Oil Demand By Region

(Millions Of Barrels Per Day)



Higher Demand From Growth In China, India, S. America, Other Asia



27

Europe's Leading Semiconductor Industry Analyst

Current Oil Price Factors

- Cyclone In Oman (Bad Weather At Sea)
- Supply Concerns From The Niger Delta
- Strikes In Brazil & Nigeria
- Unresolved Conflicts In Israel & Middle East
- Refinery Output Not Meeting Demand
(Impact Of BP Accident/Environmental Upgrades)
- Tighter Government Control Over Gas & Oil Fields
(Russia, Venezuela & Bolivia)

No Slack Left In The Near-Term Supply Chain

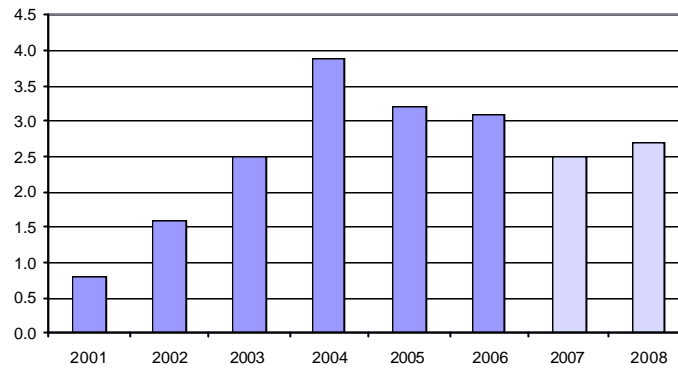
**Interest Rate Rises Will Eventually Cool Long-Term Economic Activity
(And Global Oil Demand)**



28

Europe's Leading Semiconductor Industry Analyst

US GDP History & Outlook 2001-2008



2007 Growth Revised Down By 0.2 Percentage Points

2007 Forecast Now 2.5% (With 2008 At 2.7%)

Source: IMF



29

Europe's Leading Semiconductor Industry Analyst

The US Economy

Slowing Expansion Momentum:

- Interest Rates Up Significantly - Currently 5.25%
(From 1.0% In June 2004)
- High Gasoline & Heating Costs Fuelling Inflationary Pressures
- Weaker Consumer Demand (Due To The Above)
- Continuing Large Current Account Deficit
- Cooling Housing Market (Reducing Building Starts)



30

Europe's Leading Semiconductor Industry Analyst

The US Economy ... Continued

However:

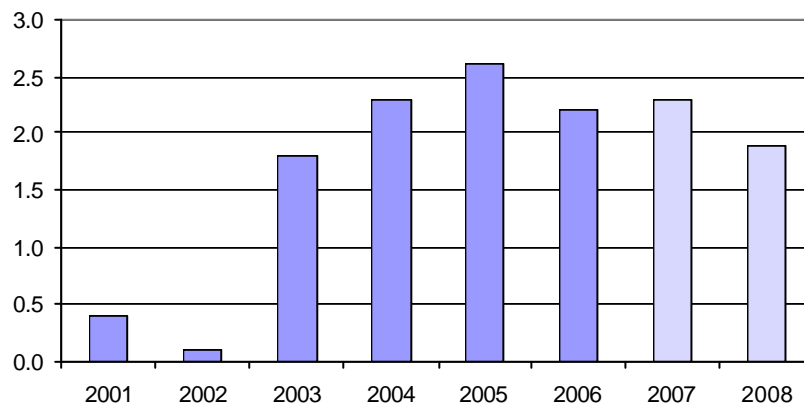
- Equity Gains Have Brought Household Net Worth Back (Following 2001 Stock Market Crash)
- Employment & Income Growth Still Continuing Strong (So Household Cash Flow Is Actually OK)
- Unemployment Steady At 4.5%
- Manufacturing Activity & Productivity Still Rising
- Corporate Investment Offsetting Home Construction Market



31

Europe's Leading Semiconductor Industry Analyst

Japan GDP History & Outlook 2001-2008



2007 Growth Revised Up By 0.2 Percentage Points

2007 Forecast Now 2.3% (With 2008 At 1.9%)

Source: IMF



32

Europe's Leading Semiconductor Industry Analyst

Japan's Economy

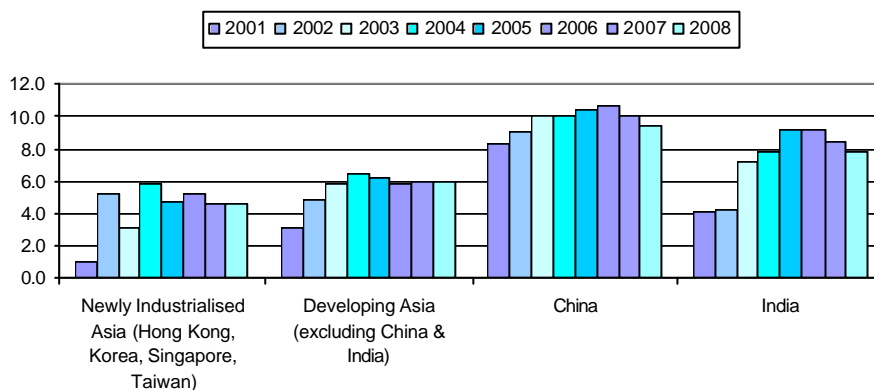
Japan's Economy Is Regaining Momentum :

- ❑ Domestic Demand Growing At A Solid Pace
- ❑ Private Fixed Investment Remains Buoyant
- ❑ Volatility In Currency Markets Back To "Normal" Levels
- ❑ Low Yen Driving Export Growth (Cars)
- ❑ Trade Surplus Rising
- ❑ Economy Back Contributing To Global Economic Growth

**Economy Remains Vulnerable To Adverse External Impacts
(Further Oil Price Rises, Cooling US Economy, Slowdown In China)**



Non-Japan Far East GDP Growth Rates, 2001-2008

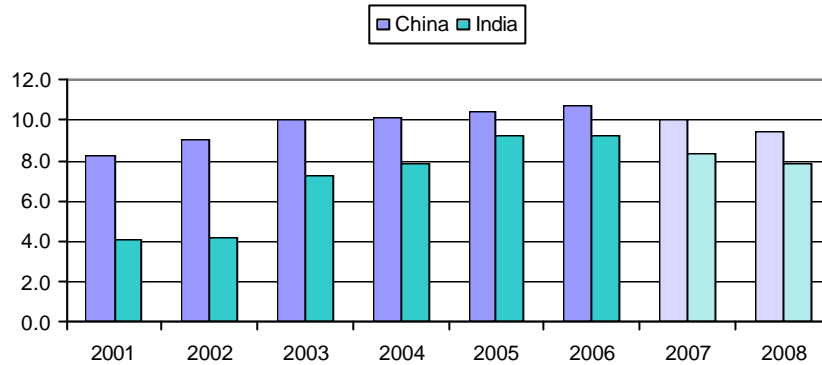


Impact Of Newly Industrialised Economies (Both As A Market & Exporter)

Source: IMF



China & India GDP Growth Rate, 2001-2008



- ❑ Both Regions 2006 GDP Growth Beat IMF's September Predictions
- ❑ China's 2007 Forecast Held At +10%
- ❑ India's 2007 GDP Growth Increased To 8.4% (Up From 7.3%)

Source: IMF



35

Europe's Leading Semiconductor Industry Analyst

China & India Economy

China:

- ❑ Inflation Highest For 27 Months At 3.4 Percent
- ❑ Central Bank Interest Rates Now 3.06% (More Increases In Prospect)
- ❑ Foot & Mouth Disease Causing Food Price Inflation
- ❑ Pension, Health & Education Reforms Boosting Domestic Consumption

India:

- ❑ Inflation Increasing Driven By Oil Prices & Strong Domestic Demand
- ❑ Stock Market Growing Strongly & Investment Flowing In

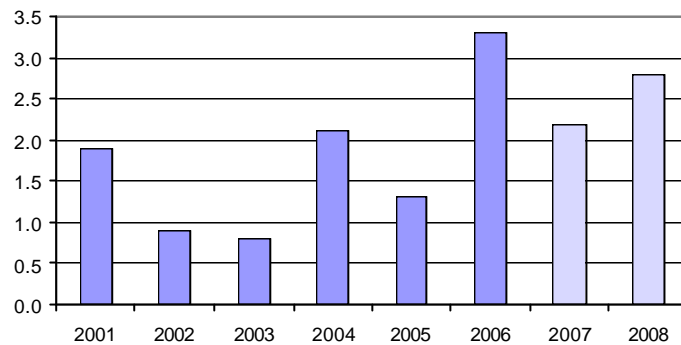
Both Regions Driven By Increasing Internal Demand



36

Europe's Leading Semiconductor Industry Analyst

Eurozone GDP History & Outlook 2001-2008



2007 Growth Revised Down By 0.8 Percentage Points

2007 Forecast Now 2.2% (With 2008 At 2.8%)

Source: IMF



37

Europe's Leading Semiconductor Industry Analyst

Eurozone Economy

Economic Activity Strengthening:

- Fastest GDP Growth For 6 Years
- Robust Business Confidence Could Generate Stronger Investment
- German Export Recovery In Full Swing

However:

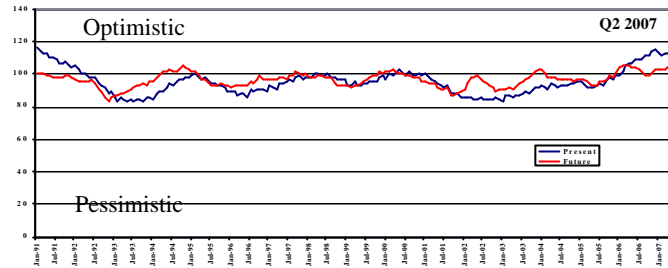
- Further Increases In Energy Prices Will Reduce Disposable Income
- Interest Rates Risen To 4 Percent (Highest Since 2001)
- Impact Of German VAT Rise Seemingly Neutral
- Declining Production Levels & Productivity Growth (Whilst Increasing In The USA)



38

Europe's Leading Semiconductor Industry Analyst

World Economic Climate – Six Month Outlook



**World Business
Confidence
'Above Average'**

- Economically Stable With Robust Business Expansion
- USA Expectations Downgraded & Japan Cooling
- France Business Confidence Poor, But Germany Good & Increasing
- UK Business Confidence Deteriorating
- Brazil Expectations Good & Strengthening
- Slowing Chinese Economy Main Risk To Future Growth
- World Economy Still In 'Upswing Phase' & Less Dependent On USA

Source: Institute For Economic Research/Future Horizons



39

Europe's Leading Semiconductor Industry Analyst

Worldwide Semiconductor Market Outlook

“IFS 2007-MT”
**Mid-Term Semiconductor
 Industry Forecast Seminar**

Malcolm Penn, Chairman & CEO



40

Europe's Leading Semiconductor Industry Analyst

Research Methodology

- **Focus On The Basic Fundamentals**
- **Look For Changes In Industry Characteristics**
- **Analyse Deviations From Long-Term Trends**
- **Analyse Cause Of Cycles, Not 'Best Historical Fit'**
- **Sales Value = Units Sold x Price Sold For**
- **Markets Don't Buy Chips - Only Customers**
- **All Markets Are Finite - They Eventually Saturate**
- **Over Capacity => Meltdown => Revenue Downturn**
- **Look For The Facts Not Hype, Fashion Or Denial**
- **Past Industry Cycles Poor Indicator Of The Future**
- **Good Old-Fashioned Common Sense & Experience**
(Slide Rule Sanity Check Mentality)

Making Sense Of The Tea Leaves

- ❑ **SC Forecasting Is NOT An Exact Science**
- ❑ **Industry Is Driven By Deterministic Chaos**
- ❑ **Picking The Right Number One Year Out Is Luck**
- ❑ **Getting The Underlying Trends Right Is Not**
- ❑ **Decimal Point Forecast Changes Are Meaningless**
- ❑ **As Are 'Monthly' Forecast 'Adjustments'**
- ❑ **Fundamental Supply-Demand Mismatch**
- ❑ **Plus The Inevitable Competitive Punch Ups**
- ❑ **Nobody Ever Said This Industry Was Rational**
- ❑ **Nor Is It Maturing Or For That Matter Homogeneous**
- ❑ **No End In Sight To The Roller-Coaster Dynamics**

Focus On Analysing The Industry Fundamentals



Future Horizons Forecast Track Record

What We Said In January vs What Actually Happened (12 Months Later)

IFS2002 Analysis - No Chance For Recovery:

Forecast 1.4% vs Consensus 'Bounce Back' View (Actual 2.0%)

IFS2003 Analysis - Weak 1H With Strong 2H Recovery

Forecast 18.0% vs Consensus 'Single-Digit' View (Actual 18.8%)

IFS2004 Analysis - Continuing Strong Recovery

Forecast 32.0% vs Consensus 'Low Double-Digit' View (Actual 28.0%)

IFS2005 Analysis - Pause Not Recession, 2003 Re-Run

Forecast 15.0% vs Consensus 'Minus-Low Growth View (Actual 6.8%)

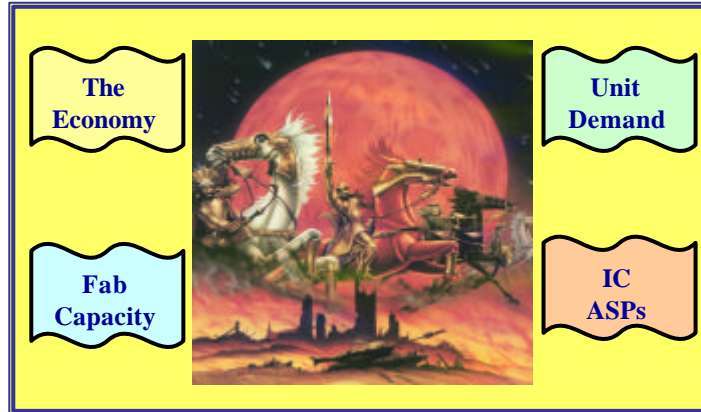
IFS2006 Analysis - Continuing Strong Recovery, 2004 Re-Run

Forecast 20.0% vs Consensus 'Low Growth' View (Actual -10%)

2006 Was A Price (Not Demand) Problem

- DRAM Price War Q1-2006 (Over By Q2)
- MPU Price War Q1-2006 (Still Ongoing)
- Three Quarter Delay To The IC ASP Recovery

What Does The Future Hold For 2007-08 ?



Consensus Calls For '+2% Growth' In 2007
FH View ... +6% More Likely

The Four Semiconductor Apocalypse Horsemen

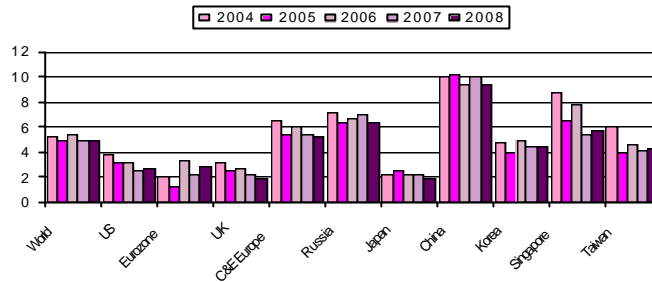


**The
Economy**

#1 (Economy) - World GDP Growth Trends

Global Economy Is Proving Remarkably Resilient

(Despite Disease, Corporate Scandals, Natural Disasters, Terrorist Attacks, Wars, Bird Flu & Soaring Oil Prices)



Current IMF 2007 Forecast Is Now +4.9% (4.9% For 2008)

- ❑ 2007 Is Turning Out BETTER Than Expected (Nov 2006 Forecast Was 4.7%)
- ❑ Deliberate Slowing In 2006/07 To Avoid Global Crash (Inflation/Overheating)
- ❑ 2004-07 Oil Price Rise Taken In Its Stride (Business & Consumers)
- ❑ 2006-07 Has Seen The Economic Emphasis Change (From Consumer To Business)

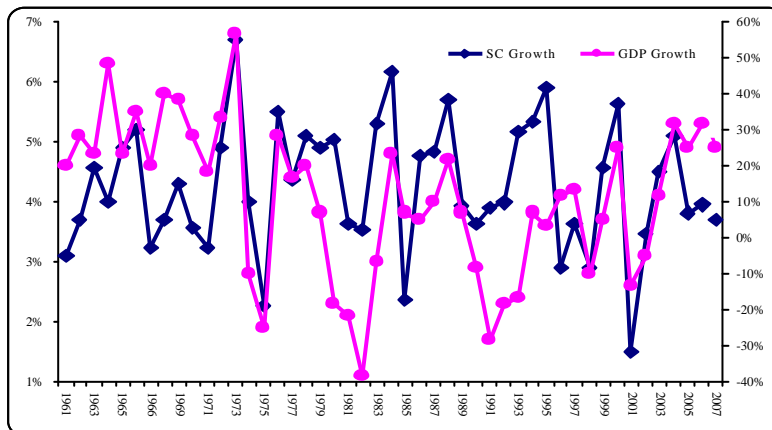
Source: IMF (March 2007 Report)



47

Europe's Leading Semiconductor Industry Analyst

World GDP & SC Market Growth Comparison



The Correlation Is Strong (But Not Perfect)
A Continuing Strong Economy Is Good News For The Chip Market

Source: IMF, WSFS, Future Horizons



48

Europe's Leading Semiconductor Industry Analyst

So ... Just How Good Is The IMF GDP Forecast?

12 Year Track Record
 Apart From Failing To Forecast Two Economic Disasters 18 Months Out (No-One Did) Their Forecasts Have Been Consistently Accurate Or Conservative, **NEVER** Optimistic

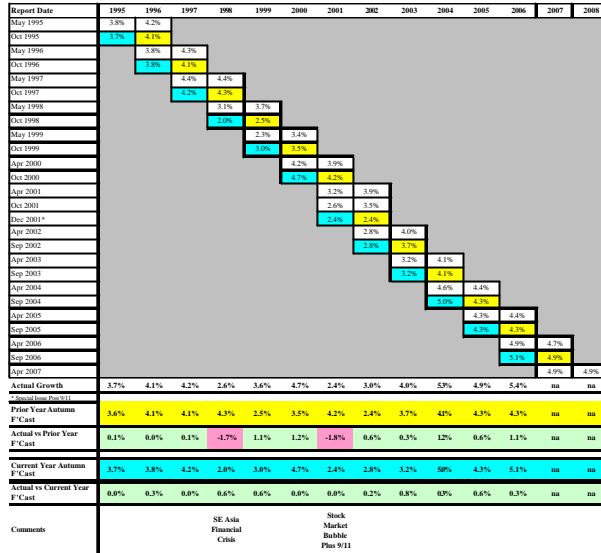
Autumn Current Year View vs Actual

Autumn Next Year View vs Actual

Forecast Correct/Conservative

Forecast Proved Too Optimistic

Forecast Twice Yearly (Spring/Autumn)
 Forecast Current & Following Year
 Four Shots For Each Year's Forecast



Source: IMF Future Horizons



49

Europe's Leading Semiconductor Industry Analyst

World GDP Growth Rates By Region

GDP Growth Rate	2005	2006	2007F	2008F	GDP Growth Rate	2005	2006	2007F	2008F
US	3.2%	3.3%	2.2%	2.8%	China	10.4%	10.7%	10.0%	9.5%
Japan	1.9%	2.2%	2.3%	1.9%	India	9.2%	9.2%	8.4%	7.8%
Euro Area	1.4%	2.6%	2.3%	2.3%	CIS	6.6%	7.7%	7.0%	6.4%
UK	1.9%	2.7%	2.9%	2.7%	Singapore	6.6%	7.9%	5.5%	5.7%
C&E Europe	5.5%	6.0%	5.5%	5.3%	C&E Europe	5.5%	6.0%	5.5%	5.3%
CIS	6.6%	7.7%	7.0%	6.4%	World	4.9%	5.4%	4.9%	4.9%
Korea	4.2%	5.0%	4.4%	4.4%	Korea	4.2%	5.0%	4.4%	4.4%
Taiwan	4.0%	4.6%	4.2%	4.3%	Taiwan	4.0%	4.6%	4.2%	4.3%
Singapore	6.6%	7.9%	5.5%	5.7%	Brazil	2.9%	3.7%	4.4%	4.2%
China	10.4%	10.7%	10.0%	9.5%	US	3.2%	3.3%	2.2%	2.8%
India	9.2%	9.2%	8.4%	7.8%	UK	1.9%	2.7%	2.9%	2.7%
Brazil	2.9%	3.7%	4.4%	4.2%	Euro Area	1.4%	2.6%	2.3%	2.3%
World	4.9%	5.4%	4.9%	4.9%	Japan	1.9%	2.2%	2.3%	1.9%

It's The New Economies That Are Now Driving World GDP

The Market's No Longer Traditionally Japan, N America & W Europe

- It Now Encompasses The Whole Asian Rim, China, Eastern Europe & India
- A Middle Class Market Growth From 500 Million To Three Billion People

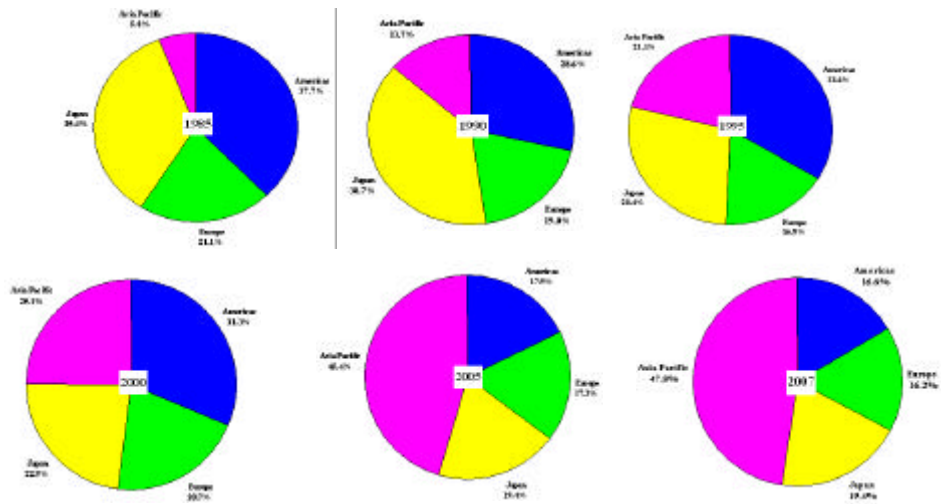
Source: IMF (April 2007)



50

Europe's Leading Semiconductor Industry Analyst

“Go East Young Man” ... Home Is NOT Where The Heart Is



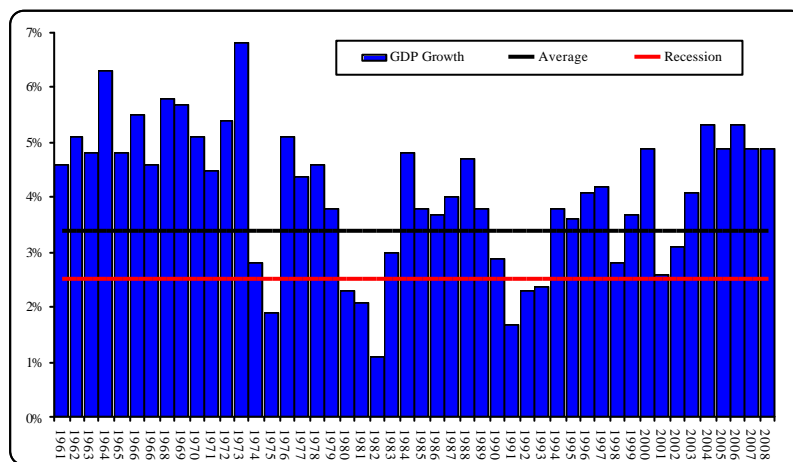
Source: WSTS/Future Horizons



51

Europe's Leading Semiconductor Industry Analyst

World GDP Growth Rate Trends



Question: How Long Will The Economic Boom Last This Time ?
(If The Economy Collapses It WILL Take The Chip Market With It)

Source: IMF



52

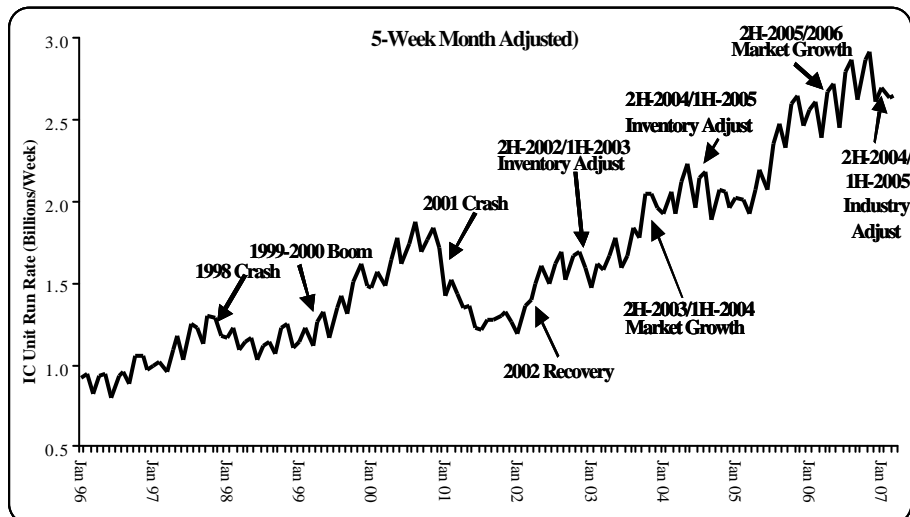
Europe's Leading Semiconductor Industry Analyst

The Four Semiconductor Apocalypse Horsemen



Unit Demand

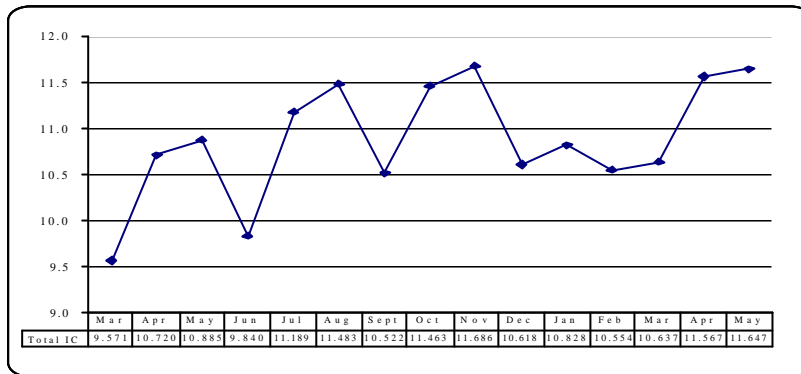
#2 (Unit Demand) - Worldwide Monthly Shipment Trends



IC Unit Shipments – 1999-2007 YTD (Billions)

(5-Week Month Adjusted)

IC Unit Shipments = IC Unit Demand \pm Inventory Adjust



**IC Unit Growth Bouncing Back
(From Q4-06/Q1-07 Inventory Adjust/Seasonal Slackness)**

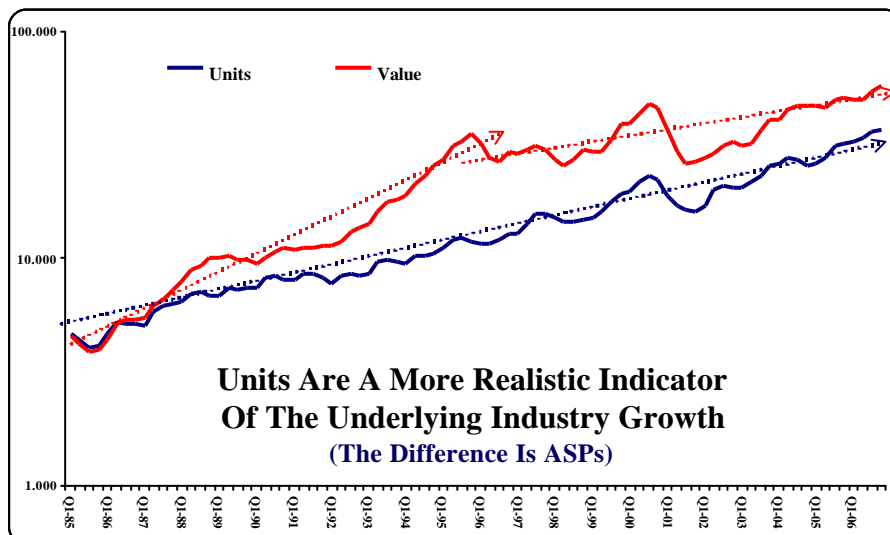
Source: WSTS/Future Horizons



55

Europe's Leading Semiconductor Industry Analyst

Long-Term IC Unit Growth Trends



Source: WSTS/Future Horizons



56

Europe's Leading Semiconductor Industry Analyst

IC Unit Demand

(The Chip Market Equivalent Of Heisenberg's Uncertainty Principle)



In Theory It's Easy

Production Demand = BOM x Quantity To Be Built

Except For The Added Complication That

Units Bought = Production Demand ± Inventory Adjust

**Plus There's No Real End Market Demand/Supply Chain Visibility
And Demand Changes In Days, Whereas Supply Takes Several Months**

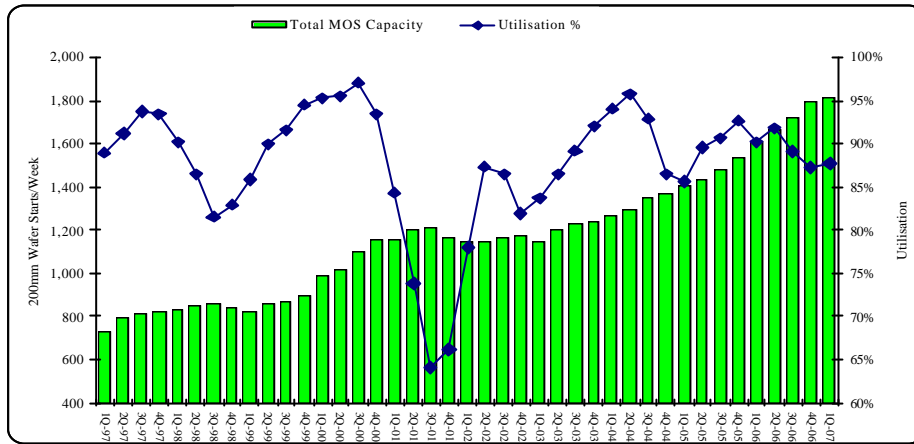


The Four Semiconductor Apocalypse Horsemen



**Fab
Capacity**

#3 (Fab Capacity) - Supply/Demand Balance



**Impossible To Balance But
Utilisation Rates Are Back On A Climb**

Source: WSTS/SICAS/Future Horizons



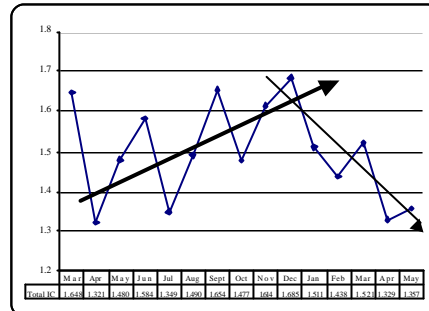
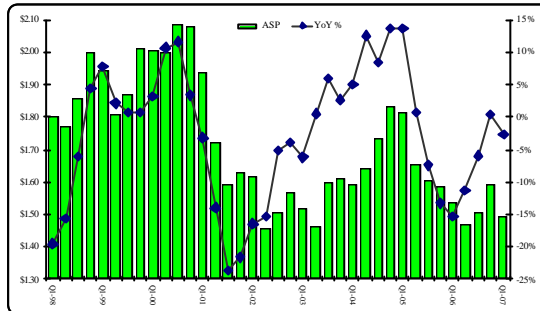
The Four Semiconductor Apocalypse Horsemen



**IC
ASPs**



#4 (IC ASPs) - An Enigma Wrapped Up In Riddle



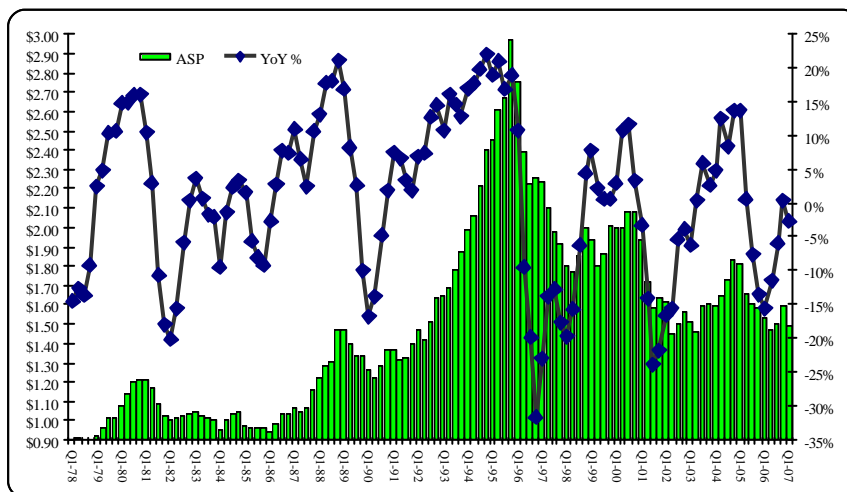
- ASPs Are Driven By New IC Designs ...That Takes Time (2-3 Years)
- Post 2001 Value Recovery Delayed One Year (130nm Impact)
- ASPs Are The Perennial Industry Wild Card
- ASP Recovery Definitely 'Wobbled' In Q1-07 (Q2-07)
- The Past 6-Months Have Been Brutal (Price Wars / Seasonality)



61

Europe's Leading Semiconductor Industry Analyst

"Wobbles Happen"



There's Still A Lot Of ASP Recovery Road In Prospect

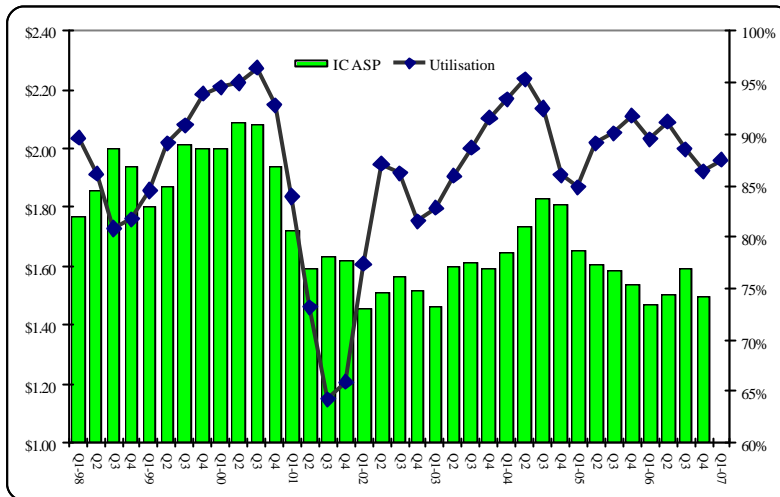


62

Europe's Leading Semiconductor Industry Analyst

IC ASP vs Capacity Utilisation

(Slipped One Quarter)



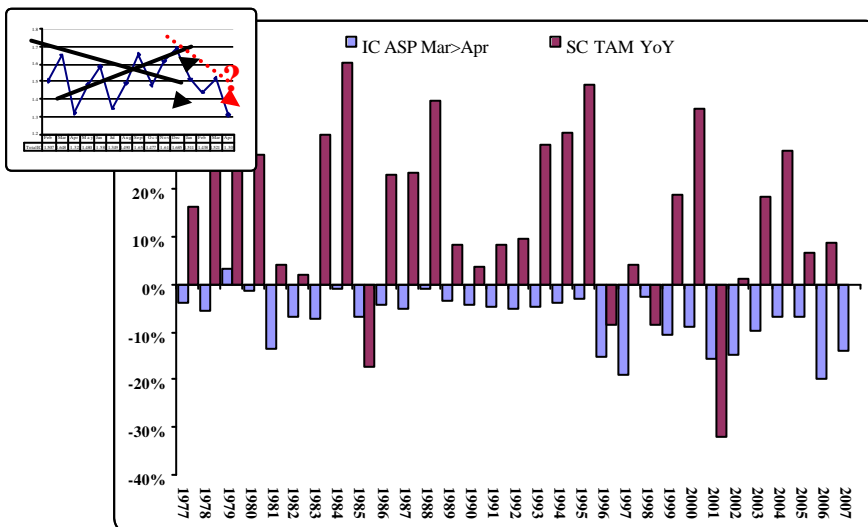
Source: WSTS/Future Horizons



63

Europe's Leading Semiconductor Industry Analyst

What About The Q1 IC ASP Trends ...



Source: WSTS/Future Horizons

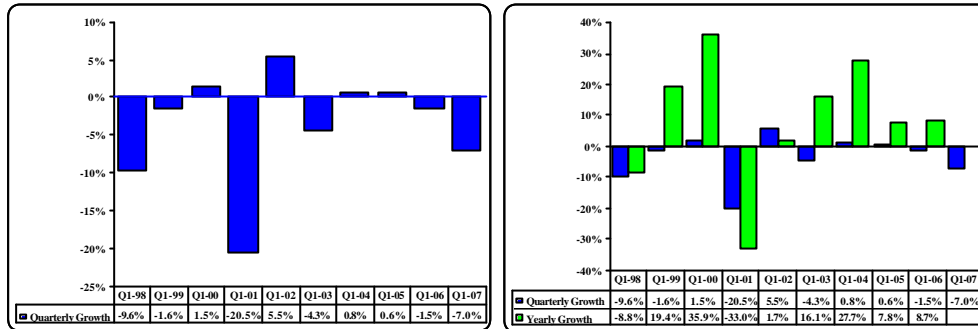


64

Europe's Leading Semiconductor Industry Analyst

Q1-07 Results In Perspective

Q1 Is Always Seasonally Weak ... Was 2007 Better/Worse Than Normal?
Does Q1 Give Guidance To The Year As A Whole?



Unfortunately No – Neither in Direction Nor Magnitude



65

Europe's Leading Semiconductor Industry Analyst

2007 Forecast Scenarios (ICs)

January Forecast		
Q1-06	\$55,678	
2006	\$209,510	
Q1-07	\$55,121	-1.0%
Q2-07	\$55,950	1.5%
Q3-07	\$59,706	6.7%
Q4-07	\$62,094	4.0%
2007	\$232,872	11.2%

Worse Case (No 2H Recovery)		
Q1-06	\$55,678	
2006	\$209,510	
Q1-07	\$51,770	-7.0%
Q2-07	\$51,250	-1.0%
Q3-07	\$55,350	8.0%
Q4-07	\$57,011	3.0%
2007	\$215,381	2.8%

Median 1 (Modest Recovery)		
Q1-06	\$55,678	
2006	\$209,510	
Q1-07	\$51,770	-7.0%
Q2-07	\$51,250	-1.0%
Q3-07	\$56,068	9.4%
Q4-07	\$58,871	5.0%
2007	\$217,958	4.0%

Median 2 (Strong Recovery)		
Q1-06	\$55,678	
2006	\$209,510	
Q1-07	\$51,770	-7.0%
Q2-07	\$51,250	-1.0%
Q3-07	\$57,503	12.2%
Q4-07	\$61,528	7.0%
2007	\$222,050	6.0%

High End (2003 Re-Run)		
Q1-06	\$55,678	
2006	\$209,510	
Q1-07	\$51,770	-7.0%
Q2-07	\$51,250	-1.0%
Q3-07	\$58,938	15.0%
Q4-07	\$64,242	9.0%
2007	\$226,199	8.0%

2007 Forecast Range Is +2.8% To +8.0%

Our Best Guess Is +6%
(Median 2 - Strong 2H-07 Recovery)

Source: WSTS, ICAS, Future Horizons



66

Europe's Leading Semiconductor Industry Analyst

Worldwide Semiconductor Market By Product - Forecast

WW TAM	2006	2007	2008	2009	2010	2011	CAGR	CAGR
							06>11	01>11
MOS Memory	58,473	60,166	69,942	71,341	79,188	92,175	9.5%	14.0%
MOS Micro	53,939	64,838	76,011	79,811	87,792	99,178	13.0%	8.1%
MOS Logic	60,158	58,146	69,973	74,962	84,707	98,260	10.3%	15.0%
Analogue	36,940	38,905	45,907	48,662	54,385	61,999	10.9%	10.3%
Bipolar Digital	na	na	na	na	na	na	na	na
Discrete/Sensors	21,926	22,148	23,032	26,246	30,481	33,034	8.5%	9.7%
Opto	16,280	16,028	16,509	18,472	21,081	22,472	6.7%	11.8%
Total	247,716	260,231	301,374	319,494	357,634	407,118	10.4%	11.3%

WW TAM	2006	2007	2008	2009	2010	2011
MOS Memory	20.6%	2.9%	16.2%	2.0%	11.0%	16.4%
MOS Micro	0.7%	20.2%	17.2%	5.0%	10.0%	13.0%
MOS Logic	5.6%	-3.3%	20.3%	7.1%	13.0%	16.0%
Analogue	16.1%	5.3%	18.0%	6.0%	11.8%	14.0%
Bipolar Digital	na	na	na	na	na	na
Discrete/Sensors	11.1%	1.0%	4.0%	14.0%	16.1%	8.4%
Opto	10.1%	-1.5%	3.0%	11.9%	14.1%	6.6%
Total	9.9%	5.1%	15.8%	6.0%	11.9%	13.8%



67

Europe's Leading Semiconductor Industry Analyst

2007-2008 Outlook

- No Change To Our IFS2007-08 Analysis
(If Anything The Fundamentals Are Stronger)**
- The Global Economic Outlook Is Stronger**
- Fab Capacity Expansion Remains Measured**
- Inventory Is As Controlled As It Gets**
- Industry Reacts Faster To Capacity / Inventory**
- Robust PC Market (Other Than Mis-Management Issues)**
- Cell Phone Replacement Cycle Decreasing**
- Continuing Strong End Market For New Consumer Gadgets**
- Price Wars Impacted MPU & Memory Markets**
- The YoY Maths Has Been Negatively Impacted**
- The Balance Leans To The Upside, Depending On ASPs**



68

Europe's Leading Semiconductor Industry Analyst

Danger Signs To Watch

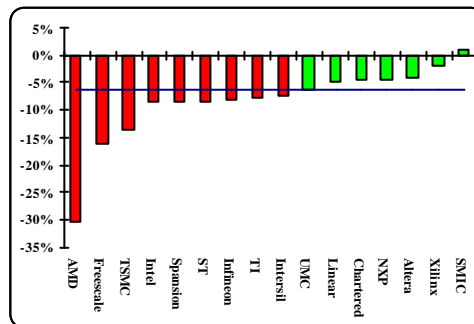
- ❑ Capacity - It's Hard To See How This Can Spoil 2007, Provided Unit Growth Holds Up (Need To Watch Cap Ex)
- ❑ Demand - Current IC Unit Demand Is Sustainable Provided Provided The Economy Holds Up (Need To Watch Inventory)
- ❑ Economy - Current Outlook Continues Good, But Risks All On The Downside (If It Does Tank, Run For The Life Boats)
- ❑ ASPs – Always The Industry's First Line Of Defence (ASPs Can Still Derail Q3/Q4, But At Least Memories Are Recovering)

Q1-07 Winners & Losers (Sampling)

Q1 Sales	Q4>Q1	Market
AMD	-30.5%	-6.5%
Freescale	-16.0%	-6.5%
TSMC	-13.4%	-6.5%
Intel	-8.7%	-6.5%
Spansion	-8.7%	-6.5%
ST	-8.4%	-6.5%
Infineon	-8.0%	-6.5%
TI	-7.9%	-6.5%
Intersil	-7.4%	-6.5%
UMC	-6.2%	-6.5%
Linear	-4.8%	-6.5%
Chartered	-4.5%	-6.5%
NXP	-4.4%	-6.5%
Altera	-3.9%	-6.5%
Xilinx	-2.0%	-6.5%
SMIC	1.2%	-6.5%

Losers

Winners



Q1 vs Q4 (ICs): Value -7.0% (-1%)

Units -0.8% (-2%)

ASP -6.3% (+1%)

(ASP Problem Was In Mem/MCU/Analog)

You Can't Blame The Market ... It's All About Products & Positioning

Q1-07 Losers Lament

"The Challenging Conditions In The "XYX" Market Negatively Impacted Our Overall First Quarter Results"

We Screwed Up Big Time ... Don't Blame The Market

"We Plan To Target Niche Markets With High Growth Potential"

Get Real ... High Growth Potential Equals Eventual Commodity

"We're Going Fab-Lite At 45nm"

We're Really Going Fabless But We Don't Want To Admit It

"Overly Bureaucratic Corporate Structure Slows Down The Organisation Whilst Others Clone Its Ideas & Best-In Class Practices"

Enter The Quick Fix / Fast Buck / 'Bean Counter' Strategy

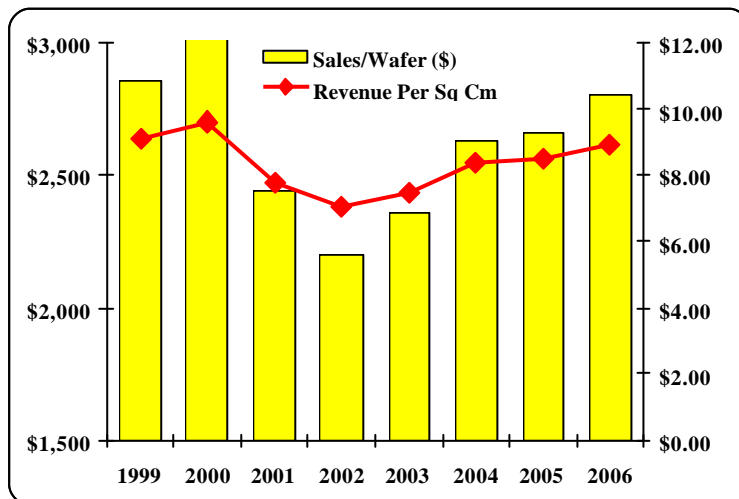
No Short Cuts To Commercial Semiconductor Success



71

Europe's Leading Semiconductor Industry Analyst

Industry Profitability – '\$9 Bucks/Square Cm'



This Is A Cost NOT Value Driven Industry

Source: SEMI/Future Horizons



72

Europe's Leading Semiconductor Industry Analyst

IDM Going Fabless Is Going To Be Tough

**Big Companies Don't Downsize Easily
(Corporate Legacy ... The Dinosaur Effect)**

**Going "Fablite" (From IDM) Is Arguably More Of A
Long-Term Risk Than Building A New Wafer Fab**

The 2015 Top 10 WILL Be Radically Different

"The Times They Are A'Changing"



AS Is The Impact On The Industry Supply Chain

Decade	SC 1.0	SC 2.0	SC 3.0	SC 4.0	SC 5.0	SC 6.0	SC 7.0
Rank	1955	1965	1975	1985	1995	2005	2015
1	Hughes	TI	TI	NEC	Intel	Intel	?
2	Transitron	Motorola	Hitachi	TI	NEC	Samsung	?
3	Philco	Fairchild	Philips	Motorola	Toshiba	TI	?
4	Sylvania	GE	NSC	Hitachi	Hitachi	Toshiba	?
5	TI	RCA	Intel	Toshiba	Motorola	ST	?
6	GE	Sprague	Motorola	Fujitsu	Samsung	Infineon	?
7	RCA	Philco Ford	NEC	Philips	TI	Renesas	?
8	Westinghouse	Philips	Fairchild	Intel	IBM	TSMC	?
9	Motorola	Transitron	RCA	NSC	Mitsubishi	Sony	?
10	Clevite	Raytheon	GE	Matsushita	Philips	Philips	?
Total	\$75	\$1,528	\$4,012	\$21,479	\$144,404	\$227,484	?
Driver	Discretes	Std Logic	MOS	CMOS	MPU	SoC	?

Decade	SC 4.0	SC 5.0	SC 6.0	SC 7.0
Rank	1985	1995	2005	2015
1	C&T	Xilinx	Qualcomm	?
2	Lattice	Altera	Broadcom	?
3	Exar	S3	Nvidia	?
4	Altera	Alliance	Sandisk	?
5	Xilinx	Cyrix	ATI	?
Fabless	\$110	\$2,650	\$32,800	?
% TAM	<1%	2%	15%	?
Driver	PC	Telecom	Mobile	?

**Ten Years
(5 Moore's Law Cycles)
Is A Lifetime In This Industry**

What A Difference A Decade Makes



Industry Capacity

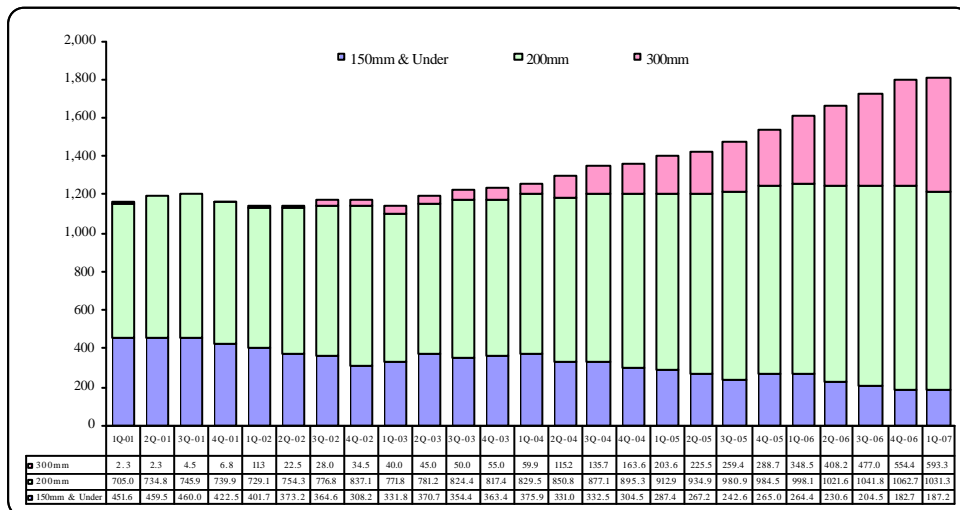
“IFS 2007-MT” Mid-Term Semiconductor Industry Forecast Seminar

Malcolm Penn, Chairman & CEO



Wafer Fab Capacity Trends – By Wafer Size

200mm Equivalent Wafer Starts/Week (k)

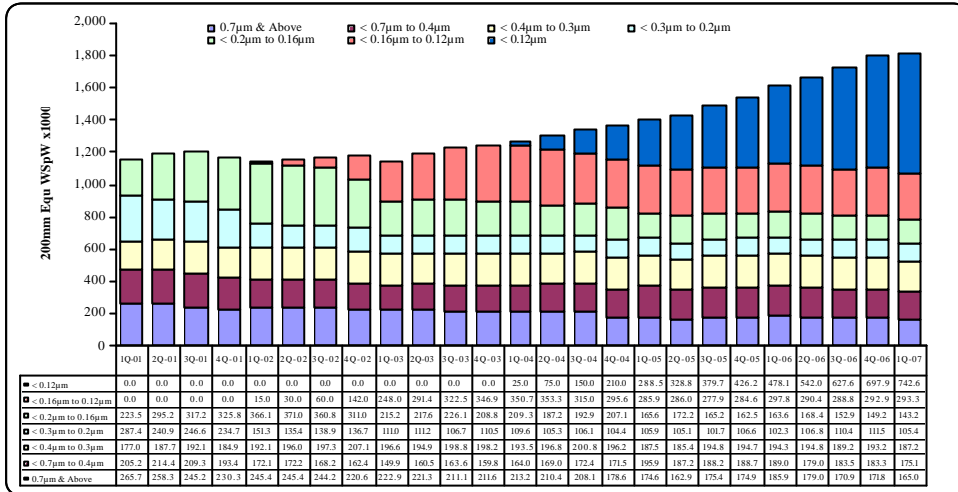


Source: SICAS/WSTS Future Horizons



Wafer Fab Capacity Trends – By Feature Size

200mm Equivalent Wafer Starts/Week (k)

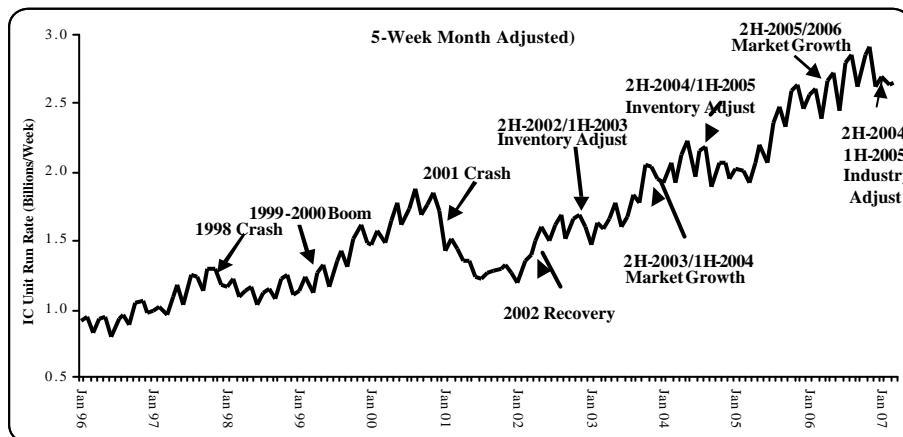


New Capacity Comes On Stream Remarkably Smoothly

Source: SICAS/WSTS/Future Horizons



Monthly IC Unit Shipments



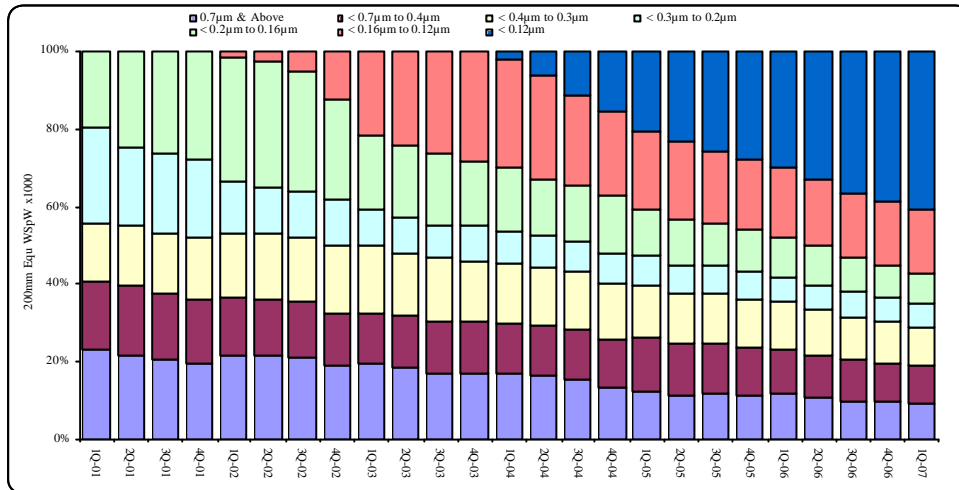
- Which Is More Than Can Be Said For The Unit Demand
- Monthly Run Rate Varies Dramatically From The Trend Line
- Mismatch Makes It 'Feel' Capacity Expansion Is Out Of Control

Source: WSTS/Future Horizons



Wafer Fab Capacity Trends – Market Share

200mm Equivalent Wafer Starts/Week (k)

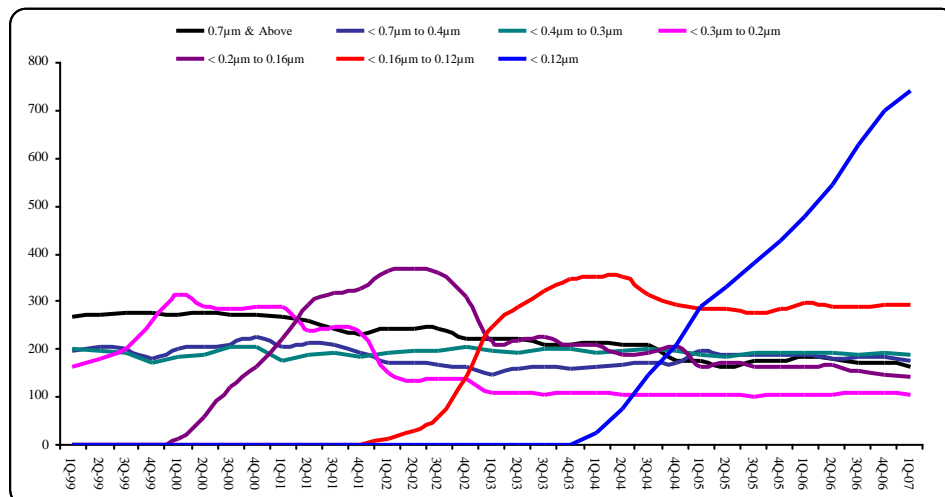


Source: SICAS/WSTS/Future Horizons



Wafer Fab Capacity Trends – By Technology Ramp

200mm Equivalent Wafer Starts/Week (k)

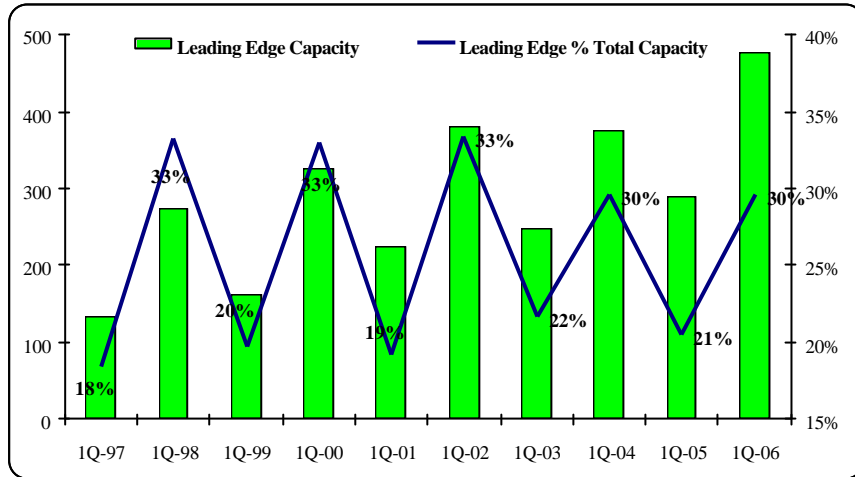


Source: SICAS/WSTS/Future Horizons



Wafer Fab Capacity Trends – Leading Edge Capacity

200mm Equivalent Wafer Starts/Week (k)



Source: SICAS/WSTS/Future Horizons

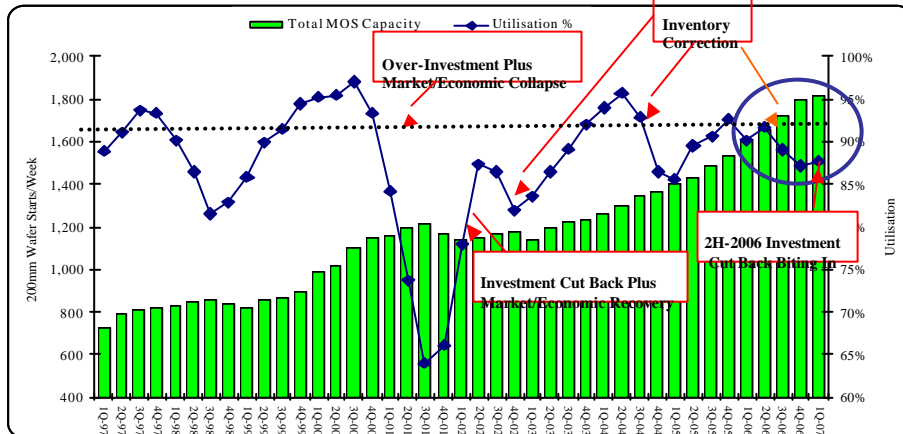


81

Europe's Leading Semiconductor Industry Analyst

The Underlying Capacity Utilisation Trends Are Good

The 2004/05 Reduction Was Temporary NOT Structural (Inventory Burn)



Utilisation Is Increasing – Demand Plus Investment Cutbacks

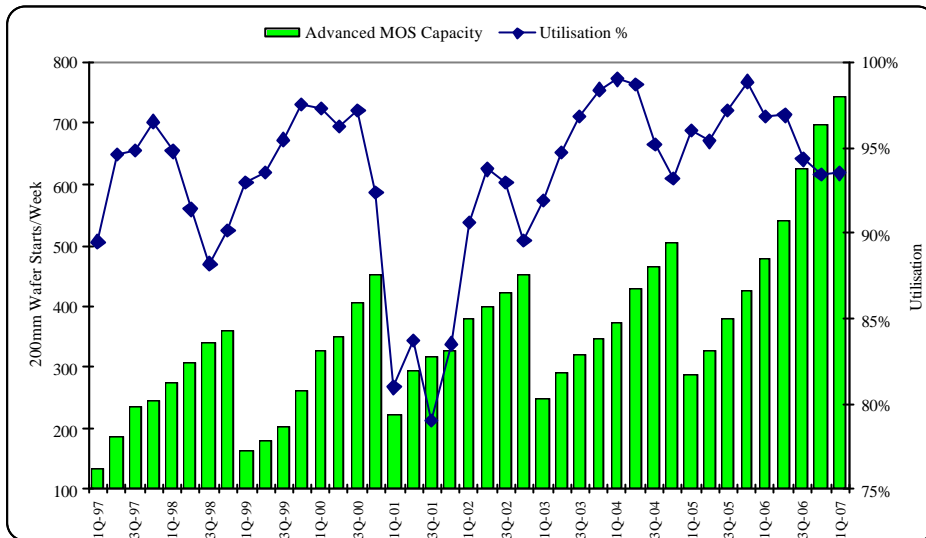
Source: SICAS/Future Horizons



82

Europe's Leading Semiconductor Industry Analyst

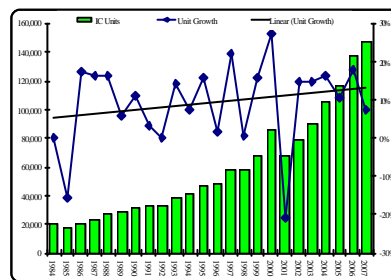
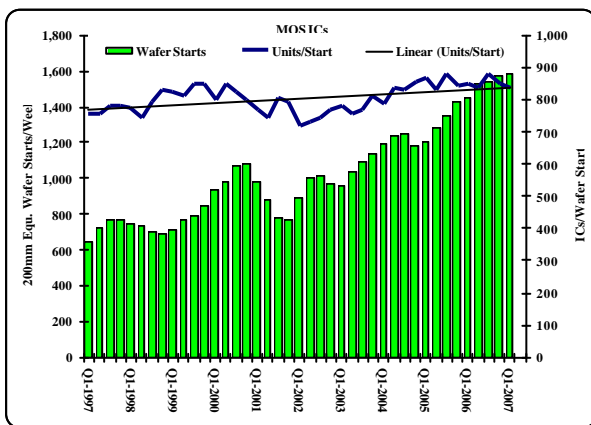
Leading Edge Remains “Fully Utilised”



Source: SICAS/WSTS/Future Horizons



Total IC Units/Wafer Start ... An Industry ‘Constant’

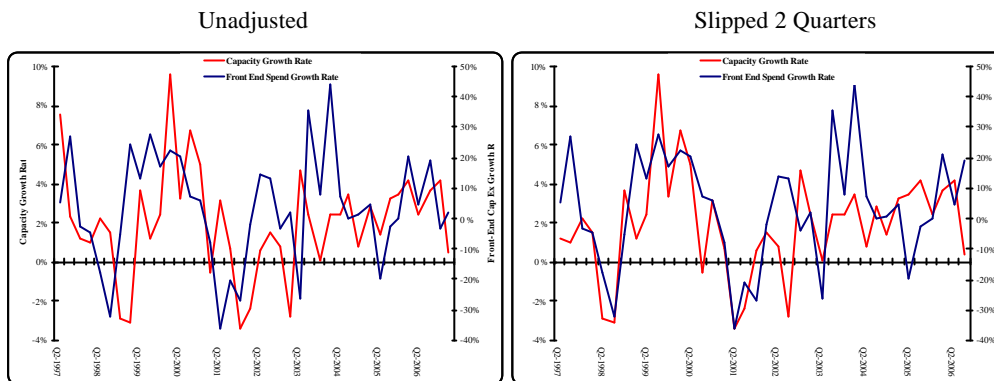


**Technology Does NOT Significantly Increase Capacity
It Simply Enables Increased Complexity (Moore's Law)
Fab Capacity Needs Are Driven By '10%/Year' IC Unit Growth**

Source: SICAS/WSTS/Future Horizons



New Capacity Vs Wafer Fab Cap Ex Spend



Buy It Today Means Capacity On Line Two Quarters Later

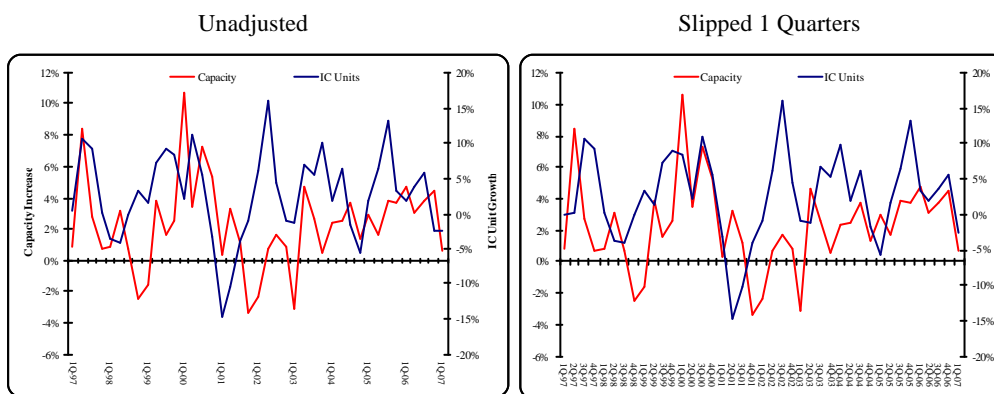
Source: SEMI/SICAS/Future Horizons



85

Europe's Leading Semiconductor Industry Analyst

IC Units Out Vs New Capacity



New Capacity Today Means Units Out One Quarter Later

Source: WSTS/SEMI/Company Reports/Future Horizons



86

Europe's Leading Semiconductor Industry Analyst

Manufacturing Basics

- ❑ Wafer Fab Cap Ex = 70% Total Equipment Cap Ex
- ❑ Total Equipment Cap Ex = 85% Of The Total Cap Ex
- ❑ Wafer Fab Cap Ex = Additional Capacity Two Quarters Later
- ❑ Additional Capacity = IC Units Out One Quarter Later
- ❑ Add One Quarter Lead Time For Wafer Fab Book To Bill

The Bottom Line

**Kit Ordered Today Equals Units Out One Year Later
(And That's Only If Everything Works Like A Dream)**

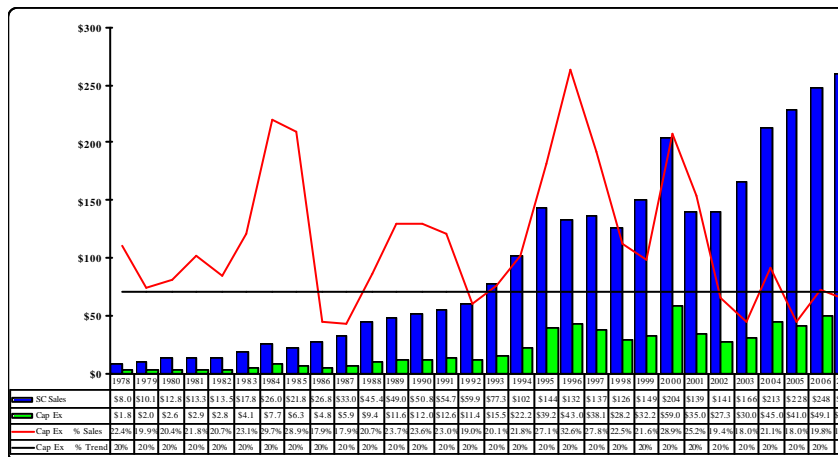
Source: SICAS/WSTS/Future Horizons



87

Europe's Leading Semiconductor Industry Analyst

Semiconductor Capital Spend



So Far It's Remarkably Restrained (Memory Aside)

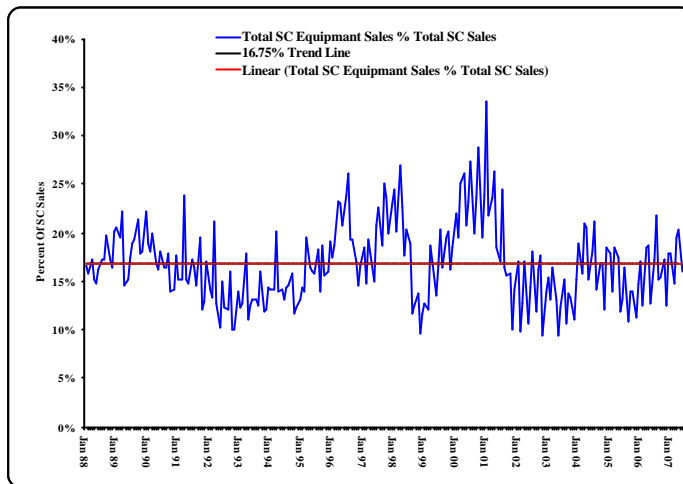
Source: WSTS/SEMI/Company Reports/Future Horizons



88

Europe's Leading Semiconductor Industry Analyst

SC Equipment Investment Trends ... 16.75% Sales



Right On '20 Year' Average ... Steady As She Goes

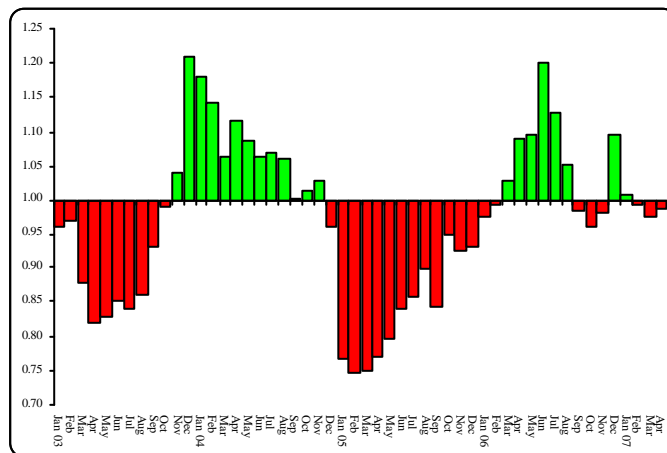
Source: SEMI/Future Horizons



89

Europe's Leading Semiconductor Industry Analyst

Front End Book-To-Bill



With The Medium-Term Outlook Looking Very Good

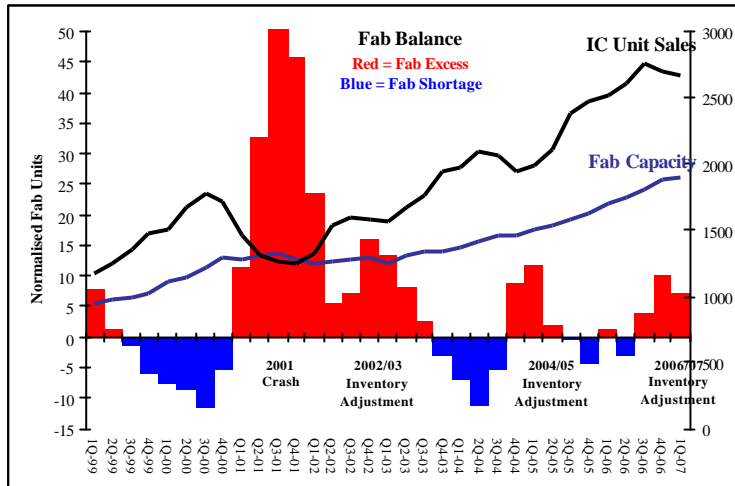
Source: SEMI/Future Horizons



90

Europe's Leading Semiconductor Industry Analyst

Wafer Fab Supply & Demand



Current Excess Capacity Will Dissipate 2H-2007

Source: SICAS/WSTS/Future Horizons



91

Europe's Leading Semiconductor Industry Analyst

2007-08 Outlook

- Currently At/Under The Investment Trend Line
- Investment Chases Unit Growth (But Lagged By Three Quarters)
- Undershoot Unavoidable In 2H-2007 (1H-2008)
- Utilisation Rates Will Increase Through Q4-07
- Strong Bounce Back Anticipated In Second Half Of Year
- 2007 Capacity Has Already Been Determined
- Low Cap Ex Expectations For 2007 ('Flat')
- This Is In Synch With Forecast Single Digit IC Unit Growth
- Unlikely To Change Before Q4-2007 Time Frame (Q3 Results)
- First-Half 2008 Expansion Thus Also Looking Good
- Has Industry *Finally* Got Cap Ex Under Control???
- Can Industry Walk The Supply-Demand Tight Rope In 2007/08?



92

Europe's Leading Semiconductor Industry Analyst

Application Markets

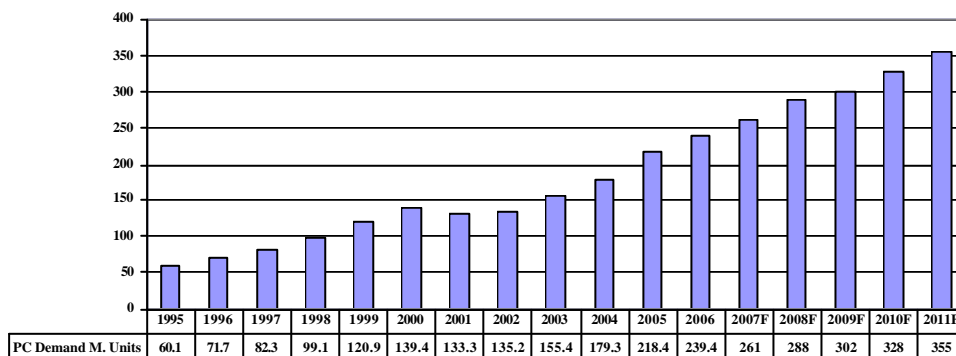
“IFS 2007-MT”

Annual Semiconductor Industry Forecast Seminar

Chris Ryan
Industry Analyst, Future Horizons



Personal Computer Unit Shipments



CAGR Slowdown:

2006-11 = 8.2%
 Note:
 1995-2000 = 18.3%
 2000-2005 = 9.4%
 2005-2010 = 8.5%

Geographical: 01>06:

USA = 6.5%
 Europe = 15.4%
 Asia = 17.3%
 ROW = 5.9%

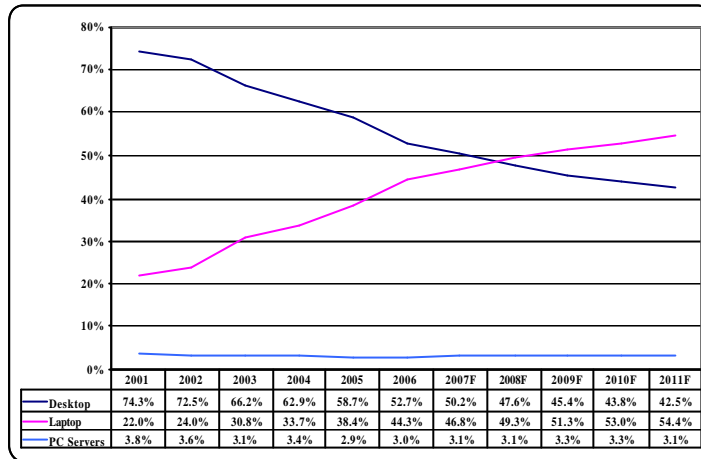
2006 Market Shares:

HP = 16.9%
 Dell = 16.9%
 Lenovo = 7.3%
 Acer = 5.9%
 FS & Toshiba = 4.0% each

Softening Demand In Established Markets



Trend Towards Laptops Continues



Laptop Computers:
 Student Use
 Executives
 90% Laptops Have Wi-Fi
 Small Businesses

Desktops:
 Large Corporations
 Governments
 Emerging Countries

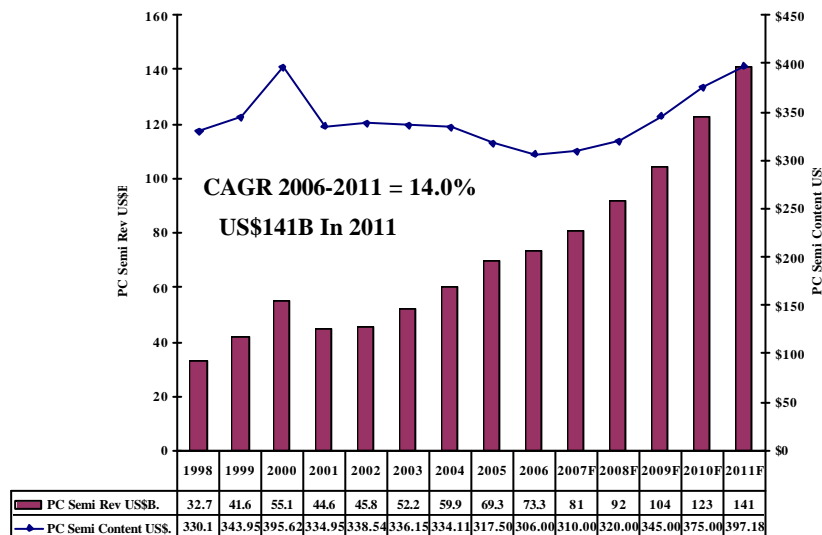
**Dell Selling Desktops
 In China For US\$335**

**Chinese Competition
 Will Be US\$200 Using
 Chinese Parts**

Emphasis Towards Portability & Connectivity In Established Markets



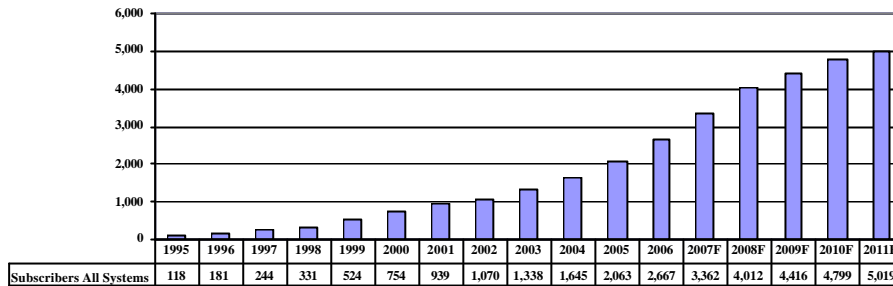
PC Semiconductor Revenue & ASP



PC Semiconductors ... Still Positive Growth ... Mix Impact On ASP



Mobile Phone Subscribers



CAGR 2006-11 = 13.5%

Looking Every 5 Years:

CAGR 1992-1995 = 65.1%

CAGR 1995-2000 = 44.9%

CAGR 2000-2005 = 22.3%

CAGR 2005-2010 = 18.4%

**Annual Growth Reducing Every Five Year Period
Increase In Multi-Subscriptions Per Person**



97

Europe's Leading Semiconductor Industry Analyst

Subscriber Base By Phone Generation

Growth:

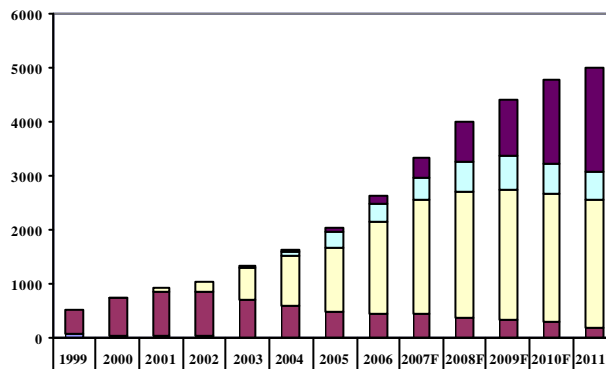
2006 = 2.7B Subs

2011 = 5.0B Subs

CAGR 13.5%

2006 3G = 7%

2011 3G = 38%



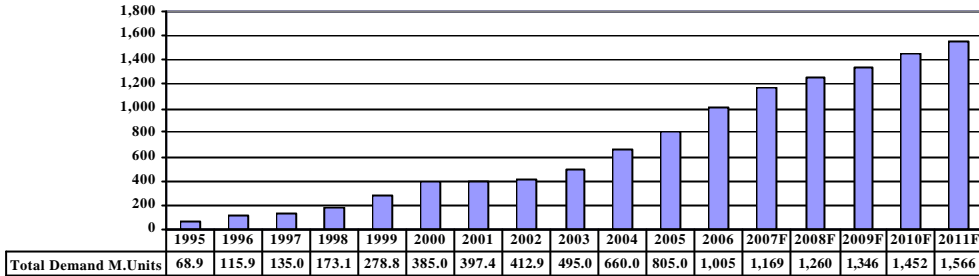
3G (UMTS/W-CDMA, CDMA 1X-EV, TD-SCDMA)	0	0	0	1	6	21	84	188	387	732	1,044	1,556	1,926
2.75 (EDGE, CDMA 1XRTT)	0	0	0	11	40	87	289	312	420	551	619	572	515
2.5G (GPRS, IS95B)	0	14	50	192	570	910	1,180	1,711	2,100	2,329	2,403	2,352	2,398
2.0 G Basic (GSM, cdmaOne, TDMA, PDC)	423	672	830	830	707	618	505	451	450	400	350	320	180
1G (Analogue)	101	68	59	35	15	10	5	2	1	0	0	0	0



98

Europe's Leading Semiconductor Industry Analyst

Mobile Phone Handset Market



Average Units Annual Growth:
 CAGR 1992-1995 310%
 CAGR 1995-2000 41.1%
 CAGR 2000-2005 15.9%
 CAGR 2005-2010 12.5%
 CAGR 2006-2011 9.4%

Recent Handset Growth:
 2005 22.0%
 2006 24.8%
 2007 16.3%



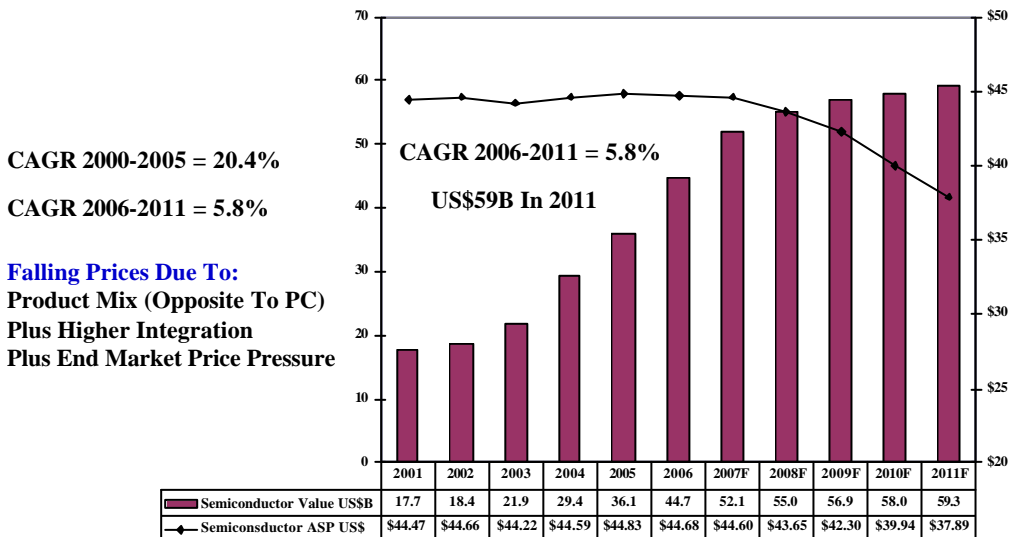
Long Term, Handset Units Market Slows



99

Europe's Leading Semiconductor Industry Analyst

Mobile Phone Handset Semiconductor Growth



Slowing & Maturing Market ... Resisting Attempt To Add New Features



100

Europe's Leading Semiconductor Industry Analyst

Semiconductor Rich Mobile Phones

Concept: Improvements Help Protect Semiconductor Value & Handset Growth. Reality: Not Yet Proven!

- | | |
|---|--|
| <ul style="list-style-type: none"> ❑ Current Features - MegaPixel Cameras - Better Viewing Screens - Global Positioning - Bluetooth and Headphones - Wi-Fi & Downloads - MP3 Player - FM Radio | <ul style="list-style-type: none"> ❑ New Features - Gaming - Movie Clip Downloads - Digital TV - Mobile Wallet |
|---|--|
-
- ❑ **Handset Diversification - Feature Centric Phone Offerings**
 - "Phones Are The New Cars"?
 - This Implies A New Level Of Marketing Excellence/Execution



BUT

Also Need To Service The "80% Of The Features For 20% Of The Cost" Developing Market
The Next 1 billion Customers (Africa, India, Rural China, South America ...)

Challenge: How To Protect Existing Cost Structure & Subscriber Base?



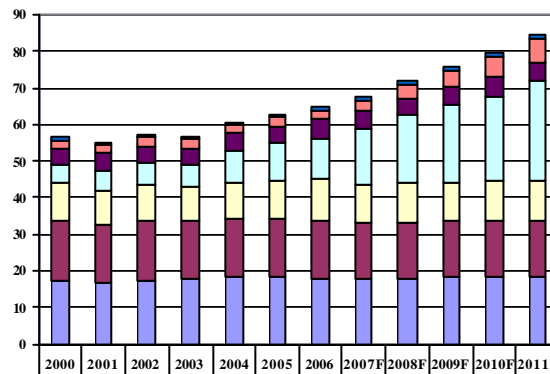
Global Production Of Light Vehicles

**Growth In China
For Internal Demand**

CAGR 2001-06 = 3.5%

CAGR 2006-11 = 5.5%

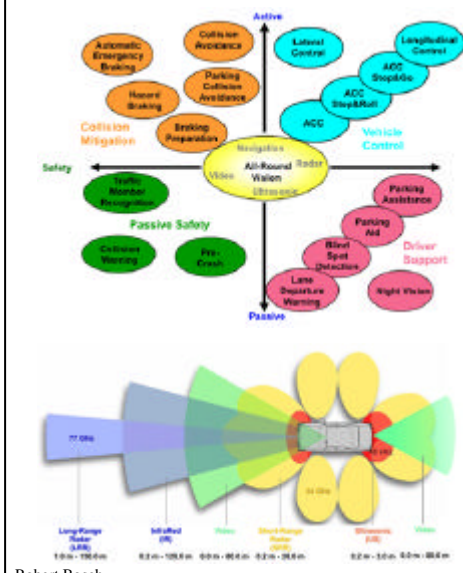
65M to 85M Units



	2000	2001	2002	2003	2004	2005	2006	2007F	2008F	2009F	2010F	2011F
■ Australia & S.Africa	0.7	0.6	0.7	0.8	0.8	0.9	1.0	1.1	0.9	1.0	1.0	1.1
■ Eastern Europe	2.5	2.4	2.5	2.6	2.4	2.5	2.6	2.9	3.7	4.6	5.7	6.5
■ South America	4.1	4.7	4.6	4.3	4.5	4.7	4.9	5.0	4.9	5.0	5.0	5.2
□ Far East	5.3	5.6	6.1	6.3	9.0	10.3	11.0	15.3	18.6	20.8	23.4	27.3
□ Japan	10.2	9.6	9.8	9.4	9.8	10.3	11.5	10.4	10.6	10.8	10.7	10.6
■ USA & Canada	16.5	15.6	16.4	15.8	15.9	15.9	15.9	15.6	15.3	15.4	15.6	15.6
■ Western Europe	17.3	16.8	17.2	17.7	18.2	18.4	18.0	17.6	18.0	18.2	18.2	18.4



Increasing Semiconductor Content



Robert Bosch
Future Horizons

Short/Medium Term Growth

- Networks
- Bluetooth & Wi-Fi
- Global Positioning
- More Airbags
- Remotely Sensed Tyre Pressure
- More Entertainment
- Anti-Lock Braking Systems (ABS)
- Electro-Hydraulic Braking (EHB)
- Electronic Stability Programme (ESP)
- Traction Control System (TCS)
- Plus Hybrid Cars

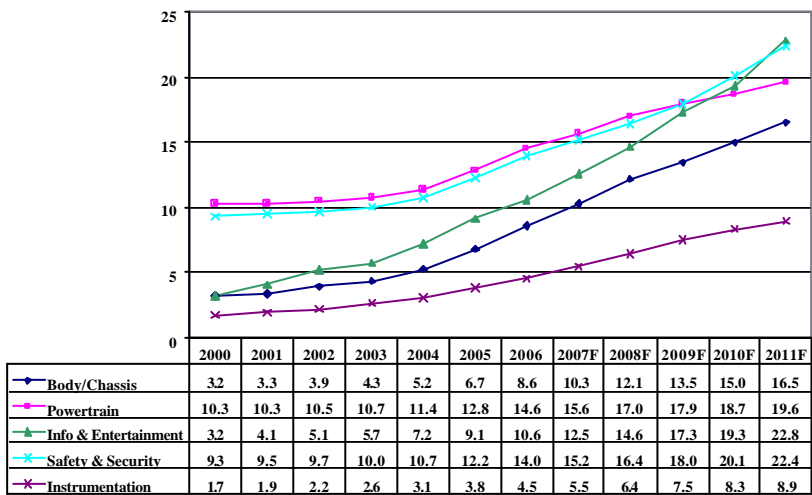
Longer Term

- All Round vision
- Driver Support
- Automatic Driving Control

Solid Annual Growth (CAGR 2006-11)

- Vehicles 5.5%
- Systems 11.5%
- Semiconductors 13.3%

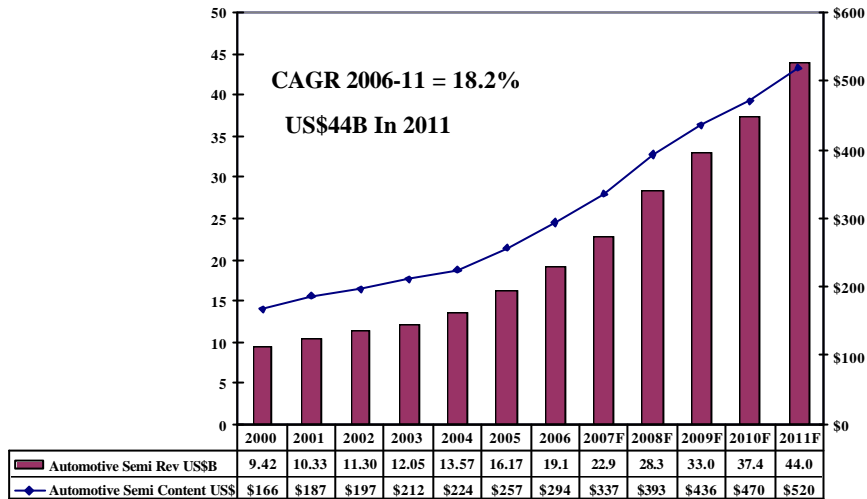
Automotive Electronic Systems



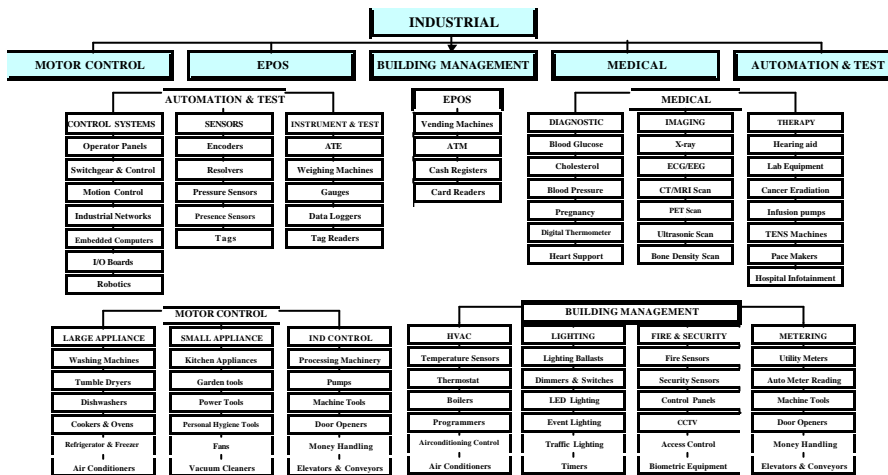
Strengths: Info & Entertainment, Safety & Security

Future Horizons

Global Automotive Semiconductor Market Forecast



What Exactly Is Industrial Electronics?



Broad & Diverse Market ...Lots Of Common Characteristics
Diverse Range Of Driving Factors ... Several Common Features



Why Now ... What's Driving The Changes?

Technology - Moore's Law / Learning Curve (Market Pull)

Legislation - Energy Saving / Conservation (Market Push)

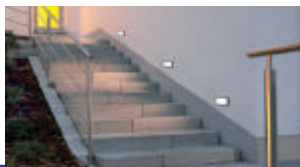
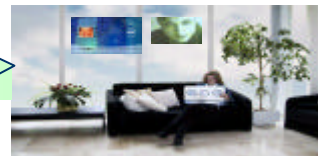
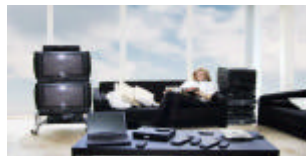
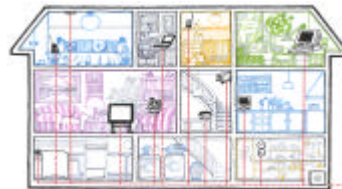
Structural - The Relentless Analogue To Digital Conversion

Combining To Do What The Chip Industry Does Best ...

Enabling Something That Was Either Previously Impossible Or Not Economic At The Previous Price Point Or Technology Iteration

Smart Buildings & Intelligent Appliances

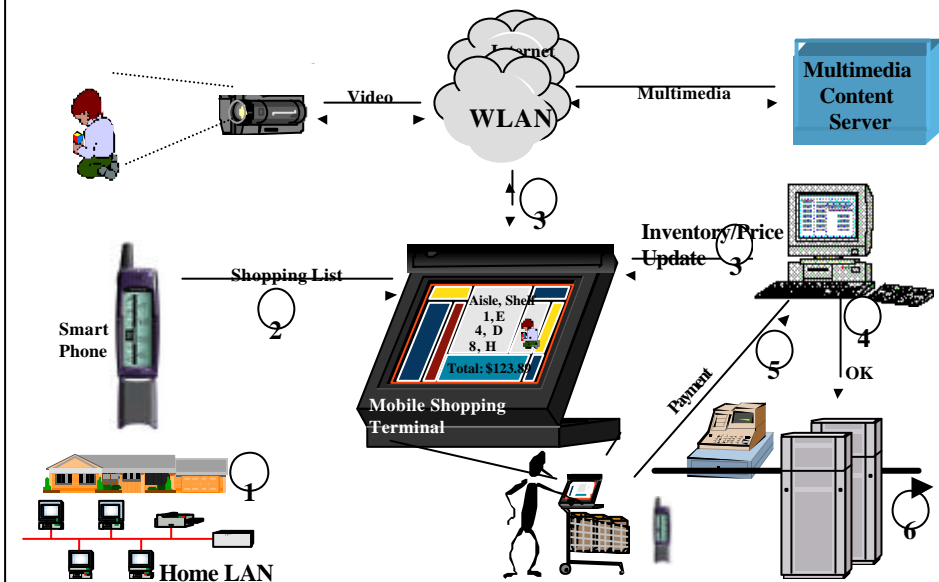
- Metering (Mandatory In New Buildings)
- Zigbee
- Lighting
- Heating Control
- Security
- EPOS



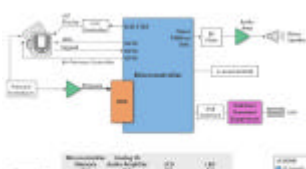
Smart Shopping



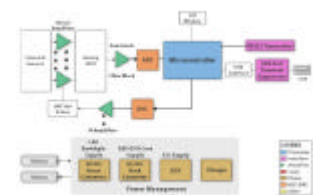
Smart Shop



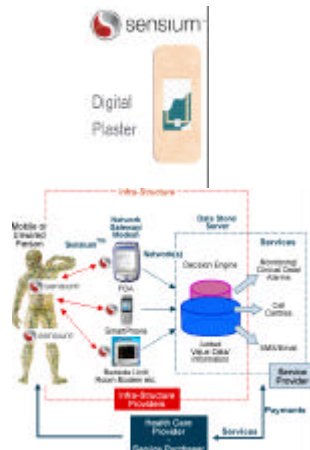
Now Medical Goes Digital ... Just Like Audio & Video



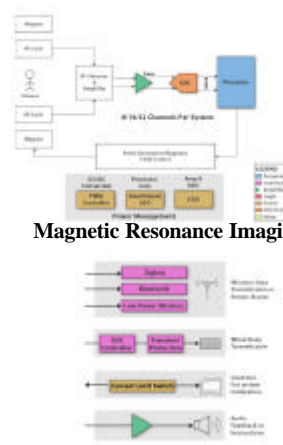
Blood Pressure Monitoring



Blood Gas Analyser



Personal Healthcare



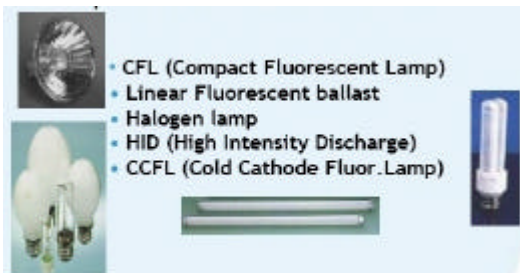
Magnetic Resonance Imaging

System-Based Functional Blocks

Source: TI/Toumaz/Future Horizons



Lighting, Displays & Photovoltaic



- CFL (Compact Fluorescent Lamp)
- Linear Fluorescent ballast
- Halogen lamp
- HID (High Intensity Discharge)
- CCFL (Cold Cathode Fluor. Lamp)



- Microcontrollers
- Power logic
- Switching regulators
- Off line controllers & converters

1.1B Watt power installed in 2005



- Microcontrollers
- Rectifiers
- IGBTs & Mosfets
- Offline controllers & drivers
- Power modules
- Voltage regulators.



Security, Motor Control & Energy Management



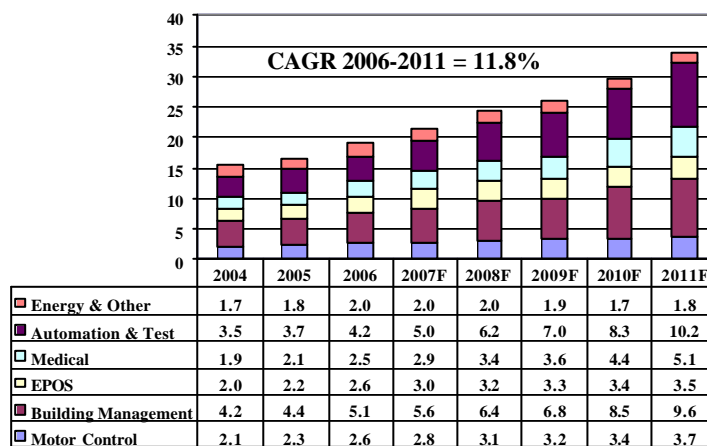
- Microcontrollers
- Smart Card
- Power logic
- Power Management
- RTC, Op. Amp, RF.



- Energy management
- Motor control
- Automation
- Utility meter
- HVAC



WW Industrial Semiconductor Market Forecast



A Conservative \$35b Market By 2011

Key & Emerging Markets – By System Unit Volume

Application	System Volume M.Units		CAGR
	2006	2011	2006-11
Automotive	65	85	5.5%
Biometrics	75	850	62.3%
Bluetooth	540	1,700	25.8%
Digital Broadcast Radio	11	160	69.7%
Digital Camcorders	18	42	19.0%
Digital Still Cameras	97	125	5.2%
DVD Players	105	118	2.3%
DVD Recorders	43	101	18.8%
Global Positioning (GPS)	94	494	39.4%
Graphics	322	498	9.1%
Hard Disk Drives (HDD)	441	913	15.7%
Industrial & Medical	9,900	23,000	18.4%
Integrated Flat-Panel TVs	54	178	27.0%
Memory Cards	707	2,040	23.6%
Mobile Phones	1,005	1,566	9.3%
MP3 Players	190	405	16.3%
Near Field Communications	13	675	120.2%
PC & Servers	239	355	8.2%
PDA/Handheld Computers	16	26	10.3%
RF-ID Tags (Non-Shop Label)	650	3,000	35.8%
RF-ID Tags (Shop Label)	1,500	135,000	146.0%
Robotics	3	78	98.5%
Smartcards	3,421	5,046	8.1%
TV Set-Top Boxes	87	214	19.8%
UltraWideBand (UWB)	2	290	186.6%
USB Flash Disks	125	320	20.7%
Video Game Machines	30	54	12.7%
Wi-Fi	202	991	37.4%
WiMAX	1	96	136.4%
Zigbee	9	750	142.7%
FH Sub Total M.Units	19,963	179,170	55.1%
Without Shop Label RF-ID	18,463	44,170	19.1%

Unit CAGR = 19%
(Excl. Shop Labels)



115

Europe's Leading Semiconductor Industry Analyst

Key & Emerging Markets – By SC Revenue

Application	Revenue US\$B		CAGR
	2006	2011	2006-11
Automotive	19.1	44.0	18.2%
Biometrics	0.3	2.6	54.0%
Bluetooth	1.7	3.1	12.1%
Digital Broadcast Radio	0.3	2.7	57.1%
Digital Camcorders	1.5	1.9	5.5%
Digital Still Cameras	3.0	3.1	0.7%
DVD Players	1.5	3.8	20.2%
DVD Recorders	1.6	2.9	13.2%
Global Positioning (GPS)	2.3	3.0	5.3%
Graphics	6.5	8.9	6.6%
Hard Disk Drives (HDD)	3.6	4.5	4.3%
Industrial & Medical	19.8	34.5	11.8%
Integrated Flat-Panel TVs	4.9	10.9	17.3%
Memory Cards	9.9	18.7	13.5%
Mobile Phones	44.9	59.3	5.7%
MP3 Players	7.3	9.5	5.4%
Near Field Communications	0.1	1.1	69.1%
PC & Servers	73.3	141.0	14.0%
PDA/Handheld Computers	2.2	2.5	2.6%
RF-ID Tags (Non-Shop Label)	1.0	2.3	16.7%
RF-ID Tags (Shop Label)	0.1	2.0	76.0%
Robotics	2.3	18.3	50.9%
Smartcards	3.0	4.1	6.4%
TV Set-Top Boxes	5.3	10.5	14.5%
UltraWideBand (UWB)	0.0	1.4	133.6%
USB Flash Disks	3.5	7.8	17.3%
Video Game Machines	6.4	8.5	5.7%
Wi-Fi	1.4	6.5	36.8%
WiMAX	0.1	1.5	70.8%
Zigbee	0.0	0.9	100.2%
FH Sub Total	226.9	421.6	13.2%
Others	20.8	14.0	-7.7%
WW Semi TAM US\$ Billion	247.7	435.6	11.9%
Market Coverage	91.6%	96.8%	

**Top 30 Areas Cover
Over 90% Of The
Market**



116

Europe's Leading Semiconductor Industry Analyst

Here Today – Gone Tomorrow

Key Products (1985)

Analog Consumer
Cash Registers/POS
Mini-Computers
Office Automation
PABX
Telephone Exchanges
Analogue TV Set-top Boxes

Key Technologies (1985)

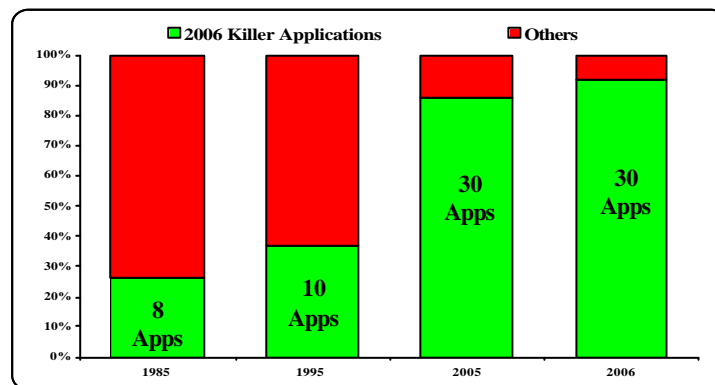
Bipolar (Except Memories)
Bipolar PALs
DRAMs
NMOS
Standard Logic (74LS TTL)

Key Companies (1985)

AT&T
Bull
Burroughs
CDC
DEC
GE
GI
Honeywell
HP
IBM
ICL
LME
NCR
Nixdorf
Olivetti
Philips
RCA
Thomson
Thorn-EMI
Univac
Wang



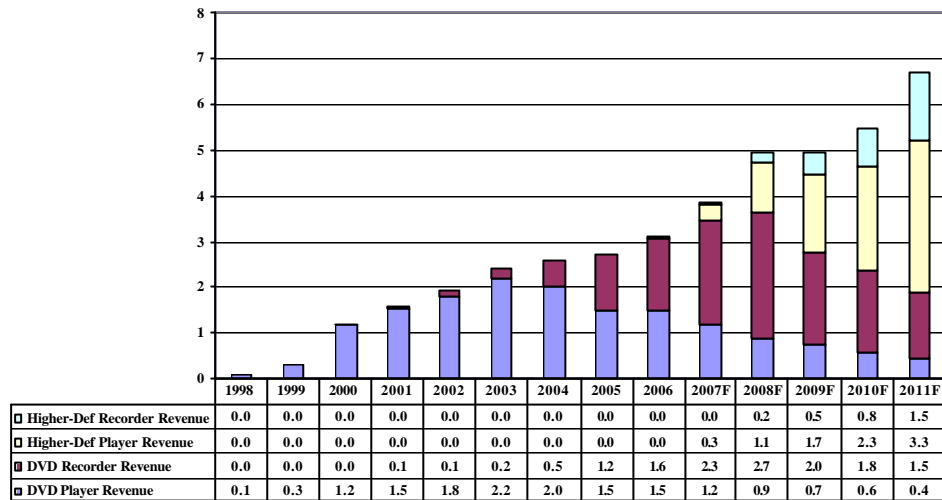
2006 Key Applications Market Share (By Value)



**22 (20) Of Today's Killer Apps Did Not Exist In 1985 (1995)
Speeding Up Of Development ... Plus
Inability To Predict New Market Areas**



New Generation Boosts Revenue – DVD Machines



119

Europe's Leading Semiconductor Industry Analyst

'New Generations' Boost Revenue

As Well As DVD Machines Other Markets Are Being Refurbished:

- New TV Sets - Digital TV**
 - LCD TV
 - HD TV
- New Games Consoles - Digital Terrestrial**
 - IP Telephone linked
- Automotive - Continually Refurbished Plus New Features**
- Broadcast Radio – Becoming Digital**
- Mobile Phones – Continually Refurbished Plus New Features**
- New Geographic Areas/Increased Market Penetration**
- Plus Local Market-Specific Products**



120

Europe's Leading Semiconductor Industry Analyst

2007 Annual Semiconductor Report

Order Your Copy NOW

(Seminar Fee Refunded For All Report Orders Received By Jul 28th)

Volume 1 – Markets By Product, Application & Region

Volume 2 – Semiconductor Application Markets

Price (Single User Versions)

Volume 1 & 2 - £3,000 (€1,500 / \$6,000)

Volume 2 Only - £2,600 (€3,900 / \$5,200)

(Site/Multi-User Licence Required For Multiple User Access)



Chipless & Fabless IC Design

“IFS 2007-MT”
**Annual Semiconductor
Industry Forecast Seminar**

Chris Ryan, Industry Analyst



Global Top-10 Fabless Companies

Rank	Fabless Company	Country	2003	YoY%	2004	YoY%	2005	YoY%	2006	Market
1	Qualcomm QCT	USA	2,466	26.1%	3,110	5.8%	3,290	31.6%	4,331	Mobile Communications
2	Broadcom Corporation	USA	1,610	49.1%	2,401	11.2%	2,671	37.3%	3,667	Communications
3	SanDisk Corporation	USA	1,080	64.5%	1,777	29.8%	2,306	41.3%	3,258	Flash Cards
4	Nvidia Corporation	USA	1,820	10.4%	2,010	18.4%	2,380	28.9%	3,068	Graphics
5	Marvell Semiconductor	USA	819	49.5%	1,225	36.4%	1,670	34.0%	2,238	Networks
6	LSI Logic	USA	1,693	0.4%	1,700	12.9%	1,920	3.2%	1,982	Networking & Storage
7	Xilinx	USA	1,300	21.0%	1,573	9.7%	1,726	8.4%	1,871	FPGA
8	Media Tek Incorporation	Taiwan	1,116	12.7%	1,258	8.3%	1,362	19.2%	1,624	Digital Consumer
9	Avago Technologies	USA	1,586	27.9%	2,028	-11.1%	1,802	-11.7%	1,592	Analogue & Mixed Signal
10	Agere Systems	USA	1,839	4.0%	1,912	-12.3%	1,676	-6.3%	1,570	Networking, Wireless & Storage
50.7%	Top Ten US\$ Million	Top 10	15,329	23.9%	18,993	9.5%	20,803	21.1%	25,201	
22.0%	Next 20	Worldwide	6,064	34.5%	8,156	11.0%	9,051	20.7%	10,929	
27.3%	Others	Worldwide	4087	121.5%	9051.3	12.1%	10145.6	33.7%	13569.6	
100%	Total Fabless US\$ Million	Worldwide	25,480	42.1%	36,200	10.5%	40,000	24.3%	49,700	
Note:- Semi Market Growth				28.0%		6.8%		8.9%		

Still Outperforming The Total Semiconductor Market

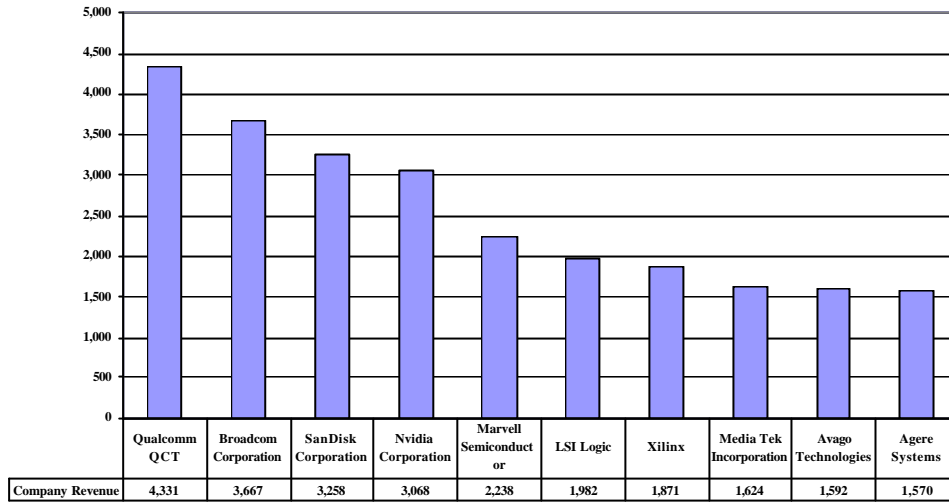


Top-10 Fabless Performance

- ❑ 30+% Growth From SanDisk, Broadcom, Marvell & Qualcomm
- ❑ ATI Takeover By AMD (Was US\$2.2b) Removed From List
LSI Logic & Agere Systems Added, Altera Outside Top-10
- ❑ In 2006 Over Twice The Growth Of The Overall Semi Market
(21.1% Vs 8.9%)
- ❑ Slightly Under Performed The Total Fabless Market
(21.1% Vs 24.3%)
- ❑ Similar Percentage of Market As Top 10 IDMs
(50.7% vs. 49.9%)
- ❑ Out Performed The Top-10 IDMs
(21.1% Vs 7.8%)



Top-10 Company Revenue



Top-30 Fabless Detail

Reminder 2006 Top 10 Total 50.7% 15,329 23.9% 18,993 9.5% 20,803 21.1% 25,201

2006 Rank	Fabless Company	Country	2003	%Change	2004	%Change	2005	%Change	2006	Applications
11	Altera	USA	827	22.9%	1,016	10.6%	1,124	14.4%	1286	FPGA
12	Conexant Systems	USA	601	49.9%	901	-19.8%	723	36.4%	986	Broadband Home Access
13	Novatek Microelectronics	Taiwan	317	75.4%	556	46.0%	812	17.9%	957	Digital Video/LCD Drivers
14	Himax Technologies	Taiwan	132	127.3%	300	80.1%	540	37.8%	745	LCD Drivers
15	Cambridge Silicon Radio	Europe	68	274.4%	253	92.2%	487	44.9%	705	Bluetooth & Wireless LAN
16	VIA Technologies	Taiwan	600	-2.2%	587	7.7%	632	4.1%	658	PC Chipsets
17	QLogic	USA	517	5.0%	543	-9.0%	494	15.4%	570	Networks
18	Sunplus Technology	Taiwan	327	82.6%	597	-2.1%	584	-8.9%	532	Audio/Video
19	Zoran	USA	217	74.6%	379	4.5%	396	25.3%	496	Digital Video
20	Silicon Laboratories	USA	325	40.3%	456	-6.6%	426	9.1%	465	Mobile Communications
21	SST	USA	257	82.9%	470	-8.3%	431	4.9%	452	Flash Memory Products
22	PMC-Sierra	Canada	250	19.0%	297	-2.0%	291	45.8%	425	Networks
23	Realtek Semiconductor	Taiwan	269	9.9%	296	11.9%	331	14.4%	378	LAN Controllers
24	MegaChips Corporation	Japan	242	20.9%	292	-10.8%	261	44.2%	376	Image Sensors
25	SMSC	USA	202	2.1%	206	49.5%	308	20.2%	371	PC Peripherals & Buses
26	SiS	Taiwan	492	-31.9%	335	7.1%	359	-2.1%	351	Chipsets & Wireless LAN
27	Etron Technology	Taiwan	129.4	53.2%	198.2	3.1%	204.4	56.1%	319	Consumer Memories
28	Atheros Communications	USA	87.4	94.1%	169.6	8.2%	183.5	64.4%	302	Wireless LAN
29	Silicon Image	USA	103.5	67.3%	173.2	22.6%	212.4	38.9%	295	Digital Consumer & Storage
30	AMCC	USA	101.6	29.1%	131.2	93.4%	253.8	3.2%	262	Wide Area & Storage Networks
2006 Next 20			22.0%	6,064	34.5%	8,156	11.0%	9,051	20.7%	10,929
Total Top 30				21,393	26.9%	27,149	10.0%	29,854	21.0%	36,130
Others			27.3%	4087	121.5%	9051.3	12.1%	10146	33.7%	13569.6
Grand Total Fabless			100.0%	25,480	42.1%	36,200	10.5%	40,000	24.3%	49,700



Top-30 Fabless Performance

❑ Taken Out

- PortalPlayer (Takeover By Nvidia)

❑ High Growth Companies To Watch:

Consistently High Growth:

- Cambridge Silicon Radio (45.8%) - *Bluetooth & W-LAN*
- Silicon Image (38.9%) - *Digital Consumer & Storage*
- Himax Technologies (37.8%) - *LCD Drivers*

Had A Good 2006:

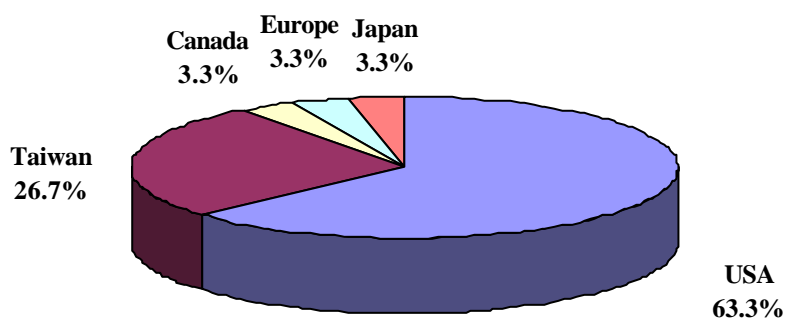
- Atheros Communications (64.4%) - *Wireless LAN*
- Etron Technology (56.1%) - *Consumer Memories*
- PMC-Sierra (45.8%) - *Networks*
- MegaChips Corporation (44.2%) - *Image Sensors*
- Conexant Systems (36.4%) - *Broadband Home Access*



127

Europe's Leading Semiconductor Industry Analyst

Geographical Spread Of Top-30 Fabless



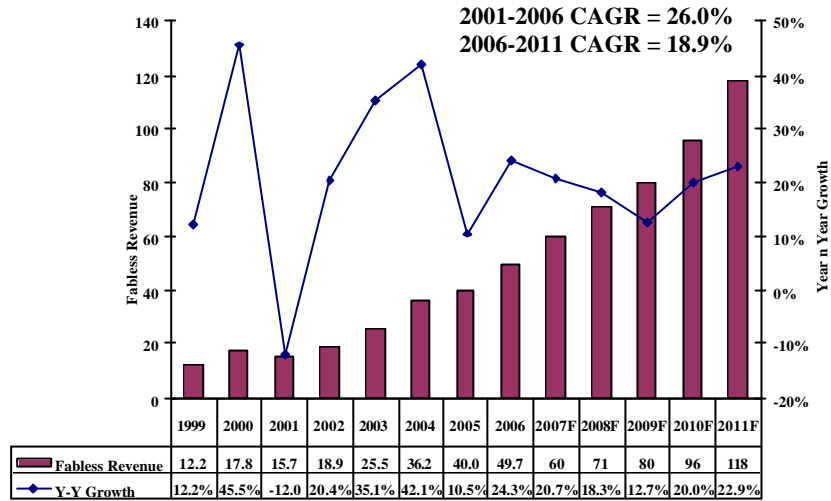
Only 3 Companies Outside USA & Taiwan



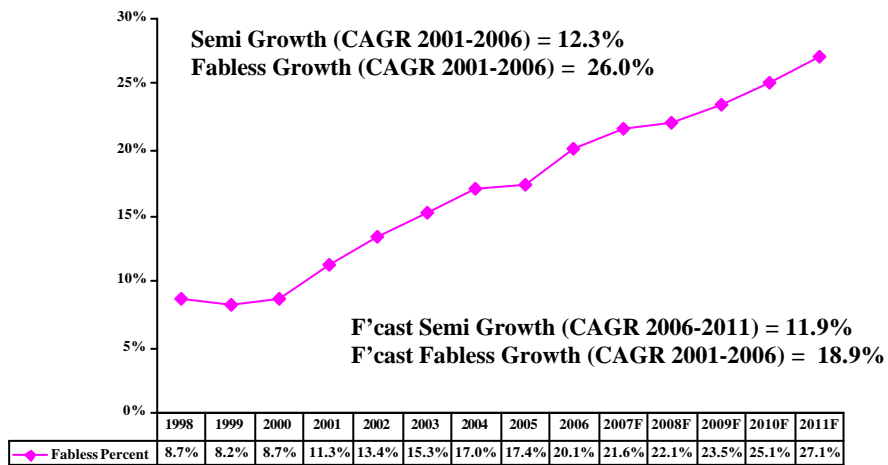
128

Europe's Leading Semiconductor Industry Analyst

Fabless Growth History



Fabless Worldwide Market Share



Fabless 20% Now & Quarter Of Market By 2010



Chipless Semiconductor Companies

Revenues	Country	Y on Y		Y on Y		Y on Y		2006	Market Sector
		2003	%Change	2004	%Change	2005	%Change		
ARM	UK	233.8	25.6%	293.6	42.5%	418.3	15.6%	483.6	Microprocessor
Rambus	USA	118.4	22.4%	144.9	8.5%	157.2	23.5%	194.2	Memory Interface
Imagination Technologies*	UK	34.9	63.1%	56.9	7.9%	61.4	53.5%	94.3	Graphics & Audio
MOSAID Technologies	Canada	31.8	32.7%	42.2	50.5%	63.5	23.1%	78.2	Embedded Memory
MIPS Technologies	USA	40.4	40.8%	56.9	4.4%	59.4	28.6%	76.4	Microprocessor
Saifun Semiconductors	Israel	na	na	30.6	94.1%	59.4	5.7%	62.8	Non-Volatile Memory IP
Virage Logic	USA	38.5	38.2%	53.2	0.6%	53.5	6.5%	57.0	Embedded Memory & I/O
Ceva (ParthusCeva)	USA	36.8	2.2%	37.6	-5.3%	35.6	-8.7%	32.5	Communications/DSP
ARC International	UK	19.3	20.7%	23.3	-22.7%	18.0	45.9%	26.3	Microprocessor
MoSys	USA	19.2	-43.8%	10.8	13.9%	12.3	20.8%	14.9	Embedded Memory
Artisan Components	USA	74.6	na	na	na	na	na	na	Mixed Signal & Logic
Total Top Ten	Worldwide	647.7	15.8%	750.0	25.1%	938.6	19.3%	1,120.1	
Others	Worldwide	285.9	19.1%	340.5	16.2%	395.6	17.5%	465	
Total Chipless US\$ Million	Worldwide	934	16.8%	1,091	22.3%	1,334	18.8%	1,585	

* Company Financial Year

Note:- Semi Market Growth

28.0%

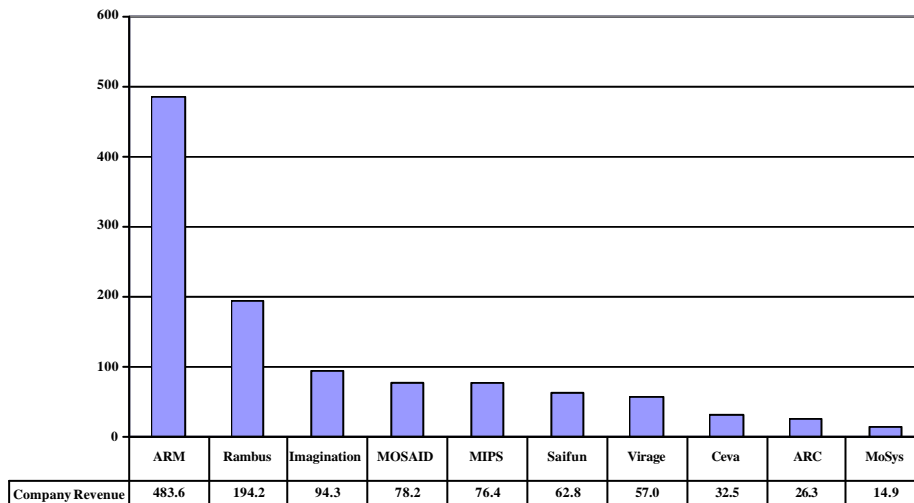
6.8%

8.9%

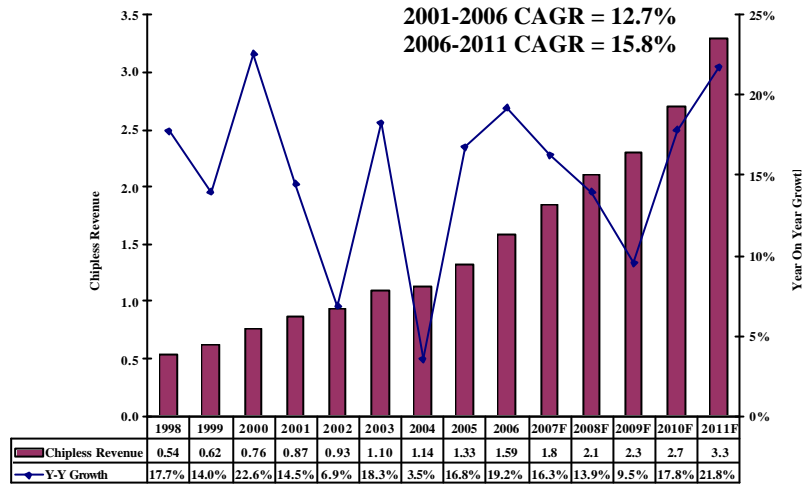
ARM Still Leads The Pack



Top-10 Company Revenue



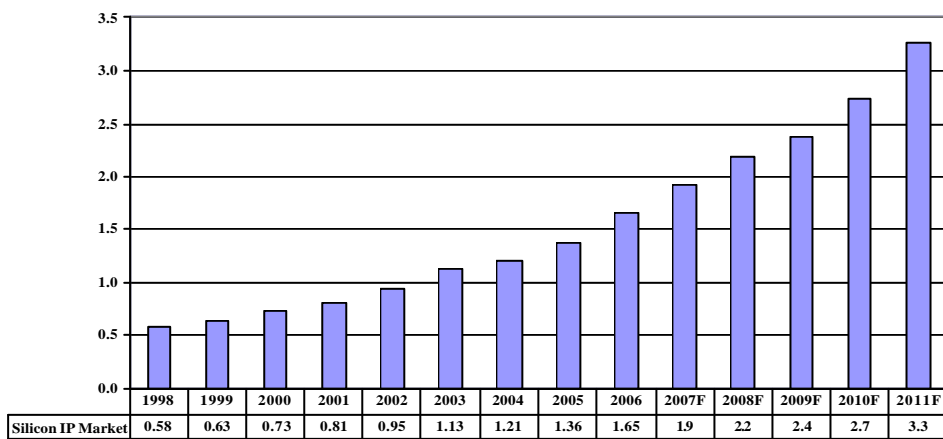
Chipless Growth History



Three Good Years Of Accelerating Growth



Silicon IP Market



= Chipless - Non-IP Items + Other IP Sources (EDA Etc)



European Semiconductor Market

“IFS2007-MT” Annual Semiconductor Industry Forecast Seminar

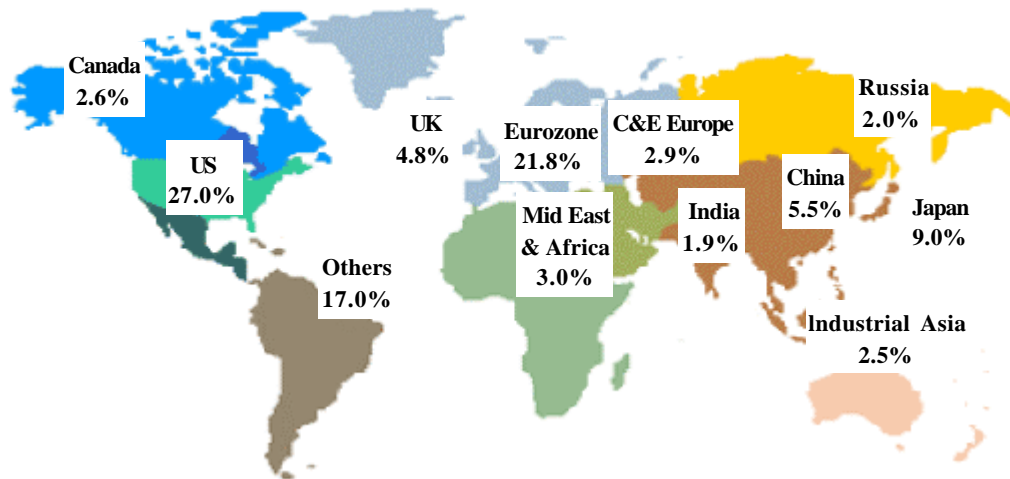
Malcolm Penn, Chairman & CEO



135

Europe's Leading Semiconductor Industry Analyst

Europe In Perspective



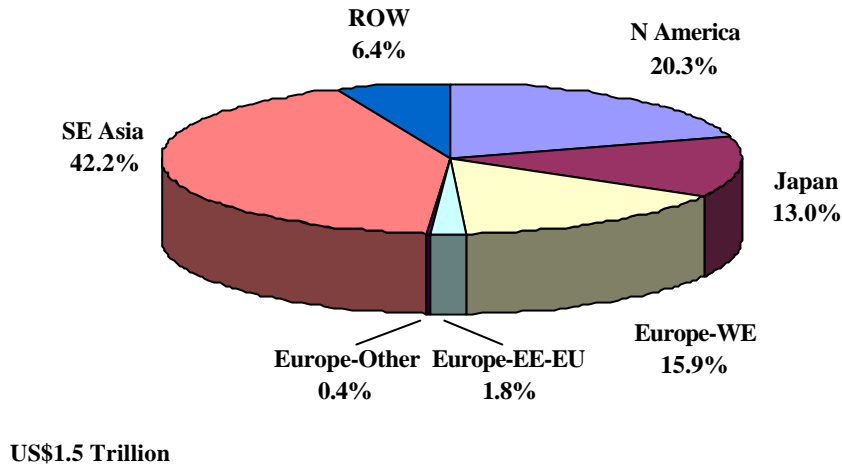
Contribution To US\$48 Trillion Global GDP (2006)



136

Europe's Leading Semiconductor Industry Analyst

World Electronics Production 2006

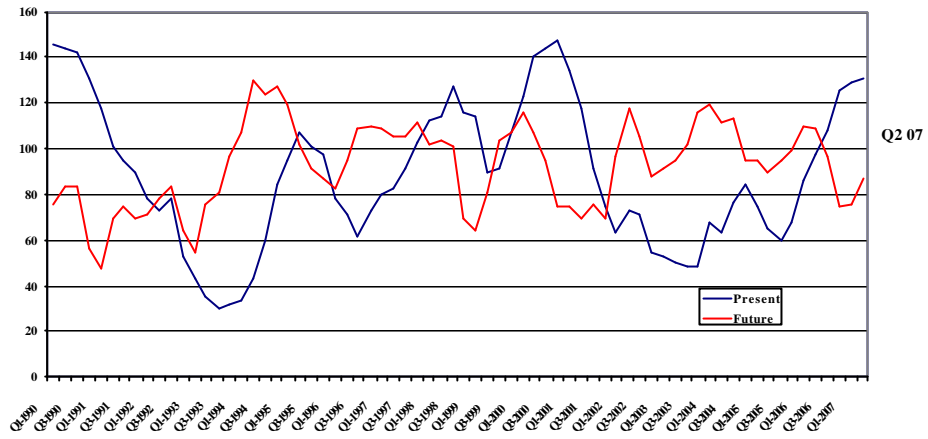


World GDP Growth Rates

World Economy	2006 GDP US\$ Trillions	2006 GDP % Contribution	2007 Growth Forecast	2008 Growth Forecast
Canada	1.2	2.5%	2.4%	2.9%
USA	13.2	27.4%	2.2%	2.8%
UK	2.3	4.8%	2.9%	2.7%
Eurozone	10.5	21.8%	2.3%	2.3%
C&E Europe	1.4	2.9%	5.5%	5.3%
Japan	4.3	8.9%	2.3%	1.9%
Russia	1.0	2.1%	6.4%	5.9%
China	2.6	5.4%	10.0%	9.5%
India	0.9	1.9%	8.4%	7.8%
Industrial Asia	1.2	2.5%	6.0%	6.0%
Others	9.6	19.9%	-	-
World	\$48.2	100%	5.1%	4.9%



Eurozone Business Economic Climate – Q2 2007



**Seven Quarters Of Growing Present-Day Confidence
Future Confidence Improving**

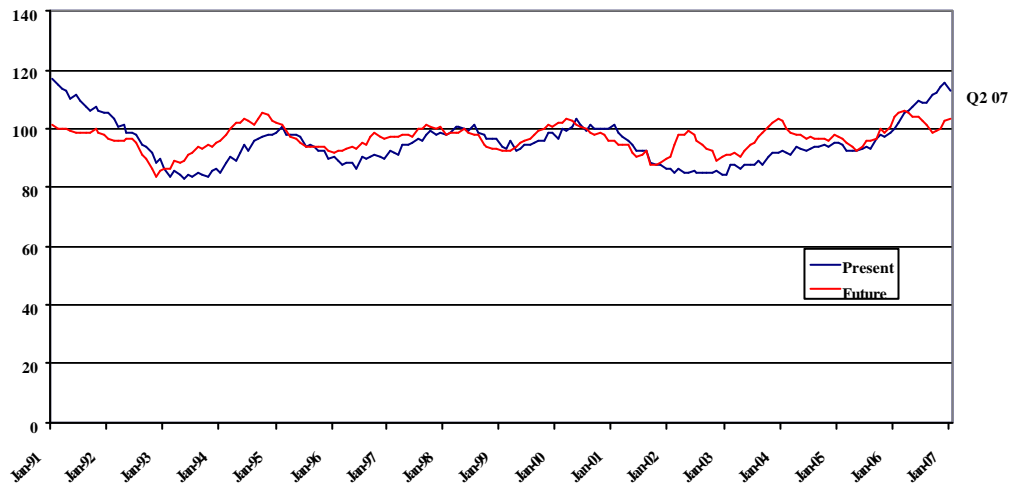
Source: Institute For Economic Research/Future Horizons



139

Europe's Leading Semiconductor Industry Analyst

German Business Economic Climate - Q2 2007



Gently Rising 'Present' Confidence, 'Future' Confidence Now Rising

Source: Institute For Economic Research/Future Horizons



140

Europe's Leading Semiconductor Industry Analyst

Eurozone Business Climate

□ Eurozone

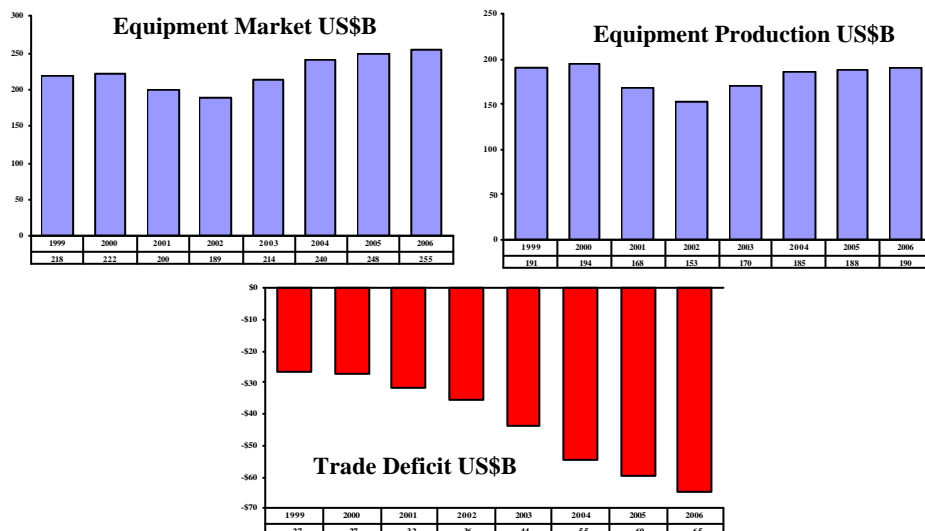
- Assessments Of Economic Situation Continue To Improve
- Present-Day Optimism In Managers Still Rising
- Forward-Looking Expectation Of 1H-2008 Encouraging
- Expectations Are For An Improving & 'Robust' Economy
- All Regions Of Eurozone Optimistic Except France (Too Early For Impact Of Nicolas Sarkozy)
- Business Expecting & Planning For More Interest Rate Rises

□ Germany

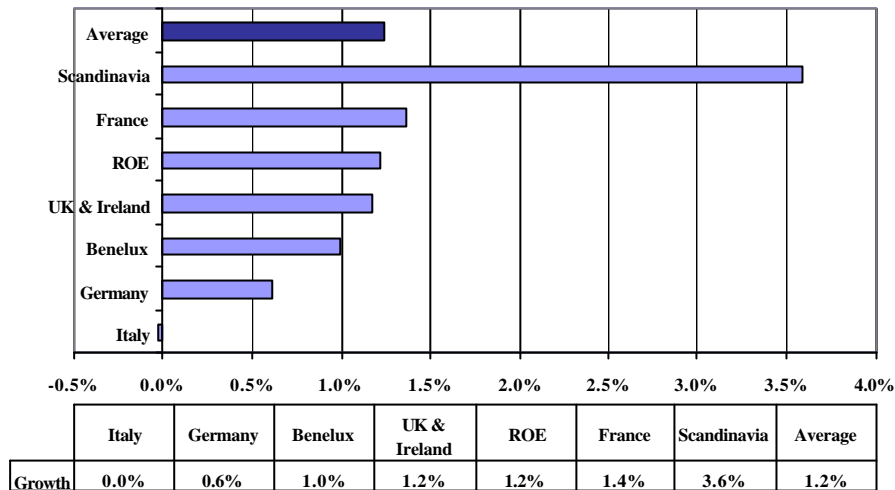
- Business Climate Still Optimistic, But Optimism Plateauing
- Manufacturing Sector Still Optimistic For Export Opportunities
- Retail & Construction Outlook Less Favourable



European Electronics - Market & Production



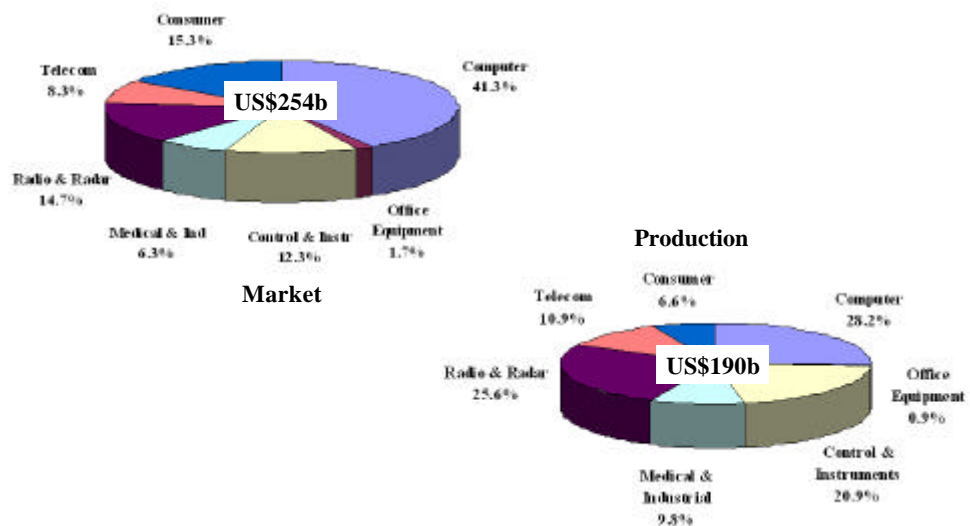
European Equipment Market Growth – 2006 vs. 2005



143

Europe's Leading Semiconductor Industry Analyst

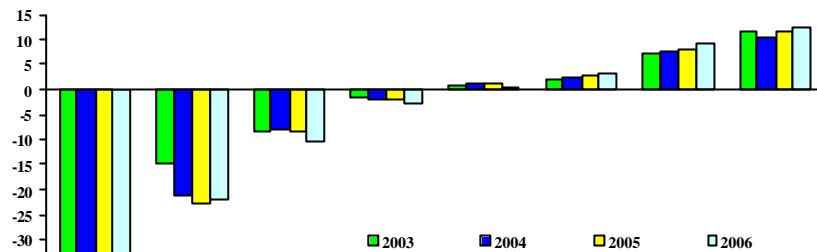
European Electronics Equipment – 2006



144

Europe's Leading Semiconductor Industry Analyst

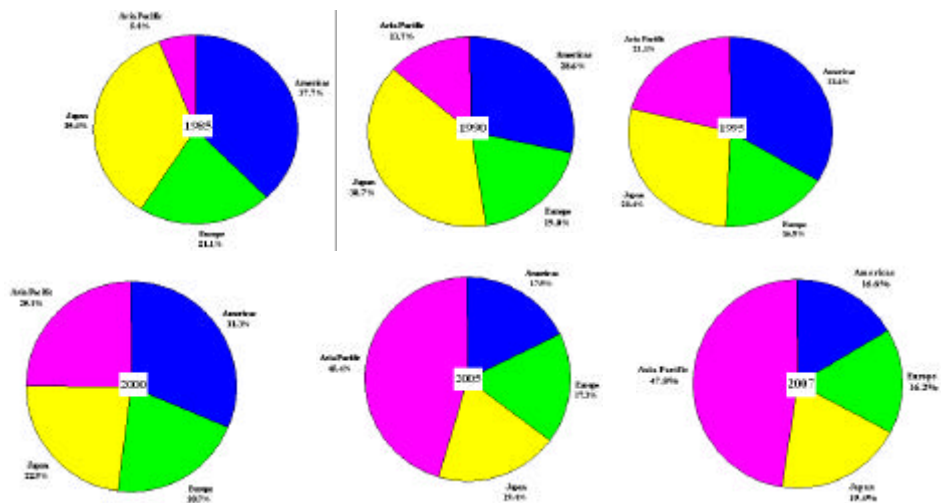
European Electronics Trade Imbalance, 2003-06



	Computer	Consumer	Components	Office Equipment	Telecom	Medical & Industrial	Control & Instruments	Radio & Radar
2003	-40.0	-14.9	-8.2	-1.7	0.8	2.2	7.2	11.4
2004	-45.3	-21.0	-8.1	-1.9	1.3	2.5	7.8	10.4
2005	-49.8	-22.6	-8.6	-2.2	1.4	2.6	8.0	11.5
2006	-54.9	-22.1	-10.3	-2.7	0.3	3.2	9.4	12.3



WW Semiconductor Market Share – By Region



European Semiconductor Market By Product – Forecast

Europe TAM	2006	2007	2008	2009	2010	2011	CAGR 06>11	CAGR 01>11
MOS Memory	8,423	8,827	10,469	10,487	11,420	12,849	8.8%	9.9%
MOS Micro	12,660	5,826	15,867	16,198	17,329	19,584	9.1%	6.9%
MOS Logic	5,677	13,973	7,370	7,578	8,335	9,360	10.5%	6.9%
Analogue	6,691	7,361	7,977	8,050	8,779	9,833	8.0%	5.5%
Bipolar Digital	na	na	na	na	na	na	na	na
Discrete/Sensors	4,302	4,492	4,159	4,695	5,325	5,716	5.8%	6.2%
Opto	2,151	2,162	2,045	2,077	2,263	2,312	1.5%	5.5%
Total	39,904	42,641	47,887	49,084	53,452	59,654	8.4%	7.0%

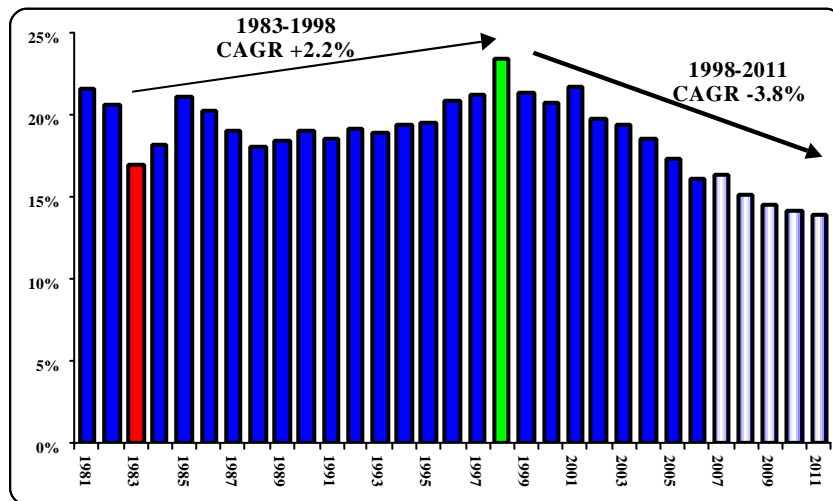
WW TAM	2006	2007	2008	2009	2010	2011
MOS Memory	14.4%	4.8%	18.6%	0.2%	8.9%	12.5%
MOS Micro	-9.2%	-54.0%	172.3%	2.1%	7.0%	13.0%
MOS Logic	-4.1%	146.1%	-47.3%	2.8%	10.0%	12.3%
Analogue	18.5%	10.0%	8.4%	0.9%	9.1%	12.0%
Bipolar Digital	na	na	na	na	na	na
Discrete/Sensors	14.0%	4.4%	-7.4%	12.9%	13.4%	7.3%
Opto	-10.2%	0.5%	-5.4%	1.6%	9.0%	2.1%
Total	1.6%	6.9%	12.3%	2.5%	8.9%	11.6%



147

Europe's Leading Semiconductor Industry Analyst

European Semiconductor Market Decline



On Current Trends, 2011 = 14.7%, 63% Its 1998 Peak



148

Europe's Leading Semiconductor Industry Analyst

It's Different This Time – For Better Or Worse

STMicroelectronics

- Going Fab-Lite
- Spinning Out Memory Division
- Major Re-Organisation Jan 2007

Infineon Technology

- No longer Top Ten Player
- Fab-Lite By Default
- Downsizing Is Tough

NXP Semiconductors

- Now PE Owned
- Product Range Second To None
- Solid Engineering Competence

Qimondo

- Span Out From Infineon
- Riding The 2006 Memory Wave
- So Far So Good ...

Crolles Alliance

- Old Alliance No More
- New Alliance In Prospect (Today)
- Key Part Of New EU Programmes

IMEC

- Control All WW DRAM Development
- Now Truly International
- No Longer Dependent On Euro Fabs

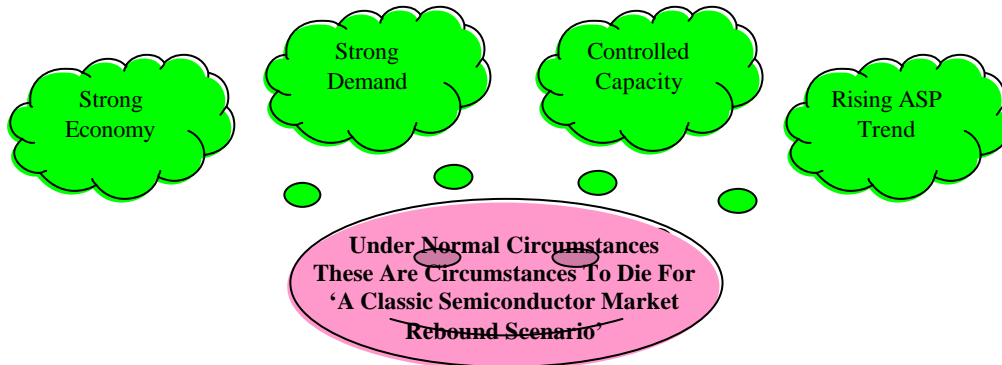
Forecast Summary & Conclusions

“IFS 2007-MT” **Mid-Term Semiconductor** **Industry Forecast Seminar**

Malcolm Penn, Chairman & CEO

There's Nothing Wrong With The Market Fundamentals

- ❑ Continuing Strong / Resilient Global Economy
- ❑ Strong Underlying Unit Demand With Purged Excess Inventory
- ❑ Improving Capacity Utilisation / Measured CapEx Investment
- ❑ ASPs In Recovery Mode, Albeit With The Usual Fits & Starts



Short-Term Outlook – Looking Very Strong

- ❑ **The 2007 Numbers Have Changed Due To The Q1/Q2 Maths**
 - The Underlying Analysis Is The Same As At January IFS2007
- ❑ **No Change To The 2008-2011 Outlook**
 - Strong 2008 With 2009 Structural Slowdown (Inventory/Investment)
- ❑ **Memory Price Wars Are Good For The Future**
 - Fuels Market Elasticity / Second Half Rebound
- ❑ **MPU Price War Is Purely Tactical**
 - Don't Mess With A Gorilla & Expect To Come Up Trumps
- ❑ **Lot's Of Upside Potential For 2007 (ASP & Units)**
 - Watch Out For A 2003-Style Bounce Back
- ❑ **Also 2008, Providing No Economic Collapse**
 - Not Yet On The Economist's Radar But No-One Really Knows

Long-Term Outlook ... Lots Of Blood & Rich Pickings

- The Industry Has Nowhere Near Run Out Of Steam**
 - Geographically Or New Products
- Nor Is It Anywhere Near To 'Maturing'**
 - Some Sectors / Companies Are But Not The Industry As A Whole
- Semiconductor 7.0 Will See Radical Industry Changes**
 - Several Big Names Will Go To The Wall By 2015
- IMEC Now Effectively Controls The DRAM Industry**
 - All The Big Players Will Now Use The Same Cell Technology
- Intel Continues To Control The MPU Industry**
 - For Better Or For Worse (In AMD's Case, For Worse)
- Foundries Look Set To Control The "Other Deep Sub-Micron"**
 - "Trust Me ... I'm A Foundry"
- ~200 Niche Players Control The "Other IC" Business**
 - "And They All Lived Together Happily Ever After" ... The End

Contact Details

www.futurehorizons.com

e-mail: mail@futurehorizons.com

Tel: +44 (0)1732 740440 or (0)7000 TELFUT

Fax: +44 (0)1732 740442 or (0)7000 FAXFUT

**Head Office: Blakes Green Cottage, Stone Street, Near Seal,
Sevenoaks, Kent TN15 0LQ, England**

**Worldwide Research Centre: 44 Bethel Road, Sevenoaks,
Kent TN13 3UE, England**

Plus Affiliates In Japan, Russia & The USA