

Objectives and Game Plan

- Introduction to Ratio Analysis
- Overview of other properties of earnings

ROE (Dupont) Analysis

$$\frac{NI}{SE} = \frac{NI + (\text{int. exp.})}{\text{Assets}} \times \frac{NI}{NI + (\text{int. exp.})} \times \frac{\text{Assets}}{SE}$$

Operating
Performance

Capital
Structure

“return on assets”

“return on
sales”

“asset
turnover”

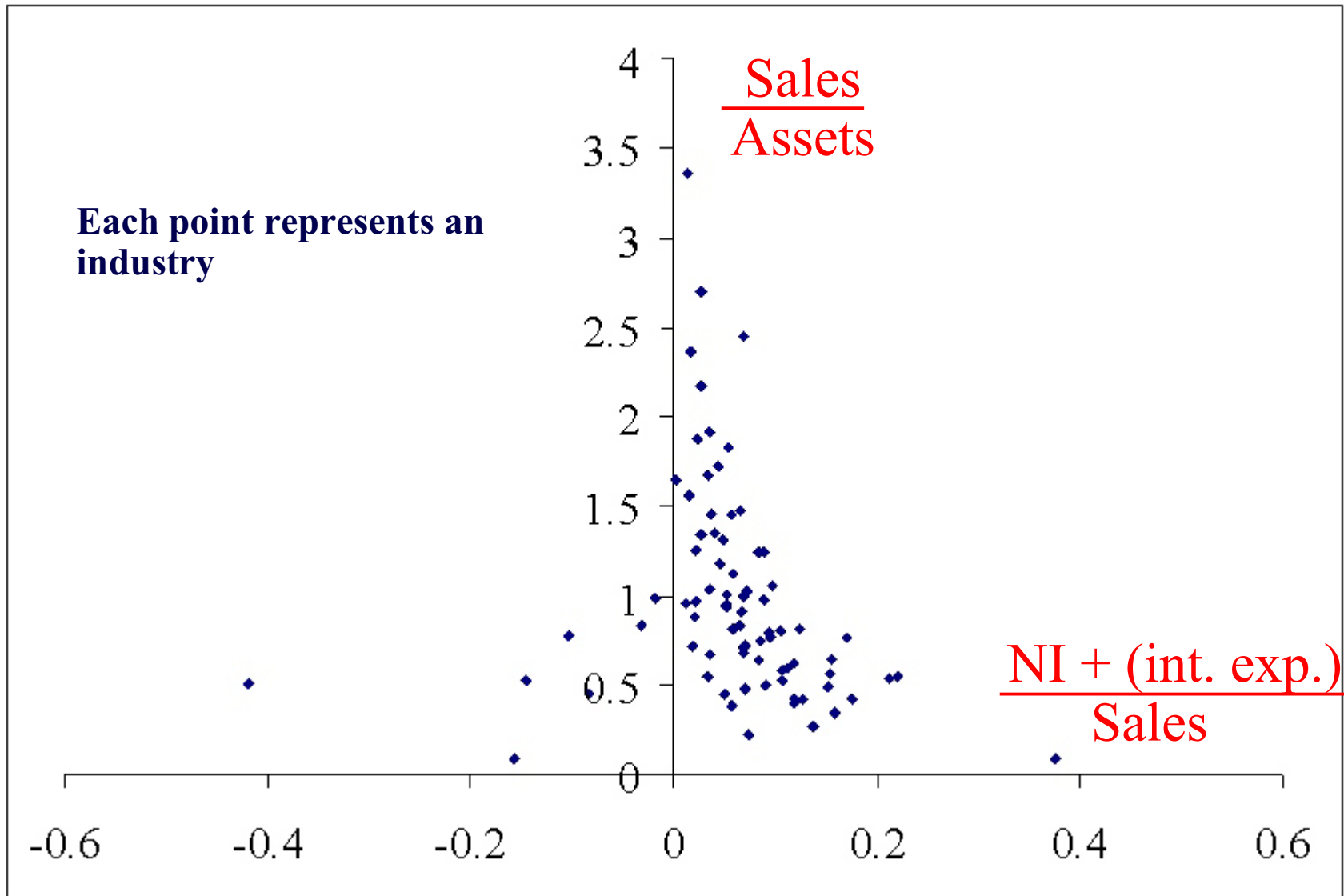
$$\frac{NI + (\text{int. exp.})}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}}$$

Comparative Analysis: 2000

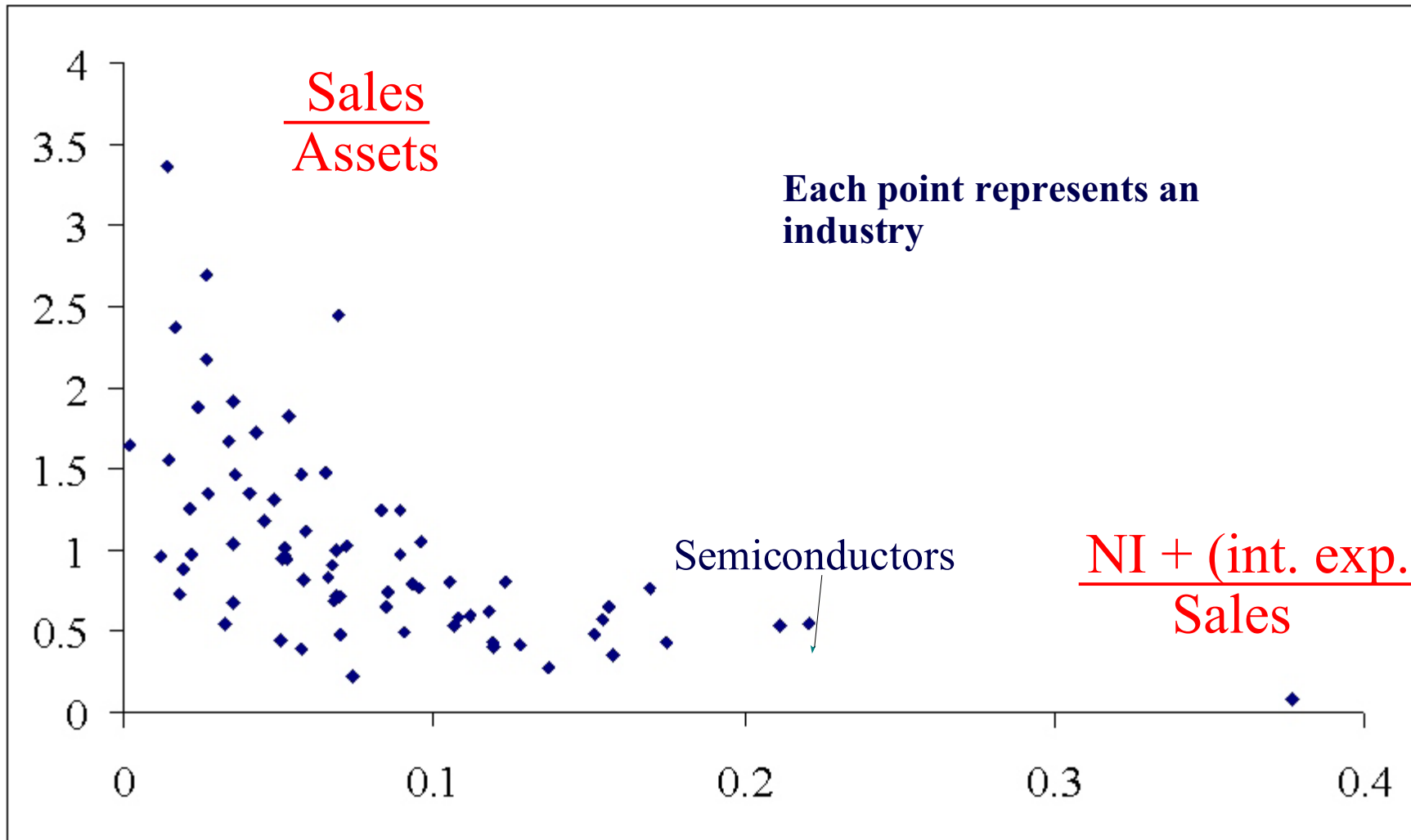
CONAME	ROE	ROA	Common Equity Leverage	Capital Structure Leverage		ROS	Sales over Assets
RAYTHEON CO	0.013	0.032	0.161	2.520		0.052	0.616
HARTMARX CORP	0.045	0.055	0.360	2.313		0.036	1.516
LUCENT TECHNOLOGIES INC	0.061	0.036	0.768	2.203		0.047	0.772
STARBUCKS CORP	0.090	0.069	1.000	1.302		0.044	1.580
IHOP CORP	0.145	0.105	0.619	2.225		0.188	0.560
99 CENTS ONLY STORES	0.168	0.154	0.982	1.116		0.085	1.803
BOEING CO	0.189	0.068	0.802	3.477		0.052	1.313
LIMITED BRANDS INC	0.192	0.119	0.880	1.832		0.048	2.472
TIFFANY & CO	0.227	0.142	0.922	1.731		0.124	1.146
MICROSOFT CORP	0.270	0.211	1.000	1.279		0.410	0.514
WINNEBAGO INDUSTRIES	0.298	0.164	0.994	1.833		0.065	2.500
PFIZER INC	0.299	0.154	0.896	2.167		0.141	1.094
INTEL CORP	0.301	0.230	0.996	1.312		0.314	0.735
ADVANCED MICRO DEVICES	0.382	0.211	0.919	1.970		0.230	0.916
TJX COMPANIES INC	0.460	0.200	0.939	2.454		0.060	3.339
MERCK & CO	0.486	0.193	0.934	2.691		0.181	1.069
LILLY (ELI) & CO	0.553	0.239	0.931	2.488		0.302	0.790



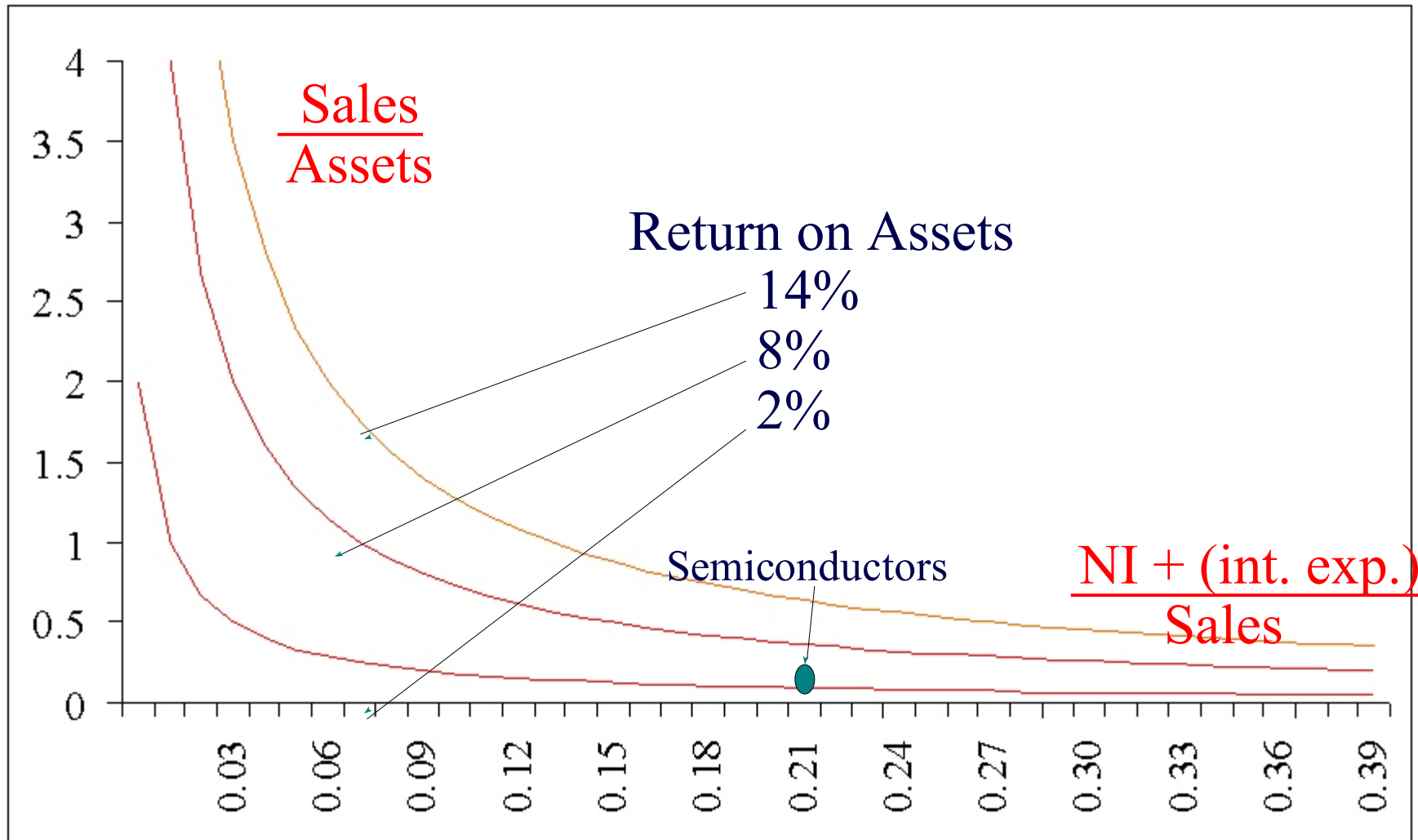
Return on Sales vs. Asset Turnover



Return on Sales (positive only) vs. Asset Turnover



Return on Sales (positive only) vs. Asset Turnover



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Intel over time

	CONAME	ROE	ROA	Common Equity Leverage	Capital Structure Leverage		ROS	Sales over Assets
1998	INTEL CORP	0.270	0.202	0.993	1.344		0.232	0.871
1999	INTEL CORP	0.260	0.195	0.994	1.339		0.250	0.780
2000	INTEL CORP	0.301	0.230	0.996	1.312		0.314	0.735
2001	INTEL CORP	0.035	0.029	0.955	1.262		0.051	0.575
2002	INTEL CORP	0.087	0.072	0.974	1.243		0.120	0.604



Comparative Analysis

		ROE	ROA	Common Equity Leverage	Capital Structure Leverage	ROS	Sales over Assets
1998	TIFFANY & CO	0.188	0.106	0.906	1.962	0.085	1.241
1999	TIFFANY & CO	0.229	0.134	0.906	1.885	0.110	1.218
2000	TIFFANY & CO	0.227	0.142	0.922	1.731	0.124	1.146
2001	TIFFANY & CO	0.177	0.121	0.897	1.630	0.120	1.005
1998	LIMITED BRANDS INC	0.825	0.480	0.968	1.777	0.227	2.112
1999	LIMITED BRANDS INC	0.195	0.125	0.855	1.825	0.055	2.251
2000	LIMITED BRANDS INC	0.192	0.119	0.880	1.832	0.048	2.472
2001	LIMITED BRANDS INC	0.205	0.126	0.939	1.740	0.059	2.126
1998	TJX COMPANIES INC	0.356	0.159	0.996	2.247	0.054	2.967
1999	TJX COMPANIES INC	0.446	0.191	0.986	2.373	0.060	3.168
2000	TJX COMPANIES INC	0.460	0.200	0.939	2.454	0.060	3.339
2001	TJX COMPANIES INC	0.391	0.166	0.925	2.551	0.051	3.281
1998	99 CENTS ONLY STORES	0.205	0.173	0.972	1.218	0.085	2.036
1999	99 CENTS ONLY STORES	0.122	0.108	0.967	1.173	0.063	1.705
2000	99 CENTS ONLY STORES	0.168	0.154	0.982	1.116	0.085	1.803
2001	99 CENTS ONLY STORES	0.169	0.154	0.998	1.098	0.084	1.837
2002	99 CENTS ONLY STORES	0.165	0.149	1.000	1.106	0.083	1.803



Microsoft

	CONAME	ROE	ROA	Common Equity Leverage	Capital Structure Leverage		ROS	Sales over Assets
1998	MICROSOFT CORP	0.328	0.244	1.000	1.341		0.310	0.788
1999	MICROSOFT CORP	0.346	0.262	1.000	1.321		0.394	0.664
2000	MICROSOFT CORP	0.270	0.211	1.000	1.279		0.410	0.514
2001	MICROSOFT CORP	0.166	0.132	1.000	1.257		0.290	0.454
2002	MICROSOFT CORP	0.157	0.123	1.000	1.276		0.276	0.447



Microsoft

- Anything unusual about Microsoft?
 - 2002 Total Assets \$67.646 billion
 - \$38,652 billion was cash or near-cash (57 percent)
 - Even at 5% that's going to earn less than \$2 billion (MSFT reported \$1.76 billion in interest)
 - What effect does this have on ROA? Other components?
 - Remove the effects of cash from NI (after-tax) and Assets
 - Other aspects of MSFT accounting choices - they expense all software development when some could be capitalized.
 - What accounts does this decision affect? What direction?

Microsoft

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2001	MICROSOFT CORP	0.166	0.132	1.000	1.257		0.290	0.454
2002	MICROSOFT CORP	0.157	0.123	1.000	1.276		0.276	0.447
2001	MICROSOFT CORP	0.166	0.262	1.000	0.632		0.290	0.903
2002	MICROSOFT CORP	0.157	0.276	1.000	0.570		0.276	1.001



Percent of firms reporting negative NI

