

### Presentation to Carnegie Mellon University Tepper School of Business



# "Mergers and Acquisitions in a Globalized Economy"

November 30, 2004

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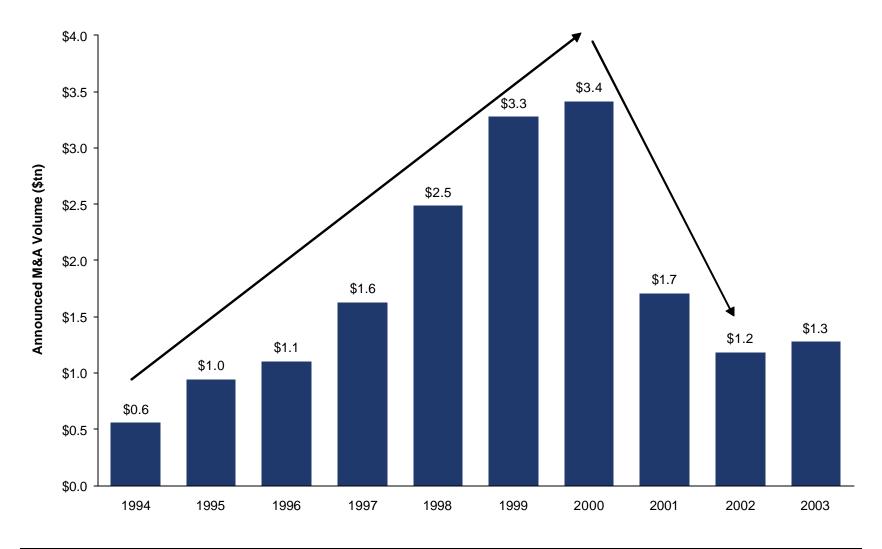
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# I. Where Are We Coming From?

### **Historical Evolution of Announced M&A Volume**



Where Are We Coming From? 2

# What Drove the M&A Boom?

- Robust economic / profit growth
- Strong equity market performance
  - Particularly in technology, media and telecom
- Accommodating regulatory environment
- Globalization of certain industries
- Technological convergence
- Desire for scale and scope
- Quest for earnings growth



## **Top Ten Merger Transactions – 2000**

Acquiror	Target	Value (\$bn)
America Online	Time Warner	\$181.6
Glaxo Wellcome	SmithKline Beecham	77.3
Shareholders	Nortel Networks	61.7
Shareholders	Liberty Media Group	46.0
Chevron	Техасо	43.3
Vivendi	Seagram	42.8
JDS Uniphase	SDL	41.0
France Telecom	Orange PLC	39.7
Pacific Century CyberWorks	Cable & Wireless HKT	35.5
China Mobile	Beijing Mobile+	34.0

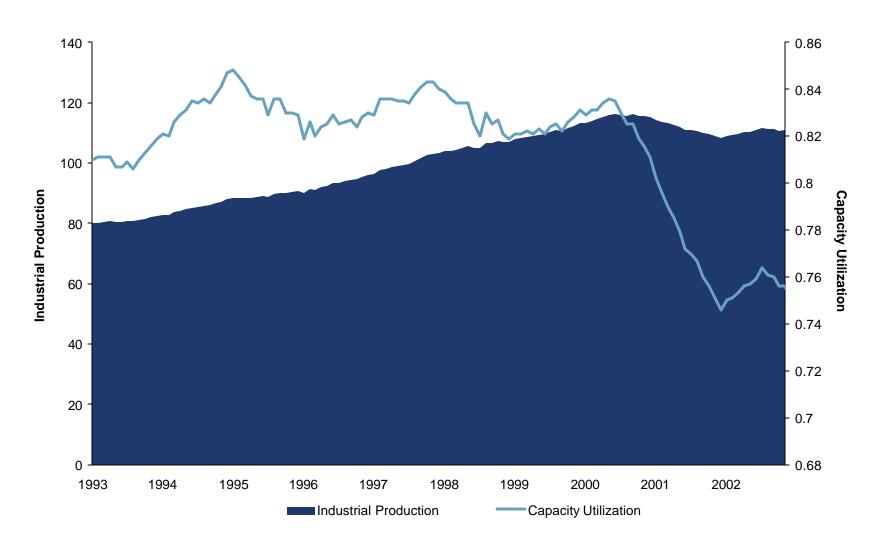
# What Happened?

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- Economic slowdown
- Dramatic decline in equity values
  - Telecom technology "bubble" burst
- Corporate scandals / regulatory scrutiny
- Large "failed" deals
- Increased focus on return on capital
- Tight credit environment



### **Industrial Production vs. Capacity Utilization**



## **Top Ten Merger Transactions – 2002**

Acquiror	Target	Value (\$bn)	Rank in 2000
Pfizer	Pharmacia	\$61.3	
National Grid Group	Lattice Group	18.4	22!
Credit Agricole	Credit Lyonnais	16.8	
HSBC Holdings	Household International	15.3	
Northrop Grumman	TRW	12.0	
Network Rail	Railtrack	11.5	
Bondholders	NTL	10.6	
China Mobile (HK) Ltd	8 Mobile Networks	10.3	
PanCanadian Energy	Alberta Energy	9.2	
Schemaventotto	Autostrade	8.9	52!

## **How Have Deals Changed?**

#### 2000

- Tech and Telecom
- Stock Deals
- Poolings
- Strategic Dilution
- Rollups

Balance Across Industries

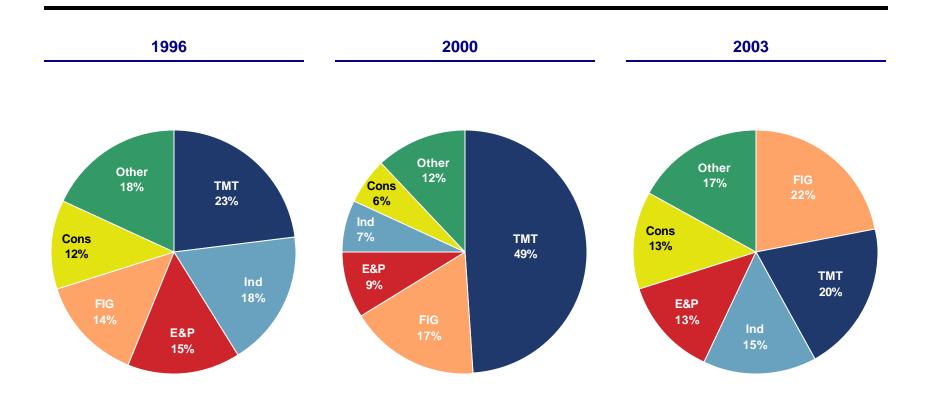
2004

- Cash Deals
- Purchase Accounting
- Strategic Accretion
- LBOs

# M&A Activity by Industry

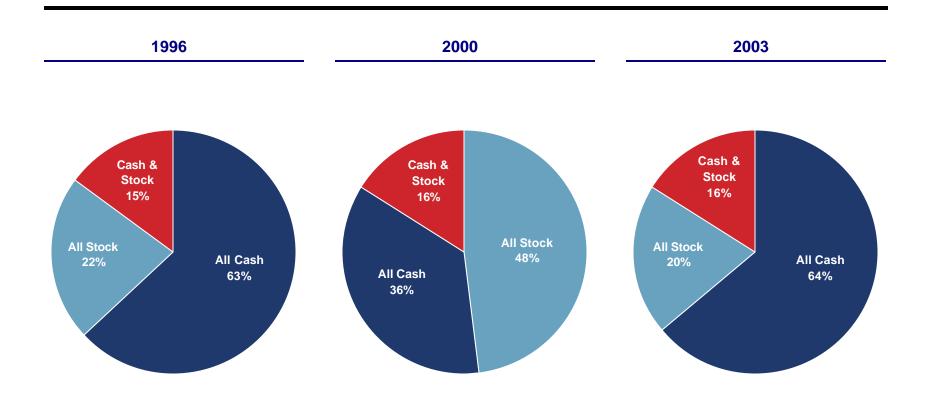
By Dollar Volume

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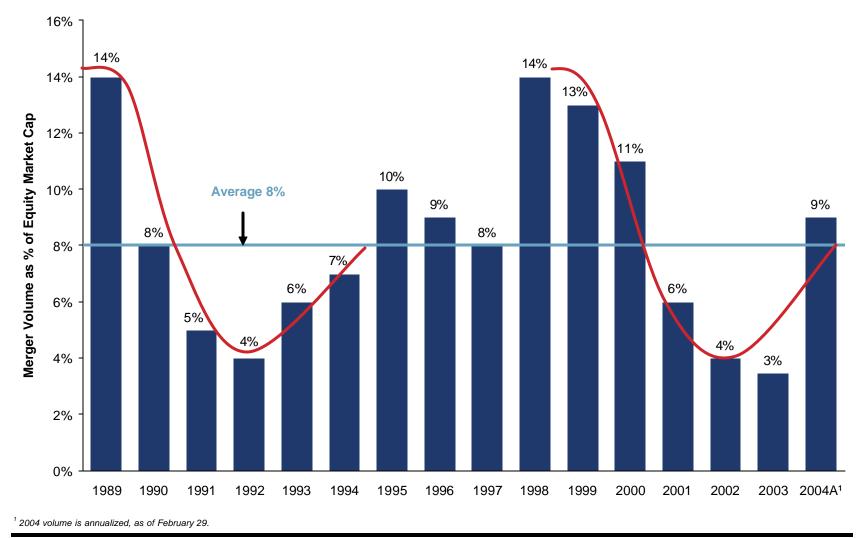


### **M&A Activity by Consideration**

By Dollar Volume; Deals >\$250 million



### U.S. Merger Volume as a % of Equity Market Cap



Where Are We Coming From? 11

# Where Do We Go From Here?

Factors Influencing M&A Activity	Mid 1990s-2000	2001/2002	2004
Economic Environment	1	↓ ↓	Improving
Stock Market Performance	1	↓ ▼	Improving
Investor Confidence	1	↓ ▼	Improving
CEO Confidence	1	•	Improving
Corporate Scandals / Bankruptcies	<b></b>	•	Improving
Geopolitical Situation	1	↓ ▼	Uncertain
Regulatory Environment	•	•	Uncertain
Absence of Write-offs	<b>↑</b>	•	Improving



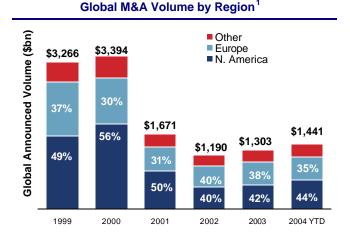
# II. Where Are We Now?



### Global M&A Market Overview 2004 YTD Highlights

- There has been \$1.4 trillion of global announced merger activity in 2004 year-to-date, which represents a 29% increase year-over-year
- The 20 largest deals announced in 2004 year-to-date accounted for 29% of overall volume, slightly higher than the five-year average of 24%. There have been eleven deals valued in excess of \$10 billion announced so far this year. The top four deals, all valued in excess of \$40 billion, accounted for approximately 17% of overall announced merger volume
- At 44% of total announced M&A volume, North Americantargeted activity has a significant lead over European-targeted activity. Five of the ten largest M&A deals this year have targets domiciled in North America





#### Top 10 Deals – 2004 YTD

Acquiror	Advisors	Target	Advisors	Value (\$bn)
Royal Dutch Petroleum Co	Roth, ABN	Shell Transport & Trading Co	DB, Citi	\$80.0
Sanofi-Synthelabo SA	BNP, ML	Aventis SA	GS, Roth, MS, UBS, Citi	65.7
JP Morgan Chase	JPM	Bank One Corp	Laz	58.8
Cingular Wireless	Citi, Leh, Evercore, Roh	AT&T Wireless (DoCoMo – 16%)	ML (GS, JPM)	47.4
Sumitomo Mitsui Finl Grp Inc	GS	UFJ Holdings Inc	ML, JPM	29.3
Westfield Holdings Ltd	GS, DB, UBS, Granger, ABN, ML, JPN Carneg, Investec, Citi, CSFB, MS	1, Westfield Trusts	None	20.2
Santander Central Hispano SA	GS, JPM, ML	Abby National PLC	MS, Leh, UBS	15.2
Wachovia Corp	UBS	SouthTrust Corp	ML	14.2
General Growth Properties Inc	CSFB, Leh, Wach, BoA	Rouse Co	GS, DB	11.9
Citizens Financial Group	GS, UBS, ML	Charter One Financial	Leh	10.5
Total Top 10				\$353.2
Top 10 as % of Total Volume for 200	)4			25%
Note: Bold indicates GS client.				

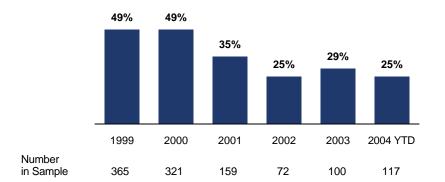
\* Unsolicited bid, not terms agreed.

Note: YTD through October 31, 2004 Source: Thomson Financial Securities Data <sup>1</sup> Region defined by target domicile.

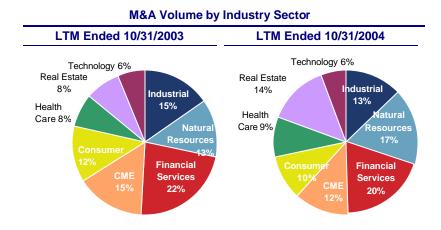
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#### Key Global M&A Trends 2004 YTD Highlights

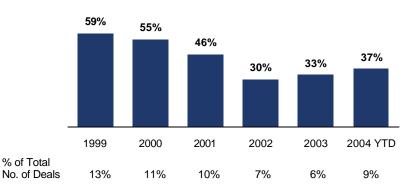
- Consolidating industries continue to influence merger volume
- At 20% of total merger volume, the financial services sector has seen the most activity over the past twelve months. Five of the ten largest deals announced in 2004 year-to-date involved FIG companies. While most sectors remain within several percentage points of their LTM 2003 contributions, the real estate sector has doubled year-over-year, punctuated by the recent takeover of Rouse Co by General Growth Properties for \$11.9 billion. Additionally, the natural resources sector has seen a pick-up of about 60% compared to the same period last year. The industrials sector saw a flurry of unsolicited activity in October, including Harmony's \$7.8 billion bid for Gold Fields, Xstrata's \$6.7 billion offer for WMC and United Technologies' \$2.9 billion bid for Kidde
- The market is becoming more receptive towards using stock as acquisition currency. At 37% in 2004 year-to-date, the use of stock in transactions surpasses that seen in 2003 but still remains below the 5-year historical average of 45%. On a number of deals basis, at 9%, the use of stock is in line with the previous five-year average
- Acquisition premiums have averaged 25% in 2004 so far, down slightly from the 29% seen in 2003. Premiums over the last few years are down significantly from the 49% seen at the market's peak in 1999 and 2000



Average Acquisition Premiums<sup>1</sup>



#### Consideration – Stock Used in Acquisitions<sup>2</sup>



Note: YTD through October 31, 2004

Source: Thomson Financial Securities Data

 $rac{1}{2}$  Premium is relative to target share price 4 weeks prior to announcement for deals with U.S. targets valued over \$250 million.

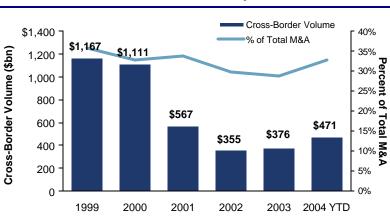
<sup>2</sup> Percentages indicate total volume of deals having a stock component.

#### **Cross-Border Activity** 2004 YTD Highlights

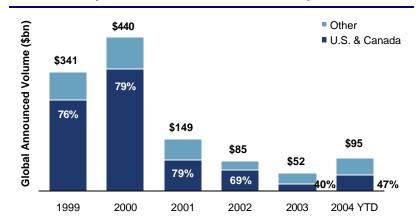
- Cross-border activity continues to be driven by privatization, deregulation and consolidation. At \$471 billion in 2004 year-to-date, announced cross-border volume represented 33% of total merger volume, on par with the 32% five-year average historically attributable to cross-border deals
- North American purchases of non-North American companies and European purchases of non-European companies remain comparable in volume year-todate. North American purchases of European companies significantly outpaced the flow in the other direction
- This year has seen the announcement of Santander Banco Hispano's \$15.2 billion acquisition of Abbey National, which has been one of the largest European cross-border FIG mergers ever announced. The Royal Dutch / Shell transaction contributes significantly to this year's cross-border volume
- Other notable cross-border transactions announced this year include: Citizens Financial's (Royal Bank of Scotland) \$10.5 billion purchase of Charter One Financial, Ambev's \$7.8 billion acquisition of John Labatt, in conjunction with Interbrew's acquisition of Braco, and Xstrata's \$6.7 billion acquisition of WMC Resources

Announced Cross-Border Activity – Worldwide





#### European Purchases of International Companies

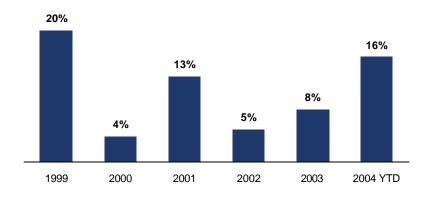


Note: YTD through October 31, 2004 Source: Thomson Financial Securities Data



### **Global Hostile / Unsolicited Activity** 2004 YTD Highlights

- 2004 year-to-date has seen \$229 billion of hostile and unsolicited activity, which is double all such activity seen in full-year 2003. So far this year, hostile and unsolicited activity represents 16% of overall merger volume and is relatively comparable to the contributions witnessed during the market's peak in 1999. At \$92 billion, European-targeted hostile activity slightly outpaced U.S.-targeted hostile volume
- 2004 has seen somewhat of a resurgence in traditional unsolicited M&A activity. Two of the largest transaction announced so far this year, Sanofi-Synthelabo's bid for Aventis and Sumitomo Mitsui's unsolicited bid for UFJ Holdings, began as hostile offers. October saw a flurry of unsolicited activity in the industrials sector, which included Harmony's \$7.8 billion bid for Gold Fields, Xstrata's \$6.7 billion offer for WMC and United Technologies' \$2.9 billion bid for Kidde. Hostile activity volumes also include Comcast's \$66.2 billion bid for Disney, which was withdrawn
- In the U.S., there has been a trend towards increased activism, in which shareholders have tried to force a sale transaction, but have not made a bid for the company. This activity is not reflected in announced hostile volume







#### Top 10 Hostile / Unsolicited Situations 2004 YTD<sup>2</sup>

Bidder	Advisors	Target	Advisors	Outcome	Value (\$bn)
Comcast Corp	MS, JPM, Quadrangle, Roh	Walt Disney	GS, BStearns	Remained Independent	\$ 66.6
Sanofi-Synthelabo SA	BNP, ML	Aventis SA	GS, Roth, MS, UBS, Citi	Sold to Bidder	65.7
Sumitomo Mitsui Finl Grp Inc	GS	UFJ Holdings Inc	ML, JPM	Pending	29.3
Revival Acquisitions Lt	td GS, ML	Marks & Spencer Group PLC	MS, Citi, Caze	Pending	19.1
MGM Mirage Inc	Citi, MS, BoA,, DB, JPM, SocGen	Mandalay Resort Group	ML	Pending	7.6
Xstrata PLC	JPM	WMC Resources Ltd	UBS	Pending	6.7
Lend Lease Corp	ABN, Carnegie	General Property Trust	Macquarie	Pending	4.2
United Technologies Cor	rp UBS	Kidde PLC	Citi	Pending	2.9
CCE Holdings LLC	JPM	CrossCountry Energy		Pending	2.4
Coeur d'Alene Mines Co	rpCIBC, JPM	Wheaton River Minerals		Pending	2.3

Note: YTD through October 31, 2004

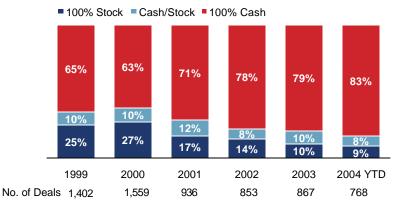
Source: Thomson Financial Securities Data

<sup>1</sup>Hostile / unsolicited activity includes deals that began as unsolicited.

<sup>2</sup> Oracle's bid for PeopleSoft was announced in 2003 and is still pending.

### Cash vs. Stock **2004 YTD Highlights**

- On a number of deals basis, the use of cash continued to dominate as consideration structure through third guarter 2004. All-cash deals accounted for 83% of all transactions for deals over \$250 million
- Similarly on a deal volume basis, cash remained the prevalent transaction currency. Despite the rebirth of merger activity, all-stock deals accounted for 23% of all transaction volume, relatively in line with the levels seen in 2003 but well below those seen during the economic boom
- In general, type of consideration is largely dependent on the size of the deal. Mega-deals over \$10 billion have tended to be stock deals. The prevalence of transactions valued below \$10 billion over the past few years, as well as the volatility in the equity markets, led to a corresponding increase in cash consideration
- 2002 and 2003 also saw a great deal of activity focused on divestitures and minority squeeze-outs, which also contributed to the sharp increase in cash consideration during that period

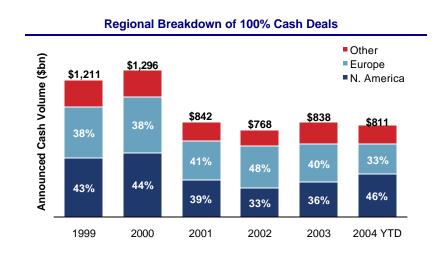


#### Consideration Based on Number of Deals<sup>1</sup>

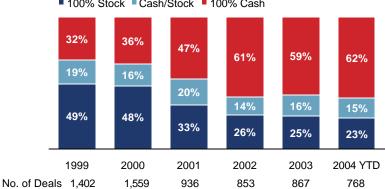
Note: YTD through September 30, 2004

Source: Thomson Financial Securities Data

<sup>1</sup> Includes deals of \$250 million and larger.



#### Consideration Based on Deal Volume<sup>1</sup>



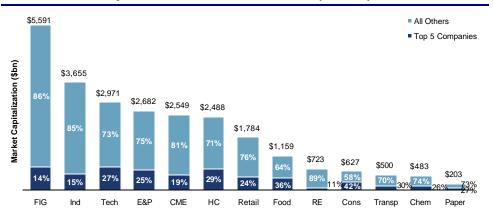
100% Stock Cash/Stock 100% Cash



# **III. Where Are We Going?**

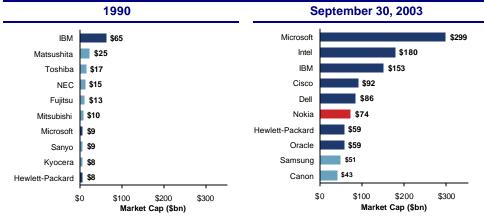
### **Industry Concentration Measures**

- The top 5 companies constitute 25%, on average, of each industry's market capitalization, leaving room for further market consolidation
- With 42% of its market capitalization in the five largest companies in the sector, consumer products is the most consolidated sector. Procter & Gamble, the world's largest consumer products company, accounts for nearly 20% of the sector's market capitalization
- After falling to \$2.1 trillion as of March 31, 2001, the technology sector's market cap has rebounded to nearly \$3 trillion at the end of September. This is still much less than the \$5.3 trillion in market capitalization at the end of 2000. The top 5 companies in the sector account for 27% of the sector's market capitalization. Microsoft, alone, accounts for 10.1% of the sector's size. At the end of 2000, Microsoft accounted for only 3.4% of the sector's volume
- In 1990, 7 of the ten largest technology firms were Japanese, accounting for 18% of the sector's volume. As of September 30, 2003, there were only two Japanese companies and one European company in the top ten; the remaining seven were U.S. companies. IBM, Microsoft and Hewlett-Packard are the only companies to appear on both lists



#### Industry Concentration – % of Sector in Top 5 Companies





Source: FactSet Note: As of September 30, 2003.

### **Industry Concentration Measures**

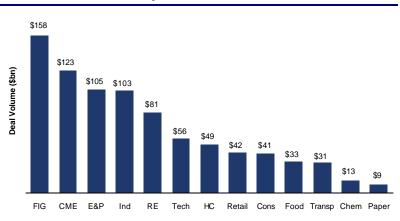
- Over the past 15 years, global transaction rates have maintained an average rate of 9%<sup>1</sup>. With the decline in merger volume and the recent pickup in equity markets, the global transaction rate has fallen to an annualized rate of 4.7% in 2003 year-to-date
- The real estate sector has been particularly active in 2003 YTD, with a transaction rate that is more than 3 times the overall market rate. There were several traditional real estate deals announced this year as well as a large number of companies selling real estate assets to raise capital
- The retail, technology and healthcare sectors have seen the least activity as a percent of their sectors' market capitalizations so far this year
- The FIG and CME sectors are the most active on a dollar volume basis in 2003 year-to-date. However, while the CME sector has seen an above-average transaction rate of 6.9%, the financial institutions sector has lagged the average slightly, with a 4.2% rate

Company	Size (\$bn)	Sector	Region
Microsoft	\$299	Technology	U.S.
General Electric	299	Industrial	U.S.
Wal-Mart	244	Retail	U.S.
Exxon-Mobil	243	Energy & Power	U.S.
Pfizer	237	Healthcare	U.S.
Citigroup	234	Financial Services	U.S.
Vodafone	136	Telecom / Media	Europe
Procter & Gamble	120	Consumer	U.S.
Coca-Cola	106	Food	U.S.
United Parcel Service	72	Transportation	U.S.
DuPont	40	Chemicals	U.S.
International Paper	19	Paper	U.S.

#### Largest Companies by Sector

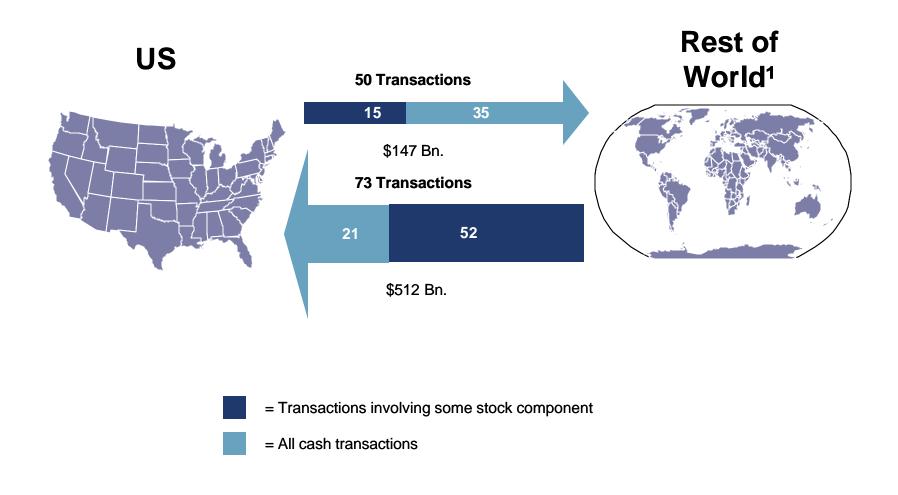
Source: Thomson Financial Securities Data, FactSet Note: As of September 30, 2003. <sup>1</sup> Transaction rate measured as average M&A volume divided by market capitalization.

**Industry Transaction Rates** 



**Industry Transaction Volume** 

## Direction and Composition of Cross-Border Deal Flow 1998-2000 Announced Transactions Greater Than \$1 Billion



<sup>1</sup> Does not include transactions involving companies from Canada or Bermuda.

### Implications of New FASB Rules For Cross-Border Acquisitions by U.S. Companies

#### **Old FASB Rules**

- Reluctance to use highly-rated stock in pooling or purchase transaction because of flowback
- Reluctance to use strong balance sheet in cash transaction because of dilution from goodwill amortization



 Difficult for US Companies to make large acquisitions abroad

#### **New FASB Rules**

- Same flowback issues, BUT
- Goodwill capitalized and not amortized
- CAN use balance sheet in cash transaction



- More US purchases of Non-US companies
- US companies better able to compete with the European buyers for attractive domestic targets
- Significant re-balancing of transatlantic deal flow

### **Merger Costs Have Fallen**

Cost per \$1,000	2000	Today
Financing Cost	\$76	\$35
Accounting Cost	53	14
Total P/L	\$129	\$49

#### **Break-even Multiple**

EBIT	7-8x	18-20x
P/E	12-13x	30-34x
Note: S&P Multiple	26x	20x
	Dilutive!	Accretive!

## **Trans-Atlantic Merger Activity**

- Surprisingly, Citizens Financial Group's acquisition of Charter One Financial has been the only trans-atlantic transaction among the ten largest deals announced through the third quarter of 2004. Both European acquisitions of North American companies and North American acquisitions of European companies have been significantly smaller in size than usual
- North American purchases of European companies have gained an \$11 billion edge over the transatlantic flow in the other direction
- Trans-atlantic deals accounted for 27% of worldwide cross-border activity and about 8% of global merger activity
- Takeover structures vary widely depending on the countries involved and can be difficult to navigate. Cross-holdings, government ownership, and protectionism in Europe are just some of the issues to consider when negotiating a transaction

#### Top Five European Purchases of U.S. and Canadian Cos – 2004 YTD<sup>1</sup>

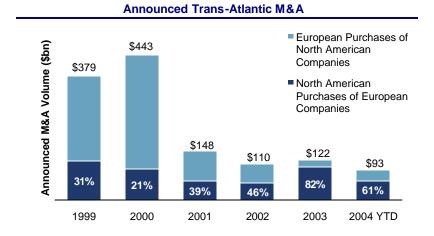
Acquiror	Target	Amt (\$bn)
Citizens Financial (RBS)	Charter One Financial	\$10.5
T-Mobile USA Inc	GSM Network	2.5
Associated British Foods PLC	Burns Philp-Herbs & Spice Div	1.4
WPP Group PLC	Grey Global Group Inc	1.2
BancWest Corp (BNP)	Community First Bankshares	1.2

Acquiror	Target	Amt (\$bn)
Fortress Deutsch (Fortress USA)	GAGFAH-Housing Portfolio	\$4.5
Rockwood Specialties Inc	Dynamit Nobel AG	2.7
VDXK Acquisition BV	Koninklijke Vendex KBB NV	2.7
Investor Group	GSW	2.4
Springtime Holdings Ltd	OAO LUKoil Holdings	2.0

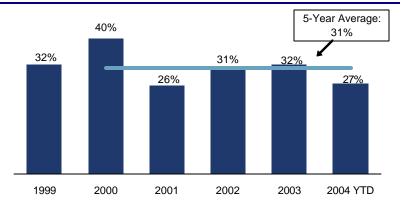
Note: YTD through September 30, 2004

Source: Thomson Financial Securities Data

<sup>1</sup> Goldman Sachs clients denoted in bold.



#### Trans-Atlantic M&A as a Percent of Total Cross-Border M&A



## **Motivations for Increased Shareholder Activism**

- Sharp decline in share prices and corporate earnings
- High profile bankruptcies and accounting issues
- Questions regarding integrity of corporate management and Wall Street research
- Regulatory changes:
  - Sarbanes-Oxley
  - NYSE reforms
  - SEC move to eliminate confidential voting by mutual funds
- Performance pressure on investment managers
- Activist infrastructure in place

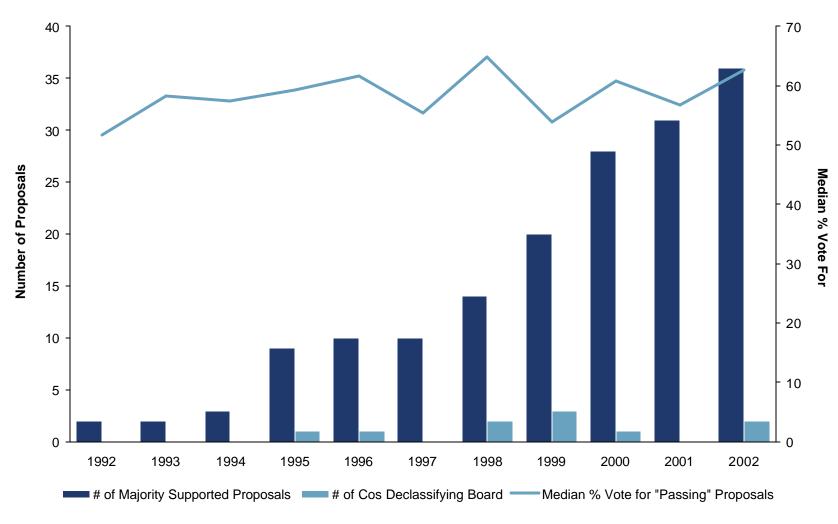
# Institutional Shareholder Services ("ISS")

- Many institutional shareholders follow ISS's recommendations or take them into account in voting their shares
  - ISS typically "influences" 10-25% of institutional investors
- In June 2002, ISS released its Corporate Governance Quotient (CGQ) which has elevated its role in the proxy process
  - Scorecard or rating system with a proprietary weighting methodology that will assist institutional investors in evaluating the quality of corporate boards
  - Evaluates impact corporate governance practices may have on performance
  - If a dissident/activist shareholder seeks one Board seat, and the company has a low rating, ISS could recommend the dissident/activist
  - State of Wisconsin Pension Board has incorporated CGQ data into its investment criteria



## Actions Taken by Companies that "Lost"

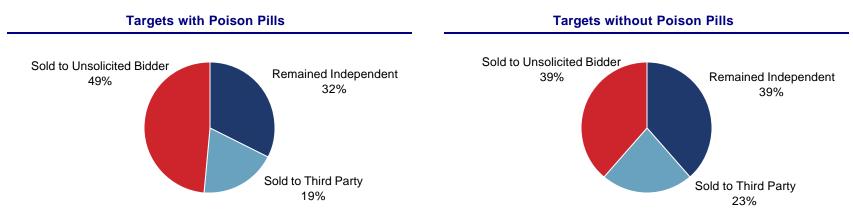
**Proposals to Repeal Classified Board** 



Source: Investor Responsibility Research Center

# Analysis of Structural Defenses in Unsolicited Situations

Targets of unsolicited initiatives who had poison pills remained independent 32% of the time



Targets of unsolicited initiatives who had classified boards remained independent 36% of the time, while those without classified boards were sold 65% of the time

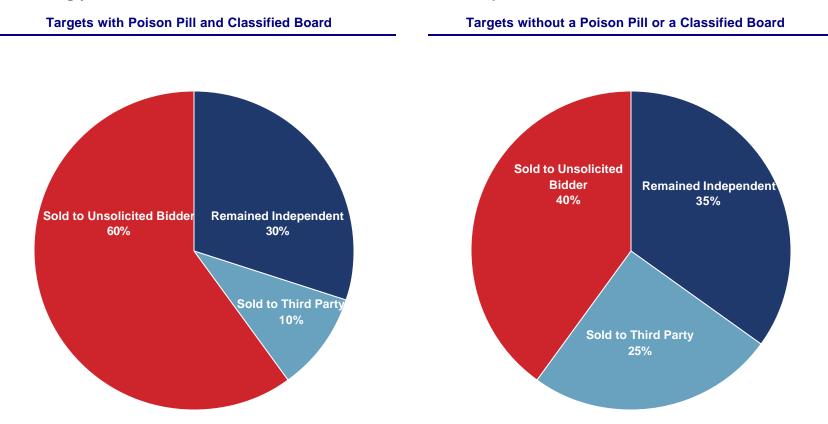


Source: Thomson Financial Securities Data

Note: For hostile / unsolicited situations over \$250 million with U.S. targets, including deals that began as unsolicited. Excludes squeeze-outs.

# Analysis of Structural Defenses in Unsolicited Situations

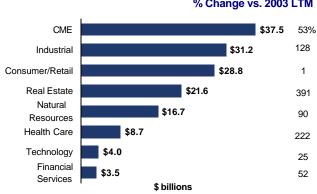
Targets of unsolicited initiatives with poison pills and classified boards remained independent 30% of the time. Interestingly, those with neither structural defense remained independent 35% of the time.



Source: Thomson Financial Securities Data Note: For hostile / unsolicited situations over \$250 million with U.S. targets, including deals that began as unsolicited from. Excludes squeeze-outs.

#### LBO Market Overview **2004 YTD Highlights**

- At \$119 billion through the third guarter 2004. LBO volumes. have already surpassed full-year totals of the past five years. After a slow first quarter in 2004, LBO volumes have since increased significantly
- Announced LBO volume accounted for 10% of overall merger volume, which is its highest contribution in the past five years
- Reversing a five-year trend of European-targeted activity dominating the leveraged buyout market, recent activity has tilted towards the United States. With six of the top ten targets domiciled in the U.S., U.S.-targeted LBOs accounted for 50% of overall volume
- The CME, Industrial and Consumer/Retail sectors have been the most active sectors in the last twelve months, accounting for about 82% of total announced LBO volume



#### LBO Volume by Industry Sector – LTM 2004

% Change vs. 2003 LTM



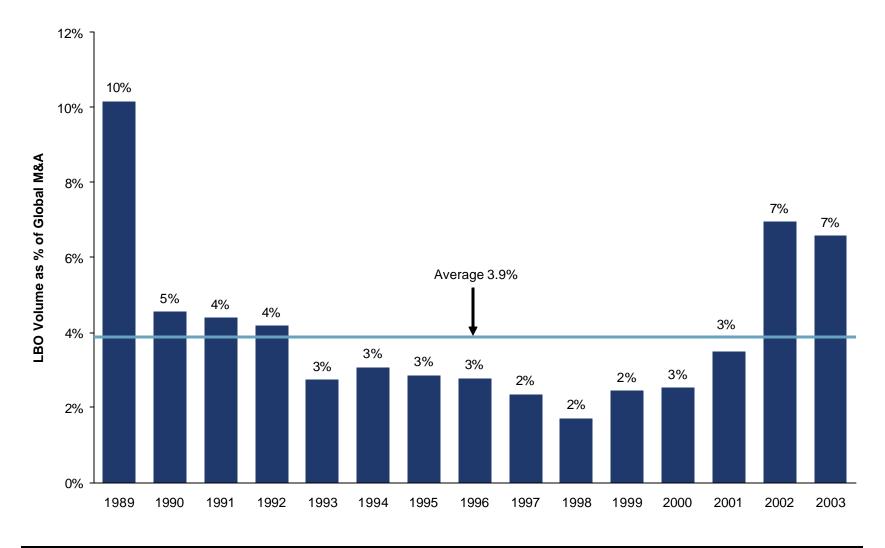
#### Top 10 Deals - 2004 YTD

Acquiror	Advisors	Target	Advisors	Value (\$bn)
Apax Partners, Permira Advisers, Apollo Management, Madison Dearborn Partners	GS, CSFB, Leh	Intelsat Ltd	MS, ML, BoA	\$5.0
Sony Corp, Comcast, Texas Pacific Group, Providence Equity, DLJ Merchant Banking Partners	JPM, Citi, CSFB, Allen, BG, HLHZ	Metro-Goldwyn - Mayer Inc	<b>GS</b> , MS, BoA	4.8
KKR	Citi	PanAmSat Corp	CSFB, Evercore	4.7
Fortress Deutschland GmbH		GAGFAH-Housing Portfolio	Орр	4.5
Boise Cascade LLC	Leh, JPM	Boise Cascade Corp-Paper Asset	GS	3.7
Riley Property Holdings LLC	GS	LNR Property Corp	Greenh	3.7
CVC Capital, Permira Advisers	Citi, Bar	Automobile Association	Caze	3.2
Blackstone Group LP	BS, BoA, DB	Extended Stay America Inc	MS	3.2
Blackstone Group, Hellman & Friedman, KKR, Texas Pacific Group	<b>GS</b> , DB, MS	Texas Genco Holdings Inc	Citi, RBC	2.9
Rockwood Specialties Inc	UBS, CSFB	Dynamit Nobel AG	DKW, Laz, DB	2.7
Total Top 10				\$38.4

Note: YTD through September 30, 2004. Source: Thomson Financial Securities Data. Region defined by target domicile.



### LBO Volume as % of Overall M&A



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### LBO Market Overview

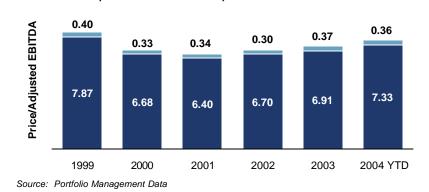
**Private Equity Firms Remain Flush with Cash** 

- The increase in M&A activity suggests that 2004 will also be a busy year for fundraising. Capital raising picked up significantly through the third quarter of 2004, ending September with a total of \$25.6 billion. This surpasses the full-year totals of 2002 and 2003. The peak of total capital raised was \$63 billion in 2000
- Interest in the CME, industrial, and consumer/retail sectors, the more traditional domains of buyout activity, has seen a resurgence
- Consortium bidding is once again gaining momentum. The third quarter saw the purchase of MGM by Sony and a group of private equity buyers, which outbid the initial favored corporate bidder Time Warner. Other notable buyouts include Intelsat Ltd's sale to an investor group, KKR's purchase of PanAmSat, CVC Capital and Permira Advisers' acquisition of Automobile Association, and Blackstone's purchase of Extended Stay America
- The ratio of LBO purchase price / adjusted EBITDA (excluding fees) declined to a low of 6.4x in 2001; it has since risen to 7.3x through the third quarter of 2004





Price/Adjusted EBITDA Fee/Adjusted EBITDA

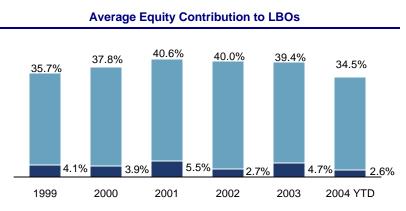


Note: YTD through September 30, 2004. <sup>1</sup> LBOs greater than or equal to \$500 million.

# LBO Market Overview

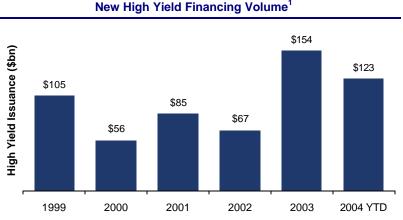
## Equity Contribution Levels Remain Firm

- Through the third quarter 2004, the average equity contribution as a percentage of total sources in leveraged buyouts was 34.5%, down from 39.4% in 2003
- Bank debt and common equity dominated as sources of proceeds for leveraged buyouts. While equity remained the major contributor, favorable conditions in the high yield market led to an increase in public and 144A high yield debt financing of LBOs to 11.4% of total sources, down from 11.9% in 2003 and up from 6.3% in 2002
- Keeping pace with the record-setting levels seen last year, high yield issuance ended the third quarter at \$123 billion. Recent increases in interest rates may slow the pace of high yield issuance over the coming months

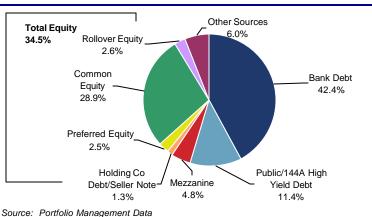


Rollover Equity Contributed Equity

Source: Portfolio Management Data



#### Total Sources – 2004 YTD<sup>2</sup>



Source: Thomson Financial Securities Data

Note: YTD through September 30, 2004

<sup>1</sup> Excludes convertible securities and split rated issues.

<sup>2</sup> Other includes senior secured and unsecured debt, and bridge loans.

# What is Merger Arbitrage?

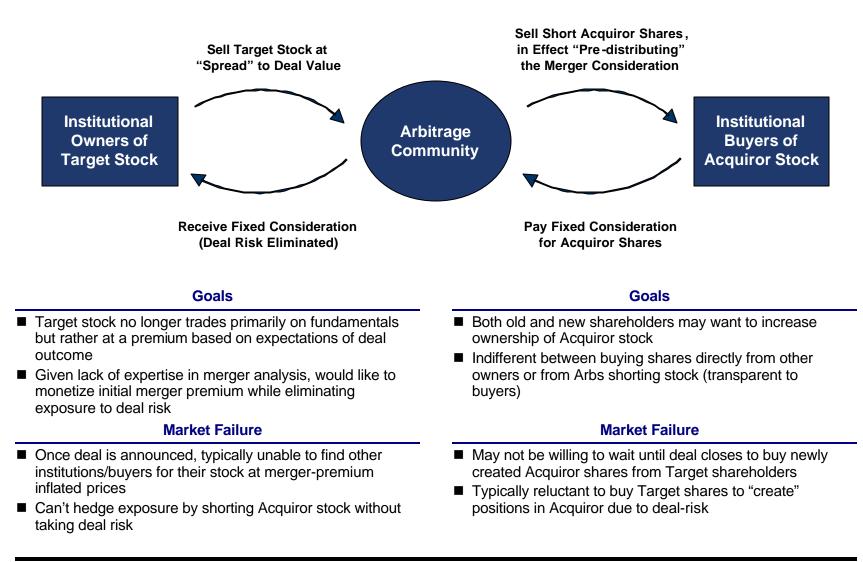
- Goal of Arb: Assess risk / return inherent in a transaction and make investments at prices that generate suitable expected returns
- "Insurance" model: Arbs = Warehousers of merger deal risk
  - Dedicated pools of capital
  - Diversified portfolio

Goldman Sachs

- Specialized skills at assessing transaction risks
- Probabilistic approach to assessing situations vs. "valuation under certainty" approach used most frequently in banking
- Big misconception: Arbs are enemy of companies involved in mergers and their stockholders
  - Arbs tend to be marginal price setters and sources of liquidity
  - Arbs allow existing shareholders to realize value without assuming deal risk
  - Arbs will act to protect self interest and generally don't want exposure to absolute moves in Acquirors' stock prices (hedging)

#### Goldman **Arbitrage Market Dynamics**

Sachs



## What Arbs Need to Make Investment Decisions

#### **Return Characteristics**

- Absolute spread realized if deal closes
- Timing of closing
- Target / Acquiror price if deal breaks
- Dividends paid by Target and Acquiror during expected life of trade
- Other potential bidders (for Target and Acquiror)
- Value of Collar provisions
  - Model value of options embedded in collar
  - Collar averaging period

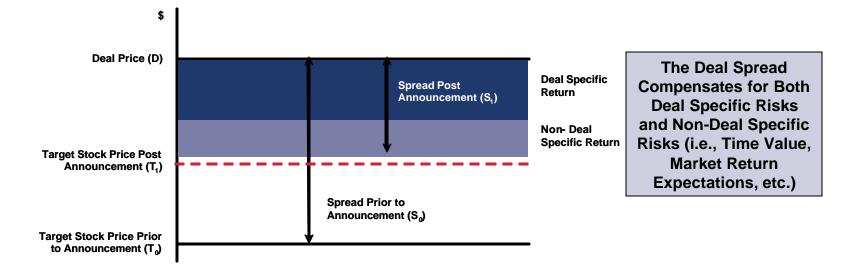
#### Certainty of Events

- Friendly vs. hostile deal / auction vs. exclusive negotiation
- Take-over defenses / lock-ups / break-up fees
- Acquiror financing
- Strategic rationale of merger and financial impact on Acquiror / Target
- Anti-trust and other regulatory issues
- Merger agreement / tender offer outs (MAC, walkaways, market tests)
- Deal contingencies (asset sales, shareholder votes, pooling/tax conditions, etc.)

#### Risk Management / Position Size

- Liquidity of Target / Acquiror
- Stock loan availability in Acquiror stock
- Relative size of Target to Acquiror
- Collar terms and expected impact on trading
- Availability of option hedges / alternative investment approaches (e.g., using target convertible bonds to establish long position)

### Merger Arbitrage Deal Math Cash Merger Scenario<sup>1</sup>



#### **Expected Return Mathematics**

Spread (S1)	=	Deal Price (D) - Target Stock Price Post Announcement (T1)				
Upside if Deal Closes	=	S <sub>1</sub>				
Downside if Deal Breaks <sup>1</sup>	=	Target Stock Price Pre Announcement (T <sub>0</sub> ) - Target Stock Price Post Announcement (T <sub>1</sub> ) = $S_1 - S_0$				
Expected Return: $(D - T_1) x (p) + (T_0 - T_1) x (1 - p)$ ; where p = Probability of Successful Deal						

<sup>1</sup> Assumes target stock price returns to pre-deal levels if deal breaks.

### Merger Arbitrage Deal Math Representative Example

AssumptionsTarget Stock Price Prior to Announcement (T\_0)=\$100Deal Price=\$150Expected Time to Closing=6 months6 Month Interest Rates=5%

Representative Spread Calculations									
Price Post-announcement	95% Success	Probability	85% Success Probability		75% Success Probability				
	\$139.50		\$139.50		\$139.50				
Spread (\$/%)									
Deal Specific Component	\$7.00	5.0%	\$7.00	5.0%	\$7.00	5.0%			
Time Value Component <sup>1</sup>	3.50	2.5	3.50	2.5	3.50	2.5			
Total Spread	\$10.50	7.5%	\$10.50	7.5%	\$10.50	7.5%			
Potential Downside (\$/%)	\$(39.50)	(28.3)%	\$(39.50)	(28.3)%	\$(39.50)	(28.3)%			
Expected Return (\$/%)	\$8.00	5.7%	\$3.00	2.2%	\$(2.00)	(1.4)%			

<sup>1</sup> Represents 5% interest on \$139.50 investment for 6 months.