Investing Using the Business Cycle

Presented by Paul Martin

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Goals for presentation

- Learn the characteristics of each phase of the business cycle
- Examine how changes in the business cycle affect the performance of different sectors in the equity markets
- Examine how changes in the business cycle affect the performance of different asset classes (stocks, bonds, and cash)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Best	Russell 1000 Growth 38.71%	Russell Mid Cap Growth 51.29%	DJ US Select REIT 31.04%	Russell 2000 Value 14.02%	Barclays Agg. Bond 10.25%	Russell 2000 Growth 48.54%	DJ US Select REIT 33.16%	DJ US Select REIT 13.82%	DJ US Select REIT 35.97%	Russell 1000 Growth 11.81%	Barclays Agg. Bond 5.24%	Russell Mid Cap Growth 46.29%	Russell 2000 Growth 29.09%	DJ US Select REIT 9.37%	Russell Mid Cap Value 18.45%
	S&P 500 28.58%	Russell 2000 Growth 43.09%	Russell 2000 Value 22.83%	DJ US Select REIT 12.35%	DJ US Select REIT 3.58%	Russell 2000 Value 46.03%	Russell Mid Cap Value 23.71%	MSCI EAFE 13.54%	MSCI EAFE 26.34%	Russell Mid Cap Growth 11.43%	Russell 2000 Value -28.92%	Russell 1000 Growth 37.21%	DJ US Select REIT 28.07%	Barclays Agg. Bond 7.84%	Russell 2000 Value 18.00%
	MSCI EAFE 20.00%	Russell 1000 Growth 33.16%	Russell Mid Cap Value 19.18%	Barclays Agg. Bond 8.44%	Russell Mid Cap Value -9.64%	Russell Mid Cap Growth 42.71%	Russell 2000 Value 22.25%	Russell Mid Cap Value 12.65%	Russell 2000 Value 23.48%	MSCI EAFE 11.17%	Russell 1000 Value -36.85%	Russell 2000 Growth 34.47%	Russell Mid Cap Growth 26.38%	Russell 1000 Growth 2.64%	Russell 1000 Value 17.46%
	Russell Mid Cap Growth 17.86%	MSCI EAFE 26.97%	Barclays Agg. Bond 11.63%	Russell Mid Cap Value 2.33%	Russell 2000 Value -11.43%	MSCI EAFE 38.59%	MSCI EAFE 20.25%	Russell Mid Cap Growth 12.10%	Russell 1000 Value 22.25%	Russell 2000 Growth 7.05%	S&P 500 -37.00%	Russell Mid Cap Value 34.21%	Russell Mid Cap Value 24.75%	S&P 500 2.11%	MSCI EAFE 17.27%
Performance	Russell 1000 Value 15.63%	S&P 500 21.04%	Russell 1000 Value 7.01%	Russell 1000 Value -5.59%	Russell 1000 Value -15.52%	Russell Mid Cap Value 38.07%	Russell 1000 Value 16.49%	Russell 1000 Value 7.05%	Russell Mid Cap Value 20.22%	Barclays Agg. Bond 6.97%	Russell 1000 Growth -38.44%	MSCI EAFE 31.78%	Russell 2000 Value 24.50%	Russell 1000 Value 0.39%	DJ US Select REIT 17.07%
	Barclays Agg. Bond 8.69%	Russell 1000 Value 7.35%	S&P 500 -9.10%	Russell 2000 Growth -9.23%	MSCI EAFE -15.94%	DJ US Select REIT 36.18%	Russell Mid Cap Growth 15.48%	Russell 1000 Growth 5.26%	S&P 500 15.79%	S&P 500 5.49%	Russell Mid Cap Value -38.44%	DJ US Select REIT 28.46%	Russell 1000 Growth 16.71%	Russell Mid Cap Value -1.38%	S&P 500 15.96%
	Russell Mid Cap Value 5.08%	Russell Mid Cap Value -0.11%	Russell Mid Cap Growth -11.75%	S&P 500 -11.89%	S&P 500 -22.10%	Russell 1000 Value 30.03%	Russell 2000 Growth 14.31%	S&P 500 4.91%	Russell 2000 Growth 13.35%	Russell 1000 Value -0.17%	Russell 2000 Growth -38.54%	S&P 500 26.46%	Russell 1000 Value 15.51%	Russell Mid Cap Growth -1.65%	Russell Mid Cap Growth 15.76%
	Russell 2000 Growth 1.23%	Barclays Agg. Bond -0.82%	MSCI EAFE -14.17%	Russell Mid Cap Growth -20.15%	Russell Mid Cap Growth -27.41%	Russell 1000 Growth 29.75%	S&P 500 10.88%	Russell 2000 Value 4.71%	Russell Mid Cap Growth 10.66%	Russell Mid Cap Value -1.42%	DJ US Select REIT -39.20%	Russell 2000 Value 20.58%	S&P 500 15.06%	Russell 2000 Growth -2.91%	Russell 1000 Growth 15.21%
	Russell 2000 Value -6.45%	Russell 2000 Value -1.49%	Russell 1000 Growth -22.42%	Russell 1000 Growth -20.42%	Russell 1000 Growth -27.88%	S&P 500 28.68%	Russell 1000 Growth 6.30%	Russell 2000 Growth 4.15%	Russell 1000 Growth 9.07%	Russell 2000 Value -9.78%	MSCI EAFE -43.38%	Russell 1000 Value 19.69%	MSCI EAFE 7.75%	Russell 2000 Value -5.50%	Russell 2000 Growth 14.55%
Worst	DJ US Select REIT -17.01%	DJ US Select REIT -2.58%	Russell 2000 Growth -22.43%	MSCI EAFE -21.44%	Russell 2000 Growth -30.26%	Barclays Agg. Bond 4.10%	Barclays Agg. Bond 4.34%	Barclays Agg. Bond 2.43%	Barclays Agg. Bond 4.33%	DJ US Select REIT -17.56%	Russell Mid Cap Growth -44.32%	Barclays Agg. Bond 5.93%	Barclays Agg. Bond 6.54%	MSCI EAFE -12.14%	Barclays Agg. Bond 4.20%

Source: Goldman Sachs 2013
"Benefits of Asset Allocation.."
http://www.goldmansachs.com/gsam/docs/fundsgeneral/general_education/investment_education/benefits_aa.pdf

Fidelity study on sector performance

- Fidelity analyzed 3,000 of the top U.S. companies ranked by market capitalization and their performance through economic cycles from 1962-2010.
- This presentation is based on the Fidelity report. All figures, unless otherwise indicated, are from the Fidelity report.

Source:

"How to invest in sectors using the business cycle"

Authors: Lisa Emsbo-Mattingly, Miles Betro, Dirk Hofschire, Li Tan

Fidelity Viewpoints 6/11/2013

https://www.fidelity.com/viewpoints/how-to-use-business-cycle

http://www.pyramis.com/ecompendium/us/articles/2012/q4/investing-strategies/business-cycle-asset-allocation/index.shtml

Business cycle phases

- Distinct phases can be identified by changes in the rate of growth in economic activity, increasing or decreasing of corporate profits, credit, inventories, and employment.

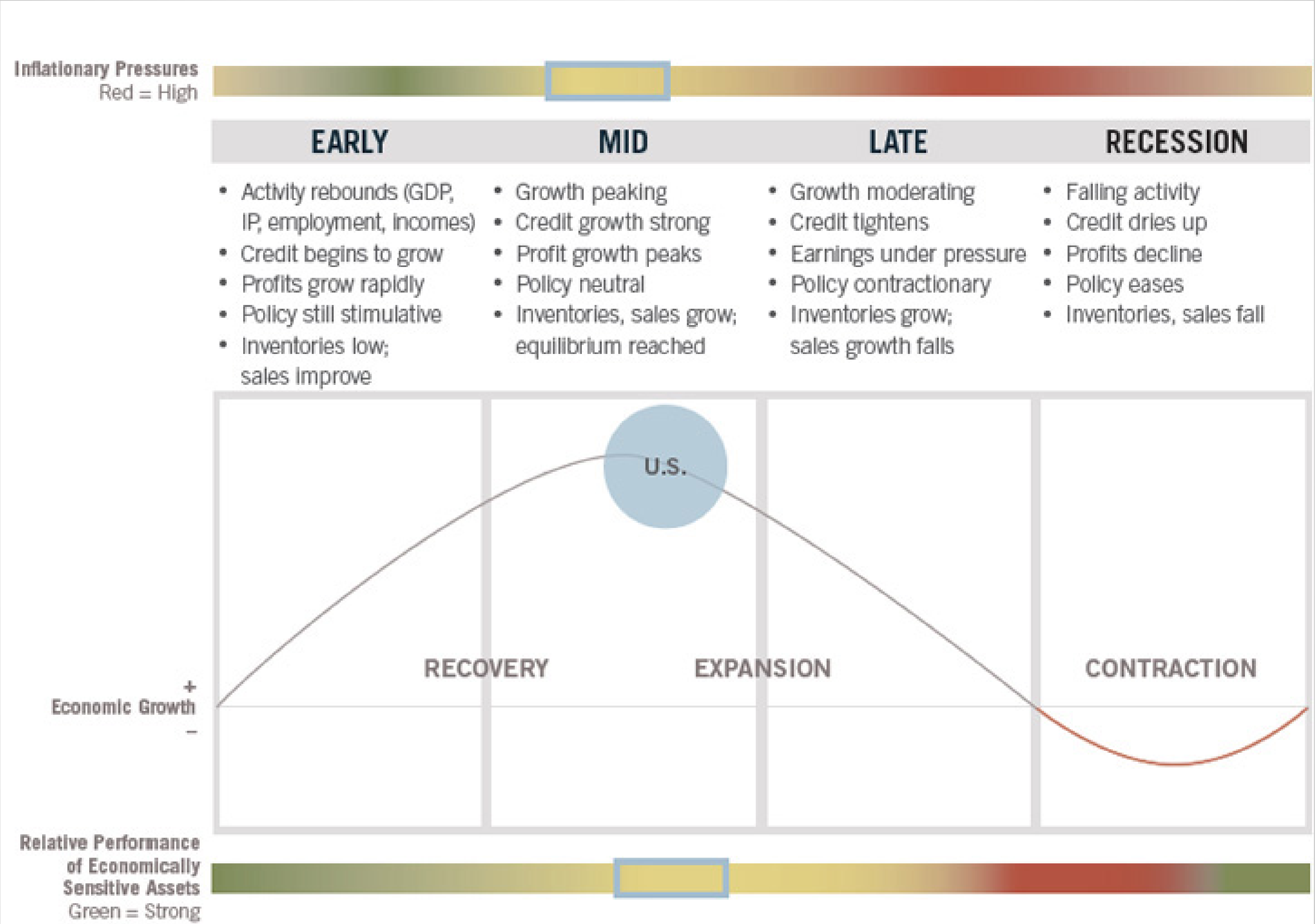
- Business cycles are not uniform – ranging from 2 to 10 years.*

- Between 1945 - 2009 there have been 11 cycles with average length of 5.7 years.*

Four Phases of Business Cycle

1. Early (Bottom)
2. Middle (Rising)
3. Late (Top)
4. Recession (Falling)

*Source: NBER analysis of business cycles since 1854
www.nber.org/cycles/html



Inflationary Pressures
Red = High
EARLY
MID
LATE
RECESSION
• Activity rebounds (GDP, IP, employment, incomes)
• Credit begins to grow
• Profits grow rapidly
• Policy still stimulative
• Inventories low; sales improve
• Growth peaking
• Credit growth strong
• Profit growth peaks
• Policy neutral
• Inventories, sales grow; equilibrium reached
• Growth moderating
• Credit tightens
• Earnings under pressure
• Policy contractionary
• Inventories grow; sales growth falls
• Falling activity
• Credit dries up
• Profits decline
• Policy eases
• Inventories, sales fall
U.S.
RECOVERY
EXPANSION
CONTRACTION
+
Economic Growth
−
Relative Performance of Economically Sensitive Assets
Green = Strong

Recent peak and trough dates 1980 to present

Turning Point Date	Peak or Trough	Announcement Date with Link
June 2009	Trough	September 20, 2010
December 2007	Peak	December 1, 2008
November 2001	Trough	July 17, 2003
March 2001	Peak	November 26, 2001
March 1991	Trough	December 22, 1992
July 1990	Peak	April 25, 1991
November 1982	Trough	July 8, 1983
July 1981	Peak	January 6, 1982
July 1980	Trough	July 8, 1981
January 1980	Peak	June 3, 1980

Source: NBER
www.nber.org/cycles/html

Early-cycle phase

- Most robust performance with the top 3000 stocks averaging a total return of 24% per year with an average duration of 15 months
- "Rising tide lifts all boats"
- Beta-driven: beta exposure tends to be rewarded
- Excess liquidity from fiscal and monetary stimulus
- GDP, industrial production, and incomes begin to pickup
- Inventories are low and sales pickup
- Corporate restructurings, deleveraging, balance sheet repair, and reduction in corporate defaults.
- Low interest rates and steep yield curve

Sector performance in early phase

- Consumer discretionary tends to outperform - benefiting from low-interest rates and increased borrowing.

- To a lesser extent, financials (banking, insurance, real estate, trading) also benefit for the same reasons.

- Outperforming industries: apparel, autos, business supplies, construction, construction materials, consumer goods, entertainment, printing and publishing, recreation, restaurants, hotels, retail, rubber and plastic products, and textiles

Sector performance in early phase

Economic sensitive sectors – like industrials, information technology, and materials – also do well, rallying in anticipation of a pick up in economic recovery.

– In tech, semiconductor and semiconductor equipment stocks are boosted by renewed expectations for consumer and corporate spending.

– Materials: containers and packaging benefit from rising trade activity

Sector performance in early phase

- Defensive industries, like utilities and telecommunications, typically underperform.
- Energy lags because of weak inflationary pressures.
- Consumer discretionary has beaten the market in every one of the early cycle phases.
  - industrials outperform 86% of the time
  - materials 71%, technology and financials 57%
  - Utilities, telecommunications, and energy have never outperformed the market in the early-cycle phase

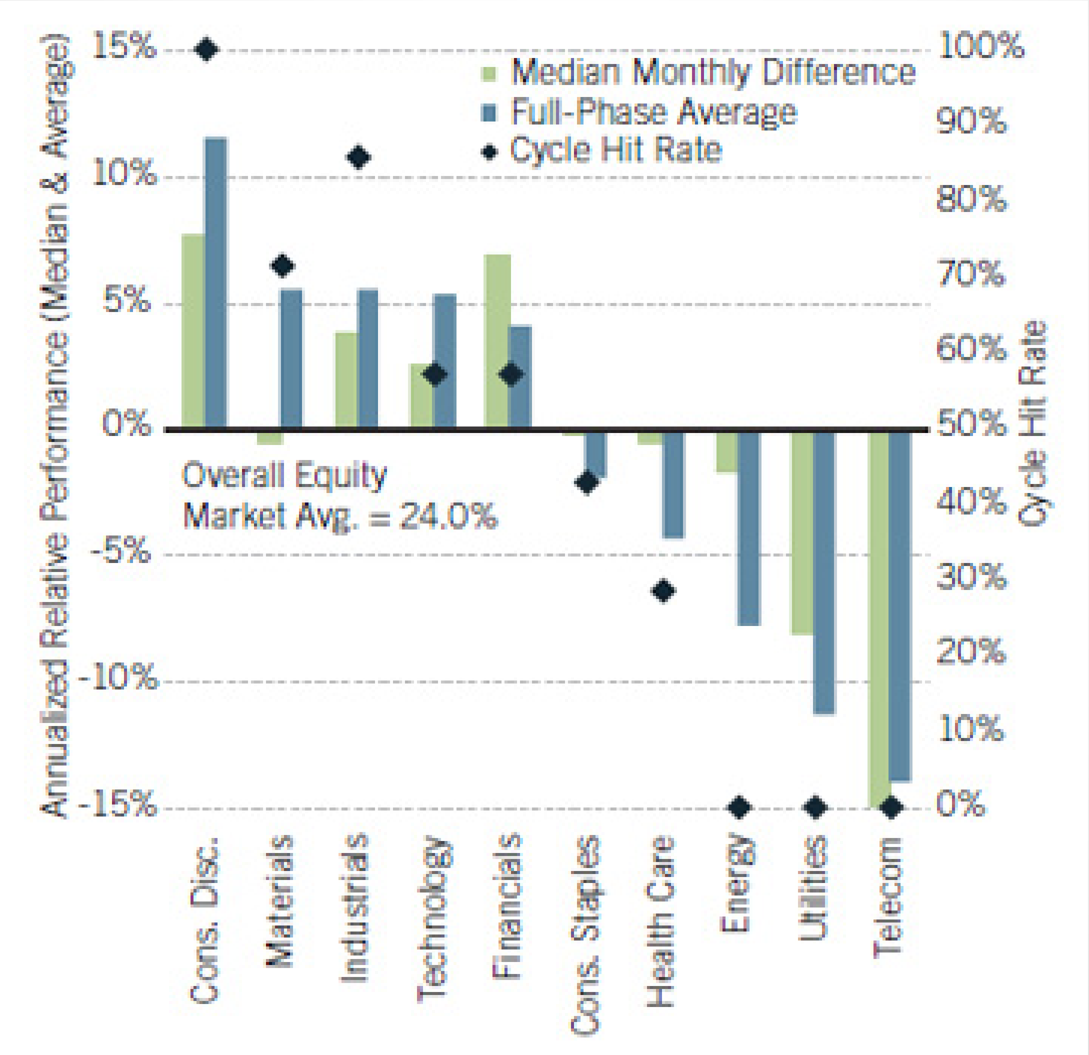
Analyzing relative asset class performance

- **Full-phase average performance:** Calculates the average performance of an asset class in a particular phase of the business cycle and subtracts the performance of the benchmark portfolio.

- **Median monthly difference:** Calculates the difference in the monthly performance for an asset class compared to the benchmark portfolio, and then takes the midpoint of those observations.

- **Cycle hit rate:** Calculates the frequency of an asset class outperforming the benchmark portfolio over each business cycle phase since 1950. This measure represents the consistency of asset class performance relative to the broader market over different cycles.

Early phase sector performance



Mid-cycle phase

- When the economy exits recovery and enters into expansion.
- Average annual stock market performance is 15%.
- Typically the longest phase in the cycle, with an average duration of 38 months
- Mid-cycle phase is when most corrections take place.
- Least sector differentiation because sector leadership rotates quickly due to corrections
- No sector has outperformed or underperformed broader market more than two-thirds of the time, and the magnitude of outperformance is modest.
- Growth is peaking, credit growth strong, profit growth peaks, policy is neutral. Yield curve is flattening; inflation is moderate.
- Inventories and sales growth reach an equilibrium.
- Stock selection becomes important – move from beta exposure to alpha driven as corporate winners and losers emerge.
- High quality fixed income performs poorly relative to stocks.

Sector performance in mid-cycle phase

- Information Technology is the best performer.
  - Software, measuring and control equipment, computers, electronic equipment

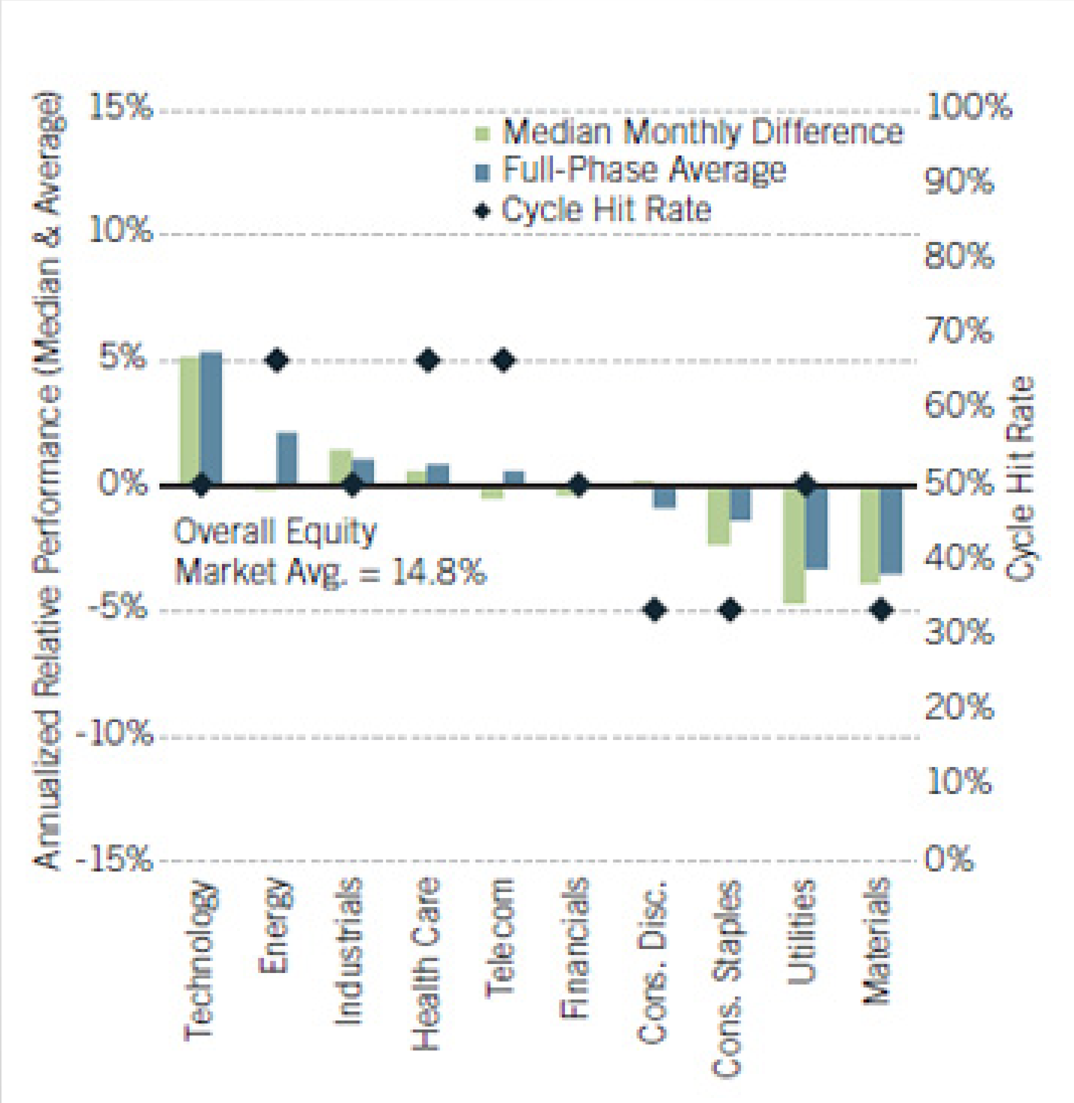
- Transportation also does well.

- Industrials on a whole tend to underperform, but certain sectors do well, such as industrial conglomerates.

- Utilities and materials lag the most.

- Mid-cycle is when stock selection is most important!

Mid-cycle sector performance



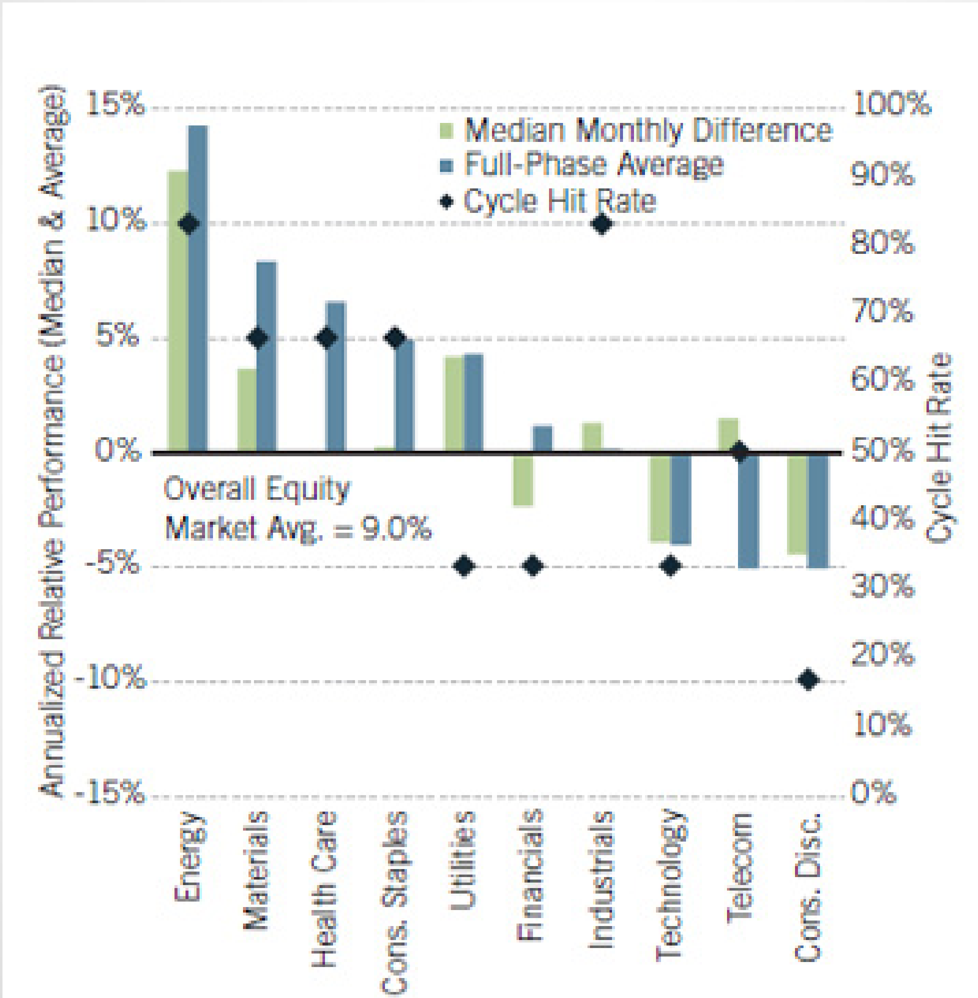
Late-cycle phase

- Stock market returns weaker than the previous two cycles. with an average of 9 percent total return per year.
- Average duration is 18 months.
- Inflationary pressures cause rising raw material costs, which help energy and material sectors outperform.
- Characteristics: deteriorating corporate margins, tightening credit. Inventories build up and sales growth slows. Yield curve is flat or inverted.
- High interest rates, corporate expansions, mergers, acquisitions, and increased leverage as corporate restructuring becomes exhausted
- Slowing economic growth amidst restrictive monetary policy, tightening credit
- High quality fixed income performance begins to improve.

Late-cycle phase

- Performance shifts towards defensive sectors, such as healthcare, consumer staples, and utilities.
- Beginning of late-cycle phase: precious metals, chemicals, steel, mining, defense, machinery, ship and railroad equipment, aircraft, electrical equipment
- End of late-cycle phase: agricultural, beer and liquor, candy and soda, food products, healthcare, medical equipment, pharmaceutical products, tobacco, coal, petroleum and natural gas

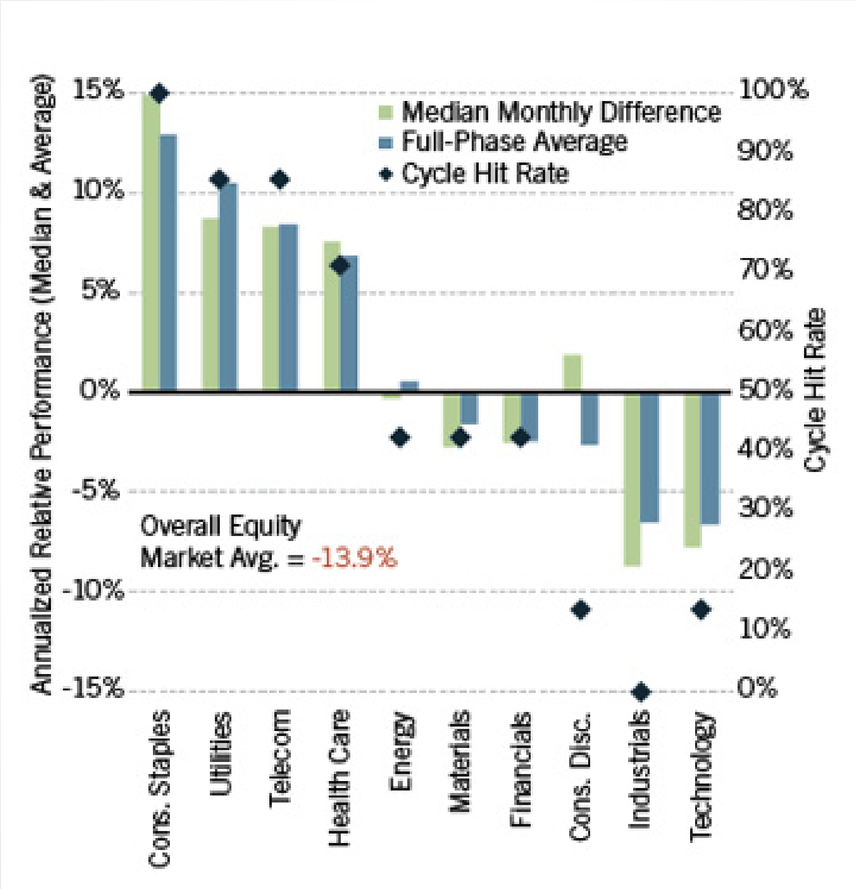
Late-cycle sector performance



Recessionary phase

- Average return is -14%, with an average duration of 10 months.
- Peak in short-term interest rates, rising corporate defaults, overexpansion, value destruction, deleveraging, scarce credit, and inventories gradually fall despite low sales levels.
- Losses across the board. Consumer staples, utilities, telecom, and healthcare tend to hold up the best. No sectors generate positive returns.
- High quality fixed income performs well.

Recessionary phase sector performance



Summary of sector performance

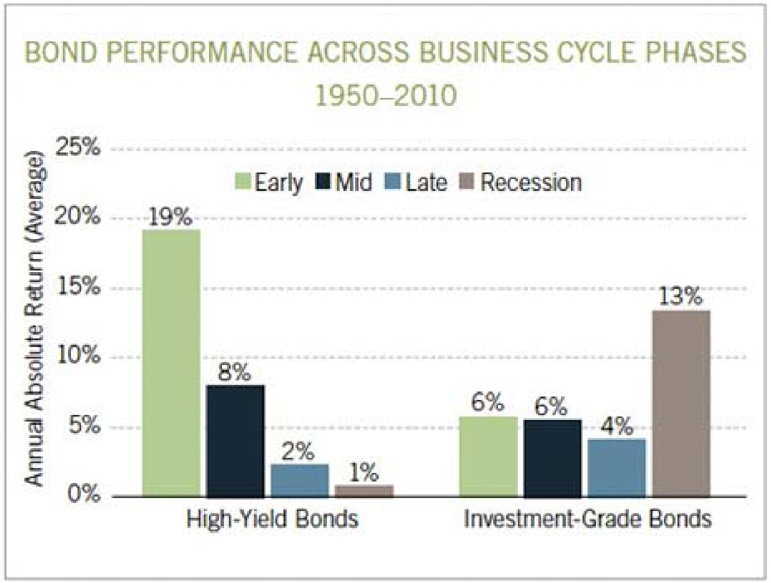
EXHIBIT 5: Equity sector relative performance has tended to be differentiated across business cycle phases.

Sector	Early	Mid	Late	Recession
Financials	+			
Consumer Discretionary	+		–	–
Technology	+	+	–	–
Industrials	+	+		–
Materials	+	–	+	
Consumer Staples			+	+
Health Care			+	+
Energy	–		+	
Telecom	–			+
Utilities	–	–	+	+

Source: Fidelity Investments (AART). Unshaded = no clear relative performance pattern. See endnotes for sector definitions.

Bond performance

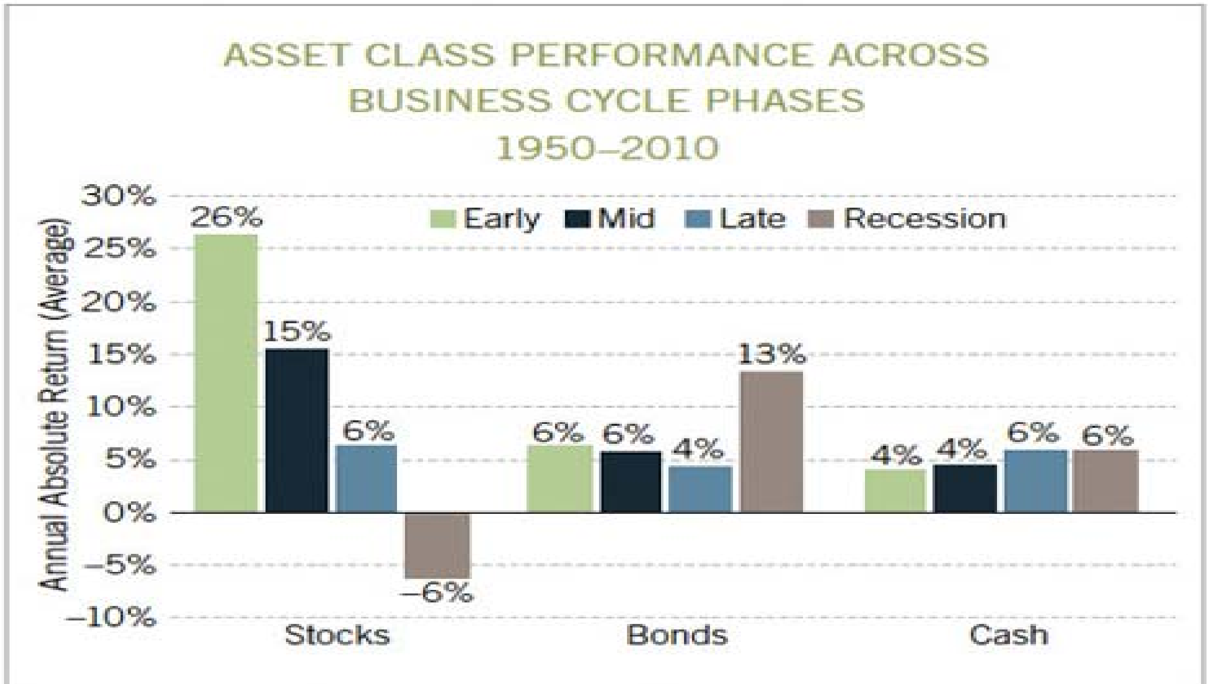
EXHIBIT 6: The economic sensitivity of high-yield bonds has caused them to behave more like equities than investment-grade bonds.



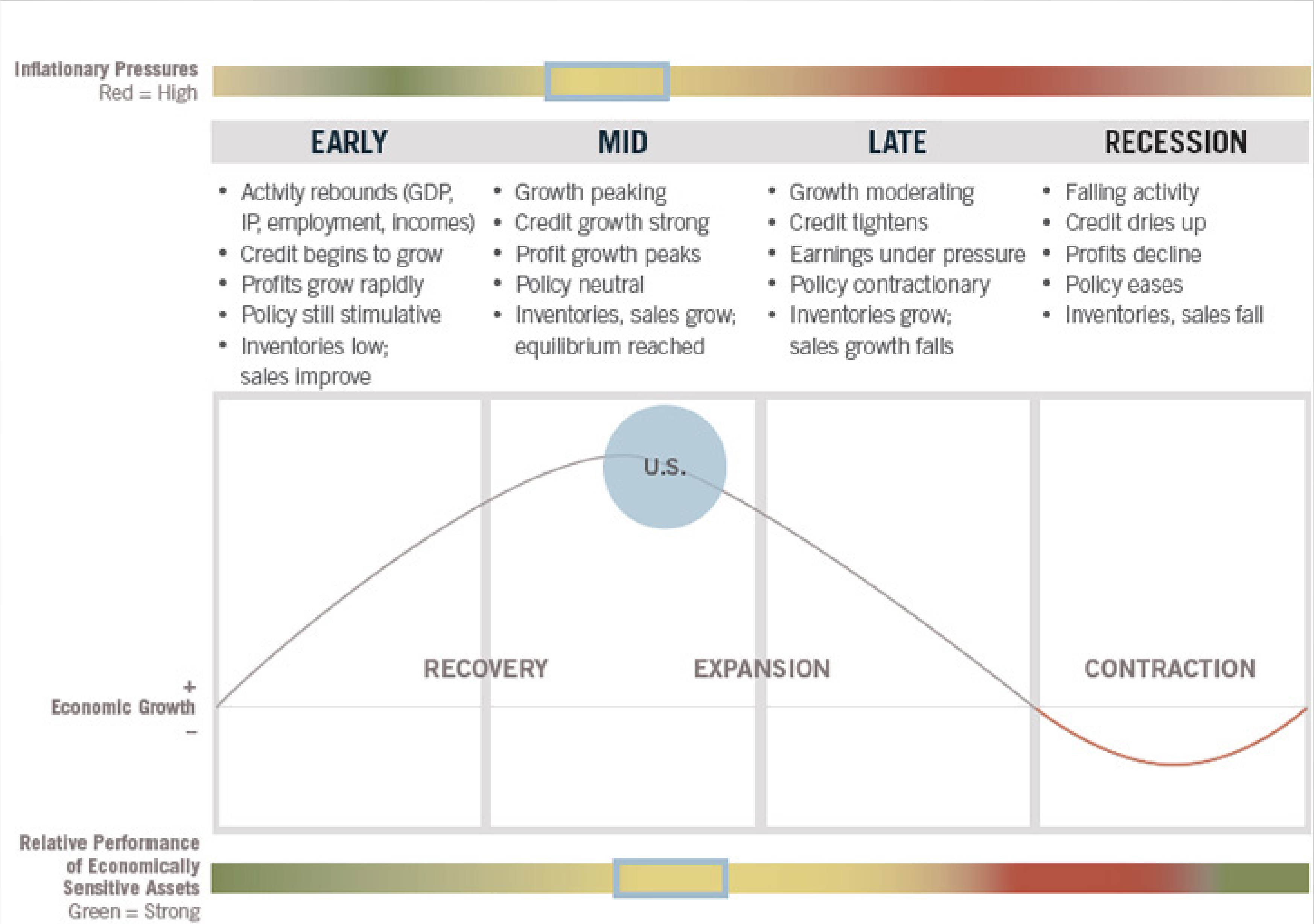
Asset classes represented by: Investment-Grade Bonds – Barclays U.S. Aggregate Bond Index for 1976–2010, 66% IA U.S. Intermediate-Term Government Bond Index and 34% IA U.S. Long-Term Corporate Bond Index for 1950–1975; High-Yield Bonds – Bank of America/Merrill Lynch U.S. High Yield Master II Index for 1986–2010, Barclays U.S. High Yield Corporate Bond Index for 1950–1985. Source: Fidelity Investments as of Apr. 30, 2010.

Asset class performance

EXHIBIT 3: Historically, performance for stocks and bonds has been heavily influenced by the business cycle.



Asset classes represented by: Stocks – Top 3,000 U.S. stocks ranked and weighted by market capitalization; Bonds – Barclays U.S. Aggregate Bond Index for 1976–2010, 66% IA U.S. Intermediate-Term Government Bond Index and 34% IA U.S. Long-Term Corporate Bond Index for 1950–1975; Cash – Barclays U.S. Treasury Bills Index (1–3 Month). Source: Fidelity Investments (AART) as of Apr. 30, 2010.



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