Wilshire

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Wilshire Consulting

Capital Market Return Assumptions

Wilshire Consulting Investment Research

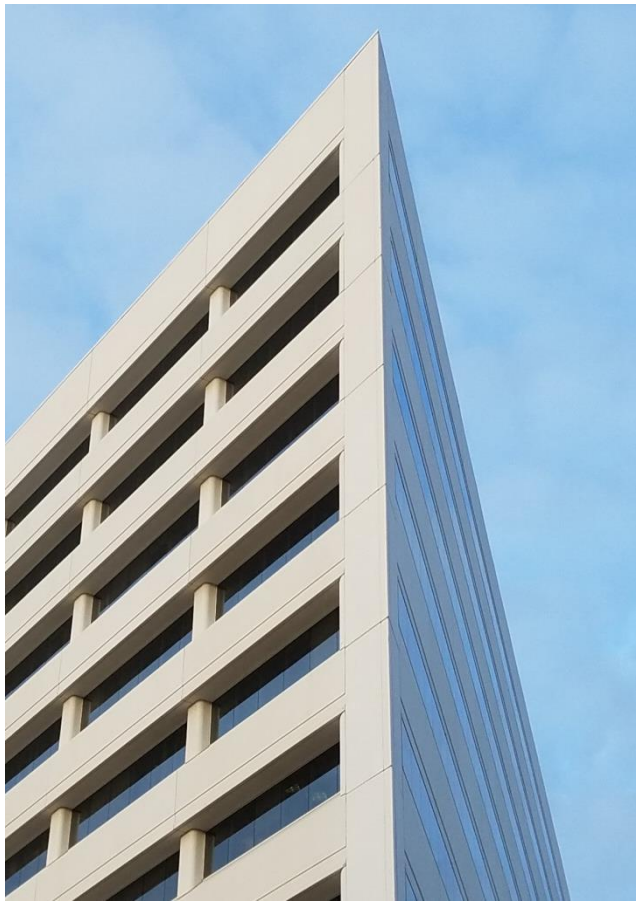
January 28, 2020

Wilshire Consulting

INTRODUCTION

- Traditional Asset Allocation Process
  - Forecasting asset class return, risk and correlation assumptions is the first step in the asset allocation process
  - Long-term estimates (10+ years)
  - Combines historical data with forward-looking analysis
  - Assumptions are updated quarterly

- Economic Highlights of 2019
  - Economic growth slowed from a year earlier; real GDP expanded 2.1% for the four quarters ending September
  - Inflation quickened somewhat with CPI up 2.3%; 10-year breakeven inflation rate was up at 1.77%
  - Treasury yields moved lower across all maturities but was generally upward sloping by year-end



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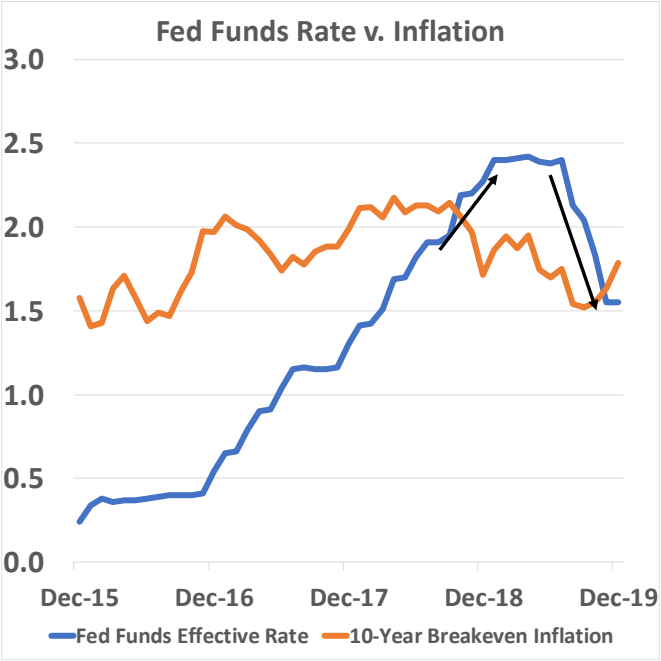
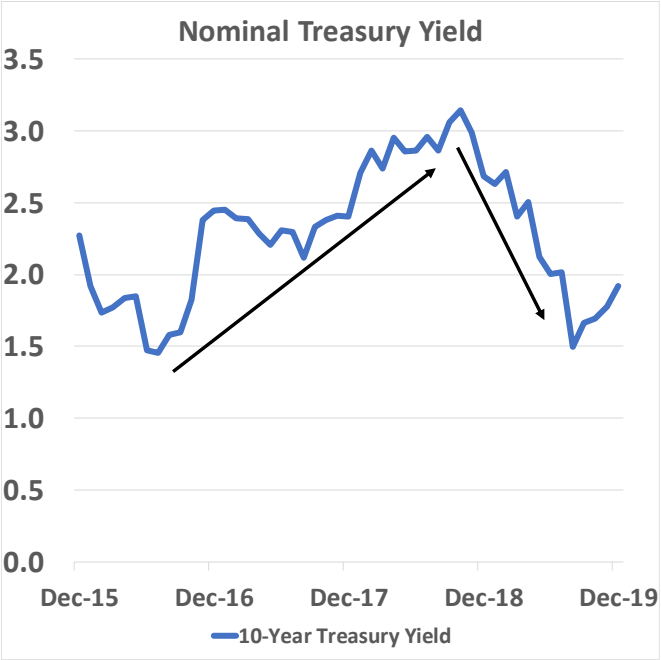
RETURN OF FINANCIAL REPRESSION

- U.S. economy seemed to be working its way out of a state of financial repression, where short-term rates were negative in real terms

- After a rate increase in late-2018, the Fed sharply reversed course, first with their messaging and then with 3 rate decreases in 2019

- Investors are again facing a historically low rate, low expected return environment looking forward





Data source: Federal Reserve

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INFLATION ASSUMPTION

- Market-based inflation forecast
  - TIPS are used to forecast inflation
  - Subtract TIPS YTM from nominal Treasury YTM with same maturity

- As of year-end 2019:
  - 10-year Treasury yield = 1.92%
  - 10-year TIPS yield = 0.15%
  - Difference is 10-year “breakeven inflation rate” = 1.77%

- Wilshire utilizes the 1.77% “breakeven inflation rate” to arrive at a rounded 1.75% 10-year inflation forecast

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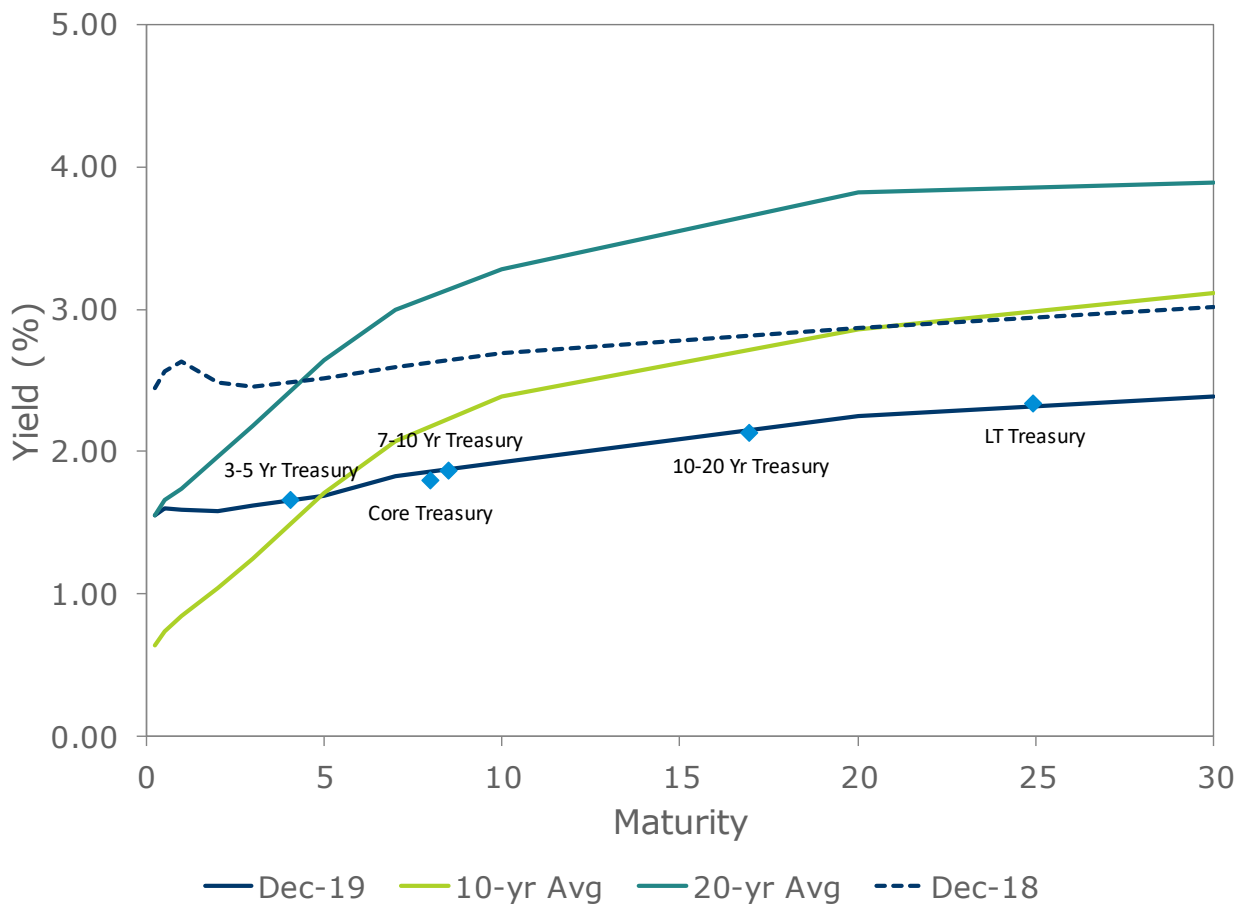
FIXED INCOME: YIELD CURVE

- U.S. Interest Rate Environment: December 2019 vs. December 2018, 10-Year & 20-Year Averages



Data sources: Bloomberg Index Services Limited, U.S. Department of Treasury

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FIXED INCOME MODEL FRAMEWORK

- Three components comprise fixed income returns:
  - Yield to Maturity
  - Annual Roll-down Return (“Roll”)
  - Return on principal from our “view” on interest rates/yield changes and appropriate spread factors

- Our fixed income return assumptions build off of key inputs:
  - Inflation assumption
  - Current observed yield and spread levels
  - Historical spread and real yield levels; forward yield curve

- Current observed maturity and credit risk premiums are normalized to historical levels over our forecast period to calculate fixed income return assumptions

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FIXED INCOME: CORE AND TREASURY BONDS

- Fixed income forecasts reflect a rising rate environment over the forecasting horizon
  - Increases are largely based on the 10-year forward Treasury curve and historical real yield observations

- Short & Intermediate Fixed income forecasts are aided by rising reinvestment rate (versus their current yields)
  - U.S. Core Bonds = 2.85% vs. Dec 2019 yield of 2.31%
  - Treasuries = 2.25% vs. Dec 2019 yield of 1.80%
  - TIPS = 2.15% vs. Dec 2019 yield of 1.87% (Barclays Capital 7-10 Treasury Index)

- Long term fixed income forecasts relatively close to current yields as decreased principal from rising rate environment offset by higher reinvestment rates
  - U.S. Long Term Core Bonds = 3.25% vs. Dec 2019 yield of 3.08%
  - Long Term Treasuries = 2.40% vs. Dec 2019 yield of 2.34%

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HIGH YIELD BONDS & EMERGING MARKET DEBT

- Wilshire utilizes a high yield bond model to forecast returns, which accounts for credit yield spreads, defaults, recoveries & appreciation/depreciation of principal

- Model Inputs:
  - Initial yield spread of 3.57%, widening to historical average of 5.92%
  - Annual default rate of 4.25% over the forecast period
  - A 40% recovery rate

- Wilshire forecasts 4.30% return for high yield bonds

- Wilshire forecasts 4.50% return for emerging market debt

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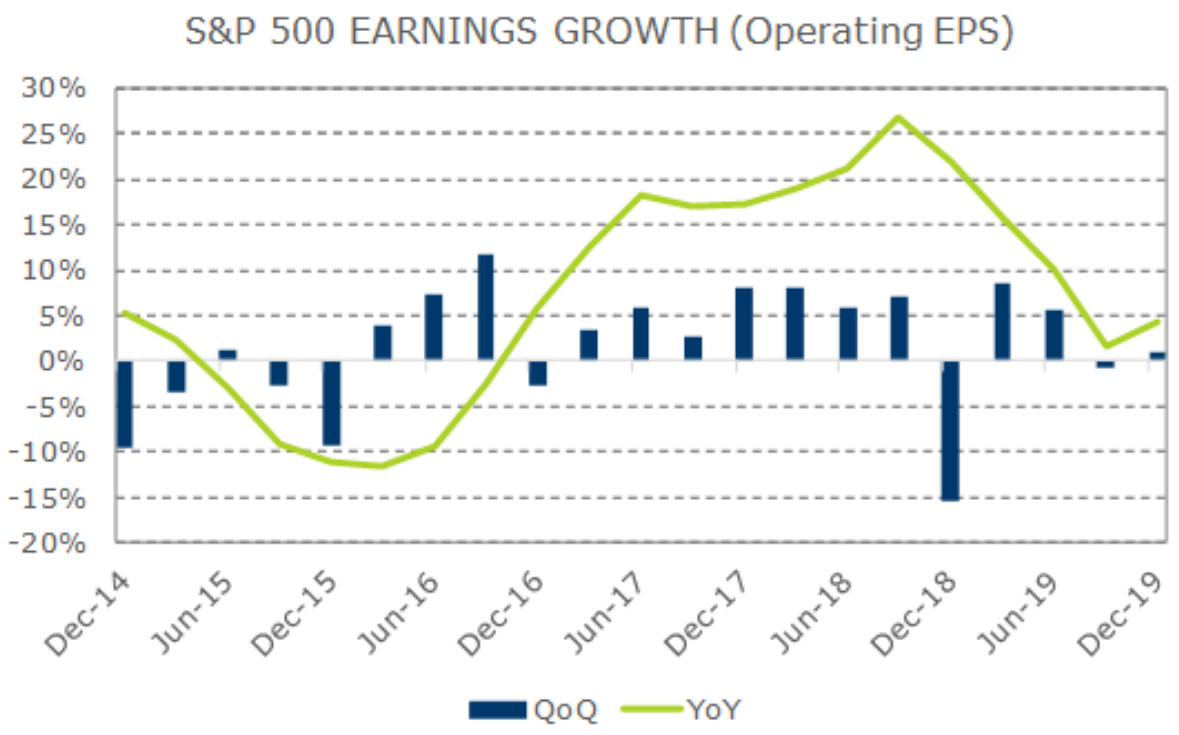
U.S. CORPORATE EARNINGS

- Even after Q4 2018's steep contraction in EPS (down -15.3%), growth in operating earnings on the S&P 500 Index decelerated from 21.8% in 2018 to 4.3% in 2019
- U.S. equities rebounded off a -14.3% Q4 2018 selloff to return 31.0% for the year, notching 35 new daily highs along the way



Data sources: S&P Dow Jones Indices

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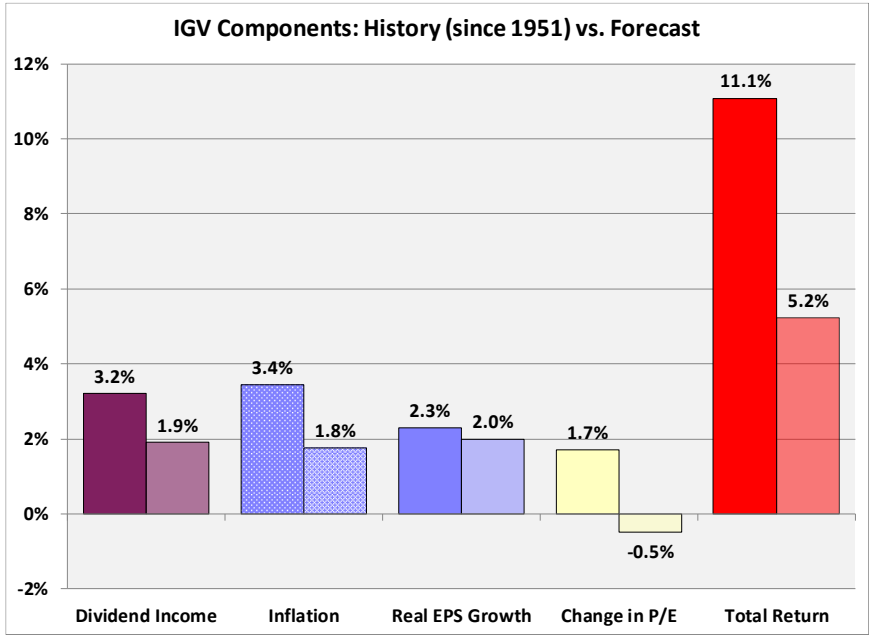
U.S. STOCKS: MODEL FORECASTING

- Income, Growth, Valuation (IGV) Model



- Dividend Discount Model (DDM)
  - Year-end 2019 S&P 500 Index price of 3,231
  - Base earnings level of $158 per share
  - Earnings-per-share growth of 5.00% during the next five years, dropping incrementally to 3.80% from years six through 15
  - 45% dividend payout ratio over the next five years

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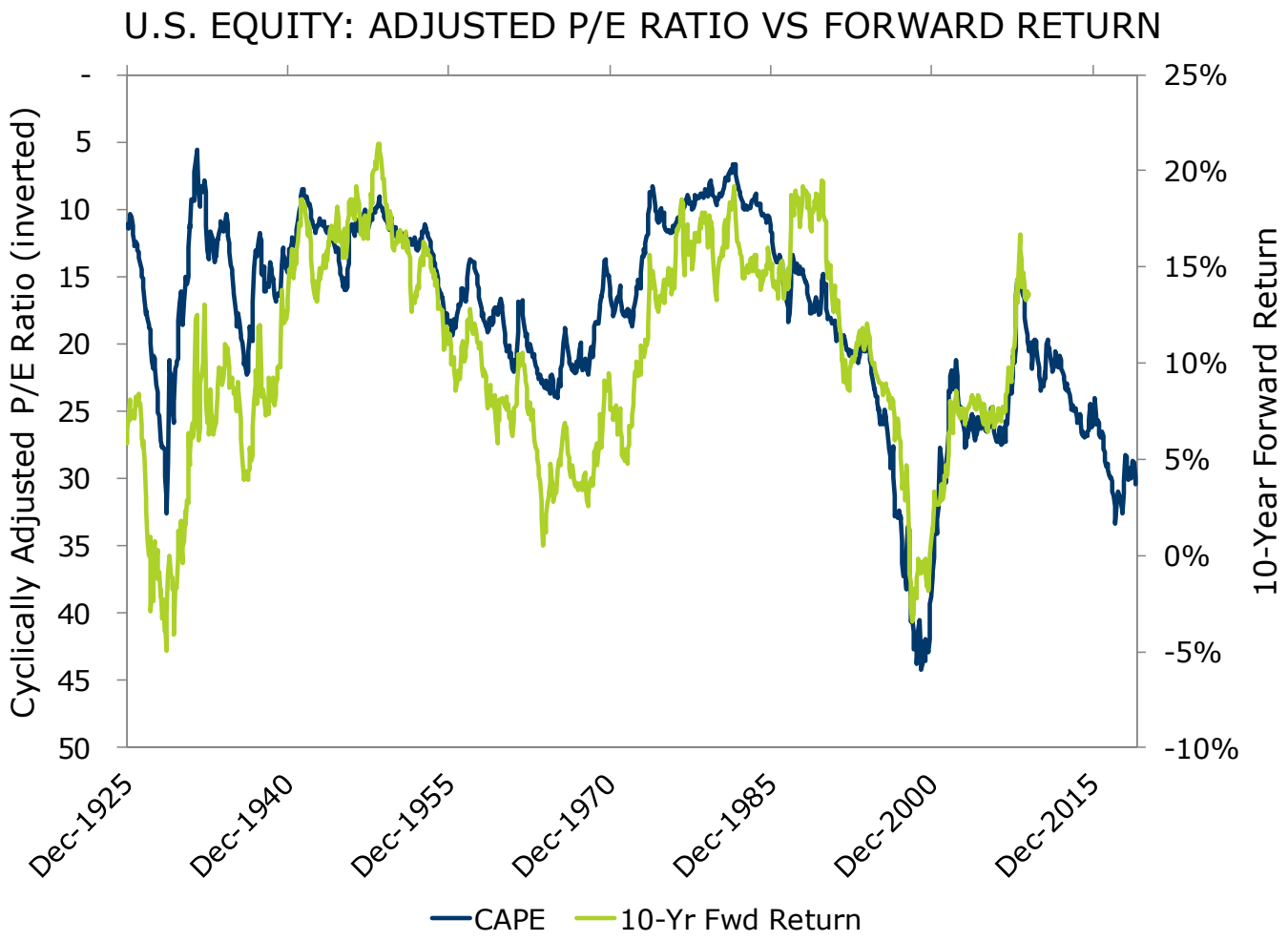
CYCLICALLY ADJUSTED P/E

- CAPE ratio's cyclical nature of smoothing historical earnings provides additional and valuable insights into anchoring long-term return prospects
- Strong relationship between the raw CAPE ratio and 10-year forward equity returns



Data sources: Robert J. Shiller

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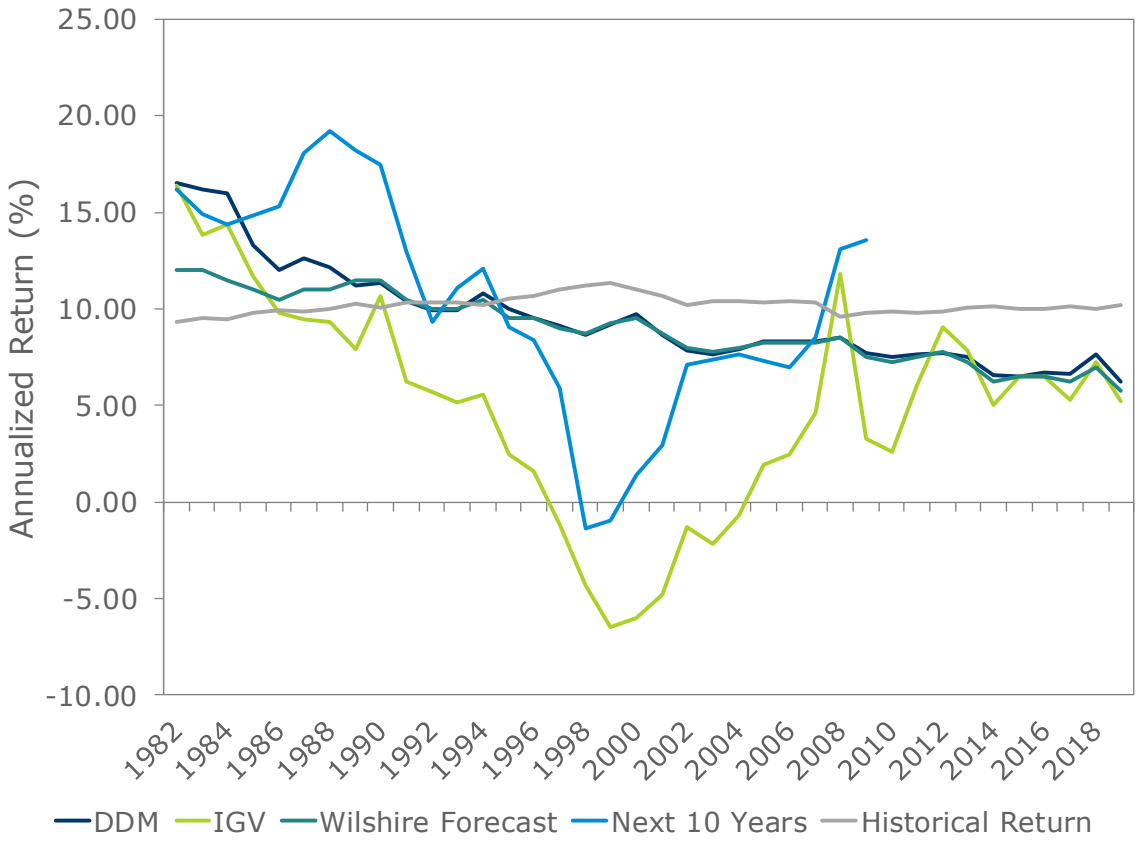
U.S. STOCKS: MODEL FORECASTING

- Wilshire's forecast for U.S. Stocks is 5.75%
  - IGV: 5.3%
  - DDM: 6.3%
  - CAPE-based regression signals 5.50%
- IGV and CAPE offer valuable information during periods of large fluctuations in price multiples



Data sources: Wilshire Compass℠

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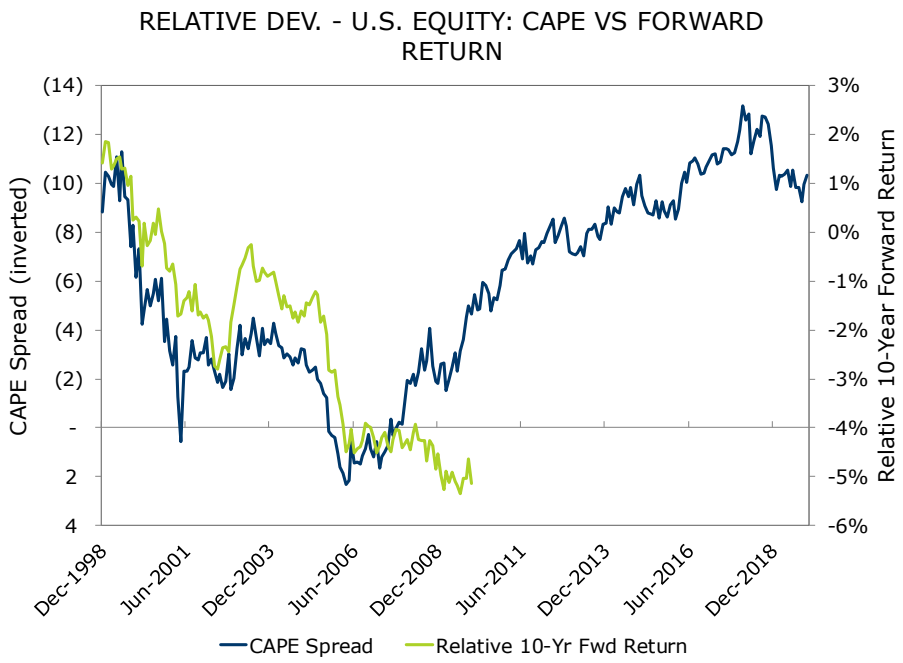
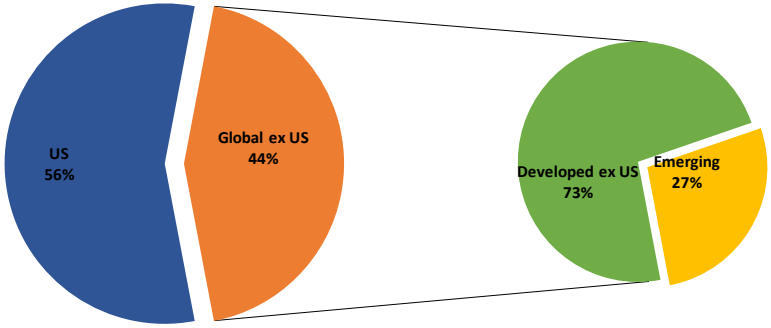
GLOBAL MARKET STOCKS

- CAPE model serves as a valuable indicator of relative return prospects across regions
- Current pricing points to relatively attractive non-U.S. valuations, which lead us to project a 0.5% return premium for non-U.S. stocks
- Market-weighted blends of Wilshire's equity return and risk assumptions results in a 6.20% and 6.50% return forecast for Global and Global ex-U.S. Equity, respectively



Global & Global ex US Equity Market Breakdown



Data sources: MSCI, Wilshire Compass, Wilshire Atlas[SM]

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PRIVATE MARKETS

- Expected return based on Wilshire private market models as well as historical relative relationships
  - Buyouts = 6.20%
  - Venture Capital = 8.40%
  - Mezzanine Debt= 6.05%
  - Distressed Debt = 6.30%
  - Non-US Buyouts = 6.95%

- Wilshire forecasts 7.95% return for private markets portfolio
  - 70% buyouts | 20% venture capital | 5% mezzanine debt | 5% distressed debt

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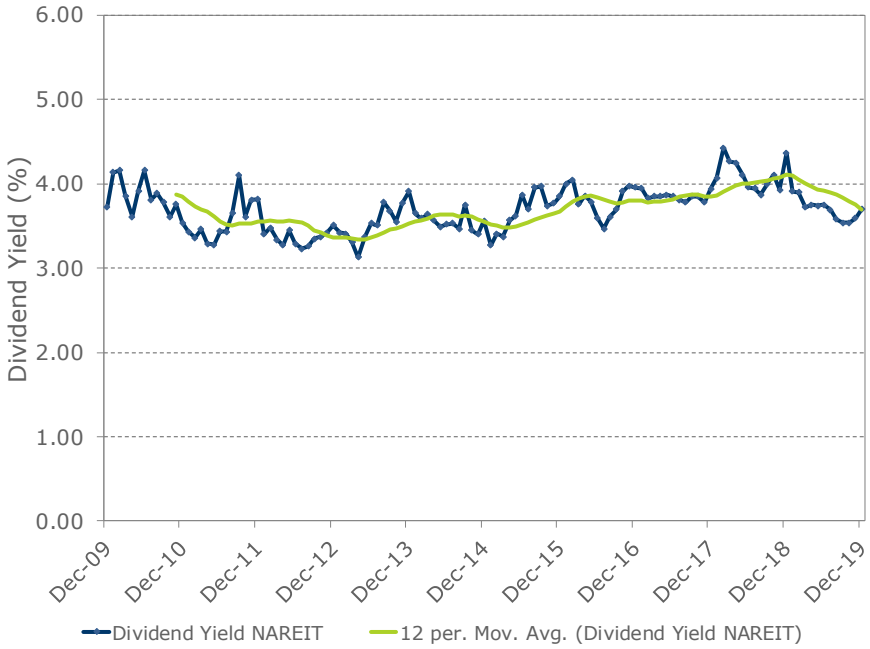
REAL ESTATE SECURITIES

- REIT assumption based on dividend yield + dividend growth
  - Yields have moved within a range the last decade, equaling 3.70% at year-end
  - Expected growth equals 75% of Wilshire's 1.75% inflation forecast (1.31%)



- Wilshire forecasts 5.00% return for U.S. & non-U.S. RE securities
- Wilshire forecasts 6.60% return for private real estate
  - 70% Core / 15% Value-added / 15% Opportunistic

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WILSHIRE'S RETURN AND RISK ASSUMPTIONS

	TOTAL RETURN			RISK		
	DEC. 2018	**DEC. 2019**	CHANGE	DEC. 2018	**DEC. 2019**	CHANGE
INVESTMENT CATEGORIES						
US STOCK	7.00 %	**5.75 %**	-1.25 %	17.00 %	**17.00 %**	0.00 %
DEV EX-US STOCK (USD)	7.50	**6.25**	-1.25	18.00	**18.00**	0.00
EMERGING MARKET STOCK	7.50	**6.25**	-1.25	26.00	**26.00**	0.00
GLOBAL STOCK	7.45	**6.20**	-1.25	17.05	**17.10**	0.05
PRIVATE EQUITY	10.05	**7.95**	-2.10	28.00	**28.00**	0.00
CASH EQUIVALENTS	2.65	**1.85**	-0.80	1.25	**1.25**	0.00
CORE BOND	3.85	**2.85**	-1.00	5.15	**5.15**	0.00
LT CORE BOND	4.25	**3.25**	-1.00	9.85	**9.85**	0.00
US TIPS	3.00	**2.15**	-0.85	6.00	**6.00**	0.00
HIGH YIELD BOND	5.90	**4.30**	-1.60	10.00	**10.00**	0.00
NON-US BOND (HDG)	1.25	**1.05**	-0.20	3.50	**3.50**	0.00
US RE SECURITIES	5.65	**5.00**	-0.65	17.00	**17.00**	0.00
PRIVATE REAL ESTATE	6.65	**6.60**	-0.05	14.00	**14.00**	0.00
COMMODITIES	4.35	**3.60**	-0.75	15.00	**15.00**	0.00
REAL ASSET BASKET	6.40	**5.90**	-0.50	8.75	**8.75**	0.00
INFLATION	1.70	**1.75**	0.05	1.75	**1.75**	0.00
TOTAL RETURNS MINUS INFLATION						
U.S. STOCKS	5.30	**4.00**	-1.30			
U.S. BONDS	2.15	**1.10**	-1.05			
CASH EQUIVALENTS	0.95	**0.10**	-0.85			
STOCKS MINUS BONDS	3.15	**2.90**	-0.25			
BONDS MINUS CASH	1.20	**1.00**	-0.20			

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APPENDIX

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WILSHIRE STANDARD ASSUMPTIONS

	EQUITY						FIXED INCOME						REAL ASSETS					
													REAL ESTATE					
	US STOCK	DEV EX-US STOCK	EMG MRKT STOCK	GLOBAL EX-US STOCK	GLOBAL STOCK	PRIVATE EQUITY	CASH	CORE BOND	LT CORE BOND	US TIPS	HIGH YIELD	NON-US BOND (HDG)	US RES	GLOBAL RES	PRIVATE RE	CMDTY	REAL ASSETS	US CPI
EXPECTED COMPOUND RETURN (%)	5.75	6.25	6.25	6.50	6.20	7.95	1.85	2.85	3.25	2.15	4.30	1.05	5.00	5.20	6.60	3.60	5.90	1.75
EXPECTED ARITHMETIC RETURN (%)	7.05	7.70	9.20	8.10	7.55	11.30	1.85	3.00	3.70	2.35	4.75	1.10	6.35	6.35	7.50	4.65	6.25	1.75
EXPECTED RISK (%)	17.00	18.00	26.00	18.95	17.10	28.00	1.25	5.15	9.85	6.00	10.00	3.50	17.00	15.80	14.00	15.00	8.75	1.75
CASH YIELD (%)	1.75	3.25	2.50	3.05	2.30	0.00	1.85	3.10	4.30	2.45	7.80	1.70	3.70	3.70	2.55	1.85	2.50	0.00
CORRELATIONS																		
US STOCK	1.00																	
DEV EX-US STOCK (USD)	0.81	1.00																
EMERGING MARKET STOCK	0.74	0.74	1.00															
GLOBAL EX-US STOCK	0.83	0.96	0.87	1.00														
GLOBAL STOCK	0.95	0.92	0.83	0.94	1.00													
PRIVATE EQUITY	0.74	0.64	0.62	0.67	0.74	1.00												
CASH EQUIVALENTS	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
CORE BOND	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT CORE BOND	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.93	1.00									
US TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.60	0.47	1.00								
HIGH YIELD BOND	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
NON-US BOND (HDG)	0.16	0.25	-0.01	0.18	0.18	0.26	0.10	0.67	0.66	0.39	0.26	1.00						
US RE SECURITIES	0.59	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
GLOBAL RE SECURITIES	0.65	0.59	0.56	0.62	0.66	0.58	-0.05	0.17	0.22	0.11	0.62	0.03	0.94	1.00				
PRIVATE REAL ESTATE	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.78	0.76	1.00			
COMMODITIES	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
REAL ASSET BASKET	0.42	0.43	0.50	0.48	0.47	0.43	0.01	0.24	0.25	0.41	0.53	0.06	0.65	0.69	0.69	0.59	1.00	
INFLATION (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

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WILSHIRE ALTERNATIVE INVESTMENT ASSUMPTIONS

	BASKET WEIGHT	EXPECTED RETURN (%)	EXPECTED RISK (%)
PRIVATE EQUITY			
BUYOUTS	50%	6.20	30.00
VENTURE CAPITAL	20%	8.40	44.00
DISTRESSED DEBT	5%	6.30	20.00
MEZZANINE DEBT	5%	6.05	20.00
NON-US BUYOUTS	20%	6.95	32.00
PRIVATE EQUITY BASKET		7.95	28.00
PRIVATE REAL ESTATE			
CORE	70%	5.45	12.00
VALUE ADDED	15%	7.70	17.50
OPPORTUNISITC	15%	9.45	25.00
PRIVATE REAL ESTATE BASKET		6.60	14.00
PUBLIC REAL ASSETS			
GLOBAL REAL ESTATE	15%	5.20	15.80
U.S. TIPS	50%	2.15	6.00
COMMODITIES	20%	3.60	15.00
MDSTRM ENERGY INFR.	15%	7.70	19.00
PUBLIC REAL ASSETS BASKET		4.15	7.60
PRIVATE REAL ASSETS			
PRIVATE REAL ESTATE	35%	6.60	14.00
TIMBER	35%	6.75	15.00
OIL & GAS	30%	7.55	18.00
PRIVATE REAL ASSETS BASKET		7.45	11.25
HEDGE FUNDS			
EQUITY MARKET NEUTR	10%	3.90	4.50
EVENT DRIVEN	25%	5.30	7.00
EQUITY LONG/SHORT	35%	5.90	9.75
GLOBAL MACRO	5%	5.20	6.75
RELATIVE VALUE	25%	4.70	5.75
HEDGE FUND BASKET		5.30	6.60

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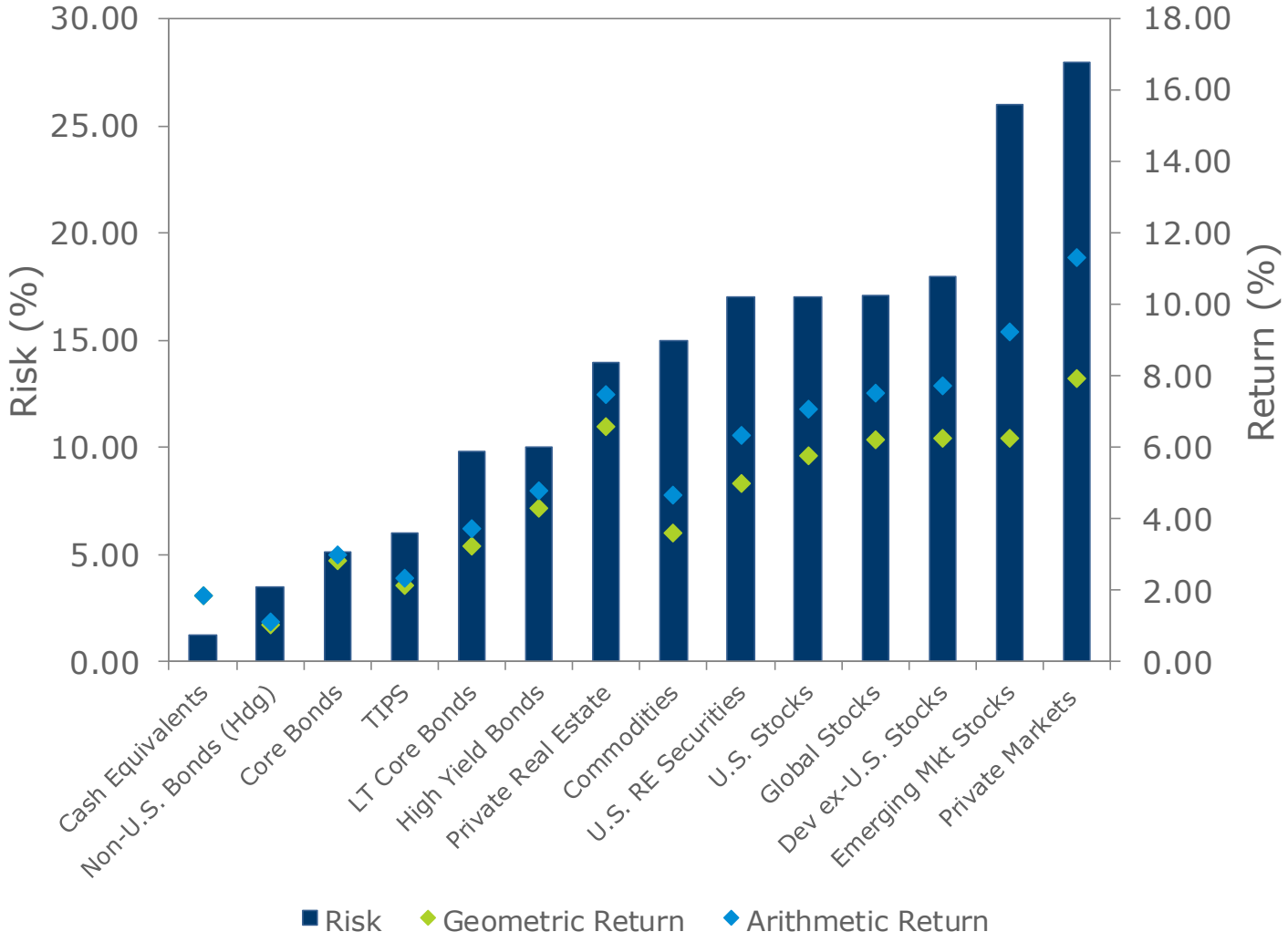
WILSHIRE'S RETURN AND RISK ASSUMPTIONS



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HISTORICAL RETURNS VS. WILSHIRE FORWARD-LOOKING ASSUMPTIONS

	HISTORICAL RETURNS (%)					WILSHIRE DEC. 2019 Asset Class Forecasts	
	1802 - 2019 *	1926 - 2019	Inflationary 1970-1979	Bull Market 1980-1999	Lost Decade 2000-2009	10-Year	30-Year
TOTAL RETURNS							
STOCKS	8.3	10.2	5.9	17.8	-1.0	5.8	7.3
BONDS	4.9	5.5	7.2	10.0	6.3	2.9	4.5
T-BILLS	4.1	3.4	6.4	7.2	3.0	1.9	2.8
INFLATION	1.5	2.9	7.4	4.0	2.5	1.8	2.3
RETURNS MINUS INFLATION							
STOCKS	6.8	7.3	-1.5	13.8	-3.5	4.0	5.1
BONDS	3.4	2.6	-0.2	6.0	3.8	1.1	2.3
T-BILLS	2.6	0.5	-1.0	3.1	0.5	0.1	0.6
STOCKS MINUS BONDS	3.4	4.7	-1.3	7.8	-7.3	2.9	2.8

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DEVELOPED MARKET EX-U.S. STOCKS

- Wilshire's approach to non-U.S. markets begins with our belief that, in the long run, global equity markets will exhibit geometric return parity
- Monitor relative valuation levels across regional markets to serve as a possible signal to add/deduct a return premium/discount to our non-U.S. equity forecasts
- Based on current metrics such as relative price-to-earnings and yield levels, Wilshire believes that a 50 basis point premium is warranted
- Return parity is otherwise well supported by historical results

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DEVELOPED MARKET EX-U.S. STOCKS

1970 - 2019 ANNUAL	U.S. DOLLAR RETURN	U.S. DOLLAR RISK	LOCAL CURRENCY RETURN	LOCAL CURRENCY RISK
S&P 500 INDEX	10.6 %	15.0 %	10.6 %	15.0 %
MSCI EAFE INDEX	8.7	16.6	7.5	14.1
EUROPE	8.9	17.1	8.8	14.8
PACIFIC	8.8	19.3	6.8	16.6

Data sources: Wilshire Compass

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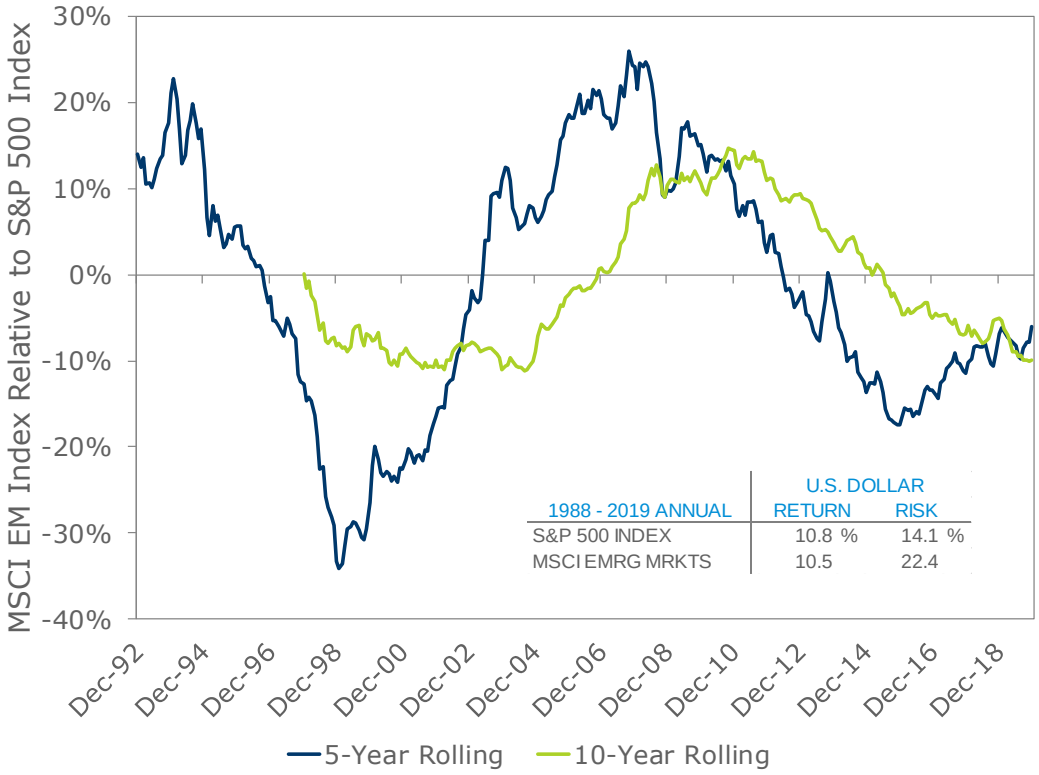
EMERGING MARKET STOCKS

- Similar approach to emerging markets:
  - Begin with belief in return parity
  - Monitor relative valuations for additional signals

- Current valuation levels suggest a return premium, currently 50 basis points



1988 - 2019 ANNUAL	U.S. DOLLAR RETURN	U.S. DOLLAR RISK
S&P 500 INDEX	10.8 %	14.1 %
MSCI EMRG MRKTS	10.5	22.4

Data sources: Wilshire Compass

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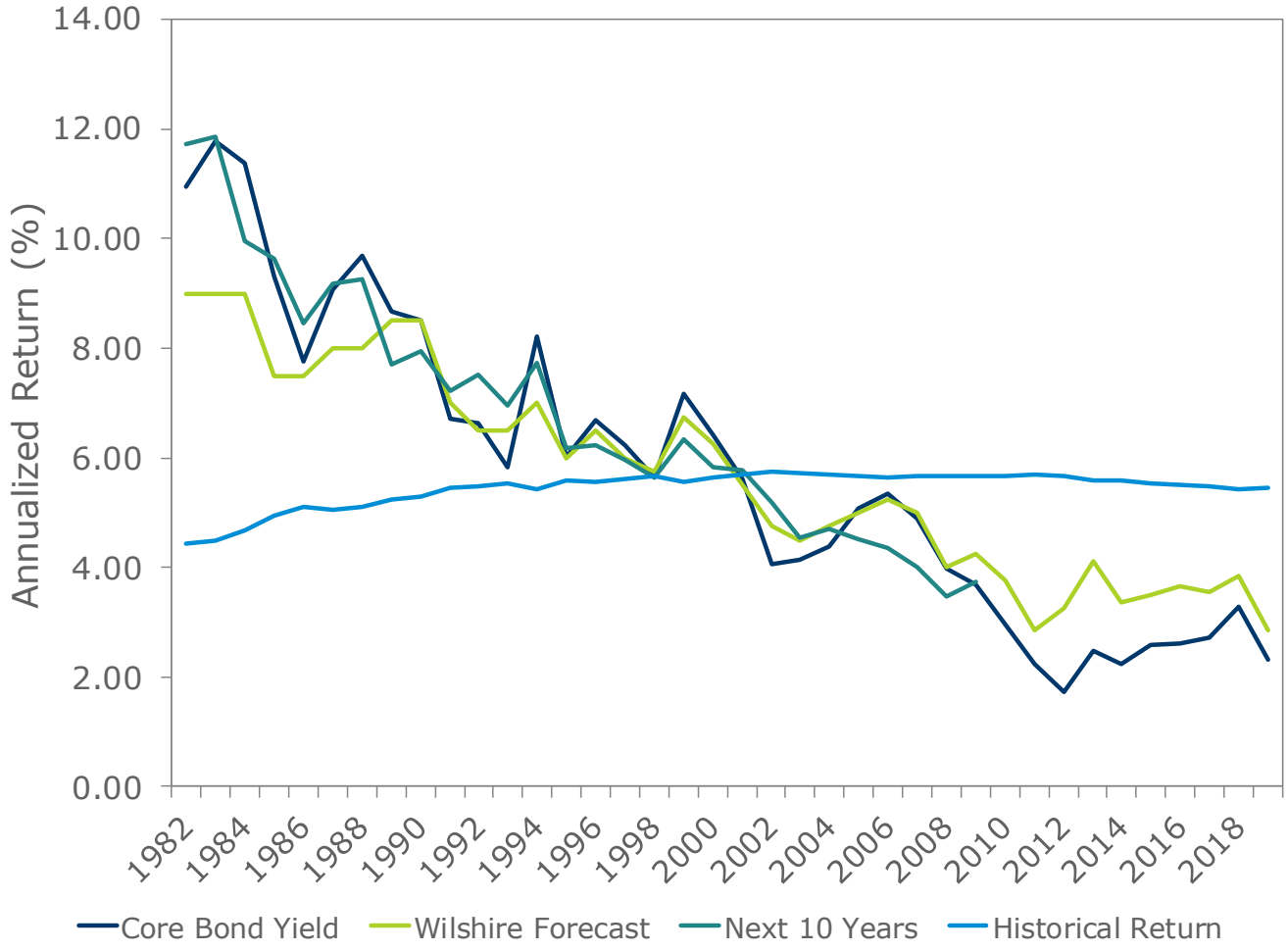
U.S. CORE BONDS

- Wilshire Forecast vs. Current Yield, Historical Return and Actual Following 10-Year Return



Data sources: Bloomberg Index Services Limited, Wilshire Compass

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COMMODITIES

- Historical Returns vs. Wilshire Methodology (10-Year Rolling)

- Wilshire forecasts 3.60% return for commodity futures
  - 1.75% inflation expectation plus 1.85% collateral yield (cash)

Data sources: Wilshire Compass

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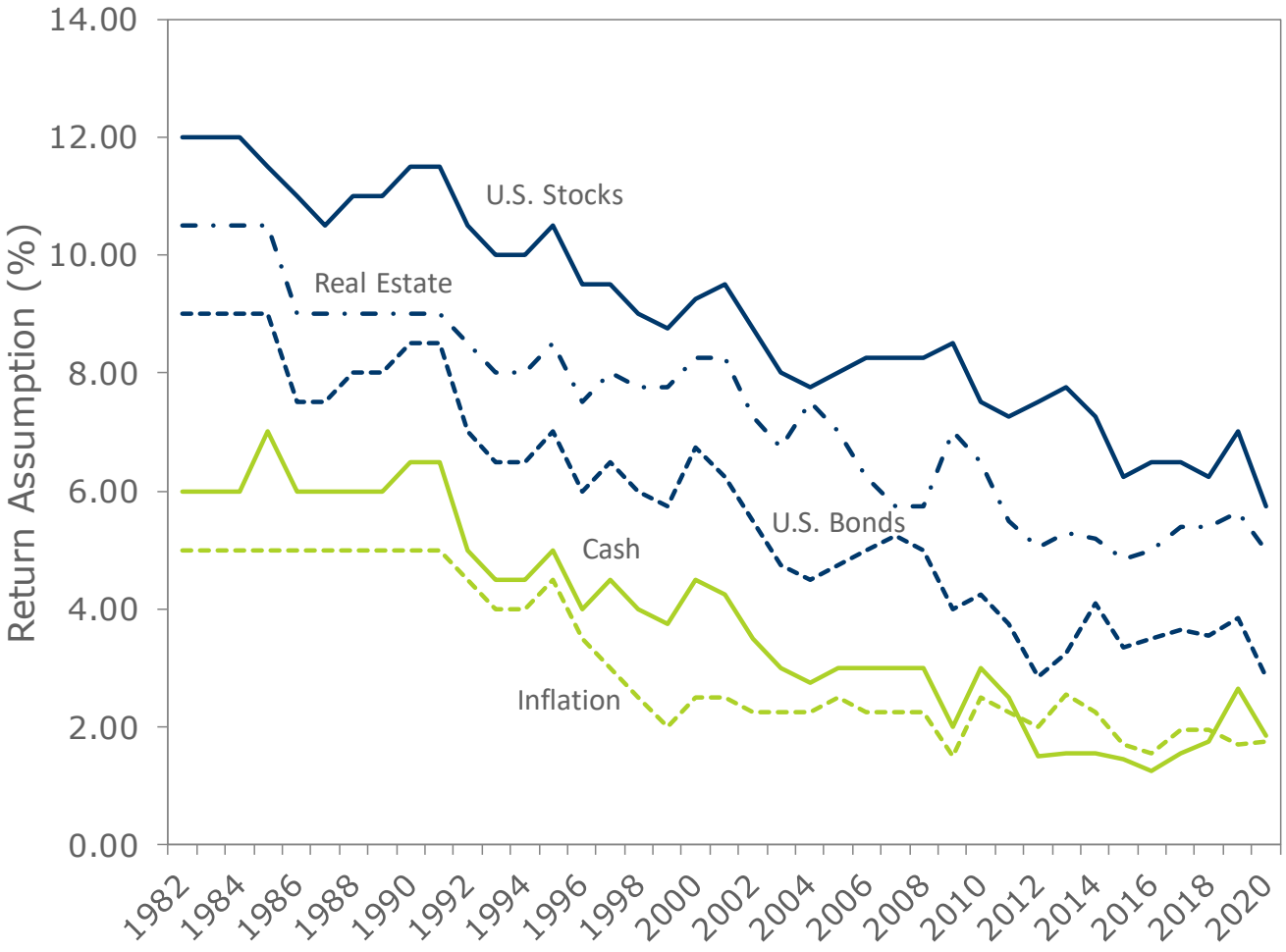
WILSHIRE FORECASTS OVER TIME



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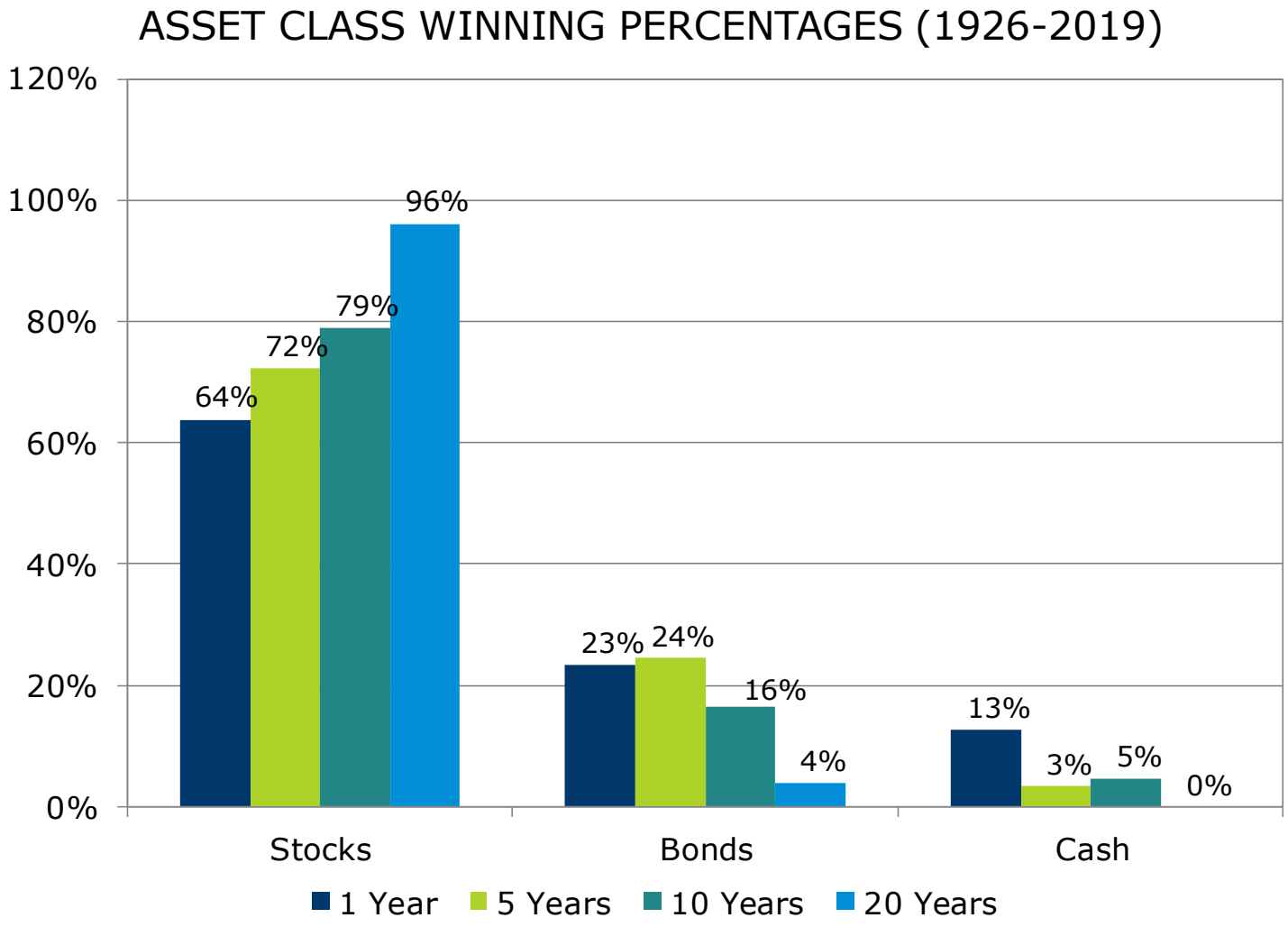
HISTORICAL RELATIVE PERFORMANCE



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HISTORICAL 1-YEAR ROLLING RETURNS (1926 TO 2019)

YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI	YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI
1926	11.6	7.4	3.3	-1.5	1973	-14.8	2.3	6.9	8.7
1927	37.5	7.4	3.1	-2.1	1974	-26.4	0.2	8.2	12.4
1928	43.6	2.8	3.5	-1.0	1975	37.2	12.3	5.8	7.0
1929	-8.4	3.3	4.7	0.2	1976	24.1	15.6	5.0	4.9
1930	-24.9	8.0	2.4	-6.0	1977	-7.3	3.0	5.4	6.7
1931	-43.4	-1.9	1.1	-9.5	1978	6.4	1.4	7.5	9.0
1932	-8.2	10.8	1.0	-10.3	1979	18.5	1.9	10.3	13.3
1933	54.0	10.4	0.3	0.5	1980	32.2	2.7	11.8	12.5
1934	-1.4	13.8	0.2	2.0	1981	-4.9	6.3	14.5	8.9
1935	47.7	9.6	0.1	3.0	1982	21.1	32.6	11.1	3.8
1936	33.9	6.7	0.2	1.2	1983	22.4	8.4	8.8	3.8
1937	-35.0	2.8	0.3	3.1	1984	6.1	15.2	9.9	4.0
1938	31.1	6.1	0.0	-2.8	1985	32.1	22.1	7.7	3.8
1939	-0.4	4.0	0.0	-0.5	1986	18.6	15.3	6.1	1.1
1940	-9.8	3.4	0.0	1.0	1987	5.2	2.8	5.4	4.4
1941	-11.6	2.7	0.0	9.7	1988	16.8	7.9	6.7	4.4
1942	20.4	2.6	0.3	9.3	1989	31.5	14.5	9.0	4.6
1943	25.9	2.8	0.4	3.2	1990	-3.2	9.0	8.3	6.1
1944	19.7	4.7	0.3	2.1	1991	30.6	16.0	6.4	3.1
1945	36.4	4.1	0.3	2.3	1992	7.7	7.4	3.9	2.9
1946	-8.1	1.7	0.4	18.2	1993	10.0	9.8	3.2	2.8
1947	5.7	-2.3	0.5	9.0	1994	1.3	-2.9	4.2	2.7
1948	5.5	4.1	0.8	2.7	1995	37.5	18.5	6.1	2.5
1949	18.8	3.3	1.1	-1.8	1996	23.1	3.6	5.4	3.3
1950	31.7	2.1	1.2	5.8	1997	33.3	9.7	5.5	1.7
1951	24.0	-2.7	1.5	5.9	1998	28.8	8.7	5.4	1.6
1952	18.4	3.5	1.7	0.9	1999	21.0	-0.8	4.6	2.7
1953	-1.0	3.4	1.8	0.6	2000	-9.1	11.6	6.2	3.4
1954	52.6	5.4	0.9	-0.5	2001	-11.9	8.4	4.4	1.6
1955	31.6	0.5	1.6	0.4	2002	-22.1	10.3	1.8	2.4
1956	6.6	-6.8	2.5	2.9	2003	28.7	4.1	1.2	1.9
1957	-10.8	8.7	3.2	3.0	2004	10.9	4.3	1.3	3.3
1958	43.4	-2.2	1.5	1.8	2005	4.9	2.4	3.1	3.4
1959	12.0	-1.0	3.0	1.5	2006	15.8	4.3	4.8	2.5
1960	0.5	9.1	2.7	1.5	2007	5.5	7.0	5.0	4.1
1961	26.9	4.8	2.1	0.7	2008	-37.0	5.2	2.0	0.1
1962	-8.7	8.0	2.7	1.2	2009	26.5	5.9	0.2	2.7
1963	22.8	2.2	3.1	1.7	2010	15.1	6.5	0.1	1.5
1964	16.5	4.8	3.5	1.2	2011	2.1	7.8	0.1	3.0
1965	12.5	-0.5	3.9	1.9	2012	16.0	4.2	0.1	1.7
1966	-10.1	0.2	4.8	3.4	2013	32.4	-2.0	0.1	1.5
1967	24.0	-5.0	4.2	3.0	2014	13.7	6.0	0.0	0.8
1968	11.1	2.6	5.2	4.7	2015	1.4	0.6	0.1	0.7
1969	-8.5	-8.1	6.6	6.1	2016	12.0	2.7	0.3	2.1
1970	4.0	18.4	6.5	5.5	2017	21.8	3.5	0.9	2.1
1971	14.3	11.0	4.4	3.4	2018	-4.4	0.0	1.9	1.9
1972	19.0	7.3	3.8	3.5	2019	31.5	8.7	2.3	2.3
					Winning Percentage:	**63.8%**	**23.4%**	**12.8%**	

Data sources: Wilshire Consulting

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HISTORICAL 5-YEAR ROLLING RETURNS (1926 TO 2019)

YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI	YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI
1926-30	8.7	5.8	3.4	-2.1	1971-75	3.2	6.5	5.8	6.9
1927-31	-5.1	3.9	3.0	-3.7	1972-76	4.9	7.4	5.9	7.2
1928-32	-12.5	4.5	2.5	-5.4	1973-77	-0.2	6.5	6.3	7.9
1929-33	-11.2	6.0	1.9	-5.1	1974-78	4.3	6.3	6.4	8.0
1930-34	-9.9	8.1	1.0	-4.8	1975-79	14.8	6.7	6.8	8.1
1931-35	3.1	8.4	0.5	-3.0	1976-80	13.9	4.8	8.0	9.2
1932-36	22.5	10.3	0.3	-0.8	1977-81	8.0	3.1	9.9	10.1
1933-37	14.3	8.6	0.2	2.0	1978-82	13.9	8.4	11.0	9.5
1934-38	10.7	7.8	0.1	1.3	1979-83	17.2	9.8	11.3	8.4
1935-39	10.9	5.8	0.1	0.8	1980-84	14.6	12.6	11.2	6.5
1936-40	0.5	4.6	0.1	0.4	1981-85	14.6	16.5	10.4	4.8
1937-41	-7.5	3.8	0.1	2.0	1982-86	19.7	18.4	8.7	3.3
1938-42	4.6	3.8	0.1	3.2	1983-87	16.4	12.5	7.6	3.4
1939-43	3.8	3.1	0.1	4.5	1984-88	15.4	12.4	7.1	3.5
1940-44	7.7	3.3	0.2	5.0	1985-89	20.4	12.3	7.0	3.7
1941-45	17.0	3.4	0.3	5.3	1986-90	13.2	9.8	7.1	4.1
1942-46	17.9	3.2	0.3	6.8	1987-91	15.4	9.9	7.1	4.5
1943-47	14.8	2.2	0.4	6.8	1988-92	15.9	10.9	6.8	4.2
1944-48	10.9	2.4	0.5	6.7	1989-93	14.5	11.3	6.1	3.9
1945-49	10.7	2.2	0.6	5.8	1990-94	8.7	7.7	5.2	3.5
1946-50	9.9	1.8	0.8	6.6	1991-95	16.6	9.5	4.8	2.8
1947-51	16.7	0.9	1.0	4.3	1992-96	15.2	7.0	4.6	2.8
1948-52	19.4	2.0	1.3	2.7	1993-97	20.2	7.5	4.9	2.6
1949-53	17.9	1.9	1.5	2.2	1994-98	24.1	7.3	5.3	2.4
1950-54	23.9	2.3	1.4	2.5	1995-99	28.6	7.7	5.4	2.4
1951-55	23.9	2.0	1.5	1.4	1996-00	18.3	6.5	5.4	2.5
1952-56	20.2	1.1	1.7	0.8	1997-01	10.7	7.4	5.2	2.2
1953-57	13.6	2.1	2.0	1.3	1998-02	-0.6	7.5	4.5	2.3
1954-58	22.3	1.0	1.9	1.5	1999-03	-0.6	6.6	3.6	2.4
1955-59	15.0	-0.3	2.3	1.9	2000-04	-2.3	7.7	3.0	2.5
1956-60	8.9	1.4	2.6	2.1	2001-05	0.5	5.9	2.4	2.5
1957-61	12.8	3.8	2.5	1.7	2002-06	6.2	5.1	2.4	2.7
1958-62	13.3	3.6	2.4	1.3	2003-07	12.8	4.4	3.1	3.0
1959-63	9.8	4.5	2.7	1.3	2004-08	-2.2	4.6	3.2	2.7
1960-64	10.7	5.7	2.8	1.2	2005-09	0.4	5.0	3.0	2.6
1961-65	13.2	3.8	3.1	1.3	2006-10	2.3	5.8	2.4	2.2
1962-66	5.7	2.9	3.6	1.9	2007-11	-0.3	6.5	1.5	2.3
1963-67	12.4	0.3	3.9	2.2	2008-12	1.7	5.9	0.5	1.8
1964-68	10.2	0.4	4.3	2.8	2009-13	17.9	4.4	0.1	2.1
1965-69	5.0	-2.2	4.9	3.8	2010-14	15.4	4.5	0.1	1.7
1966-70	3.4	1.2	5.4	4.5	2011-15	12.6	3.2	0.1	1.5
1967-71	8.4	3.3	5.4	4.5	2012-16	14.7	2.2	0.1	1.4
1968-72	7.5	5.8	5.3	4.6	2013-17	15.8	2.1	0.3	1.4
1969-73	2.0	5.8	5.6	5.4	2014-18	8.5	2.5	0.6	1.5
1970-74	-2.4	7.6	6.0	6.6	2015-19	11.7	3.0	1.1	1.8
					Winning Percentage:	**72.2%**	**24.4%**	**3.3%**	

Data sources: Wilshire Consulting

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HISTORICAL 10-YEAR ROLLING RETURNS (1926 TO 2019)

YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI	YEAR	S&P 500 INDEX	BOND INDEX	T-BILLS	CPI
1926-35	5.9	7.1	2.0	-2.6	1969-78	3.2	6.1	6.0	6.7
1927-36	7.8	7.0	1.7	-2.3	1970-79	5.9	7.2	6.4	7.4
1928-37	0.0	6.5	1.4	-1.8	1971-80	8.4	5.6	6.9	8.1
1929-38	-0.9	6.9	1.0	-2.0	1972-81	6.4	5.2	7.9	8.6
1930-39	-0.1	6.9	0.6	-2.0	1973-82	6.6	7.4	8.6	8.7
1931-40	1.8	6.5	0.3	-1.3	1974-83	10.6	8.1	8.8	8.2
1932-41	6.4	7.0	0.2	0.6	1975-84	14.7	9.6	9.0	7.3
1933-42	9.4	6.2	0.1	2.6	1976-85	14.2	10.5	9.2	7.0
1934-43	7.2	5.4	0.1	2.9	1977-86	13.7	10.5	9.3	6.6
1935-44	9.3	4.5	0.2	2.9	1978-87	15.2	10.4	9.3	6.4
1936-45	8.4	4.0	0.2	2.8	1979-88	16.3	11.1	9.2	5.9
1937-46	4.4	3.5	0.2	4.4	1980-89	17.5	12.4	9.1	5.1
1938-47	9.6	3.0	0.2	5.0	1981-90	13.9	13.1	8.7	4.5
1939-48	7.3	2.8	0.3	5.6	1982-91	17.5	14.1	7.9	3.9
1940-49	9.2	2.7	0.4	5.4	1983-92	16.2	11.7	7.2	3.8
1941-50	13.4	2.6	0.5	5.9	1984-93	14.9	11.9	6.6	3.7
1942-51	17.3	2.0	0.7	5.5	1985-94	14.4	10.0	6.1	3.6
1943-52	17.1	2.1	0.8	4.7	1986-95	14.9	9.6	5.9	3.5
1944-53	14.3	2.2	1.0	4.4	1987-96	15.3	8.5	5.8	3.7
1945-54	17.1	2.2	1.0	4.2	1988-97	18.0	9.2	5.9	3.4
1946-55	16.7	1.9	1.1	4.0	1989-98	19.2	9.3	5.7	3.1
1947-56	18.4	1.0	1.3	2.5	1990-99	18.2	7.7	5.3	2.9
1948-57	16.4	2.1	1.6	2.0	1991-00	17.5	8.0	5.1	2.7
1949-58	20.1	1.4	1.7	1.9	1992-01	12.9	7.2	4.9	2.5
1950-59	19.4	1.0	1.9	2.2	1993-02	9.3	7.5	4.7	2.5
1951-60	16.2	1.7	2.0	1.8	1994-03	11.1	6.9	4.5	2.4
1952-61	16.4	2.4	2.1	1.3	1995-04	12.1	7.7	4.2	2.4
1953-62	13.4	2.9	2.2	1.3	1996-05	9.1	6.2	3.9	2.5
1954-63	15.9	2.7	2.3	1.4	1997-06	8.4	6.2	3.8	2.4
1955-64	12.8	2.7	2.6	1.6	1998-07	5.9	6.0	3.8	2.7
1956-65	11.1	2.6	2.8	1.7	1999-08	-1.4	5.6	3.4	2.5
1957-66	9.2	3.3	3.0	1.8	2000-09	-1.0	6.3	3.0	2.5
1958-67	12.9	1.9	3.1	1.8	2001-10	1.4	5.8	2.4	2.3
1959-68	10.0	2.4	3.5	2.1	2002-11	2.9	5.8	2.0	2.5
1960-69	7.8	1.7	3.9	2.5	2003-12	7.1	5.2	1.8	2.4
1961-70	8.2	2.5	4.3	2.9	2004-13	7.4	4.5	1.7	2.4
1962-71	7.1	3.1	4.5	3.2	2005-14	7.7	4.7	1.5	2.1
1963-72	9.9	3.0	4.6	3.4	2006-15	7.3	4.5	1.2	1.9
1964-73	6.0	3.0	5.0	4.1	2007-16	6.9	4.3	0.8	1.8
1965-74	1.2	2.6	5.4	5.2	2008-17	8.5	4.0	0.4	1.6
1966-75	3.3	3.8	5.6	5.7	2009-18	13.1	3.5	0.4	1.8
1967-76	6.7	5.3	5.7	5.9	2010-19	13.6	3.7	0.6	1.8
1968-77	3.6	6.2	5.8	6.2					
					Winning Percentage:	**78.8%**	**16.5%**	**4.7%**	

Data sources: Wilshire Consulting

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