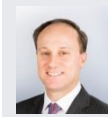# Revisiting R^: How does the fiscal deficit affect the neutral Fed Funds rate?

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What interest rate will bring fiscal discipline to Washington? Consider R^ vs. R*

R* is an estimate of the neutral overnight real interest rate. The interest rate at which monetary policy is neither tight nor loose with normal unemployment and inflation at target. In concept, this neutral interest rate balances consumption with production to achieve price stability. It should promote stable unit labor costs, such that wage growth is fueled by the productivity growth rate of labor plus only target inflation. This neutral interest rate should also promote an adequate savings rate that supports the investment spending required to align the capital related means of production with consumption. The adequate savings rate will vary across economies and time given varying capital intensity and efficiency or investment spending return. Uncertainty in capital efficiency and labor productivity causes policy setters to mostly focus on inflation and unemployment, usually per policy mandate, to justify deviations from neutral interest rates. Inflation above target calls for real interest rates set above neutral, whereas high unemployment and low capacity utilization, known as output gaps or slack, calls for interest rates below neutral.

What overnight real interest rate promotes adequate savings and also prevents excessive government borrowing from hindering balanced near and longer-term supply and demand? Fiscal risk or largesse is what differs R^ from R* in concept. In observation, 2yr Treasury yields exceeded inflation plus estimates of R* per empirical models back to 1960 (models based on inflation, unemployment, growth) when US fiscal deficits were high outside of recessions and interest expense on US debt was high relative to GDP. This note presents data, notated charts and regressions that suggest high mid cycle deficits affect market demanded 2yr real yields and thus the appropriate neutral policy rate per fiscal conditions. Incorporating deficits and interest expense burdens better explains observed 2yr real yields and likely improves R* estimates.

As we wrote here in October 2023, we think deficits affect both Treasury bond yields, or term premiums, as well as shorter term interest rates. We called the interaction between an uncertain R* and 10yr Treasury yield outlook when both are attempting to find a new normal range amidst structurally changed inflation risks with consideration of rising fiscal risks R^. "R hat" being a term borrowed from statistics denoting an estimate with error from unexplained residuals. Factoring in the fiscal burden in an empirical model of normal or neutral overnight real rates as proxied by observed 2yr real Treasury yields since 1960 reduces error and residuals from that of other R* estimate models that do not factor such. This is conceptually sound as high deficits should affect short and long-term real rates when the government is crowding out the private sector. High deficits also raise long-term inflation risk and term premiums because burdensome debt or additional debt taken on in an emergency might need to be monetized. Also, high government borrowing and spending can weigh on productivity and growth by channeling decisions and resources away from the private sector. Thus, the deficit can affect real rates when the government is crowding out the private sector and it can also raise longer-term inflation risks. There is a rational give and take at work between short and long-term yields and the Fed considers longer-term observed yields when setting appropriate policy overnight interest rates.

R^: R* estimated by 2yr real yields vs. CPI & US deficit, 1960-2005

R^ = (0.47* Core CPI y/y @ 2.8% in May) + (0.33* deficit % GDP @ 6.9%) - 0.4% = 3.2%

We examined 2yr Treasury yields less economist consensus long-term inflation estimates (to proxy normal/neutral overnight real interest rates) to CPI and US fiscal deficits from 1960-2005. We found that Core CPI y/y was the dominant cause of deviation in real 2yr yields outside of recessions and before the financial crisis. However, adding the deficit as a secondary variable in a multi-factor regression improved explanation. According to the model, 2yr real yields should be 3.25% or 5.25% nominally as compared to 3.75% now. The models suggests that for every 1%pt Core CPI is above target that 2yr real yields should be 0.5%pt above norm and that every 1%pt the deficit is over 2% that 2yr real yields should be at least 0.1%pt above norm. Yet, the average 2yr real yield from 1960-2005 was 2.5%, whereas it was -1% from 2007-2020. If we assume that the normal 2yr real yield is about 1.5% now when inflation and deficit are neutral factors, then the appropriate overnight real rate for today's inflation and deficit should be about 2.25%. This suggests thatcurrent Fed Funds rate at 4.25-4.5% or 2.25-2.5% real is neutral.

Powell soon to be lame duck? But only one Fed Chair at a time, until May Day

There is no reason for the Fed to cut near-term or signal rate cuts soon to come in this author's view. Inflation remains above target with tariffs and other acceleration risks, now including a slipping dollar. The Fed should focus on keeping the confidence of long-term bond investors by not cutting until both the risks of inflation and the high deficit subside. Assuming Trump is committed to at least 10% tariffs in aggregate and the OBBB passes with current key aspects intact, we think these two risks will remain elevated probably for the rest of Powell's term as chair ending May 2026. The risk of secularly higher Treasury bond yields remains high. The carry trade for banks doesn't work if deposits flee to real or non-dollar assets on inflation fears.

Contributor: Ju Wang, Equity Portfolio Manager

Global Equity Index Forecasts: 12-months

Index	Jun 2026F	NTM EPS Growth	Target PE
S&P 500	6,100	7.9%	22.3
EuroStoxx 50	5,600	4.0%	15.4
Stoxx 600	570	4.0%	15.1
MSCI Japan	1,720	4.0%	14.9
MSCI Asia xJ	790	8.0%	14.6
MSCI EM	1,220	8.5%	14.0

S&P 500 Outlook at Yearend

	2024	2025E	2026E
S&P 500	5882	6000	6300
Dividend Yield	1.28%	1.40%	1.40%
S&P EPS	$245	$260	$285
Trailing PE	24.0	23.1	22.1
DPS	$75	$82	$87

Next 5%+ Price Move
(Up / Balanced Risk / **Down**)

Taxable U.S. Investor Asset Allocations

Asset Class	Long-term	Current
Fixed Income/cash	**31.5%**	**32%**
Equities	**58.5%**	**57%**
US Equities	41%	40.5%
S&P 500	37%	37%
Small Caps	4%	3.5%
Foreign DM	12.5%	11.5%
Foreign EM	5%	5%
Alternatives	**10%**	**11%**

Key CIO Views

Macro signal:	June 2025	Jun 2026F
U.S. Fed Funds rate	4.25%-4.50%	3.25%-3.50%
10yr Treasury yield	4.25%	4.50%
US IG Corp Spreads	100bp	90bp
US High Yield Spreads	325bp	350bp
Crude Oil (WTI) $/bbl	65	60
EUR / USD FX rate	1.15	1.18

GDP Forecasts

Region	2024	2025F	2026F
US	2.8%	1.2%	1.1%
World	3.2%	2.8%	2.9%
Euro area	0.7%	0.8%	1.3%
China	5.0%	4.0%	3.8%
Japan	0.1%	0.9%	0.7%

* Q4/Q4 GDP growth.
EPS = Earnings Per Share; GDP = Gross Domestic Product
FX = Foreign Exchange

S&P 500 Sector and Industry views

	Market	Allocated	Sector	2024	2025	Overweight	2024	2025	Equal weight	2024	2025	Underweight	2024	2025
Over-weight	14.0%	18.4%	Financials	18.9	18.3	Banks	14.8	14.5	Financial Services	25.8	25.4	Consumer Finance	16.6	17.2
						Capital Markets	22.2	20.5						
						Insurance	15.4	15.0						
	9.4%	13.7%	Health Care	18.6	17.5	Biotechnology	21.1	17.7				Health Care Providers & Services	13.7	13.1
						Health Care Equipment & Supplies	27.8	27.5				Life Sciences Tools & Services	21.9	22.1
						Pharmaceuticals	16.3	15.3						
	2.4%	4.1%	Utilities	19.5	18.4	Electric Utilities	19.2	18.2	Gas Utilities	21.6	19.7			
						Multi-Utilities	19.7	18.3	Independent Power & Renewable E	19.6	18.7			
									Water Utilities	26.6	24.2			
	9.7%	11.3%	Communication Services	24.5	22.3	Entertainment	91.3	42.3	Wireless Telecommunication Servi	25.1	22.7	Diversified Telecommunication Servi	10.7	11.2
						Interactive Media & Services	25.7	23.8				Media	9.9	10.2
	33.1%	33.7%	Information Technology	36.3	30.9	Software	38.9	34.7	Technology Hardware Storage & P	28.1	26.6	Communications Equipment	21.1	20.9
						IT Services	24.9	24.4				Electronic Equipment	29.0	29.0
												Semiconductors	44.9	32.4
	3.0%	3.4%	Energy	16.2	17.8	Energy Equipment & Services	10.7	11.7				Oil Gas & Consumable Fuels	16.7	18.5
Under-weight	1.9%	1.2%	Materials	22.4	23.3				Construction Materials	22.9	32.8	Chemicals	24.0	24.1
									Metals & Mining	16.9	18.4	Containers & Packaging	23.6	23.3
	2.0%	0.3%	Real Estate	18.0	18.7				Hotel & Resort REITs	8.0	8.6	Health Care REITs	18.4	17.4
									Industrial REITs	19.5	19.9	Residential REITs	17.3	17.1
									Office REITs	9.9	11.0	Specialized REITs	19.5	21.2
									Real Estate Mgmt. & Development	42.0	39.8			
									Retail REITs	12.1	12.6			
	8.6%	5.8%	Industrials	27.2	27.0	Aerospace & Defense	53.4	35.0	Construction & Engineering	42.7	37.0	Building Products	26.5	29.3
						Air Freight & Logistics	13.9	14.9	Passenger Airlines	10.3	10.3	Commercial Services & Supplies	37.6	35.7
						Electrical Equipment	39.2	34.3				Ground Transportation	20.6	26.0
												Industrial Conglomerates	22.5	24.6
												Machinery	20.3	22.4
												Professional Services	30.1	30.4
												Trading Companies & Distributors	21.2	22.3
	5.5%	2.7%	Consumer Staples	24.0	25.2	Beverages	19.9	20.1	Personal Care Products	22.1	18.4	Consumer Staples Distribution & Ret	34.2	37.0
												Food Products	14.3	16.2
												Household Products	23.1	24.7
												Tobacco	20.3	19.3
	10.4%	5.5%	Consumer Discretionary	29.4	30.5	Automobile Components	10.2	10.6	Distributors	15.4	16.7	Automobiles	38.9	45.6
						Broadline Retail	38.5	36.1	Leisure Products	18.2	18.9	Hotels Restaurants & Leisure	28.3	26.8
			Automobiles	38.9	45.7				Textiles Apparel & Luxury Goods	21.1	27.4	Household Durables	10.8	13.8
			Broadline Retail	37.6	35.3							Specialty Retail	21.9	24.2
			CD ex Auto & Broadline Retail	22.6	24.2									
Aggregate PE: DWS View						Overweight	25.5	23.5	Equalweight	24.6	23.9	Underweight	24.8	24.2
	S&P 500								2024 & 2025 EPS	245.00	260.00	2024 & 2025 PE	25.2	23.7
									Bottom-up Consensus EPS	245.21	265.51	Bottom-up Cons. PE	25.2	23.2
												2024 & 2025 Ex Energy PE	25.6	24.1
												Btm-up Cons. Ex Energy PE	25.8	23.6

Sector OW	12.96%
Sector UW	-12.96%
Industry OW	19.71%
Industry UW	-19.71%
Beta	0.89
Tracking Error	255bp

Macro tilts:

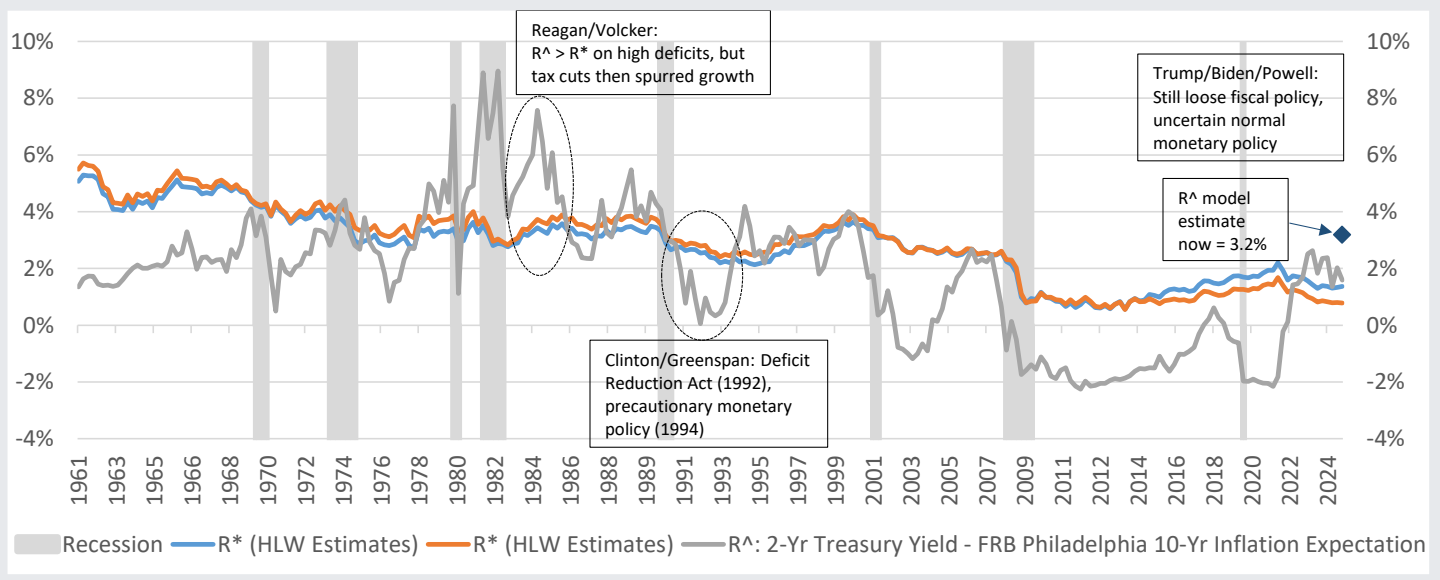|	
Great 8	0.67%
Tech + Communications	2.21%
Cyclicals (ex. Tech/Comm)	-3.55%
Non-Cyclicals	1.34%
Value (Financial+Energy)	4.84%
Growth Industries	8.97%
Growth ex Health Care	4.71%
Consumer	-7.76%
Services/Experience	-1.37%
Disc. Goods/Retail	-1.35%
Durable Goods	-2.21%
Staples Goods/Retail	-1.08%
Commodity	-0.66%
Energy Ex. Services	-0.34%
Metals/Chemicals	-0.32%
Capex	3.62%
Capacity additions	0.12%
Productivity	3.50%
Health Care	4.26%
Medicine	3.68%
Devices/Equip./Tools	1.54%
Insurers/Facilities	-0.96%
Financials	4.42%
Bond Substitutes	-2.69%
Weak FX $ plays	-1.16%
High R&D plays	6.71%
Transports	-0.56%
Geopolitical risk	0.46%
Weak oil prices	-2.88%
Inflation shock	-0.32%
Stagflation protection	2.59%
Trade sensitive	-0.99%
Domestic GDP	1.78%
Global GDP	-2.05%

U.S. market implied neutral interest rate: Based on 2yr real yield history vs. Core CPI and U.S. fiscal deficits as % of GDP
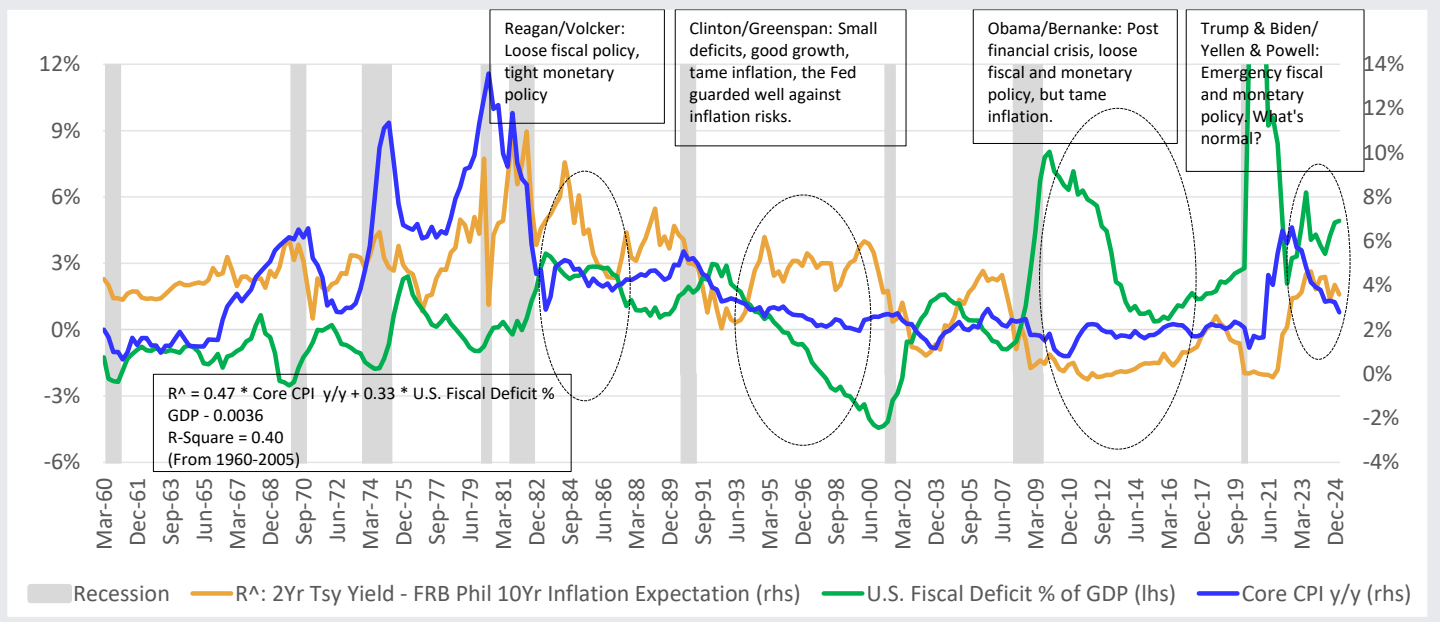
Reagan/Volcker: Loose fiscal policy, tight monetary policy

Clinton/Greenspan: Small deficits, good growth, tame inflation, the Fed guarded well against inflation risks.

Obama/Bernanke: Post financial crisis, loose fiscal and monetary policy, but tame inflation.

Trump & Biden/ Yellen & Powell: Emergency fiscal and monetary policy. What's normal?

R^ = 0.47 * Core CPI y/y + 0.33 * U.S. Fiscal Deficit % GDP - 0.0036
R-Square = 0.40
(From 1960-2005)

Legend: Recession — R^: 2Yr Tsy Yield - FRB Phil 10Yr Inflation Expectation (rhs) — U.S. Fiscal Deficit % of GDP (lhs) — Core CPI y/y (rhs)

Note: The regression uses U.S. fiscal deficit % GDP data only from 1960-2005, to exclude the distortion of the very high deficit during and after the financial crisis.
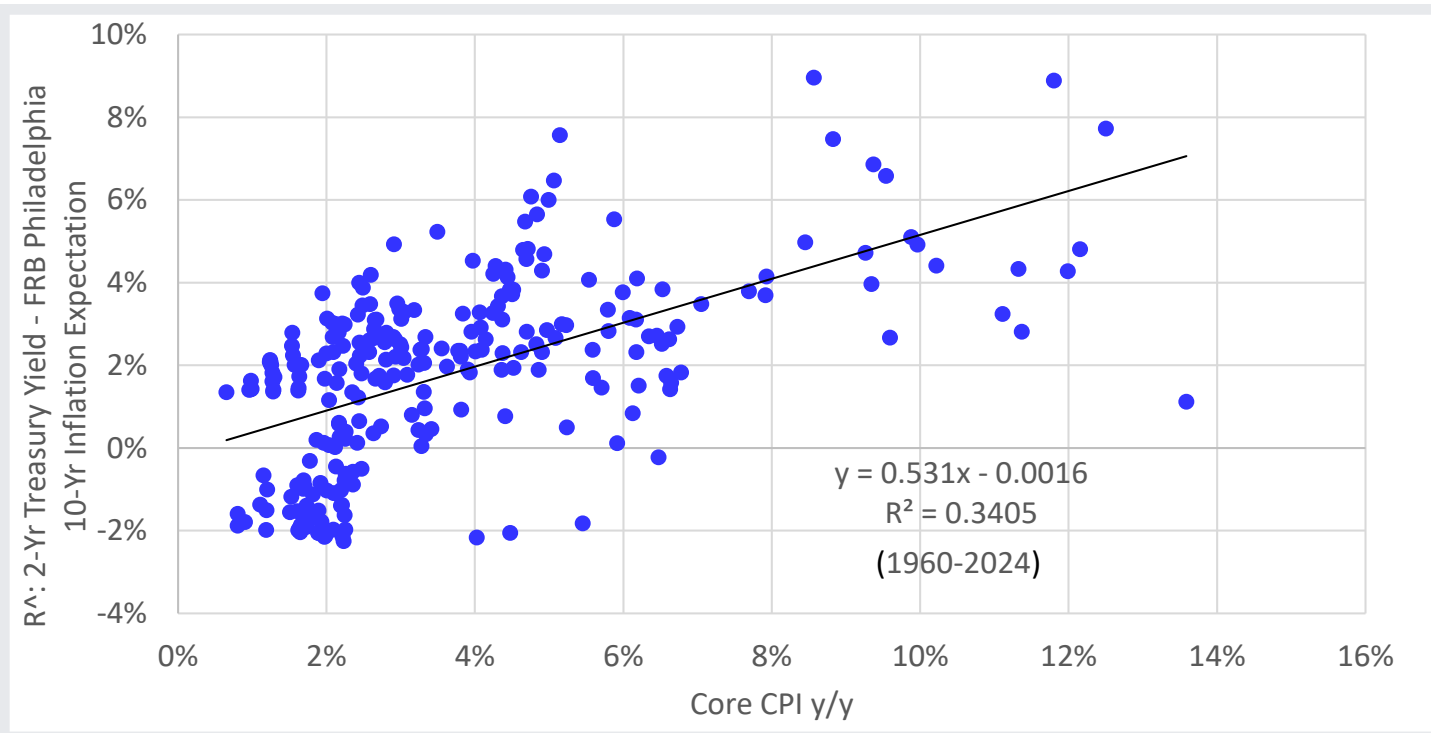Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

Federal Reserve model estimates of the neutral interest rate vs. observed 2yr real yields and the above model's estimate for today

Reagan/Volcker: R^ > R* on high deficits, but tax cuts then spurred growth

Trump/Biden/Powell: Still loose fiscal policy, uncertain normal monetary policy

R^ model estimate now = 3.2%

Clinton/Greenspan: Deficit Reduction Act (1992), precautionary monetary policy (1994)

Legend: Recession — R* (HLW Estimates) — R* (HLW Estimates) — R^: 2-Yr Treasury Yield - FRB Philadelphia 10-Yr Inflation Expectation
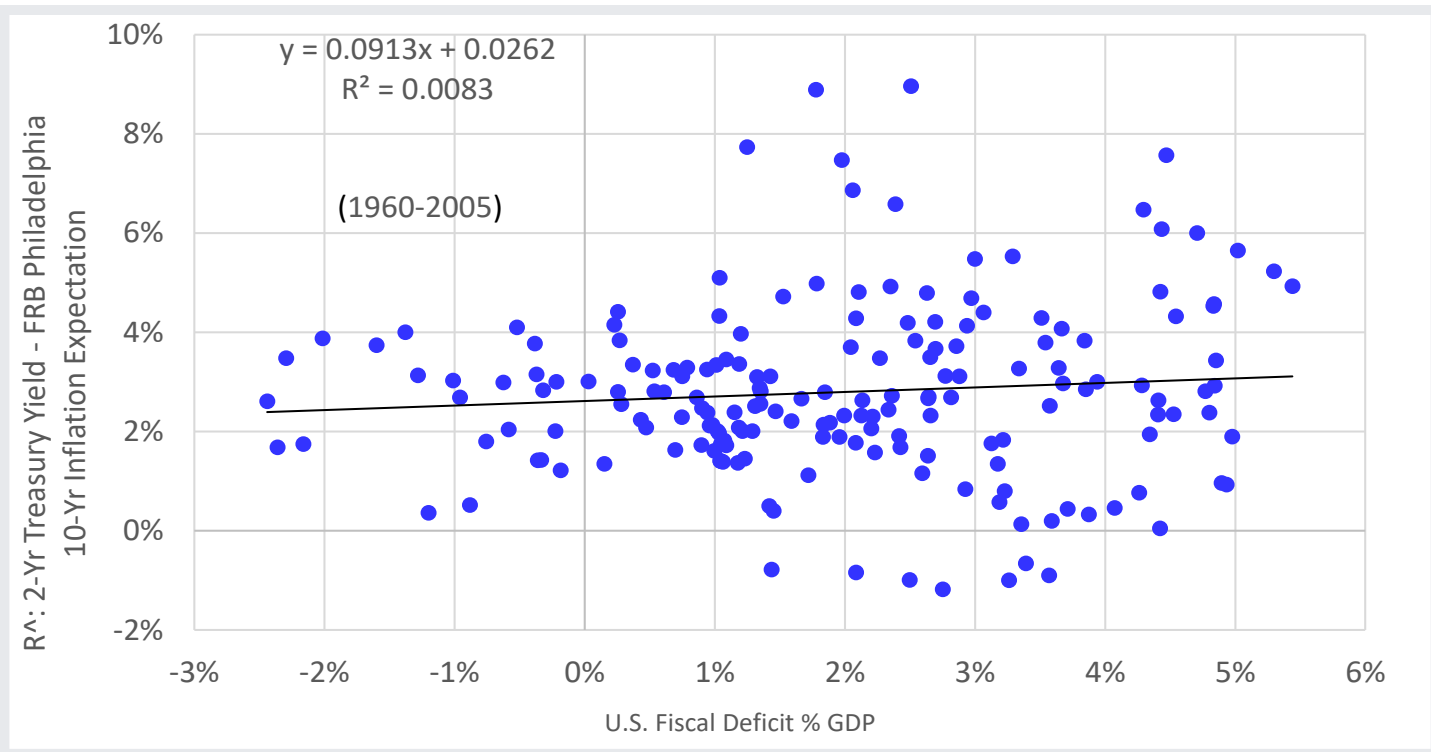
Source: Haver, Federal Reserve Bank of New York, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

R^ vs. Core CPI y/y regression

R^: 2-Yr Treasury Yield - FRB Philadelphia 10-Yr Inflation Expectation (vertical axis)

Core CPI y/y (horizontal axis)

$$y = 0.531x - 0.0016$$
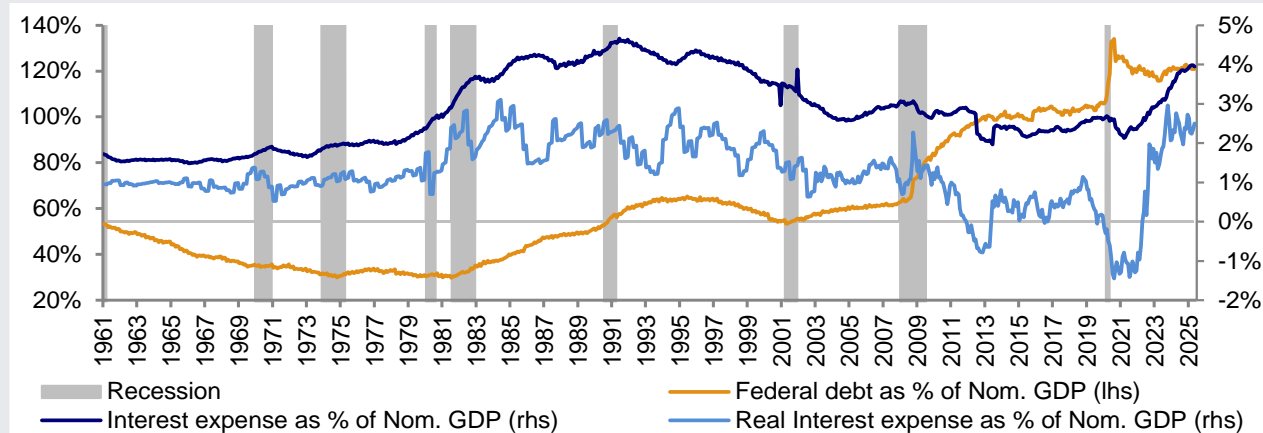$$R^2 = 0.3405$$
(1960-2024)

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

R^ vs. U.S. fiscal deficit % of GDP

R^: 2-Yr Treasury Yield - FRB Philadelphia 10-Yr Inflation Expectation (vertical axis)

U.S. Fiscal Deficit % GDP (horizontal axis)

$$y = 0.0913x + 0.0262$$
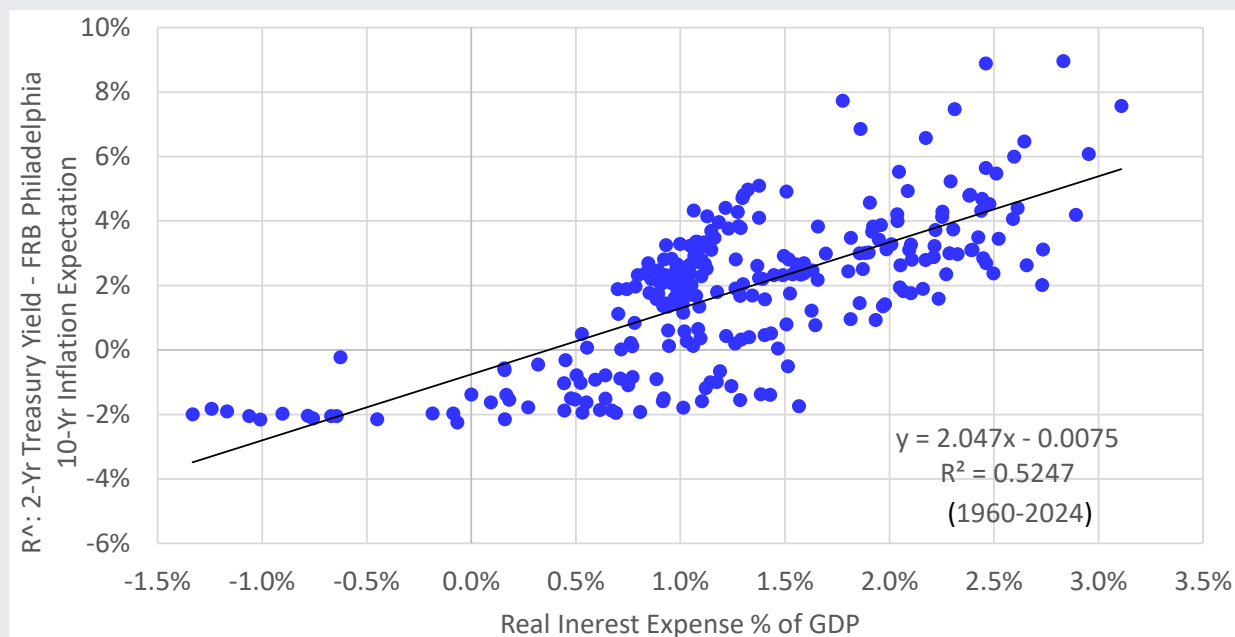$$R^2 = 0.0083$$
(1960-2005)

Note: The regression uses U.S. fiscal deficit % GDP data only from 1960-2005, to exclude the distortion of the very high deficit during and after the financial crisis.
Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

Federal debt and interest expense

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.
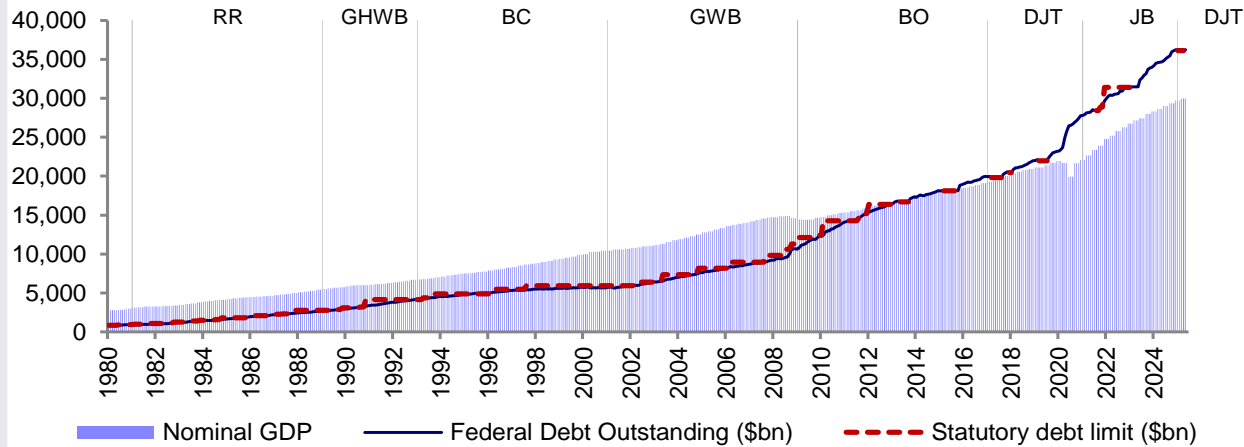
R^ vs. Federal real interest expense of GDP

$y = 2.047x - 0.0075$
$R^2 = 0.5247$
(1960-2024)

Note: The regression uses U.S. fiscal deficit % GDP data only from 1960-2005, to exclude the distortion of the very high deficit during and after the financial crisis.
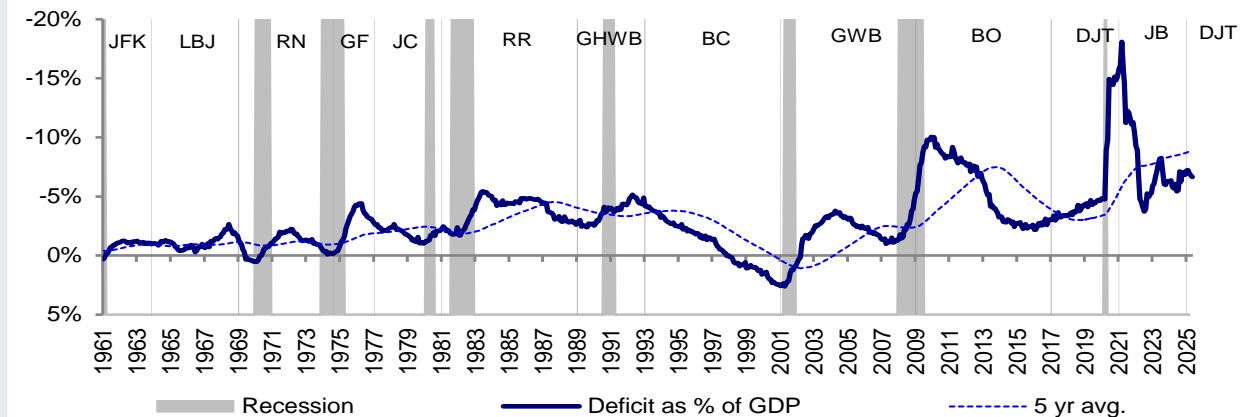Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

Federal debt outstanding vs. statutory debt limit

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

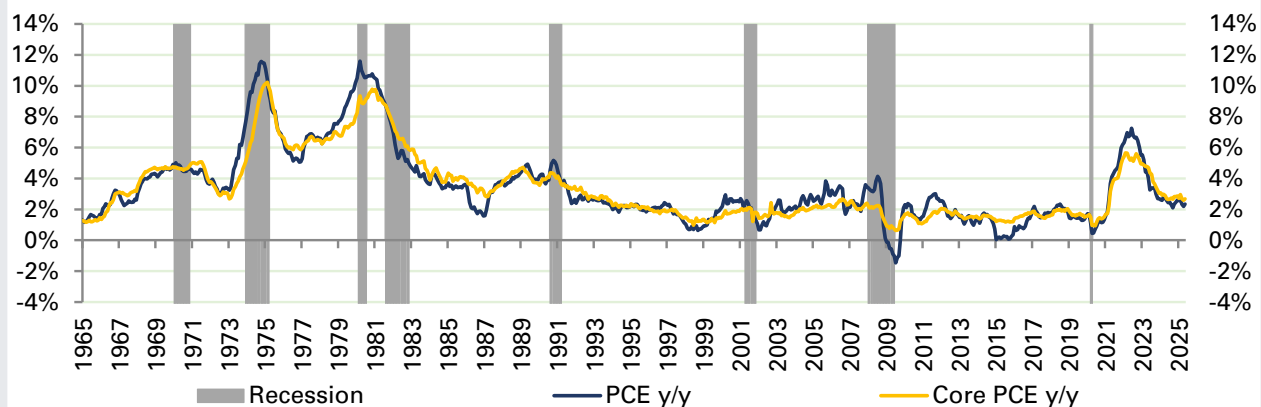## Federal debt outstanding vs. statutory debt limit

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.
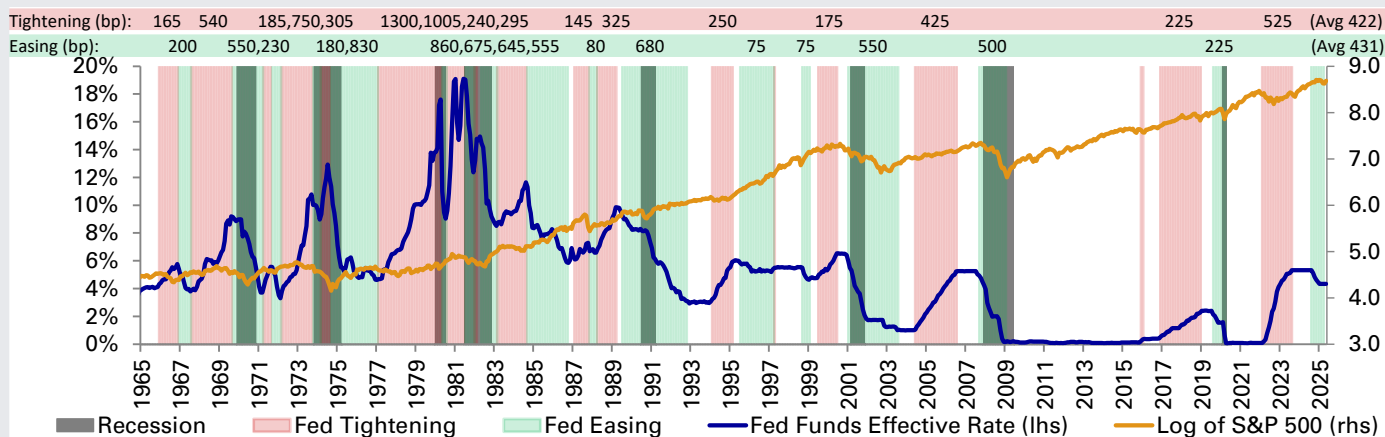
PCE and Core PCE

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

Fed tightening and easing cycles since 1960

| Tightening (bp): | 165 | 540 | 185,750,305 | 1300,1005,240,295 | 145 325 | 250 | 175 | 425 | 225 | 525 | (Avg 422) |
| Easing (bp): | 200 | 550,230 | 180,830 | 860,675,645,555 | 80 | 680 | 75 | 75 | 550 | 500 | 225 | (Avg 431) |

Recession   Fed Tightening   Fed Easing   Fed Funds Effective Rate (lhs)   Log of S&P 500 (rhs)
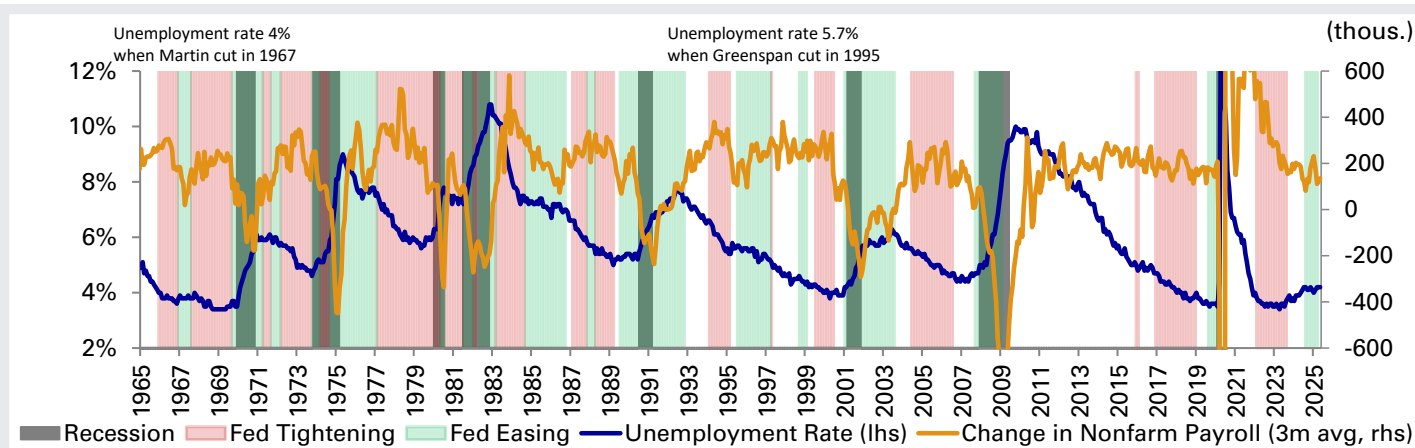
Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

U.S. labor market during Fed tightening and easing cycles

Unemployment rate 4% when Martin cut in 1967

Unemployment rate 5.7% when Greenspan cut in 1995

(thous.)

Recession   Fed Tightening   Fed Easing   Unemployment Rate (lhs)   Change in Nonfarm Payroll (3m avg, rhs)

Source: Haver, Investment Management GmbH as of June 2025. Past performance may not be indicative of future results. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

DWS Investment GmbH S&P 500 Annual EPS Outlook

	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024A	y/y	2014-2024 CAGR	Bottom-up Consensus (IBES) 2025E	y/y	2026E	y/y	DWS View 2025E	y/y	2026E	y/y	Normalized 2025 ($)	% of 2025
S&P 500 EPS (historical index)	$118.82	$117.46	$118.10	$132.00	$161.93	$162.93	$139.72	$208.12	$218.09	$221.36	$242.73	9.7%	7.4%										
S&P 500 EPS (current constituents)	$116.94	$117.28	$117.85	$131.21	$157.97	$159.48	$143.22	$217.85	$218.24	$222.05	$245.21	10.4%	7.7%	$266	8.3%	$301	13.5%	$260	6.0%	$285	9.6%	$260	100%
Sector ($ bn)																							
Communication Services	66.7	77.1	89.2	97.3	121.7	128.5	132.5	184.6	144.4	173.6	214.7	23.6%	12.4%	248.3	15.6%	271.3	9.3%	236.0	9.9%	259.0	9.7%	234.7	99%
Consumer Discretionary	57.9	68.2	75.8	80.2	95.6	94.0	63.9	121.9	111.3	157.2	182.2	15.9%	12.2%	180.3	-1.1%	206.1	14.3%	175.5	-3.7%	195.0	11.1%	183.4	105%
Consumer Staples	92.0	90.1	92.3	96.6	104.1	105.0	113.0	126.8	126.0	133.9	136.2	1.8%	4.0%	136.6	0.3%	147.0	7.6%	129.5	-4.9%	138.0	6.6%	129.5	100%
Energy	94.3	39.9	10.6	36.9	69.0	48.0	-6.7	76.1	194.2	137.9	110.3	-20.0%	1.6%	96.5	-12.5%	115.1	19.3%	100.0	-9.3%	115.0	15.0%	100.0	100%
Financials	184.7	200.3	204.2	213.4	262.6	276.7	226.3	363.5	308.8	335.3	387.7	15.6%	7.7%	404.6	4.4%	456.1	12.7%	400.0	3.2%	430.0	7.5%	394.1	99%
Health Care	137.2	152.1	156.9	171.1	187.9	205.7	226.2	291.7	307.9	243.9	253.3	3.9%	6.3%	290.9	14.9%	321.9	10.6%	285.0	12.5%	316.0	10.9%	280.0	98%
Industrials	96.8	98.1	95.3	105.1	129.1	112.1	71.1	118.0	135.8	160.3	163.9	2.3%	5.4%	173.9	6.1%	201.4	15.8%	165.0	0.7%	187.0	13.3%	171.5	104%
Information Technology	162.8	169.0	173.7	206.8	241.8	237.4	269.4	443.3	370.9	384.0	459.5	19.7%	10.9%	544.1	18.4%	642.3	18.0%	540.0	17.5%	619.0	14.6%	540.0	100%
Materials	24.6	23.1	22.1	28.8	35.9	33.7	32.2	62.3	64.9	49.8	48.1	-3.4%	6.9%	49.0	1.9%	57.2	16.7%	46.5	-3.3%	50.0	7.5%	45.5	98%
Real Estate	22.0	23.7	27.5	31.0	34.8	36.3	36.2	43.1	50.4	52.7	55.9	6.1%	9.8%	56.3	0.7%	60.3	7.0%	54.0	-3.5%	57.0	5.6%	53.4	99%
Utilities	32.3	32.5	34.9	36.7	40.0	45.2	46.8	47.4	48.7	53.1	62.5	17.7%	6.8%	65.6	4.9%	71.0	8.3%	66.5	6.4%	71.5	7.5%	73.4	110%
S&P 500	971.3	974.1	982.7	1103.8	1322.5	1322.7	1210.8	1878.7	1863.4	1881.6	2074.3	10.2%	7.9%	2246.1	8.3%	2549.7	13.5%	2198.0	6.0%	2437.5	10.9%	2205.4	100%
S&P ex. Energy ($bn)	876.9	934.2	972.1	1067.0	1253.5	1274.7	1217.5	1802.6	1669.2	1743.7	1964.1	12.6%	8.4%	2149.6	9.4%	2434.5	13.3%	2098.0	6.8%	2322.5	10.7%	2105.4	100%
S&P ex. Tech ($bn)	808.5	805.1	809.0	897.0	1080.7	1085.3	941.3	1435.4	1492.5	1497.5	1614.8	7.8%	7.2%	1702.0	5.4%	1907.4	12.1%	1658.0	2.7%	1818.5	9.7%	1665.4	100%
S&P 500 Sales/Share (historical index)	$1,163	$1,127	$1,151	$1,232	$1,339	$1,415	$1,362	$1,567	$1,753	$1,872	$1,971	5.3%	5.4%										
S&P 500 Non-GAAP Net Margin	10.2%	10.4%	10.3%	10.7%	12.1%	11.5%	10.3%	13.3%	12.4%	11.8%	12.3%												

S&P 500 EPS	Whole Year	1Q	2Q	3Q	4Q
2019A	**163**	39	41	41	42
2020A	**140**	33	28	38	42
2021A	**210**	49	53	54	54
2022A	**222**	55	58	56	53
2023A	**223**	53.00	54.25	58.5	57.25
2024A	**245**	56.50	60.50	63.00	65.00
2025E	**260**	63.00	64.00	65.00	68.00

S&P 500 Trailing PE	Average	Stdev	3yr Avg High	3yr Avg Low
1960 – 2023	16.5	4.6	26.3	7.9
1985 – 2023	18.1	3.9	26.3	13.0
1995 – 2023	18.9	3.8	26.3	14.2
2005 – 2023	17.6	2.8	21.8	14.2
2005 – 2019 (pre-pandemic)	16.7	1.9	18.8	14.2

S&P 500 EPS historical constituents represents the earnings per share (EPS) of S&P 500 index constituents at the time, while S&P 500 EPS current constituents represents the earnings per share of index constituents as of the date the data was compiled 9/30/2024. FFO is used for REITs instead of EPS.
Source: Factset, DWS Investment GmbH as of 6/27/2025. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index.

DWS

DWS Investment GmbH View: S&P 500 fair value by sector: Assuming a ~5.25% real cost of equity (CoE) for overall S&P 500

	Market Value ($bn)	Current 2025 PE	2025E Earnings ($bn)	Normal Ratio	Normal 2025E Earnings	GAAP/Non-FAAP EPS 5yr Avg	Accounting Quality Adjustment	Fully Adjusted Earnings	Net Debt / Market Cap	FCF / EPS	Real CoE	Steady State Value	Growth Premium	2025 Start Fair Value ($bn)	2025E Dividend Yield	2025 End Fair Value ($bn)	Fair PE on Normal 2025 EPS	2025 End Upside %	2025 End Upside vs. S&P 500
Communication Services	5,255	22.3	236.0	99%	234.7	82%	-7%	218.3	11%	0.83	5.10%	4,280	15%	4,922	0.8%	5,256	22.4	0%	8%
Consumer Discretionary	5,356	30.5	175.5	105%	183.4	88%	-6%	172.4	10%	0.76	5.25%	3,284	29%	4,221	0.7%	4,519	24.6	-16%	-7%
Automobiles	1,005	45.7	22.0	110%	24.2	75%	-10%	21.8	32%	0.99	5.75%	379	35%	511	0.3%	552	22.8	-45%	-37%
Broadline (Internet) Retail	2,032	35.3	57.5	110%	63.3	98%	-5%	60.1	0%	0.18	5.10%	1,178	50%	1,767	0.0%	1,901	30.1	-6%	2%
ex. Auto & Broadline (Internet) Retail	2,319	24.2	96.0	100%	96.0	90%	-6%	90.6	13%	0.78	5.24%	1,727	12%	1,943	1.5%	2,063	21.5	-11%	-3%
Consumer Staples	3,266	25.2	129.5	100%	129.5	84%	-5%	123.0	14%	0.84	5.00%	2,461	5%	2,584	2.2%	2,721	21.0	-17%	-8%
Energy	1,785	17.8	100.0	100%	100.0	97%	-5%	95.0	14%	0.90	5.75%	1,652	-15%	1,404	3.1%	1,477	14.8	-17%	-9%
Financials	7,328	18.3	400.0	99%	394.1	98%	-7%	365.5		1.11	5.75%	6,356	0%	6,356	1.4%	6,791	17.2	-7%	1%
Banks	2,022	14.5	139.5	100%	139.5	95%	-7%	129.7		1.11	6.00%	2,162	-10%	1,946	2.3%	2,067	14.8	2%	10%
Health Care	4,977	17.5	285.0	98%	280.0	64%	-10%	252.0	10%	1.14	5.20%	4,846	10%	5,331	1.9%	5,641	20.1	13%	22%
Industrials	4,455	27.0	165.0	104%	171.5	84%	-5%	162.9	15%	0.88	5.25%	3,103	10%	3,414	1.3%	3,633	21.2	-18%	-10%
Information Technology	16,686	30.9	540.0	100%	540.0	89%	-3%	523.8	2%	0.95	5.10%	10,271	35%	13,865	0.6%	14,835	27.5	-11%	-3%
Materials	1,082	23.3	46.5	98%	45.5	80%	-7%	42.3	16%	0.90	5.50%	769	10%	846	1.8%	899	19.7	-17%	-9%
Real Estate	1,009	18.7	54.0	99%	53.4	78%	-12%	47.0	35%	1.79	5.25%	895	5%	940	3.6%	979	18.3	-3%	5%
Utilities	1,221	18.4	66.5	110%	73.4	78%	-7%	68.2	79%	-0.81	5.25%	1,299	0%	1,299	2.9%	1,362	18.6	11%	20%
S&P 500 ($ bn)	52,420	23.8	2198.0	100%	2205.4	84%	-6.1%	2070.4			5.26%	39,217	15.2%	45182	1.2%	48,113	21.8	-8%	0%
S&P 500 Index ($/sh)	6173	23.7	260.0	100%	260.0	84%	-5.8%	245.0	10%	0.93	5.25%	4667	15.1%	5371	1.2%	5703	21.9	-8%	0%

Legend:
- >5%
- between -5% and 5%
- <-5%
- Bigger upside vs. S&P 500
- Same upside as S&P 500
- Smaller upside vs. S&P 500

Source: IBES, DWS Investment GmbH as of 6/27/2025. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index.

S&P 500 EPS historical constituents represents the earnings per share (EPS) of S&P 500 index constituents at the time, while S&P 500 EPS current constituents represents the earnings per share of index constituents as of the date the data was compiled 9/30/2024.
The estimated 2025 year end upside is on absolute valuation basis of each sector, not on relative sector valuation basis.

S&P 500 Intrinsic Valuation Model

S&P 500 Capitalized EPS Valuation		S&P 500 Dividend Discount Model		S&P 500 Long-term EPS & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple	
DWS 2025E S&P 500 EPS	$260.00	DWS 2025E S&P 500 DPS	$84.00	DWS 2025E S&P 500 aggregate ROE	23.6%	Fair long-term nominal return on S&P 500 index	7.75%
		2025E dividend payout ratio	32%	2024E end S&P 500 book value per share	$1,100	Components of estimated fair S&P 500 return:	
DWS "normal 2025" S&P 500 EPS	$260.00	DWS "normal 2025E" S&P 500 DPS	$84.00	DWS "normal 2025E" S&P 500 aggregate ROE	22.3%	+ Long-term real risk free interest rate	2.00%
"Normal 2025E" EPS / 2025 EPS	100%	Normal dividend payout ratio	34%			+ Long-term fair S&P 500 equity risk premium*	3.25%
				S&P EPS retained for operating reinvestment	36%	= Long-term real S&P 500 cost of equity	5.25%
Accounting quality adjustment to pro forma EPS	-$15.00	EPS directed to net share repurchases	$74.00	Estimated ROE on reinvested S&P EPS	9.00%	+ Long-term inflation forecast	2.50%
		Normal share repurchase payout ratio	30%	Economic margin (EM) or ROE-CoE	1.25%	= S&P 500 nominal cost of equity	7.75%
Normal 2025E S&P 500 EPS fair to capitalize	$245	Total payout of S&P 500 EPS	$158.00	Sources of long-term earnings growth:		* S&P 500 ERP history 300-400bps, w/ real CoE @ 5% - 6%	
Key principle: steady-state value = normal EPS / real CoE		Total payout ratio of normal and quality adj. EPS	64%	+ Long-term inflation forecast	2.50%		
				+ Fair return on operating reinvestment	1.86%	Fair S&P 500 Market Value and Book Value Multiple	
S&P 500 EPS Capitalization Valuation		S&P 500 DPS Discount Model		+ Value added earnigs growth on op. reinvestment	0.44%	2024E end S&P 500 book value per share	$1,100
Normal EPS / (real CoE - (EM/payout) - EM):		Normal DPS / (nominal CoE - DPS growth):		= Long-term earnings growth	4.81%	Fair PB = Fair PE * normal aggregate ROE	4.88
S&P 500 intrinsic value at 2025 start	5371	S&P 500 intrinsic value at 2025 start	5371	+ Growth from net share repurchases	1.38%	Fair PE =(inc ROE-g)/(inc real ROE*(real CoE-real g))	20.66
S&P 500 intrinsic value at 2025 end	5703	S&P 500 intrinsic value at 2025 end	5703	= Long-term S&P 500 EPS/DPS growth	6.19%	Implied S&P 500 fair value of book at 2025 start	5371
Implied fair fwd PE in early 2025 on 2025E $260 EPS	20.7	Implied fair forward yield on 2025E DPS of $84.0	1.56%	+ Fair normal dividend yield	1.56%	Steady-state PB = normal agg. ROE / real CoE	4.24
Implied fair trailing PE at 2025 end on 2025E $260 EPS	21.9	Implied fair trailing yield on 2025E DPS of $84.0	1.47%	= Total long-term return at constant PE	7.75%	Confirmed by fair steady-state PE = 1 / real CoE	19.0

Normal EPS / (real CoE - value added EPS growth)	5411	DPS discount model using true DPS (all payout)	5703	Value added growth premium in fair value est.	15.1%	Normal 2025E economic profit per share	$187.25

S&P 500 EPS discount model 5 steps to value:
1) Estimate normalized S&P 500 EPS
2) Adjust normalized EPS for pro forma accounting quality
3) Estimate a fair long-term real return on S&P 500 ownership (CoE)
4) Capitalize normalized and accounting quality adj. EPS at real CoE
5) Consider long-term potential for value added growth opportunities

2025E S&P 500 Normalized EPS

	$250	$255	$260	$265	$270
4.75%	6003	6192	6385	6582	6783
5.00%	5669	5845	6024	6207	6393
5.25%	5372	5536	5703	5873	6046
5.50%	5105	5259	5415	5574	5735
5.75%	4864	5009	5156	5305	5456

DWS June 2026 equity index targets

Index	3M relative View	Current Level 28/05/2025	Previous Target CIO Day	Target Jun 26 (rounded)	Chg in Target	Expected Total Return Jun 26		EPS growth NTM*	LTM multiple impact	Dividend Yield	EPS NTM* (e)	EPS NTM DWS vs. Cons.	Target LTM P/E in Jun 26	Target PE discount to US
S&P 500		5,922	5,800	6,100	5%	4.5%	USD	7.9%	-5%	1.5%	273	-3.5%	22.3x	
Stoxx 600		551	550	570	4%	6.9%	EUR	4.0%	0%	3.4%	37.7	-2.8%	15.1x	-32%
EuroStoxx 50		5,399	5,400	5,600	4%	6.9%	EUR	4.0%	0%	3.2%	362	-2.0%	15.4x	-31%
DAX40		24,154	23,500	25,600	9%	6.0%	EUR	12.0%	-8%	2.7%	1525	-2.4%	16.4x	-27%
SMI		12,236	12,500	12,500	0%	5.4%	CHF	5.5%	-3%	3.2%	733	-2.1%	17.0x	-24%
FTSE 100		8,765	8,700	8,800	1%	4.1%	GBP	3.5%	-3%	3.7%		-2.9%	12.9x	-42%
MSCI EM		1,165	1,160	1,220	5%	7.6%	USD	8.5%	-3%	2.9%	87.0	-8.5%	14.0x	-37%
MSCI AC Asia xJ		757	750	790	5%	7.2%	USD	8.0%	-3%	2.8%	54.1	-7.0%	14.6x	-34%
MSCI Japan		1,694	1,690	1,720	2%	4.1%	YEN	4.0%	-2%	2.5%	115.4	-5.1%	14.9x	-33%
MSCI Australia		1,668	1,600	1,600	0%	-0.6%	AUD	0.0%	-3%	3.5%	88.6	-0.5%	18.3x	-18%

Our S&P 500 intrinsic valuation model above uses an ERP of 3.25%, which suggests 5700 as fair S&P value at 2025 end.

If tariff, deficit, dollar and other macro risks diminish into yearend, then 3.0% might be more appropriate, which suggests 6000 as fair S&P 500 value at 2025 end.

Sector	Industry	PE on 2024 Consensus EPS	PE on 2025 Consensus EPS	2024 Consensus EPS Growth	2025 Consensus EPS Growth	2025 EPS 3m Revision	3m Total Return Momentum	2025 End Upside (Intrinsic Valuation)	Combined Signal
Consumer Discretionary		30.8	30.5	19.4%	1.1%	-6.4%	12.3%	-15.6%	1
	Automobile Components	11.0	9.7	28.8%	13.8%	-13.8%	13.5%	-4.6%	1
	Automobiles	41.3	54.7	0.8%	-24.6%	1.7%	21.4%	-45.1%	1
	Household Durables	10.8	13.5	8.3%	-19.5%	7.0%	0.3%	3.0%	0
	Leisure Products	18.2	17.1	59.8%	6.7%	-4.5%	21.9%	-24.6%	1
	Textiles Apparel & Luxury Goods	21.1	24.0	-8.1%	-12.1%	6.6%	6.2%	-27.8%	0
	Hotels Restaurants & Leisure	29.8	26.8	7.6%	11.1%	-11.8%	11.0%	-13.6%	0
	Distributors	15.2	15.6	-11.8%	-2.4%	0.7%	-3.7%	3.5%	-1
	Broadline Retail	39.3	35.2	85.7%	11.7%	-12.5%	15.8%	-6.4%	1
	Specialty Retail	23.5	23.1	1.5%	1.7%	-2.4%	1.5%	-10.4%	0
Consumer Staples		22.9	22.8	4.0%	0.5%	-2.3%	2.3%	-16.7%	0
	Consumer Staples Distribution & Retail	33.2	32.8	2.4%	1.2%	-3.9%	9.8%	-40.0%	0
	Food Products	14.2	15.9	-4.5%	-10.3%	9.3%	-4.8%	9.7%	-1
	Beverages	19.6	19.5	7.1%	0.5%	-3.0%	-4.3%	9.8%	0
	Tobacco	20.2	18.4	6.5%	9.8%	-6.1%	13.3%	-14.6%	0
	Household Products	23.3	22.8	13.1%	2.2%	-5.7%	-5.4%	-8.5%	0
	Personal Care Products	22.1	22.5	-18.9%	-1.9%	0.5%	-2.5%	-8.8%	-1
Energy		14.5	16.4	-20.1%	-11.3%	-1.2%	-7.0%	-17.2%	-1
	Energy Equipment & Services	10.7	11.7	14.5%	-9.2%	-0.7%	-15.5%	36.0%	0
	Oil Gas & Consumable Fuels	14.9	16.8	-22.4%	-11.5%	-1.3%	-6.3%	-25.9%	-1
Financials		18.8	18.0	17.5%	4.8%	-5.6%	6.0%	-7.3%	0
	Banks	14.1	13.6	5.9%	4.0%	-4.7%	15.7%	1.4%	0
	Financial Services	25.1	24.6	20.8%	2.3%	-3.0%	-3.1%	-13.8%	1
	Consumer Finance	17.2	15.7	20.9%	9.0%	-8.8%	21.0%	-27.1%	1
	Capital Markets	22.8	21.0	29.7%	8.2%	-10.4%	14.9%	-27.2%	1
	Insurance	15.6	14.9	24.7%	4.5%	-3.7%	-4.7%	13.4%	0
Health Care		19.5	16.9	5.7%	14.9%	-15.5%	-6.9%	13.3%	-1
	Health Care Providers & Services	13.3	13.4	0.6%	-1.0%	-7.1%	-15.6%	40.1%	-1
	Health Care Equipment & Supplies	28.2	26.2	11.3%	7.7%	-8.2%	4.3%	-7.3%	0
	Life Sciences Tools & Services	21.7	21.1	0.7%	2.8%	-4.5%	-9.4%	0.8%	0
	Biotechnology	21.1	16.1	-14.3%	31.6%	-25.2%	-8.9%	6.8%	-1
	Pharmaceuticals	18.8	14.7	23.4%	27.6%	-22.4%	-7.2%	16.6%	-1
Industrials		28.0	25.9	3.3%	8.0%	-10.6%	11.5%	-18.5%	0
	Aerospace & Defense	66.2	34.6	-27.0%	91.3%	-48.3%	17.9%	-27.6%	-1
	Building Products	26.4	25.6	3.7%	3.4%	-5.4%	19.9%	-32.6%	0
	Trading Companies & Distributors	25.1	24.3	4.6%	3.1%	-4.1%	12.1%	-6.2%	0
	Electrical Equipment	39.0	32.9	18.6%	18.6%	-15.2%	17.7%	0.9%	1
	Construction & Engineering	42.5	36.8	25.3%	15.4%	-12.1%	50.0%	-33.0%	1

Combined signal rules: Green – at least 2 of the following 3 must be green: EPS growth, EPS revision, price momentum
Red – at least 2 of the following 3 must be red: EPS growth, EPS revision, price momentum

Source: Factset, DWS Investment GmbH as of 6/27/2025. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index.

Sector	Industry	PE on 2024 Consensus EPS	PE on 2025 Consensus EPS	2024 Consensus EPS Growth	2025 Consensus EPS Growth	2025 EPS 3m Revision	3m Total Return Momentum	2025 End Upside (Intrinsic Valuation)	Combined Signal
	Industrial Conglomerates	22.3	21.2	-5.3%	5.1%	-5.2%	7.9%	-23.1%	0
	Machinery	19.9	21.8	0.1%	-8.7%	3.5%	8.3%	-13.4%	0
	Commercial Services & Supplies	37.3	34.6	14.1%	8.0%	-7.4%	0.9%	-32.2%	0
	Professional Services	30.0	27.7	12.1%	8.4%	-7.3%	2.6%	-20.9%	0
	Air Freight & Logistics	13.9	14.5	-4.3%	-4.1%	-6.1%	-5.2%	16.4%	-1
	Passenger Airlines	9.5	10.2	-2.7%	-6.7%	-18.0%	8.4%	-0.2%	-1
	Ground Transportation	20.7	24.2	50.6%	-14.7%	17.3%	12.0%	-23.2%	1
Information Technology		**37.0**	**31.3**	**24.1%**	**18.3%**	**-16.4%**	**22.5%**	**-11.1%**	**1**
	IT Services	24.9	23.8	4.7%	4.7%	-3.5%	7.7%	-3.7%	0
	Software	40.6	35.9	24.6%	13.1%	-10.3%	27.3%	-6.8%	1
	Communications Equipment	22.7	21.5	1.3%	5.5%	-4.1%	13.0%	-5.8%	0
	Technology Hardware Storage & Peripherals	27.7	25.7	14.5%	7.9%	-10.2%	-6.1%	0.5%	0
	Electronic Equipment Instruments & Components	29.1	25.1	7.6%	15.9%	-10.6%	24.9%	-28.7%	0
	Semiconductors & Semiconductor Equipment	45.2	33.3	43.8%	35.9%	-28.3%	40.9%	-23.5%	1
Materials		**22.4**	**21.7**	**-3.8%**	**3.3%**	**-4.8%**	**4.1%**	**-16.9%**	**0**
	Chemicals	24.4	24.6	-9.3%	-1.0%	-5.8%	1.9%	-15.8%	0
	Construction Materials	23.0	30.0	41.1%	-23.4%	31.4%	14.0%	-51.3%	1
	Metals & Mining	18.5	16.3	-7.9%	13.5%	3.5%	13.9%	-22.5%	1
	Containers & Packaging	19.4	16.4	16.7%	18.7%	-22.2%	-2.4%	-20.7%	-1
Real Estate		**29.8**	**18.6**	**-35.4%**	**59.9%**	**-37.7%**	**0.2%**	**-3.0%**	**-1**
	Industrial REITs	19.0	18.5	-1.1%	3.0%	-3.3%	-3.5%	10.3%	-1
	Hotel & Resort REITs	8.0	8.3	2.1%	-3.5%	4.2%	11.8%	5.1%	0
	Office REITs	9.7	10.0	-2.3%	-3.1%	2.9%	2.8%	4.0%	0
	Health Care REITs	21.4	19.9	9.6%	7.9%	-6.7%	-5.1%	22.0%	0
	Residential REITs	20.4	17.2	-12.2%	18.7%	-15.8%	-5.5%	9.3%	-1
	Retail REITs	21.1	13.2	-35.4%	59.8%	-38.0%	0.3%	20.1%	-1
	Specialized REITs	67.1	20.6	-69.9%	225.6%	-69.4%	3.5%	-6.8%	-1
	Real Estate Management & Development	42.3	35.8	7.9%	18.1%	-18.2%	4.9%	-35.6%	0
Communication Services		**24.3**	**21.0**	**25.7%**	**15.9%**	**-10.8%**	**18.3%**	**0.0%**	**1**
	Diversified Telecommunication Services	10.7	11.0	-4.3%	-3.1%	3.6%	-1.8%	-9.5%	-1
	Wireless Telecommunication Services	24.4	22.0	39.4%	10.5%	-9.1%	-10.9%	-5.0%	0
	Media	9.7	9.6	9.7%	1.1%	-0.4%	0.0%	14.2%	0
	Entertainment	95.5	39.3	-15.2%	143.0%	-59.1%	32.6%	-38.3%	-1
	Interactive Media & Services	25.4	22.2	45.8%	14.7%	-8.3%	20.4%	9.1%	1
Utilities		**19.6**	**18.7**	**16.3%**	**4.9%**	**-5.0%**	**5.0%**	**11.5%**	**0**
	Multi-Utilities	19.8	18.5	10.2%	7.3%	-6.9%	-0.2%	12.5%	0
	Water Utilities	26.0	24.1	4.7%	7.9%	-7.2%	-5.1%	-1.3%	0
	Gas Utilities	22.1	20.7	13.0%	7.0%	-5.9%	0.6%	6.4%	0
	Electric Utilities	19.3	18.4	16.3%	4.8%	-4.7%	4.7%	22.2%	0
	Independent Power and Renewable Electricity Producers	18.9	20.0	58.0%	-5.4%	1.1%	50.4%	-12.2%	1
S&P 500		**25.7**	**23.4**	**11.2%**	**10.0%**	**-10.9%**	**11.0%**	**-7.6%**	**0**

Combined signal rules: Green – at least 2 of the following 3 must be green: EPS growth, EPS revision, price momentum
Red – at least 2 of the following 3 must be red: EPS growth, EPS revision, price momentum

Source: Factset, DWS Investment GmbH as of 6/27/2025. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index.

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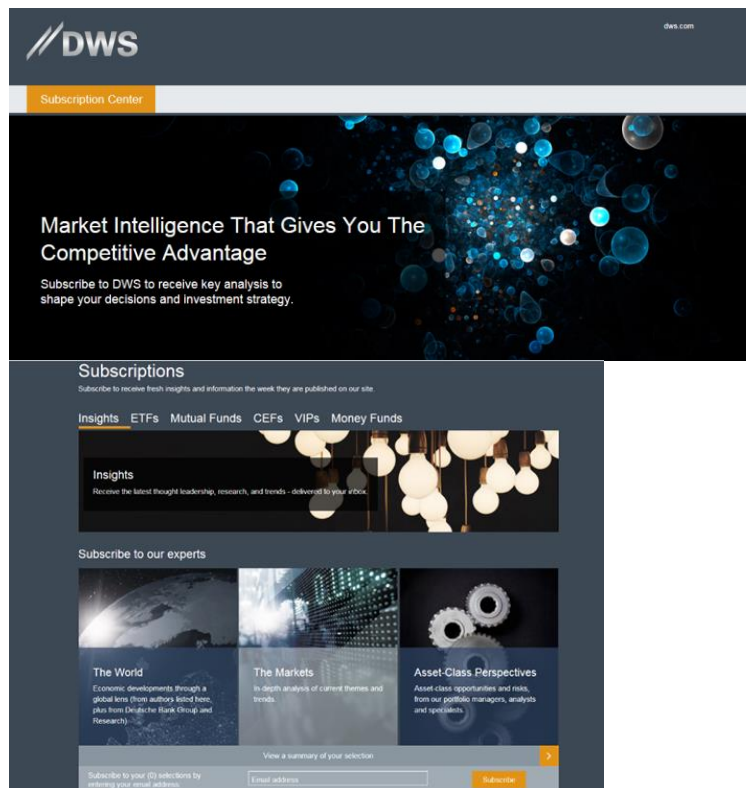
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