

## Data Appendix

Indicator	Sector	Type	Weight	Transformation		Transformed Readings			
				Moving Avg	Monthly Change	Latest	1m Ago	3m Ago	6m Ago
Nonfarm Payrolls	Labor	Real	2.0%	3	3	2.2%	2.5%	2.5%	3.2%
Prime-Age Employment-to-Population Ratio	Labor	Real	2.4%	3	6	1.7%	0.7%	0.1%	0.5%
Prime-Age Full-Time Employment-to-Population Ratio	Labor	Real	2.0%	6	6	0.8%	0.0%	0.2%	1.2%
Initial Jobless Claims (Inverted)	Labor	Real	0.4%	3	6	-43%	-31%	4.4%	13.6%
Total Jobless Claims (Inverted)	Labor	Real	1.4%	2	3	-37%	-57%	-84%	-17%
Total \$ Payroll - Production & Nonsupervisory	Labor	Nominal	1.3%	6	6	6.4%	6.8%	7.4%	9.2%
Prime-Age Employment * Employment Cost Index	Labor	Nominal	2.6%	6	6	6.0%	5.0%	5.2%	6.7%
Full-Time Prime-Age Employment * ECI	Labor	Nominal	2.6%	6	6	6.2%	5.3%	5.4%	6.8%
Compensation of Employees Received (Nat'l Accounts)	Labor	Nominal	1.8%	3	5	2.9%	2.4%	4.1%	9.2%
ISM Mfg PMI - Employment *	Labor	Soft	0.9%	2	0	51.0	49.1	49.6	49.7
NY Fed Mfg PMI - Employment *	Labor	Soft	0.6%	4	0	-6.4	-7.3	2.2	9.9
Philly Fed Mfg PMI - Employment *	Labor	Soft	0.7%	3	0	-6.1	-2.7	6.0	16.8
Richmond Fed Mfg PMI - Employment *	Labor	Soft	0.6%	4	0	0.3	-3.2	-3.2	0.7
Kansas City Fed Mfg PMI - Employment *	Labor	Soft	0.7%	3	0	6.2	7.3	7.5	6.3
Dallas Fed Mfg PMI - Employment *	Labor	Soft	0.6%	4	0	8.2	7.9	8.1	11.7
ISM Services PMI - Employment *	Labor	Soft	0.6%	5	0	51.4	51.5	50.0	50.2
NY Fed Services PMI - Employment *	Labor	Soft	0.6%	5	0	4.0	3.8	6.9	12.0
Philly Fed Non-Mfg PMI - Employment *	Labor	Soft	0.3%	7	0	4.9	4.5	7.5	8.4
Richmond Fed Services PMI - Employment *	Labor	Soft	0.8%	4	0	-0.5	0.6	4.8	7.0
Kansas City Fed Services PMI - Employment *	Labor	Soft	0.8%	4	0	9.2	8.2	7.5	17.1
Dallas Fed Services PMI - Employment *	Labor	Soft	0.8%	4	0	4.1	4.9	8.5	9.7
Dallas Fed Retailer Survey - Employment *	Labor	Soft	0.5%	6	0	-0.7	0.1	2.0	2.6
Automobile & Light Truck Sales	Consumer	Real	1.9%	6	6	20%	21%	17%	-3.5%
Retail Sales - Goods Excluding Autos & Gasoline	Consumer	Real	1.9%	6	6	-0.2%	0.3%	1.3%	2.9%
PCE: Cyclical Services Ex Food Services	Consumer	Real	3.2%	3	5	3.9%	4.0%	4.9%	4.2%
Food Service Sales	Consumer	Real	0.3%	6	6	2.2%	2.8%	6.0%	10.5%
Retail and Food Service Sales	Consumer	Nominal	4.1%	6	6	1.1%	1.8%	3.3%	8.5%
PCE: Cyclical Services Ex Food Services	Consumer	Nominal	3.2%	3	6	8.0%	8.6%	8.9%	8.7%
Consumer Confidence	Consumer	Soft	2.7%	6	4	-0.3	1.4	3.2	-4.0
Consumer Sentiment	Consumer	Soft	2.7%	6	4	2.8	4.9	5.1	-2.0
Dallas Fed Retailer Survey - Revenue *	Consumer	Soft	1.9%	6	0	-3.7	-4.8	-12.1	-12.2
Personal Consumption Expenditures - Cyclical Services	Services	Real	0.8%	3	7	4.1%	4.6%	4.9%	4.1%
Consumer Services Employment	Services	Real	2.1%	3	3	2.7%	3.3%	3.1%	4.0%
Intellectual Property Services Employment	Services	Real	2.3%	2	3	2.5%	1.1%	2.2%	4.4%
Other Services Employment	Services	Real	2.1%	3	3	2.5%	2.7%	2.5%	3.2%
Cyclical Personal Consumption Expenditures	Services	Nominal	1.1%	3	8	8.5%	8.8%	8.4%	8.2%
Consumer Services - Total \$ Payroll	Services	Nominal	2.0%	3	5	6.6%	7.7%	7.8%	8.2%
Intellectual Property Services - Total \$ Payroll	Services	Nominal	1.8%	3	4	4.4%	5.2%	4.8%	8.1%
Other Services - Total \$ Payroll	Services	Nominal	2.2%	3	4	5.0%	5.8%	5.9%	8.2%
ISM Services PMI - New Orders *	Services	Soft	1.7%	3	0	55.9	57.0	54.6	58.2
NY Fed Services PMI - Revenue *	Services	Soft	1.3%	5	0	-13.4	-12.5	-16.1	-8.3
Philly Fed Non-Mfg PMI - Revenue *	Services	Soft	0.9%	7	0	-5.5	-7.3	2.3	-0.7
Richmond Fed Services PMI - Revenue *	Services	Soft	1.3%	5	0	-13.7	-14.4	-5.8	-5.3
Kansas City Fed Services PMI - Revenue *	Services	Soft	0.9%	7	0	8.9	10.8	9.4	15.4
Dallas Fed Services PMI - Revenue *	Services	Soft	1.1%	6	0	6.0	5.4	4.8	7.9

All % growth rates are annualized

\* Moving average is weighted to linearly give more weight to recent readings

Indicator	Sector	Type	Weight	Transformation		Transformed Readings			
				Moving Avg	Monthly Chng	Latest	1m Ago	3m Ago	6m Ago
Industrial Production: Capital Goods	Mfg	Real	2.1%	3	4	-5.4%	-6.7%	-2.7%	7.2%
Industrial Production: Consumer Durables	Mfg	Real	1.7%	3	6	-2.9%	-4.7%	-4.6%	-1.4%
Industrial Production: Non-Energy Materials	Mfg	Real	2.1%	3	4	2.2%	-2.4%	-6.2%	-1.3%
Nondefense Capital Goods Orders (Ex-Aircraft)	Mfg	Nominal	2.2%	3	5	0.4%	0.4%	0.8%	5.2%
Nondefense Aircraft Shipments	Mfg	Nominal	0.1%	3	9	27%	27%	47%	35%
Consumer Durable Goods Orders	Mfg	Nominal	0.4%	6	6	4.3%	4.3%	10%	18%
Nondurable Goods Orders	Mfg	Nominal	3.3%	3	4	-7.9%	-7.9%	-5.2%	2%
ISM Mfg PMI - New Orders *	Mfg	Soft	1.4%	3	0	43.9	45.5	45.2	48.3
NY Fed Mfg PMI - New Orders *	Mfg	Soft	1.0%	5	0	-10.1	-3.4	-11.8	-2.9
Philly Fed Mfg PMI - New Orders *	Mfg	Soft	1.0%	5	0	-17.2	-20.7	-15.0	-13.9
Richmond Fed Mfg PMI - New Orders *	Mfg	Soft	0.8%	6	0	-21.0	-17.4	-18.0	-16.1
Kansas City Fed Mfg PMI - New Orders *	Mfg	Soft	0.8%	6	0	-13.8	-13.3	-9.1	-8.2
Dallas Fed Mfg PMI - New Orders *	Mfg	Soft	1.2%	4	0	-13.5	-11.2	-11.0	-14.3
Permitted Residential Housing Units	Housing	Real	1.4%	3	6	-16%	-22%	-32%	-26%
Total Home Sales	Housing	Real	0.4%	3	8	-12%	-19%	-35%	-35%
Residential Building Construction Employees	Housing	Real	0.6%	3	4	-0.5%	1.7%	2.8%	1.5%
Residential Contractor Employees	Housing	Real	0.6%	3	4	0.4%	-0.3%	1.4%	3.0%
Residential Construction Spending Ex Improvements	Housing	Nominal	0.9%	3	3	-9.7%	-12%	-16%	-26%
Total Home Sales	Housing	Nominal	0.5%	3	9	-14%	-20%	-32%	-27%
Residential Building Construction - Total \$ Payroll	Housing	Nominal	1.0%	3	4	-1%	4%	5%	2%
Residential Contractor - Total \$ Payroll	Housing	Nominal	0.7%	3	8	-6%	-2%	0%	5%
NAHB Homebuilder Sentiment *	Housing	Soft	1.5%	2	0	48.3	44.7	39.7	34.7
Nonresidential Construction Spending	Nonresi.	Real	0.8%	3	4	32%	27%	27%	3.8%
Baker Hughes Weekly Rig Count	Nonresi.	Real	1.1%	3	3	-14%	-11.4%	1.0%	9%
Nonresidential Building Construction Employees	Nonresi.	Real	0.3%	3	4	0.4%	-0.3%	1.4%	3.0%
Nonresidential Contractor Employees	Nonresi.	Real	0.3%	3	4	2.6%	9.1%	8.6%	1.1%
Architectural & Engineering Service Employees	Nonresi.	Real	0.4%	2	3	4.9%	5.1%	4.3%	5.5%
Nonresidential Construction Spending	Nonresi.	Nominal	0.7%	3	6	37%	35%	34%	15%
Baker Hughes Weekly Rig Count	Nonresi.	Nominal	1.2%	3	3	-14.8%	-12.1%	7%	43%
Nonresidential Building - Total \$ Payroll	Nonresi.	Nominal	0.5%	3	5	18%	19%	8.8%	5.2%
Architectural & Engineering Services - Total \$ Payroll	Nonresi.	Nominal	0.6%	3	4	8.8%	8.5%	11%	10.5%

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