

## Appendix A: Recovery rate by industry

Table A1: Summary statistics of recovery rate by industry

quantile	10%	25%	50%	75%	90%	avg.	obs.
recovery rate	1.93	20.61	65.41	100.00	100.00	59.41	5,334
AUTOS	1.38	40.36	81.48	100.00	100.00	65.59	186
BEER	25.86	47.94	67.83	93.29	100.00	64.56	6
BOOKS	2.51	23.74	45.31	97.00	100.00	54.47	156
BUSEQ	6.10	18.38	64.57	100.00	100.00	58.51	184
CARRY	2.63	17.65	61.17	100.00	100.00	52.73	19
CHEMS	6.86	33.57	100.00	100.00	100.00	68.27	118
CLTHS	18.62	29.69	63.85	100.00	100.00	64.95	56
CNSTR	1.43	31.14	61.04	100.00	100.00	59.76	237
COAL	4.12	28.68	49.07	100.00	100.00	57.60	39
ELCEQ	16.52	19.04	75.81	100.00	100.00	63.43	40
FABPR	5.21	43.52	74.80	100.00	100.00	67.04	117
FIN	0.70	6.75	49.68	100.00	100.00	52.41	113
FOOD	17.67	48.20	96.34	100.00	100.00	75.14	97
GAMES	3.74	17.56	74.15	100.00	100.00	59.88	169
HLTH	1.62	13.51	52.31	100.00	100.00	54.41	189
HSHLD	1.85	21.81	74.15	100.00	100.00	60.64	112
MEALS	1.15	25.27	72.88	100.00	100.00	62.92	186
MINES	16.57	27.20	31.99	88.52	100.00	50.41	29
OIL	5.41	22.65	54.35	100.00	100.00	56.60	390
OTHER	2.76	12.61	67.72	100.00	100.00	58.19	104
PAPER	2.03	38.06	100.00	100.00	100.00	71.26	151
RTAIL	0.73	14.78	48.46	100.00	100.00	53.31	538
SERVS	1.27	15.93	75.34	100.00	100.00	60.68	307
STEEL	0.00	8.99	55.27	100.00	100.00	54.90	139
TELCM	0.43	10.21	50.03	100.00	100.00	51.03	746
TRANS	4.40	20.62	56.22	100.00	100.00	56.18	384
TXTLS	15.99	38.62	68.05	100.00	100.00	64.46	81
UTIL	40.58	83.90	100.00	100.00	100.00	85.58	309
WHLSL	0.09	10.23	48.67	100.00	100.00	51.75	132

## Appendix B: Macroeconomics and industry-specific variables

Table B1: Macroeconomics and industry-specific variables

Panel A: Macroeconomics variables		
1	A713RX1Q020SBEA	Final Sales to Domestic Purchasers
2	AAA	Moodys Seasoned Aaa Corporate Bond Yield
3	AAAFFM	Moodys Seasoned Aaa Corporate Bond Minus Federal Funds Rate
4	ALTSALES	Light Weight Vehicle Sales: Autos & Light Trucks
5	AWHMAN	Value of Manufacturers Unfilled Orders for Durable Goods Industries
6	AWOTMAN	Average Weekly Hours of Production and Nonsupervisory Employees: Manufacturing
7	BAA	Moodys Seasoned Baa Corporate Bond Yield
8	BAA10Y	Moodys Seasoned Baa Corporate Bond Yield Relative to Yield on 10-Year Treasury
9	BAAFFM	Moodys Seasoned Baa Corporate Bond Minus Federal Funds Rate
10	BORROW	Total Borrowings of Depository Institutions from the Federal Reserve
11	BUSLOANS	Commercial and Industrial Loans, All Commercial Banks
12	CBI	Change in Private Inventories
13	CCSA	Continued Claims (Insured Unemployment)
14	CE16OV	Civilian Employment
15	CES0600000008	Average Hourly Earnings of Production and Nonsupervisory Employees: Goods-Producing
16	CES2000000008	Average Hourly Earnings of Production and Nonsupervisory Employees: Construction
17	CES3000000008	Average Hourly Earnings of Production and Nonsupervisory Employees: Manufacturing
18	CNCF	Corporate Net Cash Flow with IVA
19	CP	Corporate Profits After Tax (without IVA and CCAdj)
20	CPATAX	Corporate Profits After Tax (with IVA and CCAdj)
21	CPIAPPSL	Consumer Price Index for All Urban Consumers: Apparel
22	CPIAUCSL	Consumer Price Index for All Urban Consumers: All Items
23	CPIENGSL	Consumer Price Index for All Urban Consumers: Energy
24	CPIMEDSL	Consumer Price Index for All Urban Consumers: Medical Care
25	CPITRNSL	Consumer Price Index for All Urban Consumers: Transportation
26	CPIULFSL	Consumer Price Index for All Urban Consumers: All Items Less Food
27	CQRMTSPL	Real Manufacturing and Trade Industries SalesAdjusted
28	CSCICP03USM665S	Consumer Opinion Surveys: Confidence Indicators: Composite Indicators: OECD Indicator for the U.S.
29	CUMFN	Capacity Utilization: Manufacturing
30	CUSR0000SA0L2	Consumer Price Index for All Urban Consumers: All items less shelter
31	CUSR0000SA0L5	Consumer Price Index for All Urban Consumers: All items less medical care
32	CUSR0000SAC	Consumer Price Index for All Urban Consumers: Commodities
33	CUSR0000SAD	Consumer Price Index for All Urban Consumers: Durables
34	CUSR0000SAS	Consumer Price Index for All Urban Consumers: Services
35	DDURRD3Q086SBEA	Personal consumption expenditures: Durable goods (implicit price deflator)
36	DIVIDEND	Corporate Profits after tax with IVA and CCAdj: Net Dividends
37	DNDGRD3Q086SBEA	Personal consumption expenditures: Nondurable goods (implicit price deflator)
38	DPCERD3Q086SBEA	Personal consumption expenditures (implicit price deflator)
39	DPIC96	Real Disposable Personal Income
40	EMRATIO	Civilian Employment-Population Ratio
41	EXCAUS	Canada / U.S. Foreign Exchange Rate, Canadian Dollars to One U.S. Dollar
42	EXCSRESNS	Excess Reserves of Depository Institutions
43	EXJPUS	Japan / U.S. Foreign Exchange Rate, Japanese Yen to One U.S. Dollar
44	EXPGSC1	Real Exports of Goods & Services
45	EXSZUS	Switzerland / U.S. Foreign Exchange Rate, Swiss Francs to One U.S. Dollar
46	EXUSUK	U.S. / U.K. Foreign Exchange Rate, U.S. Dollars to One British Pound

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Table B1 – (Continued)

47	FEDFUNDS	Effective Federal Funds Rate
48	FINSLC1	Real Final Sales of Domestic Product
49	FODSP	Household Financial Obligations as a percent of Disposable Personal Income
50	GCE	Government Consumption Expenditures & Gross Investment
51	GDPC1	Real Gross Domestic Product
52	GDPDEF	Gross Domestic Product: Implicit Price Deflator
53	GFDEBTN	Federal Debt: Total Public Debt
54	GPDI	Gross Private Domestic Investment
55	GS1	1-Year Treasury Constant Maturity Rate
56	GS10	10-Year Treasury Constant Maturity Rate
57	GS5	5-Year Treasury Constant Maturity Rate
58	GSAVE	Gross Saving
59	HOUST	Housing Starts: Total: New Privately Owned Housing Units Started
60	HOUSTMW	Housing Starts in Midwest Census Region
61	HOUSTNE	Housing Starts in Northeast Census Region
62	HOUSTS	Housing Starts in South Census Region
63	HOUSTW	Housing Starts in West Census Region
64	HSN1F	New One Family Houses Sold: United States
65	ICSA	Initial Unemployment Claims
66	IMPGSC1	Real imports of goods and services
67	INDPRO	Industrial Production Index
68	INVCQRMTSPL	Real Manufacturing and Trade Inventories
69	IPB00004SQ	Industrial Production: Manufacturing (SIC)
70	IPB51000SQ	Industrial Production: Consumer Goods
71	IPB51100SQ	Industrial Production: Durable Consumer Goods
72	IPB51200SQ	Industrial Production: Nondurable Consumer Goods
73	IPB51221SQ	Industrial Production: Fuels
74	IPB53000SQ	Industrial Production: Materials
75	IPBUSEQ	Industrial Production: Business Equipment
76	IPDMAT	Industrial Production: Durable Materials
77	IPFINAL	Industrial Production: Final Products (Market Group)
78	IPGMFSQ	Industrial Production: Manufacturing (NAICS)
79	IPNMAT	Industrial Production: Nondurable Materials
80	LOANS	Loans and Leases in Bank Credit, All Commercial Banks
81	M1SL	M1 Money Stock
82	M2SL	M2 Money Stock
83	MABMM301USQ189S	M3 for the United States
84	MICH	University of Michigan Inflation Expectation
85	MORTG	30-Year Conventional Mortgage Rate
86	MPRIME	Bank Prime Loan Rate
87	NASDAQ100	NASDAQ 100 Index
88	PCDG	Personal Consumption Expenditures: Durable Goods
89	PCECC96	Real Personal Consumption Expenditures
90	PERMIT	New Private Housing Units Authorized by Building Permits
91	PERMITMW	New Private Housing Units Authorized by Building Permits (Midwest)
92	PERMITNE	New Private Housing Units Authorized by Building Permits (Northeast)
93	PERMITS	New Private Housing Units Authorized by Building Permits (South)
94	PERMITW	New Private Housing Units Authorized by Building Permits (West)
95	PINCOME	Personal Income
96	PNFI	Private Nonresidential Fixed Investment
97	PPIACO	Producer Price Index for All Commodities
98	PPIIDC	Producer Price Index by Commodity Industrial Commodities
99	PSAVE	Personal Saving

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Table B1 – (Continued)

100	PSAVERT	Personal Saving Rate
101	REALLN	Real Estate Loans, All Commercial Banks
102	RU2000PR	Russell 2000 Price Index
103	SP500 RETURN	S&P500 Return
104	T10Y3MM	10-Year Treasury Minus 3-Month Treasury Rate
105	TB3MS	3-Month Treasury Bill: Secondary Market Rate
106	TB6MS	6-Month Treasury Bill: Secondary Market Rate
107	TCU	Capacity Utilization: Total Industry
108	TDSP	Household Debt Service Payments as a Percent of Disposable Personal Income
109	TEDRATE	3-month LIBOR Rate Based on US dollars Minus 3-month Treasury Bill Rate
110	TOTALSL	Total Consumer Credit Owned and Securitized, Outstanding
111	TOTBKCR	Bank Credit of All Commercial Banks
112	TWEXBPA	Real Trade Weighted U.S. Dollar Index: Broad
113	TWEXMMTH	Trade Weighted U.S. Dollar Index: Major Currencies
114	U1RATE	Persons unemployed 15 weeks or longer, as a percent of the civilian labor force
115	UEMP15OV	Number of Civilians Unemployed for 15 Weeks and Over
116	UEMP15T26	Number of Civilians Unemployed for 15 to 26 Weeks
117	UEMP27OV	Number of Civilians Unemployed for 27 Weeks and Over
118	UEMP5TO14	Number of Civilians Unemployed for 5 to 14 Weeks
119	UEMPLT5	Number of Civilians Unemployed for Less Than 5 Weeks
120	UEMPMEAN	Average (Mean) Duration of Unemployment
121	ULCNFB	Nonfarm Business Sector: Unit Labor Cost
122	UMCSENT	University of Michigan: Consumer Sentiment
123	UNRATE	Civilian Unemployment Rate
124	US13NP TL	Nonperforming Loans (past due 90+ days plus nonaccrual) to Total Loans for U.S. Banks with average assets betw. USD 100M and 300M
125	USLLRTL	Loan Loss Reserve to Total Loans for all U.S. Banks
126	USLSTL	Net Loan Losses to Average Total Loans for all U.S. Banks
127	USROE	Return on Average Equity for all U.S. Banks
128	USSTHPI	All-Transactions House Price Index for the United States
129	VIXCLS	CBOE Volatility Index: VIX
130	WPSFD49207	Producer Price Index by Commodity for Final Demand: Finished Goods
Panel B: Industry-specific variables		
1	accrual	Accruals/Average Assets
2	adv_sale	Advertising Expenses/Sales
3	aftret_eq	After-tax Return on Average Common Equity
4	aftret_equity	After-tax Return on Total Stockholders Equity
5	aftret_invcapx	After-tax Return on Invested Capital
6	at_turn	Asset Turnover
7	bm	Book/Market
8	CAPEI	Shillers Cyclically Adjusted P/E Ratio
9	capital_ratio	Capitalization Ratio
10	cash_conversion	Cash Conversion Cycle (Days)
11	cash_debt	Cash Flow/Total Debt
12	cash_lt	Cash Balance/Total Liabilities
13	cash_ratio	Cash Ratio
14	cfm	Cash Flow Margin
15	curr_debt	Current Liabilities/Total Liabilities
16	curr_ratio	Current Ratio
17	de_ratio	Total Debt/Equity
18	debt_assets	Total Debt/Total Assets
19	debt_at	Total Debt/Total Assets

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Table B1 – (Continued)

20	debt_capital	Total Debt/Capital
21	debt_ebitda	Total Debt/EBITDA
22	debt_invcap	Long-term Debt/Invested Capital
23	divyield	Dividend Yield
24	dltt_be	Long-term Debt/Book Equity
25	dpr	Dividend Payout Ratio
26	efftax	Effective Tax Rate
27	equity_invcap	Common Equity/Invested Capital
28	evm	Enterprise Value Multiple
29	fcf_ocf	Free Cash Flow/Operating Cash Flow
30	gpm	Gross Profit Margin
31	GProf	Gross Profit/Total Assets
32	indret_ew	Equal Weighted Industry Return
33	indret_vw	Value Weighted Industry Return
34	industry_return	Past 12 Month Industry Return
35	industry_volatility	Past 12 Month Standard Deviation of the Industry Return
36	int_debt	Interest/Average Long-term Debt
37	int_totdebt	Interest/Average Total Debt
38	intcov	After-tax Interest Coverage
39	intcov_ratio	Interest Coverage Ratio
40	inv_turn	Inventory Turnover
41	inv_t_act	Inventory/Current Assets
42	lt_debt	Long-term Debt/Total Liabilities
43	lt_ppent	Total Liabilities/Total Tangible Assets
44	npm	Net Profit Margin
45	ocf_lct	Operating CF/Current Liabilities
46	opmad	Operating Profit Margin After Depreciation
47	opmbd	Operating Profit Margin Before Depreciation
48	pay_turn	Payable Turnover
49	pcf	Price/Cash flow
50	pe_exi	P/E (Diluted, Excl. EI)
51	pe_inc	P/E (Diluted, Incl. EI)
52	PEG_1yrforward	Forward P/E to 1-year Growth (PEG) ratio
53	PEG_ltgforward	Forward P/E to Long-term Growth (PEG) ratio
54	pretret_earnat	Pre-tax Return on Total Earning Assets
55	pretret_noa	Pre-tax return on Net Operating Assets
56	profit_lct	Profit Before Depreciation/Current Liabilities
57	ps	Price/Sales
58	ptb	Price/Book
59	ptpm	Pre-tax Profit Margin
60	quick_ratio	Quick Ratio (Acid Test)
61	rd_sale	Research and Development/Sales
62	rect_act	Receivables/Current Assets
63	rect_turn	Receivables Turnover
64	roa	Return on Assets
65	roce	Return on Capital Employed
66	roe	Return on Equity
67	sale_equity	Sales/Stockholders Equity
68	sale_invcap	Sales/Invested Capital
69	sale_nwc	Sales/Working Capital
70	short_debt	Short-Term Debt/Total Debt
71	staff_sale	Labor Expenses/Sales

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Table B1 – *(Continued)*

72	totdebt.invcap	Total Debt/Invested Capital
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