Risk Indicators in the NFCI and ANFCI

Financial Indicator[1]	Start Date	Transformation[2]	Frequency	Weight[3] NFCI	Weight[3] ANFCI
BofAML 3-5 yr AAA CMBS OAS spread[4]	02-Jan-1998	LV	W	3.50	2.26
ICE BofAML ABS/5-yr Treasury yield spread	01-Feb-1991	LV	M	3.39	3.37
CBOE Market Volatility Index VIX	05-Jan-1990	LV	W	3.11	2.64
BofAML Home Equity ABS/MBS yield spread	05-Jul-1991	LV	W	2.95	2.02
ICE BofAML Financial/Corporate Credit bond spread	31-Jan-1997	LV	M	2.90	2.94
2-yr Interest Rate Swap/Treasury yield spread	03-Apr-1987	LV	W	2.73	3.69
3-mo. BofAML Swaption Volatility Estimate Index	06-Dec-1996	LV	W	2.62	1.91
1-mo. BofAML Option Volatility Estimate Index	08-Apr-1988	LV	W	2.57	2.56
Counterparty Risk Index (formerly maintained by Credit Derivatives Research)[5]	13-Sep-2002	LV	W	-2.15	-0.92
On-the-run vs. Off-the-run 10-yr Treasury liquidity premium	04-Jan-1985	LV	W	2.10	1.65
1-mo. Asset-backed/Financial commercial paper spread	05-Jan-2001	LV	W	1.93	3.57
3-mo. TED spread (LIBOR-Treasury)	06-Jun-1980	LV	W	1.91	2.76
3-mo./1-wk AA Financial commercial paper spread	10-Jan-1997	LV	W	1.61	2.77
3-mo. Eurodollar spread (LIBID-Treasury)	08-Jan-1971	LV	W	1.50	2.14
Repo Market Volume (Repurchases+Reverse Repurchases of primary dealers)	07-Oct-1994	DLNQ	W	-1.50	-1.01
10-yr Interest Rate Swap/Treasury yield spread	03-Apr-1987	LV	W	1.06	1.86
3-mo. Overnight Indexed Swap (OIS)/Treasury yield spread	19-Sep-2003	LV	W	0.78	4.39
ICE BofAML Mortgage Master MBS/10-year Treasury yield spread	27-Jan-1989	LV	M	0.71	1.67
10-yr/2-yr Treasury yield spread	20-Aug-1971	LV	W	-0.70	-0.83
Fed Funds/Overnight Treasury Repo rate spread	24-May-1991	LV	W	0.60	2.04
1-yr/1-mo. LIBOR spread	10-Jan-1986	LV	W	0.52	1.01
Agency MBS Repo Delivery Failures Rate	07-Oct-1994	DLNQ	W	0.51	0.17
3-mo. Financial commercial paper/Treasury bill spread	08-Jan-1971	LV	W	0.50	1.47
Commercial Paper Outstanding	10-Nov-1995	DLN	W	-0.49	-0.08
3-mo./1-wk Treasury Repo spread	24-May-1991	LV	W	-0.37	1.47
Total Money Market Mutual Fund Assets/Total Long-term Fund Assets	28-Dec-1984	LV	M	0.30	0.15
Agency Repo Delivery Failures Rate	07-Oct-1994	DLNQ	W	0.22	-0.29
Treasury Repo Delivery Fails Rate	07-Oct-1994	DLNQ	W	0.19	0.05
2-yr/3-mo. Treasury yield spread	08-Jan-1971	LV	W	-0.16	0.45
Fed Funds/Overnight MBS Repo rate spread	24-May-1991	LV	W	-0.12	0.68
FDIC Volatile Bank Liabilities	01-Jul-1994	DLN	Q	-0.10	0.10
Advanced Foreign Economies Trade-weighted US Dollar Value Index	12-Jan-1973	DLN	W	0.08	0.23
Fed Funds/Overnight Agency Repo rate spread	24-May-1991	LV	W	-0.04	1.22
Corporate Securities Repo Delivery Failures Rate	05-Oct-2001	DLNQ	W	0.04	0.19

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[2] LV: Level, LVMA: Level Relative to Moving Average, DLV: First Difference, DLN: Log First Difference, DLNQ: 13-Week Log First Difference, . . . SA: Seasonally Adjusted Prior to Transformation.
[3] Indicators are sorted by NFCI weight. The weights have been scaled to sum to 100 in absolute value for ease of presentation.
[4] ICE/Bank of America Merill Lynch.
[5] Weekly average of 5-yr CDS spreads of top 15 major financial institutions

Credit Indicators in the NFCI and ANFCI

Financial Indicator[1]	Start Date	Transformation[2]	Frequency	Weight[3]	
				NFCI	ANFCI
BofAML High Yield/Moody's Baa corporate bond yield spread	07-Nov-1986	LV	W	3.22	0.91
30-yr Jumbo/Conforming fixed rate mortgage spread	12-Jun-1998	LV	W	3.19	2.76
FRB Senior Loan Officer Survey: Tightening Standards on Small C&I Loans	13-Jul-1990	LV	Q	3.15	1.25
FRB Senior Loan Officer Survey: Tightening Standards on RRE Loans	12-Oct-1990	LV	Q	3.08	2.35
NACM Survey of Credit Managers: Credit Manager's Index	15-Feb-2002	LV	M	-2.96	-1.08
FRB Senior Loan Officer Survey: Tightening Standards on Large C&I Loans	13-Jul-1990	LV	Q	2.92	0.99
Markit Investment Grade (IG) 5-yr Senior CDS Index[7]	01-Oct-2004	LV	W	2.92	2.26
FRB Senior Loan Officer Survey: Tightening Standards on CRE Loans	12-Oct-1990	LV	Q	2.92	1.65
FRB Senior Loan Officer Survey: Increasing spreads on Small C&I Loans	13-Jul-1990	LV	Q	2.90	1.62
FRB Senior Loan Officer Survey: Increasing spreads on Large C&I Loans	13-Jul-1990	LV	Q	2.79	1.15
1-mo. Nonfinancial commercial paper A2P2/AA credit spread	10-Jan-1997	LV	W	2.79	2.20
Moody's Baa corporate bond/10-yr Treasury yield spread	03-Jan-1986	LV	W	2.72	1.07
Markit High Yield (HY) 5-yr Senior CDS Index[7]	07-Jan-2005	LV	W	2.59	3.24
Commercial Bank 24-mo. Personal Loan/2-yr Treasury yield spread	05-May-1972	LV	Q	-0.97	-1.22
S&P US Bankcard Credit Card: Excess Rate Spread	31-Jan-1992	LVSA	M	-0.92	-1.68
20-yr Treasury/State & Local Government 20-yr GO bond spread	08-Jan-1971	LV	W	0.73	0.33
30-yr Conforming Mortgage/10-yr Treasury yield spread	02-Apr-1971	LV	W	0.70	1.11
FRB Senior Loan Officer Survey: Willingness to Lend to Consumers	15-Jan-1971	LV	Q	-0.70	-0.27
UM Household Survey: Mortgage Credit Conditions Good/Bad spread[6]	24-Feb-1978	LV	M	-0.37	-0.36
UM Household Survey: Durable Goods Credit Conditions Good/Bad spread[5]	27-Jan-1978	LV	M	-0.35	-0.25
ABA Value of Delinquent Home Equity Loans/Total Loans	26-Feb-1999	DLV	M	0.32	0.31
NFIB Survey: Credit Harder to Get	02-Nov-1973	LV	M	0.32	0.24
UM Household Survey: Auto Credit Conditions Good/Bad spread[4]	24-Feb-1978	LV	M	-0.30	-0.24
Commercial Bank 48-mo. New Car Loan/2-yr Treasury yield spread	05-May-1972	LV	Q	-0.30	-1.18
ABA Value of Delinquent Bank Card Credit Loans/Total Loans	26-Feb-1999	DLV	M	0.26	0.17
ABA Value of Delinquent Consumer Loans/Total Loans	26-Feb-1999	DLV	M	0.26	0.22
Commercial Bank Noncurrent/Total Loans	28-Jun-1985	DLN	Q	0.21	0.15
S&P US Bankcard Credit Card: 3-mo. Delinquency Rate	28-Feb-1992	DLVSA	M	0.17	0.10
S&P US Bankcard Credit Card: Receivables Outstanding	28-Feb-1992	DLNSA	M	-0.17	-0.03
ABA Value of Delinquent Noncard Revolving Credit Loans/Total Loans	26-Feb-1999	DLV	M	0.14	0.14
Bond Market Association Municipal Swap/20-yr Treasury yield spread	07-Jul-1989	LV	W	0.10	0.95
Consumer Credit Outstanding	29-Jan-1971	DLN	M	-0.03	0.03
MBA Serious Delinquencies	30-Jun-1972	DLV	Q	0.03	0.06
Money Stock: MZM	01-Mar-1974	DLN	M	-0.02	-0.05
Finance Company Owned & Managed Receivables	29-Jan-1971	DLN	M	0.00	-0.03

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[3] Indicators are sorted by NFCI weight. The weights have been scaled to sum to 100 in absolute value for ease of presentation.
[4] Series vehrn_nr_all
[5] Series durrn_nr_all
[6] Series homrn_nr_all
[7] Consecutive Markit series are spliced together to form a consistent time series

Leverage Indicators in the NFCI and ANFCI

Financial Indicator[1]	Start Date	Transformation[2]	Frequency	Weight[3] NFCI	Weight[3] ANFCI
S&P 500 Financials/S&P 500 Price Index (Relative to 2-yr MA)	06-Sep-1991	LVMA	W	-2.79	-3.87
COMEX Gold/NYMEX WTI Futures Market Depth	04-Jan-2008	LV	W	2.53	2.55
CME Eurodollar/CBOT T-Note Futures Market Depth	01-Feb-2008	LV	W	2.08	1.71
3-mo. Eurodollar, 10-yr/3-mo. swap, 2-yr and 10-yr Treasury Open Interest	23-Jun-1995	DLNQ	W	-1.10	-1.52
CMBS Issuance (Relative to 12-mo. MA)	28-Dec-1990	LVMASA	M	-0.22	-0.34
New US Corporate Debt Issuance (Relative to 12-mo. MA)	01-Jan-1988	LVMASA	M	-0.21	-0.41
Commercial Bank Total Unused C&I Loan Commitments/Total Assets	29-Jun-1990	DLN	Q	-0.19	-0.14
Net Notional Value of Credit Derivatives[5]	07-Nov-2008	DLN	W	-0.17	-0.45
Nonmortgage ABS Issuance (Relative to 12-mo. MA)	29-Dec-2000	LVMASA	M	-0.17	-0.05
S&P 500, NASDAQ, and NYSE Market Capitalization/GDP	28-Jun-1985	DLN	Q	-0.11	-0.11
Total Agency and GSE Assets/GDP	30-Dec-1983	DLN	Q	0.10	0.11
Broker-dealer Debit Balances in Margin Accounts[4]	29-Jan-1971	DLN	M	-0.09	-0.18
CME E-mini S&P Futures Market Depth	04-Jan-2008	LV	W	0.09	0.26
New State & Local Government Debt Issues (Relative to 12-mo.h MA)	27-Feb-2004	LVMASA	M	-0.07	-0.05
Commercial Bank Consumer Loans/Total Assets	02-Mar-1973	DLN	M	-0.07	-0.06
New US Corporate Equity Issuance (Relative to 12-mo. MA)	01-Jan-1988	LVMASA	M	-0.06	-0.11
Total Assets of ABS issuers/GDP	30-Dec-1983	DLN	Q	-0.06	-0.01
Commercial Bank Securities in Bank Credit/Total Assets	02-Mar-1973	DLN	M	-0.05	-0.15
Commercial Bank C&I Loans/Total Assets	02-Mar-1973	DLN	M	0.05	0.19
Wilshire 5000 Stock Price Index	29-Jan-1971	DLN	M	-0.04	-0.11
CoreLogic National House Price Index	02-Apr-1976	DLN	M	-0.04	-0.16
Household debt outstanding/PCE Durables and Residential Investment[6]	02-Apr-1971	DLN	Q	0.04	0.01
Total MBS Issuance (Relative to 12-mo. MA)	29-Dec-2000	LVMASA	M	0.02	-0.49
Nonfinancial business debt outstanding/GDP[6]	02-Apr-1971	DLN	Q	0.02	0.08
Total Assets of Funding Corporations/GDP	02-Apr-1971	DLN	Q	0.02	0.02
Total Assets of Insurance Companies/GDP	02-Apr-1971	DLN	Q	-0.02	-0.05
10-yr Constant Maturity Treasury yield	08-Jan-1971	DLV	W	-0.01	-0.11
Federal, state, and local debt outstanding/GDP	02-Apr-1971	DLN	Q	0.01	-0.00
S&P 500, S&P 500 mini, NASDAQ 100, NASDAQ mini Open Interest	24-Sep-1999	DLNQ	W	0.01	-0.29
Fed funds and Reverse Repurchase Agreements/Total Assets of Commercial Banks	30-Mar-1973	DLN	M	-0.01	-0.07
Total REIT Assets/GDP	02-Apr-1971	DLN	Q	-0.01	0.06
Commercial Bank Real Estate Loans/Total Assets	02-Mar-1973	DLN	M	-0.01	0.04
Total Assets of Broker-dealers/GDP	02-Apr-1971	DLN	Q	-0.01	-0.03
FRB Commercial Property Price Index	02-Apr-1971	DLN	Q	0.00	-0.00
Total Assets of Finance Companies/GDP	02-Apr-1971	DLN	Q	-0.00	0.01
Total Assets of Pension Funds/GDP	02-Apr-1971	DLN	Q	-0.00	-0.03

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[3] Indicators are sorted by NFCI weight. The weights have been scaled to sum to 100 in absolute value for ease of presentation.
[4] FINRA and NYSE data are spliced to form a single time series.
[5] Data provided under a license granted to the Federal Reserve Bank of Chicago by DTCC Solutions LCC ("DTCC Solutions"), an affiliate of The Depository Trust & Clearing Corporation. DTCC Solutions, its affiliates, and third parties from which they obtained data have no liability for the content of this material.
[6] Nonfinancial leverage subindex indicators.