

Appendix 1 List of input variables

Appendix 1 presents a list of the variables included in the systemic risk indicator. The indicator consists of five underlying sectoral indicators. Each sectoral indicator (column 1) consists of a set of variables that are specified in the table below. In some of the sectoral indicators we group similar variables together. All data series, including the resulting sectoral indicators and the overarching systemic risk indicator, have been standardized so that they have a mean of zero, and a standard deviation of one. All data is originally or has been transformed to be expressed at a quarterly frequency. The resulting systemic risk indicator spans the period from 1870 until today; at an annual frequency during 1870-1966, and thereafter at a quarterly frequency, although not all variables are included during this time period, as indicated in column 5. Some variables are expressed as deviations from a trend. The trend is estimated using the local level filter model (see Giordani et al., 2017). See the staff memo for all data transformations that have been applied to the variables. The (+) or (-) indicates whether **an increase in the variable** contributes to *increase (+)* risks and vulnerabilities in the financial system or to *decrease (-)* risks and vulnerabilities, ceteris paribus. For more information, see the staff memo, and for time series charts of the variables, see *Appendix 2 Chartpack*. All balance sheet items are book-valued if not otherwise specified.

SECTOR	VARIABLE	DEFINITION	NOTE	START	SOURCE	
BANKING SECTOR	Banking sector size (+)	Total assets (MFI) to GDP	Deviation from trend	1870	Hortlund (2005), Statistics Sweden, Macrobond	
	Leverage (-)	Equity to assets		1870	Hortlund (2005), Statistics Sweden, Macrobond	
	Profitability (-)	Return on average assets		1976	Statistics Sweden	
	LIQUIDITY					
	Liquid assets (-)	Liquid assets to total assets		1975	Statistics Sweden	
	Liquidity coverage (-)	Liquidity coverage ratio, all currencies	Average of four banks	2011	Banks' quarterly reports	
	NSFR proxy (-)	Liquid assets to runnable liabilities		1975	Statistics Sweden	
	Deposits (-)	Deposits to total assets		1975	Statistics Sweden	
	Loans (+)	Loans to deposits		1975	Statistics Sweden	
	INTERCONNECTEDNESS					
	Cross-holdings of covered bonds (+)	Ratio between long-term debt securities issued by housing credit institutions and the total stock of covered bonds among banks			1996	Statistics Sweden
	Exposure to properties (+)	Loans secured by property in relation to total loans			2001	Statistics Sweden
	Δ CoVaR (+)	Tail risk contagion. Derived from equity prices	Average of six Nordic banks		2001	Adrian & Brunnermeier (2012), Macrobond
	CPoD (+)	Probability of a banking crisis given that a major bank has defaulted. Derived from CDS prices	Average of five Nordic banks		2006	Lucas et al. (2017), Macrobond
	FOREIGN EXCHANGE EXPOSURE					
	FX mismatch (+)	FX liabilities in excess of FX assets, in relation to total assets			1976	Statistics Sweden
	Reliance on funding in FX (+)	Debt outstanding in FX in relation to total debt outstanding			1998	Statistics Sweden

HOUSEHOLD SECTOR	Household debt (+)	Total debt to disposable income	Deviation from trend	1950	Statistics Sweden, Swedish Historical Monetary Statistics
	Household leverage (+)	Total debt to total assets		1969	Statistics Sweden
	Debt servicing capacity (-)	Interest expenditures to disposable income		1950	Statistics Sweden
	Savings (-)	Financial savings to disposable income		1950	Statistics Sweden
	Loans, floating rate (+)	Share of loans (in total stock of household housing debt) with floating interest rate		1997	Statistics Sweden
NON-FINANCIAL CORPORATE SECTOR	Corporate debt (+)	Total debt (loans and issued securities) to GDP	Deviation from trend	1975	Statistics Sweden
	Corporate leverage (+)	Total debt to total assets		1980	Statistics Sweden
	Loans, floating rate (+)	Share of loans (in total stock of corporate debt) with floating interest rate		2002	Statistics Sweden
	Liquidity levels in different sectors (-)	Current assets (minus inventories and prepaid expenses) to current liabilities		1997	Statistics Sweden
	Solidity in different sectors (-)	Equity to total assets		1997	Statistics Sweden
	Interest coverage ratios in different sectors (-)	EBIT to total interest expenditures		1997	Statistics Sweden
PROPERTY MARKET	Commercial property prices (+)	For Stockholm Central area	Deviation from trend	1983	MSCI
	HOUSING PRICES				
	Housing prices (+)	Real prices for owner-occupied one and two-dwelling buildings	Deviation from trend	1870	Statistics Sweden, Swedish Historical Monetary Statistics
	Housing prices to income per capita (+)		Deviation from trend	1970	Statistics Sweden, the Riksbank
	Price to rent (+)	Housing prices to rents (as defined in the CPI basket)		1980	Statistics Sweden
	CONSTRUCTION ACTIVITY				
	Construction starts (+)	Construction starts for housing and commercial properties		1975	Statistics Sweden
	Housing investment (+)	Housing investment to GDP		1980	Statistics Sweden
	Building permits, residential (+)	In million square meters	4-quarter sums	1996	Statistics Sweden
	Building permits, commercial (+)	In million square meters	4-quarter sums	1996	Statistics Sweden
EXTERNAL ENVIRONMENT	Net international investment position (-)	Difference between foreign assets held by Swedish agents and Swedish assets funded by foreign agents, scaled by GDP	Deviation from trend	1980	Statistics Sweden
	Gross external debt (+)	In relation to GDP	Deviation from trend	1982	Statistics Sweden

	Public debt (+)	The debt position managed by the National Debt Office, scaled by GDP	Deviation from trend	1950	Swedish National Debt Office
	General government debt (+)	Covers the state, other (central and local) governments and the public pension system, scaled by GDP	Deviation from trend	1980	Statistics Sweden
	Global public debt (+)	General government debt to GDP ratios for 21 countries	Deviation from trend	1980	IMF
UNCERTAINTY INDICES					
	Economic policy uncertainty, Sweden (+)	Index	4-quarter moving average	1987	Baker, Bloom & Davis (2016), Armelius, Hull & Stenbacka Köhler (2017)
	World uncertainty, Sweden (+)	Index	4-quarter moving average	1996	Ahir, Bloom & Furceri (2018)
	Economic policy uncertainty, Europe (+)	Index	4-quarter moving average	1987	Baker, Bloom & Davis (2016)
	Economic policy uncertainty, global (+)	Index	4-quarter moving average	1997	Baker, Bloom & Davis (2016)
	World uncertainty, global (+)	Index	4-quarter moving average	1996	Ahir, Bloom & Furceri (2018)