Appendix A

Initial List of Features

 $\begin{tabular}{ll} Table A.1: Initial list of features selected from financial markets, macroeconomic and technical indicators. \end{tabular}$

Group	Subgroup	Ticker	Name
Interest F	Rates		
Rates	ON	EUDR1T	EUR Deposit O/N
	1M	EUR001M	Euribor 1 Month
	3M	EUR003M	Euribor 3 Month
	6M	EUR006M	Euribor 6 Month
	9M	EUR009M	Euribor 9 Month
	12M	EUR012M	Euribor 12 Month
ECB	ECB Refi Rate	EREU001W	ECB Effective Min Bid Refi
	3M Euribor Fut	ER1	Generic 1st 'ER' Future
	3M Euribor Fut	m ER2	Generic 2nd 'ER' Future
	3M Euribor Fut	ER3	Generic 3rd 'ER' Future
	3M Euribor Fut	ER4	Generic 4th 'ER' Future
	3M Euribor Fut	ER5	Generic 5th 'ER' Future
FED	Fed Funds	FDTR	Federal Funds Target Rate
	90day Euro\$ Fu	m t = ED1	Generic 1st 'ED' Future
	90day Euro\$ Fu	m t = ED2	Generic 2nd 'ED' Future
	90day Euro\$ Fu	m t = ED3	Generic 3rd 'ED' Future
	90day Euro\$ Fu	m t = ED4	Generic 4th 'ED' Future
	90day Euro\$ Fu	t ED5	Generic 5th 'ED' Future
Fixed Rat	te Indices (Bberg/	EFFAS)	
	All > 1 Yr	USGATR	Bberg/EFFAS Bond Indices
	All > 1 Yr	EUGATR	Bberg/EFFAS Bond Indices
	1-3 Yr	EUG1TR	Bberg/EFFAS Bond Indices
	3-5 Yr	EUG2TR	Bberg/EFFAS Bond Indices
	5-7 Yr	EUG3TR	Bberg/EFFAS Bond Indices
	7-10 Yr	EUG4TR	Bberg/EFFAS Bond Indices
	>10 Yr	EUG5TR	Bberg/EFFAS Bond Indices

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Table A.1 – Continued from previous page.

Group	$\mathbf{Subgroup}$	Ticker	Name
Yields			
Europe	3M	GECU3M	Euro Generic Govt 3 Month Yield
	2Y	GECU2YR	Euro Generic Govt 2 Year Yield
	5Y	GECU5YR	Euro Generic Govt 5 Year Yield
	10Y	GECU10YR	Euro Generic Govt 10 Year Yield
	30Y	GECU30YR	Euro Generic Govt 30 Year Yield
US	3M	USGG3M	US Generic Govt 3 Month Yield
	2Y	USGG2YR	US Generic Govt 2 Year Yield
	5Y	USGG5YR	US Generic Govt 5 Year Yield
	10Y	USGG10YR	US Generic Govt 10 Year Yield
	30Y	USGG30YR	US Generic Govt 30 Year Yield
Japan	3M	GJTB3MO	Japan Generic Govt 3 Month Yield
	2Y	GJGB2	Japan Generic Govt 2 Year Yiele
	5Y	GJGB5	Japan Generic Govt 5 Year Yiele
	10Y	GJGB10	Japan Generic Govt 10 Year Yield
	30Y	GJGB30	Japan Generic Govt 30 Year Yield
UK	2Y	GUKG2	UK Generic Govt 2 Year Yield
	5Y	GUKG5	UK Generic Govt 5 Year Yield
	10Y	GUKG10	UK Generic Govt 10 Year Yield
	30Y	GUKG30	UK Generic Govt 30 Year Yield
Bond Futu	ires		
Europe	2Y)	DU1	Generic 1st 'DU' Futur
	5Y	OE1	Generic 1st 'OE' Futur
	10Y	RX1	Generic 1st 'RX' Futur
	30Y	UB1	Generic 1st 'UB' Futur
Swap Rate	es		
Europe	2Y	EUSA2	EUR Swap Annual 2 Y
	5Y	EUSA5	EUR Swap Annual 5 Y
	10Y	EUSA10	EUR Swap Annual 10 Y
	30Y	EUSA30	EUR Swap Annual 30 Y
US	2Y)	USSW2	USD Swap Semi-Annual 30/360 2 Y
	5Y	USSW5	USD Swap Semi-Annual 30/360 5 Y
	10Y	US <mark>SW10</mark>	USD Swap Semi-Annual 30/360 10 Y
	30Y	USSW30	USD Swap Semi-Annual $30/360~30~\mathrm{Y}$
Equities			
		INDU	Dow Jones Industrial Averag
		SPX	S&P 500 Inde
		CCMP	NASDAQ Composite Inde
		SX5E	Euro Stoxx 5
		CWWD	C+ E CO
		SXXP	Stoxx Europe 60
		SXXP SX7E	Euro Stoxx Bank

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 ${\bf Table~A.1}-{\it Continued~from~previous~page}.$

Group	Subgroup	Ticker	Name
		TPX	TOPIX Index (Tokyo)
		NKY	NIKKEI 225
		HSI	HANG SENG Index
Currencies			
		EURUSD	EUR-USD X-Rate
		EURJPY	EUR-JPY X-Rate
		EURGBP	EUR-GBP X-Rate
		EURCHF	EUR-CHF X-Rate
Commoditie	s		
		CRY	Core Commodity CRB Index
		CL1	Generic 1st 'CL' Future
		CO1	Generic 1st 'CO' Future
		GC1	Generic 1st 'GC' Future
		SII	Generic 1st 'SI' Future
		HG1	Generic 1st 'HG' Future
		C 1	Generic 1st 'C' Future
		NG1	Generic 1st 'NG' Future
Volatility			
		MOVE	Merrill Lynch Option Volatility
		VIX	CBOE SPX Volatility Index
		V2X	VSTOXX Index
Economic In	dicators		
US		GDP CQOQ	GDP US Chained 2009 Dollars
		CPI XYOY	US CPI Urban Consumers Less F&E
		NAPMPMI	ISM Manufacturing PMI
		IP CHNG	US Industrial Production MoM
		CPTICHNG	US Capacity Utilization %
		USURTOT	U-3 US Unemployment Rate Total
		NFP TCH	US Employees on Nonfarm Payrolls
		INJCJC	US Initial Jobless Claims SA
		LEI CHNG	Conference Board US Leading Index
Europe		EUGNEMUY	Euro Area Gross Domestic Product
		CPEXEMUY	Eurostat Eurozone Core MUICP
		EUIPEMUY	Eurostat Industrial Production
		EUUCEMU	Europ. Commission Capacity Utilization
		GRZEEUEX	ZEW Euroz. Expectation of Ec. Growth
		UMRTEMU	Eurostat Unemployment Eurozone
Global Indicat	ors	OLE3US	OECD US Composite Leading Indicator
		OLE3EURA	OECD Euro Area Comp. Leading Indic.
		OLE3JAPA	OECD Japan Comp. Leading Indicator
		OLE3BRAZ	OECD Brazil Comp. Leading Indicator
		OLE3INDI	OECD India Comp. Leading Indicator

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Group	Subgroup	Ticker	Name
		OLE3CHIN	OECD China Comp. Leading Indicator
ECB Balance Sheet		EBBSTOTA	ECB Balance Sheet (BS) All Assets
		EBBSDEPF	ECB Balance Sheet Deposit Facility
		EBBSLONG	ECB BS LT Refinancing Operations
		EBBSA050	ECB BS Lending to Euro Area Credit Inst
ECB Money Supply		ECMSM1Y	ECB Money Supply M1 YoY
		ECMSM2Y	ECB Money Supply M2 YoY
		ECMSM3YY	ECB Money Supply M3 YoY
Government	Bond Spreads		
Inter-markets	2Y	calculated	US-Europe Govt 2 Year Spread
		calculated	Europe-Japan Govt 2 Year Spread
		calculated	US-Japan Govt 2 Year Spread
		calculated	Europe-UK Govt 2 Year Spread
	10Y	calculated	US-Europe Govt 10 Year Spread
		calculated	Europe-Japan Govt 10 Year Spread
		calculated	US-Japan Govt 10 Year Spread
		calculated	Europe-UK Govt 10 Year Spread
Intra-market	03M10Y	calculated	Europe Govt 3 M-10 Year Spread
		calculated	US Govt 3 M-10 Year Spread
	2Y10Y	calculated	Europe Govt 2-10 Year Spread
		calculated	US Govt 2-10 Year Spread
	10Y30Y	calculated	Europe Govt 10-30 Year Spread
		calculated	US Govt 10-30 Year Spread
Technical In	dicators		
Europe	Moving Average	calculated	Moving Average 5 days
2Y, 5Y,		calculated	Moving Average 10 days
10Y, 30Y		calculated	Moving Average 15 days
		calculated	Moving Average 20 days
		calculated	Moving Average 50 days
		calculated	Moving Average 200 day
		calculated	MA 10 days - MA 4 day
		calculated	$\rm MA~24~days$ - $\rm MA~14~day$
		calculated	MA 48 days - MA 35 day