

IBM Algo Managed Data Analytics Service
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Data Coverage Guide



Note

Before using this information and the product it supports, read the information in “Notices” on page 32.

Product information

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Chapter 1. Introduction

Financial decision-making begins with the integration and management of the data that is used for risk and return analysis.

Volatility in the financial markets and regulatory scrutiny has forced organizations to take a closer look at the data driving the financial models, because without the confidence in this underlying data, there can be limited confidence in the analytics as a basis for making informed business decisions.

The quality of the risk analytics, depends on relevant, reliable, and consistent market and reference data. Therefore, it is important that the input market data, risk factors, Terms and Conditions, as well as scenarios are validated and compatible with risk systems.

Managing market data and reference data, which are required as inputs into risk models, can be a time-consuming activity, demanding an investment in people, processes and systems. This, in turn, increases the total cost of ownership and diverts resources away from more value-added activities such as understanding and applying the analytics to make informed risk decisions.

IBM Algo MDAS provides access to specialist, outsourced data management services dedicated to helping clients save both time and money by managing the input data required for running their advanced IBM risk systems.

Chapter 2. Market Data Classes

Market risk factors are available for a large number of international markets and data types. The IBM Algo MDAS has adopted the following taxonomy to describe and categorize the various data elements :

Data Type	Description	Naming Convention	Asset Class
Interbank	Interbank interest rates	CX_IRC_IBK_{Country}_{Currency}	Interest Rates
Tenor Basis Swap	Interest rates used for tenor swaps	CX_IRC_REF_{Tenor}_{Country}_{Currency}	Interest Rates
Cross currency Swap	Interest rates used for cross currency swaps	CX_IRC_CCY_{Currency1}_{Currency2}_{Tenor}	Interest Rates
Treasury	Sovereign/Treasury interest rates	CX_IRC_TRS_{Country}_{Currency}	Interest Rates
Provincial	Provincial interest rates	CX_IRC_PROV_{Country Code}_{Province Name}_{Currency Code}	Interest Rates
Inflation	Inflation expectations projections	CX_INFL_{Reuters ID}	Inflation Rates
Credit Spread (Bond)	Standard rating/sector bond-based credit spreads	CX_CSC_RSD_{Sector}_{Rating}	Credit Spread
Credit Spread (CDS)	Entity specific CDS par credit spreads	CX_CDSPAR_{Entity ID}	Credit Spread
Foreign Exchange	Foreign exchange rates	CX_FXC_{Currency}	Foreign Exchange
Index_Curve	Market Indices (MSCI, Dow Jones) and Equity Time-Series Pricing	Index_Curve_{Reuters ID} / Index_Curve_CX_{ISIN}_{Exchange Code}	Varied
Commodity	Commodity forward curves	CX_CMF_{Ticker}_{Exchange}, CX_EFU_{Ticker}_{Exchange}	Commodity
Cap-Floor Volatility	Caps-Floors Implied Volatility (Strike vs Term)	CX_CFV_STK_{Currency}	Volatility Surface
Swaption Volatility	Swaptions Implied Volatility (Option Term vs Underlying Term)	CX_SWV_ATM_{Currency}	Volatility Surface
FX Volatility	FX Implied Volatility (Time)	CX_FXV_ATM_{Currency 1}_{Currency 2}	Volatility Surface

Equity Volatility (Historical)	Index/Equity Volatility (Historical)	CX_EQV_{Reuters ID}	Volatility Surface
Equity Volatility (Implied)	Index/Equity Volatility (Implied)	CX_IMPEQV_{Reuters RICRoot ID}ATMIV_{Reuters Exchange Code}	Volatility Surface
Commodity Volatility	Commodity Implied Volatility	CX_COSVOL_{Reuters RIC}	Volatility Surface

The following sections provide information around the source, timing and methodology for the various Market Data Classes included as part of the IBM Algo MDAS.

2.1 Interbank Curves (IRC_IBK)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of zero rates from the interbank market.
 - **Standard Terms:** 1m, 2m, 3m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 12y, 15y, 20y, 25y, 30y
 - **Rate convention:** Annual actual/365.

Table 1: Swap Zero Curve Coverage

AMERICAS			
Currency	Name	History	Snap Time (GMT)
BRL	Brazil	2011	23:30:00
CAD	Canada	2007	21:00:00
MXN	Mexico	2007	21:15:00
USD	United States	2007	21:15:00

ASIA			
Currency	Name	History	Snap Time (GMT)
AUD	Australia	2007	6:45:00
CNH	China offshore	2011	11:00:00
CNY	China onshore	2007	11:00:00
HKD	Hong Kong	2007	8:30:00
INR	India	2007	11:30:00
JPY	Japan	2007	11:30:00
KRW	Korea	2007	6:15:00
MYR	Malaysia	2007	9:30:00
NZD	New Zealand	2007	4:45:00
PHP	Philippines	2007	9:00:00
SGD	Singapore	2007	9:15:00
THB	Thailand	2007	10:15:00
TWD	Taiwan	2007	10:00:00

EUROPE			
Currency	Name	History	Snap Time (GMT)
BGN	Bulgaria	2011	13:00:00
CHF	Switzerland	2007	18:15:00
CZK	Czech Republic	2007	14:15:00
DKK	Denmark	2007	16:20:00
EUR	Eurozone	2007	17:15:00
GBP	United Kingdom	2007	17:00:00
HUF	Hungary	2007	14:15:00
ISK	Iceland	2008	16:45:00
NOK	Norway	2007	14:30:00
PLN	Poland	2007	15:45:00
RUB	Russia	2007	15:15:00
SEK	Sweden	2007	16:20:00
TRY	Turkey	2007	15:25:00

MIDDLE EAST & AFRICA			
Currency	Name	History	Snap Time (GMT)
AED	UAE	2009	20:00:00
BHD	Bahrain	2012	21:00:00
ILS	Israel	2008	16:30:00
KES	Kenya	2010	10:30:00
KWD	Kuwait	2011	10:30:00
SAR	Saudi Arabia	2007	20:00:00
ZAR	South Africa	2007	15:45:00

2.2 Tenor Basis Swap Curves

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of zero curves for pricing swaps with tenor basis adjustment.
 - **Standard Terms:** 1m, 2m, 3m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 11y, 12y, 13y, 14y, 15y, 20y, 25y, 30y
 - **Rate convention:** Annual actual/365.

Table 2: Tenor Curve Coverage

AMERICAS			
Currency	Tenor	History	Snap Time (GMT)
CAD	1M	2009	21:00:00
CAD	3M	2010	21:00:00
USD	1M	2008	21:15:00
USD	3M	2007	21:15:00
USD	6M	2009	21:15:00
USD	12M	2015	21:15:00

ASIA			
Currency	Tenor	History	Snap Time (GMT)
AUD	1M	2009	7:15:00
AUD	3M	2009	7:15:00
AUD	6M	2009	7:15:00
CNY	3M	2012	11:00:00
HKD	1M	2011	18:00:00
HKD	3M	2010	11:15:00
HKD	6M	2011	18:00:00
JPY	1M	2009	11:30:00
JPY	3M	2009	11:30:00
JPY	6M	2009	11:30:00
SGD	1M	2011	9:15:00
SGD	6M	2010	9:15:00
THB	1M	2011	18:00:00
THB	3M	2015	10:15:00

EUROPE			
Currency	Tenor	History	Snap Time (GMT)
CHF	1M	2009	18:15:00
CHF	3M	2009	18:15:00
CHF	6M	2009	18:15:00
CZK	3M	2010	14:15:00
CZK	6M	2009	14:15:00
DKK	3M	2010	16:20:00
DKK	6M	2010	16:20:00
EUR	1M	2009	17:15:00
EUR	3M	2007	17:15:00
EUR	6M	2007	17:15:00
EUR	12M	2009	17:15:00
GBP	1M	2009	17:00:00
GBP	3M	2007	17:00:00
GBP	6M	2007	17:00:00
HUF	3M	2010	14:15:00
HUF	6M	2009	14:15:00
NOK	3M	2010	14:30:00
NOK	6M	2010	14:30:00
PLN	3M	2009	15:45:00
PLN	6M	2009	15:45:00
SEK	3M	2010	16:20:00
SEK	6M	2010	16:20:00

THB	6M	2007	10:15:00
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Table 3: OIS Curve Coverage

Currency	Name	History	Snap Time (GMT)
AUD	Australia	2010	7:15:00
CAD	Canada	2010	20:15:00
CHF	Switzerland	2010	14:45:00
DKK	Denmark	2011	14:00:00
EUR	Eurozone	2007	15:45:00
GBP	United Kingdom	2010	16:15:00
INR	India	2010	14:00:00
JPY	Japan	2010	2:45:00
NZD	New Zealand	2010	1:15:00
PLN	Poland	2011	15:45:00
SEK	Sweden	2010	14:45:00
SGD	Singapore	2015	9:15:00
USD	United States	2007	17:30:00

2.3 Cross-currency Swap Curves

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of zero curves for pricing cross-currency swaps.
 - **Standard Terms:** 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 12y, 15y, 20y, 25y, 30y
 - **Rate convention:** Annual actual/365.

Table 4: Cross-currency Curve Coverage

Currency Pairs	Name	History	Snap Time (GMT)
AUDUSD	Australia	2011	TBD
CHFUSD	Switzerland	2009	TBD
DKKUSD	Denmark	2009	TBD
EURUSD	Eurozone	2009	TBD
GBPUSD	United Kingdom	2009	TBD
JPYUSD	Japan	2009	TBD
MYRUSD	Malaysia	2009	TBD
NOKUSD	Norway	2011	TBD
RUBUSD	Russia	2009	TBD
SEKUSD	Swedish	2011	TBD
ZARUSD	South Africa	2012	TBD

2.4 Treasury Curves (IRC_TRS)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of zero rates on available terms.
 - **Standard Terms:** 1m, 3m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 11y, 12y, 13y, 14y, 15y, 16y, 17y, 18y, 19y, 20y, 25y, 30y
 - **Rate convention:** Continuous actual/365.

Table 5: Sovereign Zero Curve Coverage

AMERICAS				
Country	Country Code	Currency	History	Snap Time (GMT)
United States	US	USD	2007	21:15:00
Canada	CA	CAD	2007	21:00:00
Brazil	BR	BRL	2007	23:30:00
Brazil	BR	USD	2011	23:30:00
Chile	CL	CLP	2011	22:00:00
Colombia	CO	COP	2008	22:00:00
Colombia	CO	USD	2011	20:30:00
Colombia	CO	COU	2017	N.A.
Mexico	MX	MXN	2007	21:15:00
Mexico	MX	MXV	2010	21:15:00
Mexico	MX	USD	2011	20:30:00
Panama	PA	USD	2011	20:30:00
Peru	PE	PEN	2009	23:45:00
Peru	PE	USD	2011	20:30:00
Venezuela	VE	USD	2011	20:30:00

ASIA				
Country	Country Code	Currency	History	Snap Time (GMT)
Australia	AU	AUD	2007	6:45:00
China	CN	CNY	2007	11:00:00
Hong Kong	HK	HKD	2011	11:15:00
India	IN	INR	2008	11:30:00
Indonesia	ID	IDR	2007	10:15:00

Japan	JP	JPY	2007	11:30:00
Korea	KR	KRW	2011	6:15:00
Malaysia	MY	MYR	2009	9:30:00
New Zealand	NZ	NZD	2007	4:45:00
Philippines	PH	PHP	2010	9:00:00
Singapore	SG	SGD	2011	9:15:00
Thailand	TH	THB	2007	10:15:00

EUROPE				
Country	Country Code	Currency	History	Snap Time (GMT)
Austria	AT	EUR	2007	15:30:00
Belgium	BE	EUR	2007	15:30:00
Croatia	HR	HRK	2011	18:10:00
Czech Republic	CZ	CZK	2007	14:15:00
Denmark	DK	DKK	2007	16:20:00
Finland	FI	EUR	2007	16:40:00
France	FR	EUR	2007	15:30:00
Germany	DE	EUR	2007	20:00:00
Greece	GR	EUR	2007	16:00:00
Hungary	HU	HUF	2010	14:15:00
Iceland	IS	ISK	2007	16:45:00
Ireland	IE	EUR	2007	17:30:00
Italy	IT	EUR	2007	15:30:00
Latvia	LV	EUR	2011	15:15:00
Malta	MT	EUR	2010	13:45:00
Netherlands	NL	EUR	2007	15:30:00
Norway	NO	NOK	2007	15:45:00
Poland	PL	PLN	2007	15:45:00
Portugal	PT	EUR	2007	16:30:00
Romania	RO	RON	2007	14:00:00
Russia	RU	RUB	2007	15:15:00
Serbia	RS	RSD	2011	15:15:00
Slovakia	SK	EUR	2007	16:30:00
Slovenia	SI	EUR	2011	12:30:00
Spain	ES	EUR	2007	17:00:00
Sweden	SE	SEK	2007	16:20:00
Switzerland	CH	CHF	2007	18:15:00
Turkey	TR	TRY	2007	15:25:00
United Kingdom	GB	GBP	2007	17:00:00

MIDDLE EAST & AFRICA				
Country	Country Code	Currency	History	Snap Time (GMT)
Botswana	BW	BWP	2010	17:00:00
Bahrain	BH	BHD	2014	21:00:00
Ghana	GH	GHS	2010	16:45:00
Israel	IL	ILS	2007	13:45:00
South Africa	ZA	ZAR	2011	15:45:00
Zambia	ZM	ZMW	2014	15:50:00

2.5 Provincial Curves (PROV)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of zero rates on available terms.
 - **Standard Terms:** 1m, 3m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 11y, 12y, 13y, 14y, 15y, 16y, 17y, 18y, 19y, 20y, 25y, 30y
 - **Rate convention:** Continuous actual/365.

Table 6: Provincial Zero Curve Coverage

AMERICAS				
Country	Province	Currency	History	Snap Time (GMT)
Canada	Alberta	CAD	2007	10:30:00
Canada	British Columbia	CAD	2007	10:30:00
Canada	Manitoba	CAD	2007	10:30:00
Canada	Ontario	CAD	2007	10:30:00
Canada	Quebec	CAD	2007	10:30:00
Canada	New Brunswick	CAD	2007	10:30:00
Canada	Nova Scotia	CAD	2007	10:30:00
Canada	Newfoundland	CAD	2007	10:30:00

2.6 Inflation Expectation Curves (INFL)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. Snap time in GMT for each curve is listed below.
- **Data:** Term structures of inflation rates on available grid of terms.
 - **Standard Terms:** 1m, 2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m, 10m, 11m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 11y, 12y, 13y, 14y, 15y, 16y, 17y, 18y, 19y, 20y, 21y, 22y, 23y, 24y, 25y, 26y, 27y, 28y, 29y
 - **Rate convention:** Annual actual/365.

Table 7: Inflation Curve Coverage

Country/Region	Description	History	Snap Time (GMT)
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United States	United States CPI Inflation Zero Curve	2012	21:15:00
United Kingdom	UK Pound Sterling Inflation Linked Zero Curve	2013	21:15:00
Eurozone	Euro HICP Inflation Zero Curve	2012	21:15:00
France	French Franc CPI Inflation Zero Curve	TBD	21:15:00
Germany	Deutsche Mark CPI Inflation Zero Curve	TBD	21:15:00
Italy	Italian Lira CPI Inflation Zero Curve	TBD	21:15:00
Spain	Spanish Peseta CPI Inflation Zero Curve	TBD	21:15:00
Japan	Japanese Yen CPI Inflation Zero Curve	TBD	21:15:00
Australia	Australian Dollar CPI Inflation Zero Curve	TBD	21:15:00
Brazil	Brazil CPI Inflation Zero Curve	TBD	1:30:00

2.7 Credit Spread Curves – Rating/Sector Bond Spreads (CSC_RSD)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** 21:30 GMT.
 - **Data:** A generic spread is defined for 5 major economic sectors and 7 ratings categories using source data from USD denominated debt from United States issuers
 - **Standard Terms:** 1y, 2y, 3y, 5y, 7y, 10y, 30y
 - **Rate convention:** Annual actual/365.
 - **Rating Structure:** AAA, AA, A, BBB, BB, B, CCC
 - **Industry-Sector Classification**

Table 8: Credit Spread Curve sectors

Sector	Description	History
BNK	Bank	2008
FIN	Financials	2008
IND	Industrials	2008
TRA	Transportation	2008
UTI	Utilities	2008

History of the credit spread curves are available from Reuters from current date back to 2016/05/02. The history is then backfilled to 2008 with proxy curves.

The backfilling process will be applying daily returns of proxy curves onto corresponding Credit Spread Curves. Using the example data below, if the credit spread needs to be backfilled to May 1st, the daily return of the proxy is calculated, $25/20 = 1.25$. Then, the May 2nd credit spread is divided by 1.25 to get May 1st credit spread, $10/1.25 = 8$.

	TRA AAA-1YR Proxy	TRA AAA-1YR Credit Spread
May 1st	20	
May 2nd	25	10

Proxy curves are chosen such that the curves have positive correlation with the credit spread curves. As a result, USD Sector Domestic Curves are used to backfill the history. For each sector, there are two proxy curves: one for investment grade and the other one for speculative grade. To keep it consistent across five

sectors, investment grade proxy curve is chosen to be A and speculative grade proxy curve is chosen to be BB with the following exceptions.

- FIN investment grade is based on BNK's investment grade proxy due to the lack of FIN investment grade proxy
- TRA speculative grade is based on IND's speculative grade proxy due to the lack of TRA speculative grade proxy
- BNK speculative grade uses BBB proxy due to the low correlation with BB proxy
- UTI speculative grade uses A proxy due to the low correlation with BB proxy

2.8 Credit Spread Curves – Single-Name CDS and CDS Index

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets.
- **Raw Data:** CDS par rates
- **Derived Data:** Hazard curve is bootstrapped from Constant Term Default Swaps with CDS par rates.
 - **Standard Terms – Pricing (if available):** 6m, 1y, 2y, 3y, 4y, 5y, 7y, 10y, 20y, 30y
 - **Standard Term – Historical:** 5y
 - **Rate convention:** Continuous actual/365.

The table below lists some major entities from each geographic area. The sectors covered include Banks, Consumer Goods, Energy Company, Gas Distribution, Manufacturing, Financial, Electric Power, Service Company, Telephone and Transportation.

Table 9: Single-name CDS Major Issuers

USA	AMERICAS Ex-USA	EMEA	JAPAN	ASIA Ex-JAPAN
Name	Name	Name	Name	Name
Apple	America Movil	Adidas	Ajinomoto	Acentre Group
AT & T Corp	Banco Chile	Air France	Bank of Kyoto	AGI
Bank of American	Bancolumbia	Airbus	Bank of TM UFJ	ANZ Bank
Boeing	Barrick Gold	Barclays Bank	Brother Ind	Bank East Asia
Capital One Bank	Bell Telephone	BMW	Canon	Bank of China
Cisco System	BMO	British Airways	Central Jpn Rail	China Mer Port
Citigroup	Brookfield Asset	Caixa Geral Dep	Chubu ELEC	China Mobile
Coca-Cola	Bunge	Deutsche Bahn	Citigroup JPHLDG	China Oversea
Delta Air	Canadian Pfc Rly	DZ Bank	Cosmo Oil	Citic Group
Duke Energy	Carnivl	ENBW Energie	Hokkaido ELECPWR	CLP Power HK
Ford Moto	CDN Natural RSC	Heineken	Honda	CNOOC
GE	CIBC	KBC Bank	Japan RE	Comm Bank AU
GM	Cosco Ship Port	Lloyds Bank	Kikkoman	Fonterra
Goldman Sachs	Enbrige Inc	Michelin	Meiji	Globe Telecom
IBM	Enel Americas	Munich Re Group	MHBK	Hang Seng Bank
Johnson & Johnson	Four Seasons HLD	National Grid	Mitsubishi	Hyundai
JP Morgan Chase	Glencore Canada	Nestle	Nankai Elec RWY	ICBC Asia
Kinder Morgan	Husky Energy	Nokia	Nikon	ICICI Bank
Kraft Heinz Co	Magna Intl	Orange	Nomura	KCR
Merrill Lyn	MFRS Life Ins	Philips	Shiseido	KEPCO

Morgan Stanley	RBC	Rallye	Showa Shell	KT&G
Nordstrom	Renaissancere	Repsol	SMBC	LG ELEC
NRG Energy	Suncor Energy	Shell Petrol	Softbank	MTR Corp
Oracle	Televisa	Siemens	Sony	Origin Energy
PNC FINL SVC	Telmex	Societe Generale		Qantas
SimithField Foods	TransAlta	Swiss Life		Reliance
SouthWest	Transcanada	TDC		Samsung
Sunoco	Vale SA	Tesco		Singapore Power
T-Mobile USA	Weather Int	Teva Pharm Ind		Singapore Tele
United Airline		Transneet		SK Innovation
Verizon		United Utilits		Telstra
Walmart		Vattenfall		TNB
Walt Disney		Vodafone Group		Woolworths
Wells Fargo		Volkswagen		
Weston Union		Zurich VG		

Table 10: Major CDS Indices

Name	
CDX EmergingMarkets	iTraxx CEEMEA
CDX NA Inv Grade High Vol	iTraxx Europe Sub Financials
CDX North America High Yield	iTraxx Senior Financials
CDX North America Inv Grade	
iTraxx Asia ex Japan	
iTraxx Australia	
iTraxx Europe	
iTraxx Europe HiVol	
iTraxx EuropeCrossover	
iTraxx_Japan	

2.9 Foreign Exchange (FXC)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** 21:15 GMT
- **Data:** Conversion to number of USD per 1 foreign currency.

Table 11: FX Rates Coverage

AMERICAS		
Currency	Name	History
ARS	Argentina	2007
AWG	Aruba	2007
BBD	Barbados	2007
BMD	Bermuda	2007
BOB	Bolivia	2007
BRL	Brazil	2007
BSD	Bahamas	2007
BZD	Belize	2007
CAD	Canada	2007
CLF	Chile	2007
CLP	Chile	2007
COP	Colombia	2007
COU	Colombia	2008
CUC	Cuba	2007
CUP	Cuba	2007
DOP	Dominican	2007
ECS	Ecuador	2007
FKP	Falkland Islands	2007
GTQ	Guatemala	2007
GYD	Guyana	2007
HNL	Honduras	2007
HTG	Haiti	2007
JMD	Jamaica	2007
KYD	Cayman Islands	2007
MXN	Mexico	2007
MXV	Mexico	2007
NIO	Nicaragua	2007
PAB	Panama	2007
PEN	Peru	2007
PYG	Paraguay	2007

EUROPE		
Currency	Name	History
ALL	Albania	2007
ANG	Netherlands	2007
BAM	Bosnia and Herzegovina	2007
BGN	Bulgaria	2007
CHF	Switzerland	2007
CZK	Czech Republic	2007
DKK	Denmark	2007
EUR	Eurozone	2007
GBP	United Kingdom	2007
GIP	Gibraltar	2007
HRK	Croatia	2007
HUF	Hungary	2007
ISK	Iceland	2007
MDL	Moldova	2007
MKD	Macedonia	2007
NOK	Norway	2007
PLN	Poland	2007
RON	Romania	2007
RSD	Serbia	2007
RUB	Russia	2007
SEK	Sweden	2007
TRY	Turkey	2007
UAH	Ukraine	2007

OTHER		
Currency	Name	History
XAG	Silver	2007

SRD	Suriname	2007
TTD	Trinidad and Tobago	2007
UYU	Uruguay	2007
VEF	Venezuela	2007
XCD	OECS	2007
XPF	CFP	2007

XAU	Gold	2007
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MIDDLE EAST & AFRICA		
Currency	Name	History
AED	UAE	2007
AOA	Angola	2007
BHD	Bahrain	2007
BIF	Burundi	2007
BWP	Botswana	2007
CDF	Congo	2007
CVE	Cape Verde	2007
DJF	Djibouti	2007
DZD	Algeria	2007
EGP	Egypt	2007
ERN	Eritrea	2007
ETB	Ethiopia	2007
GHS	Ghana	2007
GMD	Gambia	2007
GNF	Guinea	2007
ILS	Israel	2007
KES	Kenya	2007
KMF	Comoros	2007
KWD	Kuwait	2007
LRD	Liberia	2007
LSL	Lesotho	2007
LYD	Libya	2007
MAD	Morocco	2007
MGA	Madagascar	2007
MRO	Mauritania	2007
MUR	Mauritius	2007
MWK	Malawi	2007
MZN	Mozambique	2007
NAD	Namibia	2007
NGN	Nigeria	2007
QAR	Qatar	2007
RWF	Rwanda	2007
SAR	Saudi Arabia	2007

ASIA & OCEANIA		
Currency	Name	History
AFN	Afghanistan	2007
AMD	Armenia	2007
AUD	Australia	2007
AZN	Azerbaijan	2007
BDT	Bangladesh	2007
BND	Brunei Darussalam	2007
BTN	Bhutan	2007
CNH	China offshore	2010
CNY	China onshore	2007
FJD	Fiji	2007
GEL	Georgia	2007
HKD	Hong Kong	2007
IDR	Indonesia	2007
INR	India	2007
IQD	Iraq	2007
IRR	Iran	2007
JOD	Jordan	2007
JPY	Japan	2007
KGS	Kyrgyzstan	2007
KHR	Cambodia	2007
KPW	Korea	2007
KRW	Korea	2007
KZT	Kazakhstan	2007
LAK	Laos	2007
LBP	Lebanon	2007
LKR	Sri Lanka	2007
MMK	Myanmar	2007
MNT	Mongolia	2007
MOP	Macau	2007
MVR	Maldives	2007
MYR	Malaysia	2007
NPR	Nepal	2007
NZD	New Zealand	2007

SCR	Seychelles	2007
SDG	Sudan	2007
SHP	Saint Helena	2007
SLL	Sierra Leone	2007
SOS	Somalia	2007
STD	São Tomé and Príncipe	2007
SZL	Swaziland	2007
TND	Tunisia	2007
TZS	Tanzania	2007
UGX	Uganda	2007
XAF	CFA Franc	2007
XOF	CFA Franc	2007
ZAR	South Africa	2007
ZMW	Zambia	2007
ZWL	Zimbabwe	2007

OMR	Oman	2007
PGK	Papua New Guinea	2007
PHP	Philippines	2007
PKR	Pakistan	2007
SBD	Solomon Islands	2007
SGD	Singapore	2007
SYR	Syria	2007
THB	Thailand	2007
TJS	Tajikistan	2007
TOP	Tonga	2007
TWD	Taiwan	2007
UZS	Uzbekistan	2007
VND	Viet Nam	2007
VUV	Vanuatu	2007
WST	Samoa	2007
YER	Yemen	2007

2.10 Market Indices

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets. The delivery time in GMT of some major indices are listed in Table 12.
- **Data:** All major index families such as MSCI, S&P Dow Jones, FTSE, Nasdaq, Russell.
- **Coverage:** 130,000+ indices covered with history back to 2007.

Table 12: G7 Major Indices

Country	Major Indices	Snap Time (GMT)
Canada	S&P/TSX Comp, S&P/TSX 60, S&P/TSX Venture	22:50:00
France	CAC 40, SBF 120, CAC Mid60, CAC Small	18:15:00
Germany	DAX 30, SDAX Share, DAX Mid Cap	18:30:00
Italy	FTSE MIB, FTSE IT AllShare, FTSE IT Mid Cap, FTSE IT Small Cap	19:15:00
Japan	Nikkei 225, TOPIX Core 30, TOPIX Large 70, TOPIX Mid 400	8:15:00
United Kingdom	FTSE 100, FTSE 250, FTSE 350, FTSE All Share	18:05:00
United States	S&P 500, NASDAQ Comp	21:45:00
	DJ Industrial, Dow Jones Composite	22:05:00

Table 13: Market Indices Coverage (excluding G7)

AMERICAS	ASIA	EUROPE
Country	Country	Country
Argentina	Australia	Austria
Brazil	China	Belgium
Chile	Hong Kong	Bulgaria
Colombia	India	Croatia
Mexico	Indonesia	Cyprus
Peru	Kazakhstan	Czech Republic
Venezuela	Korea	Denmark
	Kuwait	Estonia
	Malaysia	Finland
	New Zealand	Greece
	Pakistan	Hungary
	Philippines	Iceland
	Singapore	Latvia
	Sri Lanka	Luxembourg

MIDDLE EAST & AFRICA
Country
Bahrain
Egypt
Israel

Morocco
Nigeria
Qatar
Saudi Arabia
South Africa
UAE

Taiwan
Thailand
Vietnam

Malta
Netherlands
Norway
Poland
Portugal
Romania
Russia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
Ukraine

2.11 Commodity Forward Curve (CMF/EFU)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets.
- **Data:** Standard grid of nodes of varying length according to market availability which is underlying specific.
 - **CMF:** Commodity Future
 - **EFU:** Energy Future
- **Coverage:** key agricultural, energy and metals markets. History is only available for the first promptness and it goes back to 2007.

Table 14: Major Commodity Exchanges

AFRICA		
Exchange	Location	Products
African Mercantile Exchange (AfMX)	Nairobi, Kenya	Agricultural, Energy
South African Futures Exchange (SFX)	Sandton, South Africa	Agricultural

AMERICAS		
Exchange	Location	Products
Chicago Board of Trade (CBOT)	Chicago, United States	Grains, Metals
Chicago Climate Futures Exchange (CCFE)	Chicago, United States	Emissions
Chicago Mercantile Exchange (CME)	Chicago, United States	Agricultural, Energy
Intercontinental Exchange (ICE)	Atlanta, United States	Energy, Emissions, Agricultural
Kansas City Board of Trade (KBT)	Kansas City, United States	Agricultural
Mercado a Término de Buenos Aires (BCC)	Buenos Aires, Argentina	Agricultural
Mercado a Término de Rosario (RFX)	Rosario, Argentina	Agricultural
Minneapolis Grain Exchange (MGE)	Minneapolis, United States	Agricultural
New York Mercantile Exchange (NYMEX)	New York, United States	Energy, Precious Metals, Industrial Metals
U.S. Futures Exchange (EUS)	Chicago, United States	Energy

ASIA & OCEANIA		
Exchange	Location	Products
Agricultural Futures Exchange of Thailand (AFT)	Bangkok, Thailand	Agricultural
Australian Securities Exchange (ASX)	Sydney, Australia	Agricultural, Energy

Dalian Commodity Exchange (DLC)	Dalian, China	Agricultural, Energy
Dubai Gold & Commodities Exchange (DGX)	Dubai	Precious Metals
Dubai Mercantile Exchange (DMX)	Dubai	Energy
Hong Kong Futures Exchange (HFE)	Hong Kong	Precious Metals
Indonesia Commodity and Derivatives Exchange (ICD)	Indonesia	Agricultural, Metals
Jakarta Futures Exchange (JFX)	Jakarta, Indonesia	Cocoa, Coffee, Precious Metals, Coal, Tea, and Rubber
Multi Commodity Exchange (MCI)	India	Precious Metals, Industrial Metals, Energy, Agricultural
National Commodity and Derivatives Exchange (NCX)	India	Precious Metals, Industrial Metals, Energy, Agricultural
Shanghai Futures Exchange (SHF)	Shanghai, China	Industrial metals, Gold, Rubber, Industrial Metals
Shanghai Gold Exchange (SGE)	Shanghai, China	Precious Metals
Singapore Commodity Exchange (SIC)	Singapore	Agricultural, Rubber
Singapore Mercantile Exchange (SMX)	Singapore	Precious Metals, Industrial Metals, Agricultural, Energy
Tokyo Commodity Exchange (TCE)	Tokyo, Japan	Energy, Precious Metals, Industrial Metals, Agricultural
Tokyo Grain Exchange (TGE)	Tokyo, Japan	Agricultural
Zhengzhou Commodity Exchange (ZHC)	Zhengzhou, China	Agricultural

EUROPE		
Exchange	Location	Products
Eurex (EUX)	Frankfurt, Germany	Agricultural, Metals
European Energy Exchange (EEX)	Leipzig, Germany	Power, Natural Gas, Emissions, Coal
London Commodity Exchange (LCE)	London, UK	Agricultural
London Metal Exchange (LME)	London, UK	Industrial Metals, Precious Metals
Moscow Energy Exchange (ARENA)	Moscow, Russia	Energy
Nord Pool (NPX)	Oslo, Norway	Power, Energy
NYSE Liffe (NYL)	Europe	Agricultural
Power Exchange Central Europe (PXE)	Prague, Czech Republic	Power
Saint-Petersburg International Mercantile Exchange (SPCEX)	Moscow, Russia	Crude oil, Natural gas, Metals, Agricultural, Timber

2.12 Interest Rate Caps/Floors Implied Volatility (CFV_STK)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Tullett Prebon
- **Time stamp:** 18:00 GMT
- **Data:** Implied normal volatility contributions for grid of strikes and terms.
 - **Strikes:** 0.005, 0.01, 0.015, 0.02, 0.025, 0.03, 0.035, 0.04, 0.045, 0.05, 0.055, 0.06, 0.065, 0.07, 0.075, 0.08, 0.085, 0.09, 0.095, 0.1.
 - **Terms:** 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 12y, 15y, 20y.

Table 15: CapFloor Volatility Coverage

Currency	Name	History
AED	UAE	TBD
CHF	Switzerland	TBD
CZK	Czech Republic	TBD
DKK	Denmark	TBD
EUR	Eurozone	TBD
GBP	United Kingdom	TBD
JPY	Japan	TBD
NOK	Norway	TBD
SAR	Saudi Arabia	TBD
SEK	Sweden	TBD
USD	United States	TBD

2.13 Interest Rate Swaptions Implied Volatility (SWV_ATM)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Tullett Prebon
- **Time stamp:** 18:00 GMT
- **Data:** Spot implied normal volatility contributions for grid of swap terms and option terms.
 - **Swap Terms:** 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 15y, 20y, 25y, 30y.
 - **Options Terms:** 1m, 2m, 3m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y, 15y, 20y, 25y, 30y.

Table 16: Swaption Volatility Coverage

Currency	Name	History
AED	UAE	TBD
CAD	Canada	TBD
CHF	Switzerland	TBD
CZK	Czech Republic	TBD
DKK	Denmark	TBD
EUR	Eurozone	TBD
GBP	United Kingdom	TBD
HUF	Hungary	TBD
ILS	Israel	TBD
JPY	Japan	TBD
NOK	Norway	TBD
PLN	Poland	TBD
RUB	Russia	TBD
SAR	Saudi Arabia	TBD
SEK	Sweden	TBD
USD	United States	TBD
ZAR	South Africa	TBD

2.14 Foreign Exchange Implied Volatility (FXV_ATM)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** 21:15 GMT
- **Data:** ATM implied volatility quotes, cross-currency.
 - **Standard Terms:** 2w, 3w, 1m, 2m, 3m, 4m, 5m, 6m, 9m, 1y, 2y, 3y, 4y, 5y, 6y, 7y, 8y, 9y, 10y.

The following tables list the coverage with currency pair of USD, EUR, GBP, and JPY. Please consult IBM Algo MDAS for other available currency pairs.

Table 17: FX Volatility Coverage: Currency pair with USD

AMERICAS		
Currency	Name	History
ARS	Argentina	TBD
BRL	Brazil	TBD
CAD	Canada	TBD
CLP	Chile	TBD
COP	Colombia	TBD
MXN	Mexico	TBD

ASIA		
Currency	Name	History
AUD	Australia	TBD
CNH	China offshore	TBD
CNY	China onshore	TBD
GEL	Georgia	TBD
HKD	Hong Kong	TBD
IDR	Indonesia	TBD
INR	India	TBD
JPY	Japan	TBD
KRW	Korea	TBD
MYR	Malaysia	TBD
NZD	New Zealand	TBD
PHP	Philippines	TBD
SGD	Singapore	TBD

EUROPE		
Currency	Name	History
CHF	Switzerland	TBD
CZK	Czech Republic	TBD
DKK	Denmark	TBD
EUR	Eurozone	TBD
GBP	United Kingdom	TBD
HUF	Hungary	TBD
ISK	Iceland	TBD
NOK	Norway	TBD
PLN	Poland	TBD
RUB	Russia	TBD
SEK	Sweden	TBD
TRY	Turkey	TBD

MIDDLE EAST & AFRICA		
Currency	Name	History
AED	UAE	TBD
QAR	Qatar	TBD
SAR	Saudi Arabia	TBD
ZAR	South Africa	TBD

OTHER		
Currency	Name	History

THB	Thailand	TBD
TWD	Taiwan	TBD

XAG	Silver	TBD
XAU	Gold	TBD

Table 18: FX Volatility Coverage: Currency pair with EUR

AMERICAS		
Currency	Name	History
BRL	Brazil	TBD
CAD	Canada	TBD
CLP	Chile	TBD
COP	Colombia	TBD
MXN	Mexico	TBD

EUROPE		
Currency	Name	History
CHF	Switzerland	TBD
CZK	Czech Republic	TBD
DKK	Denmark	TBD
GBP	United Kingdom	TBD
HUF	Hungary	TBD
NOK	Norway	TBD
PLN	Poland	TBD
RUB	Russia	TBD
SEK	Sweden	TBD
TRY	Turkey	TBD

ASIA		
Currency	Name	History
AUD	Australia	TBD
CNH	China offshore	TBD
CNY	China onshore	TBD
HKD	Hong Kong	TBD
IDR	Indonesia	TBD
INR	India	TBD
JPY	Japan	TBD
KRW	Korea	TBD
MYR	Malaysia	TBD
NZD	New Zealand	TBD
PHP	Philippines	TBD
SGD	Singapore	TBD
THB	Thailand	TBD
TWD	Taiwan	TBD

MIDDLE EAST & AFRICA		
Currency	Name	History
AED	UAE	TBD
SAR	Saudi Arabia	TBD
ZAR	South Africa	TBD

OTHER		
Currency	Name	History
XAG	Silver	TBD
XAU	Gold	TBD

Table 19: FX Volatility Coverage: Currency pair with GBP

AMERICAS		
Currency	Name	History
BRL	Brazil	TBD
CAD	Canada	TBD
CLP	Chile	TBD
COP	Colombia	TBD
MXN	Mexico	TBD

EUROPE		
Currency	Name	History
CHF	Switzerland	TBD
DKK	Denmark	TBD
HUF	Hungary	TBD
NOK	Norway	TBD
PLN	Poland	TBD
SEK	Sweden	TBD

ASIA		
Currency	Name	History
AUD	Australia	TBD
CNH	China offshore	TBD
CNY	China onshore	TBD
HKD	Hong Kong	TBD
INR	India	TBD
JPY	Japan	TBD
KRW	Korea	TBD
MYR	Malaysia	TBD
NZD	New Zealand	TBD
SGD	Singapore	TBD
TWD	Taiwan	TBD

TRY	Turkey	TBD
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MIDDLE EAST & AFRICA		
Currency	Name	History
ZAR	South Africa	TBD

OTHER		
Currency	Name	History
XAG	Silver	TBD
XAU	Gold	TBD

Table 20. FX Volatility Coverage: Currency pair with JPY

AMERICAS		
Currency	Name	History
CAD	Canada	TBD
CLP	Chile	TBD
COP	Colombia	TBD
MXN	Mexico	TBD

EUROPE		
Currency	Name	History
CHF	Switzerland	TBD
CZK	Czech Republic	TBD
DKK	Denmark	TBD
HUF	Hungary	TBD
NOK	Norway	TBD
PLN	Poland	TBD
RUB	Russia	TBD
SEK	Sweden	TBD

ASIA		
Currency	Name	History
AUD	Australia	TBD
CNH	China offshore	TBD
CNY	China onshore	TBD
HKD	Hong Kong	TBD
IDR	Indonesia	TBD
INR	India	TBD
KRW	Korea	TBD
MYR	Malaysia	TBD
NZD	New Zealand	TBD
PHP	Philippines	TBD
SGD	Singapore	TBD
THB	Thailand	TBD
TWD	Taiwan	TBD

MIDDLE EAST & AFRICA		
Currency	Name	History
ZAR	South Africa	TBD

OTHER		
Currency	Name	History
XAG	Silver	TBD
XAU	Gold	TBD

2.15 Equity Historical Volatility (EQV)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets.
- **Data:** Standard deviation of 90 days log returns of each equity.
- **Coverage:** A broad range of equity/index volatilities are covered across Americas, Europe, the Middle East, Africa and Asia Pacific.

2.16 Equity Implied Volatility (IMPEQV)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets.
- **Data:** At the money vs 30, 60, 90 day term points.
- **Coverage:** A broad range of over 1500 equity/index volatilities are covered across Americas and Western Europe markets.

2.17 Commodity Implied Volatility (COSVOL)

- **Data provider:** Thomson Reuters DataScope Select.
- **Contributors:** Thomson Reuters multi-contribution RICs.
- **Time stamp:** Varying upon markets.
- **Data:** At the money vs 180 day term point.
- **Coverage:** key agricultural, energy and metals markets.

Chapter 3. Instrument Data Classes

IBM Algo MDAS sources terms and conditions data from Thomson Reuters DataScope Select for the following instrument data classes.

3.1 Fixed Income

Asset Subtype
Agency
Government
Corporate
US Muni
Non-US Muni
Supranationals
MBS/ABS
Interest Rate Future
Eurodollar Future
Fed Funds Future
Bond Future
Option on Bond Futures
Option on EuroDollar Futures

- Covers a broad range of fixed income assets (around 2.4 million securities as of 2015) spanning corporate, government, US municipal, non-US municipal and supranational bonds.
- Includes bonds with the following coupon types and redemptive features: callable, puttable, convertible, floating, step up, inflation linked, fixed to floating and sinkable.
- Broad geographic coverage across North American, Latin American, Europe (including emerging markets), the Middle East, Africa and Asia Pacific.

The following charts show the geographic coverage of Government, Corporate, Agencies, Supranationals, non-US municipal bonds, and Fixed Income Futures and Options with the lists of counties.

Chart 1: Corporate Bonds Coverage



Africa	Americas	Asia & Oceania		Europe		
Egypt	Argentina	Australia	New Zealand	Austria	Hungary	Romania
Morocco	Brazil	Bahrain	Philippines	Belgium	Iceland	Russia
Nigeria	Canada	China	Qatar	Bulgaria	Ireland	Serbia
South Africa	Chile	Hong Kong	Saudi Arabia	Croatia	Italy	Slovakia
	Colombia	India	Singapore	Cyprus	Latvia	Slovenia
	Mexico	Indonesia	South Korea	Czech Republic	Luxembourg	Spain
	United States	Israel	Taiwan	Denmark	Malta	Sweden
	Venezuela	Japan	Thailand	Estonia	Netherlands	Switzerland
		Kazakhstan	United Arab Emirates	Finland	Norway	Turkey
		Kuwait	Viet Nam	France	Poland	Ukraine
		Malaysia		Germany	Portugal	United Kingdom
				Greece		

Chart 2: Agency Bonds Coverage



Africa	Americas	Asia & Oceania		Europe		
South Africa	Brazil	Australia	New Zealand	Austria	Greece	Portugal
	Canada	China	Philippines	Belgium	Iceland	Russia
	Colombia	Hong Kong	Singapore	Czech Republic	Ireland	Slovakia
	Mexico	India	South Korea	Denmark	Italy	Slovenia
	United States	Indonesia	Taiwan	Finland	Netherlands	Spain
		Japan	Thailand	France	Norway	Sweden
		Kazakhstan	Viet Nam	Germany	Poland	United Kingdom

Chart 3: Supra/State/Provincial Bonds Coverage



Africa	Americas	Asia & Oceania		Europe		
Egypt	Argentina	Australia	Malaysia	Austria	Iceland	Russia
Nigeria	Brazil	China	New Zealand	Belgium	Ireland	Spain
	Canada	India	Philippines	Czech Republic	Italy	Sweden
	Mexico	Japan	Taiwan	Finland	Luxembourg	Switzerland
	United States	Kazakhstan	Thailand	France	Norway	Ukraine
	Venezuela			Germany	Poland	United Kingdom

Chart 4: Non-US Municipal Bonds Coverage



Africa	Americas	Asia & Oceania	Europe		
South Africa	Argentina	China	Austria	Iceland	Russia
	Brazil	India	Belgium	Italy	Spain
	Canada	Japan	Croatia	Netherlands	Sweden
	Colombia	New Zealand	Estonia	Norway	Switzerland
		South Korea	Finland	Poland	Ukraine
		Taiwan	France	Portugal	United Kingdom
		Viet Nam	Germany	Romania	

Chart 5: Government Bonds Coverage



Africa	Americas	Asia & Oceania		Europe		
Egypt	Argentina	Australia	Pakistan	Austria	Iceland	Russia
Ghana	Brazil	Bahrain	Philippines	Belgium	Ireland	Serbia
Morocco	Canada	China	Qatar	Bulgaria	Italy	Slovakia
Nigeria	Chile	Hong Kong	Saudi Arabia	Croatia	Latvia	Slovenia
South Africa	Colombia	India	Singapore	Cyprus	Lithuania	Spain
	Mexico	Indonesia	South Korea	Czech Republic	Luxembourg	Sweden
	United States	Israel	Sri Lanka	Denmark	Malta	Switzerland
	Venezuela	Japan	Taiwan	Finland	Netherlands	Turkey
		Kazakhstan	Thailand	France	Norway	Ukraine
		Malaysia	Viet Nam	Germany	Poland	United Kingdom
		New Zealand		Greece	Portugal	
				Hungary	Romania	

Chart 6: Fixed Income Futures and Options Coverage



Americas	Asia & Oceania		Europe	
Brazil	Australia	Malaysia	Euro Zone	Russia
Canada	China	New Zealand	France	Spain
Colombia	Hong Kong	Singapore	Germany	Sweden
Mexico	India	South Korea	Hungary	Switzerland
United States	Japan	Taiwan	Italy	United Kingdom
			Poland	

3.2 Equities

Asset Subtype
Common Stock
American Depositary Receipt
Global Depositary Receipt
Equity Indices
Equity Future
Equity Option
Equity Index Option
Warrants

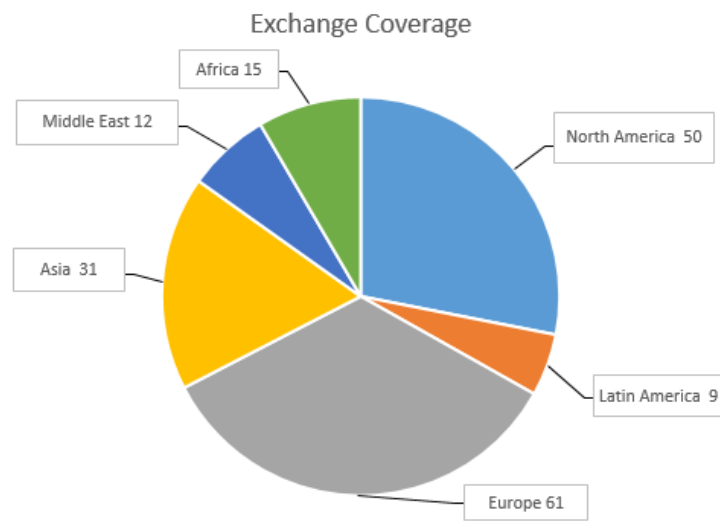
- Covers over 400,000 equity listings (and associated derivatives) with broad geographic coverage across North American, Latin American, Europe (including emerging markets), the Middle East, Africa and Asia Pacific.
- Covers over 175 exchanges in more than 90 countries

Chart 7: Common Stocks Coverage



Africa	Americas	Asia & Oceania		Europe		
Egypt	Argentina	Australia	Pakistan	Austria	Hungary	Portugal
Ghana	Brazil	Bahrain	Philippines	Belgium	Iceland	Romania
Morocco	Canada	China	Qatar	Bulgaria	Ireland	Russia
Nigeria	Chile	Hong Kong	Saudi Arabia	Croatia	Italy	Slovakia
South Africa	Colombia	India	Singapore	Cyprus	Latvia	Slovenia
	Mexico	Indonesia	South Korea	Czech Republic	Lithuania	Spain
	Peru	Israel	Sri Lanka	Denmark	Luxembourg	Sweden
	United States	Japan	Taiwan	Estonia	Malta	Switzerland
	Venezuela	Kazakhstan	Thailand	Finland	Netherlands	Turkey
		Kuwait	United Arab Emirates	France	Norway	Ukraine
		New Zealand	Viet Nam	Germany	Poland	United Kingdom

Chart 8: Equity Exchange Coverage



3.3 Commodities

Asset Subtype
Futures
Commodity Future Options

The following two tables list some major commodity futures and options with the countries where they are mainly traded.

Table 21: Major Commodity Futures

Category	Product	Countries
Grains	Corn Maize	AR, BR, CN, FR, HU, IN, JP, US, SA
	Oats	US
	Rice	CN, JP, US
	Wheat Feed	AR, AU, CA, CN, GB, HU
	Wheat Hard	AR, CN, IN, IT, TR, US, ZA
	Wheat Soft	AU, FR, GB, HU, RU, US
Oilseed	Palm & Palm Kernel	CN, IN, IDN, MY, US
	Rapeseeds	AU, CA, CN, FR, HU, IN, US
	Sunflower seed	AR, HU, SA
	Soybeans	AR, BR, CN, HU, IN, JP, US, SA
Livestock	Cattle	BR, US
Softs	Cocoa	EU, ID, GB, US, WLD
	Coffee	BR, GB, JP, US, WLD
	Sugar	CN, GB, IN, JP, US, WLD
Fibers	Cotton	CN, IN, TR, US
Metals	Aluminum Alloy	GB
	Copper	AS, CN, GB, IN, US, SG, UAE, ZA
	Lead	CN, GB, IN, SG, US
	Nickel	CN, GB, IN, JP, SG
	Steel & Iron	CN, EU, GB, IN, JP, SG, UAE, US
	Zinc	AS, CN, GB, IN, SG, US
Precious	Gold	CN, DE, EU, IN, IDN, JP, KR, RU, SG, TH, TR, TW, UAE, US, ZA
	Palladium	JP, US
	Platinum	CN, IN, JP, US, ZA
	Silver	CN, DE, EU, IN, JP, RU, UAE, US
Energy	Brent Crude	CA, EU, GB, IN, SG, TH, UAE, US, ZA
	WTI & WTS Crudes	GB, IN, SG, UAE, US, ZA

	Diesel	ARA, EU, MED, NWE, US
	Fuel Oil	ARA, CN, EU, MED, NWE, SGP, US
	Gasoline	CIF, GB, IN, JP, MED, NWE, SGP, US
	Heating Oil	NYM, US

Table 22: Major Commodity Options

Category	Product	Countries
Grains	Corn Maize	HU, US
	Oats	US
	Rice	US
	Wheat Hard	US
	Wheat Soft	AU, FR, HU, US
Oilseed	Rapeseeds	AU, CA
	Sunflower seed	HU
	Soybeans	BR, US
Livestock	Cattle	US
Softs	Cocoa	EU, US
	Coffee	US
	Sugar	GB, US
Fibers	Cotton	US
Metals	Aluminum Alloy	GB
	Copper	GB, US, ZA
	Lead	GB
	Steel & Iron	SG, US
	Zinc	GB
Precious	Gold	TW, US, ZA
	Silver	DE, US
Energy	Brent Crude	GB, US, ZA
	WTI & WTS Crudes	US
	Gasoline	SGP, US

3.4 Foreign Exchange

Asset Subtype
Forex Futures
Forex Options
Forex Future Options

Table 23: Major Currency Exchanges

Asset Subtype	Major Exchanges
Forex Futures	Chicago Mercantile Exchange, Eurex, National Stock Exchange, Hong Kong Futures Exchange, Singapore Exchange, Rosario Futures Exchange
Forex Options	Chicago Mercantile Exchange
Forex Future Options	Chicago Mercantile Exchange, Eurex, National Stock Exchange, Hong Kong Futures Exchange, Rosario Futures Exchange

3.5 Funds

Asset Subtype
Mutual Funds
Hedge Funds
Insurance and Pension Funds
Closed-End Funds and Investment Trusts
Exchange Traded Funds

The following tables lists some of the major fund types and classifications available from Reuters/Lipper.

Table 24: Fund Classification

Class Type	Classifications
Equity	Regional/Country, Industry, Diversified, Income, Emerging Market, Frontier Market
Bond	Single-currency, Multi-currency, Convertible, Corporate, Maturity, High Quality, Emerging Markets, High Yield, Inflation-Linked, Municipal, Specialist
Money Market	Unleveraged, Leveraged
Real Estate	Country/Region,
Mixed-Asset	Country/Region, Risk Degree
Hedge	Relative Value, Directional, Event-Driven, Credit, Mixed and other
Other	Absolute Return, Alternative Strategies, Commodities, Guaranteed, Protected, Target Maturity, Unclassified, Undisclosed
Exchange Traded Funds	

3.6 Supported Models

IBM Algo MDAS supports various models for market-traded securities and OTC instruments. Please refer to the document IBM Algo MDAS – Instrument Model Guide for modeling details.

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