



ARM

A commodity risk management system.

1. ARM: A commodity risk management system.

- ARM is a complete suite allowing the management of market risk and operational risk for commodities derivatives.
- 4 main modules are available:
 - 1.1. Market Data Management,
 - 1.2. Pre-trade pricing,
 - 1.3. Trade management,
 - 1.4. Market risk Analysis.

1.1. Market Data Management.

- Flat prices and volatility management following market conventions (ex. EFS and swap/swap for Platt's Products, Base metals leads by 3M contract...).
- Asset classes available: Oil, Precious Metals, Base Metals, Carbon Emissions, Coal, Iron Ore, Agricultural, Power, Natural Gas and Currencies.
- Real time links by contract with Bloomberg and Reuters.
- Real time charting capabilities of flat price, volatility, smile...
- Real time contribution and subscription across trading places.
- Official and time zone closings.
- Users can define their own layout by tab, each tab includes a set of curves or charts.
- Crack and differential can be defined dynamically.

1.1.1. Market Data Configuration Editor.

Configuration Name

Trading date.

Underlying Referential, classified by category, sub category and curve type (volatility, flat price)

Actions (delete, open)

Select or remove underlyings

Contribution State

User you subscribe to, or contribution under which token (Master or User)

Selected underlyings.

Change underlying order.

User defined cracks and differential.

The screenshot shows the 'Config. Editor' window with a menu bar (Session, Market Data, Prices, Risk Management, Trade Management, Referential, Help) and a toolbar. The main area is divided into three panes. The left pane shows a tree view of categories (Agricultural, Carbon Emissions, Coal & Iron Ore, Currencies, Energy, Metals) with 'Metals' selected. The middle pane shows a list of underlying assets with columns for Underlying, Curve, Contribution, and Users. The right pane shows a table of selected underlyings. A 'Parameter AddCrack' dialog is open at the bottom, showing fields for Coef, Underlying, and an 'Add' button.

Underlying	Curve	Contribution	Users
COC - FUT LIFFE	Forward	Contributor	Guilhem
COC - FUT LIFFE	Volatility	Contributor	Guilhem
WHT - FUT CBOT	Forward	Contributor	Guilhem
WHT - FUT CBOT	Volatility	Contributor	Guilhem

Coef	Underlying
1	Fuel 3.5% FOB Bge ARA
1	Fuel 3.5% FOB Cgo Med

1.1.2. Oil.

Average and Spread Calculator

Swap pricer

Mid live feed from Bloomberg

Spread live feed from Bloomberg

Master bullet volatility.

Slave bullet volatility, managed by spread, or volatility.

EFS Pillars: Swap are recalculated from master future and the EFS

Swap/Swap Pillars: Swap are recalculated from master swap and the Swap/Swap

Crack and differential are updated in live

Pillars with interpolated values between.

Slave Asian volatility managed by spread, or volatility.

Maturity	Swap	SIM	F.NCH	SPREAD
JUL14	97.04	-12.39	93.52	
AUG14	91.99	5.05	-16.70	97.90
SEP14	94.93	-2.94	-13.02	101.06
OCT14	100.14	5.21	-2.21	102.72
NOV14	101.83	1.69	-5.03	98.72
DEC14	103.55	-1.72	-2.84	93.53
JAN15	95.50	8.05	-10.42	96.81
FEB15	91.56	3.94	-13.91	90.13
MAR15	100.75	-9.19	-4.31	89.03
APR15	83.05	17.70	-21.61	99.00
MAY15	94.02	-10.97	-10.26	102.59
JUN15	102.74	-6.72	-1.14	102.35
JUL15	102.49	0.25	1.11	102.10
AUG15	102.24	0.25	1.11	102.10
SEP15	101.99	0.25	1.11	102.10
OCT15	101.74	0.25	1.11	102.10
NOV15	101.49	0.25	1.11	102.10
DEC15	101.24	0.25	1.11	102.10
JAN16	101.04	0.20	-0.27	100.56

Maturity	Swap	SIM	F.NCH	SPREAD
JUL14	87.27	0.81	-17.52	6.22
AUG14	87.59	-0.32	-16.56	4.40
SEP14	98.46	-10.88	-5.17	-3.54
OCT14	100.28	-3.59	-0.90	-2.15
NOV14	97.55	4.74	-5.12	4.24
DEC14	92.36	3.19	-8.78	11.9
JAN15	95.49	-3.13	-6.12	0.01
FEB15	88.80	6.68	-12.43	2.75
MAR15	87.70	1.14	-13.16	1.32
APR15	97.68	-2.83	-14.64	1.32
MAY15	99.29	1.54	-1.61	-5.21
JUN15	94.96	0.24	-6.76	3.75
JUL15	98.88	2.10	-0.63	3.60
AUG15	98.68	0.40	-0.46	3.55
SEP15	98.44	0.25	-0.34	3.55
OCT15	98.17	0.27	-0.25	3.57
NOV15	97.89	0.28	-0.14	3.59
DEC15	97.56	0.33	-0.09	3.68
JAN16	97.08	0.48	-0.06	3.96

Maturity	Swap	SIM	F.NCH	SPREAD
JUL14	93.86	-15.80	-0.29	
AUG14	93.18	0.68	-15.72	-0.34
SEP14	97.40	-4.23	-10.68	-0.50
OCT14	100.47	-3.06	-6.87	-0.59
NOV14	97.86	4.03	-8.35	-0.74
DEC14	92.75	5.22	-13.12	-0.77
JAN15	96.05	-3.30	-9.39	-0.75
FEB15	89.36	6.69	-15.66	-0.76
MAR15	88.26	1.11	-16.39	-0.77
APR15	95.23	-9.97	-10.02	-0.77
MAY15	101.81	-3.59	-7.09	-0.78
JUN15	101.56	0.32	-1.99	-0.79
JUL15	101.35	0.20	-1.62	-0.75
AUG15	101.29	0.20	-1.64	-0.76
SEP15	100.85	0.24	-1.50	-0.76
OCT15	100.61	0.24	-1.38	-0.74
NOV15	100.38	0.23	-1.27	-0.74
DEC15	100.14	0.25	-1.21	-0.74
JAN16	99.79	0.35	-1.19	-0.77

Maturity	TDY 1D Put	TDY 10D Put	TDY 25D Put	TDY 100 Put	TDY 250 Put	TDY 1000 Put	TDY 10 Put
JUL14	6.90%	1.45%	0.50%	14.11%	0.00%	0.40%	4.01%
AUG14	6.50%	1.70%	0.60%	14.40%	0.11%	0.70%	4.42%
SEP14	6.00%	2.20%	0.70%	14.79%	0.10%	1.00%	3.82%
OCT14	5.60%	2.50%	0.90%	15.09%	0.03%	0.90%	3.15%
NOV14	5.43%	2.84%	1.12%	15.31%	-0.23%	0.64%	2.62%
DEC14	5.30%	3.00%	1.25%	15.45%	-0.45%	0.25%	2.22%
JAN15	5.21%	3.13%	1.28%	15.53%	-0.60%	-0.09%	1.89%
FEB15	5.15%	3.25%	1.46%	15.55%	-0.82%	-0.34%	1.62%
MAR15	5.11%	3.34%	1.53%	15.53%	-0.94%	-0.50%	1.43%
APR15	5.07%	3.41%	1.59%	15.48%	-1.05%	-0.83%	1.25%
MAY15	5.04%	3.47%	1.63%	15.41%	-1.13%	-0.72%	1.12%
JUN15	5.00%	3.51%	1.66%	15.34%	-1.20%	-0.80%	1.00%
JUL15	4.95%	3.53%	1.68%	15.28%	-1.23%	-0.87%	0.90%
AUG15	4.88%	3.54%	1.69%	15.22%	-1.26%	-0.94%	0.80%
SEP15	4.79%	3.53%	1.70%	15.16%	-1.27%	-1.00%	0.72%
OCT15	4.70%	3.51%	1.70%	15.11%	-1.28%	-1.06%	0.64%
NOV15	4.60%	3.48%	1.70%	15.07%	-1.28%	-1.11%	0.56%
DEC15	4.50%	3.45%	1.69%	15.02%	-1.25%	-1.15%	0.49%
JAN16	4.39%	3.41%	1.68%	14.97%	-1.24%	-1.18%	0.42%
FEB16	4.28%	3.37%	1.68%	14.92%	-1.24%	-1.20%	0.35%
MAR16	4.17%	3.33%	1.67%	14.88%	-1.24%	-1.21%	0.28%
APR16	4.05%	3.29%	1.67%	14.83%	-1.24%	-1.22%	0.21%
MAY16	3.94%	3.24%	1.66%	14.78%	-1.24%	-1.22%	0.15%
JUN16	3.83%	3.19%	1.65%	14.73%	-1.24%	-1.21%	0.09%
JUL16	3.72%	3.14%	1.65%	14.69%	-1.24%	-1.20%	0.03%
AUG16	3.61%	3.09%	1.64%	14.65%	-1.24%	-1.18%	-0.03%

Maturity	TDY 1D Put	TDY 10D Put	TDY 25D Put	TDY 100 Put	TDY 250 Put	TDY 1000 Put	TDY 10 Put
DEC14	5.03%	2.61%	0.74%				
JAN15	5.01%	2.66%	0.80%				
FEB15	4.92%	2.73%	0.86%				
MAR15	4.80%	2.81%	0.92%				
APR15	4.64%	2.90%	0.99%				
MAY15	4.47%	2.96%	1.06%				
JUN15	4.31%	3.06%	1.13%				
JUL15	4.16%	3.14%	1.19%				
AUG15	4.01%	3.20%	1.25%				
SEP15	3.88%	3.24%	1.30%				
OCT15	3.76%	3.27%	1.34%				
NOV15	3.64%	3.27%	1.37%				
DEC15	3.54%	3.25%	1.39%				
JAN16	3.45%	3.21%	1.40%				
FEB16	3.34%	3.14%	1.39%				
MAR16	3.26%	3.06%	1.36%				
APR16	3.17%	2.95%	1.35%				
MAY16	3.09%	2.82%	1.32%				
JUN16	3.00%	2.68%	1.29%				
JUL16	2.92%	2.53%	1.25%				
AUG16	2.84%	2.37%	1.20%				
SEP16	2.75%	2.21%	1.16%				
OCT16	2.67%	2.06%	1.12%				
NOV16	2.60%	1.93%	1.08%				
DEC16	2.53%	1.82%	1.05%				
JAN17	2.49%	1.76%	1.05%				

1.1.3. LME Base Metals.

Interpolated values between pillars.

Pillars

COPPER LME						
Last publish time: 06/05/15 11:00:48						
[Outright SEP14]-[Outright OCT14] = 6.00						
Maturity	Promptdate	Outright	SIM	F.NCh	F.vs3M	Out.NCh
SPOT	04/06/2014	6999.22	32.00	0.08	74.00	81.22
JUN14	18/06/2014	6967.22	32.00	-5.92	42.00	75.22
JUL14	16/07/2014	6945.22	22.00	-4.92	20.00	76.22
AUG14	20/08/2014	6930.22	15.00	-1.92	5.00	79.22
3ML	02/09/2014	6925.22	5.00	81.14	0.00	81.14
SEP14	17/09/2014	6921.22	4.00	1.08	-4.00	82.22
OCT14	15/10/2014	6915.22	6.00	4.08	-10.00	85.22
NOV14	19/11/2014	6907.22	8.00	3.08	-18.00	84.22
DEC14	17/12/2014	6898.22	9.00	7.08	-27.00	88.22
JAN15	21/01/2015	6894.22	4.00	9.08	-31.00	90.22
FEB15	18/02/2015	6890.22	4.00	10.08	-35.00	91.22
MAR15	18/03/2015	6887.22	3.00	12.08	-38.00	93.22
APR15	15/04/2015	6884.22	3.00	13.08	-41.00	94.22
MAY15	20/05/2015	6881.22	3.00	14.08	-44.00	95.22
JUN15	17/06/2015	6878.22	3.00	14.08	-47.00	95.22
JUL15	15/07/2015	6875.22	3.00	14.08	-50.00	95.22
AUG15	19/08/2015	6871.22	3.50	13.58	-53.50	94.72
SEP15	16/09/2015	6868.22	3.50	13.08	-57.00	94.22
OCT15	21/10/2015	6864.22	3.50	12.58	-60.50	93.72
NOV15	18/11/2015	6861.22	3.50	12.08	-64.00	93.22
DEC15	16/12/2015	6858.22	3.00	12.08	-67.00	93.22
JAN16	20/01/2016	6854.22	3.50	12.58	-70.50	93.72
FEB16	17/02/2016	6851.22	3.50	13.08	-74.00	94.22
MAR16	16/03/2016	6847.22	3.50	13.58	-77.50	94.72
APR16	20/04/2016	6844.22	3.50	14.08	-81.00	95.22
MAY16	18/05/2016	6840.22	3.50	14.58	-84.50	95.72
JUN16	15/06/2016	6837.22	3.50	15.08	-88.00	96.22

ALUMINIUM LME						
Sum=14780.68623 Avg=1847.585779						
Maturity	Promptdate	Outright	SIM	F.NCh	F.vs3M	Out.NCh
07/08/2014	07/08/2014	1841.87	-0.34	-0.66	-8.13	9.66
08/08/2014	08/08/2014	1842.20	-0.34	-0.65	-7.80	9.66
11/08/2014	11/08/2014	1843.22	-1.01	-0.63	-8.78	9.69
12/08/2014	12/08/2014	1843.55	-0.34	-0.62	-8.45	9.69
13/08/2014	13/08/2014	1843.89	-0.34	-0.62	-8.11	9.70
14/08/2014	14/08/2014	1844.23	-0.34	-0.61	-7.77	9.71
15/08/2014	15/08/2014	1844.56	-0.34	-0.60	-7.44	9.71
18/08/2014	18/08/2014	1845.58	-1.01	-0.58	-6.42	9.74
19/08/2014	19/08/2014	1845.91	-0.34	-0.57	-6.09	9.74
AUG14	20/08/2014	1846.25	-0.34	-0.57	-5.75	9.75
21/08/2014	21/08/2014	1846.46	-0.21	-0.52	-5.44	9.79
22/08/2014	22/08/2014	1846.67	-0.20	-0.48	-5.11	9.84
26/08/2014	26/08/2014	1847.51	-0.84	-0.30	-4.29	10.01
27/08/2014	27/08/2014	1847.72	-0.21	-0.26	-3.96	10.05
28/08/2014	28/08/2014	1847.93	-0.20	-0.22	-3.63	10.10
29/08/2014	29/08/2014	1848.14	-0.21	-0.17	-3.30	10.14
3ML	02/09/2014	1850.00	-1.86	10.32	0.00	10.32
SEP14	17/09/2014	1857.00	-7.00	0.68	7.00	11.00
OCT14	15/10/2014	1866.75	-9.75	0.68	16.75	11.00
NOV14	19/11/2014	1878.50	-11.75	0.68	28.50	11.00
DEC14	17/12/2014	1887.00	-8.50	0.68	37.00	11.00
JAN15	21/01/2015	1890.75	-3.75	1.18	40.75	11.50
FEB15	18/02/2015	1898.50	-7.75	1.43	48.50	11.75
MAR15	18/03/2015	1906.25	-7.75	1.43	56.25	11.75
APR15	15/04/2015	1913.50	-7.25	1.68	63.50	12.00
MAY15	20/05/2015	1921.75	-8.25	1.93	71.75	12.25
JUN15	17/06/2015	1928.50	-6.75	2.18	78.50	12.50

ALUMINIUM LME					
Last publish time: 06/05/15 11:00:41					
Maturity	10D Put	25D Put	ATM	25D Call	10D Call
JUN14	17.86%	16.75%	16.25%	17.63%	19.21%
JUL14	17.09%	17.44%	16.05%	18.30%	17.24%
AUG14	16.77%	16.50%	16.56%	17.09%	18.26%
SEP14	16.71%	17.07%	17.20%	18.82%	16.67%
OCT14	16.89%	16.66%	16.72%	17.81%	18.22%
NOV14	17.01%	16.99%	16.80%	17.35%	19.17%
DEC14	16.08%	17.09%	15.81%	17.50%	18.19%
JAN15	17.53%	16.49%	16.87%	17.88%	18.08%
FEB15	17.55%	16.77%	16.46%	16.26%	18.93%
MAR15	17.96%	17.52%	15.95%	17.67%	17.89%
APR15	17.25%	17.26%	17.34%	18.33%	17.85%
MAY15	17.41%	16.80%	16.59%	17.30%	18.09%
JUN15	17.41%	16.80%	16.59%	17.29%	18.09%
JUL15	17.46%	16.84%	16.63%	17.32%	18.13%
AUG15	17.47%	16.84%	16.63%	17.32%	18.13%
SEP15	17.46%	16.83%	16.64%	17.27%	18.14%
OCT15	17.49%	16.85%	16.65%	17.28%	18.15%
NOV15	17.52%	16.89%	16.68%	17.31%	18.18%
DEC15	17.58%	16.95%	16.74%	17.37%	18.24%
JAN16	17.54%	16.95%	16.73%	17.35%	18.22%
FEB16	17.55%	16.95%	16.74%	17.36%	18.23%
MAR16	17.55%	16.96%	16.75%	17.37%	18.24%
APR16	17.58%	17.04%	16.77%	17.36%	18.23%
MAY16	17.58%	17.05%	16.78%	17.37%	18.24%
JUN16	17.59%	17.05%	16.79%	17.38%	18.24%
JUL16	17.63%	17.10%	16.83%	17.42%	18.27%
AUG16	17.63%	17.11%	16.84%	17.43%	18.28%

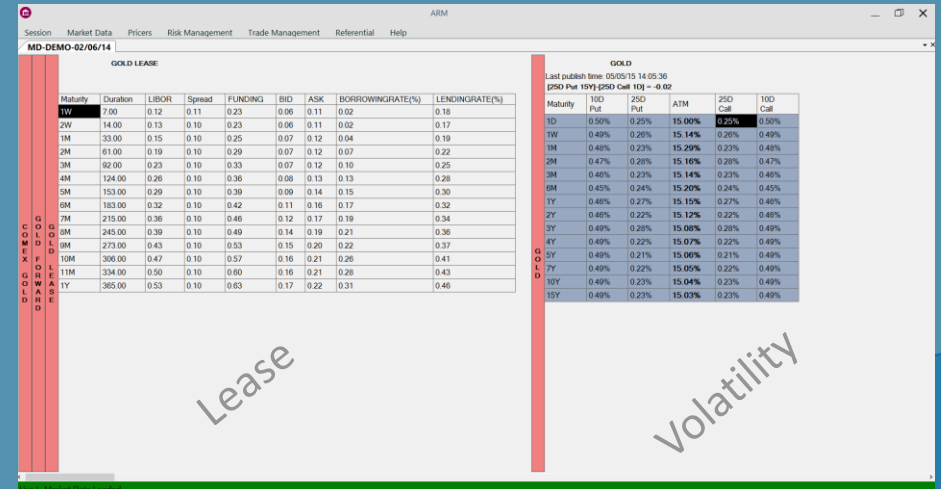
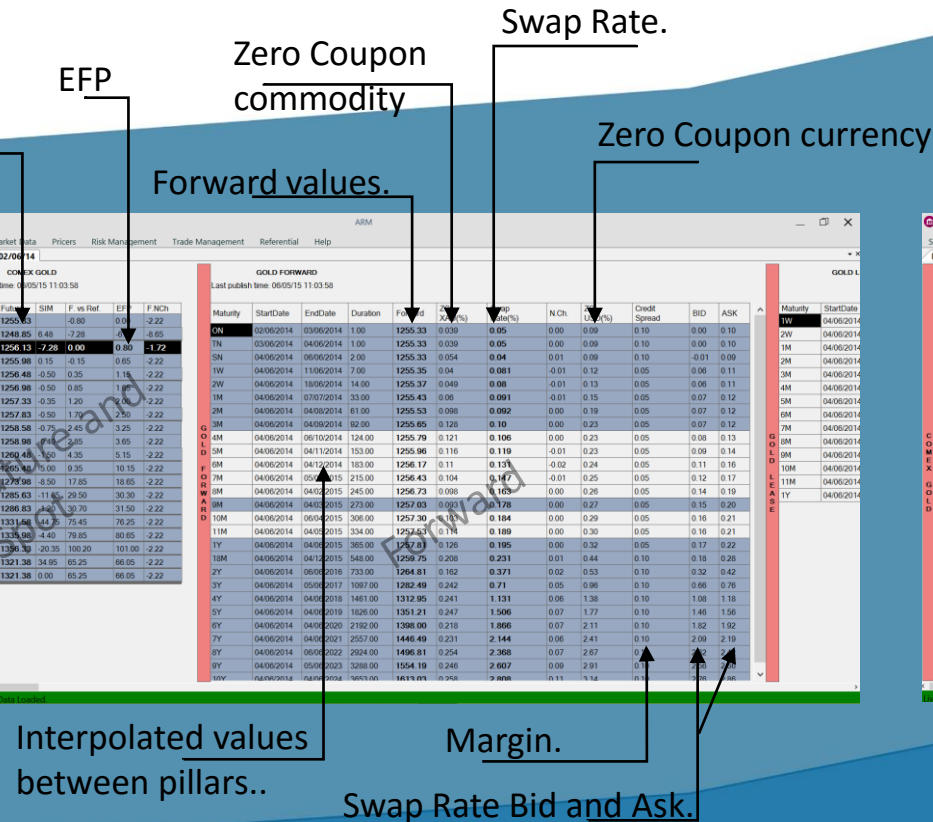
Volatility with live feed from Bloomberg

1.1.4. Precious Metals.

Spot recalculated from the EFP and the reference contract.

Reference contract.

Other Futures.



1.1.5. Agricultural Products.

Pillars with live Bloomberg feed.

Interpolated future.

ARM

Session Market Data Pricers Risk Management Trade Management Referential Help

MD-DEMO-02/06/14

SOYBN - FUT CBT

Last publish time: 05/05/15 14:28:21
[Future MAY15] = -1239.28

Maturity	Future	SIM	F.NCh
JUL14	1499.04		5.79
AUG14	1427.41	71.63	2.91
SEP14	1239.28	188.13	-46.47
NOV14	1239.28	0.00	5.53
JAN15	1239.28	0.00	-0.22
MAR15	1239.28	0.00	-3.97
MAY15	1239.28	0.00	-4.72
JUL15	1243.75	-4.47	-3.50
AUG15	1229.50	14.25	-3.00
SEP15	1204.75	24.75	-4.00
NOV15	1194.75	10.00	-3.50

SOYBN - FUT CBT

CAN - FUT WCE

Last publish time: 05/05/15 14:25:22
[40 JUL14]-[40 JUL14] = 0.00

Maturity	-20	-10	-4	-2	0	2	4	10	20
JUL14	24.26	25.26	25.69	25.50	24.88	25.86	25.60	25.37	25.85
NOV14	25.73	24.76	24.08	24.06	24.76	24.99	24.94	24.28	25.93
JAN15	25.67	24.76	25.92	25.85	25.04	25.35	24.78	24.70	25.18
MAR15	24.02	24.28	24.53	24.69	25.44	24.91	25.67	25.11	25.80
MAY15	24.72	24.52	25.10	24.38	24.64	24.70	24.52	25.73	25.15
JUL15	24.84	25.44	25.62	25.67	25.78	24.39	24.98	25.75	24.02
NOV15	25.93	24.05	24.97	25.86	24.78	24.34	24.25	25.27	25.67

SOYBN - FUT CBT

SOYBN - FUT CBT

Maturity	10D Put	25D Put	35D Put	ATM	35D Call	25D Call	10D Call
JUL14	20.08%	19.12%	18.89%	18.83%	19.00%	19.17%	19.78%
AUG14	21.37%	20.44%	20.26%	20.26%	20.63%	20.86%	21.98%
SEP14	21.82%	20.84%	20.69%	20.62%	20.93%	21.19%	22.72%
NOV14	21.77%	20.61%	20.25%	20.10%	20.18%	20.45%	21.83%
JAN15	20.77%	19.44%	19.07%	18.94%	19.09%	19.20%	20.41%
MAR15	20.34%	18.66%	18.22%	18.04%	18.22%	18.25%	19.55%
MAY15	17.80%	16.98%	16.82%	16.75%	17.05%	17.43%	19.30%
JUL15	16.56%	16.18%	16.05%	16.04%	16.27%	16.64%	18.98%
AUG15	16.66%	16.22%	16.11%	16.08%	16.25%	16.62%	19.01%
SEP15	19.34%	19.34%	19.34%	19.34%	19.34%	19.34%	19.34%
NOV15	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
JAN16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
MAR16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
MAY16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
JUL16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
AUG16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
SEP16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
NOV16	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
JAN17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
MAR17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
MAY17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
JUL17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
AUG17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%
SEP17	16.03%	15.61%	15.32%	14.95%	14.88%	15.09%	16.72%

Live 1. Market Data Loaded.

Future

Volatility by strike ratio

1.1.6. Iron Ore, Coal, Emissions and Power.

CO2 Emission forward recalculated from a zero coupon currency and the spot price.

Coal and Iron Ore can be managed with monthly contracts or market contracts.

SessionMarket DataPricersRisk ManagementTrade ManagementReferentialHelp

MD-DEMO-02/06/14

API2 CURVE W

[Future AUG14]-[Future SEP14] = -0.70

Maturity	Future	SIM	F.NCh
JUN14	75.80		0.00
JUL14	76.60	-0.80	0.00
AUG14	77.50	-0.90	0.00
SEP14	78.20	-0.70	0.00
OCT14	80.10	-1.90	0.00
NOV14	80.10	0.00	0.00
DEC14	80.10	0.00	0.00
JAN15	81.60	-1.50	0.00
FEB15	81.60	0.00	0.00
MAR15	81.60	0.00	0.00
APR15	82.65	-1.05	0.00
MAY15	82.65	0.00	0.00
JUN15	82.65	0.00	0.00
JUL15	83.80	-1.15	0.00
AUG15	83.80	0.00	0.00
SEP15	83.80	0.00	0.00
OCT15	85.00	-1.20	0.00
NOV15	85.00	0.00	0.00
DEC15	85.00	0.00	0.00
JAN16	87.05	-2.05	0.00
FEB16	87.05	0.00	0.00
MAR16	87.05	0.00	0.00
APR16	87.05	0.00	0.00
MAY16	87.05	0.00	0.00
JUN16	87.05	0.00	0.00
JUL16	87.05	0.00	0.00
AUG16	87.05	0.00	0.00

C_LGC_AU

[Future 1W]-[Future 2W] = -0.005251

Maturity	StartDate	Duration	Future	Credit Spread	ZC AUD(%)
SPOT	02/06/2014	0	10.00	0.00	0.00
1W	03/06/2014	7	10.00	0.04	2.50
2W	03/06/2014	14	10.01	0.04	2.60
1M	03/06/2014	30	10.02	0.04	2.66
2M	03/06/2014	62	10.05	0.04	2.68
3M	03/06/2014	92	10.07	0.04	2.68
4M	03/06/2014	122	10.09	0.04	2.70
5M	03/06/2014	153	10.11	0.04	2.69
6M	03/06/2014	183	10.14	0.04	2.70
7M	03/06/2014	216	10.16	0.04	2.69
8M	03/06/2014	245	10.18	0.04	2.68
9M	03/06/2014	273	10.20	0.04	2.68
10M	03/06/2014	304	10.23	0.04	2.67
11M	03/06/2014	335	10.25	0.04	2.67
1Y	03/06/2014	365	10.27	0.04	2.67
18M	03/06/2014	548	10.43	0.04	2.75
2Y	03/06/2014	731	10.58	0.04	2.81
3Y	03/06/2014	1098	10.94	0.04	2.97
4Y	03/06/2014	1462	11.39	0.04	3.22
5Y	03/06/2014	1826	11.87	0.04	3.40
6Y	03/06/2014	2192	12.43	0.04	3.60
7Y	03/06/2014	2557	13.05	0.04	3.78
8Y	03/06/2014	2922	13.72	0.04	3.93
9Y	03/06/2014	3289	14.44	0.04	4.06
10Y	03/06/2014	3653	15.21	0.04	4.17

ICE EXC C_CER_EU

[Future SEP14]-[Future JUN14] = 0.005

Maturity	Future	SIM	Pillar Spread	F.NCh
SPOT	0.54			0.00
JUN14	0.54	0.00	0.00	0.00
SEP14	0.55	-0.01	-0.01	0.00
DEC14	0.55	0.00	0.00	0.00
MAR15	0.57	-0.02		0.00
JUN15	0.59	-0.02		0.00
SEP15	0.61	-0.02		0.00
DEC15	0.62	-0.01	-0.07	0.00
MAR16	0.63	-0.01		0.00
JUN16	0.63	0.00		0.00
SEP16	0.64	0.00		0.00
DEC16	0.64	0.00	-0.02	0.00
MAR17	0.67	-0.03		0.00
JUN17	0.70	-0.03		0.00
SEP17	0.72	-0.03		0.00
DEC17	0.75	-0.03	-0.11	0.00
MAR18	0.76	-0.01		0.00
JUN18	0.77	-0.01		0.00
SEP18	0.78	-0.01		0.00
DEC18	0.79	-0.01	-0.04	0.00
MAR19	0.84	-0.05		0.00
JUN19	0.89	-0.05		0.00
SEP19	0.95	-0.05		0.00
DEC19	0.99	-0.04	-0.20	0.00
MAR20	1.02	-0.03		0.00
JUN20	1.05	-0.03		0.00
SEP20	1.08	-0.03		0.00

DE - DEUTCH POWER BASELOAD

Last publish time: 05/05/15 14:39:29

[OFFPEAK 1D]-[BASE 1D] = 0.50

Maturity	BASE	PEAK	OFFPEAK
1D	10.50	10.00	11.00
2D	10.50	10.00	11.00
3D	10.50	10.00	11.00
4D	10.50	10.00	11.00
5D	10.50	10.00	11.00
6D	10.50	10.00	11.00
7D	10.50	10.00	11.00
8D	10.50	10.00	11.00
9D	10.50	10.00	11.00
10D	10.50	10.00	11.00
11D	10.50	10.00	11.00
12D	10.50	10.00	11.00
13D	10.50	10.00	11.00
14D	10.50	10.00	11.00
15D	10.50	10.00	11.00
16D	10.50	10.00	11.00
17D	10.50	10.00	11.00
18D	10.50	10.00	11.00
19D	10.50	10.00	11.00
20D	10.50	10.00	11.00
21D	10.50	10.00	11.00
22D	10.50	10.00	11.00
23D	10.50	10.00	11.00
24D	10.50	10.00	11.00
25D	10.50	10.00	11.00
26D	10.50	10.00	11.00
27D	10.50	10.00	11.00

ARM

ARM

Power with base price, recalculated from the peak and off peak prices

CO2 Emission future interpolated values between pillars

1.1.7. Currencies and Rates.

Live Bid and Ask from Bloomberg.

Live discount factor recalculated from FX forwards and USD discount factors.

Live discount factors, bootstrapped from cash rate, futures and IRS.

Forward points

DISCOUNT FACTOR USD									
Last update received from XXX : 17/07/14 02:28:09									
Maturity	StartDate	Discount Factor							
1D	04/06/2014 00:00:00	0.99999258							
2D	04/06/2014 00:00:00	0.99998952							
1W	04/06/2014 00:00:00	0.99996978							
2W	04/06/2014 00:00:00	0.99994267							
1M	04/06/2014 00:00:00	0.99985322							
2M	04/06/2014 00:00:00	0.99966674							
3M	04/06/2014 00:00:00	0.99940724							
4M	04/06/2014 00:00:00	0.99920324							
5M	04/06/2014 00:00:00	0.99899167							
6M	04/06/2014 00:00:00	0.99876172							
7M	04/06/2014 00:00:00	0.99848918							
8M	04/06/2014 00:00:00	0.99820978							
9M	04/06/2014 00:00:00	0.99793362							
10M	04/06/2014 00:00:00	0.99754762							
11M	04/06/2014 00:00:00	0.99717513							
1Y	04/06/2014 00:00:00	0.99677339							
15M	04/06/2014 00:00:00	0.99504807							
18M	04/06/2014 00:00:00	0.99332916							
21M	04/06/2014 00:00:00	0.99141678							
2Y	04/06/2014 00:00:00	0.98920666							
27M	04/06/2014 00:00:00	0.98548126							
30M	04/06/2014 00:00:00	0.98135446							
33M	04/06/2014 00:00:00	0.97670937							
3Y	04/06/2014 00:00:00	0.97160314							
39M	04/06/2014 00:00:00	0.96596846							
42M	04/06/2014 00:00:00	0.96002883							
45M	04/06/2014 00:00:00	0.95361051							

EURO									
Last update received from XXX : 17/07/14 02:28:09									
Maturity	BID	ASK	Forward	D.F. EUR	D.F. XXX	SPOT	spread		
SPOT	1.36015	1.36015	1.36015	1.00	1.00	1.36015	0.00		
SN	1.36014	1.36015	1.360145	0.99998584	0.99998952		-0.05		
1W	1.36011	1.36012	1.360115	0.99994404	0.99996978		-0.35		
2W	1.36011	1.36012	1.360115	0.99991694	0.99994267		-0.35		
1M	1.36008	1.36009	1.360085	0.9998211	0.99986888		-0.65		
2M	1.36013	1.36015	1.36014	0.99965939	0.99966674		-0.10		
3M	1.36019	1.3602	1.360195	0.9994403	0.99940724		0.45		
6M	1.36045	1.36053	1.36049	0.99901139	0.99876172		3.40		
9M	1.36084	1.36101	1.360925	0.99850223	0.99793362		7.75		
1Y	1.36151	1.36168	1.361595	0.99779281	0.9967339		14.45		
18M	1.3642	1.3647	1.36445	0.99646948	0.99332916		43.00		
2Y	1.3696	1.37039	1.369995	0.99636671	0.98920666		98.45		
3Y	1.38777	1.38892	1.388345	0.99174383	0.97160314		281.95		
4Y	1.4114	1.41312	1.41226	0.98306881	0.94679524		521.10		
5Y	1.43771	1.4397	1.438705	0.97046456	0.91747605		785.55		
7Y	1.48508	1.48946	1.48727	0.93352066	0.85373075		1271.20		
10Y	1.53953	1.54703	1.54328	0.86039842	0.7583011		1831.30		
15Y	1.61445	1.62645	1.62045	0.73310225	0.61534082		2603.00		

BRITISH POUND									
Last update received from XXX : 17/07/14 02:28:09									
Maturity	BID	ASK	Forward	D.F. GBP	D.F. XXX	SPOT	spread		
SPOT	1.6745	1.6745	1.6745	1.00	1.00	1.6745	0.00		
SN	1.67449	1.67449	1.67449	0.99998355	0.99998952		-0.10		
1W	1.67441	1.67441	1.67441	0.99991603	0.99996978		-0.90		
2W	1.67432	1.67433	1.674325	0.99983817	0.99994267		-1.75		
1M	1.67408	1.67409	1.674085	0.99962108	0.99986888		-4.15		
2M	1.67372	1.67372	1.67372	0.99920108	0.99966674		-7.80		
3M	1.67332	1.67332	1.67332	0.99870297	0.99940724		-11.80		
6M	1.6719	1.67199	1.671945	0.99723779	0.99876172		-25.55		
9M	1.67005	1.67027	1.67016	0.99534716	0.99793362		-43.40		
1Y	1.66766	1.66794	1.6678	0.99274577	0.9967339		-67.00		
18M	1.662	1.66251	1.662255	0.98606531	0.99332916		-122.45		
2Y	1.65603	1.65702	1.656525	0.97858797	0.98920666		-179.75		
3Y	1.65023	1.65162	1.650925	0.95792411	0.97160314		-235.75		
4Y	1.64924	1.65222	1.65073	0.93335521	0.94679524		-237.70		
5Y	1.65243	1.65727	1.65485	0.90670961	0.91747605		-196.50		
7Y	1.66817	1.67237	1.67027	0.85157412	0.85373075		-42.30		
10Y	1.6888	1.7009	1.69485	0.76751664	0.7583011		203.50		
15Y	1.7165	1.7415	1.729	0.63536834	0.61534082		545.00		

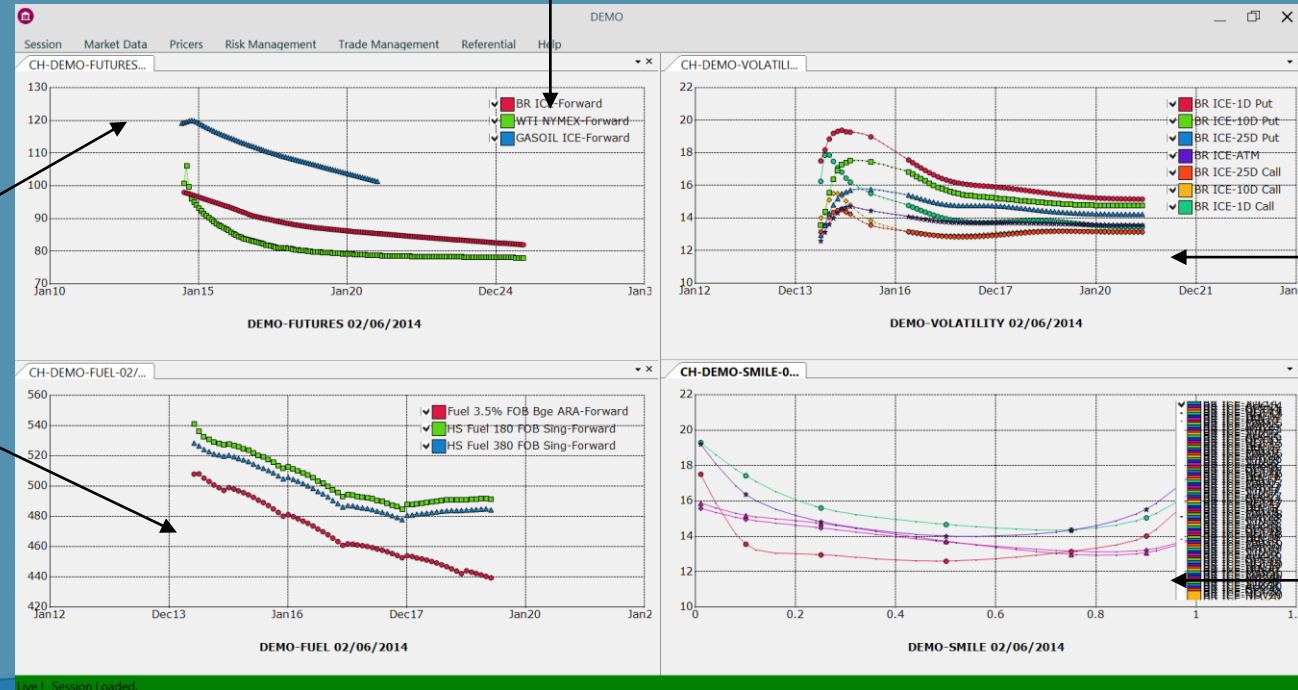
FX Forwards

FX Forwards

1.1.8. Charting.

Displayed curves.

Flat Price Chart.



Volatility Chart.

Smile Chart.

1.2. Pricers.

1.2.1. Swap Pricer:

- Users can define 2 legs and calculate the spread.
- Real time update based on underlying market data changes.
- Pricing of swap and forward strip.
- Customisation of the strip : Start date, end date, quantity, settlement date of each period.
- Automatic generation of monthly, quarterly, yearly strip.
- Compo, quanto pricing.
- Rolling and fix nearby.
- Future rolling rules (at option expiry, notice date...).

1.2.2. Option Pricer:

- Same features as swap pricer (without the spread calculation).
- Users can define linear combinations of trades and calculate the total PV and Greeks.
- Strip Pricing of American, European and Asian options.
- Greeks calculation by scenarios.
- Cross and correlation override, volatility bump.
- Detailed risk analysis with scenarios.
- Detailed risk analysis in the future with fixing overrides.
- Display of pricing errors and warnings.

1.2.1. Swap Pricer (screenshots).

Strip definition. It could be fully customized

Strip Configuration

Start Date	End Date	QTY	Expiration Date	Settlement Date
02/01/2015	30/01/2015	1	30/01/2015	30/01/2015
02/02/2015	27/02/2015	1	27/02/2015	27/02/2015
02/03/2015	31/03/2015	1	31/03/2015	31/03/2015
01/04/2015	30/04/2015	1	30/04/2015	30/04/2015
04/05/2015	29/05/2015	1	29/05/2015	29/05/2015
02/06/2015	30/06/2015	1	30/06/2015	30/06/2015
01/07/2015	31/07/2015	1	31/07/2015	31/07/2015
03/08/2015	31/08/2015	1	31/08/2015	31/08/2015
01/09/2015	30/09/2015	1	30/09/2015	30/09/2015
01/10/2015	30/10/2015	1	30/10/2015	30/10/2015
02/11/2015	30/11/2015	1	30/11/2015	30/11/2015
01/12/2015	31/12/2015	1	31/12/2015	31/12/2015

Settlement Type: Monthly

Averaging: COMPODAILY

NEARBY 1NB

Save Cancel

Strip generator (Monthly, Quarterly...)

Averaging Method (Quanto, Compo ...)

Fixing type

Leg 1.

Spread

Leg 2.

DEMO

Session Market Data Pricers Risk Management Trade Management Referential Help

SP-DEMO OP-DEMO

02/06/2014 Auto Please load appropriate currencies/commodities to get live pricing. Click here to see the list.

	DealType 1	Underlying 1	Currency 1	Period 1	Unit 1	Price 1	Spread	DealType 2	Underlying 2	Currency 2	Period 2	Unit 2	Price 2
	SWAP	BR ICE	USD	C15	BBL	102.795	3.51	SWAP	DUBAI	USD	C15	BBL	99.285
	SWAP	BR ICE	USD	JAN15-MAY15	BBL	104.051	3.563	SWAP	DUBAI	USD	JAN15-MAY15	BBL	100.488
	SWAP	BR ICE	USD	Q315	BBL	102.219	3.415	SWAP	DUBAI	USD	Q315	BBL	98.804
	SWAP	BR ICE	USD	Q415	BBL	101.194	3.477	SWAP	DUBAI	USD	Q415	BBL	97.717
	SWAP	BR ICE	USD	S115	BBL	103.879	3.573	SWAP	DUBAI	USD	S115	BBL	100.306
*													

Swap Pricer

Live ! Market Data Loaded.

1.2.2. Option Pricer (screenshots).

Dimensions and measures

The screenshot shows the 'Pricer Risk Analysis' window. On the left, there's a 'Cube structure' pane with a tree view containing 'Measures', 'Dimensions', and 'Filters'. The 'Measures' list includes MTM, DeltaFut, Vega, Gamma, and Theta. The 'Dimensions' list includes RFD-Year, RFD-Month, and RFD-Day. The 'Filters' list is empty. The main area displays a pivot table with 'RFD-Year' and 'RFD-Month' as dimensions and the measures as values. The table shows data for 2014 and 2015, with rows for Dec, Jan, and Feb. The values are numerical, representing risk metrics.

Item	Filter description	MTM	DeltaFut	Vega	Gamma	Theta
2014		97.09	0	0	0	-0.01
Dec		97.09	0	0	0	-0.01
2015		0	1.12	0.13	0.02	0
Jan		0	0.76	0.09	0.01	0
Feb		0	0	0.04	0.01	0
Total		97.09	1.12	0.13	0.02	-0.01

Pivot table

Legs

Greeks and PVs can be displayed by unit, by period or total

Header

ARM																							
Session Market Data Pricers Risk Management Trade Management Referential Help																							
OP-DEMO																							
02/06/2014																							
Auto																							
Collapse All Expand All																							
Strategy Name Strategy Type dealtype underlyingcode period strike cross volbump range Total PV Total Delta Total Vega Total Gamma Total Theta																							
DEMO CUSTOM BR ICE DEC14 0 0 0 0 0 107.684 1.368 0.277 0.038 -0.010																							
dealtype underlyingcode currency period unit quantity strike optiontype cross volbump correlation crossref crossref fx volref Unit PV Unit Delta Unit Theta Unit Gamma Unit Vega Unit Cega																							
OPAS BR ICE USD DEC14 BBL 1 108 Call 0 0 0 0 105.22 0 14.29 3.7 0.442 0.011 0.039 0.302																							
OPAS BR ICE USD DEC14 BBL -1 110 Call 0 0 0 0 105.22 0 14.177 -2.477 -0.367 0.011 -0.039 -0.288																							
OPAS BR ICE USD DEC14 BBL 1 112 Call 0 0 0 0 105.22 0 14.117 1.889 0.294 -0.01 0.038 0.263																							
SWAP BR ICE USD DEC14 BBL 1 0 Call 0 0 0 0 105.22 0 0 105.066 0.999 0 0 0																							
Total 107.684 1.368 0.277 0.038 -0.010																							
CLIENT 1 Call Spread OPAS DUBAI C15 0 0 0 0 0 5.512 0.65 0.403 0.03 -0.008																							
dealtype underlyingcode currency period unit quantity strike optiontype cross volbump correlation crossref crossref fx volref Unit PV Unit Delta Unit Theta Unit Gamma Unit Vega Unit Cega																							
OPAS DUBAI USD C15 BBL 1 108 Call 0 0 0 0 99.285 0 12.539 2.058 0.298 -0.006 0.031 0.357																							
OPAS DUBAI USD C15 BBL -1 110 Call 0 0 0 0 99.285 0 12.446 -1.598 -0.244 0.005 -0.029 -0.323																							
Total 0.460 0.054 -0.001 0.002 0.034																							
CLIENT 2 CUSTOM SWAP COC - FUT NYBOT DEC14 0 0 0 0 0 3,060.503 0.999 0 0 0 0.460 0.054 -0.001 0.002 0.034																							
dealtype underlyingcode currency period unit quantity strike optiontype cross volbump correlation crossref crossref fx volref Unit PV Unit Delta Unit Theta Unit Gamma Unit Vega Unit Cega																							
SWAP COC - FUT NYBOT USD DEC14 TON 1 0 Call 0 0 0 0 3,060.503 0 0 3,060.503 0.999 0 0 0 0																							
Total 3,060.503 0.999 0.000 0.000 0.000																							
CLIENT 3 CUSTOM WTI NYMEX DEC14 0 0 0 0 0 97.091 1.117 0.133 0.017 -0.005																							
dealtype underlyingcode currency period unit quantity strike optiontype cross volbump correlation crossref crossref fx volref Unit PV Unit Delta Unit Theta Unit Gamma Unit Vega Unit Cega																							
OPAS WTI NYMEX USD DEC14 BBL 1 108 Call 0 0 0 0 96.528 0 14.724 0.854 0.151 -0.006 0.024 0.163																							
OPAS WTI NYMEX USD DEC14 BBL -1 110 Call 0 0 0 0 96.528 0 14.878 -0.637 -0.109 0.005 -0.022 -0.13																							
OPAS WTI NYMEX USD DEC14 BBL 1 112 Call 0 0 0 0 96.528 0 15.149 0.487 0.076 -0.004 0.015 0.1																							
SWAP WTI NYMEX USD DEC14 BBL 1 0 Call 0 0 0 0 96.528 0 0 96.387 0.999 0 0 0 0																							
Total 97.091 1.117 -0.005 0.017 0.133																							
CLIENT 4 CUSTOM OPAS COPPER LME JAN15 0 0 0 0 0 -133.89 -0.067 2.196 0 -0.057																							
dealtype underlyingcode currency period unit quantity strike optiontype cross volbump correlation crossref crossref fx volref Unit PV Unit Delta Unit Theta Unit Gamma Unit Vega Unit Cega																							
OPAS COPPER LME USD JAN15 TON 1 6,700 Call 0 0 0 0 6,901.449 0 17.905 493.217 0.686 -0.812 0 20.213																							
OPAS COPPER LME USD JAN15 TON -1 6,500 Call 0 0 0 0 6,901.449 0 18.673 -627.107 -0.753 0.755 0 -18.017																							
Total -133.890 -0.067 -0.057 0.000 2.196																							
Total 3136.900 4.067 3.009 0.085 -0.080																							

Duplicate leg or header.

Delete leg or header.

Pricing option and
Risk analysis configuration

1.3. Trade Management.

- Futures, Forwards, Swaps, American options, Asian options, European options can be inputted. Physical Contracts are under development and should be ready end of the year 2015.
- Trade versioning: every time a trade is modified or deleted a version is created. A complete trade history is available.
- Full strip customisation (see pricers for details).
- Automatic fees calculation depending on Broker and Clearer.
- Portfolio blotter:
 - Real time portfolio monitoring (PnL, fees, greeks).
 - Trade blotter with greeks and PnL.
 - Quick trade insertion with predefined templates.
 - Trade copy, deletion.
- Trade search by criteria (portfolio, trade type...)
- This module is available as C# heavy client.

1.3. Trade Management (Heavy client screenshots).

Risk analysis definition, and
deal scope definition

Trade search criteria.

Risk
analysis

Portfolio Blotter

Category	PnL	NRG	MTM	DeltaFut	Gamma	Vega	Theta
Total	617 226.53	817 224.53	817 224.53	55 585.34	55 585.34	272.44	272.44
Jun14	127.79	127.79	127.79				
Dec14	32 149.49	32 149.49	32 149.49				
Jan15	61 293.43	61 293.43	61 293.43	1 865.45	1 865.45	16.18	16.18
Feb15	59 058.76	59 058.76	59 058.76	3 747.83	3 747.83	21.23	21.23
Mar15	58 022.07	58 022.07	58 022.07	3 887.08	3 887.08	21.76	21.76
Apr15	57 064.09	57 064.09	57 064.09	3 702.47	3 702.47	20.45	20.45
May15	56 102.19	56 102.19	56 102.19	3 734.3	3 734.3	18.71	18.71
Jun15	103 826.38	103 826.38	103 826.38	4 789.56	4 789.56	19.65	19.65
Jul15	101 743.62	101 743.62	101 743.62	5 556.72	5 556.72	25.55	25.55
Aug15	100 049.98	100 049.98	100 049.98	6 184.01	6 184.01	42.61	42.61
Sep15						1 097.86	1 097.86

Trade shortcuts: New Deal, Forward, Future, 3ML, Spot

Trade Search

Init. Search Criteria

Search

Deal Type	Underlying	Portfolio	Way	Quantity	Strike	Maturity Code
ALL	ALL	ALL	ALL			

From Trade Date: 01/01/1970 To Trade Date: 01/01/1970 From Mat. Value: 01/01/1970 To Mat. Value: 01/01/1970

Market: ALL Broker: ALL Clearer: ALL Media: ALL

Deal	Underlying	Dealtype	Way	Strike	Premium	Option Type	Qty	Unit	Maturity	PnL	Delta	Gamma	Vega	Theta
1	BR ICE	SWAP	B	90	0		2	LOT	C15	0	0	0	0	0
2	BR ICE	OPAM	B	90	0	c	2	LOT	C15	0	0	0	0	0
4	BR ICE	OPAS	B	90	1	c	2	LOT	Q315	0	0	0	0	0
5	BR ICE	SWAP	B	90	0		1	LOT	C16	0	0	0	0	0
6	WTI NYMEX	OPAM	S	90	0	c	2	LOT	DEC16	0	0	0	0	0
7	GO 0.05%	SWAP	B	600	0		1	TON	C16	0	0	0	0	0
8	DUBAI	SWAP	S	95	0		1	BEL	Q315	0	0	0	0	0
9	DUBAI	SWAP	B	80	0		1	LOT	Q315	0	0	0	0	0
10	GO 0.05%	SWAP	S	128	0		10	TON	Q416	0	0	0	0	0
11	Fuel 3.5%	SWAP	S	600	0		10	TON	Q315	0	0	0	0	0
12	Fuel 3.5%	SWAP	B	590	0		11	TON	Q315	0	0	0	0	0

Trade shortcuts: New Deal, Forward, Future, 3ML, Spot

Trade shortcuts

Trade list

Trade shortcuts

Trade list

Trade Input

TradeType: Future Underlying: WTI NYMEX Currency: US Dollar Way: Buy TradeDate: 23/09/2015 TradeValueDate: 23/09/2015

Portfolio: PTF1 Trader: USERS 1 Back/Validated: Clearer: FREE Broker: FROM TradingMedia: Electronics IsTAS: []

Comment: Demo

PortfolioName: C15 Strike: 112 Quantity: 10 Unit: LOT NeatlyType: Neatly Neatly: INB PaymentFrequency: Monthly

Risk: Forward PaymentMethod: Cash CurrencyAverageMethod: Daily Composition

PayoffFlow:

ExpirationDate	SettlementDate	BeginDelivery	EndDelivery	Quantity	Unit	CurrencyStrike	Strike	CommodityPayoff
20/10/2015	20/10/2015			10	Lut	US Dollar	112	US Dollar
20/11/2015	20/11/2015			10	Lut	US Dollar	112	US Dollar

CashFlow:

Type	SettlementDate	Quantity	Unit	CommodityPayoff
PL/CL	23/09/2015	8.00000000	per trade	US Dollar
CLEARING	23/09/2015	0.00000000	per trade	US Dollar

Trade input screen

1.4. Risk Analysis.

- Risk analysis can be defined by portfolio or trade list.
- Customisable view using pivot table and tab.
- PnL, Mark to Market, greeks and explained PnL ,greeks calculation.
- Bi-axes scenarios, flat price and volatility.
- Calculation distribution on a calculation farm.
- Risk projection on market contracts.
- Drill through to trade id.
- Strike and delta bucketing.
- More than 20 dimensions available (Underlying, portfolio, client...).
- Conditional formatting.
- Users can run risk analysis against different market data sets.
- Comparison of 2 risk analysis.
- Errors and warnings report.

1.4. Risk Analysis (screenshots).

Dimensions and measures

Errors and warnings

Views displayed by tab.

DEMO

Session: Market Data Pricers Risk Management Trade Management Referential Help

Blotter: PTF1 Deals Search TEST PTF1 COMPARE SG-LDN...

Calculation date: 16/07/2011 - 2 errors. Click here for details

Delta/Year Vola/Year Gamma/Year PNL/Year Theta/Year Scenario Market Data

Filter area

Columns area

Measures Category Underlying

Category Underlying Risk Factor Time

Category	Underlying	Risk Factor	Time	Australian Dollar	CUR	HS Fuel 180 FOB Sing	Jet Kero FOB Sing	DUBAI	HS Fuel 360 FOB Sing	GO 0.05% FOB Sing	ULSD 10 SINGAPORE	BR DATED	Fuel 3.5% FOB Bge ARA	Jet CIF Cgo NWE	WTI NYMEX	BR ICE	GASOIL ICE	HO NYMEX	W
Jul14				2 854 017.44	2 654 017.44	15 432.82	-14 621.28	12 115.07	-94.89	28 937.23	1 354.23	-6 964.22	-1 619.83	794.38	35 647.47	68 000	70 396.12	-4 493.6	
Aug14				2 899 621.97	2 899 621.97	13 835.71	-36 629.54	20 602.4	3.49	-25 496.73	1 713.88	29 990.24	-34 452.41	10 525.8	-2 058.96	-9 879.51	81 735.23	22 680.26	1 832.51
Sep14				3 273 202.92	3 273 202.92	5 123.55	15 639.39	-7 756.45	-1 389.82	-4 751.12	3 414.53	19 988.66	-2 058.96	-7 100.53	-9 879.51	81 735.23	22 680.26	1 832.51	
Oct14				6 474 862.71	6 474 862.71	-8 178.08	-14 067.26	3 250.73	9.49	-14 961.14	10 000		-5 496.55	-7 856.44	-100 000	9 295.53	-15 913.91	-1 039.19	
Nov14						-3 412.8	-5 322.72	-8 398.69	12.04	-1 967.66	10 000		-4 792.72	-23 595.16	104 259.98	9 290.56	-4 857.46	-1 079.74	
Dec14						7 116.47	15 823.51	10 038.31	15.77	-35.99	10 000		-5 041.73	23 640	-1 942.18	29 372.97	44 399.29	1 007.47	
Jan15				6 961 051.95	6 961 051.95	-5 122.9	-12 696.42	-33 943.8	-64 470.4	16.16				4 700.14	2 893.42	-22 629.19	-1 003.4		
Feb15						-2 972.63	-10 880.75	-33 933.32	-38 237.55	14.53	9 981.56			-1 350.11	23 362.34	27 857.14			
Mar15						-11 549.76	-9 857.67	-29 928.38	-43 642.65	19.48	9 977.31			71.51	68 665.39	24 090.91			
Apr15				4 172 676.29	4 172 676.29	-9 992.93	3 034.1	-29 914.26	3 639.26	-9 690.74	19 945.43			86	57 421.17	15 909.09			
May15						-8 753.78	5 187.07	-29 698.23	5 175.03	-8 163.55	0			25.33	37 367.62	0			
Jun15						-6 249.73	6 425.97		6 773.04	-8 356.81	0			60.4	-10 983.92	94 309.04	0		
Jul15				1 227 287.74	1 227 287.74	-3 268.11	-3 939.2		-995.49		-5 090.3			71.16	10 670.96				
Aug15						-107.36	-6 114.54		-994.72		-5 103.71			83.29	-13 181.31				
Sep15						-100.97	2 811.71		-993.07		-5 120.69			0	9 667.18				
Oct15						-8 936.61	-3 345.45		-5 432.72					0	4 755.13				
Nov15						-100.8	6 618.21		-962.37					0	26 266.16				
Dec15						-107.01	5 811.25		-991.47					-42 736.17	290 107.93				
Jan16						0			-990.76					-6 257.44	-79 696.26				
Feb16						0			-990.03										
Mar16																			

Pivot table

Simulation Definition.

Job Definition

Name: TEST PTF1

Portfolios: PTF10 x

Trade List

☒ With Deal Info ☐ With Explained PnL Indicators ☐ After Fixing

Add scenarios Remove scenarios 0

Units: Default Market Closing Master

☐ Trade Version 13 April 2015

Technical Parameters

Calculation Unit Number: 15 Processes

Change Views 73

Save 13 April 2015 Run

Trade scope definition.

Pricing options.

Technical Option

Scenario Designer.

ScenarioDesigner

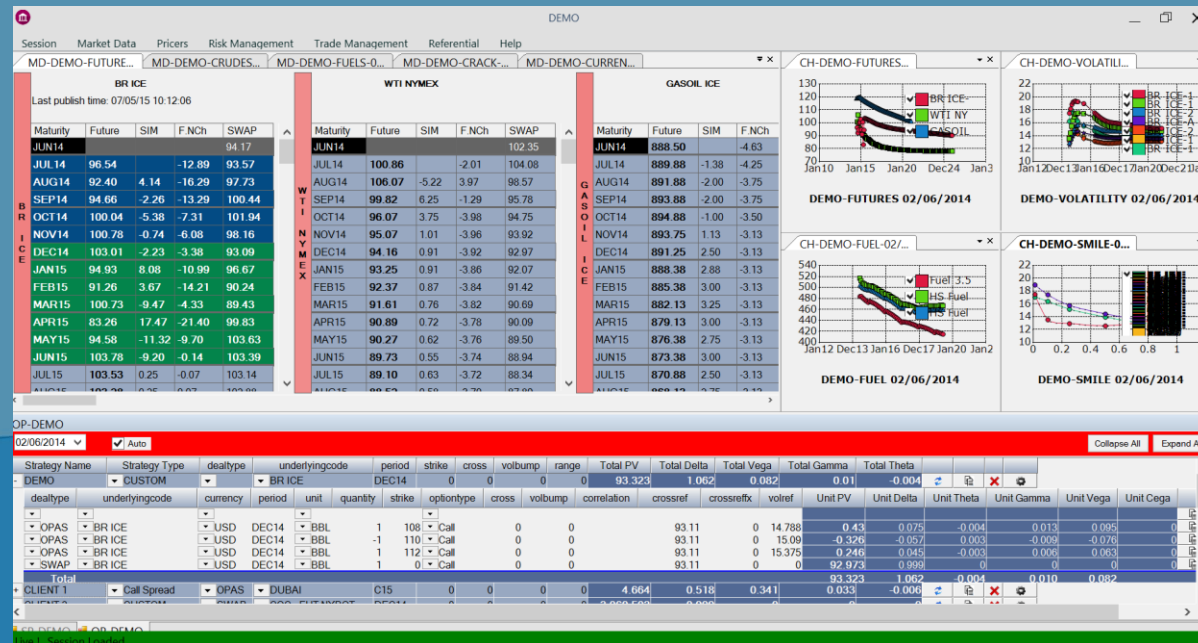
TEST Now Delete

Underlying	Curve	Bump Style	bumpsizes
ALUMINIUM LME	Forward	Relative	-20;-10;0;10;20
COPPER LME	Forward	Absolute	-15;-5;0;5;15
NICKEL LME	Forward	RelativePrompt	-20;-10;0;10;20
LEAD LME	Forward	Relative	-20;-10;0;10;20
ZINC LME	Forward	Relative	-20;-10;0;10;20
ALL	Volatility	Absolute	-15;-5;0;5;15

Save

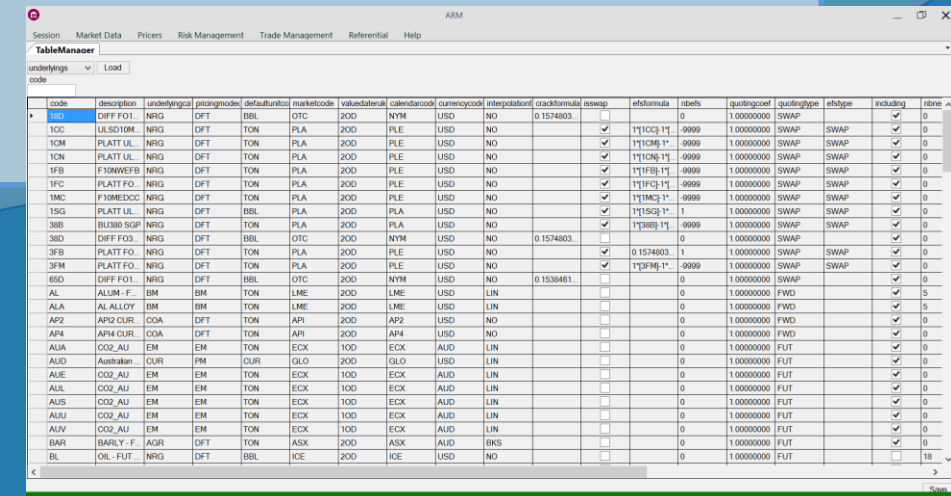
1.5. Session.

- Users can define their own layout, and save it.
- The layout is available from any computer.
- The session can be open manually or automatically at a given time.



1.6. Referential Management.

- The application has its own referential, it can be managed from the user interface, and it is stored into the database.
- Referential data includes calendars, market conventions, underlying definition, clients, analytical structure (portfolios, portfolio groups) ...
- Referential can be fed from external sources.
- Referential can be exported in XML format.



The screenshot shows the 'TableManager' application window with a menu bar (Session, Market Data, Prices, Risk Management, Trade Management, Referential, Help) and a toolbar (underlyings, Load). The main area displays a table with columns: code, description, underlying, pricingmode, defaultunitof, marketcode, valuedateunit, calendarcode, currencycode, interpolation, crackformula, swap, estformula, rebets, quotingcoef, quotingtype, esttype, including, and rebne. The table contains various financial instruments and their associated parameters.

code	description	underlying	pricingmode	defaultunitof	marketcode	valuedateunit	calendarcode	currencycode	interpolation	crackformula	swap	estformula	rebets	quotingcoef	quotingtype	esttype	including	rebne
100	DIFF F01	NRG	DFT	BBL	OTC	200	NYM	USD	NO	0.1574803				0	1.00000000	SWAP		0
10C	US1010M	NRG	DFT	TON	PLA	200	PLE	USD	NO			1110C3 1	-9999	1.00000000	SWAP	SWAP		0
10M	PLATT UL	NRG	DFT	TON	PLA	200	PLE	USD	NO			1110M3 1	-9999	1.00000000	SWAP	SWAP		0
10N	PLATT UL	NRG	DFT	TON	PLA	200	PLE	USD	NO			1110N3 1	-9999	1.00000000	SWAP	SWAP		0
1FB	F10NWEFB	NRG	DFT	TON	PLA	200	PLE	USD	NO			111FB3 1	-9999	1.00000000	SWAP	SWAP		0
1FC	PLATT FO	NRG	DFT	TON	PLA	200	PLE	USD	NO			111FC3 1	-9999	1.00000000	SWAP	SWAP		0
1MC	F10MEDC	NRG	DFT	TON	PLA	200	PLE	USD	NO			111MC3 1	-9999	1.00000000	SWAP	SWAP		0
1SG	PLATT UL	NRG	DFT	BBL	PLA	200	PLE	USD	NO			111SG3 1	-9999	1.00000000	SWAP	SWAP		0
3B8	BU380 SQP	NRG	DFT	TON	PLA	200	PLE	USD	NO			113B83 1	-9999	1.00000000	SWAP	SWAP		0
3B0	DIFF F03	NRG	DFT	BBL	OTC	200	NYM	USD	NO	0.1574803				0	1.00000000	SWAP		0
3FB	PLATT FO	NRG	DFT	TON	PLA	200	PLE	USD	NO			113FB3 1	-9999	1.00000000	SWAP	SWAP		0
3FM	PLATT FO	NRG	DFT	TON	PLA	200	PLE	USD	NO			113FM3 1	-9999	1.00000000	SWAP	SWAP		0
6B0	DIFF F01	NRG	DFT	BBL	OTC	200	NYM	USD	NO	0.1538461				0	1.00000000	SWAP		0
AL	ALUM - F	BM	BM	TON	LME	200	LME	USD	LIN					0	1.00000000	FWD		5
ALA	AL ALLOY	BM	BM	TON	LME	200	LME	USD	LIN					0	1.00000000	FWD		5
AP2	AP2 CUR	COA	DFT	TON	API	200	API	USD	NO					0	1.00000000	FWD		0
AP4	AP4 CUR	COA	DFT	TON	API	200	API	USD	NO					0	1.00000000	FWD		0
AUA	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
AUD	Australian	CUR	PM	CUR	GLO	200	GLO	USD	LIN					0	1.00000000	FUT		0
AUE	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
AUL	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
AUS	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
AUJ	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
AUV	CO2 AU	EM	EM	TON	ECX	100	ECX	AUD	LIN					0	1.00000000	FUT		0
BAR	BARLY - F	AGR	DFT	TON	ASK	200	ASK	AUD	BKS					0	1.00000000	FUT		0
BL	OIL - FUT	NRG	DFT	BBL	ICE	200	ICE	USD	NO					0	1.00000000	FUT		18

1.7. Excel API.

- The main functionalities are available from the Excel API:
 - Price contribution and subscription.
 - Pricing of instrument (swap, options).
 - Trade insertion.
- Allow to quickly specify new needs or design tailor made pricing tools.
- Same level of security as the main application.

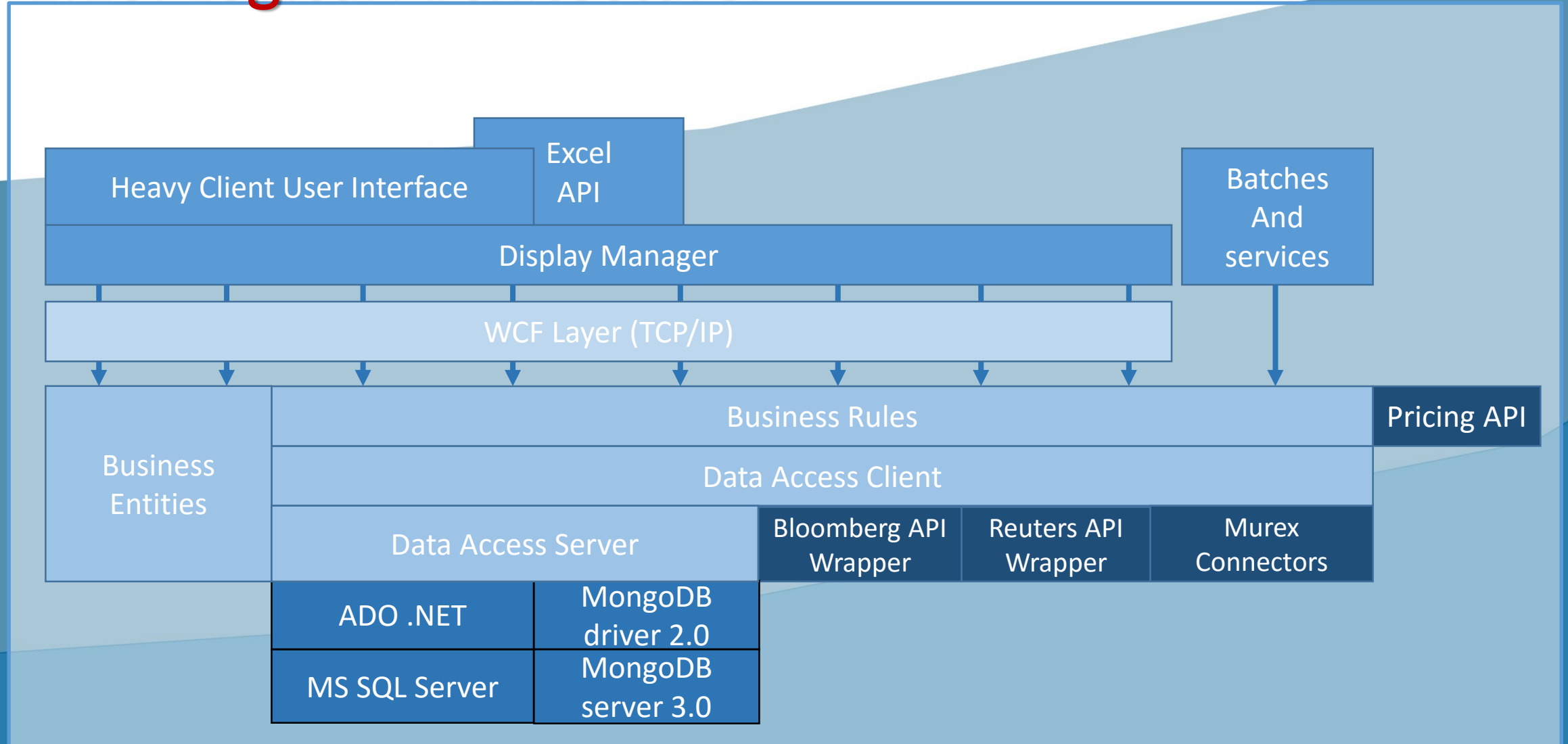
1.8. Connectivity with other systems.

- Bloomberg: API is implemented and allow to use either the client API or a B-Pipe connection. Closed days, live mid prices, fair values, settlements and fixings could be retrieved from the wrapper.
- Reuters: Live prices can be published or subscribed.
- Murex: Prices can published or retrieved from murex, users can specify the environment. And depending on the client configuration, trades could also be retrieved/inserted.
- Export/Import: Price can be exported to/imported from Totem or Super Derivatives, or by Email.
- Pricing API: The application has its own pricing library, but a client pricing library can be easily plugged using the pricing API wrapper.

1.9. Security and Audit.

- Transparent integrated Microsoft Windows security.
- Your own security module can be implemented.
- 4 different roles are available: Administrator, Trader, Sale, Operator.
- Only traders can publish prices.
- Market Data changes are audited.
- Trade changes are audited, i.e. a full history of the trade is available into the database.

1.10. Logical Architecture.



1.11. Technical Infrastructure.

- Thanks to the logical architecture, the technical infrastructure could be very flexible:
 - Simple client/server: with 1 database server, and clients. In this case, clients will act as calculation node for the risk analysis calculation distribution.
 - N tiers with an HPC grid: 1 database server, one or several application server, and one HPC calculation farm.
 - A middleware can be also added to speed up the curves sharing across geographical places.
- The technical infrastructure could be hosted and managed by the client, or we can propose a fully managed infrastructure.

2.12. Data storage.

- Referential data, market data, and market convention are stored in a relational database (MS SQL).
- Trades, and trade elements are stored in a document database (MongoDB).
- This design brings a high flexibility in trade storing and remove the constraint of high cost of maintainability of a complex relational data schema.
- New types of trade and trade modules can be added easily without changing the database. Only the user interface and business logic should be designed.