Mecklai Financial
WHERE RISK MEETS ITS MATCH

FX Risk Management

for Indian Fertilizer Companies

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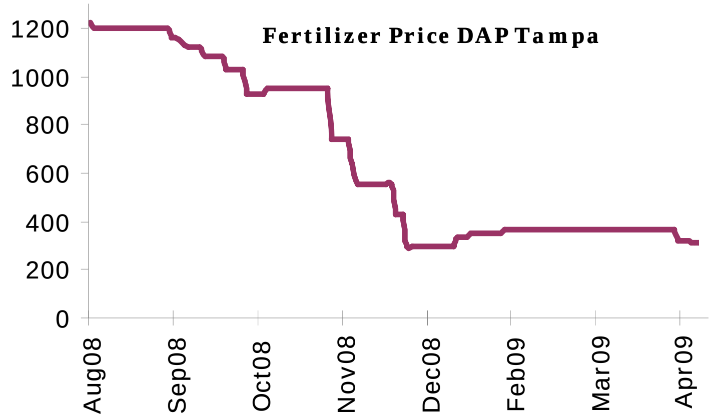
Background

The fertilizer industry plays a pivotal role in the Indian economy supporting the ongoing need of increased farm productivity. The industry as a whole is highly regulated with production quotas and an administered price mechanism (APM) that insulates farmers from high prices. Fertilizer producers are compensated via a subsidy that accounts for the differential between a commercial price and the administered price of fertilizers.

As with other industries, 2008 was an action-packed and challenging year for the fertilizer industry highlighted by

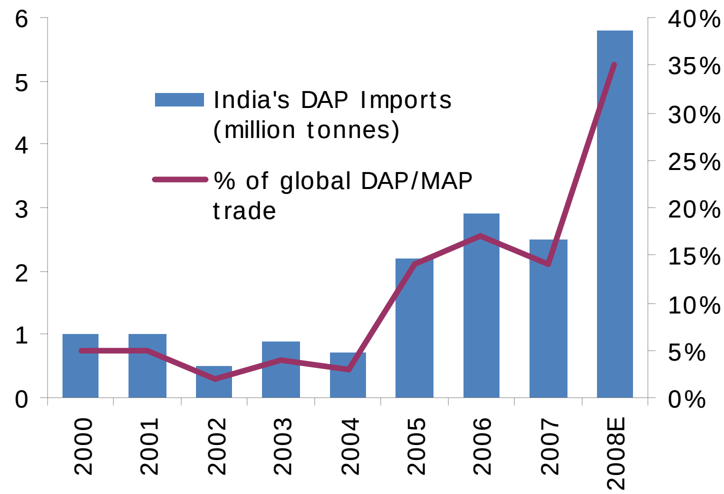
- Strong demand for crop nutrients
- Tight credit conditions
- Extremely volatile FX markets
- Domestic supply side issues on DAP production
- Sharp Rise, followed by an almost as sharp fall in commodity prices
- Illiquid and low yield fertilizer subsidy bond market

Figure 1 *(Source: Bloomberg)*



The bulk of raw material for phosphatic and complex fertilizers is imported and constitutes 70-75% of the production cost. This translates to significant foreign exchange transaction volumes (and consequently FX risk) for businesses – especially in the context of volatile FX markets and thinning margins.

Figure 2 *(Source: Based on FAI, PotashCorp, FerteCon data and as available on the Internet)*

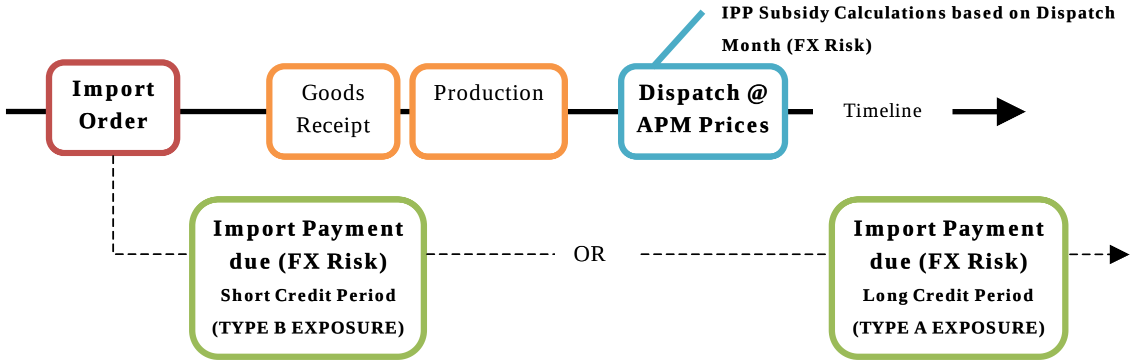


Peculiar nature of FX Risk

In principle, the subsidy based on Import Price Parity (IPP) compensates a manufacturer by directly linking the subsidy amount to import prices. Due to this, direct FX risk is largely eliminated. In effect, for each dollar of import the company receives a dollar by way of subsidy. However, in reality things are not this simple and companies carry a significant currency risk.

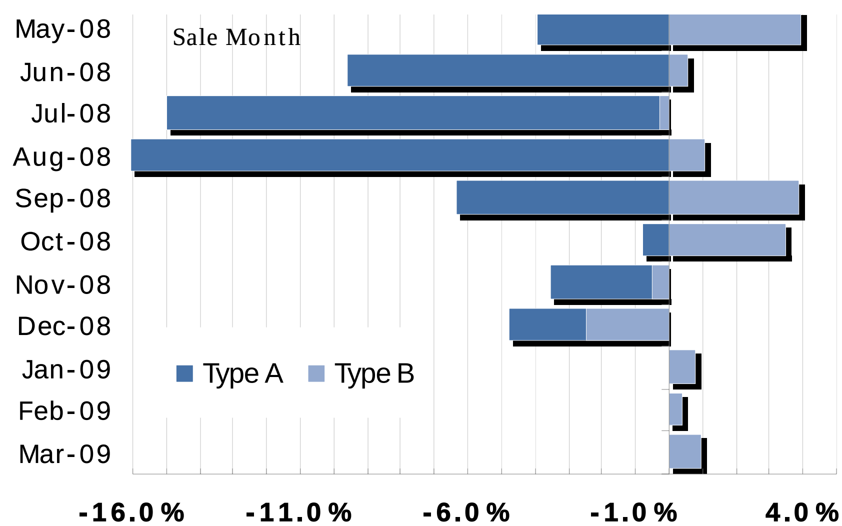
As shown below (Figure 3), FX Risk exists because of the time mismatch between Import Payment Date and Month of Fertilizer Dispatch. Companies need to ensure that their USD rate for import payment is not more than the Monthly Average RBI Reference rate for subsidy calculation.

Figure 3 *(Typical Lifecycle of FX Exposure)*



The graph below (Figure 4) illustrates the potential impact – rupee gain or loss in % terms based on historical market volatility and IPP calculations - for every dollar of import if companies stay unhedged.

Figure 4 *(Rupee Gain/ Loss in % for every $1 of import)*



[Note assumptions for the graph: **Type A Exposure (Longer Credit Cycle)** – *Sale Date* is 3 months from the *Date of Import* and *Import Payment* is due 6 months from the *Date of Import*. **Type B Exposure (Short Credit Cycle)** – *Sale Date* is 3 months from the *Date of Import* and the *Import Payment* is due 1 month from the *Date of Import*.]

Challenges in Hedging FX Risk

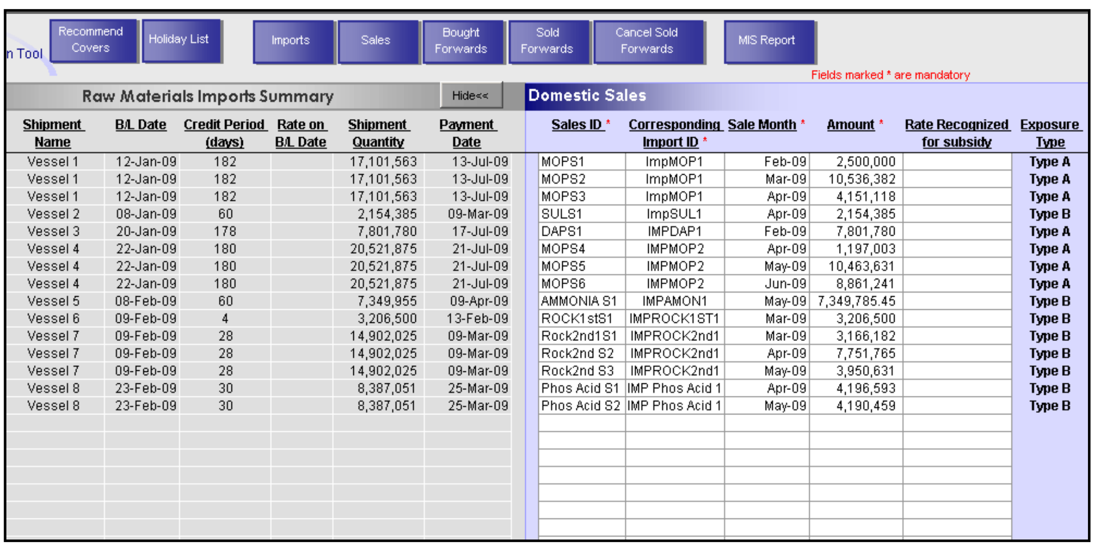
- Is it an Import Risk or Export Risk? It is both, as the import payment obligation is an import exposure and the method used to calculate the subsidy is akin to having an export exposure.
- Hedging is tightly linked to your Import Terms, Shipment and Production Data including inventory utilization, and eventual Sale.
- There is NO standard forward contract or other financial instrument available that provides you a strike rate based on the average of daily RBI reference rates for a given month. You need to have an approach to synthesize a forward. This is an operationally intense activity.
- Hedging exposures with a shorter credit cycle (what we call Type B Exposure) will require you to both buy and sell dollars. How can companies sell dollars forward when they have no underlying actual export?
- Integral to FX hedging decisions is an understanding of interest costs on credit lines

How can Mecklai help?

Mecklai has developed a solution – comprising a **PROPRIETARY APPROACH** and **A SET OF SOFTWARE TOOLS -** to manage this risk addressing the above challenges. Two leading fertilizer companies in India are already utilizing our solution**.**

The solution is detailed and treasury team members use the system to manage the risk covering **the entire life cycle spanning import entry, sales / production tracking, hedge signals and execution and subsidy crystallization.** Refer sample system screen shots below:

Figure 5 *(Sales Details Entry)*



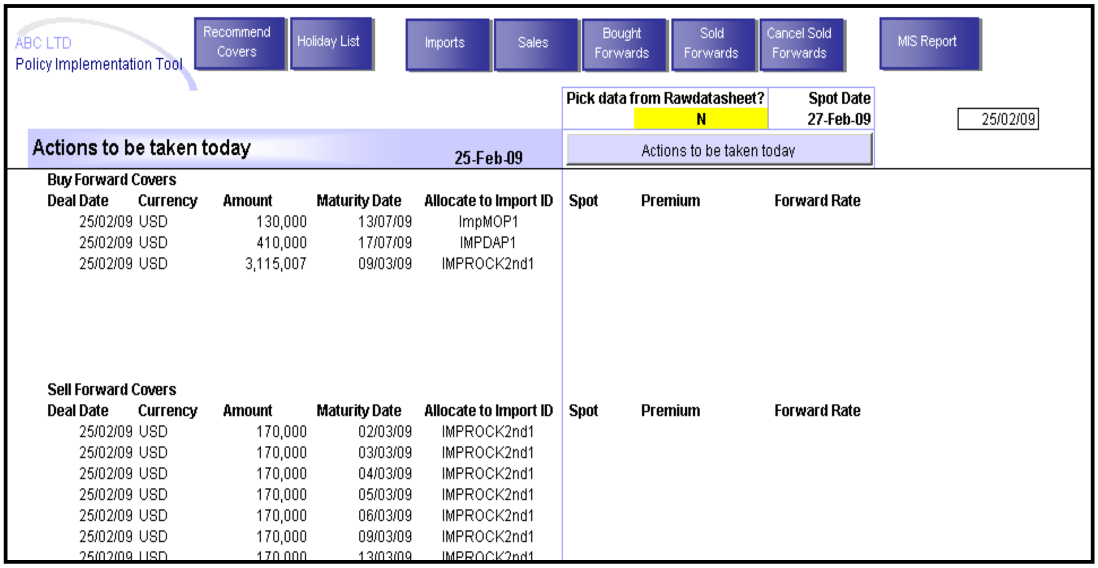
Raw Materials Imports Summary

Shipment Name	B/L Date	Credit Period (days)	Rate on B/L Date	Shipment Quantity	Payment Date
Vessel 1	12-Jan-09	182		17,101,563	13-Jul-09
Vessel 1	12-Jan-09	182		17,101,563	13-Jul-09
Vessel 1	12-Jan-09	182		17,101,563	13-Jul-09
Vessel 2	08-Jan-09	60		2,154,385	09-Mar-09
Vessel 3	20-Jan-09	178		7,801,780	17-Jul-09
Vessel 4	22-Jan-09	180		20,521,875	21-Jul-09
Vessel 4	22-Jan-09	180		20,521,875	21-Jul-09
Vessel 4	22-Jan-09	180		20,521,875	21-Jul-09
Vessel 5	08-Feb-09	60		7,349,955	09-Apr-09
Vessel 6	09-Feb-09	4		3,206,500	13-Feb-09
Vessel 7	09-Feb-09	28		14,902,025	09-Mar-09
Vessel 7	09-Feb-09	28		14,902,025	09-Mar-09
Vessel 7	09-Feb-09	28		14,902,025	09-Mar-09
Vessel 8	23-Feb-09	30		8,387,051	25-Mar-09
Vessel 8	23-Feb-09	30		8,387,051	25-Mar-09

Domestic Sales

Sales ID *	Corresponding Import ID *	Sale Month *	Amount *	Rate Recognized for subsidy	Exposure Type
MOPS1	ImpMOP1	Feb-09	2,500,000		Type A
MOPS2	ImpMOP1	Mar-09	10,536,382		Type A
MOPS3	ImpMOP1	Apr-09	4,151,118		Type A
SULS1	ImpSUL1	Apr-09	2,154,385		Type B
DAPS1	IMPDAP1	Feb-09	7,801,780		Type A
MOPS4	IMPMOP2	Apr-09	1,197,003		Type A
MOPS5	IMPMOP2	May-09	10,463,631		Type A
MOPS6	IMPMOP2	Jun-09	8,861,241		Type A
AMMONIA S1	IMPAMON1	May-09	7,349,785.45		Type B
ROCK1stS1	IMPROCK1ST1	Mar-09	3,206,500		Type B
Rock2nd1S1	IMPROCK2nd1	Mar-09	3,166,182		Type B
Rock2nd S2	IMPROCK2nd1	Apr-09	7,751,765		Type B
Rock2nd S3	IMPROCK2nd1	May-09	3,950,631		Type B
Phos Acid S1	IMP Phos Acid 1	Apr-09	4,196,593		Type B
Phos Acid S2	IMP Phos Acid 1	May-09	4,190,459		Type B

Figure 6 *(Daily Hedging Signals)*



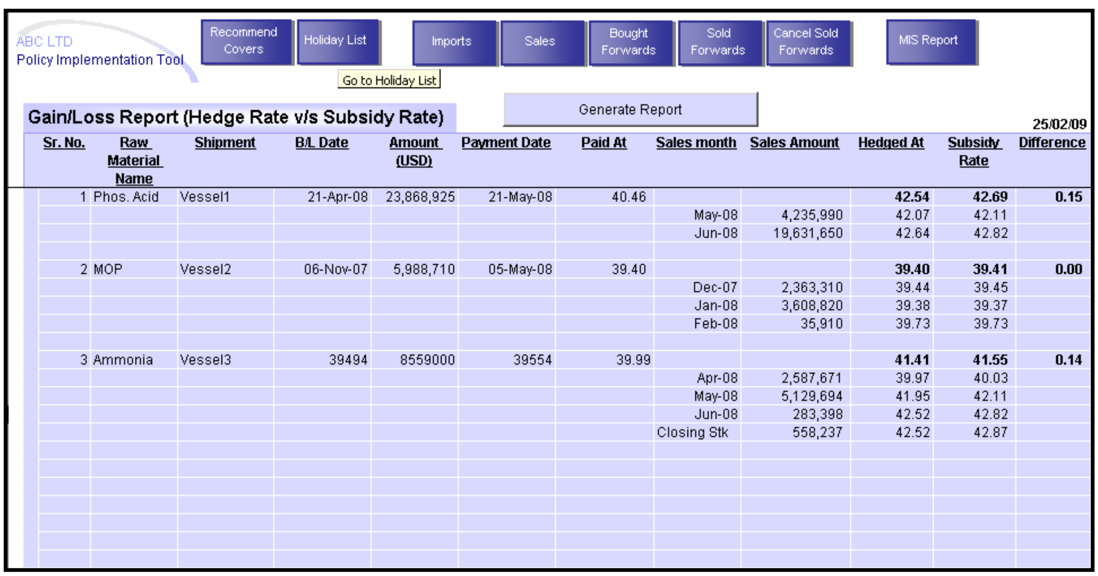
Buy Forward Covers

Deal Date	Currency	Amount	Maturity Date	Allocate to Import ID	Spot	Premium	Forward Rate
25/02/09	USD	130,000	13/07/09	ImpMOP1			
25/02/09	USD	410,000	17/07/09	IMPDAP1			
25/02/09	USD	3,115,007	09/03/09	IMPROCK2nd1			

Sell Forward Covers

Deal Date	Currency	Amount	Maturity Date	Allocate to Import ID	Spot	Premium	Forward Rate
25/02/09	USD	170,000	02/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	03/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	04/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	05/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	06/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	09/03/09	IMPROCK2nd1			
25/02/09	USD	170,000	13/03/09	IMPROCK2nd1			

Figure 7 *(MIS: Gain / Loss Report)*



Sr. No.	Raw Material Name	Shipment	B/L Date	Amount (USD)	Payment Date	Paid At	Sales month	Sales Amount	Hedged At	Subsidy Rate	Difference
1	Phos. Acid	Vessel1	21-Apr-08	23,868,925	21-May-08	40.46			**42.54**	**42.69**	**0.15**
							May-08	4,235,990	42.07	42.11	
							Jun-08	19,631,650	42.64	42.82	
2	MOP	Vessel2	06-Nov-07	5,988,710	05-May-08	39.40			**39.40**	**39.41**	**0.00**
							Dec-07	2,363,310	39.44	39.45	
							Jan-08	3,608,820	39.38	39.37	
							Feb-08	35,910	39.73	39.73	
3	Ammonia	Vessel3	39494	8559000	39554	39.99			**41.41**	**41.55**	**0.14**
							Apr-08	2,587,671	39.97	40.03	
							May-08	5,129,694	41.95	42.11	
							Jun-08	283,398	42.52	42.82	
							Closing Stk	558,237	42.52	42.87	

Depending on your needs, we can provide you a fully operational end-to-end solution, comprising **treasury policy, processes, software, training to staff and MIS.**

Please contact us at infowest@mecklai.com

About Mecklai Financial Services Ltd (MFSL)
(www.mecklai.com)

MFSL is a consulting company exclusively focused on risk management. We have been in business for over 25 years, the last ten of which have been as an unlisted public limited company. We engage at all levels from Board to Back-Office, offering a full suite of services, ranging from deep-dive consulting assignments to ongoing advisory.

With over 60 staff across 6 locations in India, we deliver tailored solutions backed by our proprietary risk management approach, robust technology and market research. Today, we already provide services to nearly a dozen non-Indian multinationals, over and above our domestic client base of nearly 1,000 companies. Over $20 billion worth of FX volume gets transacted by our clients, reflecting the materiality of our services.

Our business is structured along the following lines:

- **Risk Management Advisory** - FX & Interest Rates Advisory, Insurance Advisory
- **Risk Management Consulting** - Treasury Audit, Treasury Policy - Development and Implementation
- **Corporate Services** – Derivative Valuation & Accounting Services; Structured Product Design & Analysis; Outsourcing; Professional Education
- **Risk Management Software** – TRAKSIS
- **Research & Market Intelligence** – Daily/Weekly/Fortnightly research reports; electronic price ticker & analytical tools