

April 19, 2010

## Freight Index Movement - Mar 2010

•									
	Change (%)								
Asset Class	Current	3M	6M	1Yr.					
Dirty Tanker Index	964	18	69	79					
Clean Tanker Index	708	12	37	90					
Baltic Dry Index	2,998	0	35	86					
Capesize Index	3,425	-12	20	66					
Panamax Index	3,674	3	61	167					
Supramax Index	2,431	9	24	89					

## Freight Rates – Mar 2010

VLCC	1
Suezmax	1
Aframax	1
Capesize	1
Panamax	1
Supramax	1
Handysize	1

## Top Picks – April 2010

Top Buy	% Upside
Bharati Shipyard	28
Mercator Lines	23
Top Sell	% Downside
Varun Shipping	-22

#### Analyst's name

Bharat Chhoda bharat.chhoda@icicisecurities.com

Jehangir Master jehangir.master @icicisecurities.com

Prerna Jhunjhunwala prerna.jhunjhunwala@icicisecurities.com

# Dry bulk, offshore companies likely to outperform in April...

- The Baltic Dry Index (BDI) rose by 9% to 2998 in March 2010 as against 2738 in February 2010. The gain was led by 8% rise in Capesize index to 3425 and 8% rise in Panamax index to 3674
- The Dirty Tanker Index gained 8% to 964 on account of a rise in crude oil shipments while the Clean Tanker Index declined by 7% to 708 in March 2010 on account of sluggish demand for refined crude oil products
- LPG freight rates for VLGC and LGC declined marginally in March 2010
- Utilisation level for drillship, jack-up rigs and semisubs were at 90%, 81% and 86%, respectively in March 2010
- New build asset prices remained flat except for capesize bulk carriers, which gained marginally. Five year old asset prices for tankers continued to remain weak. However, dry bulk asset prices firmed up led by rise in Capesize and Panamax asset prices
- New building orders for dry bulkers increased from 35 to 71 vessels while that for tankers increased from 18 to 29 vessels in March 2010
- Demolition of vessels continued unabated with 167 vessels scrapped in March 2010. Maximum demolitions were of 57 crude/product tankers, followed by 47 container vessels and 37 dry bulk vessels. Average scrap prices also increased from \$340 per LDT to \$367 per LDT

## Outlook

## **Dry bulkers**

Dry bulk freight rates are expected to show a significant improvement in the second half of April 2010 as import of iron ore by China picks up momentum post conclusion of iron ore contracts between mining companies and Japanese steel producers.

## Tankers

We expect crude oil tanker freight rates to firm up on account of rise in shipments while product tanker rates are expected to remain flat.

## LPG carriers

LPG rates are likely to recover after remaining sluggish for almost the entire year.

## **Offshore vessels**

Crude oil prices spiked up sharply after being range bound for the last six months. The utilisation level of offshore vessels is expected to improve along with improvement in vessel day rates.



Tanker freight rates inched higher across all vessel categories. VLCC rates rose by 14% to \$29491 per day, Suezmax rates rose by 20% to \$17407 per day while Aframax rates gained by 28% to \$13401 per day.

Dry bulk freight rates showed strength and the benchmark index (BDI) rose by 9% during March 2010. Capesize vessel rates rose by 13% during the same period while the rates of Panamax vessels, which are the mid size vessels rose by 21% on account of higher demand for mid size vessels during March. Chinese import of iron ore from India increased sharply in March. As a majority of ports in India do not have infrastructure to handle Capesize vessels it resulted in higher demand for Panamax vessels and a resultant spike in panamax freight rates.

Exhibit 1: Tankers & bulkers T/C (US\$ per day)										
Dec,09	Jan ,10	Feb ,10	Mar ,10							
24797	49108	25908	29491							
17209	34911	14495	17407							
14572	17577	10476	13401							
55769	38877	30036	33881							
29500	29976	26308	31816							
26308	28200	27558	31358							
20292	16366	18889	20896							
	Dec,09 24797 17209 14572 55769 29500 26308	Dec,09 Jan ,10   24797 49108   17209 34911   14572 17577   55769 38877   29500 29976   26308 28200	Dec,09 Jan ,10 Feb ,10   24797 49108 25908   17209 34911 14495   14572 17577 10476   55769 38877 30036   29500 29976 26308   26308 28200 27558							

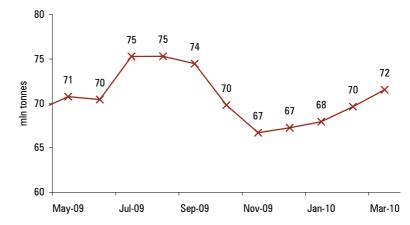
T/C- term charter

Source: Bloomberg, ICICIdirect.com Research

Exhibit 2: LPG T/C (US\$ per day)					
	Feb-10		Mar-10		
Asset class	Monthly	Daily	Monthly	Daily	
VLGC-TC 78,000 cbm	455,000	14,967	450,000	14,803	
LGC-TC 57,000 cbm	610,000	20,066	580,000	19,079	
MGC-TC 35,000 cbm	585,000	19,243	575,000	18,914	
MGC-TC 30,000 cbm	565,000	18,585	565,000	18,585	
MGC- TC 28,000 cbm	515,000	16,941	515,000	16,941	
MGC- TC 24,000 cbm	490,000	16,118	490,000	16,118	

Source: Bloomberg, ICICIdirect.com Research





Source: Bloomberg, ICICIdirect.com Research

Tanker freight rates across all categories reported a rise with the maximum gains of 28% posted by Aframax vessels

Dry bulk freight also gained traction with maximum gains of 21% posted by mid size panamax vessels

LPG freight rates for VLGC and LGC vessels declined in March 2010. Freight rates for gas carriers have remained depressed since the last one year. This is a discomforting factor

China's iron ore inventory level increased to 72 million tonnes in March 2010



The Asia Pacific iron ore index increased 5.7% in March to 349 levels from the previous month's level of 330  $\,$ 

China's iron ore import from Australia and India increased by 38% and 37%, respectively. However, imports from Brazil declined by 5% in December

The offtake from Australia and India has been strong for two months in a row while it has been largely subdued from Brazil

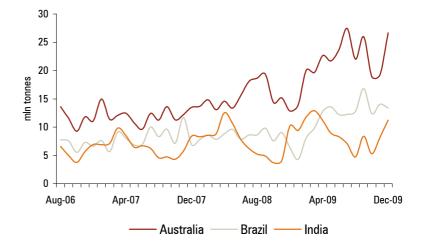
Steel production in China declined by 2.2 million tonnes (4.1%) in February 2010

We expect production to pick up in April 2010. This would lead to a drop in iron ore inventories and increase in shipments



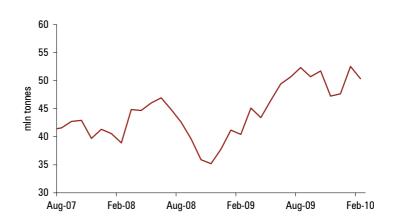
Source: Bloomberg, ICICIdirect.com Research

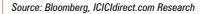
## Exhibit 5: China iron ore import trend analysis



Source: Bloomberg, ICICIdirect.com Research

Exhibit 6: China's monthly steel production





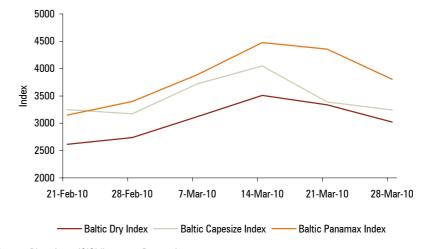




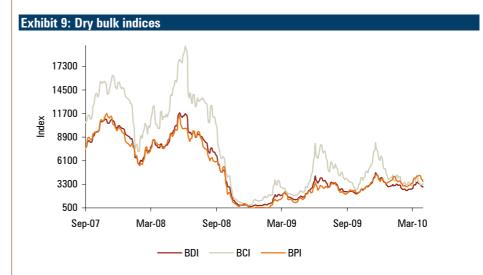
World Coal Index as well as Asia Pacific Coal Index both gained by 3% in March 2010

Source: Bloomberg, ICICIdirect.com Research

#### Exhibit 8: Weekly dry bulk indices movement



Source: Bloomberg, ICICIdirect.com Research





Dry bulk indices rose in the first half of March after which it declined towards the end of the month

The BDI rose by 9% in March to 2998 level

The Baltic Capesize index rose by 8% in March to  $3425 \mbox{ level}$ 

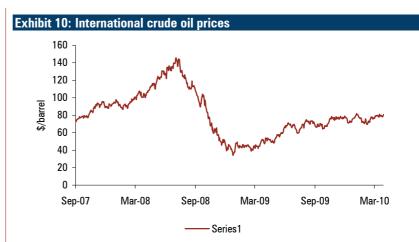
The Baltic Panamax index rose by 8% in March to the 3674 level

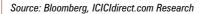


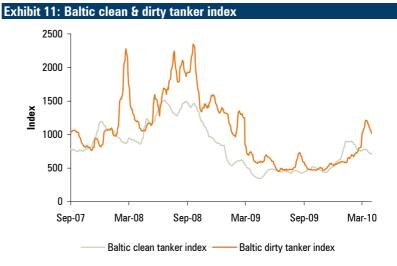
Crude oil prices in March 2010 rose by 6% to \$81/barrel. Crude oil prices have shown significant strength in the last one month

The BCTI declined by 7.1% to 708 while the BDTI rose by 7.5% to 964 in March 2010. While clean tanker rates declined on account of high US gasoline inventories, dirty tanker rates showed strength on account of a rise in crude oil shipments in March 2010

Freight rates for VLCC rose by 14% to \$29491/day; Suezmax rose by 20% to \$17407/day while for Aframax it rose by 28% to \$13401/day

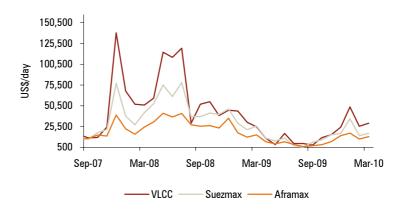






Source: Bloomberg, ICICIdirect.com Research

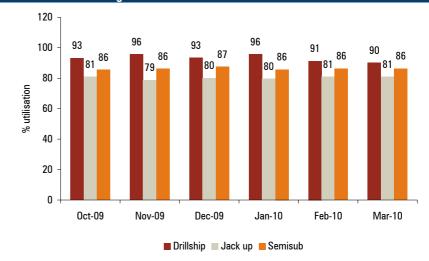
## Exhibit 12: Tanker rates trend







## Exhibit 13: Offshore rig utilisation levels

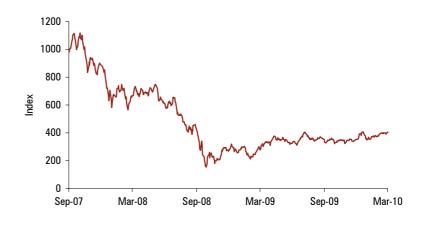


to 90% while utilisation levels for jack-up rigs and semisubs rigs remained flat at 81% and 86%, respectively, in March 2010

Rig utilisation levels for drill ships declined

Source: Bloomberg, ICICIdirect.com Research

#### Exhibit 14: BPR Asia Pacific Shipbuilding Index



Source: Bloomberg, ICICIdirect.com Research

Asset Class	t	: (USE	) Mn)	1 M Chang	e (%)	3 M Chan	ge(%)	1Yr. Chan	ge(%)
Tankers	DWT	NB	5Yr.	NB	5Yr.	NB	5Yr.	NB	5Yr.
VLCC/ULCC	300,000	97.0	77.0	0.0	0.0	-3.0	0.0	-14.9	-26.7
SUEZMAX	150,000	68.0	58.0	0.0	-1.7	-1.4	-3.3	-20.0	-17.1
AFRAMAX	105,000	49.0	39.0	0.0	0.0	0.0	0.0	-30.0	-29.1
PANAMX	70,000	41.0	33.0	0.0	0.0	-6.8	-5.7	-30.5	-28.3
MR TANKERS	47,000	33.0	22.5	0.0	-6.3	-1.5	-10.0	-28.3	-42.3
Bulk	DWT								
CAPESIZE	170,000	69.0	53.0	1.5	1.9	4.5	6.0	38.0	17.8
PANAMAX	74,000	41.0	33.3	0.0	0.9	-1.2	0.9	36.7	23.3
SUPRAMAX	52,000	33.0	26.8	0.0	-0.7	-2.9	-0.7	26.9	16.5

There was hardly any movement in new build asset prices except a 1.5% rise in Capesize vessel prices. There was significant activity in the re-sale market with correction in tanker asset prices but dry bulk asset prices showed significant strength.

The BPR Asia Pacific Shipbuilding Index gained by 8.7% in March 2010

New build asset prices of Capesize vessels reported a marginal rise

Five year old asset prices of tankers remained weak

Five year old asset prices of dry bulk vessels especially Capesize vessels reported strength



Tanker rates are expected to gradually improve over the course of 2010 with the phasing out of single hull tankers. However, new vessel deliveries would cap upsides in freight rates

Bulk rates would remain under pressure due to new vessel additions. Rise in commodity demand could be the only respite and support for dry bulk freight rates

Orders for new build vessels increased sharply in March with the highest number of orders placed for vessels in the last six months

Sale of dry bulk vessels picked up pace in March 2010 with 157 vessels being sold in the second hand market

## Exhibit 16: Global order book size

Asset Class	2010	2011	2012	2013	Total Order Book
Tankers					
VLCC/ULCC	71	88	13	0	172
SUEZMAX	44	57	9	1	111
AFRAMAX	83	49	7	3	142
PANAMAX	29	36	2	2	69
MR TANKERS	192	114	17	2	325
0-35K DWT	183	62	13	1	259
Total(a)	602	406	61	9	1078
Bulk					
CAPESIZE	328	217	103	36	684
80-100k WT	192	187	62	23	464
PANAMAX	84	65	35	9	193
SUPRAMAX	363	245	73	7	688
HANDYMAX	301	249	103	9	662
Total(b)	1268	963	376	84	2691
Total Vessel(a+b)	1870	1369	437	93	3769

Source: Bloomberg, ICICIdirect.com Research

## Exhibit 17: New building order breakdown

	Bulk carriers	Container	Tanker	LPG/LNG	All Others	<b>Total Units</b>
Oct-09	27	2	8	0	30	67
Nov-09	39	2	11	0	31	83
Dec-09	49	0	38	5	13	105
Jan-09	42	0	12	6	8	68
Feb-09	35	0	18	4	18	75
Mar-09	71	5	29	3	13	121

Source: Bloomberg, ICICIdirect.com Research

#### Exhibit 18: Sale of vessels in second-hand market

	Dry	Wet	Total
Oct-09	33	15	48
Nov-09	44	23	67
Dec-09	42	11	53
Jan-10	86	60	146
Feb-10	81	35	116
Mar-10	157	39	196

Source: Bloomberg, ICICIdirect.com Research



Demolition activities reported a significant increase with 167 vessel demolitions in March 2010. India continued to lead with 45 vessel demolitions followed by Bangladesh and China

Tankers/product carriers reported the maximum scrapping with 57 vessels being demolished, followed by container

and dry bulk vessels

# Exhibit 19: Leading countries involved in demolition work

	India	China	Bangladesh	Pakistan	All Others	Total Units
Oct-09	23	8	11	6	4	52
Nov-09	30	27	28	7	6	98
Dec-09	32	11	5	5	2	55
Jan-10	56	11	12	4	2	85
Feb-10	35	7	10	5	10	67
Mar-10	45	29	37	17	39	167

Source: Bloomberg, ICICIdirect.com Research

## **Exhibit 20: Demolition statistics**

	Dry	Wet	Containers	Others	Total
Jan-10	13	38	25	9	85
Feb-10	24	10	14	19	67
Mar-10	37	57	47	26	167

Source: Bloomberg, ICICIdirect.com Research



#### **Recent events**

#### Aban Offshore (AOL)

Aban Offshore entered into a contract for deployment of its jack-up rig Deep Driller 1 on a firm contract of one year at a rate of  $\sim$  \$118000/day with an option to extend the contract for a further period of one year. The deployment is likely to commence during Q1FY11.

In yet another development its jack-up rig Deep Driller 8 has entered into a firm contract of four years at a rate of  $\sim$  \$1,15,000/day. The deployment is likely to commence during Q2FY11.

#### Essar Shipping Ports and Logistics Ltd (ESPLL)

The promoters of Essar Group are undergoing stake restructuring of group companies with inter-se transfer between April 9 and April 30. This would lead to more clear ownership. The move is directed to facilitate the listing of the group holding company at London Stock Exchange.

In yet another development, Ravi Ruia resigned from the board of ESPLL due to other commitments.

#### GE Shipping

GE Shipping modified its new build order placed with Hyundai Heavy Industries for construction of two Suezmax crude carriers and substituted it with three VLCCs. The vessels are expected to be delivered in Q4FY12.

#### Pipavav Shipyard (PSL)

Punj Lloyd offloaded its 19.43% stake in Pipavav Shipyard to SKIL Infrastructure Ltd at an average price of  $\sim$  Rs 51 per share aggregating Rs 656 crore. SKIL Infrastructure Ltd i.e. the promoters of Pipavav Shipyard have also issued an open offer to shareholders for acquiring an additional 20% stake in the company at Rs 61.50 per share. The offer is expected to commence from May 21, 2010 and will close on June 9, 2010.

Atul Punj and Luv Chhabra also resigned from the board of directors of the company.

The company also informed the stock exchange of its decision to raise Rs 178 crore by issuing compulsory and mandatory convertible unsecured debentures to Flls.



# **Global Valuations**

			P/BV (x)			P/E (x)		EV	/EBITDA	(x)		ROE (%)	
Company	Country	CY09	CY10E	CY11E	CY09	CY10E	CY11E	CY09	CY10E	CY11E	CY09	CY10E	CY11
Dry Bulk/Tankers													
Teekay Corp.*	USA	0.7	0.8	0.8	-	44.6	22.3	11.5	9.4	8.6	-	2.8	5.2
Diana Shipping*	USA	1.1	1.0	1.0	9.2	9.1	9.4	6.8	6.4	6.6	13.5	11.5	9.7
Genco Shipping*	USA	0.8	0.6	0.7	4.7	6.0	13.6	6.2	6.6	8.7	18.0	11.2	3.3
DryShips*	USA	0.7	0.6	0.6	6.0	7.2	5.0	7.5	6.5	4.9	7.2	7.5	11.2
Frontline Ltd*	Norway	3.1	2.8	2.8	20.8	13.5	13.2	10.3	9.0	8.9	14.9	19.8	20.4
GE Shipping#	India	0.7	0.7	0.6	8.4	6.7	4.7	7.1	5.5	3.9	8.8	10.1	12.9
Mercator Lines#	India	0.6	0.6	0.5	29.2	13.5	6.7	5.8	4.8	3.4	2.0	4.2	7.8
SCI#	India	1.0	1.0	0.9	18.5	17.1	20.0	15.7	14.5	11.2	5.3	5.6	4.7
LPG/LNG													
BW Gas*	Norway	-	-	-	-	6.7	-	-	-	-	-	-	
Exmar*	Belgium	0.8	1.1	1.1	-	-	12.0	17.6	14.6	10.1	1.6	10.2	8.5
Mitsui OSK Lines*#	Japan	1.2	1.1	1.0	149.3	15.9	11.9	17.0	9.8	8.3	0.7	6.6	8.3
Varun Shipping#	India	1.0	1.0	1.0	-	-	30.6	16.5	10.3	9.4	-	-	3.3
Offshore													
Transocean*	USA	1.4	1.2	1.1	7.5	9.8	8.3	6.1	6.9	6.3	18.7	13.7	15.1
Hercules Offshore*	USA	0.5	0.6	0.6	-	-	-	7.9	8.4	6.5	-	-	
ENSCO*	USA	1.3	1.2	1.1	9.1	12.1	10.0	5.4	6.7	5.8	14.9	10.1	11.2
Diamond Offshore*	USA	3.5	3.3	3.1	9.0	10.6	10.3	6.0	6.4	6.1	39.8	32.3	34.4
Aban Offshore#	India	1.9	1.3	1.0	16.2	4.0	4.6	10.3	5.9	6.1	6.7	28.6	18.4
Great Offshore#	India	1.7	1.5	1.2	9.0	8.4	6.2	7.5	5.7	4.4	19.4	17.8	20.0
Garware Offshore#	India	1.8	1.5	1.3	9.2	8.9	9.8	8.8	8.1	8.1	19.0	16.9	13.5
Shipbuilding													
Hyundai Heavy Industries*	South Korea	2.4	1.7	1.4	9.1	7.7	7.8	7.1	6.1	6.3	29.9	23.2	19.1
Samsung Heavy Industries*	South Korea	2.0	1.6	1.4	8.8	7.8	9.0	6.8	6.7	8.8	26.8	22.5	15.6
Daewoo Shipbuilding*	South Korea	1.6	1.3	1.1	6.4	6.0	7.5	6.7	6.2	8.4	27.8	23.9	16.0
Keppel Corp. Ltd.*	Singapore	2.6	2.2	2.1	11.7	14.4	14.8	10.9	12.3	12.7	27.9	16.4	15.0
Sembcorp*	Singapore	5.4	4.2	3.7	17.1	15.3	17.7	10.6	9.1	10.7	35.5	29.7	22.9
Bharati Shipyard#	India	0.9	0.8	0.7	5.4	3.5	3.3	8.0	7.0	7.3	16.5	13.7	10.5

# With regards to Indian companies and Mitsui, three year data represents FY10, FY11 and FY12 (financial year ending in March)

Source: Bloomberg, ICICIdirect.com Research



# ICICIdirect.com coverage universe

G.E Shipping			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
Idirect Code	GESHIP CMP (Rs.)	324 FY10E	2830.2	33.0	9.8	7.1	8.8	8.8
	Target (Rs.)	387 FY11E	3379.9	41.4	7.8	5.5	10.1	10.1
МСар	4924.8 % Upside	19 FY12E	3832.2	60.0	5.4	3.9	12.9	12.9
Mercator Lines			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
Idirect Code	MERLIN CMP (Rs.)	60 <b>FY10E</b>	1910.1	2.0	30.7	5.8	2.0	5.6
	Target (Rs.)	74 FY11E	2045.5	4.2	14.2	4.8	4.2	6.4
MCap	1416.0 % Upside	23 FY12E	2231.3	8.5	7.1	3.4	7.8	7.9
SCI			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	<b>RoNW</b> (%)	RoCE (%)
Idirect Code	SCI CMP (Rs.)	158 <b>FY10E</b>	3485.6	7.9	20.0	15.7	5.3	5.9
	Target (Rs.)	159 <b>FY11E</b>	3590.9	8.5	18.5	14.5	5.6	6.0
МСар	6691.3 % Upside	1 FY12E	3738.8	7.3	21.7	11.2	4.7	5.4
Varun Shipping			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	<b>RoNW</b> (%)	RoCE (%)
Idirect Code	VARSHI CMP (Rs.)	51 <b>FY10E</b>	679.5	-	-	16.5	-	5.8
	Target (Rs.)	40 FY11E	771.8	-	-	10.3	-	9.6
МСар	765.0 % Upside	-22 FY12E	819.0	1.7	30.6	9.4	3.3	10.5
Aban Offshore			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
Idirect Code	ABALLO CMP (Rs.)	1223 FY10E	3151.7	80.2	15.2	10.0	7.6	8.4
	Target (Rs.)	1448 <b>FY11E</b>	5243.0	332.4	3.7	5.5	30.8	15.0
МСар	4622.9 % Upside	18 FY12E	4815.4	280.3	4.4	5.7	19.2	12.9
Garware Offshore			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
Idirect Code	GARSHI CMP (Rs.)	168 FY10E	239.9	22.4	7.5	9.0	19.0	9.4
	Target (Rs.)	182 FY11E	244.2	23.3	7.2	8.2	16.9	10.0
МСар	399.8 % Upside	8 FY12E	232.4	21.2	7.9	8.2	13.5	9.2
Great Offshore			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
Idirect Code	GREOFF CMP (Rs.)	414 <b>FY10E</b>	1081.1	74.2	5.6	6.9	22.5	12.2
	Target (Rs.)	430 FY11E	1112.0	55.9	7.4	5.3	19.0	12.1
МСар	1535.9 % Upside	4 FY12E	1232.9	55.9	7.4	4.1	20.0	13.7
Bharati Shipyard			Sales (Rs. Crore)	EPS (Rs.)	PE (x)	EV/EBITDA (x)	RoNW (%)	RoCE (%)
ldirect Code	BHASHI CMP (Rs.)	289 <b>FY10E</b>	1321.4	49.3	5.9	8.5	16.5	11.3
	Target (Rs.)	369 FY11E	1361.7	76.7	3.8	7.4	13.7	12.3
МСар	797.6 % Upside	28 FY12E	1214.6	79.8	3.6	7.8	10.5	11.4

Source: ICICIdirect.com Research

# **Freight Forward**



# Glossary Tankers VLCC Very large crude carrier tanker of 200,000+ DWT Suezmax A vessel of 120,000 to 200,000 DWT, whose dimension enables her to pass though the Suez Canal Aframax A tanker measuring between 80,000 and 120,000 in DWT terms primarily used for the carriage of crude oil **Small Tankers** A vessel of 10,000-60,000 DWT **Bulkers** Capesize Dry bulk carrier of 80,000-200,000 DWT A vessel of 60,000 to 100,000 DWT, whose dimension enables her to pass through the Panama Panamax Canal Handymax Bulk carrier vessel of 40,000-60,000 DWT Handysize Bulk carrier vessel of 10,000-40,000 DWT Offshore **AHTSV** Anchor handling tag supply vessel, a vessel specially designed to handle offshore oil & gas platforms and rigs. **PSV** Platform supply vessel, a vessel specially designed for proving support services to offshore oil & gas platforms and drilling rigs. Drillship A maritime vessel that has been fitted with drilling apparatus and is able to drill in water depths of over 2000 meters. Jack up rig Mobile offshore oil and gas drilling platform that is able to stand still on the sea floor, resting on a number of sporting legs. Jack up rigs can only be placed in shallow water (Up to1000 feet). LPG VLGC Very large gas carrier of 70,000+ CBM

- MGC Medium gas carrier with a capacity of 20,000-50,000 CBM
- LGC Large gas carrier of 50,000-70,000 CBM

# Miscellaneous

DWT	Dead Weight Tonne
LDT	Light Displacement Tonne



#### **RATING RATIONALE**

ICICIdirect.com endeavours to provide objective opinions and recommendations. ICICIdirect.com assigns ratings to its stocks according to their notional target price vs. current market price and then categorises them as Strong Buy, Buy, Add, Reduce, Sell. The performance horizon is two years unless specified and the notional target price is defined as the analysts' valuation for a stock.

#### Pankaj Pandey

#### Head - Research

ICICIdirect.com Research Desk, ICICI Securities Limited, 7th Floor, Akruti Centre Point, MIDC Main Road, Marol Naka Andheri (East) Mumbai – 400 093

research@icicidirect.com

#### pankaj.pandey@icicisecurities.com

#### ANALYST CERTIFICATION

We /l, Bharat Chhoda MBA (Finance), Jehangir Master ACA, Prerna Jhunjhunwala MBA (Finance) research analyst and the author of this report, hereby certify that all of the views expressed in this research report accurately reflect our personal views about any and all of the subject issuer(s) or securities. We also certify that no part of our compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or view(s) in this report. Analysts aren't registered as research analysts by FINRA and might not be an associated person of ICICI Securities Inc.

#### **Disclosures:**

ICICI Securities Limited (ICICI Securities) and its affiliates are a full-service, integrated investment banking, investment management and brokerage and financing group. We along with affiliates are leading underwriter of securities and participate in virtually all securities trading markets in India. We and our affiliates have investment banking and other business relationship with a significant percentage of companies covered by our Investment Research Department. Our research professionals provide important input into our investment banking and other business selection processes. ICICI Securities generally prohibits its analysts, persons reporting to analysts and their dependent family members from maintaining a financial interest in the securities or derivatives of any companies cover. The information and opinions in this report have been prepared by ICICI Securities and are subject to change without any notice. The report and information contained herein is strictly confidential

The information and opinions in this report have been prepared by ICICI Securities and are subject to change without any notice. The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of ICICI Securities. While we would endeavour to update the information herein on reasonable basis, ICICI Securities, its subsidiaries and affiliates") are under no obligation to update or keep the information current. Also, there may be regulatory, compliance or other reasons that may prevent ICICI Securities from doing so. Non-rated securities in dicate that rating on a particular security has been suspended temporarily and such suspension is in compliance with applicable regulations and/or ICICI Securities policies, in circumstances where ICICI Securities is acting in an advisory capacity to this company, or in certain other circumstances.

This report is based on information obtained from public sources and sources believed to be reliable, but no independent verification has been made nor is its accuracy or completeness guaranteed. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. ICICI Securities will not treat recipients as customers by virtue of their receiving this report. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances.

The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. The recipient should independently evaluate the investment risks. The value and return of investment may vary because of changes in interest rates, foreign exchange rates or any other reason. ICICI Securities and affiliates accept no liabilities for any loss or damage of any kind arising out of the use of this report. Past performance is not necessarily a guide to future performance. Actual results may differ materially from those set forth in projections. Forward-looking statements are not predictions and may be subject to change without notice.

ICICI Securities and its affiliates might have managed or co-managed a public offering for the subject company in the preceding twelve months. ICICI Securities and affiliates might have received compensation from the companies mentioned in the report during the period preceding twelve months from the date of this report for services in respect of public offerings, corporate finance, investment banking or other advisory services in a merger or specific transaction. ICICI Securities and affiliates expect to receive compensation from the companies mentioned in the report within a period of three months following the date of publication of the research report for services in respect of public offerings, corporate finance, investment banking or other advisory services in a merger or specific transaction. It is confirmed that Bharat Chhoda MBA (Finance), Jehangir Master ACA, Prerna Jhunjhunwala MBA (Finance), research analysts and the authors of this report have not received any compensation from the companies mentioned in the report in the preceding twelve months. Our research professionals are paid in part based on the profitability of ICICI Securities, which include earnings from Investment Banking and other business.

ICICI Securities or its affiliates collectively do not own 1% or more of the equity securities of the company mentioned in the report as of the last day of the month preceding the publication of the research report.

It is confirmed that Bharat Chhoda MBA (Finance), Jehangir Master ACA, Prerna Jhunjhunwala MBA (Finance), research analysts and the authors of this report or any of their family members does not serve as an officer, director or advisory board member of the companies mentioned in the report.

ICICI Securities may have issued other reports that are inconsistent with and reach different conclusion from the information presented in this report. ICICI Securities and affiliates may act upon or make use of information contained in the report prior to the publication thereof.

This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject ICICI Securities and affiliates to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction.