

EMC – Sustaining Value from Cloud Applications to Shareholders

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Case Synopsis

“Experience has shown us that good governance increases EMC’s competitive power, enhances the company’s performance, and improves our ability to create more value for shareholders. And that is why EMC strives continually to improve its governance.”

Joe Tucci, EMC Chairman and CEO

Case Synopsis

The fact that EMC Corporation is reckoned among the most successful technology companies presents compelling reasons to derive insights from the managerial practices adopted by it. Apart from being a world leader in Storage & Cloud applications, the steady rate of successes achieved by EMC while embarking complex acquisitions has significantly contributed in realizing its growth targets. EMC has also been known to operate a “*federated business model*”, according to which strategic business units are run separately as independent subsidiaries with complete autonomy in respect of product and process related operations. Notwithstanding the recent furore upon the ‘stock-market implications’ of this model in recent times, EMC has ungrudgingly and stealthily orchestrated towards perfecting this model. EMC’s amazing ingenuity in amalgamating technological



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pro prowess with sound corporate governance practices has earned it many accolades from both industry and investors. Aiding all of these accomplishments is EMC's stellar Balance Sheet with a cash repository of \$ US 7.8 billion at end of December 31, 2013 (registering a growth of 167% over previous year).

This case seeks to capture the phenomenal rise of EMC using the cross-functional platforms comprising of Information Technology (IT), Mergers & Acquisitions, and Financial performance with an objective to maximize the interests of all the stakeholders. The managerial lessons gleaned out from this case could well serve as a yardstick for achieving global excellence by IT corporations operating in India.

Background

EMC, an American multi-national corporation is reckoned as a world leader in storage solutions with a presence in 86 countries across the world. The company has R&D centres in Brazil, China, France, India, Ireland, Israel, the Netherlands, Russia, Singapore, and the US. With a ranking of 139 in the Fortune 500, EMC has a workforce of 60,000 worldwide. In 2012, the company reported revenues of \$21.7 billion, the largest in its 34-year history. EMC – a publicly traded company is included in the S&P 500 Index. It is also included in the Dow Jones Sustainability Index (DJSI), which tracks the financial performance of leading sustainability-driven companies (EMC Corporation, 2014).

The company recorded a rise in consolidated revenues at a compounded annual growth rate (CAGR) of 13.43% over the period from fiscal year ending 31st December 2009 through 2013. The operating income over the same period grew at a CAGR of 30.89% (Financial Statements of EMC Corporation). Amongst the diversified portfolio comprising of Information Storage, Information Intelligence Group, RSA Information Security, Pivotal, and VMware Virtual Infrastructure; contribution from storage business accounted for as

much as 69% of the total revenues, which stood at \$ US 23.22 billion at the end of fiscal 2013. The share of VMware Virtual Infrastructure stood at 22% to the total revenues (Exhibit I).

EMC has divided the world market into four major clusters with US acting as the major cluster with a revenue contribution of 53% to the total revenue in fiscal ending 2013. The cluster comprising of Europe, Middle-East and Africa contributed 27.37% while the Asia-Pacific region accounted for 13.75% of the total revenues. Given the heightened levels of competition along with the existence of an active and a discerning consumer base in the technology market in US, EMC's dependence on US market and economy looks justified (Exhibit II).

Corporate Governance

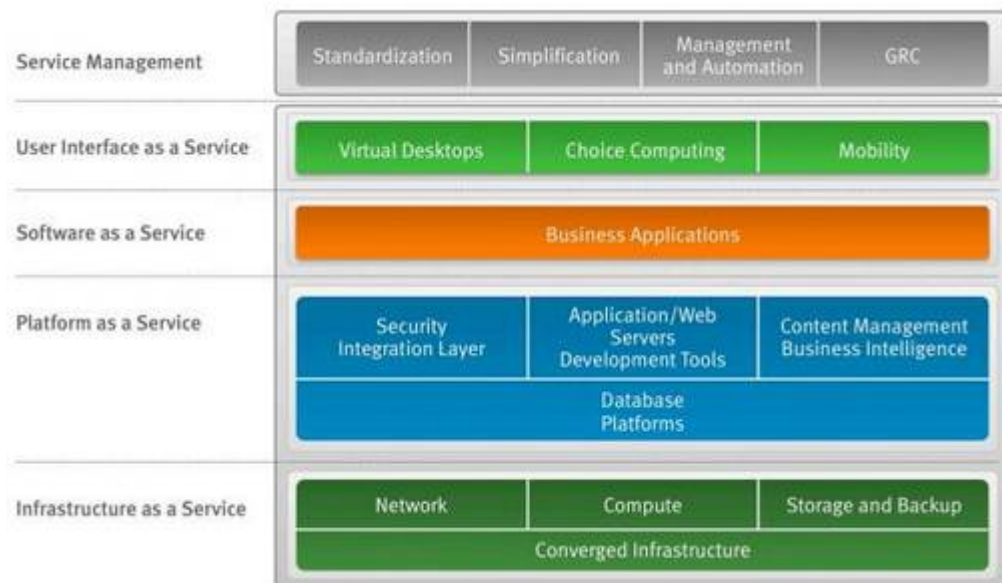
EMC has maintained a lean, albeit effective Board of Directors (BoD) for running the affairs of the company. Among the 13-member strong board, 9 of them are independent directors. This enables the board to look at impending business issues critically without any scope for bias. In keeping with the resolution of the BoD to maximize shareholder value, the company has been consistently engaging in rewarding shareholders through stock repurchase programs besides paying dividends. The total cash returned by EMC as part of the stock-repurchase program increased from \$ US 2 billion in fiscal year ending 2011 to \$ US 3 billion in 2013 (Financial Statements of EMC Corporation).

Product Portfolio

A cloud – private, public or a hybrid, is intended to support IT as a service (ITaaS) for businesses. By 2009, more applications were deployed on virtual servers than physical. As indicated earlier, EMC offers a range of storage and cloud based solutions. Cloud computing solves a number of problems, which predominantly includes the ability to curtail enterprises' operating expenditures on maintenance of underlying infrastructure. On an average, 67% of IT budgets are spent on maintenance, while only 27% goes to innovation or creating value

for the business. By choosing to embrace commodity hardware with grid computing, virtualization, and business intelligence, the tedious expenses of the organizations can be reduced and applications shared across virtual data centres (EMC Corporation, 2011).

Figure 1 : EMC Corporation Storage Strategies



(Source: EMC Its Journey to the Cloud: A Practitioner's GUIDE Sep 2011)

In 2002, EMC in its Annual Report (EMC Corporation, 2013) termed its strategy in a one-line statement: *The only company 100% dedicated to automated networked storage*. The twin developments led by the ubiquitous rise of Social Media platforms complemented with surge in offerings by Retail Banking and Insurance sectors leading to the dawn of 'Big Data' (which in reality is an unstructured data) and the demand for flash-based storage have rattled the storage market. The requirements of Big Data fundamentally include simplicity, low cost and high capacity. The transformation in strategy orchestrated by EMC in keeping the changing times is bewildering! Today EMC is an information infrastructure company with a broad portfolio of products and services, including VMware and RSA. VMware is a virtualization

and cloud computing software provider for x86-compatible computers, which EMC acquired in December 2003. RSA offers Intelligence Driven Security solutions that help organizations mitigate the risk of operating in a digital world (EMC Corporation, 2014). RSA, an American computer and network security company was also acquired by EMC. With all the talk about the Cloud, Big Data, and the Data Centre, storage continues to assume a crucial priority within EMC's product portfolio. In 2011 at an Industry Analyst Summit, EMC explained how its storage portfolio aligns itself with its larger strategic themes (EMC Corporation, 2014).

EMC offers product and services that include data storage, information security, virtualization, analytics, cloud computing and others. The company serves both Fortune-500 organizations and various smaller businesses across different industries, and generates almost half of its sales from regions outside the US.

The range of EMC's storage portfolio starts with the high end products of the Enterprise Storage Division (ESD). ESD products such as VMAX accentuate the cutting-edge data management capabilities (such as disaster recovery protection) and reliability that are vital for online transaction processing systems. Naturally, VMAX is priced higher given its capabilities. The US division features the converged infrastructure led by the VNX product line.

In keeping with the strategic goals in mind, EMC's affirmation about the growth potential of storage market is evident by the acquisition of Isilon. Isilon offers Network-Attached Storage (NAS) integrated with its distributed file systems along with *OneFS* Operating System. It is most apt for the Big Data market, such as streaming video and other media, where it already has a strong presence.

In 2013, EMC launched its new division PivotalOne. The organization combines technologies from VMware and EMC and is focused on delivering Platform-as-a-Service offerings. EMC also offers Greenplum. Greenplum as an appliance takes a different approach to the Big Data market.

Significant competitors to EMC within the domain of cloud storage solutions include NetApp, Dot Hill Systems, Nimble Storage Inc., Quantum Corp., IBM, and HP. Most of these, however, are not direct competitors in all spheres operated by EMC (Exhibit IV).

Financial Parameters at EMC

Given that the product line led by Information Storage is the single biggest contributor of revenues, gross margin for the same increased from \$ US 8.86 billion in FY ending 2012 to \$ US 9.082 billion in 2013. The total gross margin witnessed a marginal decline from 62.81% to 62.32% due to a marginal increase in cost of revenue over the same period. Operating margins have remained steady at 18%. EMC's reliance on R&D and Selling, General, & Administrative expenses to generate revenues explains the difference between gross and operating margins. Diluted Earnings per share (DEPS) witnessed a growth of 6% over the period through FY 2012-13 from \$ US 1.70 per share to \$ US 1.80 (Financial Statements of EMC Corporation). Free cash flow to firm (FCFF) measured as the cash flow available for distribution to all the stakeholders after meeting working capital and capital expenditure requirements increased by 9.77% from \$ US 5.024 billion in FY ending 2012 to \$ US 5,515 billion in 2013 (Exhibit III).

Accruals present enough opportunities in the hands of vested managers to propitiate income figures to show better performance. Such instances of earnings management could be unearthed by computing a ratio of cash flow from operations (CFO) over operating income. A figure of less than 1 is implicit of aggressive accounting. For EMC, this ratio increases from 1.58 for FY ending 2012 to 1.67 in 2013 indicating an absence of a case of earnings management. Net worth indicative of the total wealth generated for shareholders increased from \$ US 23.52 billion in FY 2012 to \$ US 23.79 billion in 2013. Return on equity (ROE) measured to compute the returns generated over the investments made by equity shareholders increased from 12.27% to 13% over the same period (Financial Statements of EMC Corporation).

Inorganic Growth Strategy

Significant to EMC's growth capabilities has been the company's unrelenting expansion through acquisitions. The enormously large cash reserves of EMC enables it to pursue acquisitions using the all-cash route towards buying strategic companies without inviting too much of target-shareholders' ire. A noteworthy event in EMC's history of acquisitions has been the all-cash buyout of Palo Alto based VMware Corporation in December 2003 for \$ US 625 million. The acquisition of VMware enabled EMC to gain a firm foothold in the emergent field of Virtual Infrastructure Software enabling clients to fully leverage their computing investments and respond faster to changing business demands. Under the terms of the deal, VMware would continue to operate as an independent subsidiary having complete autonomy in all product and process related operations. This is part of the federated-business model pursued by EMC. Post-acquisition, the listing of privately owned VMware has generated a value of \$ US 30 billion (New York Times, 2012).

While EMC continues to lead the industry in reaping successes from acquisitions in the highly evolving technology industry, sceptics in recent times have made an argument against the business model pursued by EMC. The fact that while contribution of VMware to EMC's total revenues stood at 22% for fiscal ending 2013, contribution by VMware to the tune of 75% to the EMC's market capitalization of \$ US 59.8 billion raises some concerns. The skewed ratio makes it much difficult for shareholders of EMC from realizing the full-value on their investment. Much to the chagrin of EMC's CEO, the debate to consider a possible spin-off has gathered a new momentum among the industry watchers and investors. With empirical studies suggesting that carefully planned spin-offs lead to a maximization of shareholders' wealth, the arguments posited by EMC management merit careful attention (Forbes, 2012).

Epilogue

EMC has continued to achieve an unprecedented acceleration in business as reflected by its stellar performance demonstrated by its financial parameters. The continued focus on new product development aided by its deep insight, cutting-edge research, and carefully crafted acquisitions makes it a cynosure of all the investors. A strategy aimed at fostering and sustaining innovation becomes an essential ingredient for achieving growth particularly in industries characterized by frenetic technological developments. EMC Corporation, while pursuing a federated business model has sought to maintain the momentum on innovation. This has particularly been true in scenarios where strategic businesses units have been allowed to retain their technological and innovative prowess by continuing to operate as independent subsidiaries. However, it remains to be seen whether the parent EMC by itself is able to remain completely insulated from the cascading effects of such a model. After-all, a company that has prided on its virtue of maximizing shareholders' interest at all times, wouldn't want to deride them of an opportunity to maximize wealth given that there is an impending pressure on current valuation of EMC stock.

Joe Tucci would well serve to ruminate on some of these intriguing issues before he offers a solution.

Some of the emergent issues that arise from the case are delineated below.

- a) Should EMC continue to embark the '*federated business model*' in order to drive the growth at EMC?
- b) Should EMC deploy its super-abundant cash more productively to benefit the shareholders?
- c) Should EMC focus on unlocking value by pursuing a potential spin-off?
- d) Should EMC's exclusive reliance on storage based solution concern shareholders?
- e) Would excessive reliance on US markets among all geographic markets merit a calibrated diversification strategy for EMC?

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Exhibit I – EMC Segmented Revenues: Product

Revenues			
The following table presents total revenue by our segments (in millions):			
2013	2012	2011	
Information Storage	\$16,132	\$ 15,440	\$ 14,684
Information Intelligence Group	647	640	661
RSA Information Security	987	889	828
Pivotal	309	270	130
VMware Virtual Infrastructure	5,147	4,475	3,705
Total revenues	\$23,222	\$ 21,714	\$ 20,008

(Source: EMC 2013 10-K report)

Exhibit II – EMC Segmented Revenues: Geography

Revenues			
	2013	2012	2011
United States	\$ 12,230	\$ 11,510	\$ 10,550
Europe, Middle East and Africa	6,355	5,908	5,668
Asia Pacific	3,193	3,017	2,639
Latin America, Mexico and Canada	1,444	1,279	1,151
Total Revenues	\$ 23,222	\$ 21,714	\$ 20,008

(Source: EMC 2013 10-K report)

Exhibit III – EMC FCFF (Free Cash Flow to Firm)

	For the Three Months Ended		For the Year Ended	
	December 31,	December 31,	December 31,	December 31,
	2013	2012	2013	2012
Cash Flow from Operations	\$ 2,190	\$ 1,899	\$ 6,923	\$ 6,262
Capital Expenditures	-270	-296	-943	-819
Capitalized Software Development Costs	-123	-103	-465	-419
Free Cash Flow	\$ 1,797	\$ 1,500	\$ 5,515	\$ 5,024

(Source: EMC 2013 10-K report)

Exhibit IV – EMC: Related Companies

NTAP	NetApp Inc.
HILL	Dot Hill Systems ...
NMBL	Nimble Storage Inc
QTM	Quantum Corp
OVRL	Overland Storage Inc
IBM	Intl. Business Ma...
HPQ	Hewlett-Packard C...
BRCD	Brocade Communica...
QLGC	QLogic Corporation
FIO	Fusion-IO, Inc.

(Source: <http://www.google.com/finance>)

EMC CORPORATION
CONSOLIDATED BALANCE SHEETS
(in millions, except per share amounts)

	December 31,	
	2013	2012
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 7,891	\$ 4,714
Short-term investments	2,773	1,422
Accounts and notes receivable, less allowance for doubtful accounts of \$62 and \$68	3,861	3,433
Inventories	1,334	1,201
Deferred income taxes	912	784
Other current assets	507	465
Total current assets	17,278	12,019
Long-term investments	6,974	5,260
Property, plant and equipment, net	3,478	3,145
Intangible assets, net	1,780	2,035
Goodwill	14,424	13,840
Other assets, net	1,965	1,663
Total assets	<u>\$ 45,849</u>	<u>\$ 37,962</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,434	\$ 1,041
Accrued expenses	2,783	2,492
Notes converted and payable	1,665	—
Income taxes payable	639	514
Convertible debt	—	1,652
Deferred revenue	5,278	4,575
Total current liabilities	11,799	10,274
Income taxes payable	296	293
Deferred revenue	3,701	2,976
Deferred income taxes	421	468
Long-term debt	5,494	—
Other liabilities	352	369
Total liabilities	<u>22,063</u>	<u>14,380</u>
Convertible debt (See Note E)	—	58
Commitments and contingencies (See Note N)		
Shareholders' equity:		
Preferred stock, par value \$0.01; authorized 25 shares; none outstanding	—	—
Common stock, par value \$0.01; authorized 6,000 shares; issued and outstanding 2,020 and 2,107 shares	20	21
Additional paid-in capital	1,406	3,691
Retained earnings	21,114	18,853
Accumulated other comprehensive income (loss), net	(239)	(208)
Total EMC Corporation's shareholders' equity	<u>22,301</u>	<u>22,357</u>
Non-controlling interests	1,485	1,167
Total shareholders' equity	<u>23,786</u>	<u>23,524</u>
Total liabilities and shareholders' equity	<u>\$ 45,849</u>	<u>\$ 37,962</u>

(Source: <http://www.emc.com/corporate/investor-relations/index.htm>)

EMC CORPORATION
CONSOLIDATED INCOME STATEMENTS
(in millions, except per share amounts)

	For the Year Ended December 31,		
	2013	2012	2011
Revenues:			
Product sales	\$ 13,690	\$ 13,061	\$ 12,591
Services	9,532	8,653	7,417
	23,222	21,714	20,008
Costs and expenses:			
Cost of product sales	5,650	5,259	5,320
Cost of services	3,099	2,817	2,519
Research and development	2,761	2,560	2,151
Selling, general and administrative	7,338	7,004	6,479
Restructuring and acquisition-related charges	224	110	97
Operating income	4,150	3,964	3,442
Non-operating income (expense):			
Investment income	128	115	129
Interest expense	(156)	(79)	(170)
Other income (expense), net	(257)	(196)	(152)
Total non-operating income (expense)	(285)	(160)	(193)
Income before provision for income taxes	3,865	3,804	3,249
Income tax provision	772	918	640
Net income	3,093	2,886	2,609
Less: Net income attributable to the non-controlling interest in VMware, Inc.	(204)	(153)	(148)
Net income attributable to EMC Corporation	\$ 2,889	\$ 2,733	\$ 2,461
Net income per weighted average share, basic attributable to EMC Corporation common shareholders	\$ 1.39	\$ 1.31	\$ 1.20
Net income per weighted average share, diluted attributable to EMC Corporation common shareholders	\$ 1.33	\$ 1.23	\$ 1.10
Weighted average shares, basic	2,074	2,093	2,056
Weighted average shares, diluted	2,160	2,206	2,229
Cash dividends declared per common share	\$ 0.30	\$ —	\$ —

(Source: <http://www.emc.com/corporate/investor-relations/index.htm>)

EMC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Year Ended December 31,		
	2013	2012	2011
Cash flows from operating activities:			
Cash received from customers	\$ 24,319	\$ 22,585	\$ 21,145
Cash paid to suppliers and employees	(16,708)	(16,019)	(15,219)
Dividends and interest received	169	103	136
Interest paid	(96)	(33)	(70)
Income taxes paid	(761)	(374)	(323)
Net cash provided by operating activities	6,923	6,262	5,669
Cash flows from investing activities:			
Additions to property, plant and equipment	(943)	(819)	(801)
Capitalized software development costs	(465)	(419)	(442)
Purchases of short- and long-term available-for-sale securities	(11,250)	(6,347)	(7,180)
Sales of short- and long-term available-for-sale securities	5,292	4,983	5,121
Maturities of short- and long-term available-for-sale securities	2,845	1,049	1,130
Business acquisitions, net of cash acquired	(770)	(2,136)	(537)
Purchases of strategic and other related investments	(131)	(117)	(329)
Sales of strategic and other related investments	35	70	30
Joint venture funding	(411)	(228)	(383)
Proceeds from divestiture of business	38	58	—
Purchase of leasehold interest	—	—	(151)
Net cash used in investing activities	(5,760)	(3,906)	(3,542)
Cash flows from financing activities:			
Proceeds from the issuance of EMC's common stock	342	560	673
Proceeds from the issuance of VMware's common stock	197	253	338
EMC repurchase of EMC's common stock	(3,015)	(685)	(2,000)
EMC purchase of VMware's common stock	(160)	(290)	(400)
VMware repurchase of VMware's common stock	(508)	(468)	(526)
Excess tax benefits from stock-based compensation	116	261	362
Payment of long-term and short-term obligations	(46)	(1,715)	(28)
Proceeds from the issuance of long-term and short-term obligations	5,460	5	3
Interest rate contract settlement	—	(70)	(141)
Dividend payment	(415)	—	—
Third party contribution to Pivotal	105	—	—
Net cash provided by (used in) financing activities	2,076	(2,149)	(1,719)
Effect of exchange rate changes on cash and cash equivalents	(62)	15	6
Net increase in cash and cash equivalents	3,177	222	414
Cash and cash equivalents at beginning of period	4,714	4,492	4,078
Cash and cash equivalents at end of period	\$ 7,891	\$ 4,714	\$ 4,492

(Source: <http://www.emc.com/corporate/investor-relations/index.htm>)

**Exhibit VI – Understanding the dynamics of EMC:
An Interaction with Mr. Vinay Parthasarathy¹**

1. Where do you see the future of Storage devices market in enhancing client value-added services?

Storage is moving from the earlier 1st platform of mainframes, 2nd platform of client server / networked computers to 3rd Platform of social, mobile, cloud and bigdata. EMC is strategically positioned very well with a diverse product range of storage platforms, software defined storage, converged infrastructure to provide / enhance client value –added services.

2. How is EMC poised to exploit the huge potential existing in the Cloud applications segment to attain leadership position?

Being already an acknowledged leader in storage, EMC is already making headway into cloud applications segment. EMC is working with cloud service providers to provide integrated solutions that provide hyperscale, multitenancy cloud infrastructure in private, public and hybrid cloud environments.

3. How does the Product Engineering division at EMC contribute to Product Development at EMC?

EMC product engineering contributes in end to end product development of products that are architected for the 3rd platform of social, mobile, cloud and bigdata under different business units.

4. How significant is the Asia-Pacific market in general and Indian market in particular in overall scheme of EMCs product development initiatives?

APJ (Asia Pacific & Japan) market becomes extremely important as emerging markets with huge opportunities for providing cloud based services in verticals healthcare, finance etc. Social/Mobile/ Bigdata applications proliferation and usage in Asia-Pacific region

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can potentially outnumber the overall demand in the world and EMC is greatly positioned to capitalize on these opportunities. Healthcare enablement for all leveraging cloud technology is a great use case perhaps.

5. How does EMC encourage and foster innovative practices leading to excellence in Product Development?

EMC has been in the forefront of product and process innovation by investing in continuous product/process innovation seeking innovative ideas from various channels and promoting a culture of innovation. For the third year in a row EMC India has been the recipient of prestigious Zinnov “Great Place to Innovate” and “Technical Role Model” award, standing as testaments to EMC’s thought leadership and innovation. EMC’s software defined storage product ViPR won “Product of the Year” award last year, yet another instance of innovation.

