

## Water Island Capital Special Report: Consolidation in the Semiconductor Space

Dated: 10/22/15

While the hottest sector in the M&A landscape over the last few quarters has been health care – from inversions in 2014 to health insurance consolidation in 2015 – current trends suggest a shift is occurring. While deal volume has continued to grow in health care (35 deals YTD with a total volume of \$110 B as of Q3 2014 vs 52 deals YTD with a total volume of \$283 B as of Q3 2015 according to Dealogic), returns for the space have not kept pace. With a return of -10.85% over the last three months (as of 10/22/15) health care has been the worst performing sector in the S&P 500 (-4.20% over the last three months) over that time period. In addition, recent trends suggest that the sector could be set to experience more pain.

As a favored tactic of the health care industry (albeit one that has been slowing down), tax inversions look to be entering the public discourse once again. While the US Treasury put a damper on inversions when it released [rules](#) designed to crackdown on them in September 2014, the issue looks to be far from settled. On October 21, Carl Ichan announced the creation of a \$150 MM SuperPAC designed to, among other things, [“focus on the pernicious effects that are occurring and will continue to occur as a result of Congress’s failure to immediately stop so many of our great companies from leaving our country.”](#) Health care stocks could be set to drop should this issue gain more traction.

Additionally, accusations of price gouging on the part of the pharmaceutical industry have led to large selloffs over the past month. What began as a [murmur](#) in regards to questionable pricing practices by the industry blossomed into a full-on conflagration after a [tweet](#) from Hillary Clinton set fire to the proverbial tinderbox – drawing criticisms not only of pharmaceutical companies, but of hospitals and health insurers as well. Furthermore, Valeant Pharmaceuticals, which, at its August high, was up over 1,000% in five years and which has been the most voracious acquirers in the industry, saw its share price drop nearly 40% from October 19<sup>th</sup> to October 21<sup>st</sup> as it disclosed that it had received subpoenas from federal prosecutors asking about its drug pricing and patient-assistance programs; announced that it was going to shift from its strategy of growth through acquisition to a greater focus on R&D; and became the subject of a short-seller report alleging improper accounting and other improprieties.



Source: Morningstar Direct. Past performance is not indicative of future returns.



As the sun looks to set on the health care sector, momentum has been building in the semiconductor space, where a recent spate of deals is suggesting that a nascent consolidation trend is beginning to pick up steam...

## Overview

For much of 2015, the technology industry has faced strong headwinds as both demand for PCs, and growth rates for tablets and smartphones, has dropped in both China and the United States. Semiconductor manufacturers, especially, are having difficulty controlling costs and achieving growth as the crowded industry struggles to deal with the ripple effect of lagging sales (of which semiconductors are a major component). The consolidation trend in the industry, which began picking up steam in May, is a result of these pressures as management has determined acquisitions are the best way to cut costs and achieve growth. Although there is always the chance that trends can reverse, what gives credence to the belief that the semiconductor space has officially become “Pharma 2.0” is the fact that not only are acquisitions taking place, but topping bids for companies already engaged in acquisitions are occurring as well (such as Microsemi coming over the top of Skywork’s offer to acquire PMC-Sierra), suggesting that companies are beginning to feel that acquisitions are necessary in order to remain competitive. Furthermore, there has been a resurgence in the usage of the term “scarcity value” (e.g. the attributes or services these target companies possess are rare for the space, and losing them to a competitor would preclude the acquirer from gaining access to them through another acquisition) as acquirers attempt to justify paying high premiums on these deals.

Also interesting is the effect US-Chinese relations have and are having on these deals. In an attempt to get approval for the Applied Materials / Tokyo Electron deal, the companies had to divest select assets. When the Chinese regulator MOFCOM (Ministry of Commerce of the People’s Republic of China) provided a buyer for those assets, US regulators blocked the deal citing security concerns (regarding a Chinese company gaining control of select US assets). Since then, US-based tech companies have faced increased pressure from MOFCOM, either through the agency refusing to grant regulatory approvals, or having restrictions placed on their businesses. As a result, many US-based tech and semiconductor companies are rushing to establish partnerships with Chinese companies with the belief that these cooperative agreements will allow them to garner approval from Chinese regulators for any future strategic alternatives in which they might engage.

## Individual Deal Profiles

Currently, the largest semiconductor deals in the space are as follows:

DATE	TARGET / ACQUIRER	DEAL VALUE (\$ BILLIONS)
May 28	Broadcom / Avago Technologies	\$36.6
Oct. 21	SanDisk / Western Digital	\$19.0
June 1	Altera / Intel	\$16.7
March 2	Freescale Semiconductor / NXP Semiconductors	\$11.8
Oct. 21	KLA-Tencor / Lam Research	\$10.6

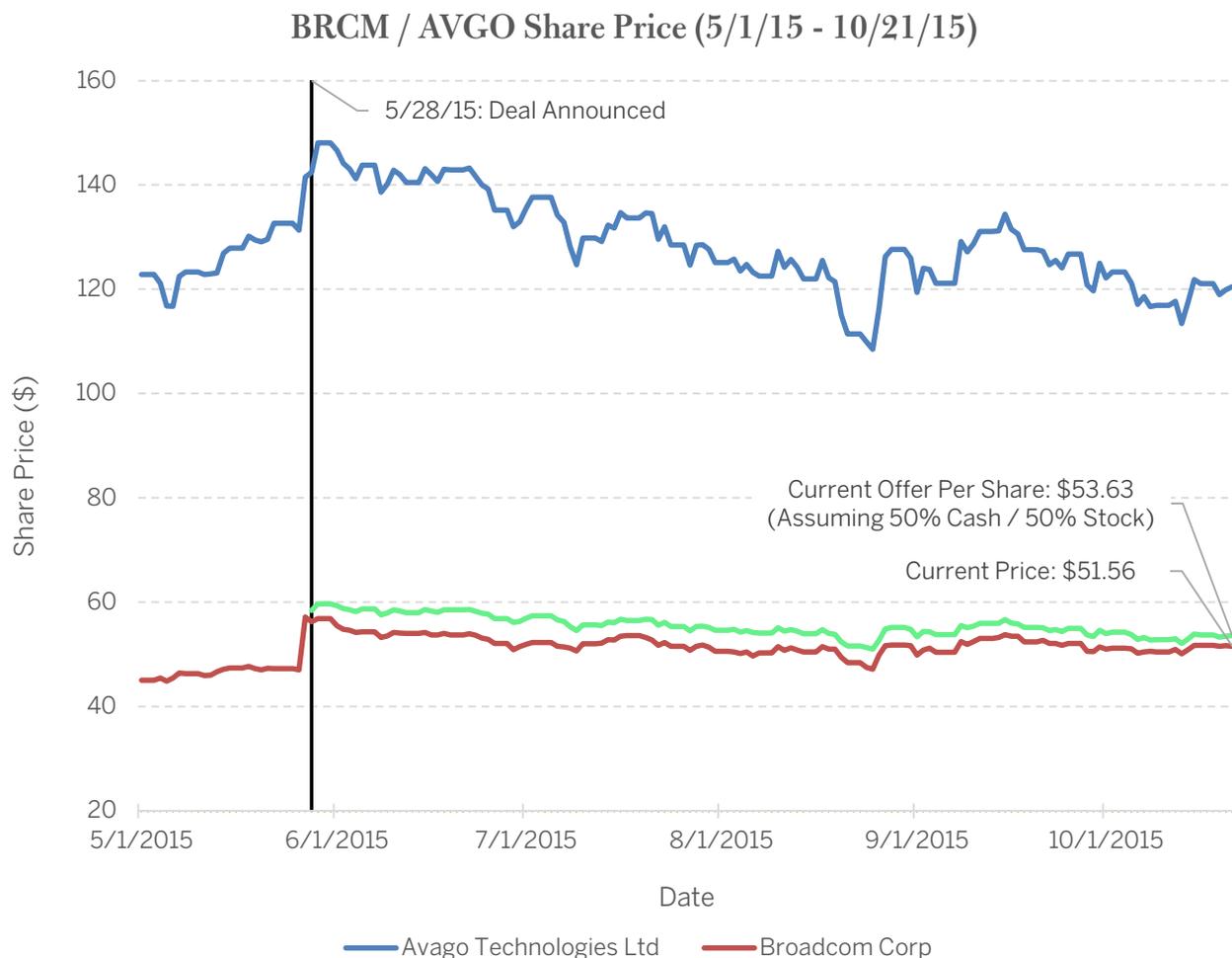
Sources: Dealogic; the companies



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**Broadcom / Avago Technologies** – On May 28, Avago Technologies Ltd – a leading designer, developer and global supplier of a broad range of analog semiconductor devices, with an extensive portfolio in four key markets: wireless communications, enterprise storage, wired infrastructure, and industrial – entered into a definitive agreement to acquire Broadcom Corp – a global leader and innovator in digital CMOS (Complementary metal-oxide semiconductor) solutions best known for its connectivity chips, which are used widely in smartphones made by Apple and Samsung Electronics and wireless connectivity devices. This is a cash or stock deal composed of \$17.1 B in cash and \$19.5 B in stock for a \$36.6 B consideration. At the close of the deal, Broadcom shareholders will be subject to a proration mechanism should they choose the stock component. The all cash component will be worth \$54.50 per share. The transaction is subject to regulatory approvals in various jurisdictions, as well as the approval of Avago's and Broadcom's shareholders, and is expected to complete by the end of the first calendar quarter of 2016.

*Strategic Rationale:* While there is little notable overlap in their respective product offerings, they do serve shared markets to a degree. The deal is predicated on allowing Avago to expand its offerings in digital Ethernet, cable, and wireless connectivity products; increase synergies in sales and marketing; improve their bargaining position with manufacturers; and cut costs in the competitive semiconductor market which has seen chipmakers face increased pressure on their bottom lines.



Sources: Dealogic; Morningstar Direct. Past performance is not indicative of future returns.

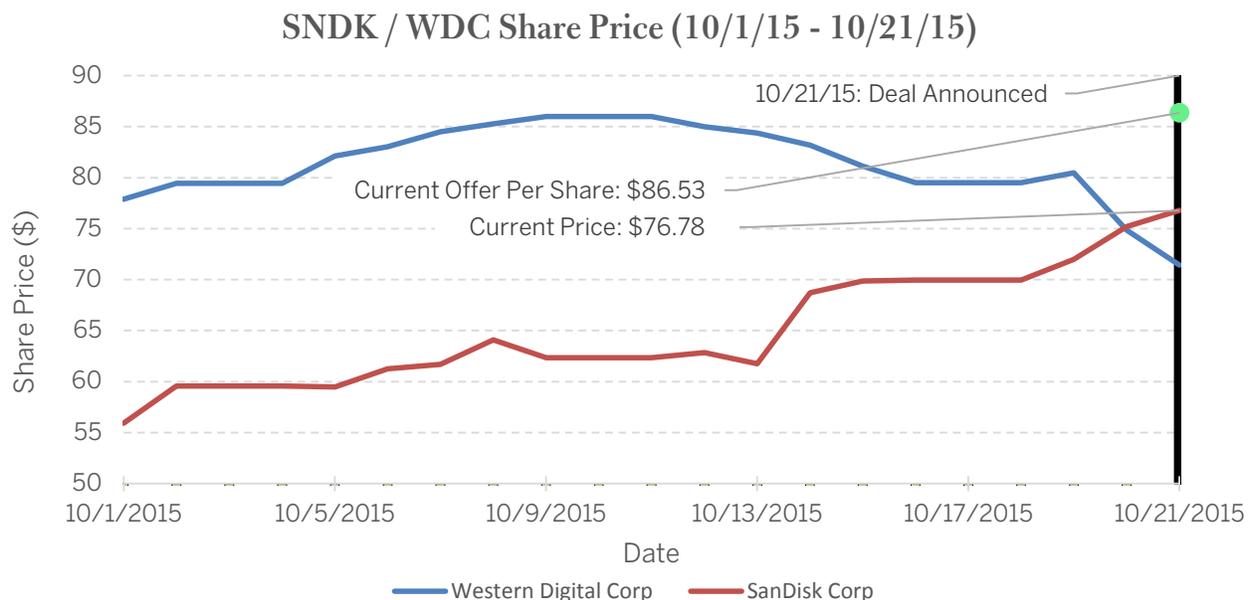


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**SanDisk / Western Digital** – On October 21, Western Digital Corp, a US-based manufacturer of computer storage devices, entered into a definitive agreement to acquire SanDisk Corp, a US-based manufacturer of flash memory products. This is a cash & stock deal comprised of \$14.3 B in cash (\$85.10 per share) and \$3.8 B in stock (0.0176 shares of Western Digital) for an \$18.1 B consideration. The deal is subject to approval by SanDisk Corp and Western Digital shareholders, receipt of regulatory approvals and other customary closing conditions. The deal is expected to complete in the third calendar quarter of 2016. NOTE: If the previously announced investment in Western Digital by Unisplendour Corp Ltd closes prior to this acquisition (discussed below), deal conditions may change.

*Strategic Rationale:* While Western Digital has recently surpassed competitor Seagate Technology to become the largest supplier of traditional disk drives (memory storage devices such as hard drives which rely on moving parts to store data), demand in the space has weakened with the introduction of solid state storage systems (SSDs) and chip-based flash storage technology. That shift has hurt sales of the most expensive and profitable drives and storage systems. In addition, PC sales have slowed and consumers have shifted to products like smartphones and tablets that use flash memory chips, a technology that uses less energy and is less prone to failures than spinning disks. Thus, by acquiring SanDisk, Western Digital hopes to diversify its product offerings in the faster growing space in addition to gaining an internal supply of the newer chips at attractive prices.

*Addendum:* Via their subsidiary, Unisplendour Corp, Tsinghua Holdings – a Chinese state-owned LLC solely invested by Tsinghua University, with a wide range of subsidiaries in the technology industry – is attempting to acquire a stake in Western Digital prior to the SanDisk deal completing, further accelerating the trend of US technology companies scrambling to connect with politically connected Chinese partners amid the difficult business environment. Should Tsinghua be successful in that endeavor, not only would there be no shareholder vote on the SanDisk deal (as Western Digital could use the cash received as a substitute for their stock offering in the SanDisk Corp deal, negating the requirement for a vote), the deal would also be much more likely to achieve Chinese regulatory approval.



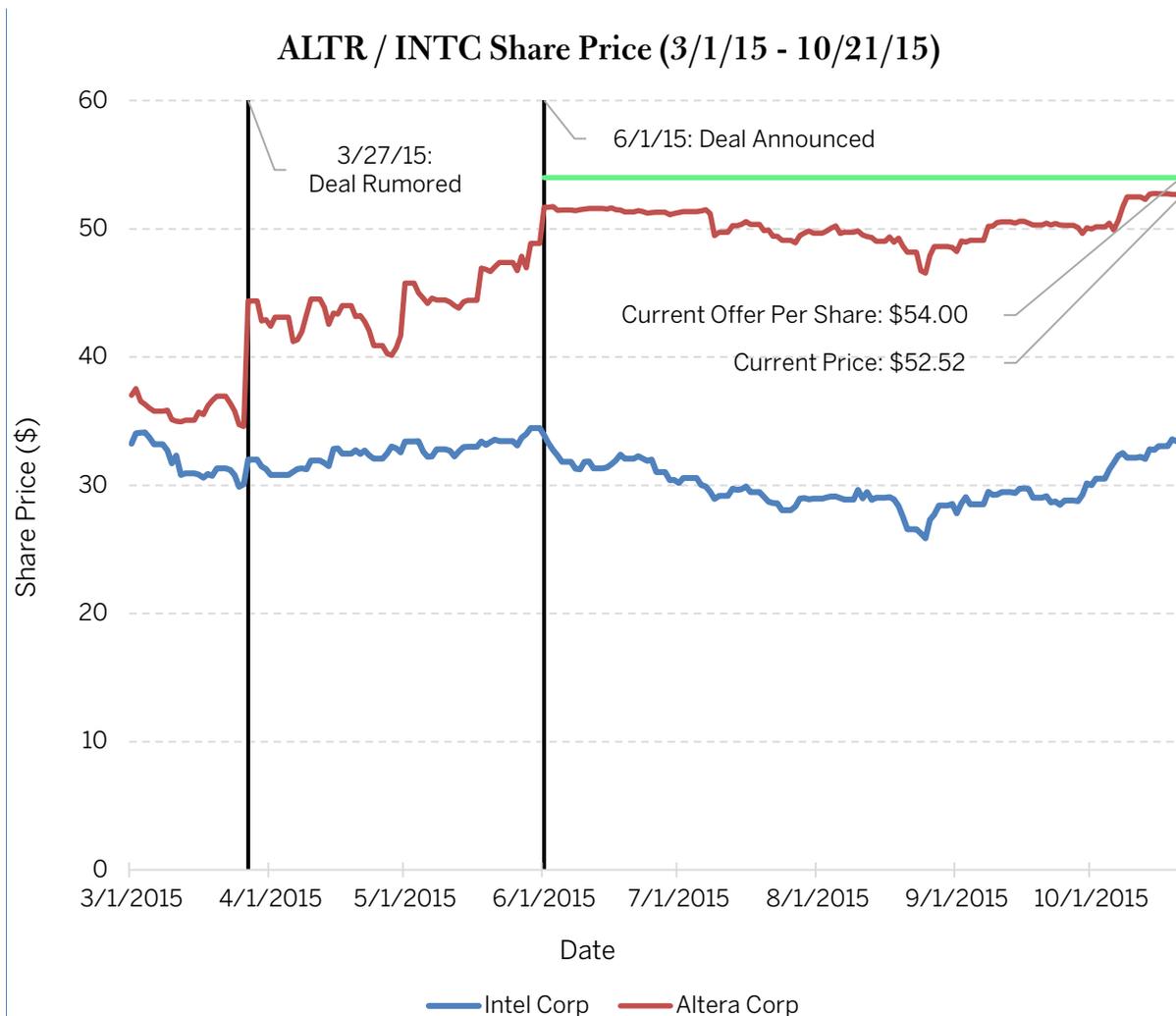
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**Altera / Intel** – In talks since March 27, on June 1, Intel Corp, a US-based semiconductor manufacturer signed a definitive agreement to acquire Altera Corp, a US-based semiconductor integrated circuits developer. This is an all cash deal of \$54.00 per share for a \$16.7 B consideration. The deal has already received shareholder and EU approval and is expected to close in Q4 2015.

*Strategic Rationale:* The transaction would help Intel bolster its position in server systems and other equipment found in corporate data centers, as well as fuel its plans to supply chips for devices related to the [Internet of Things](#) (a network of physical objects such as smartphones, tablets, and home appliances which have network connectivity, allowing them to communicate and exchange data with one another). Intel and Altera already have a partnership with one another, with Intel's factories churning out high-end semiconductors for Altera, which designs the chips. Intel also plans to use Altera's line of programmable chips as a means of revenue growth amid a slowdown in demand for personal computers by combining Altera's specialized chip customization technology, FPGA, with its existing chip lineup.



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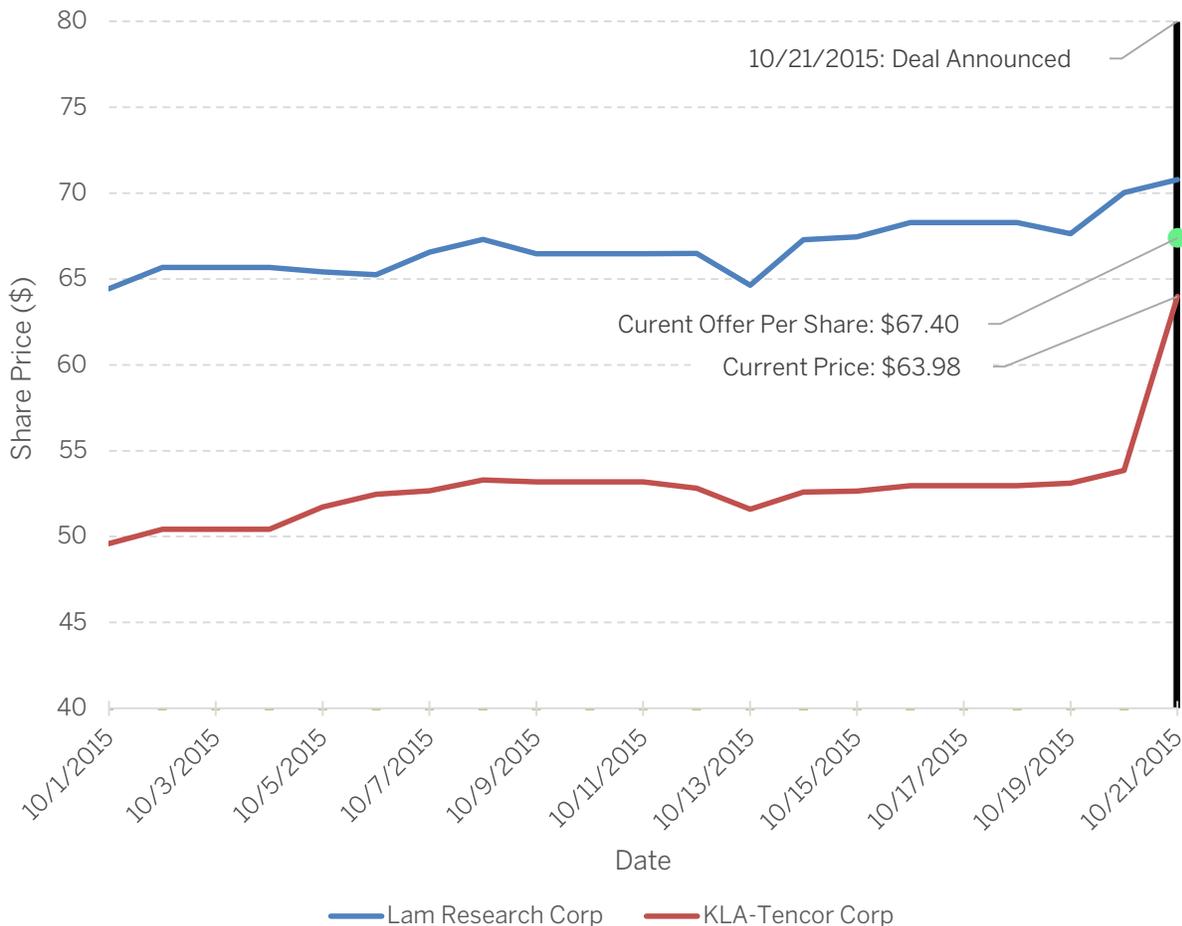


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**KLA-Tencor / Lam Research** – On October 21, Lam Research Corp, a US-based manufacturer of semiconductor processing equipment used in the making of integrated circuits, signed a definitive agreement to acquire KLA-Tencor Corp, a US-based manufacturer of inspection and metrology systems for the semiconductor industry. This is a cash & stock deal comprised of \$5 B in cash (\$32 per share) and the \$5.7 B in stock (.50 shares of Lam Research) for a \$10.7 B consideration. The deal is subject to customary regulatory approvals, customary closing conditions and approval by Lam Research's stockholders of the issuance of shares in the transaction. The deal is expected to complete in mid-calendar year of 2016.

*Strategic Rationale:* The two Silicon Valley companies rank among the biggest makers of equipment used in semiconductor manufacturing. Lam has focused on machines that deposit or etch away materials on the silicon wafers used to make computer chips. KLA-Tencor’s machines, by contrast, are used to spot defects in chips once the wafers are processed. Chipmakers, facing slowing sales for products like personal computers and smartphones, have been racing to find acquirers or buy smaller rivals. This deal aims to cut costs and increase synergies between the companies. Additionally, combined teams of engineers from Lam and KLA-Tencor could help customers solve their technical problems, come up with ideas for new equipment, and improve chips by further shrinking their circuitry while adding capacitors.

**KLAC / LRCX Share Price (10/1/15 - 10/21/15)**



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Other recently announced semiconductor deals:

**PMC-Sierra Inc / Microsemi Corporation** – Announced October 19 as a topping bid to the Skyworks Solutions offer. This is a cash and stock deal with a \$2.4 B consideration based on the cash offer price of \$8.75 and share exchange ratio of 0.0736 of a share of Microsemi common stock. The transaction is expected to close November 2015.

**EZchip Semiconductor Ltd / Mellanox Technologies Ltd** – Announced September 30, this all cash deal has a consideration of \$811 MM based on an offer price of \$25.50 per share. The transaction is expected to close in January 2016.

**Pericom Semiconductor / Diodes Incorporated** – Announced September 3, this all cash deal has a consideration is \$392 MM based on the offer price of \$17.00 per share of Pericom. However, Montage Technology Group Ltd, a China provider of semiconductors and interface modules has also made an offer to acquire Pericom. The consideration is \$428.0m based on the cash offer price of \$18.50 per share.



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### Glossary:

**Corporate Inversions:** An action which involves re-incorporating a company overseas in order to reduce the tax burden on income earned abroad. Corporate inversion as a strategy is used by companies that receive a significant portion of their income from foreign sources, since that income is taxed both abroad and in the country of incorporation. Companies undertaking this strategy are likely to select a country that has lower tax rates and less stringent corporate governance requirements.

### Important Information:

**An investor should consider the investment objectives, risks, charges and expenses of the Fund carefully before investing. The current prospectus contains this and other information about the Fund. You may obtain a copy of the Fund's prospectus at <http://arbitragefunds.com> or by calling (800) 295-4485. Please read the prospectus carefully before investing.**

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Top ten holdings as of 9/30/15: PartnerRe Ltd, Precision Castparts Corp, Sigma-Aldrich Corp, Chubb Corp, Cytec Industries Inc, Thoratec Corporation, Ansaldo STS SpA, Symetra Financial Corp, HCC Insurance Holdings, World Duty Free SpA. Top 10 holdings represent 37.7% of the portfolio. Holdings are subject to change. Current and future holdings are subject to risk.

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