July 6, 2012

Zacks Small-Cap Research

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CryoPort Inc (CYRX-OTC)

CYRX: 10-K Filed

Current Recommendation	**Outperform**
Prior Recommendation	N/A
Date of Last Change	03/02/2011
Current Price (07/06/12)	$0.40
Target Price	**$3.00**

OUTLOOK

The issues surrounding the rather anemic revenue ramp to-date appears to continue to be the long, drawn-out tire-kicking process by potential customers. In addition, customers that do adopt the system may only initially do so for only a portion of their cryogenic shipping needs but over time gradually shift to a greater reliance on CryoPort's container.

Longer process in customer adoption than initial expectations has delayed ramp in revenue. We, however, remain highly positive on CryoPort and their cryogenic shipping solution. CEO change will hopefully facilitate customer growth and iron-out outstanding issues.

SUMMARY DATA

52-Week High	**$1.73**
52-Week Low	**$0.36**
One-Year Return (%)	**-71.43**
Beta	**-0.18**
Average Daily Volume (sh)	**24,404**
Shares Outstanding (mil)	**38**
Market Capitalization ($mil)	**$15**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**5**
Insider Ownership (%)	**3**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2013 Estimate	**N/A**
P/E using 2014 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**N/A,**
Type of Stock	**N/A**
Industry	**Rubber&Plastics**

ZACKS ESTIMATES

Revenue
(in '000s of $)

	Q1 (June)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2012	124 A	111 A	144 A	177 A	556 A
2013	214 E	468 E	979 E	1,772 E	3,432 E
2014					16,888 E
2015					45,297 E

Earnings per Share

	Q1 (June)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2012	-$0.07 A	-$0.07 A	-$0.07 A	-$0.05 A	-$0.27 A
2013	-$0.05 E	-$0.05 E	-$0.04 E	-$0.03 E	-$0.17 E
2014					-$0.03 E
2015					$0.17 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

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WHAT'S NEW....

10-K Filed: Revenue continue to be in-line with our numbers

On June 27th CryoPort filed their 10-K for the 2012 fiscal year ending March 31, 2012. Revenue was in-line with our estimate with operating expenses coming in well below our forecast, reflecting what we expect is management's recent greater focus on cost-control. Q4 revenue of $177k was slightly ahead of our $165k estimate. Q4 net income and EPS came in at ($1.67) million and ($0.05) compared to our ($1.84) million and ($0.06) estimates, the difference mostly due to lower than modeled ($1.32MM A vs. $1.79MM E) operating expenses.

During Q4 CryoPort sold in a private placement 9.1 million shares of common stock for $0.55/share for gross proceeds of $5.0 million. The company also repaid ~$500k principal of convertible bonds. Cash and equivalents stood at $4.6 million at fiscal year end. Cash used in operations was $2.1 million and $6.8 million in the three and twelve months ending 3/3//2012. Investing activities used another $21k and $388k over the same respective periods.

We have again made some downward adjustments to our revenue estimates, reflecting the drawn out customer onboarding process and related sales ramp. We are, however, maintaining our $3.00 per share price target which is based on 21x our out-year (which is now 2016) EPS estimate discounted back at 20%/year.

CEO Search Continues

The search to fill the CEO position continues. Immediately following Larry Stambaugh's vacating of the CEO and Chairman positions in early April, Steve Wasserman was named Chairman and in May was also appointed as CryoPort's "principal executive officer", essentially a proxy position until a permanent CEO is found. Then in June the principal executive officer position was vacated by Mr. Wasserman and filled by Rob Stefanovich, CYRX's CFO. CryoPort's board continues to search for a permanent CEO, which could be a several-month long process.

BUSINESS

CryopPort, Inc. has developed what it believes is a “game-changing solution to the challenge of shipping biological materials” which require a frozen condition. CryoPort’s offering includes CryoPort Express Shipper, a proprietary liquid nitrogen container with long holding periods and CryoPortal, a web-based ordering, tracking and monitoring system.

CryoPort’s cold chain frozen shipping system targets customers in the life sciences industry which ship biological specimens such as vaccines, blood, cancer tissue and stem cells that must be kept at extremely low temperatures during transport, often over several days or even weeks, in order to prevent cell death.

Currently, the vast majority of frozen biological material is shipped using dry ice, which has a relatively short holding time and is handling-intensive, among having other drawbacks. CryoPort’s container addresses all the deficiencies of dry ice, but more importantly, combined with their web portal, provides life sciences companies a self-contained outsourcing solution to their frozen shipping needs. There are a select number of other companies which offer liquid nitrogen shipping containers, but none, to our knowledge, that offer the combination of a next-generation container and robust service infrastructure similar to CryoPort’s Express solution.

The annual market specific to CryoPort’s offering is estimated at $400 - $500 million and projected to grow at about 20% over the next several years. Market growth is largely being driven by more clinical trials moving overseas, which often require long shipping and extended holding times.

In 2010 CryoPort signed separate agreements with Federal Express (FedEx) and DHL Express (DHL) which provide customers with preferred pricing. These carrier collaborations also greatly enhance and expand the company’s marketing message, efforts and reach.

FROZEN BIOLOGICAL MATERIAL SHIPPING

Pharmaceutical companies and clinical research organizations (CROs), among other life sciences companies, use frozen shipping to transport biological drugs and live specimens. These materials must be kept at low temperatures (sometimes as low as -150° C) over the duration of transport in order to ensure the integrity of the samples.

Clinical trials in connection with development of new drugs require that biological samples be shipped from the point of collection (typically a hospital or clinic) to the labs where the specimens are analyzed. Oftentimes a single clinical trial will use numerous patient sites scattered over different parts of the country or the world. This can require long shipping times for the patient samples to reach the testing labs.

Clinical trials can be extraordinarily expensive and sometimes take years to complete. In addition, based on the typically strict protocol and analytical procedures of these trials, patient samples can not be redone if lost or damaged. As a result it is critical that the specimens be maintained at pre-specified temperatures in order to ensure they are not ruined.

Biologic drug (i.e. – made from a living organisms) development has surged over the last several years and is expected to grow significantly faster than that of chemical drugs. This, along with much of the manufacturing of biologics recently moving overseas, has increased the demand for reliable frozen shipping with long holding periods.

Infectious materials must be packaged and shipped according to strict regulations. Infectious materials are classified by international regulations as those that are known or reasonably believed to cause disease in humans or animals. Human specimens containing serious diseases (for example HIV-infected blood) are classified as infectious substances and must be shipped frozen and packaged so as to reduce the risk of human exposure.

Artificial insemination, as it relates to both humans and animals, typically involves the transport of semen to the insemination site. Human and animal semen must be stored and shipped at cryogenic (-150° C) temperatures.

These extremely low temperatures can only be attained with the use of liquid nitrogen (dry ice sublimation temperature is only -79° C).

DRY ICE PACKAGING

The most common method today for packaging frozen materials involves the use of dry ice in a Styrofoam container. In general, dry ice can keep a biological sample frozen for only one or two days. This poses a problem, especially for international shipments with long transport times. The solution, which has been to re-ice the packages at points during transportation, involves extra handling and thus, additional expense. The need to re-ice also introduces other possible complications including the potential that dry ice is not available where or when needed or is not possible due to flight cancellations or other unexpected circumstances. If not re-iced in time, biological samples can be tainted and, therefore, unusable. Temperature excursions, which are common with dry ice shipments, can also be detrimental to the health of a specimen sample. CROs and pharmaceutical companies have a very significant interest (i.e. – money) in completing clinical trials as soon as possible and unusable patient samples only hinder progress and add time and cost.

DRY ICE *PROBLEMS*

- ***1 – 2 DAY HOLDING TIME*** – international shipments often require lengthy holding times. This means packages need to be re-iced. Re-icing is costly and if not re-iced in time, contents will spoil.

- ***TEMPERATURE EXCURSIONS*** – temperature fluctuations are common with dry ice, especially during re-icing. Many specimens require near-constant temperature in order to retain integrity.

- ***HASSLE*** **–** the typical process followed by life sciences companies when shipping using dry ice involves ordering containers, ordering dry-ice, following special dry-ice handling instructions, filling out complicated shipping paperwork (dry-ice is considered a "dangerous good" and requires specific paperwork), contacting specialty carriers and then hoping the contents do not spoil before they reach their destination.

- ***DANGEROUS GOODS*** – some carriers and countries will not accept packages which use dry ice as a refrigerant.

- ***ENVIRONMENTAL IMPACT*** **–** Styrofoam containers are largely the packaging of choice used with dry ice – much of this packaging is single-use only and thrown away after one shipment. By some estimates Styrofoam takes up 25% of U.S. landfill space with insulating packaging a major contributor to this. Dry ice is also not environmentally friendly as it evaporates as a greenhouse gas (carbon dioxide).

CRYOPORT's *SOLUTION*

- ***LONG HOLDING TIME*** **–** CryoPort's Shipper has a 10+ day holding time. - long enough for almost all international shipments from origin to destination. No special handling is required which reduces cost.

- ***STABLE TEMPERATURE*** **–** unlike dry ice, CryoPort's LN_2 container maintains a constant temperature. Temperature monitoring device affords confidence that temperature of specimen did not fluctuate.

- ***OUTSOURCING SOLUTION*** **-** CryoPort understands the hassles involved with shipping using dry ice. They developed their system as a complete outsourcing solution. Ease and reliability of their system affords customers less headaches and added piece of mind.

- ***NON-HAZARDOUS*** – CryoPort's Shipper is classified as "non-hazardous" by the IATA. The containers do not risk being prohibited entry on certain carriers or into certain countries. They also do not require any special labeling.

- ***ENVIRONMENTAL FRIENDLY*** - LN_2 evaporates harmlessly. CryoPort's Shippers are reusable and recyclable.

PRODUCTS

CryoPort's outsourcing shipping solution encompasses a proprietary container along with an IT interface. The combination which the company believes affords customers (initially expected to be clinical trial related) a more reliable, less time consuming, easier and (potentially) less costly alternative to shipping with the use of dry ice and specialty couriers.

CryoPort Express Shippers
CryoPort Express® Shippers ("Shippers") are reusable dewar flasks made from aircraft-grade aluminum with a chamber for holding biological specimens. The patented containers use dry vapor liquid nitrogen (LN_2) as a refrigerant. The flask is similar to a thermos bottle in that it is designed to reduce heat conduction and convection.

Inside the chamber can be placed as many as 75 specimen vials - a new, larger container which can hold up to 500 vials was introduced in early 2012. Surrounding the container's chamber is a low density, porous foam which fully absorbs the LN_2. Cold vapor emanating from the foam cools the specimen inside the chamber to as low as -150° C. The vapor then slowly evaporates out of the container's vapor plug. This proprietary design – in which the liquid nitrogen is absorbed by the foam, prevents the liquid nitrogen from spilling – regardless of how the container placed (i.e. – upside-down, on its side, etc.). CryoPort believes this proprietary spill-proof design affords a significant advantage over competing shipping containers

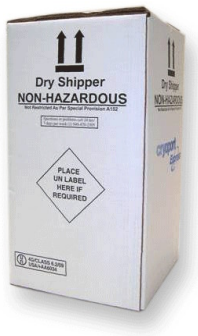
The specimen chamber is closed with a cap. A very high vacuum is created in the space between the outer and inner aluminum shell of the flask and a second cap is used to enclose the liquid nitrogen and specimen holding container. The dewar is wrapped insulating and cushioning materials and placed in a disposable, spill-proof package for shipment. CryoPort notes that their Shipper provides cooling for ten days or more and is relatively lightweight (~22 lbs.) – both of which it believes are other significant advantages (along with "spill-proofness") over competing products or methods of cold chain shipping.

The International Air Transport Association (IATA) is a global body that represents the airline industry. The IATA is made up of a consortium of airlines which publishes the "IATA Dangerous Goods Regulations" manual, a globally accepted field source reference for shipping of dangerous goods and hazardous materials. IATA has specific regulations regarding the packaging requirements of shipping of diagnostic specimens and infectious substances (covered by IATA Packaging Instructions 650 and 602, respectively). If a package does not meet these requirements, it can not be shipped by air. CryoPort's Shippers meet both of these requirements which essentially means it can be used to ship any type of biological material. This includes live cell pharmaceutical products such as cancer vaccines, diagnostic materials, semen and embryos, infectious substances and other items that require continuous exposure to frozen or cryogenic temperatures.

CryoPort Express Shippers are designated as "dry shippers" by the International Air Transport Association (IATA). As opposed to dry ice which must be labeled as "dangerous goods" and packaged in a way that permits the release of a build-up in gases, CryoPort's Shippers are considered "non-hazardous" by the IATA and therefore do not require any special labeling. The distinction is meaningful as: 1) airlines have discretion to refuse to carry certain cargo and are more likely to do so for those classified as "dangerous goods" 2) some countries refuse to accept shipments containing dry ice 3) the process of labeling "non-hazardous" materials is more simple which makes the shipping process easier.

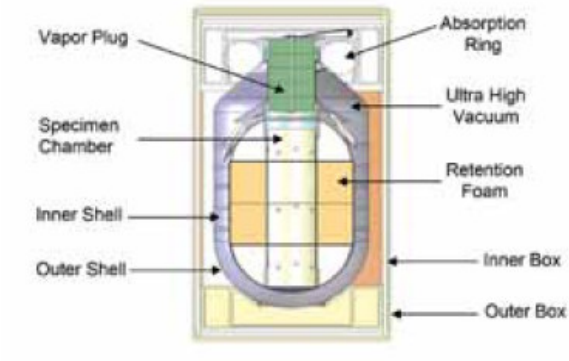
There are other companies that offer LN_2 containers but (as we detail under "Competition" below) there can be important differences in functionality between the various containers on the market. CryoPort has designed their Shipper and patented certain of its components to address what it believes have been significant deficiencies of other LN_2 containers. CryoPort owns three patents on its Shipper relating to the absorption foam, secondary packaging, and dewar materials and design – which are integral to its relatively light weight and "spill-proofness".

Disposable, spill-proof package



CryoPort, Inc.

CryoPort Express Shipper



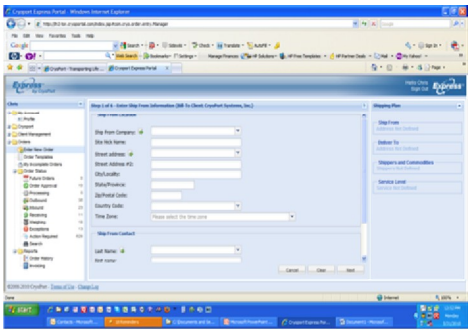
CryoPort, Inc.

CryoPort Express Portal

CryoPortal™ is the company's proprietary web-based ordering, tracking and monitoring system. It allows customers as well as CryoPort's customer service personnel to request a shipment and track its progress through the transport process. CryoPortal automates entry of orders, prepares customs documentation and tracks the shipment through to its destination. It will also alert customers and customer service if a shipment encountered unexpected delays – allowing for rerouting if necessary. The system is also integrated with the tracking systems of CryoPort's carrier partners (i.e. – FedEx and DHL), allowing for the seamless translation of scan codes and shipping and tracking information into the CryoPortal's interface.

The IT behind CryoPortal was built by KLATU Networks, a company that specializes in development of cold storage information networks. KLATU and CryoPort spent significant time in developing CryoPortal to ensure ease-of-use and high functionality and utility. CryoPortal integrates the multiple steps involved in the shipping into a one-stop-shopping experience – which CryoPort believes can reduce administrative costs and headaches associated with less automated processes. CryoPort also notes that its web portal can "detect and sometimes anticipate delays in the shipping process, often before the customer of the shipping company becomes aware of it."

CryoPortal web portal





CryoPort, Inc.

Smart Pak

CryoPort's Express Smart Pak is a data logger device which can be included with the Shipper to monitor the temperature of the specimen. The device uses a probe located in the vapor plug of the container. When the Shipper arrives at its destination, the Smart Pak is removed and the temperature data can be reviewed, downloaded and sent to the customer in PDF format. Smart Pak is a value-added feature and provides assurance that temperature of the specimens remained at acceptable levels, ensuring there was no degradation in the integrity of the contents.

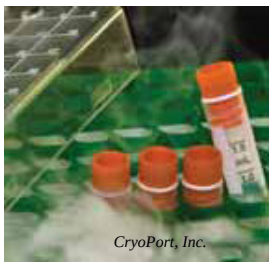
Smart Pak data logger



CryoPort, Inc.

Accessories
CryoPort also offers for sale sterile vials and aluminum canes which hold the vials during transport. The canes hold up to five vials each and up to fifteen canes can be placed in the CryoPort Shippers.

Cryovial



CryoPort, Inc.

Canes



CryoPort, Inc.

CRYOPORT EXPRESS SHIPPING PROCESS

CryoPort designed its products and processes to be an outsourcing solution for its customers frozen shipping needs so those companies can spend less time and money on preparing and monitoring shipments and more resources on value-added aspects of their respective businesses.

1.) **Order is placed via CryoPortal for CryoPort**

2.) **CryoPort arranges to send CryoPort Express Shipper, already charged with LN_2, next-day air to point of origin (i.e. – where specimen will be loaded)**

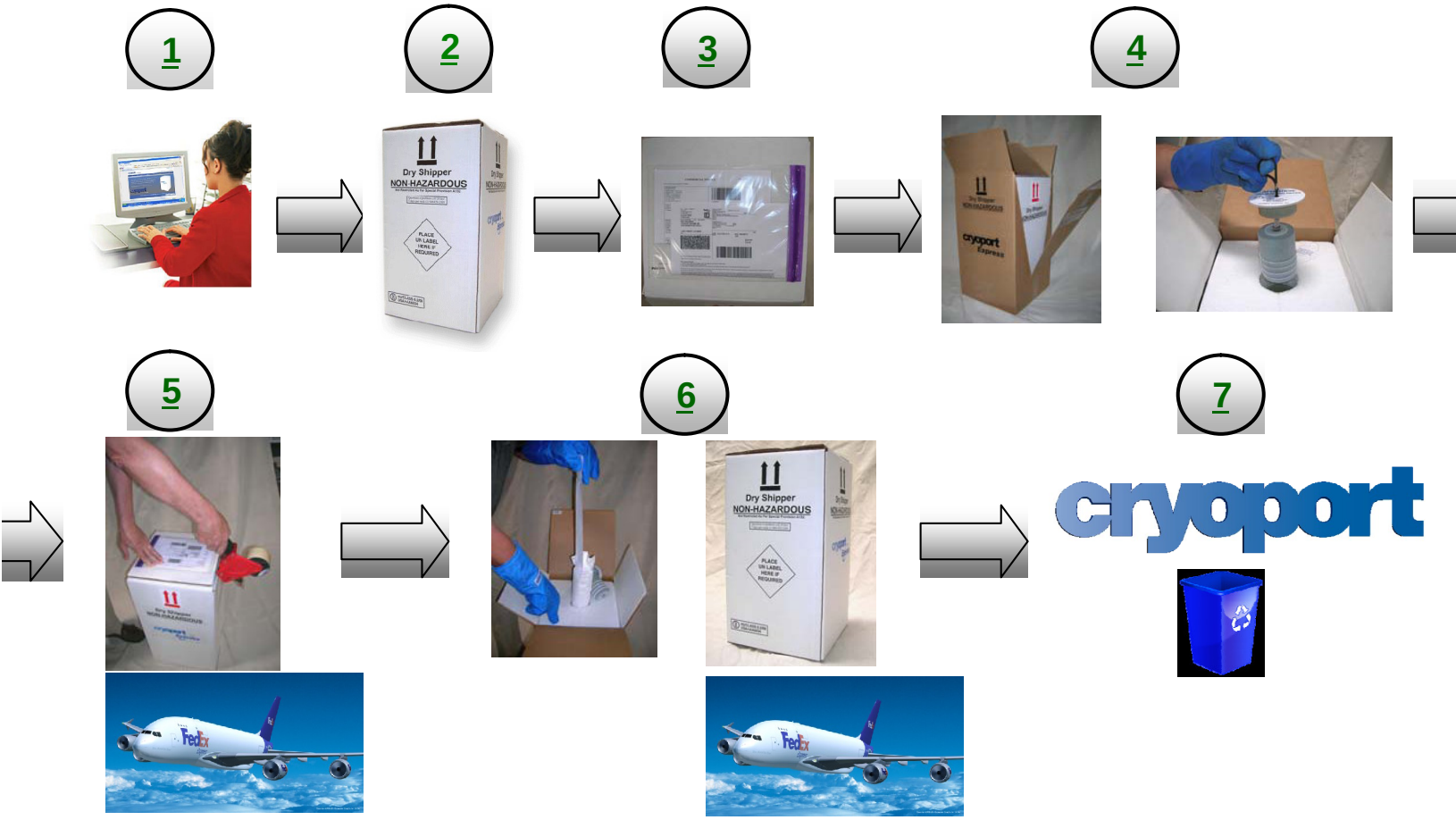
3.) **Prior to shipping out the container, CryoPort prepares and attaches all necessary shipping paperwork (air bill, commercial invoice, regulatory labels, etc.) – this includes all the shipping paperwork for transport to the point of origin (i.e. - from CryoPort's warehouse to point where specimen will be loaded) as well as all the paperwork necessary to ship from point of origin to its destination and back again to CryoPort**

4.) **At point of origin, the brown shipping carton is removed. Specimens (for example, human blood samples collected at a hospital for clinical trial purposes) are then loaded into the CryoPort Shipper**

5.) **Personnel at point of origin seal box (box shipping label already prepared and attached prior to being shipped from CryoPort) and make package available for pick up by cargo carrier**

6.) **Personnel at point of destination unload material, close box and make it available for shipment to CryoPort by cargo carrier**

7.) **Upon arrival back to CryoPort, the box is recycled and the flask refurbished and then reused**



BUSINESS MODEL – MOSTLY SCALABLE

Revenue is generated through lease of the containers on a per-use basis. As a significant portion of costs are either fixed (containers) or semi-fixed (servicing customer flow), the business should be fairly scalable. Cost of the containers is capitalized and depreciated (runs through COGS) over three years.

CryoPort sources individual components of its products from third parties and maintains a facility near San Diego where it assembles the shipping containers. They also currently have two refurbishing facilities from which the containers are shipped after used for specimen delivery, refurbished and then reused. In September 2011 they also contracted with MediRent BV to operate an operations center in The Netherlands - which is expected to be a key cog in servicing the European market. The company expects to add additional refurbishing facilities as new customers come online – likely located in overseas locations such as Asia and Brazil. As these facilities are rather rudimentary, incremental costs associated with these sites should be relatively minor.

CARRIER PARTNERSHIPS

As we detail under "Competition", several air carriers have recently launched specialty cold chain logistics and shipping services due to increasing demand. CryoPort, through agreements with two of the world's largest cargo carriers, should be able to directly benefit from the surge in clinical trial activity, especially overseas, through leveraging these carriers' geographic reach, marketing muscle and logistics capabilities. CryoPort did not release

specifics about pricing through these agreements but did note publicly that customers shipping through FedEx and DHL would receive “preferred pricing”. CryoPort hopes to sign agreements with other carriers in the future.

Federal Express
In January 2010 CryoPort signed an agreement with FedEx whereby FedEx will lease CryoPort’s Express Shippers and other products such as its Smart Pak data logger.

All orders can be placed either through CryoPort’s CryoPortal or FedEx's dedicated website for healthcare shipping called "*FedEx HealthCare Solutions".* For orders placed through FedEx, FedEx will lease the Shippers from CryoPort for each order. FedEx is responsible for delivering the Shipper from CryoPort’s facility to the customers’ address and finally back to CryoPort. FedEx monitors the container throughout transit and can intervene in the event of delays and reroute the package if necessary.

FedEx will pay CryoPort a fixed fee per lease transaction (up to 14 days), the amount dependent on to and where the Shipper will be shipped. FedEx is not required to lease a minimum number of Shippers from CryoPort. Per the agreement CryoPort is required to maintain shipper recycling centers in Asia, Europe and South America and is responsible for supplying and recharging all containers.

FedEx launched the program in January 2011 under the name, “FedEx Deep Frozen Shipping Solution” as part of its FedEx Healthcare Solutions business which specifically targets customers in the pharmaceutical and biotech industries and caters to clinical trials applications. The website boldly displays CryoPort's Shippers as the sole deep-frozen shipping offering through FedEx.

FedEx issued a press release on January 24, 2011 announcing launch of the program. Raj Subramaniam, FedEx’s senior VP of global marketing, in describing CryoPort’s system said, “It is truly a complete solution that enhances the current services we provide our health care customers, giving them an even greater peace of mind”. Carl Asmus, FedEx’s VP for international development for FedEx Health Care Solutions, said, “Deep frozen is a very fast growing area, and it’s becoming a very significant area for us. As we see these more and more complex technologies and medicines being developed, they’re requiring more robust and temperature-sensitive shipping solutions.” Relative to the significant shift of clinical trials being moved overseas, Asmus commented, “It requires a far more reliable shipping solution and that’s why it (i.e. – CryoPort’s offering) just plays into FedEx’s strengths in regard to our network and reliability.”

FedEx and CryoPort began marketing the partnership and making sales calls to potential customers in late 2010. Management noted in recent investor presentations and conference calls that they have been targeting life sciences companies in cities with a big biotech and pharma presence as this is where they think they can be most productive initially. More recently, CryoPort announced in early April 2011 the hiring of a Chief Commercial Officer and Senior Director of Sales. The press release indicates both positions will be involved in supporting the sales efforts of FedEx sales teams. Then in June 2011 the company announced they hired two new Senior Sales Directors - to cover the Northeast and Southeast. The new hires have held sales positions with FedEx and DHL serving large healthcare customers. We presume that this means that they come armed with potentially very valuable customer contacts as well as hit-the-ground-running experience.

DHL Express
CryoPort announced an agreement with DHL in September 2010. The agreement is very similar to the deal with FedEx, offering preferred pricing and allowing customers access to CryoPort’s web portal through integration of the system into the carriers’ IT systems. It differs slightly however, as DHL will not market CryoPort’s service (whereas FedEx will).

MARKETS

CryoPort notes in their public filings and in presentations that they expect to eventually target a number of different categories of customers and applications including those related to food, bio-terrorism, environmental samples and semiconductors. These are more of “back-burner” markets at the moment and we expect the majority of near-term interest in CryoPort Express to come from the life sciences industry including pharmaceutical, biotechnology and clinical research companies. Fertility clinics also fall into the life sciences category and offer a very captive market given the fact that semen must be shipped at cryogenic temperatures (thus disqualifying dry ice as an option) but at

an estimated 50k doses shipped annually (estimate taken from CryoPort's 10-K), they represent a relatively insignificant portion of total cold-chain shipping volume.

Current Market

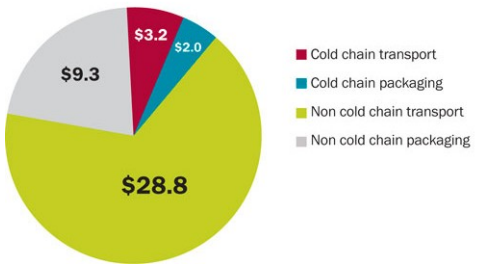
CryoPort's target market is a niche estimated to be worth between $400 million - $500 million in the broader ~$5 billion cold chain shipping category. CryoPort's market represents small specimen size that can benefit from being kept in a frozen state – and more specifically, that require long holding periods (i.e. – international shipments). While we have found nothing that documents the expected growth for CryoPort's specific market, we believe certain catalysts which are expected to drive growth of the overall cold chain shipping category will benefit CryoPort's niche as well. Based on these estimates, we think it is reasonable that CryoPort's target market can be expected to grow at 20% or more annually over the next several years.

Life Sciences Cold Chain Shipping

Cold chain shipping is somewhat of a broad category and includes a fairly diversified participant base from several industries including transportation, packaging and logistics - in addition to a variety of life sciences companies. U.S. and international regulatory bodies also play a part. There are also several processes involved which can differ based on the handling requirements of the material being shipped, cost and time considerations, regulations and destination of the shipment, among other potential factors. Recent developments in the pharmaceutical and biotechnology industries have resulted in a number of changes to these links within cold chain shipping and have created opportunities for many of its participants. It is important to understand when considering CryoPort's opportunity and target markets, however, that much of the cold chain shipping market is confined to materials that need to be kept cold but not frozen. This disqualifies CryoPort's Shipper, which maintains specimens at cryogenic temperatures, as a shipping option. Nonetheless, we expect recent developments to be catalysts in expanding the entire cold chain shipping market – including those related (directly or indirectly) to CryoPort's offerings.

Pharmaceutical Commerce, a publication focused on the processes involved in getting new drugs to market, recently published a study on cold chain shipping related to life sciences called "Biopharma Cold Chain Sourcebook 2010". The report estimates that cold chain shipments accounted for about $5 billion (or ~12%) of the roughly $43 billion that was spent on life sciences shipping during 2008. Of this, about $2 billion was for cold chain packaging and instrumentation. Instrumentation includes temperature monitoring devices.

Fig. 2. $5 billion was spent on global cold-chain logistics in 2008, in a total biopharma logistics market of $43 billion



www.pharmaceuticalcommerce.com

Fig. 3. Cold-chain logistics spending will expand from $5.1 billion in 2008 to $6.6 billion by 2011



www.pharmaceuticalcommerce.com

Authors of the report expect demand for cold chain shipping to grow significantly over the next several years, driven in large part to expanding international vaccination programs and a shift away towards development of more biological drugs. According to *Pharmaceutical Commerce*, this will help push demand for cold chain shipping up to $6.6 billion by the end of the current year. Much of this growth is expected to come from outside the U.S. with shipping to/from Asia and emerging markets forecast to grow by about 50% and 33%, respectively.

Distribution / Clinical Trials

Life sciences companies use cold chain shipping for two major purposes: 1) distribution of commercialized drugs and, 2) clinical trial related purposes for drug candidates under development. The industry report does not differentiate between the expected growth in spending on distribution versus that of clinical trials. Nor does it specifically differentiate between spending on the type of cold chain packaging. As a result, we have to make some generalizations about how this may benefit CryoPort.

While we believe CryoPort can directly benefit from increased clinical trial activity, cold chain drug distribution typically involves the use of large containers which may limit their exposure to that segment of the market. We also note that CryoPort's liquid nitrogen shippers cater to drugs that need to be in a frozen state during transport – a condition that not all biological drugs require.

Vaccines - distribution
A catalyst to the growth in vaccines has been philanthropic efforts such as the Bill and Melinda Gates foundation which have been focused on the eradication of infectious diseases in many third world countries through greater access to medicines.

While the portion of the predicted growth in cold chain shipping over the next few years related to vaccine distribution could be a boon for certain companies that cater to the long-haul segment, it may not translate into a comparably significant opportunity for CryoPort. We think some of the greatest beneficiaries in the cold chain system will be those that provide large capacity cold (but not necessarily frozen) storage with long holding times. There are several companies that participate in this portion of the market, some of which have specific collaborations, partnerships or joint-ventures with large air cargo carriers.

While some vaccines need to be kept frozen in order to maintain their effectiveness, most vaccines need to be maintained at temperatures between 2°C - 8°C (35°- 46°F) and can not be exposed to freezing temperatures. And more recently, vaccines that can be kept at room-temperature have been introduced. CryoPort's target markets are clearly those that require materials to be maintained at sub-freezing temperatures. This isn't to imply that CryoPort can not or will not benefit from the surge in vaccine manufacturing, especially as new vaccines are developed that may require a frozen state – only that we do not think CryoPort will see much of an initial significant and direct benefit from an increase in distribution demand from the growth in the global vaccine market.

Clinical Trials
Major pharmaceutical companies have a major problem. Reliance on chemical drugs with finite patent lives which are relatively easy to copy and generacize has recently sent many big pharmas (Pfizer, Sanofi-Aventis, Merck, Eli Lilly, among others) scrambling to find new, more stable sources of revenue. Consolidation in the industry has been rampant over the last few years, driven in large part by the desire to increase development of biological drugs – which are inherently very difficult to copy.

By some estimates, 50% of all new drugs will be biologics by the year 2015 with a big part of this growth forecasted to come from vaccines. Stem cell research has grown substantially over the last few years and is also expected to be a major area of interest for biotech companies focused on areas such as cancer and birth defects. While controversy remains regarding the use of stem cells for research purposes, the area is gaining support both from private as well as public entities. Stem cells and cord blood are best maintained at cryogenic temperatures – for which dry ice fails and liquid nitrogen excels.

Drug development means clinical trials. Clinical trials often require that biological material be shipped in a frozen state from the point of collection (i.e. – hospital, clinic, etc.) to a lab where the specimen can be analyzed. Drug development can be extraordinarily expensive, with a significant portion of this cost related to clinical trials. As a result, many drug companies and clinical research organizations are moving clinical trial sites overseas.

A report published in the New England Journal of Medicine cited a significant increase of the number of U.S. clinical drug trials moving overseas. It noted that approximately one-third of phase III trials of major U.S. pharmaceutical companies were being run entirely outside of the United States – with many of the study sites located in Europe and Asia. Distant trial sites means potentially long transport time before specimens reach the lab – this will undoubtedly create greater demand for frozen shipping with long holding times – and CryoPort could be a direct beneficiary of this demand for materials that are best maintained at cryogenic temperatures.

Future Markets?
CryoPort's relatively small size containers and liquid nitrogen refrigerant means that a large portion of the cold chain market has been inaccessible. With the introduction of their 500-vial container, their target customer base may now begin to broaden, however. CryoPort has also noted in public filings that they are investigating "alternative phase change materials in place of liquid nitrogen (that) may be used to increase the potential markets these shippers can serve such as ambient and 2-8°C markets". While we have no visibility on the timeline or even the feasibility of CryoPort eventually introducing containers (the company has released little in the way development scope or progress) that could maintain temperatures in the 2°C - 8°C (35°- 46°F) range, if and when it happens, this would greatly expand their current target market – and would potentially allow them to directly benefit from the expected surge in vaccine demand (and other biologics) over the coming years.

COMPETITION

Competition to CryoPort's cold chain shipping system is represented by 1) providers of shipping containers and 2) shipping and logistics services. Our due diligence has not uncovered a competing container manufacturer that offers both a full suite (most offer no services whatsoever) of shipping services (i.e. – scheduling, tracking, monitoring, package labeling, etc.) combined with a container(s) with similar benefits of CryoPort's Shipper (i.e. – light weight, durable, long holding time, etc.). We believe CryoPort can be just as competitive against specialty courier services as a result of CryoPort's low cost business model. By contracting with large cargo carriers, including FedEx and DHL, CryoPort can offer shipping rates competitive with (and potentially significantly lower than) specialty shipping and logistics services.

CONTAINER PROVIDERS

There are two general classifications of cold chain shipping containers; active-temperature ("active") controlled products and passive-temperature ("passive") controlled products. Active devices use an electrical or mechanical means to actively control the temperature of the inside of the unit. Active container manufacturers cite longer holding times as a benefit over passive containers – while potentially true compared to most passive containers, this does not necessarily appear to be the case compared to CryoPort's container with 10+ day holding time. Passive devices, by contrast, do not have the means to adjust temperature up and down. Passive containers, in general, are less expensive and lighter weight than active containers. Lighter weight means cheaper shipping costs, but this is often achieved with the use of less durable materials – CryoPort has designed its container as lightweight without compromising durability.

CryoPort's device, which falls into the passive category, aims to offer the benefits of both active containers (longer holding times, greater durability) and passive containers (less expensive, lighter weight - cheaper shipping) without the related drawbacks. As the small size of CryoPort's Express Shipper makes it most ideally suited for clinical trial use, we focus most of our discussion on competitors' comparably sized units which would likely be used for similar purposes.

We also reiterate that CryoPort's container (and data logger) is only a portion of its cold chain shipping solution – the other, arguably just as important portion is its web portal ordering and tracking system. So if a competitor does not offer both a compelling product along with a highly functional IT support system, their aggregate value-added may fall far short of CryoPort's. In addition, cost is likely to be a consideration in a customer's decision in which vendor to use. CryoPort's business model (lease of the container and use of its ordering and tracking system) is different than many of its competitors', which largely sell their containers outright and do not provide ordering or tracking support. CryoPort's one-stop-shopping system is designed for ease, convenience and, ultimately, overall cost savings. Based on the difference in business models and potentially significant differences in shipping volumes among end-users it is difficult to make cost comparisons between vendors. However, we do believe it is reasonable to assume that time is money, and (all else equal) if CryoPort's system saves customers time compared to a competitors' offering, it would save them money.

Finally, unlike CryoPort's container which is IATA certified to ship both diagnostic specimens and infectious substances, many of the competing containers are not. As indicated earlier, the distinction is important as non-IATA certified containers are prohibited from shipping certain materials – essentially excluding them from that portion of the market. Many life science companies will ship both non-infectious as well as infectious materials and will likely not be interested in using different containers for each – this again lends support for CryoPort's one-stop-shopping solution.



www.gokodiak.com

Kodiak Thermal Technologies offers various sizes of reusable active and passive containers. Their smallest container has a payload capacity of 1 liter and weighs 40lbs – the company's literature notes that this container is "excellent for clinical trials…." . Kodiak advertises that their active containers have holding times of at least five days. Kodiak does offer a data logger device that, according to the company's website, records internal and external temperatures which can be downloaded at the end of the trip. The company does not offer a web-based tracking and ordering product similar to CryoPort's.



www.acutemp.com

- **AcuTemp** offers a wide range of shippers including both active and passive containers. Their website notes that the longest hold time of any of their passive containers is 160 hours (~ 7 days) – that container weighs 24lbs. Their smallest active container has a capacity of 27 liters and weighs 135lbs. The company does not offer a tracking system nor a device to monitor temperature of the package contents.



www.cryogena.com

- **Cryogena**, a French company, offers a single-use passive dry shipper called Cryodrum which uses liquid nitrogen as the refrigerant. According to online literature, the container weighs approximately 15lbs. with a capacity roughly similar to that of CryoPort's Shipper. The literature notes Cryodrum has a holding time of 8 days. Cryogena does not offer a tracking system or a temperature monitoring device.

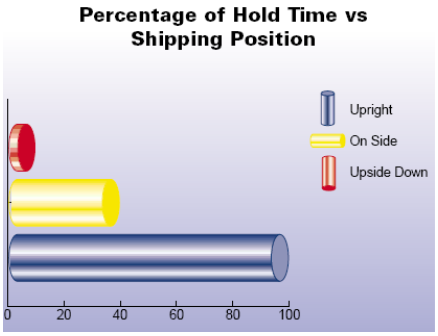


www.cryodepot.com

- **Cryodepot** appears to have containers which may be the most competitive to CryoPort's. The company claims it is the "USA's largest distributor of cryogenic equipment for scientific/medical research and educational applications". The company offers a number of different sizes of passive reusable liquid nitrogen dry shippers, including three that are in the same size range as CryoPort's Shipper. According to specifications on Cryodepot's website, one of its containers (model SC 20/12V) has a static holding time of 85 days (there is a caveat to this, however - see our discussion below of holding times) and capacity of 180 vials. That particular container weighs 52lbs. Another of its containers, and the size most similar to CryoPort's, holds 95 vials (compared to CryoPorts' 75 vials), weighs 18lbs (compared to CryoPort's 22lbs) and has a static holding time of 14 days. Cryodepot also offers a temperature monitoring device with a probe which fits through the cork of the container. Data from the logger can be downloaded at the end of the trip. Cryodepot does not appear to offer a tracking and ordering sytem, however.

We note that while Cryodepot's containers appear to have holding times longer than CryoPort's Shipper (and in the case of the 85-day container, significantly so), the comparison is not necessarily apples-to-apples due to potentially significant differences in static versus functional holding times. Cryodepot specifically notes in their online literature that their holding times are under static conditions. By contrast, CryoPort's 10+ day holding time is under functional conditions. Static holding times are measured (essentially) when the container is sitting in a room, upright and not under heat load (i.e. – not under stress of typical shipping conditions). Functional holding times are measured under use and containing samples. Static and functional performance can significantly differ, in large part due to tilting of containers during shipment which can cause the liquid nitrogen to evaporate much more rapidly than when sitting upright. CryoPort designed its containers in a way to specifically address this issue, resulting in relatively long functional holding times. Cryodepot mentions in their literature that their containers employ a certain absorbent material that results in "spill-free shipping" and offers "the maximum holding time." But Cryodepot's online literature includes a chart (at left) that indicates that when their containers are placed upside-down and on their side that their holding times are only approximately 5% and 35% of the stated static holding times. So accordingly, their container with a static holding time of 85 days may have a functional holding time of as short as 4 days.

Cryodepot



www.cryodepot.com

We also believe that CryoPort's web-portal order and tracking system is a significant portion of the value-added proposition that CryoPort's total cold chain system offers – which Cryodepot lacks. As a result, we expect CryoPort to be very competitive to Cryodepot's offerings, regardless of potential differences in holding times.



www.taylorwharton.com

- **Taylor-Wharton** offers passive reusable liquid nitrogen shippers which also appear like they could be competitive with CryoPort's. Two of the smaller containers hold between 85 and 100 vials, weigh approximately 20lbs. and have listed "working" holding times of 11 to 17 days. The company notes that they do offer temperature data loggers but it does not appear that they offer an ordering and tracking system.

SPECIALTY LOGISTICS
The other side of the competitive spectrum is the service side of the business – this comes mostly from specialty logistics organizations. **World Courier** is the largest specialty courier service for the pharmaceutical industry – the company claims that they are involved in transportation and logistics with 80% of the world's clinical trials which require specialty courier service. The company has over 140 offices throughout the world and offers "comprehensive clinical trial services" including transportation scheduling from collection site to lab, expertise in cold chain handling, dry ice replenishment, shipment monitoring with real-time tracking and customs clearance. The company offers a proprietary clinical trials data management system which can, according to World Courier, "take clinical trial logistics management to an entirely new level" and "can proactively anticipate and prevent costly transportation problems that are so often unavoidable when conducting studies".

CryoPort acknowledges that these specialty carriers offer a competitive threat but due to the relatively high cost of these service providers, that CryoPort's system can provide a cheaper alternative with no compromise to service, ease or convenience. In their recent investor presentation, CryoPort noted that a study done by Quest Diagnostics showed that CryoPort's Express Shipping system cost approximately 20% less than compared to World Courier in shipping to 21 Asian cities.

With the recent surge in cold chain shipping demand, large air carriers have been launching their own specialty pharmaceutical shipping services. *Pharmaceutical Commerce* notes that in less than three years' time the number of airlines launching pharmaceutical product offerings has grown from four to more than a dozen. Some of these include

- **American Airlines** recently teamed up with **Envirotainer**, a manufacturer of large cold chain shipping containers, in launching their ExpediteTC service which is focused on temperature-controlled shipping.

- **DHL** and **Lufthansa** created a joint venture called **LifeConEx** which provides an all-inclusive pricing and delivery system for temperature-sensitive biopharma products and with a specified, pre-validated container whose delivery and return to LifeConEx takes responsibility for. LifeConEx has also announced an ocean-delivery service for life sciences, brandnamed "H2Cargo".

- UPS just launched its **UPS Healthcare Logistics** service with a focus on distribution, logistics and transportation of pharmaceutical products including cold chain services.

- **FedEx Custom Critical** is an expedited (same day or overnight) air shipping service which includes temperature controlled products, handling and transportation. FedEx also recently rolled out its SenseAware tracking device in 2010. The device, in real time, monitors the location and temperature of packages. FedEx offers both the tracking device and related software to customers. FedEx's agreement with CryoPort, which FedEx markets as "FedEx Deep Frozen Shipping Solution", is part of the carriers' FedEx Healthcare Solutions business.

FINANCIAL CONDITION

$5.2MM Private Placement

In February CryoPort announced private placements of 9.5 million shares of common stock for $0.55 / share for gross proceeds to CryoPort of $5.2 million (net = ~$4.7MM). The buyers will also received one warrant for every share purchased, entitling the holder to purchase one share of common stock at $0.69 over the next five years.

Cash
As of their most recent reporting period (3/31/2012) CryoPort had $4.6 million in cash and equivalents. CryoPort also had $251k in restricted cash that will be used to repay the remaining convertible bond principal, which came due June 2012. At the ~ $2.1MM current average quarterly cash burn rate, this represents about 6 months of funds. If shipping volume picks up from recent history, operating cash burn should moderate to a certain extent -

although this may also necessitate an increase in container inventory (i.e. - increase in capex) which, at least initially, may offset any increase in cash from operations.

Debt

As of 3/31/2012 CryoPort had approximately $1.8 million in debt outstanding. This includes $1.4 million due to related parties and $334k of convertible debentures.

Debt owed to **related parties** of $1.4 million (including accrued interest) represents funds loaned to CryoPort from 2001 through 2005 by four former members of the company's board of directors. The notes bear interest at 6% annually and currently requires principal payments of $8k per month. Any remaining principal and any accrued interest is due on March 1, 2015.

During fiscal Q4 2012 CryoPort repaid ~$500k in convertible bond principal. The remaining $334k in convertible debentures are due June 2012 (we assume they have been repaid).

VALUATION / RECOMMENDATION

While revenue growth and shipping volumes have been disappointing relative to expectations, management indicates that they continue to add customer accounts and are getting increased interest from clinical research organizations and pharmaceutical companies - these are the customer classes that potentially represent very significant opportunity for CryoPort. Recent highlights include the addition of ACM Global and ImClone Systems as new customers beginning in late 2011. In addition, other life sciences companies, including diagnostic testing organizations are also showing meaningful interest. A catalyst to help secure new, larger accounts, per our recent investor note, is the addition of a new high volume shipper (introduced in early 2012), which will accommodate much larger shipments

The issues surrounding the rather anemic revenue ramp to-date appears to continue to be the long, drawn-out tire-kicking process by potential customers which includes including running multiple test shipments. In addition, customers that do adopt the system may only initially do so for only a portion of their cryogenic shipping needs but over time gradually shift to a greater reliance on CryoPort's container. As we noted when initiating on the company early last year, although CryoPort appears to have a significantly better system of shipping frozen materials, a better mousetrap often does not result in rapid acceptance. Staying the course is often viewed as a safer bet than trying something new for fear that the something new will provide no meaningful benefit, cause disruptions or be costly. It seems that this may be a headwind that CryoPort will be fighting for some time - and may be longer than management initially anticipated.

While we continue to be highly positive on CryoPort and their cryogenic shipping solution, due to the ongoing issue of a longer process in customer adoption, we have again trimmed our revenue forecasts through the end of our financial model. We now look for revenue to grow to about $45 million in 2015 (down from $57 million since our previous update). We model revenue to grow to $71 million in the year 2016.

We continue to value the company based on an industry P/E multiple (21x) and discount this back to the present at 20% / year. We look for EPS of $0.27 in 2016 - based our valuation methodology, this values the stock at approximately $3.00 / share. We are maintaining our Outperform rating.

FINANCIAL MODEL

CryoPort Inc.

	2012 A	Q1E	Q2E	Q3E	Q4E	2013 E	2014 E	2015 E	2016 E
Total Revenues	$555.6	$213.7	$468.0	$978.8	$1,771.9	$3,432.3	$16,888.4	$45,297.1	$71,118.7
YOY Growth	*16.9%*	*72.7%*	*322.7%*	*578.3%*	*901.8%*	*517.7%*	*392.0%*	*168.2%*	*57.0%*
Cost of Revenues	$1,392.5	$331.2	$374.4	$587.3	$974.5	$2,267.4	$7,671.1	$18,475.5	$28,447.5
Gross Income	($836.8)	($117.5)	$93.6	$391.5	$797.3	$1,164.9	$9,217.3	$26,821.6	$42,671.2
Gross Margin	*-150.6%*	*-55.0%*	*20.0%*	*40.0%*	*45.0%*	*33.9%*	*54.6%*	*59.2%*	*60.0%*
SG&A	$6,106.0	$1,618.0	$1,744.0	$1,745.0	$1,812.0	$6,919.0	$10,403.3	$16,035.2	$20,268.8
% SG&A	*1098.9%*	*757.2%*	*372.6%*	*178.3%*	*102.3%*	*201.6%*	*61.6%*	*35.4%*	*28.5%*
R&D	$491.8	$126.0	$131.0	$144.0	$155.0	$556.0	$525.0	$550.0	$875.0
% R&D	*88.5%*	*59.0%*	*28.0%*	*14.7%*	*8.7%*	*16.2%*	*3.1%*	*1.2%*	*1.2%*
Operating Income	($7,434.7)	($1,861.5)	($1,781.4)	($1,497.5)	($1,169.7)	($6,310.1)	($1,710.9)	$10,236.4	$21,527.4
Operating Margin	*-1338.0%*	*-871.2%*	*-380.6%*	*-153.0%*	*-66.0%*	*-183.8%*	*-10.1%*	*22.6%*	*30.3%*
Interest income, net	($515.8)	($47.0)	($51.0)	($44.0)	($42.0)	($184.0)	($91.0)	($22.0)	$18.0
Loss on asset sale	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Change in derivative value	$119.2	$15.0	$0.0	$0.0	$0.0	$15.0	$0.0	$0.0	$0.0
Pre-Tax Income	($7,831.3)	($1,893.5)	($1,832.4)	($1,541.5)	($1,211.7)	($6,479.1)	($1,801.9)	$10,214.4	$21,545.4
Taxes	$1.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$2,413.1
Tax Rate	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*11.2%*
Net Income	($7,832.9)	($1,893.5)	($1,832.4)	($1,541.5)	($1,211.7)	($6,479.1)	($1,801.9)	$10,214.4	$19,132.3
YOY Growth	*-27.3%*	*7.8%*	*9.7%*	*25.9%*	*27.4%*	*17.3%*	*-72.2%*	*-666.9%*	*87.3%*
Net Margin	*-1409.7%*	*-886.2%*	*-391.5%*	*-157.5%*	*-68.4%*	*-188.8%*	*-10.7%*	*22.5%*	*26.9%*
EPS	($0.27)	($0.05)	($0.05)	($0.04)	($0.03)	($0.17)	($0.03)	$0.17	$0.27
YOY Growth	*41.6%*	*31.6%*	*34.0%*	*47.5%*	*43.7%*	*38.8%*	*-80.6%*	*-618.7%*	*62.6%*
Diluted Shares O/S	28,975	37,300	38,250	39,877	41,222	39,162	56,000	61,200	70,510

Brian Marckx, CFA

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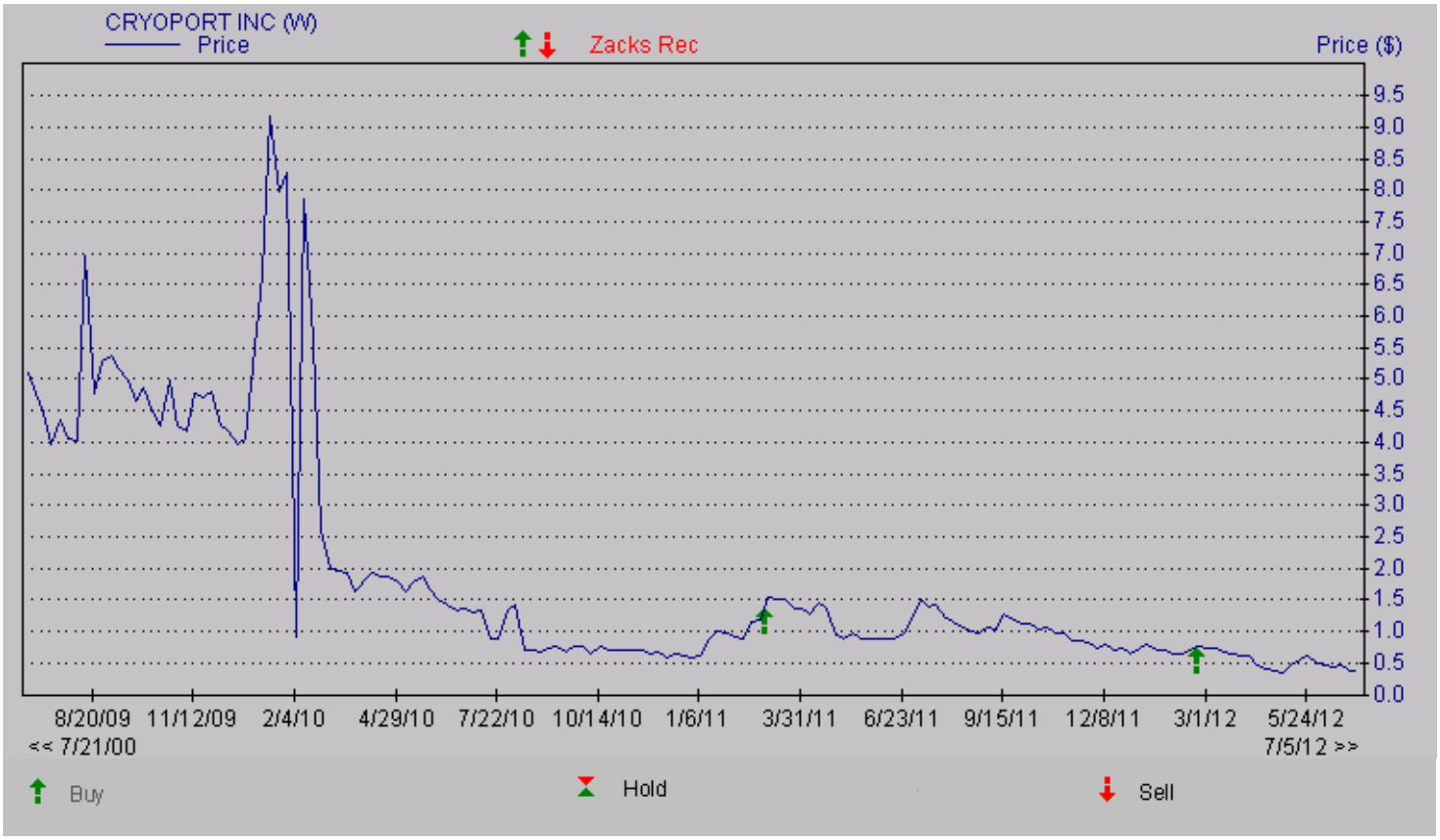
HISTORICAL ZACKS RECOMMENDATIONS



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