1. **Forecasted industry growth is moderate but steady**

Spurred by a recovering U.S. economy, the refrigerated storage industry is forecasted to grow by about 3.4 percent annually between 2014 and 2019. Indicators suggest that consumer spending should gradually increase demand for refrigerated and frozen food products, which comprise about 88 percent of the cold storage industry revenue. As disposable income levels rise, consumers are expected to return to valuing freshness and nutrition—the hallmarks of refrigerated foods—over the lower prices of canned and dried products. Working adults also are increasingly turning to the convenience of frozen foods for meal preparation, especially since selection has expanded from the lowbrow “TV dinners” of the past to the restaurant-quality fare in today’s supermarkets. Additionally, a steady upward trend in dining out that was temporarily slowed by the 2008 recession is returning, triggering a greater need for cold storage by foodservice companies.

Total demand for refrigerated storage is roughly about 33 percent each from food manufacturers and wholesalers, and another 22 percent from retailers. Those ratios are expected to change as more major food retailers such as Walmart, Target and Costco opt to bypass wholesalers to purchase goods directly from manufacturers, using their sophisticated owned or leased facilities for cold storage. In 2013, Target opened its own fully-automated 360,000-square-foot perishable distribution center in Denton, Texas. The nine-story facility can keep foods at temperatures ranging from 34 to -15 degrees Fahrenheit. Target is currently developing a second 500,000-square-foot cold storage warehouse in Rialto, California; and plans a third center in Jefferson, Ohio.

The remaining 12 percent of U.S. cold storage capacity is consumed mainly by pharmaceutical, floral and fur products producers that require temperature-controlled storage. Pharmaceutical companies in particular...
are expected to increase production of temperature controlled vaccines and biologic drugs for conditions such as rheumatoid arthritis and Type 2 diabetes. One industry expert forecasts that by 2016, about half of the world’s top selling drugs, in terms of value, will be temperature-sensitive biologics.3

Alongside the growth in cold storage demand is an upgrade in transportation infrastructures for temperature-sensitive commodities. Connecting refrigerated facilities in the nation’s agricultural heartland with ones near major American seaports are “cold train” intermodal third-party logistics firms like Railex, which combines five-day coast-to-coast refrigerated freight shipping with full beginning-to-end 3PL support. Using dedicated trains with compartmentalized, temperature-monitored cars to protect sensitive commodities, Railex even offers customers five days of free storage at any of its multiple 225,000-square-foot refrigerated distribution centers.4

More powerful “blast” units that can quickly freeze food and hold it at temperatures up to -60 degrees Fahrenheit. These are becoming popular to flash-freeze seafood to help maintain optimum flavor and texture.8

Wireless radio frequency identification (RFID), utilizing scanned tags providing tracking information such as product movement, time spent in transit and temperature fluctuations. This enables operators to better control product handling and improve quality.9

Cross-docking, which uses automatic bar coding, storage and retrieval systems, and guided vehicles to enable products to be moved from receiving dock straight to a staging zone for final delivery, without being inventoried.

Product picking improvements such as hands-free voice-directed picking for workers in freezers wearing bulky thermal gloves, and robotic pickers than can eliminate some manual labor needs.

Building dimensions are important as well. Creating an effective cold storage facility involves much more than merely putting a freezer in a dry warehouse. Square footage is less important than cubic feet, meaning that preferred ceiling heights on new buildings are between 36 to 40 feet, compared to the 22 foot average clear height for warehouses built just 20 years ago. Plus, buildings are not typically concrete tilt-ups due to the freezer space’s component requiring special insulation and padding. Cold storage operators pay a premium for climate control, so they want to maximize their vertical space.10

In addition, the expense of operating and maintaining refrigerated storage space is far greater than for a conventional warehouse. Besides the capital and maintenance cost of freezers and other sophisticated equipment, the power required to chill contents can comprise more than 25 percent of a cold storage building’s ongoing operating costs.11 Electricity costs in non-refrigerated spaces, or traditional warehouses, are generally under 10 percent total overhead. Also, cold storage facilities require fully redundant backup generators to maintain product temperatures if the main power goes out. The difference between operating requirements between refrigerated and dry storage facilities is comparable to that of mission-critical data centers versus conventional office buildings.
Finally, the cold storage industry is subject to many government regulations ranging from food-grade product handling to safety regarding ammonia used in refrigeration units. Permitting can be more complex and inspections more frequent than with dry warehouses. Insurance is also more expensive and, in Chicago, for instance, can average 2-3x that of more conventional rack warehouses; the higher cost can be traced to the use of ammonia cooling systems.

3 The industry is dominated by big players, and continues to consolidate
Despite over 600 operators in the U.S. refrigerated storage industry, the top 10 players dominate about 80 percent of the market. This trend will only increase as the largest cold storage firms merge or purchase smaller ones. Lineage Logistics, the second largest refrigerated warehousing and logistics firm in the industry, purchased the fourth largest company in the industry, Millard Refrigerated Services in 2014. An even bigger deal may be at hand: Sysco Corporation and U.S. Foods, the two largest American food distribution companies, have proposed a merger. The resulting company could end up controlling over 35 percent of the broadline food distribution market through a combination of direct ownership and leasing and operating facilities.

Despite some major food retailers such as Target completely owning their distribution, many others, as well as manufacturers, are partnering with 3PL providers in hybrid ownership/operating arrangements. Food company Bob Evans actually sold its Springfield, Ohio cold storage distribution facility to Millard, prior to the Lineage acquisition. The company had switched from direct-to-store distribution (DSD) to warehouse ownership to realize economies of scale. However, executives realized that to continue to support planned growth, the company would have to invest significantly in processes and technologies that were outside its core competency. “You have to decide who you are as a company,” notes Dathel Nimmons, Vice President of Bob Evans. “The answer for us is: we are a food company, not a distribution company.”

4 There are several opportunities
While cold storage is a relatively thin market, from an ownership perspective there are several reasons potential investors and developers should keep an open mind about refrigerated storage. For one, Class A traditional bulk distribution/warehouse space in many primary and secondary U.S. markets is getting harder to come by, and—when it does come to market—there are often bidding wars among investors. Investing in and developing cold storage facilities can be an alternative to being forced into considering Class B warehousing space in these markets.

People have to eat regardless of fluctuations in the general economy, meaning cold storage is recession-proof.

Another good reason: There are also more mouths to feed with the addition of 62.8 million Americans being added from 1990-2013, a 24.8 percent increase, bringing the total population to 316.1 million. By 2050, the U.S. population will exceed 400 million, suggesting the demand for refrigerated storage will likely outstrip supply for many years. The scenario of not enough new cold storage facilities being developed to keep pace with industry growth is likely to increase as more existing facilities age beyond their 30 to 35 year life cycle or cannot keep pace with necessary technology.

A Tenant’s Perspective: Modernity and Site Selection (Case Study)
One of the largest diversified suppliers and distributors to the quick service restaurant industry, with 50+ customers and 25,000+ restaurants from three continents, took occupancy of a 161,605-square-foot build-to-suit in McCook, Illinois in mid-2014. The company consolidated two existing facilities into a new LEED-Gold facility, which features a 40 foot clear height, 61,015 square feet of dry storage, 32,537 square feet of office space and a separate 5,112-square-foot on-site maintenance building. The modern distribution center is also equipped with 4,000 AMPS of power and a cascade refrigeration system that maintains 39,179 square feet of cooler storage at 34°F Fahrenheit and 23,765 square feet of freezer storage at -10°F Fahrenheit. McShane Construction completed the design-build, while JLL provided site selection, real estate acquisition and construction management services for the facility.

The distributor outgrew an existing 85,000-square-foot facility, which dates back to the 1980s, and the McCook move gives the company the capacity to grow. It also puts them 11 miles closer to their customers in the Chicagoland area. As transportation costs impact 50 percent of the average distributor’s bottom line, intelligent site selection considering all supply chain costs is a competitive differentiator.

Although many of the largest facilities owned by the deepest-pocketed investors and developers, there are still niche opportunities for mid-level and smaller firms. For example, a less-expensive alternative might be a combination cold and dry storage facility, or one with some refrigerator and some more costly freezer space. Such hybrids also offer more flexibility to a tenant with a variety of needs.
Another potential strategy is to refurbish an existing cold storage facility with expanded and/or upgraded refrigerator or freezer space. Since the building shell and infrastructure might already be largely suitable, necessary improvements can be made for about $60-$70 per square foot, around 40 percent of the cost of ground-up development.

Since cold storage facilities are more unique and less plentiful than dry warehouses, they do not stay on the market long, and off-market deals are common. It is important to have a deep understanding of the markets for such properties, or engage someone who does.

5 Consider buy-lease-resell scenarios
Many investors pursue cold storage with a goal of buying or building a facility with about a 10 percent capitalization rate, lease it for a period to build cash return, then sell it at around an 8 percent cap rate. Not surprisingly, freezer storage facilities command the highest values with cap rates generally 200 basis points lower than that of refrigerated storage space.

Values for cold storage facilities are usually based upon the number of pallet positions, which are based upon cubic feet. Market rents, however, are generally cited on a square footage basis, and are typically much higher than rents for dry warehouse space due to the higher capital costs of the facility. The return can be especially substantial in coastal areas that serve as a crossroads both for ocean seafood frozen soon after it is caught, and for cold train shipments of food such as meat and poultry from America's heartland. In general, cold storage space is less subject to market volatility than dry storage, and offers a lower beta. To maximize return stability and mitigate risk, investors frequently seek 10 to 15 year leases on refrigerated storage facilities, compared to five years for traditional warehouses.

While the buy-lease-resell scenario is attractive to many investors, some opt for a long-term hold when a credit tenant is in place. Each tenant’s operations are highly specialized and tenant improvement allowances are considerable to get them up and running. If a company is in the space for the long-haul, meaning there is a consistent cash flow, then why divest?

Conclusion: Now’s the time
Market fundamentals favor cold storage as an investment vehicle since demand outstrips supply, and demand is not showing any signs of letting up, based on future U.S. population estimates. While the segment can be off-putting to investors since it is capital-, management- and maintenance-intensive, returns can be substantial with a 15-year lease in place; returns for freezer (versus traditional warehouse buildings) may be up to 400 basis points higher due to the inherent risks cited earlier. Such yields are very appealing in a low interest rate environment. The key, however, is to invest carefully, taking into account the added complexity of refrigerated storage facilities, and, as with all real estate transactions, acting from a position of knowledge and strength.
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1IBISWorld Industry Report 49312, Refrigerated Storage in the U.S., June 2014
4http://railex.com
5McCurry, op cit
7IBISWorld, op cit
9IBISWorld, op cit
10JLL Research
11Innovative Cold Storage Enterprises, Inc.
15U.S. Census Bureau

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