

Equity Research

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Codexis, Inc. (CDXS-\$7.47)

Rating: BUY

Target Price: \$13.00

Shell/Cosan Agreements -- Brazil Build-out Positive -- BUY

| EPS | 1Q | 2Q | 3Q | 4Q |
|-------|----------|---------|---------|---------|
| 2008A | --- | --- | --- | --- |
| 2009A | --- | --- | --- | --- |
| 2010E | (0.50)A | (0.15)A | (0.11)E | (0.12)E |
| 2011E | (0.09)E | (0.15)E | (0.10)E | (0.10)E |
| FY | 2008A | 2009A | 2010E | 2011E |
| EPS | (18.96)A | (7.74)A | (0.54)E | (0.45)E |
| P/E | NM | NM | NM | NM |

Sum of quarterly EPS may not equal full-year total due to rounding and/or change in share count.

- Yesterday, Shell (NYSE: RDS, NC) announced signing of binding agreements with Cosan (NYSE: CZZ, NC), one of the world's largest sugar producers and Brazil's only totally integrated renewable energy producer supplying sugar/fuels/power, following their non-binding February 2010 memo of understanding. Cosan currently owns 23 sugarcane producing units with 60 million tons crushing capacity and produces 2 billion+ liters of ethanol annually.
- Importantly, Codexis, plus Shell's other biofuels partner, Iogen Energy (privately held), will co-contribute second generation technology enabling the production of cellulosic ethanol at significant scale — leveraging Cosan's infrastructure — a significant and broad technology platform application opportunity for Codexis with substantial long-term potential, in our view.
- The proposed joint venture, pending regulatory approval, will have an annual capacity of approximately 18 billion liters of fuels with a consolidated network of supply and distribution assets including 4,500 retail sites establishing a competitive position in Brazil's fuels distribution market.
- Recall, Codexis achieved two of six milestones anticipated in 2010 for the Shell collaboration and expect milestone payments in 2H:10, continued positive development driving long-term cash flow, in our view.
- We think Codexis could become a key player in bioenergy leveraging its proprietary technology platform to generate enabling enzymes required for 1st-gen ethanol, cellulosic ethanol, biodiesel and carbon-related businesses.
- Codexis currently sells biocatalysts (enzymes, microbes) and value-added pharmaceutical intermediates/APIs, a green chemistry manufacturing alternative to conventional processes, with potential to improve pharma customers' gross margins while reducing environmental impact. Management has guided to additional pharma partnerships that we think could contribute to near-term revenue growth. We reiterate our BUY rating.

Current Statistics

| | | | |
|---|----------------|--------------------------------|------------------|
| Market Cap (\$Mil) | \$255.5 | Institutional Holdings: | 26.1% |
| Avg. Daily Trading Volume (3 mo.): | 91,704 | Technology Value (TV): | \$157.193 |
| Shares Out (Mil): | 34.199 | Cash (Mil): | \$100.307 |
| Float Shares (Mil): | 6.104 | Short Interest (Mil): | 0.367 |

Company Description

Codexis (www.codexis.com) applies its proprietary technology to create and optimize biocatalysts that enable the manufacture of products cost-effectively, at commercial scale and with significantly reduced environmental impact relative to conventional manufacturing processes. The company develops products for energy, pharmaceutical, and environmental industries. Codexis has

The Disclosure Section may be found on pages 4 - 5 of this report.

Valuation

Exhibit 1: CDXS sum-of-the parts analysis

| Valuation | | NPV \$MM | \$ / share |
|------------------------|-----|--------------|-------------|
| Cash 3Q:11 | | \$87 | \$2 |
| Shares 3Q:11= 39MM | | | |
| Biocatalysts | | | |
| 10-y NPV | | \$69 | \$2 |
| Terminal value | | \$101 | \$3 |
| Total value | | \$170 | \$4 |
| Biofuels | | | |
| 10-y NPV | | \$237 | \$6 |
| Terminal value | | \$172 | \$4 |
| Total value | | \$410 | \$10 |
| Total discounted value | 3-y | \$251 | \$6 |
| Total value | | \$509 | \$13 |

| | | Biofuels royalty rate | | |
|----------------------|-----|-----------------------|-------------|------|
| | | 6% | 7% | 8% |
| Discount rate | 13% | \$14 | \$16 | \$18 |
| | 15% | \$12 | \$13 | \$14 |
| | 17% | \$10 | \$11 | \$12 |

Source: Cantor Fitzgerald

Our 12-month price target of \$13 is based on the following assumptions:

- We applied a discount rate of 15% to account for CDXS' relatively low risk business model, a contract service/manufacturing leveraging its enzyme optimization technology platform in exchange for product revenues / royalties and service fees.
- We assume a nominal terminal growth rate of 2% after 2020 to reflect a sustainable long-term business.
- We provide a detailed NPV model with market size and penetration assumptions for the specialty enzyme business.
- For the Shell biofuels alliance, we assume a two stage expansion from 500 million gallon per year (MPY) plant online in 2014 to 1.5 billion MPY online in 2019, approximately 10% of EISA RFS cellulosic biofuel requirement, based on Shell's capability and industry progress. Due to the product royalty arrangement with BP (NYSE: BP, NC), we assume a total 7% royalty payment to CDXS, of which 2% is payable to Maxygen (NASDAQ: MAXY, NC) according to the company's licensing agreement.

We think that CDXS is under valued given its current market capitalization and relatively low risk business model. As a result of the exclusive agreement with Shell, the company could not license any technology developed under the collaboration for the patent life of such technology should Shell not pursue the commercialization of any cellulosic sugars, biofuels or related products developed under the collaborative agreement, a significant competitive disadvantage in the biofuels market, in our view. However, the company is positioned to pursue alternative businesses outside of the field of fuels and lubricants leveraging its technology developed in the biofuels alliance – providing upsides should these new ventures become successful. Based on our risk/return analysis, we assign a BUY rating and a \$13 price target.

Risks

Development risks: Codexis is a development stage company and that could continue to incur substantial losses and not achieve profitability. Codexis has an accumulated deficit of \$159.6 million as of December 31, 2009. The development of technology for converting sugar derived from non-food renewable biomass sources into a commercially viable biofuels is still in its early stages, as a result, production and commercialization of cellulosic biofuels may not be feasible.

Commercial risks: Codexis is dependent on the acceptance of its enzyme products in the marketplace and could experience delays if these new biotechnology-derived products experience customer resistance and/or regulatory hurdle.

Collaboration risks: Codexis is dependent upon its relationships with collaborative partners and their interest and ability to commercialize biocatalyst-based manufacturing processes and/or cellulosic ethanol products based upon Codexis technology for its future revenue.

Competitive risks: Codexis products could face significant competition in the future which could diminish its revenue potential. Additionally, Codexis is dependent upon its patent estate to create product value for its customers. The company could also face competitive opposition and be required to defend its intellectual property that could involve litigation and expenses. Further, under the licensing agreement with Maxygen, there are limitations on Codexis' ability to enforce Maxygen's patents to which it hold a license, which could have a material adverse effect on Codexis' business.

Financing risks: Codexis may need substantial capital requirements to continue its development. Should Codexis be unable to enter into or maintain collaborations with partners that are able or willing to fund its development efforts and/or raise additional funds, the company may be forced to delay or terminate research or development programs or the commercialization of products, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require the company to relinquish commercial rights, or grant licenses on terms that are not favorable.

Market risks: Codexis' biofuels business is dependent on prices of petroleum-based fuels, price and availability of cellulosic biomass and fuel regulations/policies. The company may not be able to produce commercially viable alternatives to petroleum-based fuels and biofuels royalty revenues under the agreements with Shell are indexed to the price of oil. Additionally, the availability of arable land to supply feedstock, weather conditions, farming decisions, government policies and subsidies with respect to agriculture and international trade, and global demand and supply may impact the price and availability of biomass. Further, foreign, federal, state and local government regulations and policies concerning the petroleum industry may have material impact on the biofuels industry and Codexis' business.

Disclosures Appendix

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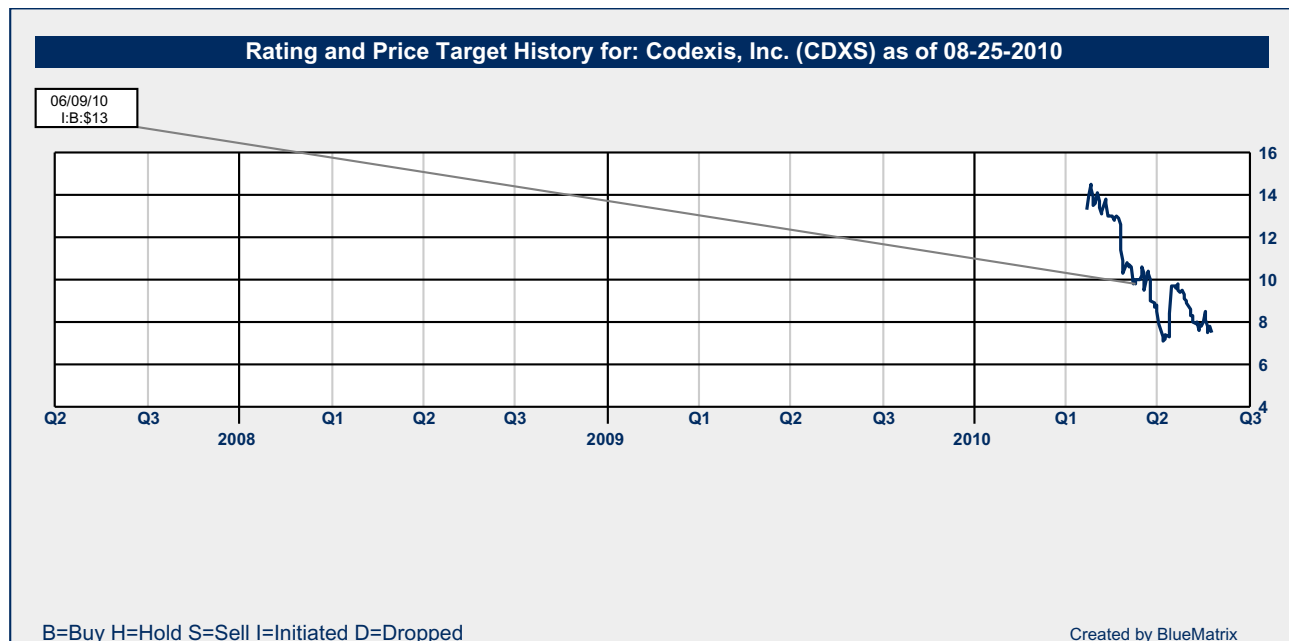
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| Rating | Count | Percent | IB Serv./Past 12 Mos. | |
|----------|-------|---------|-----------------------|---------|
| | | | Count | Percent |
| BUY [B] | 44 | 64.70 | 10 | 22.73 |
| HOLD [H] | 20 | 29.40 | 3 | 15.00 |
| SELL [S] | 4 | 5.90 | 0 | 0.00 |

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