



JPS Global Investments—The Quarter in Review

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Market Summary

I imagine 2011 was a good year for heartburn medication sales. Market volatility— which is fed by uncertainty— got dangerously close to levels last recorded at the height of the financial crisis, as measured by the widely followed CBOE Volatility Index (VIX). In “normal” periods the VIX tends to register below 20 and in the third quarter of 2011 it spiked over 40 several times, just shy of the 50 threshold that was breached during the darkest days of 2008-2009.

Europe still did not solve its debt crisis in a conclusive manner. The US debt ceiling debacle may have permanently convinced the few remaining optimists that our political system is indeed dysfunctional and out of its league in dealing with the economic challenges at hand. Even China, generally a reliable source of economic growth, showed some signs of contagion from the ills that are sweeping the developed economies.

Despite all that, the broader market, as measured by the S&P 500 Index, was essentially flat for 2011. Bonds had a great year, as the 10-year Treasury yields dropped below 2%. As measured by the Lehman Aggregate Bond Index, bonds returned 7.84%. Consensus view earlier in the year was that yields couldn't possibly go lower, but yet they did. Can they go lower still? I am not sure, but the Japanese 10-year government bond yield has been around 1% for the last decade.

International markets did considerably worse than the US. As measured by the MSCI EAFE Index, international developed markets were down 12.14% and the MSCI Emerging Market Index

was down 19%. That international developed markets— which are primarily Europe and Japan— did worse than the US is not surprising, considering the fundamental problems these economies face. However, emerging markets were to a meaningful degree casualties of a flight to *perceived* quality and might be more of a bargain than they were a year ago, considering their substantially better long-term prospects.

Green stocks also fell victim to the flight from risky assets though part of the decline can be chalked up to headwinds specific to the Green Economy, such as regulatory uncertainty in Europe and the US, oversupply of wind turbines and solar panels, and sunseting renewable energy incentives. As measured by the Ardour Global Index, green stocks were down 44.10% in 2011. Though we did meaningfully better than our benchmark, our stocks were not immune from the malaise affecting virtually all of the green sectors.

Visibility in the short-term remains low. However, we are confident that in the long-term fundamentally sound companies in the green sectors will generate positive returns for investors. After all, we still have a need to diversify the energy mix for security, environmental, and ultimately cost reasons. It is still a fact that energy efficiency saves money which is good for the government, business, and consumers. Finally, virgin resources, ecosystems, and fresh water supplies are still being depleted and new products & technologies are required to ease the burden on these finite resources, so that global economic growth can continue. These challenges have not receded in recent years, but public attention has (temporarily) shifted elsewhere; when it returns green stocks should be well positioned for growth.

Blue is the New Green

The water space is inextricably linked to the Green Economy. In fact, one could argue that fresh water shortages are an even more immediate threat to the planet and its economies than climate change, pollution, and resource scarcity. Almost a billion people lack access to clean water. Even without the impact of climate change, fresh water aquifers are being depleted at a rate that exceeds their replenishment. Water scarcity is most acute in Asia, the Middle East, Northern/Eastern Africa, Australia, and the Western United States. An increasing population will place further stress on the supply, with agriculture, industry, and households all competing for a dwindling water supply. According to the World Water Council, over 260 river basins are shared by two or more countries, which creates the potential for conflict. Examples of such potential conflicts include those between powerful nuclear states: China and India, India and Pakistan, Israel and its neighbors, to name a few.

The purpose of my newsletter is not to dwell on environmental problems (there are plenty of newsletters for that), but to recognize the investment opportunities that these problems spawn. In the water space specifically, there are a number of sub-sectors where investors might find value: water treatment, leak detection, infrastructure, and distribution. The thesis across these sub-sectors is the same: Water is a valuable yet underpriced asset. It will increasingly be priced based on usage. As the price of water increases, the demand for efficient distribution at minimal loss will increase, as well as the demand for recycling & reclaiming water. The downside risk to the sector seems unlikely: water becoming a less valuable and less frequently priced asset. As such, we are committed to the space in the long-term and currently have about a 15% allocation to water in our Green Economy strategy.

How has the sector done in 2011? The S&P Global Water Index was down 6.74%, underperforming the broader US market, but outperforming international markets, emerging markets, and small caps. I recall visiting a green

investment conference in San Diego a couple years back where they had a session on the water space. It was preceded by a cleantech presentation by a fit Bay Area über-hipster who spoke to a full room. As the water guys took to the stage, you could feel the energy drain from the room and soon the attendees did as well. Though what they were talking about was fascinating, substance never won from style and much of the message was lost. This is a random anecdote from which no meaningful conclusion can be drawn, but I bring it up because it reflects the position of the water space in investors' minds: interest is lukewarm and excitement is low, though the dire state of global clean water is hardly a secret. The flip side of that coin, however, is that the sector is underpriced and carries a lower risk profile, relative to the more volatile cleantech and renewable energy sectors. As such, we believe a meaningful allocation to water has a place in both conservative and growth oriented portfolios.

Biofuels Lack Octane

Biofuels are an area of investment that has continued to disappoint. In the early days of (corn) ethanol we took a pass, believing that it was a market built solely on misplaced government subsidies with no basis in economics. When second generation biofuel companies started sprouting up, the sector became more interesting. The promise is great: the energy released from combusting liquid hydrocarbons has propelled the modern economic era. If there are substitute fuels that have a more benign carbon footprint and are derived from renewable feedstock, the uptake could be quite spectacular. However, investors should proceed with caution, lest they forget the speculative nature of the stocks that occupy the biofuels space. Some of the recently public biofuel companies have had a challenging 2011. Amyris, a company that modifies micro organisms to convert sugarcane to fuel, was down 56.74%. Codexis, known for its biocatalysts research with Shell to produce advanced biofuels, saw its stock decline 50%. Finally, Solazyme, a Bay Area company focused on transforming plant-based sugars into oils, was down 42.54% from its IPO price in May. Though generally these companies

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haven't fallen short of their stated milestones, it is a lack of revenue let alone earnings that proved too big of a hurdle during the dire summer of 2011 to retain investor confidence.

Despite all the gloom, a number of biofuel stocks are set to go public this year. In fact, the first one already did: Renewable Energy Group (ticker: REGI). This company is a more traditional biodiesel producer, which uses low cost feedstock including inedible animal fat, used cooking oil, and inedible corn oil. The IPO wasn't too exciting, coming out at \$10 per share, well below its target offering price of \$14. Perhaps, this is partially to blame on the track record of the biofuel IPOs of recent past, which have failed to excite.

From a technology standpoint, more interesting companies that are slated to go public are Origin Oil, a Los Angeles based company that is focused on developing high-speed and cost effective manufacturing processes for the extraction of oil from algae, and Genomatica which focuses on engineering microorganisms to efficiently convert renewable feedstocks into chemicals. What makes both companies interesting is that they are focused on the technology and process but partner with larger companies that have the scale to handle the actual production.

Though some of these companies hold great promise, in our portfolios we prefer companies that not only have great potential, but also a strong statistical record when it comes to balance sheet, cash flows, and the prospect for near-term earnings. As such, we will continue to keep an eye on some of these companies but will need to see a few more milestones met before a strong case can be made for investment rather than speculation.

EU Crisis: A Green Economy Showstopper?

It is a fair question to ask whether the sovereign debt crisis in Europe will derail or set back the nascent Green Economy. Europe has been at the forefront of integrating renewable energy into the grid, with often lofty subsidies. From an investor's perspective the short-term answer has already been "yes." As investors worried about the

effect of solar subsidy reductions and oversupply in key markets such as Germany, Spain, and Italy in the last couple years, the companies in this space have seen their stock prices decline upwards of 75%. Interestingly, however, Germany installed a record 7,500 megawatts of solar capacity last year, outshining analyst estimates by approximately 25%. The story in Europe's offshore wind power market in 2011 was one of stability: During the year, according to the European Wind Energy Association, 866 MW of offshore capacity was installed, comparable to 2010 and more than double that of 2008. Of the installation, 87% went into the seabed in British waters and 80% was supplied by Siemens, one of our core holdings. Meanwhile, Europe has reached its 2010 target of 21% of electricity from renewables. Whereas onshore wind was the main source of renewable energy growth from 2005-2010, it is expected that offshore development will take the lead as the main source of growth in wind power going forward.

Yes, subsidy uncertainties and reductions have been a source of instability in the renewable energy sectors, especially in Spain and Italy. And yes, it is not over with further cuts and changes to come as governments are underfunded. However, the steady march of renewable energy generation has not been halted thusfar and the unsubsidized cost continues to decrease with grid parity ever closer. Progress will not be even. However, it is not realistic to expect these sectors to melt away, as they currently account for over 20% of all electricity generation and a majority of all new installed power capacity.

In summary, I believe that patience will reward long-term investors in the European renewable energy sector. The winning investments, however, may not necessarily be companies domiciled in Europe, nor will the greatest value stay in one place of the vertical supply chain. Certain parts will be commoditized or oversupplied, other parts will be in high-demand and with favorable barriers to entry. Investors will have to anticipate these changes in order to maximize their benefit from investing in the space.

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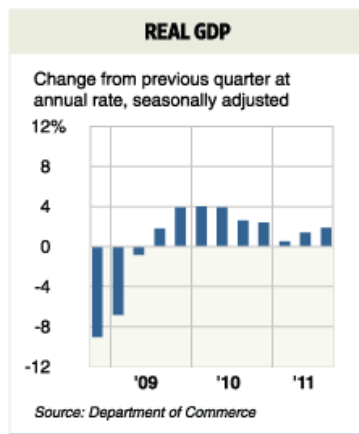
Financial Markets Data

Performance as of 12/31/11

	quarter	yr-to-date	1-yr	3-yr avg.
S&P 500 Index	11.82%	2.11%	2.11%	14.11%
NASDAQ Composite	9.99%	-1.80%	-1.80%	18.72%
MSCI World Index	8.93%	-7.71%	-7.71%	11.29%
Ardour Global Index (Green Stocks)	-7.09%	-44.10%	-44.10%	-17.06%

All returns are Price Return, with the exception of S&P 500 Index returns, which are Total Return.

Economic Indicators



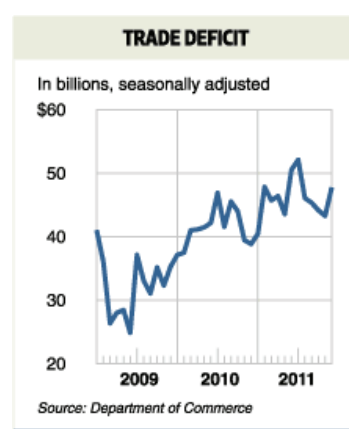
Q3: 1.8%



December: 8.5%



December: 64.5



November: \$47.8 billion