

# Mid-Tier Silver Producers Report

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## Introduction

The Metal Augmentor is an investment research service located at <http://www.metalaugmentor.com/>. We specialize in covering gold, silver and other metals and mining stocks from primarily a fundamental perspective along with some technical analysis as well as market timing. We have built a robust peer valuation database for exploration stage, development stage, and production stage gold, silver, base metal, and “energy metal” companies. This report focuses on the universe of mid-tier silver producers, loosely defined as companies that produce on the order of 3 to 25 million ounces of silver per year, that generate the majority of their revenue from silver production, and that are generally viewed by investors as silver mining companies.

## Summary of Valuation Ranges

| Company         | Symbol | Exchange | Current Share Price | Valuation Targets in Original Currency |           |            | Valuation Targets Relative to Current Share Price |           |            |
|-----------------|--------|----------|---------------------|--|-----------|------------|---|-----------|------------|
|                 |        |          |                     | Base Case                              | Best Case | Worst Case | Base Case   | Best Case | Worst Case |
| Silver Standard | SSRI   | NASDAQ   | \$17.90             | \$21.59                                | \$34.93   | \$14.99    | 21%   | 97%       | -16%       |
| Fortuna         | FVI    | TSX-V    | \$2.05              | \$2.32                                 | \$3.25    | \$1.53     | 13%   | 58%       | -25%       |
| First Majestic  | FR     | TSX      | \$3.94              | \$3.80                                 | \$5.23    | \$2.21     | -4%   | 32%       | -40%       |
| Pan American    | PAAS   | NASDAQ   | \$25.44             | \$21.56                                | \$30.41   | \$12.57    | -15%  | 20%       | -51%       |
| Hecla           | HL     | NYSE     | \$5.31              | \$4.32                                 | \$6.09    | \$2.52     | -20%  | 16%       | -55%       |
| U.S. Silver     | USA    | TSX-V    | \$0.20              | \$0.16                                 | \$0.42    | \$0.02     | -24%  | 109%      | -85%       |
| Coeur           | CDE    | NYSE     | \$14.89             | \$11.16                                | \$17.97   | \$4.65     | -25%  | 21%       | -69%       |
| Endeavour       | EXK    | AMEX     | \$3.45              | \$2.52                                 | \$3.54    | \$1.33     | -27%  | 3%        | -55%       |
| Silvercorp      | SVM    | NYSE     | \$6.75              | \$3.78                                 | \$5.32    | \$2.18     | -44%  | -21%      | -67%       |

Like most of the mid-tier gold producers (which we define as producing 100,000 to 1 million ounces of gold per year), the mid-tier silver producers as a whole appear to be fully valued at current metal prices. The notable exceptions are Fortuna Silver (TSX-V: FVI) and Silver Standard (NASDAQ: SSRI). Along with First Majestic (TSX: FR) and U.S. Silver (TSX-V: USA), these mid-tier silver producers also have the best leverage to a rise in the price of silver according to our model.

[Despite our less-than-glowing reaction](#) to the pre-feasibility results on its San Jose project, we note that within the mid-tier silver producer universe Fortuna probably offers the best value. In addition, if Silver Standard is able to eventually figure out how to extract as much market value from of its mammoth Snowfield/Brucejack project (probably via a spinoff or outright sale) as has Seabridge Gold (TSX: SEA) for its KSM project (which is being valued at over \$1 billion by the market even though there has been little public interest from potential buyers of the project), Silver Standard starts to look quite attractive. In particular, the company's global silver-equivalent resource of about 4.6 billion ounces would go a long way in leveraging a large and sustained rise in silver and gold prices.

Quite frankly, we were most surprised by how overvalued Silvercorp (TSX: SVM) appears in our model and so we will continue to review the data to make sure the company is getting a fair quantitative shake. If further analysis proves our initial work to be correct, we can then confidently state that the idea of the market applying large discounts to companies operating in China is just another myth.

Comparing the valuation ranges for the obvious peer pairs of Hecla (NYSE: HL) vs. Coeur (NYSE: CDE) and First Majestic vs. Endeavour (TSX: EDR; AMEX: EXK), there does not appear to be significant speculative differences with these companies from the perspective of share price targets and thus other quantitative and qualitative factors need to be considered in order to distinguish them. It appears to us that Hecla's longevity as a mining company along with the high quality of its mining assets as well as First Majestic's relatively large resource base might be important factors to consider. Coeur also appears to have a quality asset in Palmarejo although it is unproven and a doubtful market will require some very serious convincing.

*Note: Neither Minera Andes (TSX: MAI) nor Silver Wheaton (NYSE: SLW) have been included in our mid-tier silver producer report because we view the former as a junior gold producer and the latter as a royalty company with a much larger market cap than the nearest silver producer peer. If we were to consider Silver Wheaton a silver producer, it would make sense to compare it directly to only Pan American (NASDAQ: PAAS), Hecla and Coeur as part of a "Major Silver Producer" report. We may yet do so but for now Silver Wheaton is part of our royalty company peer analysis while Minera Andes is a member of our junior gold producer analysis. Other companies such as Great Panther (TSX: GPR) might arguably be on the cusp to mid-tier silver producer status but they still have production profiles and market capitalizations more consistent with junior silver producers, a report on which Metal Augmentor subscribers can look forward to seeing in the weeks ahead.*

### Valuing Ounces in the Ground

Minimum project values are attributed in our model to proven and probable, measured and indicated, and inferred resources on exploration-stage projects as well as development-stage projects where a net present value analysis gives a lower value than the minimum per ounce figures. Exploration stage is defined for our purposes as projects where no economic analysis (i.e. preliminary mine plan or bankable feasibility study) has been completed. Our assumptions for minimum per ounce in situ value are as follows:

- P & P: \$60 Au, \$1.00 Ag
- M & I: \$30 Au, \$0.50 Ag
- Inferred: \$15 Au, \$0.25 Ag

It is very rare that a project will have a higher value using the minimum value per ounce calculation but it does occur with some marginal projects such as DRDGOLD's ERPM project. Also, it is important to recognize that P&P reserves by definition only appear after a resource is evaluated on an economic basis, so the assumptions for P&P only tend to have an effect on the valuation of a company when a project is sub-economic at current metal prices (but since reserves are supposed to be economic by definition, some serious doubts about a project are raised in such a scenario).

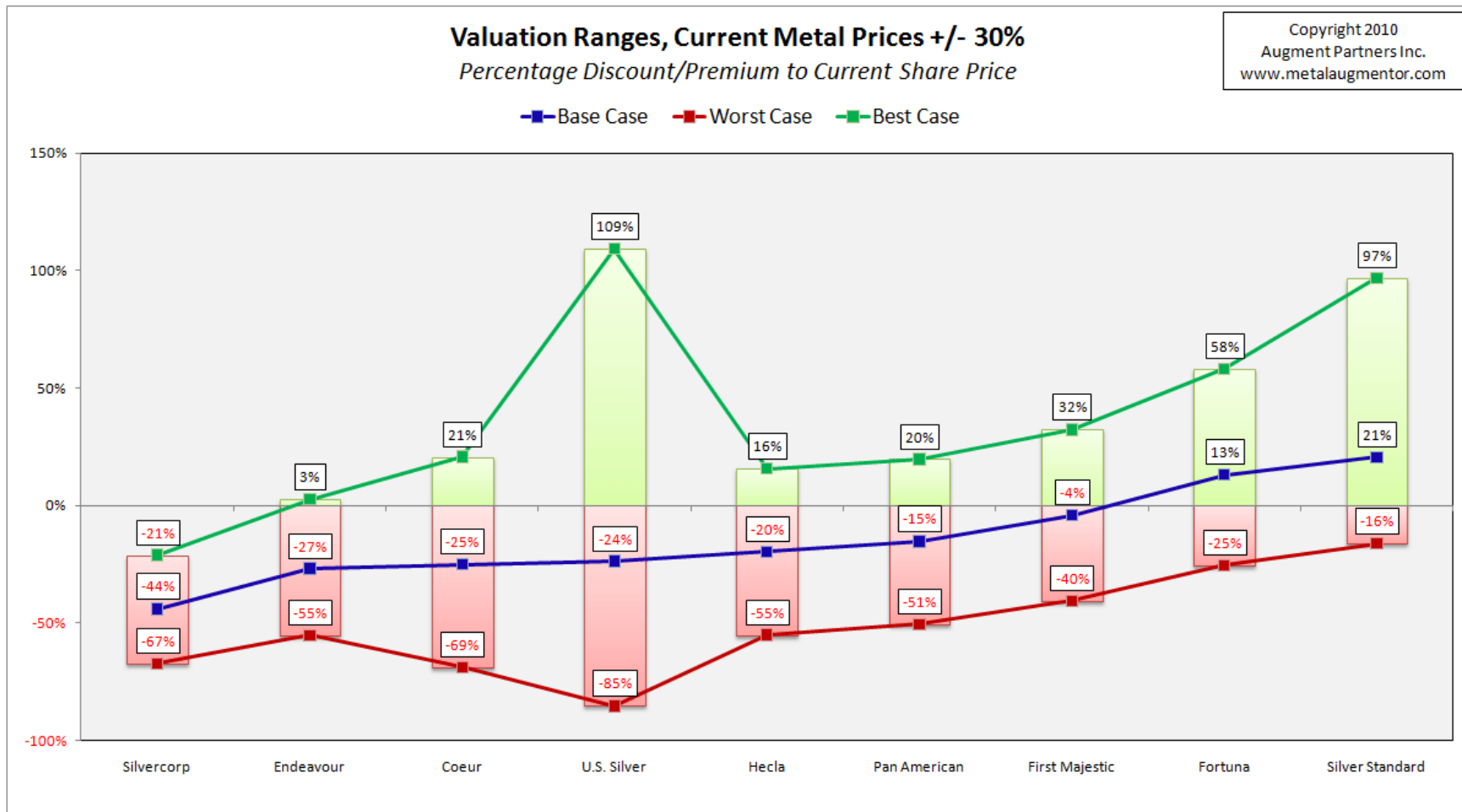
**Chart Analysis**

- Base Case = current metal prices (as of June 3, 2010)
- Best Case = current metal prices +30%
- Worst Case = current metal prices -30%

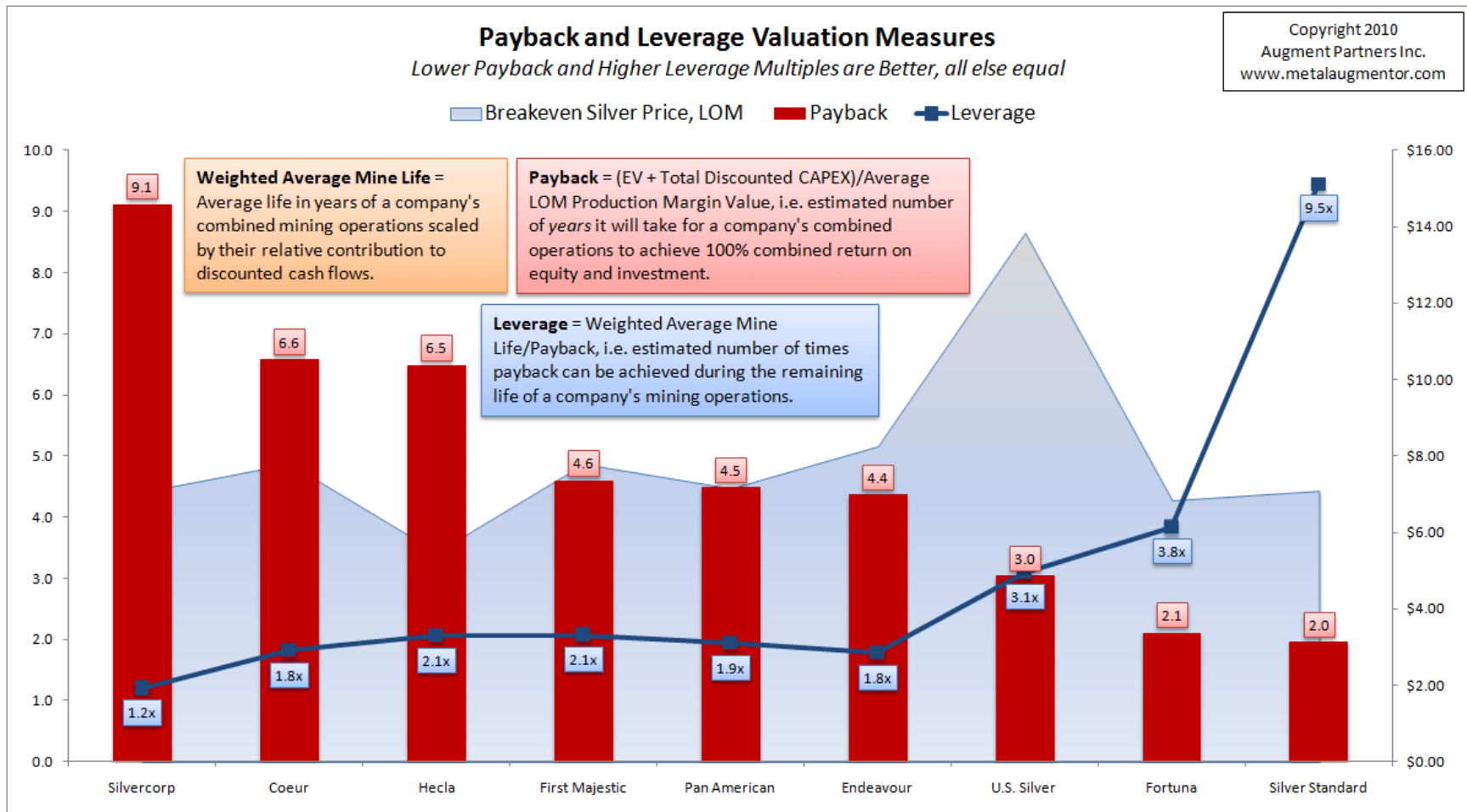
It will help to become familiar with our terminology when analyzing the various charts and tables contained within this report:

| Term   | Definition  |
|--|---|
| <b>Enterprise Value: EV</b>                        | Market capitalization minus breakup value.  |
| <b>Breakup Value: BV</b>                           | Net value of liquid assets (e.g. cash and securities) less outstanding debt and other significant liabilities (e.g. underwater hedges).   |
| <b>Treasury Method: TM</b>                         | Accounts for any in-the-money warrants and options in market capitalization, enterprise value, and other similar "value" calculations.  |
| <b>Overhead Coverage</b>                           | Annual production margin value divided by overhead expenses, i.e. a measure similar to the interest coverage ratio, only this looks at how many times over the cash flow from future production is likely to cover overhead expenses (does not include exploration expenses).   |
| <b>Overhead Dilution</b>                           | Annual overhead expenses as a percentage of the current market capitalization, i.e. the minimum inflation rate of the company's currency (i.e. stock).  |
| <b>Payback</b>                                     | (EV + Total Discounted CAPEX)/Average LOM Production Margin Value, i.e. estimated number of years it will take for a company's combined operations to achieve 100% combined return on equity and investment.  |
| <b>Leverage</b>                                    | Weighted Average Mine Life/Payback, i.e. estimated number of times payback can be achieved during the remaining life of a company's mining operations.  |
| <b>Discounted Leverage</b>                         | Leverage minus Payback. In other words, this punishes companies whose projects take longer to pay for themselves (i.e. large Payback ratios) and have lower LOM cashflow (i.e. small Leverage ratios).  |
| <b>Weighted Average (WAVG) Realized Production</b> | Average life in years of a company's combined mining operations scaled by their relative contribution to total discounted cash flow.  |
| <b>WAVG Production Mid-Point</b>                   | The year in which a company's combined mining operations, scaled by each operation's relative contribution to total discounted cash flow, have been 50% depleted.   |
| <b>WAVG Realized Production Start-Up</b>           | Point in time at which a company's average mining operation will have entered commercial production. Calculated by scaling each project's relative contribution to total discounted cash flow and then adjusting for each project's assumed start-up date. NOTE: If all mines are currently in production this value will equal the current year. |
| <b>Gross Annual Production Value (GAPV)</b>        | Gross annual revenue of a mining operation.   |
| <b>Production Margin Value (PMV)</b>               | Net operating cash flow, excluding capital charges, of a mining operation.  |
| <b>Total LOM Discounted PMV</b>                    | Cumulative total discounted cash flow, excluding capital charges, for the life of a company's combined mining operations.   |

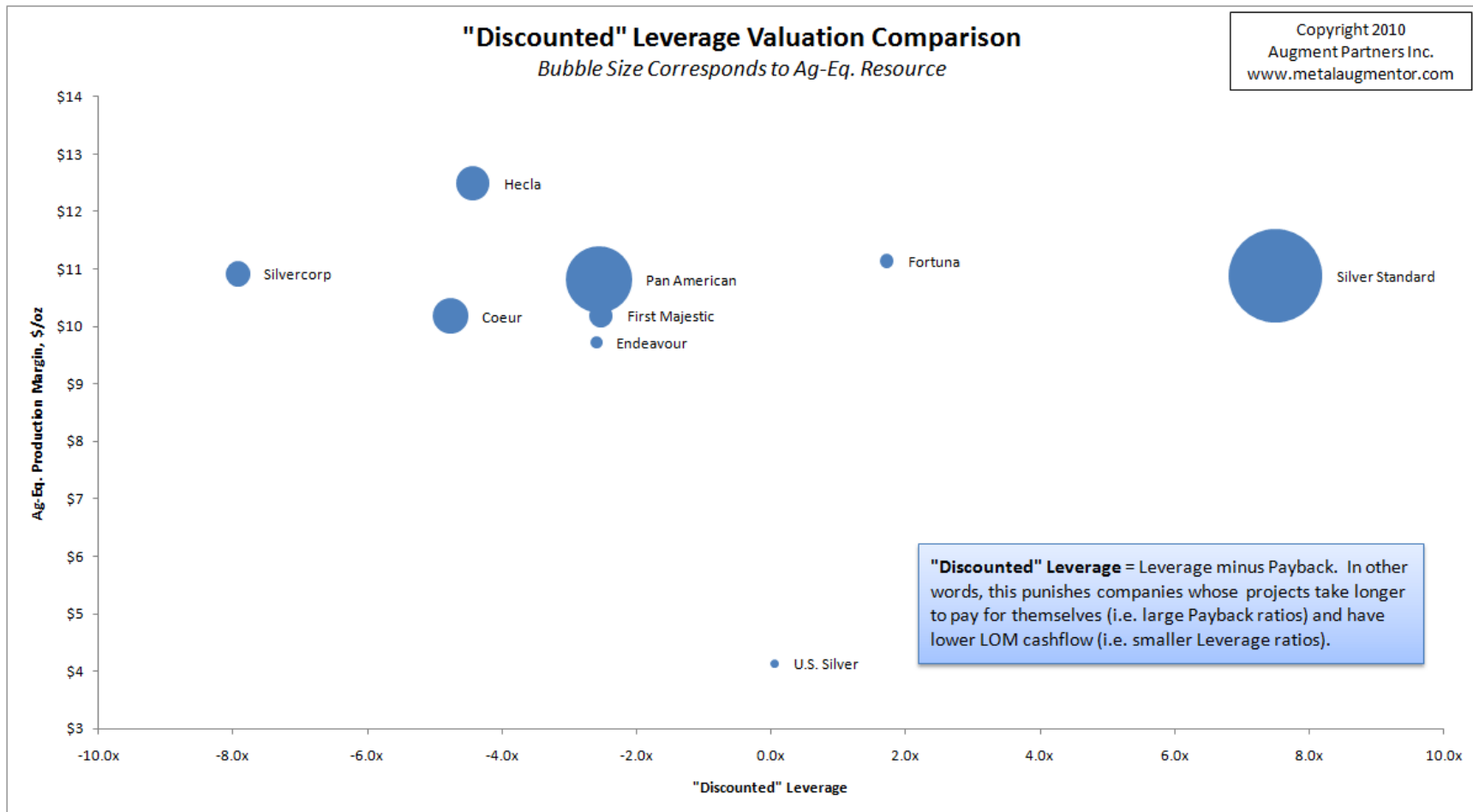
*Note: For the most part all charts have been arranged such that the most desirable company will appear on the far right side, and the least desirable on the far left side. "Desirable" is based on the criteria used in that chart, not "desirable" from the perspective of the company necessarily being a good buy overall.*



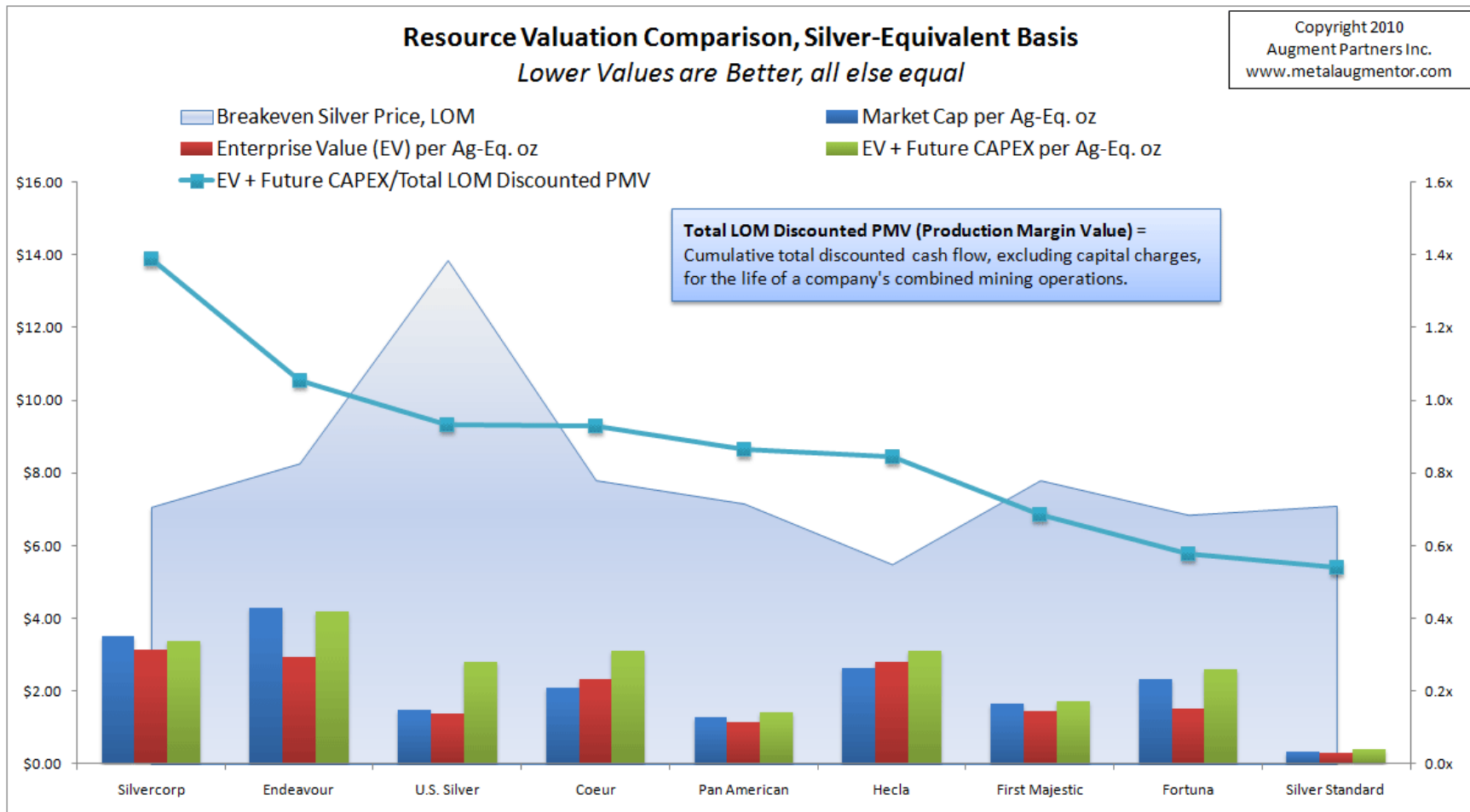
The above chart shows price target potential calculated by our model for each company in the base, best (+30%) and worst (-30%) case metal price scenarios. There are a lot of data and critical assumptions built into our model about which the above chart says little so it should never be used in isolation. The chart does, however, serve the ultimate purpose of helping identify (1) companies that are presently undervalued or overvalued in relation to their peers and (2) companies that have the greatest leverage to rising metal prices (or that are most vulnerable to a drop in metal prices). There are also unique risks, caveats and unquantifiable value drivers (exploration upside, potential to extend mine life beyond current mine plans, etc.) for each company that are not captured by our model. In other words, don't take the above chart too much at face value and do keep reading further in addition to doing your own research to get a fuller sense of the story behind this introductory visual.



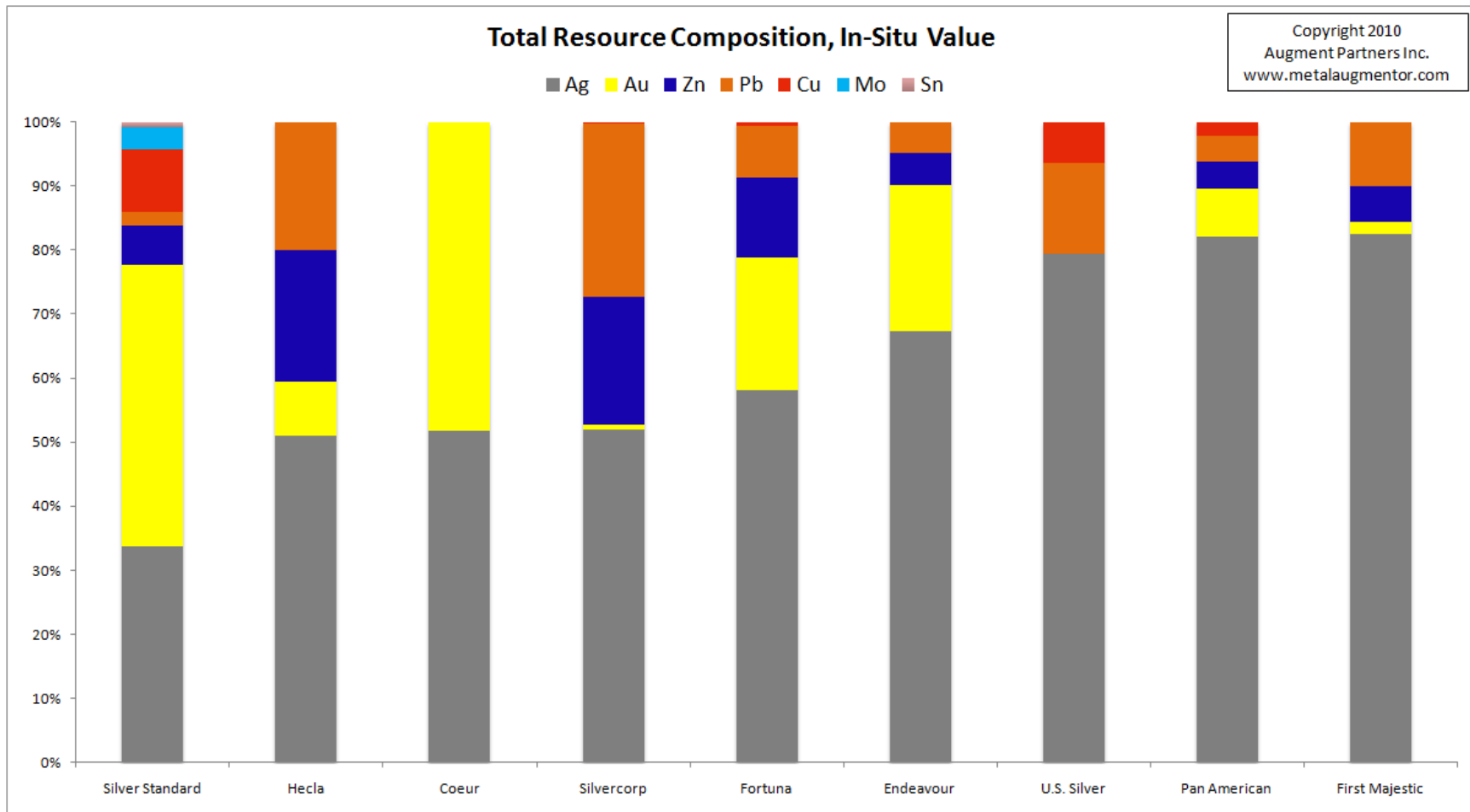
The above chart is a bit complex but it becomes much less so if you take the time to understand the terminology involved. We believe our Leverage and Payback figures might be among the most important quantitative factors that investors should consider before investing in a mining company. Leverage and Payback combine operational effectiveness and mine life to distill the essential goal of a mining company, which is mining *success*. Indeed, it is the lack of modeling by other analysts of comparative mining success that prompted us to develop our proprietary peer valuation model and database last year. In any case, Silver Standard and Fortuna appear to lead the mid-tier silver producers with leverage and payback measures significantly better than their peers. The companies in the middle of the pack appear very similar, especially the classic matchups of Hecla vs. Coeur and First Majestic vs. Endeavour. Although it doesn't stand out, Pan American is arguably desirable on the basis of its size in comparison to its position on the chart.



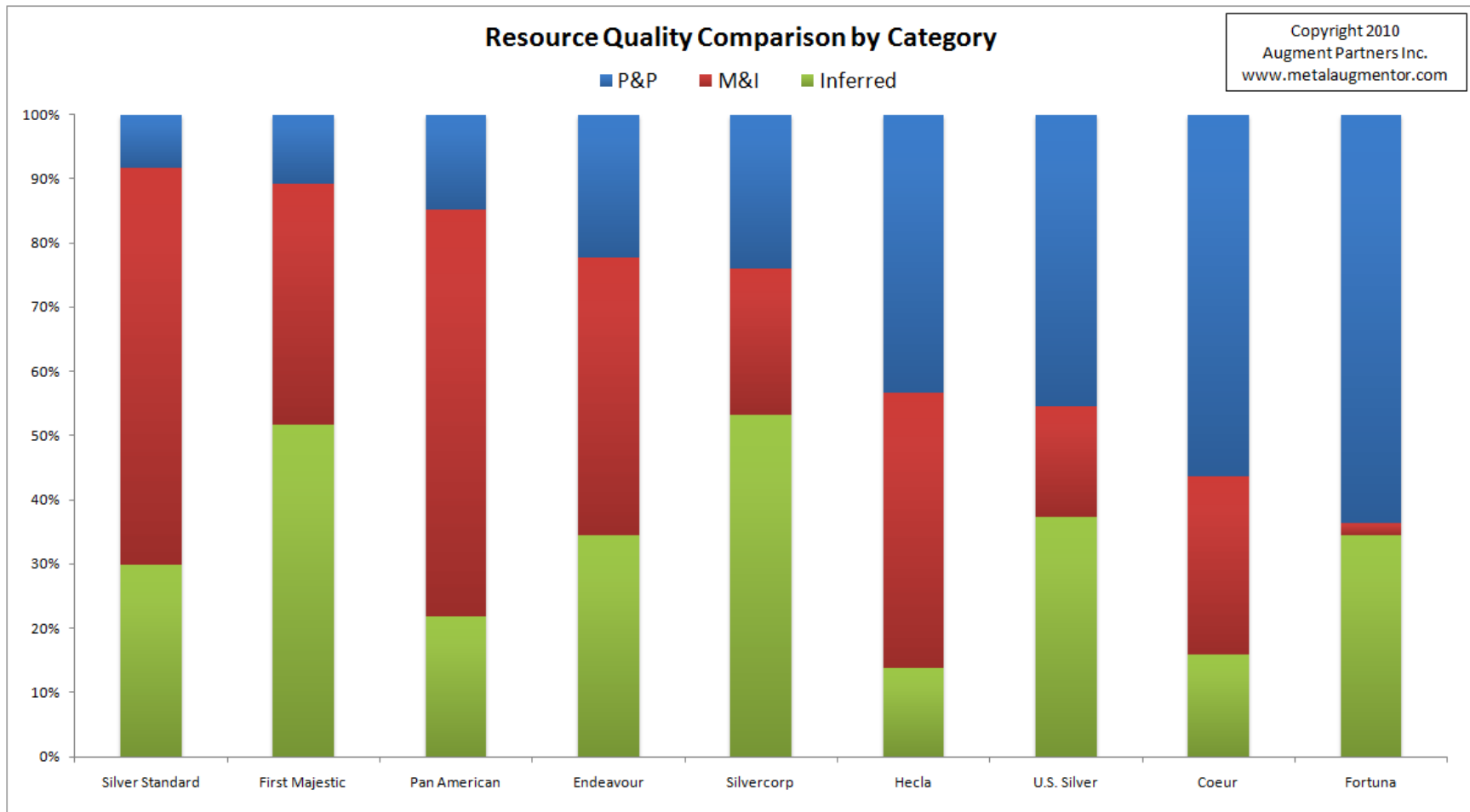
The best place to be in the above chart is the top right-hand corner. As such Silver Standard and Fortuna are the clear standouts, with most of the others clustered together except for Silvercorp and U.S. Silver trailing behind. To be fair to Silvercorp, its flagship Ying project is a deep mesothermal underground mine with the likelihood for very high grade ore shoots to come on line in the next few years and therefore our model may not reflect the company's full potential. For U.S. Silver the issue is operating margin; if it can be improved while silver prices remain high, the company could do very well. Once again we also find Pan American in an attractive position when we take into account its relative size.



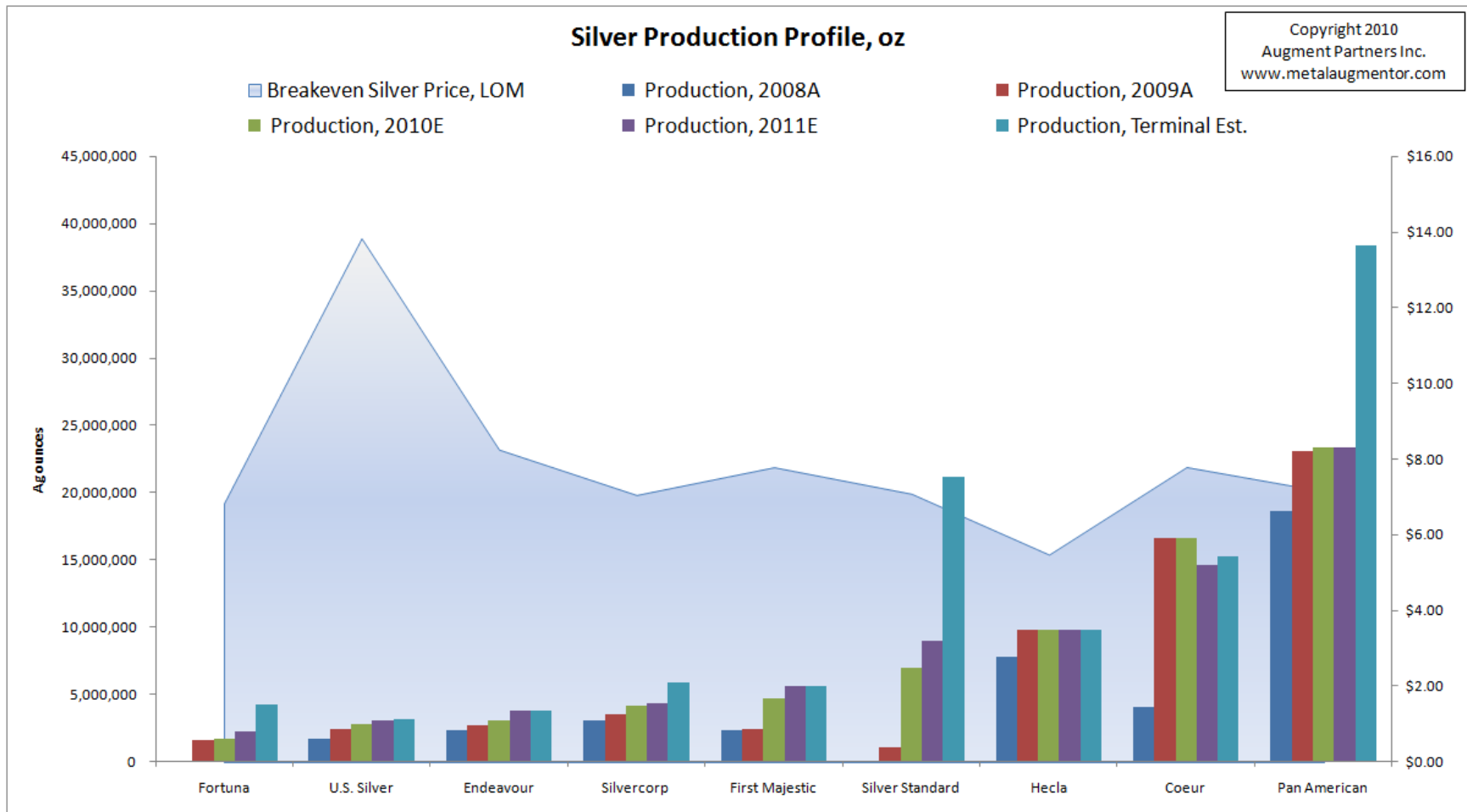
The above chart shows a number of resource valuation measures, each one being more inclusive of operational factors compared to the prior one. The most inclusive measure of EV + Future CAPEX /Total LOM Discounted PMV appears as a blue line. Silver Standard's enormous resource base at the Snowfield/Brucejack project is the cause for the low "value per ounce" measures. Note also the high breakeven silver price for U.S. Silver compared to the surprisingly consistent figure of \$6 to \$8 per ounce for all of the other mid-tier silver producers.



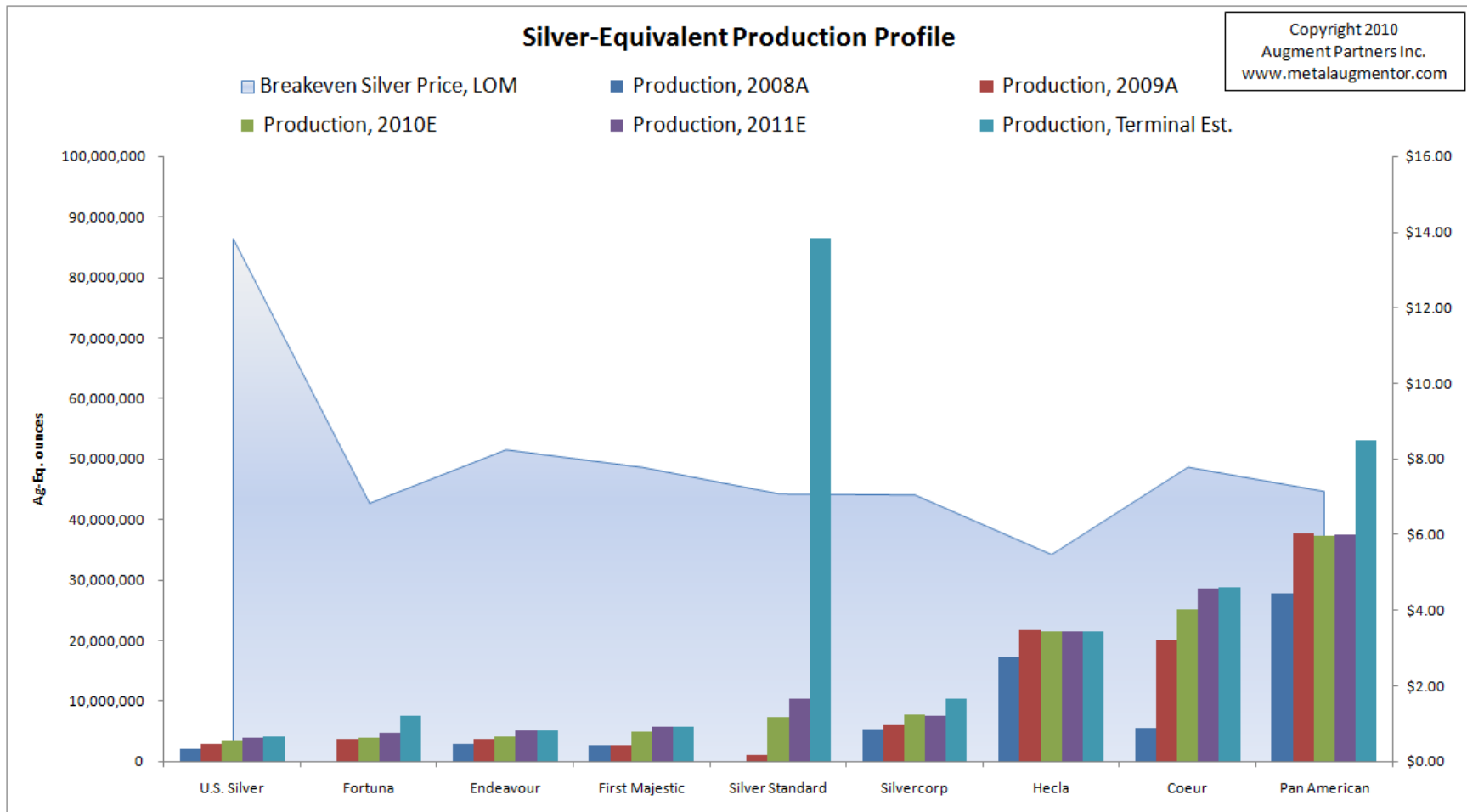
The above chart breaks down the relative contribution of each metal to the company’s global resource base. Pan American, U.S. Silver and First Majestic stand out as the three “purest” silver companies. Meanwhile, Silver Standard would appear to be more exposed to gold than it is to silver thanks to the giant Snowfield/Brucejack project. This chart also clearly sets Coeur and Hecla apart by showing Hecla’s exposure to base metals as opposed to Coeur’s pure gold/silver profile. Notice also Silvercorp’s heavy exposure to base metals. Along these lines, if there is one area we can “fault” Fortuna as a silver producer, it is the base metal exposure: zinc and lead are economic contributors to the company’s flagship Caylloma operation in Peru to a greater extent than would appear from the above chart.



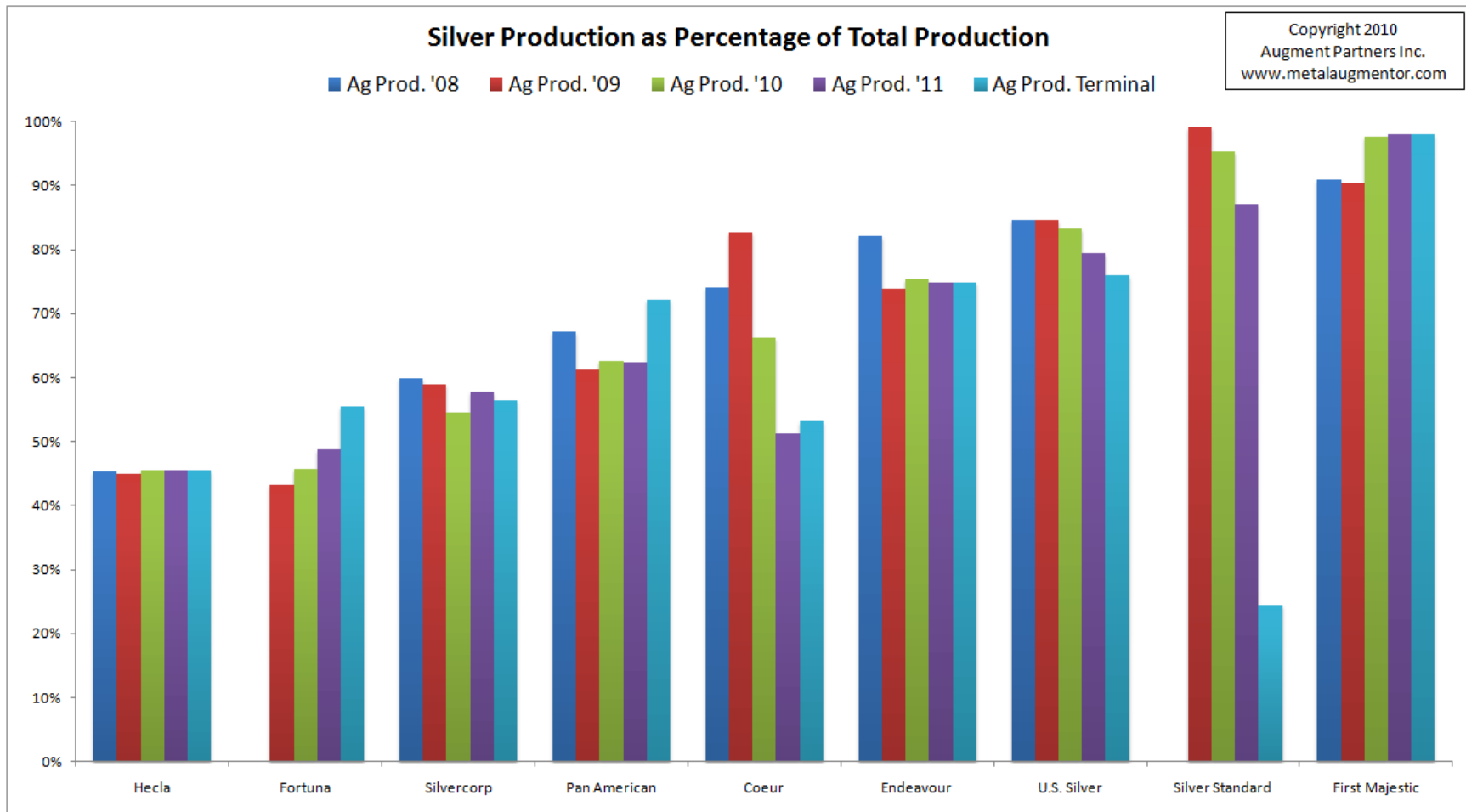
The above chart is arranged in ascending order of P&P (Proven and Probable) reserves as a percentage of total resources. We were surprised to find that Fortuna’s resource base is comprised of over 60% Proven and Probable tonnage, which is the highest quality resource among its peers (although it comes as no surprise that Pan American, Coeur and Hecla have the lowest percentage of resources in the Inferred category).



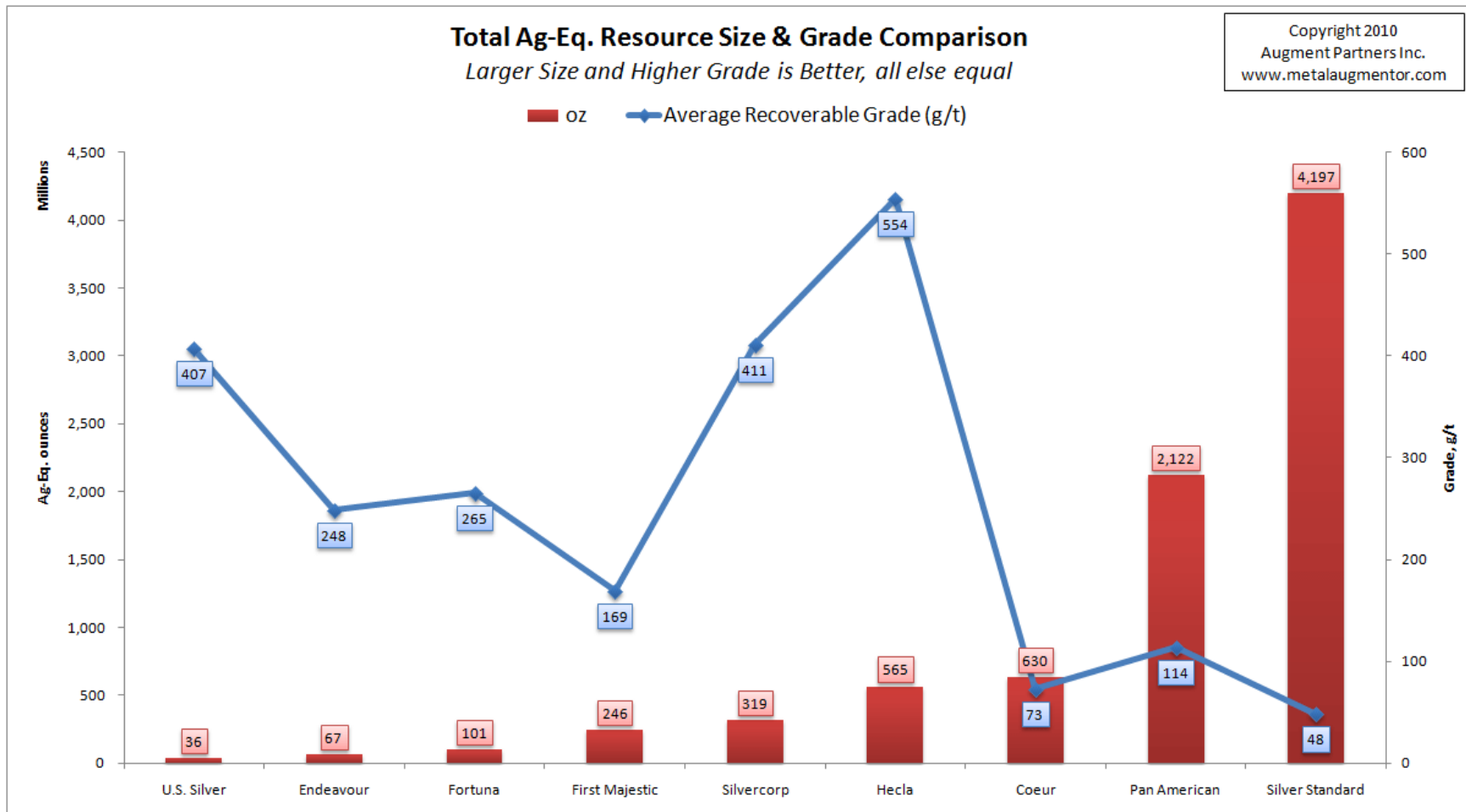
The above chart, as well as the one that follows below, is arranged in ascending order of projected 2010 production. Notice the relative production profile of Coeur compared to the following chart that graphs silver-equivalent production: importantly, Coeur's production growth comes primarily from gold. Also note that Silver Standard, Pan American, Fortuna and Silvercorp have the most significant silver production growth profiles based on the development projects in their current pipelines.



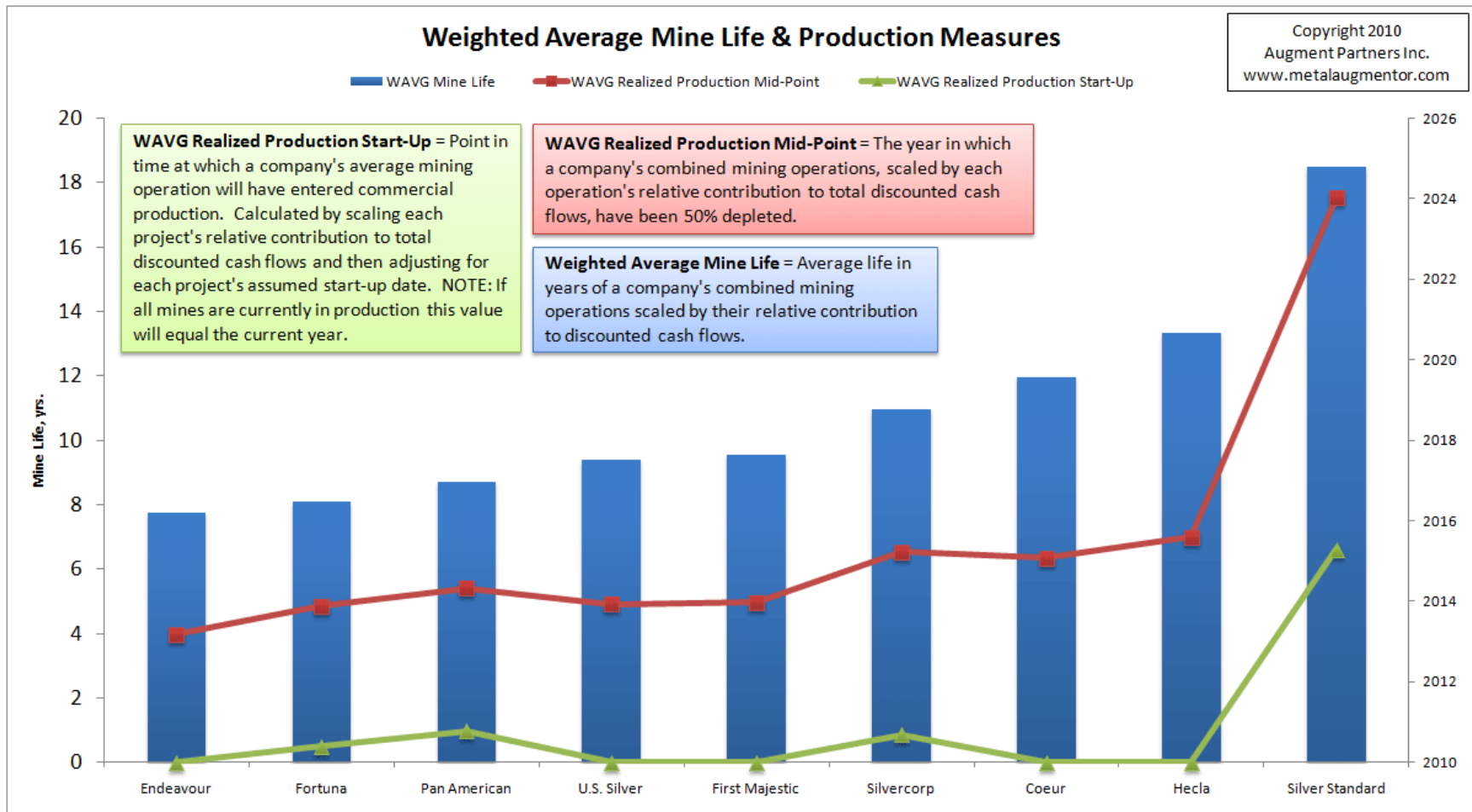
In the above chart, Coeur beats out Hecla because of the impact of increasing gold credits but the production gap does close a fair amount due to Hecla's heavy exposure to lead and zinc production (which is as heavy if not heavier than Coeur's exposure to gold production). Silver Standard's terminal period silver-equivalent production is almost off the chart due to the massive Snowfield/Brucejack project, but we should note the likelihood of this project going into production within the foreseeable future is very low (we expect Silver Standard will instead monetize the project).



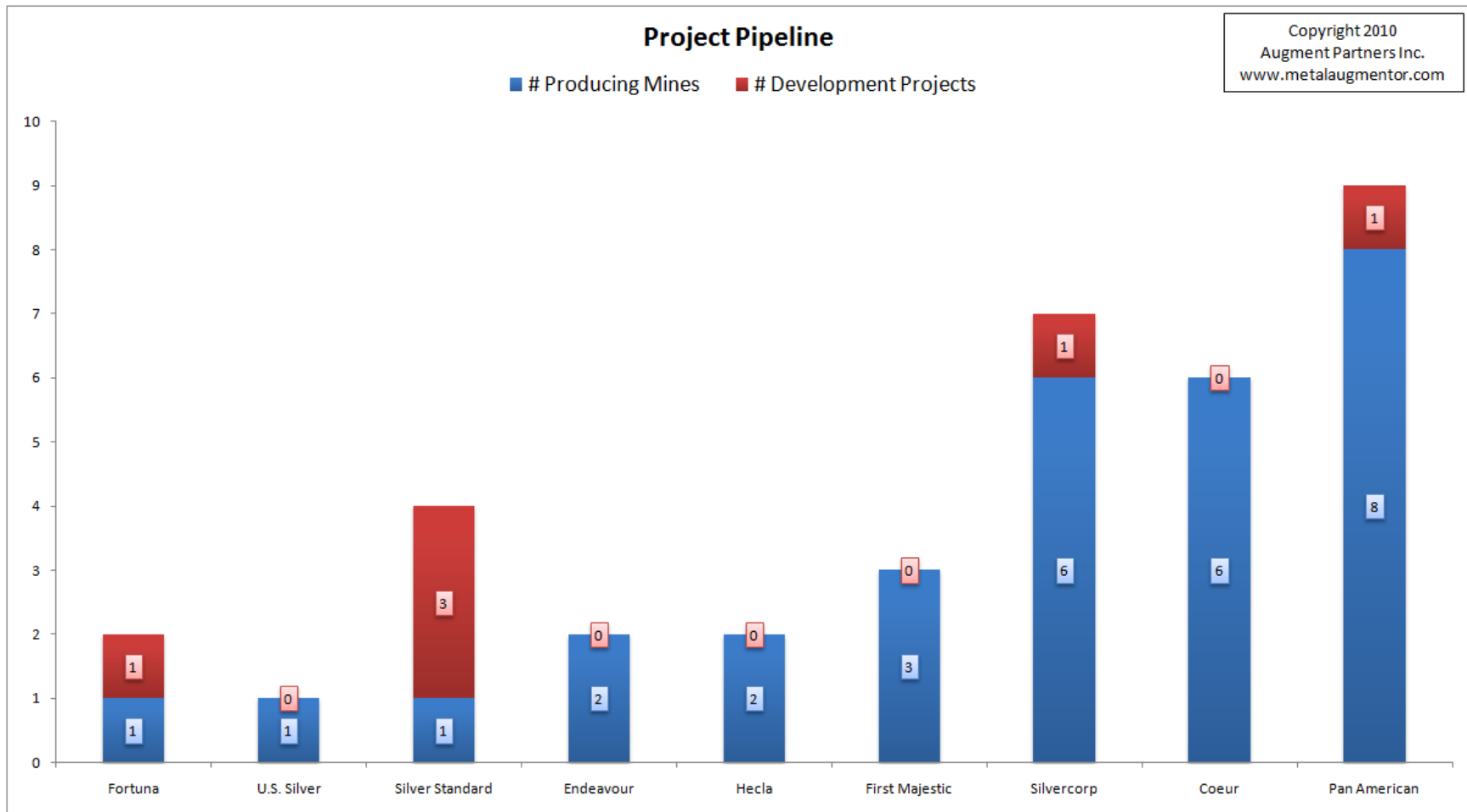
The above chart is arranged in ascending order of 2010 silver production as a percentage of total production. It clearly shows Fortuna’s and Hecla’s relative lack of silver exposure for which both companies can rightfully be “criticized” as primary silver producers (base metal and gold credits contribute greatly to the positive economics of their projects). Meanwhile, Coeur and Silver Standard’s big decline in future exposure to silver is due primarily to projected increases in gold production, something we would not criticize vehemently given that most investors are comfortable with having some gold exposure along with their silver. Note also that First Majestic appears to stand out as the purest of the pure in terms of projected silver production (although our model might be understating base metal production during the next year or two given recent operating results). In terms of *precious metal* production Endeavour Silver and Coeur are probably the two purest mid-tier silver producers.



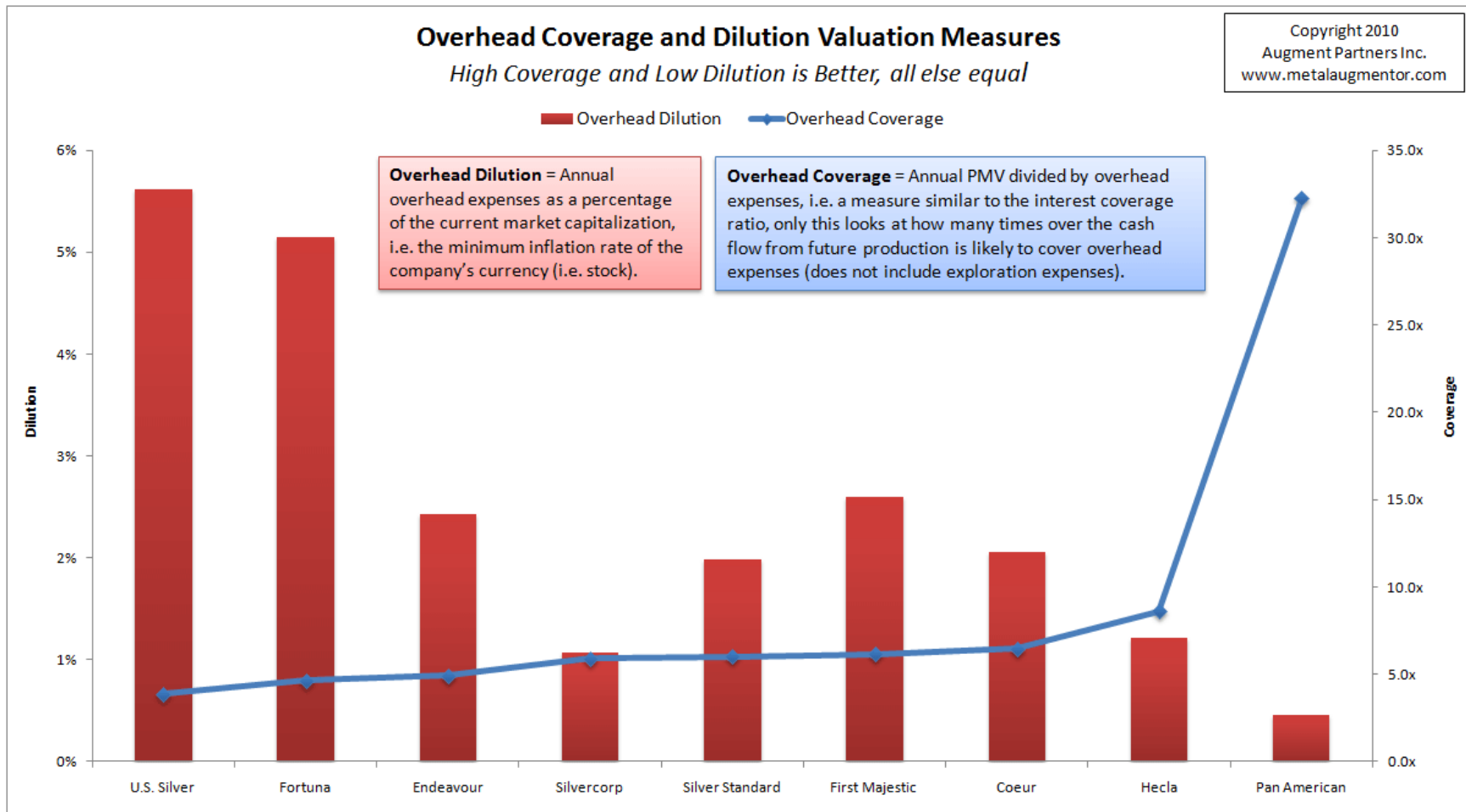
Silver Standard stands head and shoulders above the competition in the above chart thanks to the Snowfield/Brucejack project but the overall grade leaves something to be desired. Take away Snowfield/Brucejack and the global resource shrinks to about 1.85 billion silver-equivalent ounces, which is still impressive but more on par with Pan American. Meanwhile, Hecla, Silvercorp, and U.S. Silver shine in terms of recoverable grade. No surprise there as all three operate mines that exploit deep underground mesothermal ore shoots. Of course grade isn't everything (in fact often it is nothing), but perhaps the above chart might begin to explain why a company like Silvercorp is being given a relatively high share valuation by the market.



The above chart visually expresses the projected mine life of each silver producer's operations. Hecla appears to be the winner in this analysis especially since its Lucky Friday mine in Idaho is a deep underground mesothermal vein system that has substantial potential for mine life extension that is not reflected in the above chart. Some deep mesothermal veins have been mined for decades with never more than five to seven years of reserves being defined ahead of time. We can say the same thing about Silvercorp and once again this might explain the relatively high market value of the company. U.S. Silver also has a mesothermal vein system in the same district as Hecla's Lucky Friday, but U.S. Silver's veins appear to consist of less extensive and more numerous ore shoots containing a few million ounces each and not the tens to a hundred million or more ounces found at the Lucky Friday and vicinity. This has implications for operating costs because significant ongoing development is required for smaller, more numerous, distal ore shoots.



The above chart provides a general idea of project diversification among the mid-tier silver producers. Development projects in red are defined as those with at least a preliminary economic assessment or scoping study. Coeur, Silvercorp, and Pan American obviously stand out as the most diversified, but in the case of Silvercorp this is a bit deceptive since its flagship Ying project is broken into several individual operations referred to as separate “mines”. The above chart also doesn’t reflect geographical diversification which is an important qualitative factor to consider. In particular, points should probably be taken away for Coeur’s project in Bolivia (which is a major contributor to its production profile) and Silvercorp’s focus in China. Pan American clearly wins the diversification prize whereas Silver Standard comes out on top in terms of projects in the pipeline. Finally, First Majestic has expansion plans that arguably represent a project pipeline although at least a preliminary economic assessment is needed before being considered as such.



The above chart attempts to illustrate how efficient a company is with its overhead and general and administrative expenses. It should be noted that the “overhead dilution” measure has a flaw in that it will look lower when a company is overvalued. In other words, a larger market cap results in a lower overhead dilution ratio (which is figured on the basis of market cap). Moreover, it is much easier for a large company to achieve a lower overhead dilution ratio, and so it should not come as a surprise that Pan American looks the most attractive in the above chart. On the flip side, there is no reason to be overly concerned about Fortuna or U.S. Silver’s overhead dilution rates given their small market caps and in the case of Fortuna its undervalued (according to our model) status. Indeed, when we look at the overhead coverage ratio, which compares overhead expenses to mine operating cash flows, we can see that both Fortuna and U.S. Silver are comparable to their most-similar peers.

## Conclusion

After taking all of the above charts and qualitative factors into account, the three best overall values among mid-tier silver producers presently appear to be Fortuna, Silver Standard and First Majestic. We are currently accumulating a position in Fortuna and will be on the lookout for buying opportunities in Silver Standard and First Majestic should we get a further pullback in the markets. With its huge leverage to higher silver prices, U.S. Silver also offers silver bulls an attractive speculative punt, but we are unlikely to be buyers until cash production costs decline below \$10 per silver ounce because in our view the downside risk remains excessive otherwise. Remember, leverage works in both directions. Purists who want primarily precious metal exposure in their portfolios should consider Endeavour Silver with the understanding that purity usually carries a premium. Pan American also deserves consideration as an all-around solid silver producer although it too has a few warts (including a less-than-stellar safety record).

In the grand scheme of things, our report reveals that the mid-tier silver producers are not screaming buys at current prices especially when we consider that they do not offer operating leverage to a 30% rise in metal prices from current levels. Therefore, we believe the key to gains from silver producers in the short to medium term will be value-conscious selectivity and market timing.

Please note this report reflects a snapshot at a specific moment in time of the mid-tier silver producer universe. Market conditions can change rapidly and what looks overvalued today could become a bargain tomorrow and vice versa. The beauty of our model is that it adjusts automatically to changing metal and share prices and this allows us and our subscribers to stay on top of things from a valuation perspective at all times. We are currently working on incorporating our model into a web-enabled database format that will generate updated peer valuation results for subscribers on demand.

NOTE: All data contained within this report are current as of the latest financial statements for each company (generally March 31, 2010). Our model calculations were made using closing share prices and commodity prices as of June 3, 2010.

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**Disclaimer:** *We currently own shares in Fortuna but none of the other companies mentioned in this report. We will be looking to aggressively buy more Fortuna at or under C\$2.00 and especially if it hits our “back up the truck” buy target around the C\$1.60 level. Silver Standard and First Majestic also look interesting (particularly for patient investors with a long-term investment horizon) and we would be opportunistic buyers at lower prices. No compensation has been received for this report from any party. This is not investment advice, a recommendation or solicitation to buy or sell shares in any company. We are not licensed investment advisors; please seek the advice of an investment professional or broker before investing. The information and data contained herein is being presented solely as a service to help investors conduct further research. We believe the data comes from reliable sources but it may not be current and material changes in a company’s financial position could have taken place since the as-of date of this report. Before making an investment decision, you or your licensed investment advisor should personally verify all information that you are relying upon. We are not responsible for the results of any investment made on the basis of the data presented herein, nor are we responsible for any errors or omissions (though we strive for accuracy and completeness). We disclose our own investment position or relationship in all companies.*