



MORTGAGE TECHNOLOGY

Exploring Return on Automation

Seeing the Future of Valuations



Photography By Drexelle Park

Veros CEO **Darius Bozorgi** predicted a change coming to valuations. He was right.

Darius Bozorgi has taken Veros from its early roots as a provider of automated valuation models to a full-scale valuation systems and management developer. As president and CEO, he uses his experience as a lawyer and involvement in the capitalization and operation of several technology and finance ventures to lead the day-to-day operations of the Santa Ana, Calif.-based predictive technology firm.

Since 2009, Veros has served as a vendor to first Fannie Mae, and later Freddie Mac, to provide appraisal data and delivery technology in support of the Loan Quality Initiative, a broad-based series of initiatives the Federal Housing Finance Agency mandated to overhaul GSE eligibility, underwriting and loan delivery policies to improve loan quality.

In an interview with *Mortgage Technology's* Austin Kilgore, Bozorgi talked about the tandem evolution of his firm and predictive technology, and how the LQI will lead industrywide change to the mortgage market.

By Austin Kilgore



MORTGAGE TECHNOLOGY: *How has Veros evolved over the years?*

DARIUS BOZORGI: Veros started almost 10 years ago, in 2001. We started first on the analytics side of our business, beginning with automated valuation models. At the time, AVMs were not in their evangelist mode.

We developed what I would consider the first-ever second generation AVM on the market. We were the first company to come out and put quantifiable metrics around AVMs. One example of this is with confidence scoring.

We quickly branched out into other related analytics, including specialty AVMs—like REO and default AVMs—home price indices, market risk scores and mortgage fraud scores.

As we evolved, it became apparent to me that if you look at the valuation market as a whole, historically, valuations—be it AVMs or appraisals and broker price opinions—they've all been used in a very compartmentalized fashion. An originator would say, "I'm only going to only use a AVM over here, I'm only going to use a Form 2055 (exterior only) appraisal here, or I'm only going to use a BPO in this specific servicing application."

But it was clear to me the market was heading to a holistic view of valuation. What was missing were the tools to allow the market to use all these products and analytics in an optimized and centralized fashion. So we evolved Veros to include the systems, or platform side, of the space. Now, we market a platform that lets users manage these tools all from one platform.

The other thing that drove that decision for me is that there has also historically been a very large disconnect

when it comes to property valuation between the origination and investor sides of the industry. These systems are now allowing for a more streamlined and transparent flow of property valuation information from origination all the way to the secondary markets.

MORTGAGE TECHNOLOGY: *What do you mean by a second-generation AVM? How have AVMs evolved from index models that rely only on data sets and the hedonic models that use algorithms to derive estimates?*

DARIUS BOZORGI: The early AVMs were one of two types—you had index-only or hedonic-only. The Veros AVM is a blended model that employs multiple index methods, multiple hedonic methods and multiple hybrid methods. Hybrid methods take in aspects of both the hedonic and index aspects. All of those sit behind the scenes and are reconciled on an individual property basis to determine the single-point estimate of value. We leverage the strength of the different approaches—index, hedonic and hybrid—and the technologies that fuel those approaches—ranging from multiple regression analysis, up to much more advanced neural net approaches.

MORTGAGE TECHNOLOGY: *What generation are AVMs now? How do they differ?*

DARIUS BOZORGI: We're in third generation mode at this point. Not everybody is there, but I think we are at the beginning of the third generation of AVM technology. There are two major aspects to any AVM. The modeling side and the technology side are in one bucket, and that's what drove the first generation AVMs to the second generation. The second-major aspect is the data used to fuel the AVM.

The area of improved data quality is fueling the development of third generation of AVM models. You can have the best model and technology in the world, but if you have less-than- high

quality data, you're going to end up with poor results. The opposite is also true. There are many organizations with tremendous data resources, but where they fell down was they ignored the modeling or technology side.

MORTGAGE TECHNOLOGY: *One trend in the valuation industry is the use of hybrid valuation tools—products and services that combine an AVM valuation with an appraisal or a BPO. Do you see that trend continuing?*

DARIUS BOZORGI: There's a distinction between hybrid products and hybrid processes. There are various AVM-assisted appraisals, and there are also appraiser-assisted AVMs. But those are two different types of products. Neither have really ever taken off.

But the concept behind them, hybrid processes, is very sound and that is the future of property valuation analysis. It's exactly what I was alluding to earlier about the reason we got into the systems side. It's not going to be sufficient anymore in the future to say, "I took this one product and based a decision on it with blinders on and without considering any other available data," because everybody knows there is other data available.

MORTGAGE TECHNOLOGY: *Is that mindset limited to originators?*

DARIUS BOZORGI: The same thing is happening on the servicing side. BPOs have ruled the day there for some time now. The BPO volumes across the country significantly outnumber appraisal volumes by at least three to one. That's a function of the market we're in right now, with what's happening on the servicing side right now.

Servicers are realizing they need to look at their valuations holistically. They're combining BPOs from a process standpoint with AVMs and market risk scoring to make sure they have a better handle on the valuation and the risk associated with the property.

MORTGAGE TECHNOLOGY: *What about specialized AVMs? There are many products available that calculate values in specific conditions and circumstances. Will those products continue to be used, or will we see AVMs evolve into all-inclusive technology offerings?*

DARIUS BOZORGI: We're going to see a continued push toward granular, situation-specific data, with the goal of greater transparency on the loan level. These various products may be bundled into different combined offerings, but new services that will drive those will continue to come online.

For example, in the secondary market on the deal level, they've never had loan-level information. Now, they can analyze deals and go to the individual loans and take a look at them. They can use an AVM and get a current estimate of value, or get a current estimate of value with an REO AVM.

An investor with a pool of mortgages can break it down and get updated values. If 20% of the pool is in foreclosure, values can be derived with an REO AVM on that specific portion. The investor is rebuilding the deal with loan-specific valuations and can project the true performance of the pool.

MORTGAGE TECHNOLOGY: *How were AVM datasets impacted by the recent home price volatility? How did AVM providers react?*

DARIUS BOZORGI: An AVM is not a static product. If a company treats their AVM as a static product, they won't succeed. You have to constantly evaluate the models and technology you use to fuel the data.

To the extent that you're using any HPIs in your model, one of the things you have to consider in evaluating its accuracy is when do you use foreclosure sales and how does that affect the performance of the models?

The most aggressive projection I saw was a study that said every foreclosure in a neighborhood negatively impacts nonforeclosed home values 2%. I think

that's a little high, but there is an impact. To just put blinders on and ignore that, you're ignoring reality.

Some out there take a hard line and say foreclosure sales should never be used in an index because they're not representative of the underlying market.

We disagree and don't take a hard and fast stance on that. Sometimes they should be considered because in some places, they are the market. To not use them paints an inaccurate picture of what's happening.

In foreclosure-heavy markets, we take a dynamic approach to our proprietary HPIs and AVMs, making changes to ensure we deliver quality valuations.

MORTGAGE TECHNOLOGY: *How did valuation providers have to change processes to react to the housing downturn? Was it an issue specific only to AVM providers?*

DARIUS BOZORGI: Anytime you have decreased transactions, it affects the data. These issues are not unique to AVMs. They're actually more troublesome to traditional valuation products. An appraiser or broker has access to the same data that we do, but they're more limited in their analysis.

An AVM modeler can take a broad analysis and make appropriate adjustments. Appraisers aren't even given that luxury. An appraiser may have a comparable sale that is appropriate to



SPOTLIGHT ON DARIUS BOZORGI

Darius Bozorgi is president and CEO of Veros. He co-founded the predictive analytics firm in 2001 after spending most of his early career practicing civil litigation in Chicago. He served on the board of the Real Estate Information Professionals Association, and was a founding member and served two terms as chairman of the Collateral Assessment Technologies Committee.

use. But if it's too old or too far away, sometimes the appraiser is prohibited from making the adjustment, even if the comp is the correct one to use for the assignment.

We can evaluate a much broader set of data over a longer period of time to create a more objective and unbiased view of value. That's always been one of the advantages of an AVM. Not that we're the end-all, be-all. We have weaknesses as well. Every product has its strengths and weaknesses.

MORTGAGE TECHNOLOGY: *How has the availability of AVMs to the general public impacted consumers' understanding and appreciation of valuation products? Are they always getting the most accurate information, and does inaccurate data affect general perceptions?*

DARIUS BOZORGI: For most Americans, their home is the largest asset

they will ever own in terms of the percentage of their total net worth.

Yet sadly, it's the asset they know the least about in terms of price movement and volatility and how it impacts their mortgage. The public has little understanding of what is behind the price of their homes or the price of homes in their neighborhood. Sites like Zillow—but it's not just them, all the public sites—they are in essence lead generation services. There's not a lot behind those particular models.

When they first came on the scene, the industry took a look at those models and those services because they were free. But they quickly discerned that you get what you pay for. That's why companies that produce commercial AVMs are still in existence—the market determined we provide a significant value versus the free services.

MORTGAGE TECHNOLOGY: *And what about the public's perception of valuations?*

DARIUS BOZORGI: Collateral in general has played second fiddle to credit, not just in this last boom, but for much longer than that. Property valuation was an afterthought. It was a "check the box" mentality in the homeownership and mortgage process.

Then we had the perfect storm and we ended up where we are now. As you look for silver linings out of that, one is that the market, from the consumer to the lender, and all the way through to the investor, have realized the property valuations side of the equation is very important and significant.

Now you're getting folks paying attention and wanting to learn—both consumers and investors. Before, they had little information or understanding of valuations, but now they want more information. We're now getting to the point where collateral is considered as important as credit.

MORTGAGE TECHNOLOGY: *Veros is a partner with Fannie and Freddie in the Loan*

Quality Initiative. From what you've seen in that partnership, is the LQI an example of the new focus on collateral you just spoke of?

DARIUS BOZORGI: Fannie started the ball rolling with the Collateral Data Delivery initiative and Veros was selected as the technology provider for the platform. It has now evolved into a GSE initiative mandated by the FHFA called the Uniform Collateral Data Portal. Veros is also the developer for that.

This isn't limited to the GSEs. This is a secondary market issue. We as a society are trying to figure out what the future of the secondary market is in this country. We need to eliminate the possibility that this could happen again, or more realistically, that we never have a down cycle to this degree ever again.

We are re-engineering the entire secondary market, hopefully in a fashion that is much more safe and sound. The key to that, so far, has proven to be loan-level data as early in the process as possible and data that's in an electronic format that's standardized and capable of being readily analyzed quickly to identify risk.

What you're seeing the GSEs do with this initiative is take the lead and say, "We need to get property valuation data as early in the process as possible, so we can analyze that and make appropriate decisions based on what we see before we buy a loan." Doesn't that just make sense?

MORTGAGE TECHNOLOGY: *With the platform Veros is building for the GSEs to accept electronic appraisal delivery, there are going to be streamlining and efficiency improvements for the industry. What do you see is the broad impact of these initiatives?*

DARIUS BOZORGI: We're just seeing the tip of iceberg. This initiative will be a model for much broader impact on the mortgage industry. I think they're starting with valuations because it's one of the biggest voids—they've never had access to this much information before. But they won't stop there.

This concept will end up being applied to the entire mortgage file so that we will get to a point of where we have true e-mortgages.

People talk about e-mortgage today in the sense of electronic registration and ownership in the secondary market. But I'm talking about a fully electronic standard file created digitally all the way through, with monthly data updates by the servicer after origination. It will create more transparency for appropriate stakeholders to access information to make decisions. That type of process is my Holy Grail for the mortgage industry.

The effects of projects like UCDP will ripple through the entire industry and ultimately lead to higher quality valuations. I think we'll see Wall Street and the private markets apply these types of processes, too. With that transparency, you're going to end up with higher quality appraisals. MT

