Looking Below The Surface Of 3D Printing

by Steve Brown

Did you see the news that researchers now believe there could be a whole lot of water sitting under the surface of the dry, old, crusty moon? It seems researchers from Brown University have been able to detect water molecules using pictures of the moon's surface and reflecting light somehow. The bottom line is that if this is true, we could live there, have oxygen to breathe, water to drink, water for growing food and hydrogen for creating rocket fuel to come and go. It sure is interesting how things around us can change so quickly just by taking a closer look.

Taking a closer look at the impact on banking, we examine recent advances in 3-dimensional (3D) printing technology. This technology is touching virtually every sector around you - allowing people to quickly and effectively fabricate everything from operational prosthetic limbs, working firearms, musical instruments and even buildings.

For community banks, 3D printing is likely to be seen and felt first in the commercial real estate (CRE) area. It allows builders and borrowers to more easily and inexpensively "print" more exacting model representations of planned buildings and even print the buildings themselves. That compresses timelines, reduces construction risk and helps expedite things overall.

Case in point: Researchers at MIT recently used a 3D printing system to build a dome-like structure. It was 50-ft in diameter and 12-ft high and was constructed in less than 14 hours. Even at the beginning of this nascent market, it's no surprise that industry watchers see huge potential to shake up CRE.

Other examples: 3D printing has been used to: 1) build a 400 square foot (sf) house for about $10k in materials or $25 per square foot (psf). This compares to about $150 psf as normally constructed - an 83% savings; 2) build 10 houses in 24 hours vs. 6 months for each normal house. That means 1,800 houses could be built vs. 1 using current methods in place today; and 3) built a 5 story apartment building for $161,000 total.

In short, 3D printing for buildings saves up to 70% in production time, cuts labor costs by up to 80% and reduces construction waste by up to 60%. For a bank focused on construction lending this means a lot, reduces risk, increases the opportunity to leverage dollars and could bring new players into the space. Risk and opportunity abound, so staying on top of this in the coming years will be important for community banks.

Overall, the 3D printing market is expected to growth at a compound annual growth rate (CAGR) of more than 28% between 2016 and 2022, hitting more than $30B by 2022, according to a research report from Market and Markets. Deloitte sees 3D printing technology as one of the five most important themes affecting CRE in the near term, in its report, "Innovations in Commercial Real Estate: Preparing for the City of the Future."

At first, 3D printing started primarily as a cheaper, faster way to manage architectural modeling on projects, to better understand and review potential future development--and also support and underscore investment and lending decisions around location, design and construction, according to the Deloitte research. But as the printers have gotten larger and the technology inside has improved, the technology is now able to fabricate actual building materials, offering (in some cases) better quality and durability than what otherwise would be available.

Although the idea of "printing" up walls, flooring and even foundations might seem like the stuff of science fiction, 3D printing is expected to rapidly flourish in CRE. Perhaps it will soon be time to look below the surface to see if anything else is sitting there in the 3D world that could also be a lending game changer.

BANK NEWS

Loan Competition

Square reported it made $318mm of business loans to customers during Q2, a 68% jump from the same period last year.

Different Regulation

The Fed issued a welcome proposal that would scale back requirements on directors, as it seeks to recalibrate the heavy flood of regulations that followed the crisis. The move is intended to get bank boards out of the weeds to instead focus more on bigger strategic issues. This approach will be welcomed by community bankers crushed by heavy regulation, but it could also take a longer time than expected to implement perhaps, given how deeply embedded in the day to day processes directors became following the crisis and corresponding regulatory response.

Rate Movement

Fed San Francisco President Williams said he supports the Fed moving to cut their $4.5T portfolio starting in Sep. He also indicated he is comfortable with 1 more rate hike this year and 3 next year. Williams also indicated he thinks it will take about 4Ys to completely unwind the balance sheet.

SNC Update

Regulators have released their semiannual shared national credit (SNC) exam results for the $4.3T worth of these loans in the market. Recall that loans are considered SNCs if they are $20mm or larger in size and shared by 3 or more unaffiliated regulated institutions. The review found the level of adversely risk rates (special mention and classified) declined slightly but remains elevated, primarily related to distressed borrowers in the oil and gas sector and those in other sectors with excessive leverage.

20TH ANNIVERSARY TRIVIA

To celebrate our 20 years of service, we wanted to provide you with some interesting trivia. Look for these facts the first Monday of the month. This month's trivia:

Loans: 20Ys ago the FDIC reports institutions w/assets <$1B controlled $790B in loans vs. $826B (Q1 2017) - a 5% increase.