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Securitisation innovation in focus

Summer 2018

China in your hand

Opportunities and challenges in a surging market

Investing in structured credit

Growing green ABS

The state of STS

Reforming the GSEs

Rethinking CRTs

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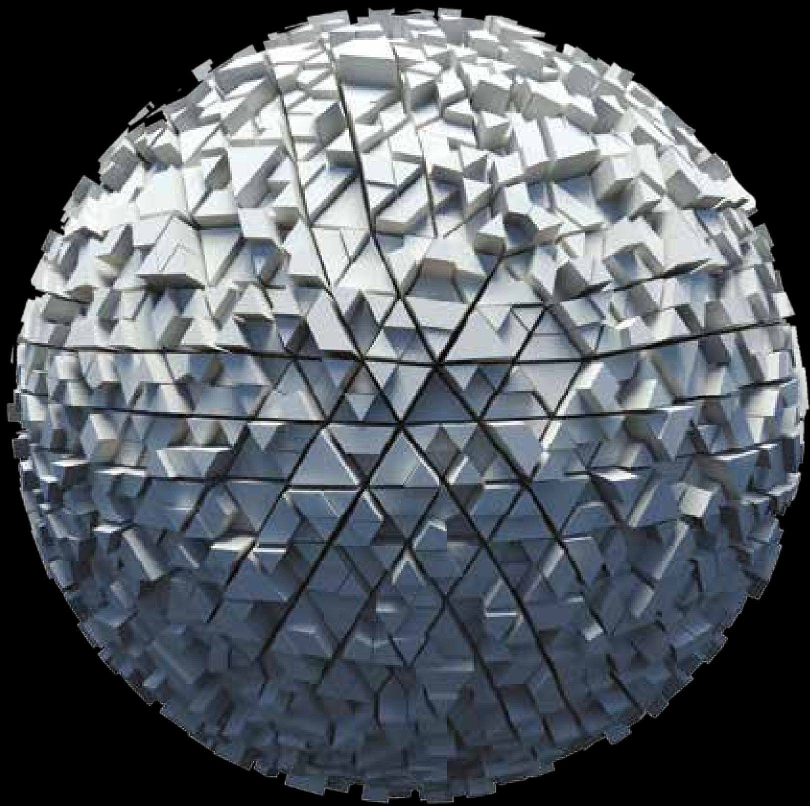

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Editorial Summer 2018

London, May 2018

Don't call it a comeback; while we are very excited to have a new print issue, SCI has been providing leading structured finance news, data and events for years. The market has grown and so have we, and growth is a key theme in this issue of the magazine.

China's securitisation market has grown from a smidge more than nothing to stand as the second-largest in the world. Its rapid growth and the questions that raises provide this edition's cover story, with a strong range of opinions as to the market's value and potential.

PACE is the name of the game for green ABS. The development of commercial and residential PACE on both sides of the Atlantic has provided fresh impetus to the renewables space. We have looked at how that is shaping up and how the rest of the market is growing, too.

The fate of STS, "an idea whose time never came", is not just being discussed in conference halls and boardrooms, but also in these pages. We look at the latest regulatory twists and turns as well as the likely uptake of the STS label.

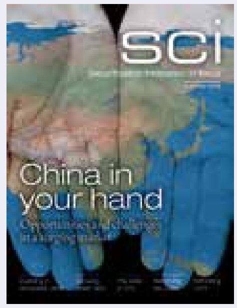
The cases for and against reform of the GSEs are put forward, as well as an investigation of the change that has been achieved so far. We have also dug into how the GSEs themselves see things and how private companies are adapting the enterprises' strategies and growing the risk transfer market.

Meanwhile, the capital relief trade sector has grown up a lot since we published our special report on the market in 2015. That report has since been updated, but it is time now for an entirely new one on the sector and that is exactly what we are bringing. A sneak peek is available in this magazine.

There are also examples of some of the great news and data you can find on our website. Oh, and we even found time to sit down with Palmer Square Capital Management to get their take on corporate and structured credit.

Enjoy the magazine.

James Linacre
Special Projects Editor, SCI



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Contents Summer 2018

Hip to be Square

Chris Long, president and portfolio manager at Palmer Square Capital Management, discusses his firm and the credit markets it operates in

Q: What is Palmer Square's focus?
A: At Palmer Square, we are focused on exploiting opportunities and finding relative value across corporate credit and structured credit. On the structured credit side, we spend a lot of time on CLOs, where we are both a manager and an investor. We also invest significantly in other types of ABS and MBS.

I started the firm in June 2009, so we are already approaching our ninth birthday. Starting a business like Palmer Square from scratch, particularly coming out of the depths of the financial crisis, was a huge challenge but also a fantastic opportunity. At that point, we believed that credit was going to play a huge

> "I ATTRIBUTE OUR GROWTH TO MANY REASONS, MOST NOTABLY OUR TEAM, OUR CULTURE OF PUTTING THE CLIENT FIRST, AND FINALLY OUR ABILITY TO LAUNCH AND MANAGE PRODUCTS WHICH SUIT OUR CLIENTS' NEEDS"

part in investor portfolios and so we gradually positioned our team and product platform with that vision in mind.

I attribute our growth to many reasons, most notably our team, our culture of putting the client first, and finally our ability to launch and manage products which suit our clients' needs. It might have been tough to get started, but once you have begun building that track record, you are on your way.

We have built a client base we are proud of which includes institutions and family offices, RIAs, banks and broker-dealers, and we have been able to put together a long string of good performance.

Q: How do you differentiate yourselves from your competitors?

A: We stand apart through our focus and how we have structured our firm. Palmer Square's research platform was built so that the corporate credit side and structured credit teams would work together seamlessly rather than separately, and that design allows us to analyse opportunities quickly.

Our investment team is very experienced and we are incredibly proud of the team we have built. We have 24 people total and our investment team averages approximately 13 years of experience in structured or corporate credit. These are people who have been around credit cycles and have a deep understanding of industries and/or structure.

We have an integrated credit investment platform which manages mutual fund offerings, private funds and separately managed accounts. This diversity of vehicles allows investors to easily access Palmer Square's competitive advantage in credit in a way that is optimal for their specific situation.

Finally, we can be nimble. We are small enough to be able to take advantage of a lot of credit market opportunities yet we also now have scale from an infrastructure and team standpoint. We manage approximately US$5.5bn.

Q: How do the Palmer Square CLO indices work?

A: In June 2015, we announced a partnership with the New York Stock Exchange and Thomson Reuters on two CLO market indices which are distributed worldwide on a daily basis. The first is Palmer Square CLO Senior Debt Index (ticker: CLOSE) which is designed to illustrate the investable universe of triple-A/double-A debt (market-weighted basis).

The second index is Palmer Square CLO Debt Index (ticker: CLODI) which is designed to illustrate the investable universe of single-A/triple-B/double-B debt (market-weighted basis). We believe the indices can serve as a potential tool not only for existing CLO investors to benchmark portfolios, but also for prospective investors who seek to follow the CLO space more closely.

Q: Where do you see the most compelling business opportunities in 2H18?

A: As a manager, we continue to find opportunities in static CLO equity, an area where we have used our knowledge of credit and structure to be active in generating opportunities in these markets. Offering these static CLOs has been important for our business.

We have issued six of these deals now and continue to achieve significant cash-on-cash returns. We believe the returns have been very strong, especially when compared to other opportunities in the market.

A static CLO might only last only one to two years, whereas other CLOs could live for six to nine years. The shorter time that you get to hold onto the assets might be a disincentive to other managers, but it is something we will continue to look at because we have found it continues to work well in various market environments. Pioneering static CLO opportunities is a prime example of our ability to be active in how we go about generating alpha for clients.

We are also bullish on accessing bank loan exposure through warehousing facilities given the low cost of senior debt funding we have been able to obtain from banks. Given this relative value, we increased this allocation over the course of 1Q18 and plan to continue to increase our capital allocation to this area.

As a refresher, we have been investing capital into warehouses since 2013 in order to buy diversified portfolios of large, floating

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> “WE BELIEVE THERE IS A LOT OF CUSHION FOR COMPANIES TO SERVICE DEBT SO WE ARE NOT OVERLY CONCERNED BY THE INCREASES IN LEVERAGE WE HAVE SEEN SO FAR”

rate corporate bank loans, either from new issuance or in the secondary market. These bank loans are typically senior secured and first lien in nature, meaning an investor is first in line to be paid in the event of the issuer's insolvency.

Palmer Square continues to adhere to our strict underwriting criteria which includes but is not limited to buying broadly syndicated loans which are large in size, first lien in nature offering strong asset protection, and finally we believe we can purchase loans that are higher quality with strong industry or company-specific tailwinds.

Finally, the short end of the yield curve and floating rate debt presents a compelling opportunity. Short-term and floating rate yields are up significantly year-over-year and the curve is relatively flat.

This type of environment allows you to position portfolios defensively without giving up any significant yield because investors are not being compensated significantly more for taking duration risk. Short-dated or floating rate securities make a lot of sense to us.

For example, most floating rate paper is tied to either 90-day or one-month Libor. Both of those are currently at elevated levels and if the Fed continues to increase rates, which we believe will occur, then that situation is likely to continue.

Q: Which parts of the market are you more nervous about?

A: High yield bonds are less attractive so we have not been particularly active in high yield bond land for some time. We do not think that spreads of 330bp-340bp over are enough to compensate for the risk that you take on. Historically that kind of paper would have been paying out around 200bp more in spread than it does in today's market.

Moreover, high yield could see an increased amount of supply should some portion of triple-B rated investment grade credit face downgrades. Of note, there are currently around US$3trn of triple-B corporate bonds while the double-B, high yield universe is only around US$600bn.

That is a huge difference and you have to ask what would happen if there were downgrades and that investment grade paper shifted down to high yield. That kind of move could unnerve high yield investors and cause things to gap out materially.

New issue CLO paper is also not as attractive relative to shorter duration CLO debt because you earn a relatively similar amount of yield but leave your portfolio more susceptible to spread widening events. We believe shorter duration CLO debt offers higher price stability, which is something we really value at the moment.

It is also the case that new issue paper does not always have the same strength of documentation as older vintage CLOs do. Investors need to do their homework and ensure that they have the proper protection.

Q: How do you expect the market to change?

A: We believe default rates are going to climb from here. However, we think it will remain isolated to certain industries rather than becoming a systemic issue. The most obvious example for increased defaults is probably retail, but wireline telecoms could also be a sector where defaults will be driven higher.

Defaults have been so low for such a long time now and we all know it cannot last forever. However, that does not mean we think the market will decline in the near future. We think there is a relatively long runway for this current cycle.

We base our comments on the fact that the macro-economic environment is constructive for companies paying back debt. The economy is strong, GDP is good and employment is great, so the outlook is healthy.

From a company-specific standpoint, we also draw comfort in that interest coverage ratios remain robust. While leverage certainly is up, debt has generally been raised at low interest rates which allows for really good interest coverage. We believe there is a lot of cushion for companies to service debt so we are not overly concerned by the increases in leverage we have seen so far.

Q: How does Palmer Square expect to change?

A: We are keen to expand on the peripheries of what we are currently doing, but that has to happen at the right time. So many areas of credit remain stretched in terms of valuations so we believe now is not the time for us to take that step.

Our priority will remain serving our clients in the best way we can. To accomplish that objective, we will continue to be nimble, responsive and alert to opportunities wherever they can be found in our focus area of corporate and structured credit. Over the past nine years we have built a business that we are proud of and our job going forward is continue to generate performance, great client service, and solutions that investors need. ■

About the interviewee:

Christopher D. Long founded Palmer Square Capital Management in June 2009. He is president and portfolio manager with responsibility for managing the company's investment effort and overall business. The firm has approximately US$5.5bn AUM.

Long previously worked in investment roles at Prairie Capital and Sandell Asset Management and worked in the credit derivatives and distressed securities group at Morgan Stanley. Before that he was at TH Lee Putnam Ventures, a private equity fund sponsored by Thomas H Lee Partners and Putnam Investments.

He started his career at JPMorgan in leveraged finance and mergers and acquisitions. He has an MBA from Harvard Business School and an AB in Economics cum laude from Princeton University.

China in your hand

Chinese securitisation issuance surged to a record high in 2017 but significant challenges remain. Overseas ABS market participants point to the need to develop the investor base and deepen market expertise, but are also showing increased willingness to dip their own toes in the water

China's ABS market is experiencing explosive growth and overseas interest has soared. After negligible activity up to 2013, issuance has rocketed to make the Chinese securitisation market the second-largest in terms of new issuance, hitting CNY1.495trn in 2017.

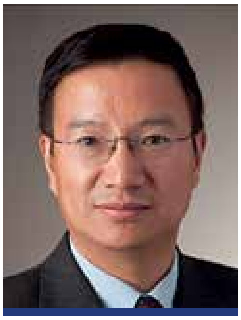
It remains a young market, however, and this presents a number of challenges. Investors looking to China are concerned by the perception of misaligned incentives among participants in the securitisation process, a lack of transparency regarding underlying assets and heavy reliance on credit ratings.

However, it is a market which is developing rapidly and which continues to take strides to meet these challenges.

"China is often cited as the world's second-largest securitisation market and it has several large, active sectors. Auto ABS, RMBS, and consumer ABS spaces have become leading asset classes, while balance sheet CLOs, finance leasing, and account receivable ABS are also significant," says Jian Hu, md, structured finance, Moody's.

CLOs are the third-largest asset class issued under the credit assets securitisation (CAS) scheme, although issuance volume has declined in each of the last two years. RMBS was the largest class issued under CAS last year, while consumer loan ABS and finance leasing ABS experienced issuance increases of almost 650% and over 160%, respectively.

More than half of issuance last year was corporate asset securitisation under the asset-backed specific plan (ABSP), which accounted for around CNY840bn in 2017. Almost CNY600bn came through the CAS scheme, which has accounted for around half of all Chinese securitisation issuance since 2012. The asset-backed note (ABN) and asset-backed plan (ABP) programmes both remain small and ABN totalled less than CNY60bn last year, although it did grow 240% after the regulator, NAFMII, amended issuance guidelines.



Jian Hu, Moody's

China's rise

China's regulators first opened the doors for ABS in 2005, but the market was still in its infancy when the global financial crisis led to a total shutdown. Asset securitisation was reinstated in 2012 but its phase of explosive growth began two years later, in 2014, when market needs aligned with benign regulatory policy.

On the supply side, banks became eager to transfer loans off balance sheets and corporates turned to securitisation to diversify funding. On the demand side, there were high household savings and a desire by asset managers for liquidity.

"Commercial banks and large corporate issuers began shrinking their balance sheet as China's economy became more stabilised in growth and bigger in size, while SMEs looked at securitisation as a viable alternative funding source. In the meantime, investors became more and more comfortable with securitised products as a new class of investment products, in addition to the stock market and real estate. Even retail investors can participate in securitised products via banks' wealth management plans," says Raymond Chen, co-secretary-general of China ABS Forum-100.

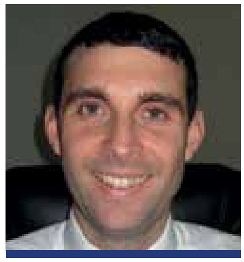
He continues: "The government is very supportive to the securitisation market and understands the benefits of such financial tools, but there have still been many obstacles and inefficiencies in growing this new market. For instance, the investors are less sophisticated and the market needs more long-term investors and investors who can take junior or subordinated risk."

The government's role cannot be overstated. To whatever extent hurdles stand in the way of the market's development, the government's continued favour should be sufficient to see those hurdles overcome.

"In China the government can make things happen or make them stop happening on a dime. There is always the possibility that there could be a moratorium overnight, but this market has grown so much and is developing critical mass. Additionally, because it is such a diverse market with distinct sectors, the regulators could be very surgical in fixing issues if any trouble does develop, rather than having to shut the whole sector down," says Richard Mertl, counsel, King & Wood Mallesons.

He adds: "The Chinese are willing to try new things and they are enthusiastic about securitisation, but they also keep a close eye to make sure development happens the right way. A good example of this is with cryptocurrencies, where they were one of the first jurisdictions to clamp down."

Raymond Chen, China ABS Forum-100



Jonathan Rochford, Narrow Road Capital

Outstanding challenges

Despite government support and the market's impressive growth, there remain significant challenges. These range from a lack of professional managers to comingling risk, lack of transparency and over-reliance on ratings. The rapid growth also distracts from the market's youth and the fact that structures remain untested.

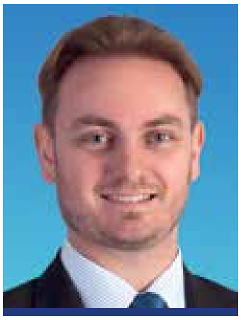
"Any investor looking to the Chinese market must remember that it remains an emerging market; its sheer size encourages some investors to assume it also is well developed, but as of yet that is simply not the case. There are practices allowed in China which would not be allowed in the US, Europe or Australia, for example," says Jonathan Rochford, portfolio manager, Narrow Road Capital.

The Chinese ABS market has traditionally relied on offshore investors to take most of the risk. This is "because domestic investors do not have a strong understanding yet of this product", says Julien Martin, general manager, Bond Connect.

This is developing, however. Martin continues: "Further, the buy-side and sell-side are closely linked in China, with the same banks serving as investors and underwriters, so the People's Bank of China (PBoC) launched Bond Connect as a way to allow global investors to come into the market and bring in buy-side knowhow to make it more advanced and liquid."

Chen agrees that more professional investment managers are entering the fast-growing ABS market. With continuous regulatory progress and supportive regulators, he says that investors in China are becoming more and more sophisticated and experienced.

> "IN CHINA THE GOVERNMENT CAN MAKE THINGS HAPPEN OR MAKE THEM STOP HAPPENING ON A DIME"



Julien Martin, Bond Connect

"There has been considerable debate that some Chinese securitisations have not achieved true sale and been off balance sheet. The market has now become more comfortable with the credit asset securitisation originated by financial institutions regulated by bank regulators and so-called standard structures, but less so for non-standard transactions," says Hu.

Comingling risk, where originators are also servicers, has also been cited as a concern. There have been cases where originators have misused payments due to the securitisation for other purposes instead, thus disrupting cash to noteholders. The development of professional servicers is therefore keenly awaited, along with other similar infrastructure improvements on investors' wish lists.

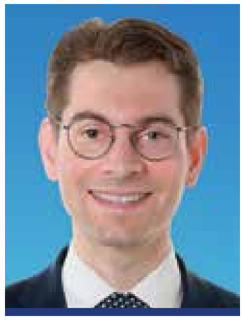
Investors, particularly international investors, are also watching for greater involvement by Western rating agencies and originators. This is a process which has already begun.

"Ratings are a very large gap. There are domestic agencies whose rating scales appear comparable but are substantially inflated compared to the ones used in the West. Those rating agencies which most investors are familiar with are now becoming more involved in the Chinese market and that will help a lot. Westerners will trust S&P fairly readily, for example," says Rochford.

Mertl comments: "Greater integration of international rating agencies into the Chinese market will really help international investors. We have already seen the likes of GM, Ford, Volkswagen and BMW, among others, successfully issuing auto ABS deals in China using the structures similar to those used in the US or Europe. Keeping that consistency also makes rating those deals easier."

The greater involvement of global originators and rating agencies, and the expertise they bring with them, will help the domestic originators and rating agencies to develop. As Martin notes when discussing the related issue of global investors, "China does not need just capital, what it needs is smart capital".

This lack of experience is evident in the behaviour of domestic investors. Chen says: "Investors tend to pay more attention to counterparty risks than asset-based risks. The market is more used to price issuer's credit risks and equity risks, and it will need more time to develop comprehensive pricing mechanisms for structured credit risks."



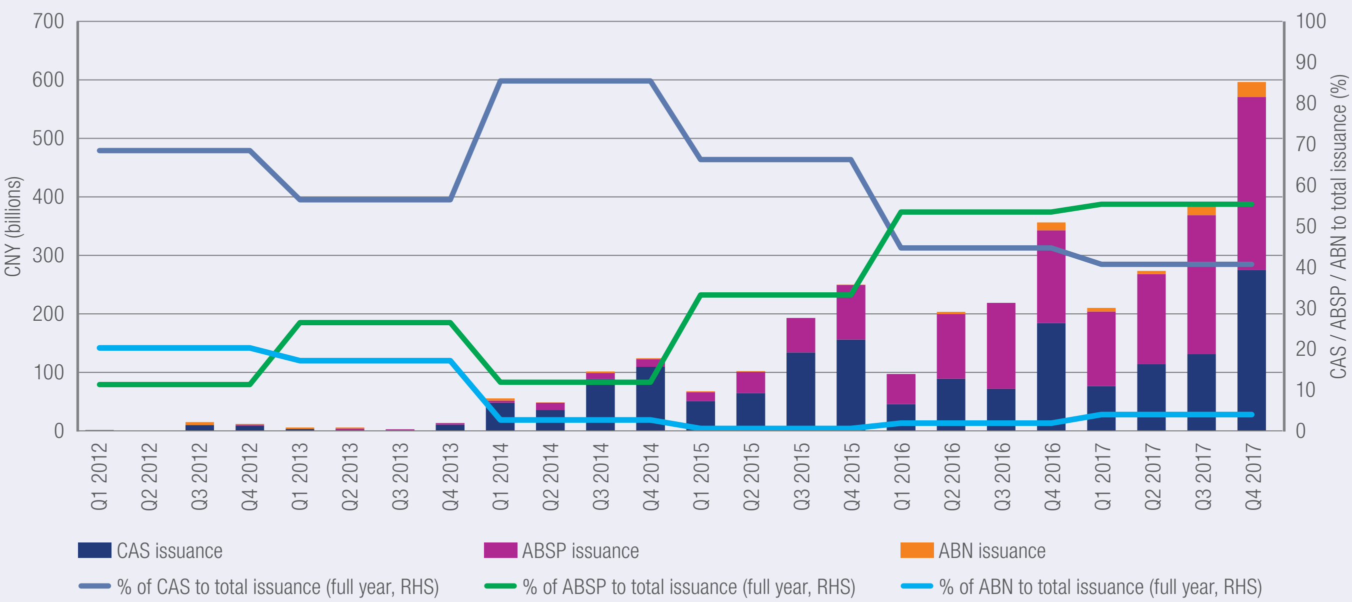
Richard Mertl, King & Wood Mallesons

This greater involvement of global participants, with the experience and expertise they can bring, will fuel a new phase in the Chinese securitisation market's development, just as the supportive policies of the government and regulators have provided its ignition. The education process is already well underway.

"There are multiple annual conferences – for example the China Securitization Forum's May event was expecting up to 4,000 people – and international trade associations such as SFIG are actively building bridges and sharing knowledge," says Mertl.

He continues: "The biggest hurdle to the market's development is arguably regulatory caution, but mark my words, foot-dragging is not an issue; Chinese regulators are keen to see securitisation markets form. But to

Exhibit 1: Chinese securitisation issuance is growing | Total ABS issuance volume (under different schemes)



Source: Moody's Investors Service

Exhibit 2: China has three main securitisation schemes

Securitisation scheme	CAS	ABSP	ABN
Regulators	PBoC and CBRC	CSRC	NAFMII
Originators	Financial institutions	Non-financial enterprises	Non-financial enterprises
Issuance market	Interbank bond market	Stock exchange market	Interbank bond market

Note: PBoC = People's Bank of China, CBRC = China Banking Regulatory Commission, CSRC = China Securities Regulatory Commission, NAFMII = National Association of Financial Market Institutional Investors.

Source: Moody's Investors Service

get comfortable they need to understand the market dynamics. To their credit, Chinese regulators have generally been proactive about monitoring and keeping abreast of developments in the marketplace."

International perspective

Overseas investors are typically fairly conservative when taking on Chinese risk and stick to senior tranches, notes Chen. He believes many of them are not yet entirely comfortable with the country's legal structure "where, for example, if a default happens then it might be perceived to be difficult for foreign investors to directly get hold of the underlying assets".

Chen adds: "There are, however, good opportunities for experienced foreign investors to get involved in China's ABS market, including pre-ABS investment where investors participate in the origination and/or warehouse lending of the underlying assets. If you come in and do the work and get your hands dirty, the opportunities are there, but China's ABS market is probably not yet a market for Bloomberg terminal traders; you must do fundamental research."

Foreign investors looking to China – and who China's regulators hope will bring 'smart capital' with them – were previously unable to invest directly without a domestic partner. That process has become easier in the last year.

"Bond Connect is a simplified model of access to any Chinese fixed income product issued in the wholesale market, which includes ABS. Previously a foreign investor had to move money to an onshore custodian and that was prohibitive, particularly for investors who wanted only limited involvement in the market, so Bond Connect makes a big difference," says Martin.

Bond Connect was launched in July 2017 as a joint venture established by China Foreign Exchange Trade System (CFETS) and Hong Kong Exchanges and Clearing (HKEX). It uses Hong Kong's position as a bridge between China and the rest of the world to create a channel for foreign capital to enter China's bond market and also for Chinese investors to access overseas markets.

Bond Connect provides access to 30,000 securities, including ABS, and offers access to the entire primary market. Martin notes that 260 new issues have already been bought by investors, ranging from government bonds to structured products and including the first RMBS sold through the platform.

That RMBS was Xinguyan 2018-1 RMBS, which was issued on 19 April with an issuance size of CNY7.949bn. It is the first RMBS through China's interbank market for foreign investors issued through Bond Connect.

Bond Connect comments: "[The Xinguyan 2018-1 RMBS sale] further enriched the scope of investors for China's asset securitisation products, increased the sources of financing funding, and promoted the asset securitisation market in China to be in line with international standards. At the same time, the expansion of overseas capital investment in China's bond market is conducive to enriching foreign investors' investment channels, enhancing investor confidence and satisfying more demands for the allocation of CNY assets."

Restrictions on convertibility of renminbi have historically created a bottleneck for foreign investors. Bond Connect at least partially solves this.

"Bond Connect has been available since July of last year as a channel for offshore investors to access the Chinese bond market, including the securitisation market, and it provides options for conversion and hedging of renminbi. Uptake of various types of Chinese government bonds and Treasuries through Bond Connect has been rapid; in the securitisation space some small allocations of RMBS and auto ABS bonds have also already been sold through Bond Connect," says Mertl.

Bond Connect has both a Northbound and a Southbound channel. Overseas investors buying Chinese securities use the Northbound channel. Chinese investors looking abroad will be able to use the Southbound channel.

"Bond Connect Southbound will come online when demand really requires it. We are getting close to this but do not have a hard timeline yet. The priority for regulators, the buy-side and the sell-side was Bond Connect Northbound," says Martin.

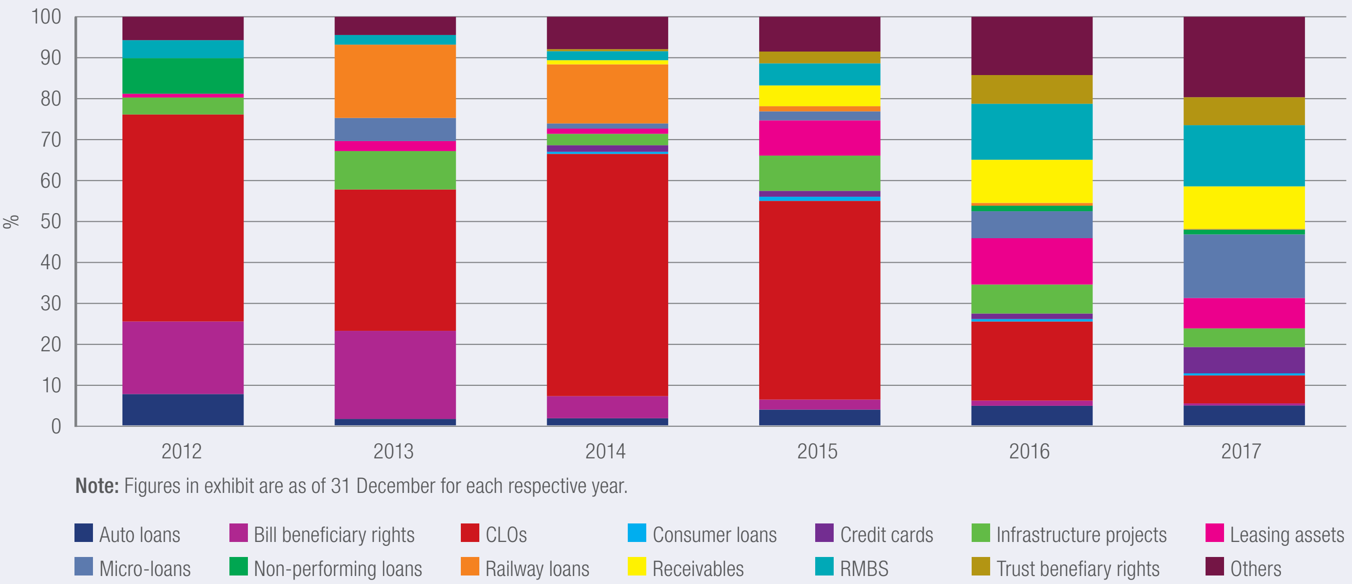
He continues: "In the less than a year that we have been operating, overseas holdings of Chinese securitisations have increased 55%. Bond Connect Northbound has huge potential and its success will drive the success of Bond Connect Southbound."

With Chinese rates high and the cost of credit low, Chinese investors are not particularly incentivised to look abroad. However, greater involvement by global investors is expected to pull market rates lower and allow credit to be priced better, which will encourage Chinese investors to increase their investment into foreign assets as they search for yield. There is already evidence of Chinese investors targeting CLOs, for example.

"There has also been clear growth in Chinese investment in foreign structured products, but it remains limited. One of the main overseas targets for Chinese investment

> "THE BIGGEST HURDLE TO THE MARKET'S DEVELOPMENT IS ARGUABLY REGULATORY CAUTION, BUT MARK MY WORDS, FOOT-DRAGGING IS NOT AN ISSUE"

Exhibit 3: Broad range of assets securitised in China | Major asset classes funded by securitization (by outstanding balance)



Note: Figures in exhibit are as of 31 December for each respective year.

Source: Moody's Investors Service

is US CLOs, mainly because of that market's size and also because of the yield they offer," says Hu.

Time to grow

The Chinese securitisation market needs time to become more sophisticated. Rochford wants to see a track record established with asset pools which can be assessed over a number of years.

He says: "What the Chinese market needs to do now is prove out these asset classes and demonstrate that credit assessments are being done in the right way. That would build confidence but it will take time."

Until that happens, Rochford says he would be very cautious about investing in China. There are simply too many challenges as a foreign investor, he believes.

"These include currency challenges and getting money out of the country but also ownership issues where assets can be repossessed in the courts, sometimes on spurious grounds. Therefore, until processes develop a bit more and the market matures, I would be cautious about the Chinese market," says Rochford.

It is very important that investors keep in mind the fact that the underlying assets in Chinese deals are not the same as those in the US or Europe. This is not just the case with unfamiliar asset classes – and there are plenty of fintech innovations which apply securitisation techniques to digital assets – but even with assets with which foreign investors might be better acquainted.

"Even the more familiar asset classes such as RMBS have quite different features because of the different legal environment. For example, mortgages in China function differently from mortgages in the US; differences like this add to the complication for non-Chinese investors and rating agencies to conduct credit analysis on Chinese structures," says Mertl.

The lack of a secondary market also causes domestic investors to favour buy-and-hold strategies. This causes a bias towards short-duration issuance.

"Investors would prefer to buy paper they are completely comfortable holding throughout its lifetime; it is not like those more mature markets where investors know they can sell bonds on if circumstances change," says Chen. "For a secondary market to develop we would need more institutional investors such as insurance companies and retirement funds to come into the space. Meanwhile, there may need to be more market-makers to facilitate trading activities."

A secondary market is expected to develop with time. Aforementioned challenges such as servicing standards, ratings reliance or regulatory caution should also be addressed with the passage of time and accumulation of experience and expertise. However, time and familiarity can also bring complacency, and this, too, must be monitored.

Hu says: "The biggest risk for this sector is potential lack of discipline, [packaging] more and more non-standard assets into structured transactions, some of which may not withstand legal tests. At some point a downturn will come to the sector and some of the risks we see today will materialise into losses."

"INVESTORS WOULD PREFER TO BUY PAPER THEY ARE COMPLETELY COMFORTABLE HOLDING THROUGHOUT ITS LIFETIME"

Everything's gone green

The US green ABS market has been dominated by residential PACE and solar ABS transactions, but commercial PACE and other renewables are establishing themselves. There is also growing interest in these markets in Europe, where a PACE pilot programme is underway

An April whitepaper from the New York State Energy Research and Development Authority (NYSERDA) and the New York Department of Public Service (DPS) is set to implement a new order, with both commercial and residential PACE highlighted as tools to meet the state's ambitious energy efficiency targets. Proposals include strengthening the state's existing commercial PACE programme, supporting a new commercial PACE programme for New York City, and promoting state-wide availability of residential PACE financing.

PACE is also on its way to Europe with a pilot programme starting in Spain. The EuroPACE programme is trialling both commercial and residential PACE and is set to run for three years.

With all of the developments happening with PACE, it would be easy to lose focus on solar ABS, but that sector remains a central pillar of green ABS and continues to grow rapidly. There are new entrants to the market and the prospect of a first triple-A rating is drawing closer, which could take activity to another level. ▶

There are also many other markets being made possible by new technology or by finding green uses for existing technology and products. An interesting example here is the innovative use of ground leases.

Picking up the PACE

The NYSERDA and DPS whitepaper has significant commercial PACE implications, but the boost for residential PACE could be even greater. Residential PACE in the US has so far been limited to California, Florida and Missouri.

"The time has never been better to put PACE to work for the people, businesses and communities of New York. This announcement comes amid mounting evidence that PACE is working for American homeowners and their local communities," says Roy Guthrie, ceo, Renovate America.

Lain Gutierrez, svp, DBRS, notes that while residential PACE continues to grow in its established markets, the rate of growth has begun to slow down. This may not be entirely surprising, considering the speed at which the market developed in California.

"The rapid growth was driven by the availability of an alternative financing option, while the reduction in the cost of solar panels also made going solar more affordable. However, California is now pretty saturated and origination volume will be checked by the ability to pay and income verification requirements that are now in effect," says Gutierrez.

The residential PACE market is dominated by Renovate America and Renew Financial. Between them they accounted for over 80% of total PACE ABS issuance in 2016-2017.

"Residential PACE is a point of sale product and around 60% of our sales are reactive, typically because something is broken and needs an immediate repair. PACE is there when you need it, it can finance the entire cost of the improvement and it comes with a lot of protections that other forms of financing do not, so it is an attractive option," says Craig Braun, svp, head of capital markets, Renovate America.

He continues: "The fact that PACE is only for energy efficient improvements also has a strong appeal for many people. This is a product that is held back only by the fact that it has to be approved on a state-by-state basis."

Much of the older housing stock in the US is not energy efficient. Renovate America finds customers who improve their homes' energy efficiency are able to save money. The company projects that the US$2.9bn HERO home financing loans it has provided will save homeowners nearly US$3.5bn over the expected useful lifetime of those products.

PACE loans are not just good for homeowners. The performance of residential PACE ABS has been good for investors.

"PACE delinquencies have been fairly stable year-over-year and remain negligible. They are well inside aggregate property tax delinquencies across California, for example. Performance has been strong and within expectations, reflecting a strong asset class, and this is not too surprising considering borrowers who have PACE assessments are self-selecting and want to enhance the value of their home," says Gutierrez.

Delinquency data for Renovate America and Renew Financial's ABS programmes from the tax year 2013-2014 until the tax year of 2016-2017 shows delinquencies peaked at 2%-4% in January for each tax year before declining to the end of the tax year in June and then continuing to decline thereafter, notes Gutierrez. He adds: "By Month 22, delinquency rates range from just 23bps to 27bps."

Residential PACE volume could decline a little this year as a result of legislation in California which is aimed to increase protections for consumers taking out PACE home improvement loans, although tax changes are not expected to have an impact. "California is the leader in PACE and others look to the California model and, over time, there may be some states following California's lead," says Braun.

> "RESIDENTIAL PACE IS A POINT OF SALE PRODUCT AND AROUND 60% OF OUR SALES ARE REACTIVE, TYPICALLY BECAUSE SOMETHING IS BROKEN AND NEEDS AN IMMEDIATE REPAIR"

Lain Gutierrez, DBRS

The whitepaper from NYSERDA and DPS specifically notes the development of the Californian market and the legislation to formalise consumer protection policies and implement state oversight and regulation of administrators. It suggests that New York should call on the Department of Financial Services to issue draft consumer protection guidelines and a programme for oversight and regulation of residential PACE administrators in New York.

The commercial side

While the New York whitepaper makes recommendations for both residential and commercial PACE, the markets are very different. "Commercial and residential PACE share a name but very little else," says Jessica Bailey, co-founder and ceo, Greenworks Lending.

Greenworks set an industry standard when it brought the first securitisation backed entirely by commercial PACE assets last year. The US$75m ABS was arranged by Guggenheim Securities and privately placed, with Morningstar Credit Ratings assigning a double-A rating.

"We have a different origination pathway, acquire and vet customers differently, and although we have channel partners like the residential guys do, we are involved much more deeply in conversations with the property owner and the team of stakeholders and advisors they bring to the table," says Bailey.

She continues: "The assets themselves are also lumpier, with an average size of US$500,000. While that is a good way short of CMBS level, it is also considerably larger than residential PACE."

Exhibit 1: PACE delinquency rates

*Tax year 2016-2017 is combined for both HERO and Renew

Source: DBRS

There are other significant differences to residential PACE, not least the much wider availability of commercial PACE. Bailey notes that Greenworks' last deal had half a dozen states represented in the pool, but its next deal will diversify further and include the likes of California and Florida – residential PACE stalwarts. The timing of that second deal, like the timing of a rumoured offering from Clean-Fund Commercial Capital, remains uncertain.

"Our previous deal has performed well, so we expect to be able to return to the market this year. We are also seeing other originators come to market and that is encouraging," says Bailey.

She continues: "Commercial PACE is not just limited to renovation of old properties. Since the last quarter of 2017 there has been a huge spike in interest on the new development side, although that has different risks as the developer risk and leasing risk are different.

Jessica Bailey, Greenworks Lending

The best candidates for commercial PACE are not class A offices, but rather class B and C properties."

Commercial PACE remains a smaller market than residential PACE but its slower growth does not point to more limited prospects, argues Bailey. The available market into which it can grow "is huge" and the policy environment is beneficial.

"We foresee 30 states into which we can lend and that will grow as states such as Pennsylvania and New Jersey will become available. A lot of states are turning onto commercial PACE lending," says Bailey.

Braun also acknowledges the wider availability of commercial PACE, but notes that the difficulty is that there is not the same volume, so while deals are bigger than residential PACE, they also take a long time to complete. He says: "It is much like the difference between RMBS and CMBS. RMBS is a flow business but CMBS has to be far more bespoke and takes so much longer to underwrite and for those deals to flow through the system."

When it comes to rating these deals, Gutierrez notes that commercial PACE calls for a property-by-property approach. He notes that commercial PACE "is a different animal" and harder to assess.

"While residential PACE is consumer finance with homogenous and granular pools which all – even across different issuers – look very similar, this is not the case with commercial. Commercial pools come in different shapes and sizes because of the variety of office buildings, malls, multifamily properties, owner-occupied properties such as warehouses, car dealerships and special use properties which can be included," says Gutierrez.

Commercial PACE is certainly a useful financing option. Whether or not it grows to reach its potential remains to be seen, but the early signs are encouraging.

"Construction is an area for potential growth, because if PACE can replace even part of the very expensive mezzanine financing that property owners currently rely on, then it can reduce costs considerably. We have received a number of enquiries about rating new construction and gut rehab projects," says Gutierrez.

Bringing PACE to Europe

A decade on from the launch of PACE in California, the concept is crossing the Atlantic. Considering the strong appetite among many European governments to support green initiatives, the biggest surprise might be that it has taken so long to arrive.

The EuroPACE programme being piloted in Spain intends to take the best practices from the US experience and further enhance its reach and scope. It is funded by Horizon 2020, the EU programme for research and innovation, and will be available for residential homes as well as offices, hotels, multifamily

"THIS STARTED AS A NICHE AND HAS CAUGHT ON LIKE WILDFIRE, SO ANY GOVERNMENT THAT WANTS TO USE POLICY TO IMPROVE GREEN ENERGY COULD BENEFIT FROM LOOKING AT PACE"

and mixed-use properties, and in its current form will run until March 2021.

The project is being led by GNE Finance and Poland's Center for Social and Economic Research (CASE). Other partners in the scheme are the Climate Bonds Initiative, the Energy Agency of Extremadura, Joule Assets Europe, UpSocial, the local government of the city of Olot in Catalonia – where the residential pilot is taking place – and Ente Vasco de la Energia, the Basque government's energy agency.

The project has been busily promoting the prospects for PACE at the national level in Spain and developing support from the financial community at the European level, and there has been a EuroPACE workshop in Madrid held under the auspices of the Sustainable Energy Investment Forum. That session brought together policy-makers, city practitioners, investors and energy efficiency experts to delve into PACE adoption in Spain.

"PACE can be done anywhere there are property taxes, so European PACE makes sense. The pilot programme in Spain is suggestive of the power of green technology and our model. This started as a niche and has caught on like wildfire, so any government that wants to use policy to improve green energy could benefit from looking at PACE," says Bailey.

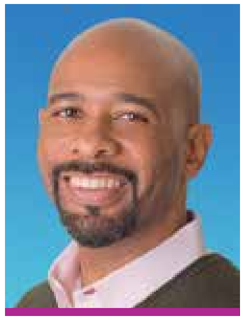
Eric Neglia, Kroll Bond Rating Agency

A market in the sun

While PACE has risen as a green ABS asset class, solar is not being left in the shade. The sector continues to grow as there have been increases in both solar loan issuance and in the use of securitisation for funding.

"The sector is growing quickly, which can be seen for example in the fact that both Mosaic and Dividend each issued their inaugural solar loan securitisations last year. Since February 2017 KBRA has rated US$922m in solar loan ABS, three securitisations for Mosaic totalling US$682m and two securitisations for Dividend totalling US$240m," says Eric Neglia, md, ABS, Kroll Bond Rating Agency.

As well as solar loan ABS there are also solar lease or PPA deals. Kroll spotted three of these in 2017, two of which came from Tesla in November and December and "were well received and oversubscribed", which is impressive considering the short time between them.



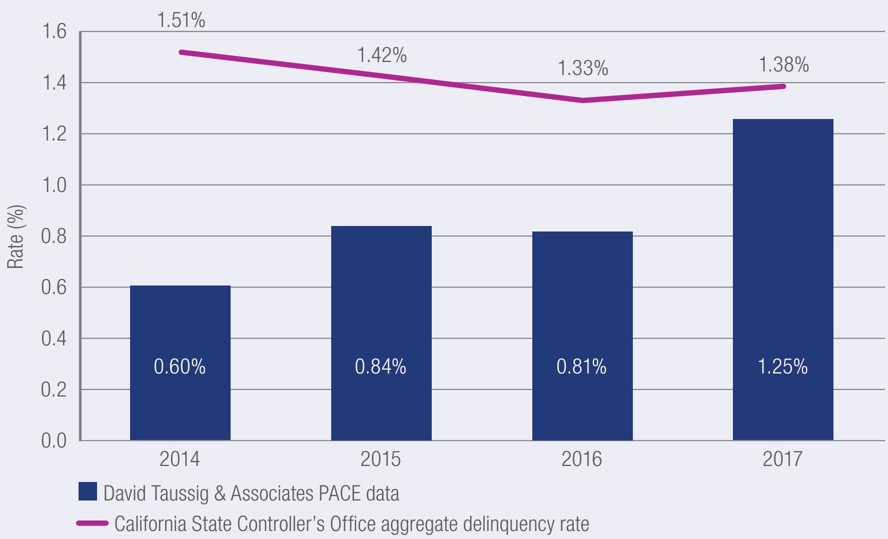
Cecil Smart, Kroll Bond Rating Agency

"With PPAs or leases the key difference to solar loans is that the homeowner does not own the solar panels. There has been a healthy amount of solar lease and PPA transactions, but none of it has been sold in the ABS market. Not everybody can take advantage of the investment tax credit (ITC) which makes solar loans more affordable, so the solar lease and PPA option should continue to be popular, particularly as the ITC sunsets in the next few years," says Cecil Smart, md, ABS, Kroll Bond Rating Agency.

President Trump's imposition of import tariffs this year will affect solar cells and modules. The tariffs stand at 30% for the first year, 25% for the second, 20% for the third and 15% for the fourth.

The impact on ABS should be limited. The price of PV systems has come down a long way in recent years, and there are sufficient other

Exhibit 2: Aggregate SCO vs PACE delinquency | As of tax year end



Source: DBRS

factors involved in a consumer's solar financing decision that the tariffs should not be a deciding factor.

"Another significant factor will be rising interest rates, which will affect the solar finance company's cost of funds. To some extent those higher costs will have to be passed on to the consumer. However, the rapid pace of advances in solar panel technology should continue to bring down costs and of course the 30% ITC tax credit also remains in place through December 2019," says Neglia.

As the solar ABS sector develops, a triple-A rating becomes more likely. The largest barrier at the minute is a lack of performance data, which forces rating agencies to rely on proxy data. As young companies, solar ABS firms are currently prioritising maximal leverage over the very highest ratings.

"Dividend achieved a double-A rating on its latest deal, having previously issued at single-A. The later deal had 78% credit enhancement on the class A notes which was sufficient to cover our double-A stress scenarios," says Neglia.

New avenues

In Europe, the solar finance market is expected to develop mainly in the private placement or institutional investor market. There could be public securitisations further down the line.

Europe's latest public green RMBS – Green Storm 2018 – was announced in May, while beyond Europe there was also a green RMBS tranche from National Australia Bank sold earlier in the year. It is anticipated that RMBS or other large sectors such as auto ABS would make likely candidates for future green ABS issuance.

"Green ABS activity in the UK and Europe remains limited but we continue to see growing interest from clients and investors. Green ABS is clearly a huge growth area which will need a lot of funding in the next few years and securitisation will be a significant part of that," says Kathryn James, managing associate, Simmons & Simmons.

She continues: "The easier ABS markets to make the green transition are going to be the likes of auto loans and RMBS because they are already large, well established markets which could treat green securitisation as a variation on current practice. The likes of PACE or other totally new concepts would be more challenging, but that only means they might take longer, not that they cannot be done."

James notes that investors like the ethical cachet of green ABS and that, while there is not always a pricing differential between green and non-green tranches, there have been examples of green paper achieving tighter pricing. The "exponential evolution" of technology will make certain green ABS sectors quite challenging, though.

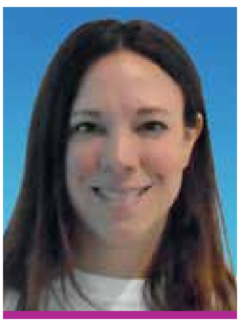
"Technology can become outdated quickly and that raises questions about how a buyer might feel about buying a house with obsolete solar panels and what (if any) value could be derived by a lender taking security over the panels," says James.

She adds: "It will be necessary in the UK and Europe to consider ownership rights in respect of the panels and the energy generated by them, whether that is the owner of the property or the solar panel company (which is often the case in the US) and how the property on which the panels are installed is linked to those rights. From a legal perspective, this will be relevant to taking security and enforcement and raises inter-creditor issues if the underlying property is subject to a separate financing arrangement and security."

The reliance on the manufacturer of the technology, such as solar panels for example, to service the green asset could also expose a securitisation to the risk of that manufacturer getting into financial difficulty. In such a case an alternative manufacturer might be required to step into the role and therefore it needs to be considered whether they would be able and willing to do so, particularly if the technology was outdated.

"With time it should become easier for these companies to step into each other's shoes when necessary. However, while the industry remains young, investors will have to be particularly aware of the ownership of these assets and contingency plans for if things go wrong," says James.

> "THE EASIER ABS MARKETS TO MAKE THE GREEN TRANSITION ARE GOING TO BE THE LIKES OF AUTO LOANS AND RMBS"



Kathryn James, Simmons & Simmons

The rapid pace of technological change is also making new markets possible in the US, where the quantity of electric cars now being produced is making it easier to collateralise green auto loan ABS. There are other niche opportunities which are not reliant on technological advances but which might find green uses thanks to technological change, such as ground leases.

"Hannon Armstrong has securitised payments associated with ground leases, which is an innovative green securitisation. These work when a farmer or other landowner leases part of their land to place an energy project on it and those lease payments are then securitised," says Smart.

He continues: "The project is then built and the project owner will contract with a utility company and have a PPA, where the associated payments are used to pay the obligations under the ground leases. Crucially, those payments sit ahead of all the debt for the project itself, so they are very secure."

There are also further opportunities related to solar ABS. Solar storage could be an exciting avenue for green ABS, with Neglia commenting that "financing solar-plus-storage could be a game-changer".

While that is a way for solar ABS to branch out, PACE lenders can also expand what they are doing. While Renovate America has a focus on PACE lending, it also offers unsecured home improvement loans.

"Our Benji consumer unsecured product is a great complement to PACE and can be offered where it is the right fit for a consumer. Unlike PACE it does not need state-by-state approval, so we offer those loans in 46 states and expect to see triple-digit growth this year," says Braun. "There is the potential to securitise those loans further down the line."■

(I can't get no) STS-faction

From boardrooms to conference halls, the subject of STS remains high on the agenda. Once portrayed as the initiative to revitalise European securitisation, it has been variously hailed as a game-changer or lamented as not fit for purpose. The truth, perhaps, may be somewhere in between

The titles – Regulation (EU) 2017/2402 and Regulation (EU) 2017/2401 – may not seem to promise much, but the new securitisation regulation and related capital requirements ratio (CRR) amending regulation will massively overhaul the regulation of securitisation in Europe. Among the many provisions is the implementation of a label for simple, transparent and standardised (STS) securitisations.

The two regulations were published in the official journal of the EU in the final days of 2017 and seek to harmonise rules on due diligence, risk retention and disclosure for all securitisations, securitisers and institutional investors. They create an STS framework and implement the revised Basel securitisation framework into EU law.

The regulations will apply from 1 January 2019. They are the culmination of years of work with the goal of revitalising European securitisation, but during their long gestation the market has picked itself up, raising questions as to the STS label's necessity.

One rule to save the market

"STS is an irrelevance because the products which STS is supposed to help are already selling like hotcakes. You can get near-record pricing on Dutch or UK RMBS even without the STS label," says David Shearer, partner, Norton Rose Fulbright.

He believes that the STS label "is an idea whose time never came". While it has always been popular with regulators, it has held less appeal for the rest of the market. For that reason, its impact is expected to be limited.

"The STS regulation in itself will not particularly help with issuance but nor will it make things significantly worse overall, as some people fear. There are a few technical

David Shearer, Norton Rose Fulbright

points yet to be clarified which may have a positive or negative effect – and we will find out when we get the RTS from ESMA and the EBA," says Markus Schaber, managing partner, Integer Advisors.

He notes that the CRR will technically change quite a lot more. Capital weightings are higher, for example.

Schaber adds: "The most significant parts of the STS regulation for all securitisations are Articles 5, 6 and 7, covering due diligence, risk retention and transparency. While the transparency regime will change quite a bit, due diligence and risk retention will not be substantially different in terms of overall requirements, albeit there are certainly some technical points which need to be clarified."

Those due diligence requirements largely formalise processes which should already have been in place. CLOs will be particularly affected by the transparency changes, however, because certain transparency obligations appear to have been designed only with bank-originated deals in mind, not with non-bank actively managed ones considered.

Ian Bell, head of the PCS Secretariat, agrees that "STS is not a silver bullet, but it is helpful". He does not believe regulation can ever really make a market, although it does have the potential to end one, which the STS rules should not do.

"The market's success will rest fundamentally on banks' needs. If banks need to issue securitisations, and STS allows them to do that at an acceptable cost, then securitisation will succeed. Without STS the new CRR and not-so-new Solvency 2 would have made it very difficult to find a price point that would work for everyone, so STS attenuates the harm of other regulations," says Bell.

Ian Bell, PCS Secretariat

What's in the box?

The goal of the STS label is to differentiate simple, transparent and standardised term securitisations and ABCP from complex, opaque and risky paper and to incentivise investment in the former over the latter. Certain securitisations, such as those with managed portfolios, CMBS and synthetic deals, have been excluded, although balance sheet synthetic securitisations may be allowed at a later date.

The STS label will be available to securitisations completed on or after 1 January 2019, while legacy securitisations may also be eligible if the transaction and underlying assets comply with procedural and structural requirements at the time of notification to ESMA. Receiving an STS label will not guarantee a transaction preferential capital treatment and not all investors will be able to benefit.

"There is a very long list to fulfil, including some very specific points such as homogeneity

Exhibit 1: STS criteria ABS and ABCP transaction attributes – **Simplicity**

Required	Excluded
All of the originator, sponsor and SPV established in the EU	Any of the originator, sponsor or SPV established outside of the EU
True sale, assignment, or transfer with the same legal effect of the underlying assets to the issuer SPV	Synthetic transaction structures
Prescribed perfection triggers such as deterioration of asset quality included where assignment is not immediately perfected (common in UK structures)	Commercial mortgage-backed securitisations
Originator representations that (to the best of its knowledge) the underlying assets are unencumbered	Re-securitisations (which are banned even for non-STS transactions, subject to limited exceptions)
Underlying assets meeting predetermined, unambiguous and clearly documented eligibility criteria	Clawback provisions applied to the underlying assets in the event of an originator's insolvency
ABS with underlying assets that are originated in the ordinary course of an originator's business	Active portfolio management on a discretionary basis (which will exclude CLOs and some master trusts, but substitution of underlying assets that are in breach of representations is allowed)
In respect of underlying residential loans, borrower creditworthiness that meets the standards set out in the Mortgage Credit Directive (or equivalent in third country)	Underlying assets that are in default at the time of selection
Underlying assets originated according to underwriting standards that are no less stringent than those applied to an originator's non-securitised assets	Underlying assets that relate to, at the time of selection, a credit-impaired debtor or guarantor
At least one payment having been made on the underlying assets at the time of transfer to the SPV	Repayments structured to depend predominantly on the sale of assets securing underlying exposures
Underlying asset pools that are homogeneous in asset type	ABS and ABCP transactions backed by bonds, shares or other transferable securities listed on a trading venue
Underlying exposures containing contractually binding and enforceable obligations with full recourse to borrowers and, where applicable, guarantors	Transactions backed by residential loans that were marketed or underwritten on the premise that the loan applicant's income might not be verified by the lender
Underlying exposures with defined periodic payment streams	ABCP transactions backed by underlying assets (other than auto loans, leases or equipment leases) with a weighted average life (WAL) exceeding one year or with a residual maturity of more than three years
Originators or lenders with expertise in originating exposures of a similar nature to those securitised	ABCP transactions backed by auto loans, auto leases or equipment leases with WALs exceeding three and a half years or a residual maturity of more than six years
ABCP programmes with sponsors that are EU-supervised credit institutions	ABCP transactions backed by residential or commercial mortgages
ABCP programmes that are supported by sponsors in respect of liquidity and credit risks for all transactions	ABCP programmes with call options, extension clauses or other clauses affecting the final maturity
Material dilution risks of the underlying assets and transaction and programme-wide costs supported by the ABCP programme sponsor	Certain non-sequential or reverse order priorities of payment on enforcement

Source: Norton Rose Fulbright

Exhibit 2: STS criteria ABS and ABCP transaction attributes – Standardisation

Required	Excluded
Risk retention requirements satisfied	Failure by the originator, sponsor or original lender (as applicable) to retain the 5 per cent net economic interest
For ABCP, the sponsor retains risk at the programme level or seller retains risk at the transaction level	Referenced interest payments based on "complex formulae or derivatives"
Currency and interest rate risk hedged	Inclusion of non-hedging derivatives
Either non-revolving ABS, or, if a revolving ABS, with early amortisation events for termination of revolving periods based on prescribed triggers	Any trapping of cash following enforcement in a term ABS or revolving ABS where the revolving period has ended, beyond what is necessary to ensure an SPV's functioning or repayment of investors, or to prevent the deterioration of credit quality of the underlying assets
Standard asset servicing, trustee and other ancillary service provisions included in transaction documentation	Any trapping of cash in ABCP transactions following a seller or originator's default or an acceleration event, beyond what is necessary to ensure an SPV's functioning or repayment of investors, or to prevent the deterioration of credit quality of the underlying assets
Servicers with experience in servicing exposures of a similar nature to those underlying the transaction, and well documented policies, procedures and risk management controls related to servicing the exposures	Servicers with no demonstrable track record in servicing a given asset class or documented servicing policies and procedures
Clear counterparty replacement provisions included in transaction documentation	Sub-standard or insufficient asset servicing, trustee and other ancillary service provisions or servicers that fail to meet minimum standards
Transaction documentation with clear provisions for resolution of conflicts between classes of investors, bondholder voting provisions and trustee responsibilities	Provisions requiring automatic liquidation of underlying assets at market value
Historical loan-level static and dynamic performance data provided at pricing, covering at least three years for trade receivables and other short term receivables, and five years for all other exposures provided by the originator, sponsor or SPV	

Source: Norton Rose Fulbright

which can be quite complex. The STS label is ultimately a quality label and issuers will have to check whether deals are compliant. It should have been fairly easy for prime auto ABS or prime RMBS, but it remains somewhat more complicated than many market participants had hoped it would be," says Schaber.

There are several steps for a securitisation to achieve an STS designation. First and foremost it must comply with the general rules of the securitisation regulation, such as risk retention, transparency and due diligence requirements.

Originators, sponsors and issuers are then jointly responsible for assigning the STS designation, with an authorised third-party then able to confirm that the deal satisfies the criteria. Originators, sponsors and SPVs must then notify their regulators and ESMA, after which ESMA will publish an STS notification on a register on its website.

Investing institutions can then apply for STS preferential treatment. Capital requirements for securitisation positions are calculated either under the securitisation internal ratings based approach (SEC-IRBA), standardised approach (SEC-SA) or external ratings based approach (SEC-ERBA).

A close reading of the STS regulation finds there are 101 queries for establishing STS compliance, says Bell. Those will not all apply to every deal, but for any given securitisation around 80 would be relevant.

"Anybody who claims that the STS regulation is simple is mistaken. At PCS we have broken down the regulation's articles, paragraphs and sub-paragraphs into separate queries, each subject to a specific and singular answer. This helps to make measuring compliance a straightforward and binary process, but it also underlines its complexity," says Bell.

He adds: "STS is not straightforward, but regulation rarely is. For example, the US Securities Act of 1933 was actually hugely complicated with very onerous requirements, but we have since become used to the idea of 80-plus page offering circulars. By the same token, this latest regulation will cause consternation and take up a lot of lawyers' time, but the market will adapt and become used to it."

Applying the STS label

"The hoops which you need to jump through for STS and preferential treatment are so high that I do not think people will meet them. Pools are required to be homogenous, so my belief is that pools which would qualify would have to be so small that there would never be the required economies of scale," says Christopher Sullivan, knowledge of counsel, Norton Rose Fulbright.

The use of the STS label is voluntary and deals which are able to comply do not have to choose to do so. Despite this, Shearer worries that the new regime "represents the de-democratisation of the market".

He says: "You have to prove a history of origination experience, which appears to be because the European Commission can only imagine a capital market where the originators are all banks. STS should be about making sure securitisation is opened up for more market participants, not creating a bottleneck where only a few can use it."

Perhaps originators could finance through warehouse structures before going public, but this still presents a barrier to challenger financiers, denying them financing cost efficiencies which will be available to others. The obligation for servicers to have a demonstrable servicing record in each relevant particular asset class means that there, too, new entrants are excluded.

"While implementing STS is expected to be challenging, we will not know quite how challenging until the EBA's final guidelines in October. There are several points which the EBA could either make very simple or very problematic. Even one problematic issue makes life difficult because it is not good enough to satisfy 100 out of the 101 requirements for STS; it is all or nothing," says Bell.

He adds: "Furthermore, different issuers will find STS compliance harder or easier depending on what is securitised. For example, and depending in the final EBA interpretation guidelines, an auto ABS with low residual value

Markus Schaber, Integer Advisors

risk may well find certain criteria easier to pass than an ABS with higher residual value risk."

The prospects for change

"There needs to be some fine-tuning in the RTS but I strongly doubt there will be a meaningful change of direction. The consultation comments I have seen and conversations I have been part of have been mostly technical in nature, which is not surprising given that the Level 1 regulation is already quite detailed," says Schaber.

The exclusion of synthetic securitisations from STS eligibility disappointed many people in the market. While this may not change in the short-term, there are higher hopes that it will be rectified further down the line.

"Legislation dictates that there must be proposals for synthetics in STS by 2020. It was not included when these regulations were initially being drafted because synthetics had a bad reputation – which of course was never fully deserved – but the ground has since been prepared for this oversight to be fixed," says Bell. "There is nothing intrinsic about synthetics that means they could not be STS."

Shearer notes that the best view of the finished package should be at the end of the year, when further guidance is due. However, even then there are expected to be unanswered questions as he notes that experience with similar regulations shows there are frequently areas for interpretation left open.

"There may be some fine-tuning but the direction of travel is pretty clear. The STS label is not totally different to IOSCO proposals or the Financial Stability Boards 'simple, transparent and comparable' securitisation plan," says Shearer.

Sullivan adds that any significant changes are likely to wait until the European Commission has had a chance to see the STS label in action and to analyse the results of that. If the label is not having the desired effect then changes will be made, he argues.

Exhibit 3: STS criteria ABS and ABCP transaction attributes – Transparency

Required	Excluded
Originator and sponsor providing environmental performance of assets financed in a residential mortgage or auto loan/lease ABS transaction	Failure by originator, sponsor and SPV to be jointly responsible for compliance with transparency requirements
Originator, sponsor or SPV providing investors with asset performance data at pricing and quarterly investor reports for ABS or on a monthly basis for ABCP	Failure by originator, sponsor and SPV to jointly provide investors with asset performance data at pricing and quarterly investor reports for ABS or monthly investor reports for ABCP
Originator or sponsor providing a liability cash flow model to ABS investors at pricing and on an ongoing basis	Lack of external, independent verification of underlying exposure data
External verification of underlying exposure data by an appropriate, independent party	
Compliance by the originator and sponsor of general transparency requirements (e.g. transaction documentation, asset performance), with related information being made available to potential investors before pricing (on request)	

Source: Norton Rose Fulbright

Burdens and benefits

The big banks are expected to be best positioned to take advantage of STS because they will be better able to spread the burden of compliance. The homogeneity requirements and the legal risk they would be required to take on, however, leave open the question of whether or not they will actually want to.

There is also an entirely new industry of service providers created by the regulatory changes. Third-party STS certification firms and private sector data repositories will have reasons to cheer, too.

However, those third-party certification firms could also be the ones on the hook if a deal's STS status subsequently comes to be questioned. The originators, arrangers and SPV management companies will also want to ensure that all the correct boxes have been ticked and documentation has been double-checked.

"The primary liability remains with the issuer but investors still have to review if a deal meets the STS criteria. Certification agents can help here as their involvement arguably significantly reduces the risk for both issuers and investors of acting negligently when the agent confirms that a transaction is STS compliant," says Schaber.

If a deal is found to not be STS compliant then there are capital charges which can be enforced against investors' balance sheets. There are also administrative – or even criminal – sanctions which are possible against originators and sponsors, depending on how member states choose to implement the regulation.

"There is a patchwork of sanctions regimes across Europe and treatment will be different in different parts of the EU. Ironically, STS underlines the lack of harmonisation in European capital markets," says Sullivan.

In creating the STS label, regulators sought to boost securitisation issuance across Europe by building confidence in the product. They also set out to discourage what they understood to be overly risky transactions.

Whether the new regulations revitalise the European securitisation market in the way they are intended to remains to be seen. They may never have been able to make a market, but they did have the ability to end it, which does not now look like being the case.

"The treatment of high-quality securitisation in Europe does not really make sense, but it is at least getting closer to a point where it is doable. There is a high bar to clear but it can be done. Previously, there was a high bar that just could not be cleared," says Bell.

The EBA is conducting a public consultation on its draft guidelines which will provide a harmonised interpretation of the criteria for securitisations to be eligible as STS. The consultation was launched in April and will run until 20 July. ■

> "THERE NEEDS TO BE SOME FINE-TUNING IN THE RTS BUT I STRONGLY DOUBT THERE WILL BE A MEANINGFUL CHANGE OF DIRECTION"

The GSEs they are a-changin'

A new common security for Fannie Mae and Freddie Mac is one year away, with implementation set for June 2019. This shifts the ongoing debate over how to reform the GSEs and how the US mortgage market should function at a time when private companies are issuing securitisations which look increasingly like those of the government enterprises

The Uniform Mortgage-Backed Security (UMBS) will be implemented on 3 June 2019, one year from now. The clear direction of travel provided by the FHFA focuses the debate on GSE reform, with various proposals to reshape the government enterprises apparently facing a shrinking window of opportunity.

The FHFA announced the June 2019 date at the end of 1Q18. The new single security will replace current TBA offerings and is another step along the road of reform the GSEs have taken since being put into conservatorship in the wake of the global financial crisis.

The UMBS would effectively combine the conventional MBS product into one shelf, increasing the float available per cohort while reducing the total number of cohorts. It would apply to 30-year, 20-year, 15-year and 10-year single family MBS.

Where UMBS would use individual pools, they could also be aggregated into large pools called Supers – similar to Fannie Mae Megas or Freddie Mac Giants – which would use any UMBS, legacy Fannie Mae securities or exchanged legacy Freddie Mac securities as collateral. REMICs would provide a potential third level of securitisation and those could be backed by legacy securities, new or exchanged UMBS, Supers or other REMICs.

UMBS will use the payment delay and pool prefixes of Fannie Mae, with the disclosure framework of Freddie Mac. Back-end processes such as underwriting and servicing will remain separate, although the GSEs have agreed to align some policies and practices.

Freddie Mac will begin issuing 55-day securities, as Fannie Mae already does, on the first business day of the month that the single security initiative is implemented, which is currently June 2019. The first TBA settlement will follow on the scheduled Reg A and Reg B dates for that month.

While the GSEs' evolution is not complete, it is well underway. They have established and grown credit risk transfer (CRT) programmes and are very different businesses to the ones which existed before the crisis.

Landon Parsons, Moelis & Company

A single security could allow for a single label with catastrophic insurance explicitly underwritten by the government. However, this continued government role is hotly contested.

The need for reform

"The US government should not be in the business of fully supporting the housing system. For that reason the GSEs have to raise capital so that the private sector can support the system instead," says Landon Parsons, senior advisor, Moelis & Company.

He continues: "Treasury secretary Steven Mnuchin has stated that de-risking the US taxpayer is a priority and that the government's level of support to the GSEs is clearly an area of risk. Similarly, you have Mel Watt, the Obama-appointed head of the FHFA, who has been very clear in comments to the Senate banking committee that further conservatorship of the GSEs is unsustainable. So there are a number of voices providing broad support for reform."

Parsons adds: "The only public document in favour of the status quo has been the PIMCO plan. Given the current legislative agenda, any legislative approach to solving Fannie and Freddie is unlikely to get taken up by this Congress, so if the status quo of taxpayer exposure to GSEs' losses is going to change the only remaining option is administrative reform."

The status quo does have a certain appeal. Having been given US$187.5bn in bailout funds after the crisis, Fannie Mae and Freddie Mac have since repaid those funds in full and they are profitable, paying dividends into government coffers. This raises the question of how much reform is actually needed.

For a long time the front-running proposal was the so-called Corker-Warner plan, a bipartisan scheme to create more guarantors to compete with the GSEs to end their duopoly. Crucially, this plan would add competitors to the GSEs, rather than replace the enterprises which currently exist.

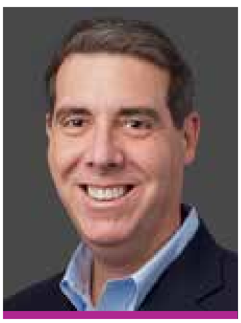
For this to come to pass, the US Congress would have to pass a bill, signed into law by the President. Peter Carroll, executive, CoreLogic, says: "We understand that there is a bill under consideration in both the House and the Senate that would introduce the concept of additional competition providing a private credit guarantee on a US-backed RMBS."

However, serious objections have been raised to this plan. Not the least of these is that the taxpayer should not be on the hook for any future losses, as is currently the case. To this end, Fannie Mae and Freddie Mac should have their own capital.

"The FHFA and GSEs have accomplished perhaps 80% of the reform that is needed, but two things remain: creating actual private equity and the appropriate ownership structure. Most market participants and commentators have moved on from the – erroneous – arguments about the need for many competitors as the solution," says Richard Cooperstein, model risk management director, Andrew Davidson & Co.

> "IF THE STATUS QUO OF TAXPAYER EXPOSURE TO GSES' LOSSES IS GOING TO CHANGE THE ONLY REMAINING OPTION IS ADMINISTRATIVE REFORM"

He continues: "The GSEs' CRT programmes are highly efficient and are a key source of private capital, but the GSEs also need private equity. The GSE market has the hallmarks of regulated utilities; large entry barriers, shared infrastructure and large community value. Consequently, a regulated utility ownership structure should be well adapted."



Peter Carroll, CoreLogic

Richard Cooperstein, Andrew Davidson & Co

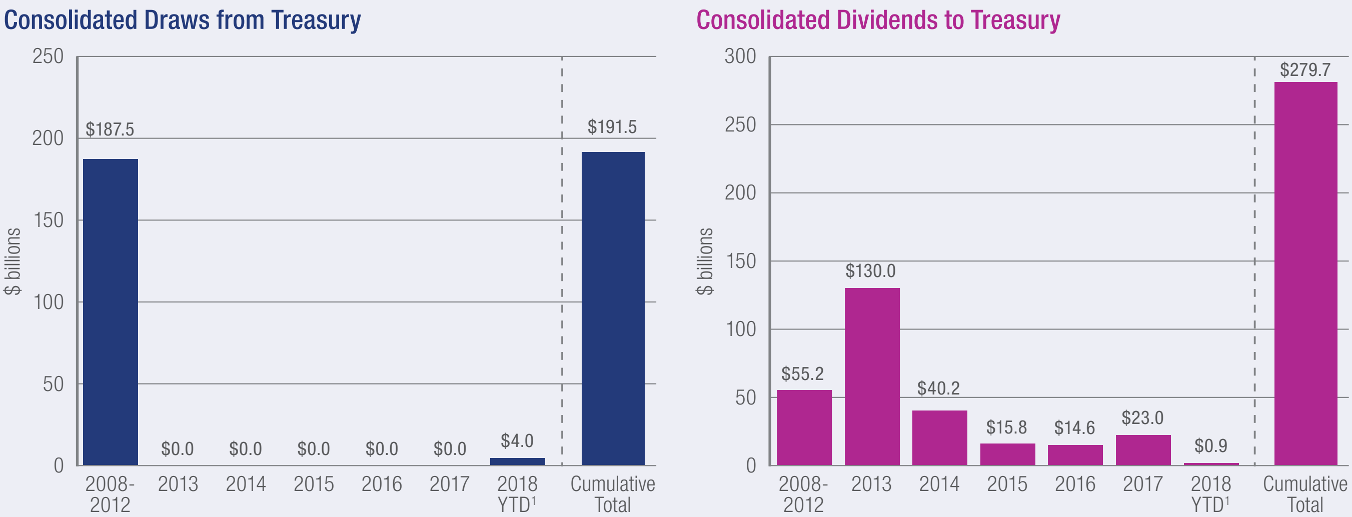
Cooperstein believes taxpayers should have about 5% (or US$250bn) of credit protection in the GSEs for US$5trn of guaranteed mortgages. He advocates capitalising the GSEs with around US$100bn of equity along with a fully penetrated CRT programme.

Cooperstein says that competition has not worked for the mortgage insurance industry. The infrastructure and intellectual property for servicing, automated underwriting systems, quantitative models, securitisation and more which would be needed for each new guarantor in a multi-guarantor system is also prohibitive.

If each firm were then to have its own CRT security, that would lead to fragmentation and illiquidity. Issuing combined securities would lead to free rider problems "because firms are incentivised to contribute riskier loans and benefit from more valuable combined securities".

Cooperstein adds: "Who arbitrates to assure consistent quality? And by the way, the same problem would exist for standard MBS as well. Maybe combining Fannie and Freddie into the Common Securitization Platform (CSP) would not result in free riding, but with five new entrants, it seems inevitable."

Exhibit 1: Consolidated GSE Treasury draws and dividends paid



[1] Includes draws and dividends payable through 2Q18

Source: The Moelis & Company Blueprint for Restoring Safety and Soundness to the GSEs, updated for YTD 2018

That takes the market back to the drawing board. Carroll observes that the political reality is that there are legitimate risks with regard to GSE reform and the upsides may not be sufficient to offset them.

He says: "There has been the refrain that the status quo is not sustainable but history has not been kind to that assumption. Stakeholders are starting to ask whether it actually is sustainable and if the parts that need modification cannot be handled via collaborative administrative reform efforts."

Parsons also stresses the need for administrative reform, since legislation is unlikely to be approved by this Congress. He believes there is simply no time left for a new plan to work its way through Congress, and Corker-Warner is no longer an option.

"We have to accept there are limits to what can be changed and that no system will ever be perfect, but taking into consideration the legislative calendar, the current state of the GSEs and assessing what is possible, the Moelis plan – or the very similar principles proposed by Mel Watt or by the Independent Community Bankers of America – makes the most sense. Essentially all three keep Fannie and Freddie as two entities but prevent them from having the investment portfolios which got them into trouble, with strong oversight by the FHFA and much increased capital," says Parsons.

He continues: "There should be significant private capital so that Fannie and Freddie can meet and achieve SIFI-like capital requirements. They could then continue their CRT activities as a second level of credit protection providing the frosting on the cake."

> "DESPITE THERE BEING ONLY TWO GSES, COMPETITION WAS RUINOUS AND LED TO THE GSES CHARGING A THIRD OF WHAT THEY SHOULD HAVE FOR THE RISK THEY WERE TAKING"

There is a growing consensus that Fannie Mae and Freddie Mac should be private enterprises, regulated like utilities, continuing their CRT activities. The Moelis Blueprint, published last year, outlines Parsons' firm's proposals for how this could be achieved.

Moelis envisages up to US$180bn of core capital through retained earnings and common stock issuance complemented by CRT and reinsurance transactions. This would add up to over 3% core capital with another 2% from CRTs.

Parsons says: "Our plan maintains all the reforms already enacted. The GSEs could be made to resemble more of an income-orientated stock than a growth stock. Our plan not only accomplishes [Treasury] Secretary Mnuchin's principles but also bears striking similarity to Mel Watt's plan, with the exception that he proposes an explicit 100% government guarantee of mortgage bonds – which is compatible with the Moelis plan, but adds the complication of requiring Congressional approval."

With time apparently running out, advocates for change are keen that the process starts sooner rather than later. Administrative reform could always be followed by seeking Congressional approval for a 100% guarantee at a later date.

So far, so good

The GSEs are already very different to the companies which were taken into

"THE GSES COULD BE MADE TO RESEMBLE MORE OF AN INCOME-ORIENTATED STOCK THAN A GROWTH STOCK"

Laurel Davis, Fannie Mae

conservatorship in 2008. Cooperstein notes that the pre-crisis GSEs' "fatal flaw" was that they were private companies with a public mission and that reconciling those two facts was impossible.

"They eventually chased bad loans because executives knew if they did not maximise returns they would be replaced. Despite there being only two GSEs, competition was ruinous and led to the GSEs charging a third of what they should have for the risk they were taking," he says.

This is something which the GSEs themselves realised and have worked to remedy. Fannie Mae and Freddie Mac have both established CRT programmes and it is the success of these schemes that has seen calls for them to be retained in most reform scenarios.

"Coming out of the financial crisis we realised that we needed a new way to do business. We could not just be a buy-and-hold investor, instead we needed to create new ways to distribute credit risk and that required developing a broad and liquid market," says Laurel Davis, vp, capital markets, Fannie Mae.

She continues: "That is why our CRT activity has grown from our first CAS deal in October 2013 to having now transferred credit risk on over US$1trn of mortgages. It has been a case of incredible evolution and growth and now it is the most liquid US RMBS market there is."

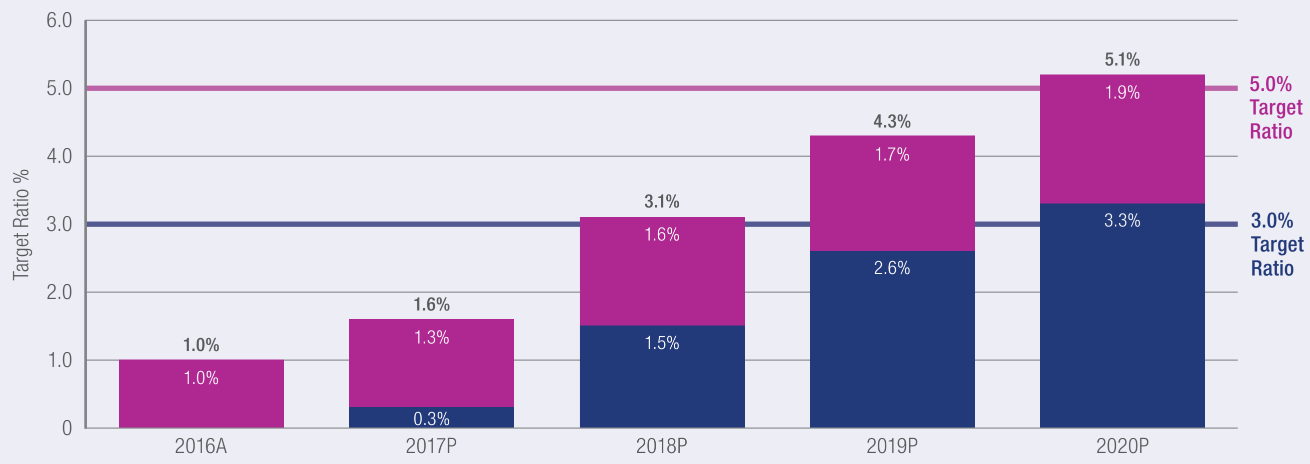
Davis notes that Fannie Mae's size necessitated a deep and scalable market, which the GSE has built through consistency in the timing and structure of issuances. It publishes deal calendars and issues in benchmark size, which has developed the investor base from the hedge funds who were early buyers to now also include many of the large investment managers, who now see these deals as a staple investment.

"We have formed close partnerships with dealers, particularly rewarding new issue mandates to those dealers that we see do the most to support secondary trading. That helps incentivise the dealers to trade the product. Last year we issued US$8.5bn and because of slightly lower origination volume we expect to issue US$7.6bn this year," says Davis.

The GSEs appreciate the need to continue to innovate, as well. While Fannie Mae is

Exhibit 2: Projected consolidated leverage ratio

$ billions at 31st December 2017



	2016A	2017P	2018P	2019P	2020P
Core Capital[1]	($188)	$12	$75	$131	$167
CRT Capital[2]	54	67	78	88	97

[1] Core Capital includes Common Equity and Junior Preferred Stock
[2] CRT Capital includes CRT debt issued and outstanding to third parties

Source: The Moelis & Company Blueprint for Restoring Safety and Soundness to the GSEs

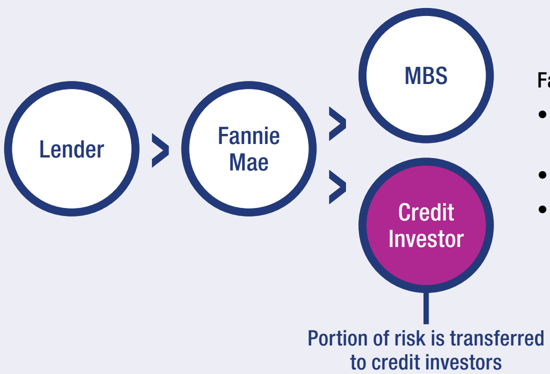
Exhibit 3: Credit risk transfer – what is it?

Old model

Fannie Mae:

- Guaranteed timely payment of principal and interest to MBS investor
- Kept all credit risk associated with loan acquisitions
- Managed credit risk through underwriting and eligibility guidelines, lender oversight, quality control practices, servicing policies and credit portfolio management

New model



Fannie Mae:

- Guarantees timely payment of principal and interest to MBS investor
- Sells a portion of credit risk to investors
- Applies its credit risk management expertise on behalf of investors to protect the value of their investment

Source: Fannie Mae

reluctant to tinker with the structure of its hugely popular deals, it has secured the ability to make a REMIC election on the loans underlying its CAS deals.

Davis says: "Most private RMBS are issued as REMICs but we have not previously been able to benefit from that tax treatment. This is a change which will reduce barriers for mortgage REITs to invest, so it can deepen the investor base even further."

The GSE has also been a leader in democratising information, providing loan-level and historical data going back 15 years. The sheer volume of that data also led it to develop Data Dynamics, which is a free tool for slicing and dicing the information.

"Fannie Mae is in a unique position because of our size, so we have the ability to really influence moving the market forward. So much of the process of manufacturing mortgages has not changed in the last 20 years but the advent of big data means we have so many more options available now," says Davis.

"FANNIE MAE IS IN A UNIQUE POSITION BECAUSE OF OUR SIZE, SO WE HAVE THE ABILITY TO REALLY INFLUENCE MOVING THE MARKET FORWARD"

Jim Bennison, Arch Capital Group (US) Inc

She continues: "We are focused at the minute on income verification, which is a process which technology can really improve. For example, lenders can verify income directly with employers, which is faster and safer. This is a responsible way to streamline processes."

Beyond the GSEs

The impact of the GSEs on the US mortgage market extends far and wide. A developing trend is the issuance of mortgage insurance-linked securitisations. The first such deal to be publicly rated was Arch Capital Group's Bellemeade Re 2017-1, which priced in Q4 last year.

"Mortgage insurance-linked securitisations are very similar to what the GSEs do. In fact, our programme was designed after looking at CAS and STACR," says Jim Bennison, evp and head of alternative markets, Arch Capital Group (US) Inc.

He continues: "The structure is different and we could not issue a corporate note in the same way, so we combine their approach with what the ILS market has very successfully done with cat bonds. We issue an insurance-linked note through a special purpose reinsurer set up in Bermuda."

Essent Guaranty followed Arch's lead with its own transaction, Radnor Re 2018-1, in 1Q18. Continuing to set the pace, Arch has already returned with Bellemeade Re 2018-1, which had US$375m of offered notes and achieved a triple-B rating from Morningstar Credit Ratings on its class M1B notes. In assigning its ratings, Morningstar has specifically highlighted the fact that Arch's underwriting guidelines are generally aligned with GSE guidelines.

Bennison adds: "Bellemeade Re 2018-1, which closed on 18 April, broadly covers Arch MI originations from 2H17. We have issued the M1B, M2 and B1 classes, while retaining the A, M1A and B2 classes. Those issued securities will receive interest payments from a reinsurance trust account

> **"IT IS LESS ABOUT WHAT A GSE MAY LOOK LIKE AND MORE ABOUT THE PRINCIPLES OF WHAT WE KNOW WORKS IN OUR HOUSING SYSTEM"**

invested in high quality sources such as US Treasury funds."

While mortgage ILS has similar risks to GSE CRTs, the mortgage insurance being used exclusively covers first-loss risk on high-LTV loans. Investors can diversify their credit risk and, in doing so, take slightly more leveraged risk than is otherwise available, receiving appropriate compensation in the process.

This market did not start last year, however. United Guaranty, which is now part of Arch, issued two unrated deals – in 2015 and 2016 – before Bellemeade 2017-1 came out last October. However, that rating has made a significant difference to the viability and prospects of mortgage ILS.

"Getting a rating has certainly been helpful and the M1B note has been rated investment grade on both of our last two deals, which really opens up the investor base by, for example, including insurance companies. Before our deals were rated the investor base was concentrated more on money managers and hedge funds," says Bennison.

Arch has the capacity to issue twice a year and will certainly consider doing so, subject to market conditions. Essent Guaranty also has a rated deal, while National Mortgage Insurance Corporation (National MI) has the unrated Oaktown Re Series 2017-1.

"While we will continue to issue in the future, I think we will not be alone. In fact, as more mortgage insurance companies recognise the benefits of this product I expect it will grow considerably," says Bennison.

One source of growth could be European investors. Changes were made for Bellemeade Re 2017-1 specifically to take account of European risk retention requirements.

Bennison says: "Through that deal and our latest one we have had our first European investors and that is something we want to grow. We think European investors will find this an interesting option to diversify their GSE CRT investments."

Arch Capital Group also recently embarked on a mortgage CRT pilot programme with Freddie Mac. The IMAGIN (Integrated Mortgage Insurance) programme has been established by new subsidiary Arch MRT, which will insure Freddie Mac and transfer 100% of the risk assumed to a panel of reinsurers which provide high quality collateral assets in trust.

The next steps

In the absence of mandated GSE reform, the GSEs and private issuers have both taken steps – either apart or together – to reshape the market and revolutionise the way that risk is shared. Both can be expected to continue this work.

In the case of the GSEs, CRT issuance is expected to continue regardless of how they are reshaped or the competitors which are brought in alongside them. Cooperstein, Parsons and many others see this as being a central component of the remoulded enterprises.

However the GSEs are rearranged, Carroll stresses the need to maintain those current aspects of the GSEs which work well. He says: "It is less about what a GSE may look like and more about the principles of what we know works in our housing system, which includes a widely accessible and affordable 30-year fixed rate mortgage loan."

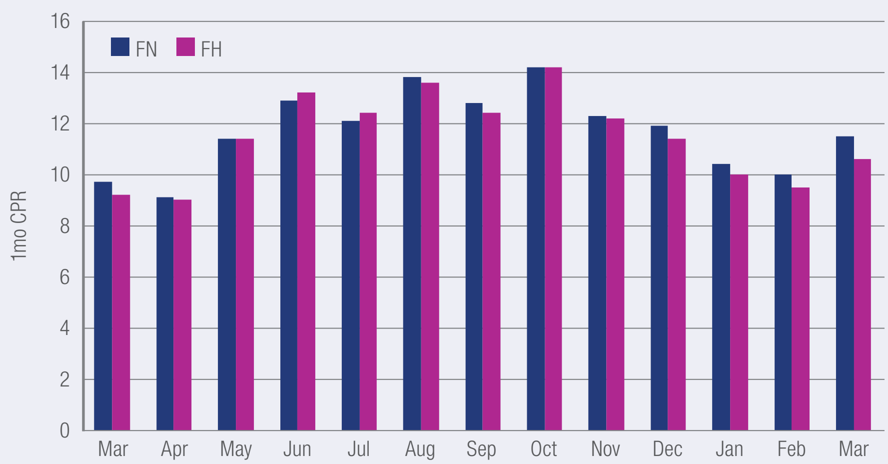
Finishing the job of GSE reform, in a way which respects and preserves what is good in the current US mortgage financing landscape, may well require the House of Representatives to change hands after the election, suggests Cooperstein. Should the GSEs take losses and be forced to draw on their Treasury lines – which is likely since they are not allowed to have any capital – then it is the taxpayers putting capital up at the moment who would be on the hook and that would surely provide fresh impetus.

Cooperstein says: "It seems Congress and the public remain angry at Fannie and Freddie for their past behaviour and failure, and want to see them replaced by several new companies doing the same thing. But the original GSE shareholders were completely wiped out, and all of senior management has been replaced – a few times."

He continues: "So who exactly is being punished now, the logos? Meanwhile, private speculators own some options and warrants on the GSEs and should not benefit from a successful recapitalisation."

Exhibit 4: 2015-vintage 2.5 prepayment speeds

1mo CPR Time Series | 30yr FH and FN 2015 Vintage, 3.5 Cpn, Last 12 Months



Source: FTN Financial

Dropping names

The CRT market continues to grow and mature and will be the subject of an SCI Special Report in Q3. Part of that continued development is that the market appears to have outgrown the name CRT, focusing participants' minds on how it should develop as it continues to evolve

CRTs are variously identified either as capital relief trades or capital release transactions, but both definitions have proven problematic for the industry. The transactions have also been referred to as credit risk transfer deals, thus sharing a name with the market established by Fannie Mae and Freddie Mac, the US GSEs, but there is a fundamental concern that no form of the name CRT adequately covers what these transactions do.

Market participants do agree on the need for common nomenclature. There are various opinions on what this should be, however.

What's in a name?

"It would be great to agree on a name that is more encompassing than capital relief trade or regulatory capital transaction. While it is true that regulatory capital does drive transactions, many others are done to reduce risk or manage single-name limits," says Som-lok Leung, executive director, IACPM.

Leung prefers to refer to the transactions simply as synthetic securitisations, because

Som-lok Leung, IACPM

that is the structure and the form of them. Others favour a name which speaks more to the intentions of a transaction.

"The market has outgrown the name capital release transaction. The emphasis should not be on 'capital' but transferring risk, not a therapy for banks that need 'relief' from their distress but a routine risk management tool," says Richard Robb, ceo, Christofferson, Robb & Company.

He continues: "The two largest investors – PGGM and CRC – as well as the EBA use the term RST which stands for risk sharing transactions. I would prefer to move away from 'T' for 'transaction' since the most valuable relationships between banks and investors turn into long-term partnerships that transcend the transactional."

Robb suggests that if the CRT acronym is to continue to be used, a better name for the market might be credit risk transfer. That is the name which Fannie Mae and Freddie Mac use for their risk sharing programmes and it is one which market participants can see merit in, despite the potential for confusion.

"We call these capital protect transactions – for example our most recent deal, in April, was LibreMax Cap Protect 2018-1 – but credit risk transfer is also a suitable name because these deals are about credit, risk, and its transfer. These are certainly not just regulatory capital transactions," says David Moffitt, head of tactical investment opportunities, LibreMax Capital.

He continues: "A name such as capital release gets too close to the specific motivation of the issuer which is something I do not want to get into on a deal. What we care about is the alignment of interest between the parties, not general motivation."

As well as capital protect transactions, the deals have also been referred to as concentration risk management deals.

Kaikobad Kakalia, cio, Chorus Capital, prefers a name which emphasises risk sharing and notes that these transactions are for far more than simply capital relief. He says: "Calling these deals capital relief trades is too narrow. Banks also run the risk of spooking regulators, who may assume questionable motives."

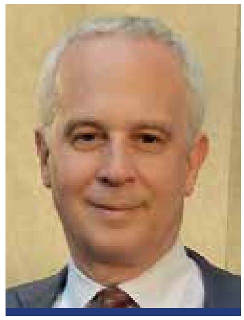
Kakalia continues: "The partnership aspect of these deals is important. This is not just about risk transfer, because the bank remains very much involved and invested in the outcome."

Kakalia notes that a core concept for these deals is that if the bank does well, then the investors do well. It is not like many other markets where assets are sold and one party benefits while the other loses out. Risk sharing therefore brings out a flavour that is not captured by capital relief.

James Parsons, md, PAG, says that his firm is another which prefers to refer to these deals as risk sharing transactions. He says: "They do more than just share risk but that is a central aspect of what they do and it takes a step away from the idea that these trades are driven purely by a single form of capital relief."

The lack of an agreed nomenclature "is holding the market back" says Leung. He also believes that a name which is "regulator-friendly would be particularly beneficial",

Kaikobad Kakalia, Chorus Capital



Richard Robb, Christofferson, Robb & Company

which is a common refrain from market participants looking for a more suitable and encompassing name for these deals.

Leung adds: "These deals are also called credit risk mitigation transactions and risk sharing transactions. I quite like the latter because it captures the spirit of what these deals are designed for."

> "I WOULD PREFER TO MOVE AWAY FROM 'T' FOR 'TRANSACTION' SINCE THE MOST VALUABLE RELATIONSHIPS BETWEEN BANKS AND INVESTORS TURN INTO LONG-TERM PARTNERSHIPS THAT TRANSCEND THE TRANSACTIONAL"

The use of CRTs

European banks remain under pressure to improve their capital ratios. While one way to do this is to sell off their riskier assets, CRTs provide a way to transfer the risk – and therefore reduce the capital that regulators require the banks to hold – without losing control of the assets.

Non-bank investors underwrite losses on portfolios, receiving in return a coupon linked to the bank's cost of capital. There is a variety of asset types available for CRTs, although it is more beneficial for the bank for the portfolio to carry a high risk weight so that it maximises the benefits of risk transfer.

For investors, the central attraction is the high coupon that the bank pays. Because of

David Moffitt, LibreMax Capital

> “TO THE EXTENT A TRANSACTION BRINGS NEW AND UNCONDITIONAL CAPITAL TO THE BANKING SYSTEM, WE ALSO BELIEVE THAT THE REGULATORS MAY SEE THAT AS A GOOD THING”

the partnership nature of the relationship between bank and investor, as noted earlier, there is also significant skin-in-the-game to help insulate investors from excessive risk.

CRTs also provide exposure to diversified bank credits. The transactions often reference SME loans, providing an attractive way for investors to access what can be an elusive credit.

“For a portfolio manager issuing one of these deals, the vital point is that they are not doing them for the sake of doing a synthetic securitisation, they are specifically solving a problem in their portfolio. Typically this goal will be freeing up regulatory capital,” says Leung.

He continues: “Synthetics are particularly effective when you cannot disclose the borrowers behind the assets, which is the case in several jurisdictions. They are also effective when the assets are illiquid and cannot be sold or transferred through other mechanisms. You also need a supportive regulator who understands how these work and will accept issuers doing them.”

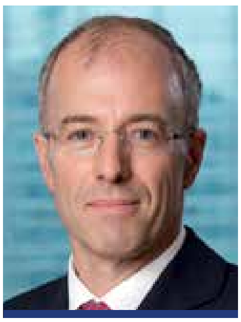
Growing the market

The CRT market has historically been driven by corporate and SME loans, with the corporate side in particular growing rapidly over the last few years. There are significantly more large corporate disclosed portfolios but there has also been an increase in the number of specialised lending deals, CRE lending and project finance.

“The changes in collateral composition have had a knock-on effect on how deals are put together. The use of blind and granular SME pools in the past lent itself to more widely syndicated deals brought by large issuers. However, the increased use of disclosed portfolios and more specialised products has increasingly led banks to do more bilateral and club deals,” says Parsons.

He continues: “The increased prevalence of club deals has been a significant development. These typically have between two and five investors depending on how large the deal is. It is an attractive proposition for banks because they are able to get the price tension that they are looking for while also limiting the number of investors with which they have to work.”

While deals are issued from Europe, investors also come from further afield. The experience of American investors in the market frequently draws speculation that there may also be US CRTs issued at some point, although this appears to remain some way off.



James Parsons, PAG

US banks have not been under the same pressure as European ones to solve balance sheet difficulties. Where there are difficulties, synthetic securitisation is not necessarily the best solution.

“The US has been very slow to adopt CRTs, despite the fact that many US banks could enhance ROEs by doing so. There is no first-mover advantage in a highly regulated environment like banking, resulting in a lot of discussion and interest but no early adopters. To the extent a transaction brings new and unconditional capital to the banking system, we also believe that the regulators may see that as a good thing,” says Moffitt.

Moffitt adds: “This is a clubby market with five to seven usual suspects that invest in a good number of these transactions. That said, there are many investors who would love to see [US] CRTs and there are certainly bankers working to make that happen.”

> “THE US HAS BEEN VERY SLOW TO ADOPT CRTS, DESPITE THE FACT THAT MANY US BANKS COULD ENHANCE ROES BY DOING SO”

It is growing that investor base, rather than having deals issued from the US, which may make the most significant difference. One potential avenue for this is bringing in more pension money.

Beyond PGGM, which is a major investor in CRTs, pension funds have been far less involved than they could be. PGGM has over €200bn of AUM and a dedicated allocation to CRTs.

Some market participants believe pension finance is the key which can unlock growth on an entirely new scale. “If a small number of additional pension schemes allocated a similar portion of their assets to this asset class, we would see huge growth in this market,” says Kakalia.

With the prospect of huge growth within reach, there may never be a better time to agree on a name for this developing market to rally behind.

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Split-mortgage securitisation mulled

| 18 May

Permanent TSB has pulled €900m of split mortgages from its Project Glas portfolio sale of approximately €4bn of distressed Irish mortgages. The need to maintain borrower relationships and regulatory challenges over the treatment of split mortgages raise the prospect of the securitisation route for these loans.

Following the withdrawal of the mortgages from the portfolio, Project Glas now consists of around €2.2bn of loans. Jeremy Masding, ceo of Permanent TSB, comments: "Since the launch of Project Glas, there have been some developments, including engagement with regulatory authorities on the treatment of split mortgages and the emergence of solutions which could enable us to maintain the day-to-day relationship with the account holders."

He continues: "Therefore, we have decided to withdraw mortgages linked to about 4,300 homes (par value of approximately €900m) from the Project Glas sale process. We will continue our engagement on the regulatory classification of these mortgages and, at the same time, we will explore different options – including ones that enable us to maintain the day-to-day relationship with the account holders..."

IFRS 9 first-time impact gauged

| 14 May

Banks have begun releasing their first quarterly results for this year, with the reports suggesting a limited impact from the first-time adoption of IFRS 9. However, the lack of a requirement to restate comparative figures means that the potential volatility in reporting generated by the accounting standard's three credit stages will have to be monitored over time. Furthermore, banks appear not to be disclosing details around the categorisation of stage one and two assets.

According to Pauline Lambert, senior bank analyst at Scope Ratings: "The impact varies bank by bank. For example, a UK bank like Lloyds would have seen a 30bp decrease to its CET1 ratio before transitional arrangements, while an Italian bank like Intesa would have witnessed a decline of 100bp. Overall, though, we have not seen a material impact on banks' capital positions, especially after the effect of transitional measures..."

RMBS double follows UKAR disposal

| 11 May

Barclays is prepping two RMBS – dubbed Durham 1 and 2 – of Bradford & Bingley legacy mortgage loans, after acquiring the remaining £5.3bn portfolio from UKAR *(SCI 27 April)*, although they're likely to be preplaced. The asset sale and securitisation pay off the remainder of the FSCS loan, which was partially repaid by the previous sale of legacy mortgages to Blackrock and Prudential last year *(SCI 4 April 2017)*.

Rob Scott, head of asset finance, asset finance solutions at Barclays, outlines the shape of the transaction: "Overall, the size will be £5.3bn, but there will be two securitisations. These will very roughly be a 50/50 split between the owner-occupied residential loans and buy-to-let pools."

Barclays will hold an economic interest in the duration of the deal in the form of the 5% vertical risk retention piece and the deals are expected to close before the end of May...

Standardised bank issuance picking up

| 8 May

Standardised bank issuance of capital relief trades is picking up, despite the market having long been the purview of larger internal rating based (IRB) banks. This is driven by rating agencies offering more flexible benchmarking and the Juncker plan, which allows the EIF to guarantee both the senior and mezzanine risk.

However, the shift is slow because of the smaller size of these banks and because they are less familiar with the technology compared to IRB banks. Robert Bradbury, md at Stormharbour, comments: "Standardised banks are often smaller, non-systemic banks with lower overall capital needs and simpler business models."

He continues: "In many cases it is more straightforward for them to raise equity than execute a risk transfer transaction. The larger banks with larger capital needs are more likely to use risk transfer transactions as part of their toolbox, alongside Tier one and two, MREL..."

Widespread risk retention sell-off unlikely

| 4 May

After the recent repeal of risk retention for open-market CLO managers in the US, a widespread sell-off of risk retention capital is thought to be unlikely as managers will still keep some skin in the game. Furthermore, while there is agreement that the repeal has lowered barriers to entry, opinion is divided as to whether it will lead to an influx of new CLO managers.

"I do not think there will be a widespread trend of managers selling their risk retention pieces. Perhaps managers who are capital constrained will feel compelled to sell, but generally people will be economically rational, particularly given the widening markets," says Joyce DeLucca, portfolio manager in the US for Hayfin Capital Management's high-yield and syndicated loans strategy.

DeLucca adds that some compliant CLOs will have incorporated risk retention into the documentation and, along with structural restrictions, it cannot be easily sold off. She also suggests that the underlying investment thesis for capital in CLO equity will still hold after the ruling and so it will still make sense to keep the holdings…

NPL recovery boost expected

| 4 May

Greek systemic banks are teaming up to create a platform that will manage and settle mortgage and retail non-performing loans to borrowers who have filed for protection under a much-abused law providing favourable restructuring terms *(SCI 8 December 2016)*. Greek lenders have used this procedure for corporate loans, but not for mortgages, consumer and SME loans.

The arrangement is expected to improve Greek NPL recoveries. The "Katselis law" allows a borrower, during the interim period from application to final court hearing, to pay each month only 10% of their original instalment.

"It can take up to 10 years to reach a legal decision. We hope for an enhancement of the law, by having debtors that do not meet the monthly payments that the court has ordered automatically exempted from the protection of the law," says one Greek bank source…

CLO trends ring alarm bells

| 3 May

Ever loosening loan documentation and manager drift are giving CLO investors pause for thought, particularly those higher in the structure. While certain managers may be benefiting now, there are worries that those pursuing a less conservative strategy may fall short when the credit cycle turns.

Michael Schewitz, co-portfolio manager of credit trading and investment at Investec, suggests that the trend of looser loan documentation is overall not a positive for the sector. However, he points out that this can depend on where you invest in the capital stack and that exceptions can be made depending on the experience and track record of the CLO manager.

"Generally I would disagree with the concept that loosening constraints might be a good thing but it can depend on where you are investing. If you are investing in equity you want flexibility in the documentation," he says.

Schewitz continues: "Higher up the capital stack, such as in triple-A, you want stability and to get your money back. Triple-A investors do not want uncertainty…"

Potential solution to IFRS 9 volatility

| 25 April

Capital relief trade issuers are understood to be considering whether credit guarantees which are accounted for as a "reimbursement asset" can be used to mitigate volatility arising from the implementation of IFRS 9 expected credit losses. However, the accounting technique features its own challenges and raises a number of other questions.

A reimbursement asset is recognised for holders of credit guarantees at the time that loss allowances relating to those guaranteed loans are recognised. The holders then do not suffer a loss to the extent covered by the guarantees. IFRS 9 allows for an earlier recognition of reimbursement assets for those loans which are covered by credit guarantees.

IFRS 9 requires earlier recognition of loan loss allowances, which is expected to increase model volatility due to the migration over the accounting standard's three credit stages. The higher volatility that will, in turn, be generated is expected to increase lifetime expected loan loss provisions and thus reduce CET1 capital ratios *(SCI 23 June 2017)*.

This raises the prospect of significant risk transfer trades that are able to hedge provisioning increases…

CRT issuance boost expected

| 25 April

Total capital relief trade issuance this year should exceed 2017, believes alternative asset manager PAG Asia, one of the sector's major investors. Issuance is expected to be accelerated by an end to accommodative central bank monetary policies, underlining the importance of investing experience and expertise.

James Parsons, portfolio manager at PAG Asia, says: "This year may be a pivotal year in financial markets as central banks dial back the exceptionally accommodative monetary policy that has supported risk assets since the financial crisis. The volatility that has already characterised the early part of the year looks set to continue and credit spreads in public markets are expected to rise over the course of 2018, possibly accompanied by rising default rates."

He continues: "This will make an interesting backdrop to a year in which we expect the total volume of CRT transaction issuance to increase compared to last year, some of which perhaps even in anticipation of rising market stress. We believe that experience of investing whilst handling these types of financial market conditions will be a distinguishing feature for providers of CRT solutions…"

Proportional protection reviewed

| 20 April

EU policymakers are currently negotiating an amendment to Article 234 of the CRR that would allow banks to treat first-loss protection as proportional protection. If successful, the move is expected to boost mortgage significant risk transfer issuance.

According to Article 234 of the CRR, loan-level insurance protection for synthetic securitisations that is tranched first-loss protection must apply Chapter Five of the securitisation framework, which is designed for portfolios rather than individual loans. This means that a portfolio of 5,000 loans would have to replicate the securitisation analysis and authorisation process for the regulatory SRT assessment 5,000 times. This approach is very complicated and to date there is no known case of capital relief being achieved through this route.

The amendment – dubbed 596 and drafted by MEP Caroline Nagtegaal – allows banks to treat first-loss protection as proportional protection (or partial protection) for the purpose of calculating capital relief and thus avoid having to go through the securitisation framework. This is accomplished by integrating the new Basel 3 rules into the CRR, which is expected to be introduced in 2022. However, the amendment itself will become immediately effective if it is eventually legitimised by the European Parliament…

Swiss mortgage portfolio sale eyed

| 18 April

BNP Paribas last week acquired Raiffeisen Bank Polska (Polbank), the Polish subsidiary of Raiffeisen Bank International (RBI), but carved out from the acquisition a portfolio of mainly Swiss franc-denominated foreign currency residential mortgages. The €3.5bn portfolio derailed earlier attempts by RBI to either sell or IPO Polbank, so Polish financial regulator KNF finally rejected the transfer of the portfolio, which will be retained by a newly established Polish subsidiary of RBI. Sources expect Raffeisen to attempt a sale of the portfolio eventually.

"Irrespective of whether RBI retains or sells the portfolio, foreign exchange residential mortgages are complicated. Portfolio recovery may be hampered by the introduction of strict consumer protection measures, as we have seen in Hungary and Romania. Pricing in a portfolio sale is directly tied to recovery potential," observes Denise Hamer, partner at Trace Capital Advisors.

Hamer alludes to the €3.6bn Neptune loan portfolio, sold by Erste Group's Romanian subsidiary Banca Comerciala Romana, as an example of how uncertainty around the recovery of non-performing residential mortgages was a key issue for potential acquirers…

Microfinance ABS regroups after defaults

| 13 April

A number of Indian microfinance loan securitisations recently defaulted, halting a trend of strong performance and steady growth in the asset class. While demonetisation is partly to blame, lender overexpansion and the introduction of a competing credit instrument also took their toll.

Several firms have historically used securitisation to fund their microfinance lending in India, culminating in 2016 with microfinance securitisation volumes of R104bn. A range of financial pressures – including demonetisation – saw issuance fall in 2017 to almost half, at around R65bn.

This was accompanied by a sustained rise in delinquencies, which contributed to seven microfinance ABS defaulting. The junior notes in the affected deals were wiped out entirely by the defaults and the senior notes saw losses of 2%-3%.

Another factor behind these defaults was the aggressive growth of microfinance firms, with some doubling their books in a year, possibly at the expense of underwriting quality. Furthermore, through overexpansion, these firms may have extended loans to more borrowers than they could adequately service.

Demonetisation, in turn, exposed these lender weaknesses in the industry and put borrowers and lenders under an unexpected level of strain…

Provisioning impact muted

| 11 April

The ECB and European Commission have both put forward new rules for minimum loss coverage, which are a step towards improving provisioning practices across Europe and avoiding future unreserved non-performing loan build up. Although having two different sets of rules may create regulatory uncertainty across the banking sector, the impact for NPL securitisation seems muted.

"The rules deal with new loans, while most NPL securitisations reference existing loans, so the regulatory uncertainty and the impact for NPL securitisation are two separate issues," says Gordon Kerr, head of European structured finance research at DBRS.

However, Kerr expects the rules to have a positive impact for securitisation when taken separately from each other. He refers specifically to the Commission's proposal.

"It reduces the cost and time necessary to liquidate the collateral backing those NPLs, thanks to a swift out-of-court mechanism," he observes.

The Commission's proposals include three main instruments: an out-of-court mechanism to liquidate the collateral of NPLs granted to business borrowers; a blueprint for member states to set up asset management companies as a backstop for NPL transactions; and a passport for credit purchasers and servicers to carry out their activities throughout the EU…

Mortgage 'institutionalisation' gains traction

| 10 April

The Dutch mortgage market continues to receive high levels of interest from investors, but RMBS faces stiff competition from other funding options like covered bonds and whole loan strategies. However, securitisation remains well-suited to funding the development of the fast-growing buy-to-let sector in the Netherlands, due to its lack of homogeneity and current light-touch regulatory regime.

Hans Starrenburg, head of treasury and trading at NIBC Bank, comments that while the bank is active in the Dutch mortgage market, it currently favours other funding methods over RMBS. One such method is known as 'originate-to-manage', which allows institutional investors to invest directly in the Dutch residential mortgage market without the operational burden of ongoing management of the mortgages.

He explains: "We oversee the origination and servicing process of the loans and the borrower works with us throughout the entire process, but the investor then holds the loans on their own balance sheet. We receive…upfront and ongoing fees for services like the acceptance, arrear management and servicing processes throughout the life of the loan, while being able to move risk and return to their balance sheet…"

Synthetic NPLs gain traction

| 29 March

The ECB's latest non-performing loan provisioning guidelines are expected to trigger increased synthetic NPL securitisation issuance. Nevertheless, defining a credit event for a portfolio of loans that are already non-performing remains a significant challenge.

The ECB guidelines prescribe full provisioning for unsecured NPLs after two years and seven years for secured NPLs. "This could potentially incentivise banks to offload the provisioning increase through synthetic structures," says Gordon Kerr, head of European structured finance research at DBRS.

The guidelines apply to significant institutions directly supervised by the ECB and cover all exposures classified as non-performing, as of 1 April 2018. Banks are required to inform the central bank of any differences between their practices and the prudential provisioning expectations from early 2021 onwards (for year-end 2020)…

Seeking to scale

| 26 March

The capital relief trades (CRT) market suffers from a material gap between banks' needs and the availability of investor capital, within the strategy. To facilitate growth, one of the next steps should be to attract greater buy-in from long-term investors, especially pension funds and their investment consultants.

Kaikobad Kakalia, cio at Chorus Capital, believes that long-term investors – especially pension funds – are the "essential link" in enabling the CRT/risk-sharing market to scale. "Capital relief generated by risk-sharing issuance from the largest banks accounts for only basis points of their capital and is therefore small in the context of their balance sheets. Most issuers would like to scale their issuance to more meaningful levels, but this requires specialist asset managers with suitable skills and the ability to channel large pools of investment capital."

He says there is a material gap between the needs of the banking sector, its available assets and the amount of investor capital available in this strategy. "Awareness of the attractive risk/return profile of the strategy needs to become more widespread in order to attract long-term capital from pension funds. In order to create more awareness with pension funds, asset managers need the buy-in of specialist consultants, who advise pension funds on their asset allocation and manager selection. This is critical to unlocking vast pools of long-term capital…"

Grappling with uncertainty

| 23 March

Capital relief trade issuers are incorporating structural features highlighted in the EBA's risk transfer discussion paper in an effort to gain some regulatory certainty in the absence of any guidance. Challenges remain, though, as significant risk transfer (SRT) recognition will depend on negotiations between national regulators and banks.

"There are a number of grey areas that can affect the SRT status of a deal with national regulators," says one source. This includes pro-rata amortisation, which the EBA permits and – as opposed to sequential amortisation – helps keep the cost of protection constant and therefore less expensive.

Another example is excess spread, where the trapping mechanism is a key requirement, according to the paper. The amount of excess spread not absorbed by losses during a given year should remain trapped in the transaction in the form of a funded reserve account, available to absorb losses in future years…

Issuers urge goodwill on STS

| 15 March

European securitisation issuers are modelling new transactions and updating legacy deals, across a range of asset classes, to be STS compliant. However, there is agreement that an overly punitive regulatory environment could harm the chances of the framework's success, with some issuers backing the implementation of a transition period.

Steve Gandy, md at Santander Global Corporate Banking, commented at a recent PCS conference that STS is attractive to issuers in its current form and that his firm is hoping to make its deals STS-compliant in the future. He added that legacy transactions are also being assessed, with STS compliance in mind.

Gandy said: "Our various issuing entities are doing a gap analysis of their existing deals across our main asset classes – such as mortgages, autos, SMEs – with the hope of adapting as many as we can to try to achieve STS, but obviously it's too soon to tell if this will be possible…"

Cyber tops ILS agenda

| 9 March

The insurance sector continues to push the boundaries of innovation, with new product offerings in terror and nuclear risk already structured and a cyber risk ILW said to be in the pipeline. There are also hopes that cyber and terror ILS products may lead to repeat issues and so buck the trend for one-offs in the sector.

Thomas Johansmeyer, avp of PCS strategy and development at Verisk, expresses why the cyber space could see growing structured finance involvement. "There is huge potential for expansion in the cyber risk space," he says, "particularly because the losses from recent cyber events have exceeded coverage by some way."

He continues: "Equifax, for example, had coverage of around US$125m and it saw economic losses in the end of around US$1bn – and it was a similar picture with Merck. There is certainly a great potential for the ILS market to help fund the cyber risk space, in this instance in the ILW form…"

Efficiency drive

| 9 March

Credit Suisse is pioneering the re-tranching of capital relief trades, following the implementation of the new securitisation framework in Switzerland *(SCI 9 February)*. However, more widespread re-tranching activity is expected to emerge over the next 24 months, as issuers seek to retain the efficiency of their transactions.

The new securitisation framework became effective in Switzerland on 1 January 2018, without a grandfathering period. The impact of the change on capital relief trades is two-fold: first is that senior tranches have a risk-weight floor of 15% (up from 7% under the previous rules); second is that the new formula to determine risk weights – SEC-IRBA – is more conservative.

Taken together, these factors mean that tranches generally need to be thicker to maintain a trade's efficiency. Issuers have the option of either selling a thicker tranche to investors at a lower spread – although this may not meet the return target of some of the typical equity tranche investors – or split the risk into different tranches, with the junior piece paying a higher spread and the mezzanine piece paying a lower spread *(SCI 26 January)*…

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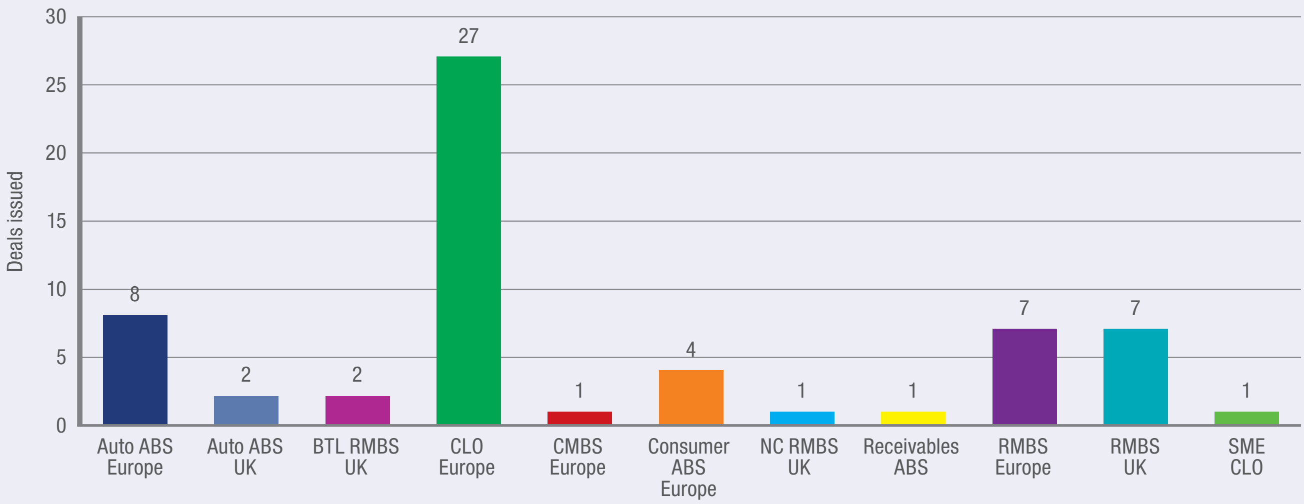
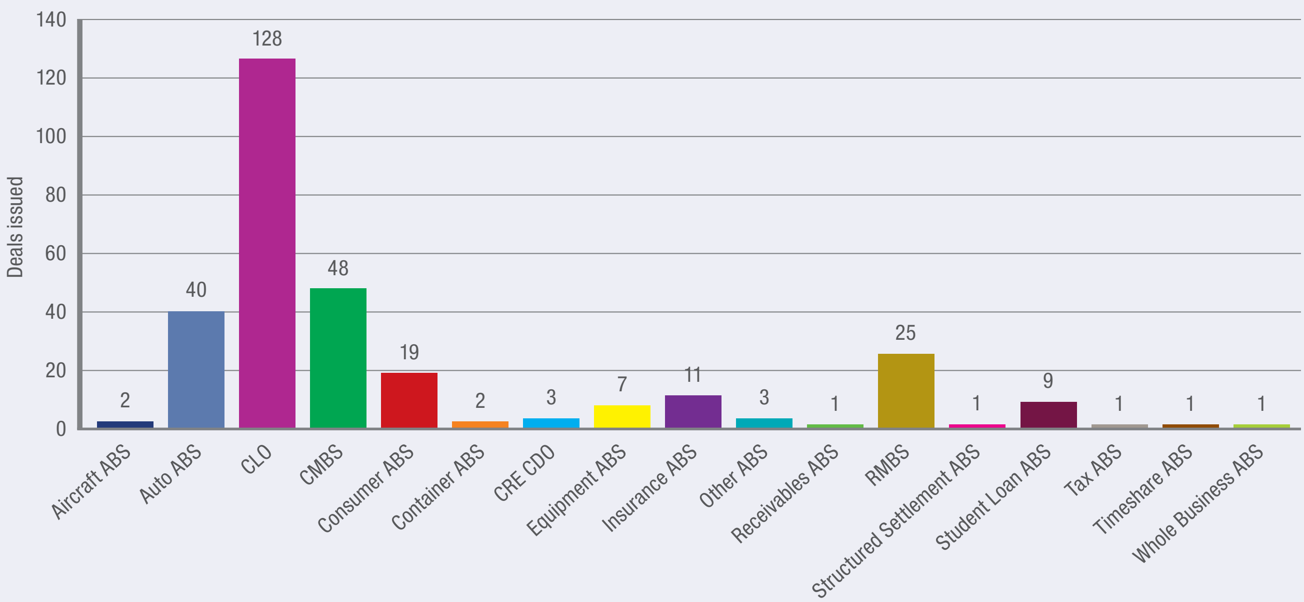
Europe/UK primary issuance 1Q18



Source: SCI primary issuance database: https://www.structuredcreditinvestor.com//database/ABS_CDO/

US primary issuance 1Q18



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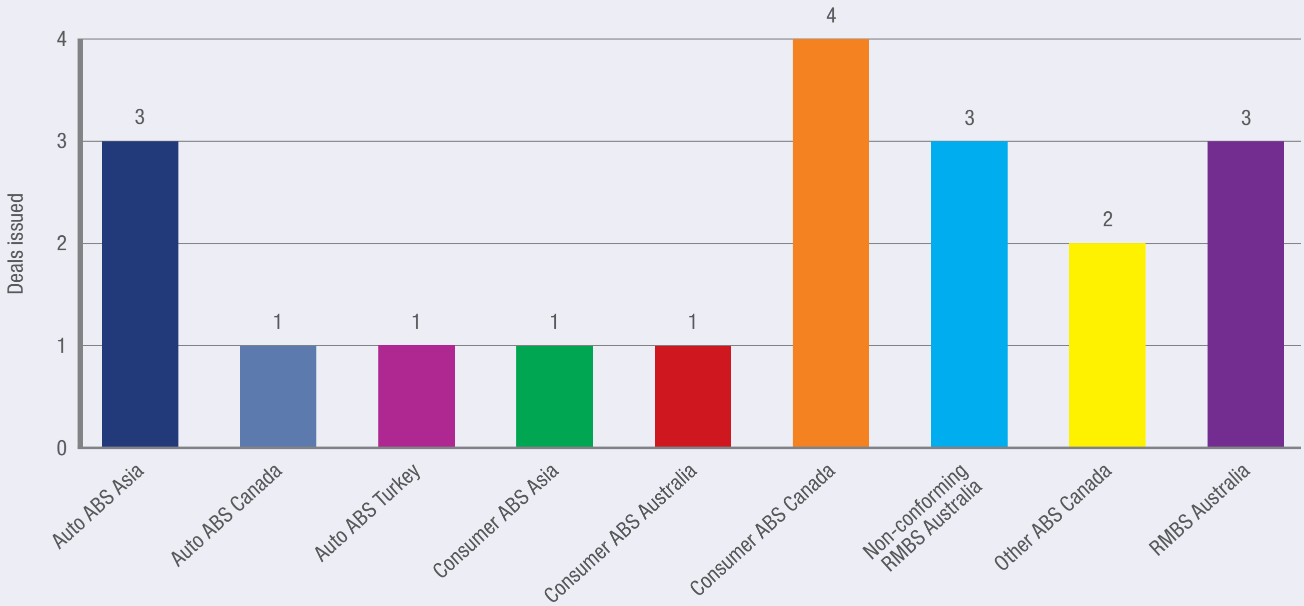
Rest of world primary issuance 1Q18



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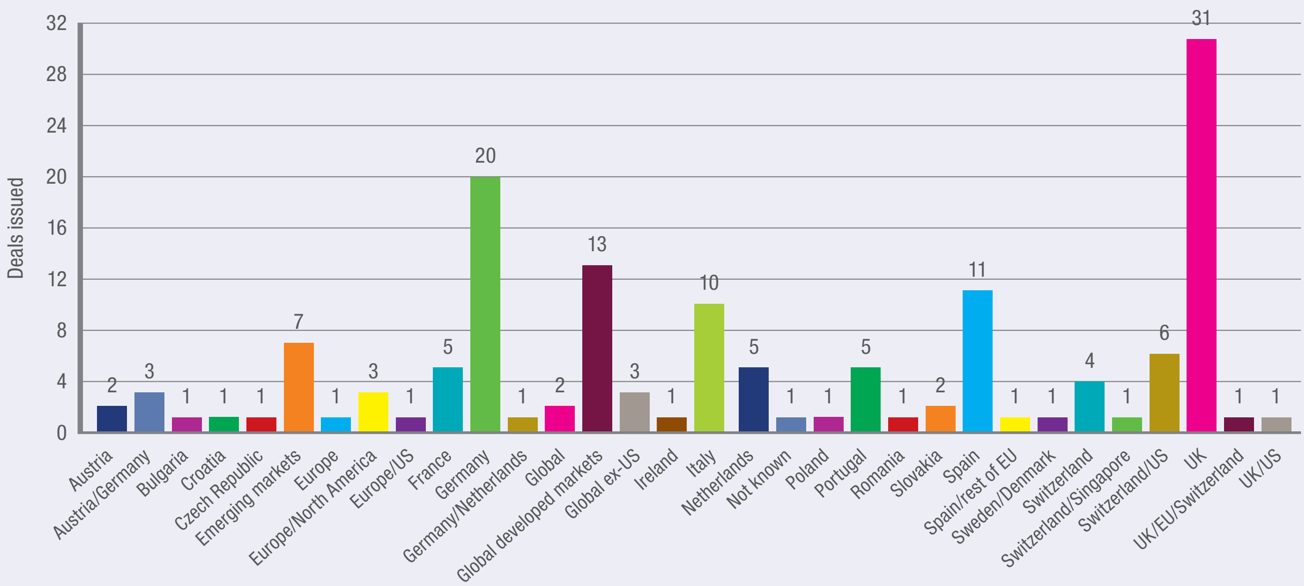
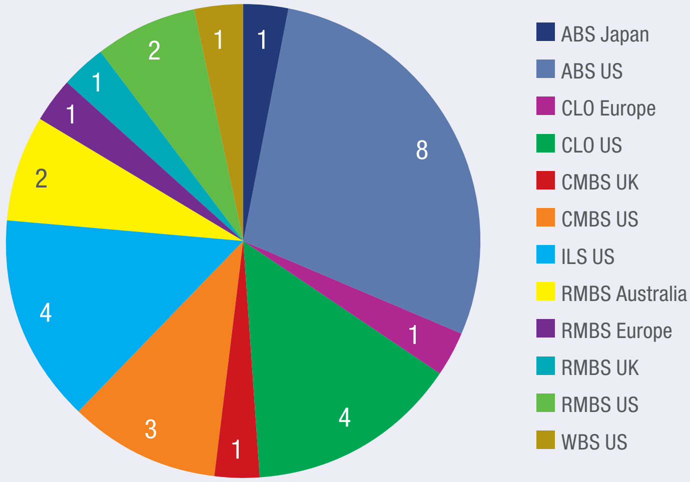
Capital Relief Trades by jurisdiction to April 2018



Source: SCI Capital Relief Trades database: https://www.structuredcreditinvestor.com//database/CRT/data.asp

Deals in the pipeline as at 18 May 2018



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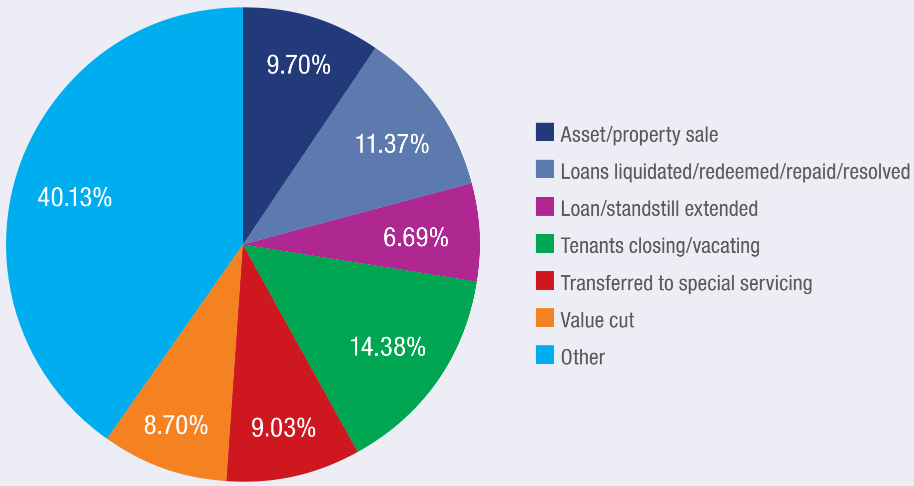
CMBS loan events 1Q18



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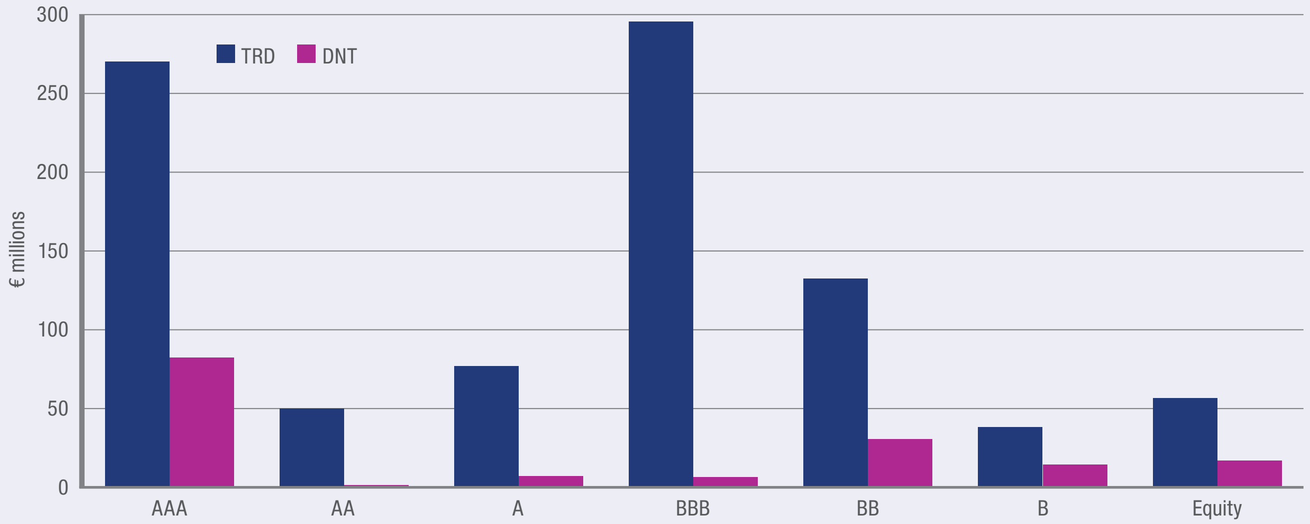
EUR CLO BWIC volumes by rating 1Q18



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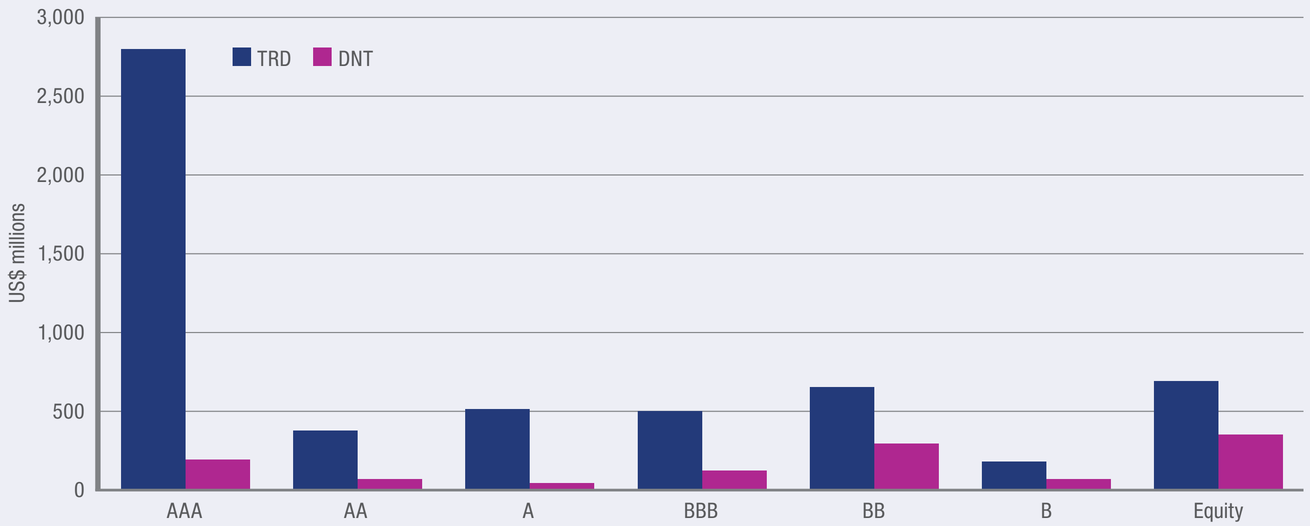
USD CLO BWIC volumes by rating 1Q18



Original sizes and whole equivalent original ratings used

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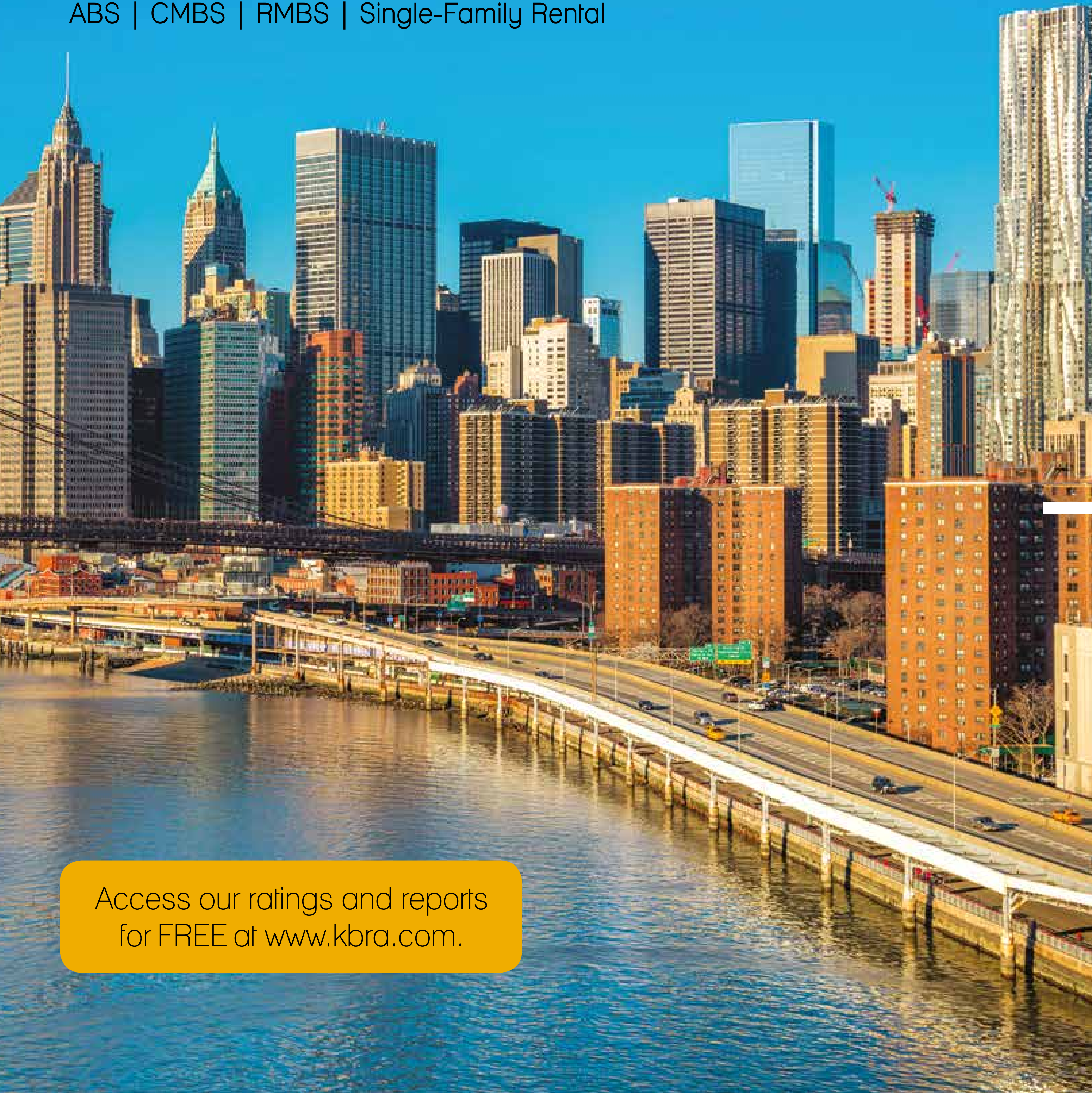

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