Modelling Low Default Portfolios - 12 Reasons Not to Join the Pool Party

With the new Partial Use approach, the Basel Committee on Banking Supervision will allow institutions to use the IRB approach for individual portfolios.

Above all, institutions currently using the standardized approach (SA) can benefit from this regulation and apply advanced methods for the calculation of risk-weighted assets (RWA). However, the operation of IRB rating procedures is very demanding, especially when it comes to wholesale portfolios, which could bring substantial relief in terms of RWA. The question therefore arises as to whether institutions could outsource this task in a resource-saving manner.

Pool models are a way of reducing the cost and workload in risk management and still benefiting from accurate, IRB-compliant rating systems, especially in terms of wholesale lending.

What does a pool party have to do with credit risk modelling?

Good question.

A pool model is a collaborative effort involving a central service provider which develops, operates, and validates rating systems for specific asset classes (in particular wholesale exposures) and provides arguments to supervisory authorities. The model is based on the exposure data contributed from all client banks (pool), which considerably increases the amount of data available and, consequently, the model's accuracy. The service provider and its client banks have separate responsibilities (providing the rating system vs. preparing the ratings). Apart from greater accuracy, pool models offer cost effectiveness and less strain on valuable quantitative resources. IRBA institutions in particular are faced with considerable and constantly changing regulatory challenges. If a service provider can shoulder some of the burden, why not let banks benefit from this.

In short: Pool parties make life better. Even in risk management.

Are there really 12 reasons NOT to follow such an approach?

Reason 1/12: Using a pool model means giving up my modelling expertise

Absolutely not. It only means sharing knowledge.

Banks that develop their own rating systems know everything about them. But only until the key specialists who soak up all the knowledge leave. In our experience, many banks incur a considerable risk by accepting a concentration of expertise that no independent service provider would be prepared to tolerate.

Also, providers of pool models must document the complete algorithm and fully disclose it, especially to IRBA banks. So banks always have insight into every single detail of the model. After all, that's what supervisors expect of them.

Besides, should a bank really spend its time on the development, IT implementation, and technical operation of rating systems? Not exactly one of the core activities banks are supposed to focus on these days, right? It may be smarter to simply pick the best models for pricing from the shelf.

In short: Do banks need to know how their rating systems work? Absolutely. Do they have to develop and operate those systems themselves? Not really.

Reason 2/12: Our business is too specific for any pool model

Is it really?

No doubt many banks have specialised in narrow business segments, nowadays. The pool's representativeness for an institution's individual portfolio is actually crucial and a prerequisite for using the pool model. However, the question is not whether an institution's portfolio is already part of the pool (especially large companies, banks, sovereigns or insurers have often already been rated by another pool participant). What matters is whether the portfolio in question is characterised by different risk factors or requires different system settings. Note, though, that the longer a pool model has been in use, the more data it is based on, and the more people use it – the more likely it is to fit the portfolio of a specific institution.

In short: There probably isn't a pool model for every single segment of your lending business. But for most of it.

Reason 3/12: How do I know that pool models work?

Ask ECB and BaFin.

Pool models have been in use in Germany since 2004 and have reached a very high level of quality because many banks strongly rely on them. They were approved for the IRBA in 2007 by the German and in 2014 by the European authorities. Users are satisfied because they can use high-quality models at comparatively low cost.

In short: Pool models work. We're not the only ones to say so: supervisors do too and so do users.

Reason 4/12: Using pool models means becoming dependent on a service provider

Not at all.

The business relationship is governed by a detailed and comprehensive agreement which does not expire unless it is terminated or voluntarily changed. This for example, rules out any arbitrary price raises. Clients always have the option of going back to applying their own systems or switching to a different provider. While this may entail expenses, the mere option forces the provider to stay competitive. In addition, service providers usually grant the right to use the systems even after the agreement has been terminated and until a suitable alternative has been found and implemented.

In short: A service provider is essentially just that. Nothing more – nothing less.

Reason 5/12: Own internal rating systems are a crucial competitive advantage that I don't want to lose

Are they really?

Banks have been working with rating systems for at least 20 years. Developing rating systems may be demanding but it isn't rocket science. By now, all major banks are able to rate most of their exposures appropriately.

Good rating systems exhibit three characteristics:

- Stability: They require a sufficient amount of data and a long time series for shock resilience
- Reliability: They depend on the amount of data available
- Broad scope of application and solid performance on borderline cases: Again, the amount and structure of the underlying data are key: the more data there is, the broader the scope of application can be. This may be a prerequisite for developing systems for specific business segments (for example, LBOs would be difficult to assess with a tool designed for rating typical corporate borrowers; as well as for leasing companies).

In short: It's the data, stupid!

Reason 6/12: Using our own rating systems is less costly

No way!

Pool model providers offer a range of rating systems and other services which can each be contracted separately. There are different service packages for each product and also different levels of client support. Clients only purchase what they really need.

Taking all relevant expenses into account, operating internal rating systems is not nearly as economical as using pool models, at least in wholesale lending. The savings potential is between 20% and 50% of annual operating expenses.

In short: Your rating models may have grown on you. But you may need to be able – and willing – to afford them.

Reason 7/12: If pool models have been in use in Germany for the last 15 years, then they probably cover mainly German exposures. My business has a different focus.

Good thinking – but not entirely accurate.

Most (but not all) current pool model users are based in Germany. However, most of them operate internationally, making the data pool international. Obviously, there is a certain regional focus. For example, Western Europe is better represented than Africa. Geography matters less than risk factors. Whether the relevant risk factors of the institution's portfolio are captured in the pool model will have to be examined jointly before joining the pool.

In short: Although the representativeness of the pool for the respective portfolio is key, it does not depend very much on regional aspects.

Reason 8/12: If the service provider goes bankrupt or is sold, I might find myself without rating systems.

No need for worry.

If the service providing company is sold, that usually doesn't affect its contractual relationships with its clients. Agreements typically have terms of five years or even longer.

A sudden insolvency of the service provider is extremely unlikely, as the collaborative approach and the long-term nature of its business relationships ensure very stable cash flows.

In short: While the business models of banks may have become volatile, providing pool models is not a very sexy business – but it is pretty stable.

Reason 9/12: I don't want to hand my data over to a service provider who will spread it around

Nothing to fear.

The service provider will use the data for the sole purpose of checking and improving the power and accuracy of its rating systems. For this purpose, all data is pseudonymised for more security. The data pool is not disclosed to third parties or otherwise commercialised. Client data strictly remains the property of each institution.

In short: Your data belongs to you. We keep it that way.

Reason 10/12: We have very specific requirements. Standard software is not tailored to our needs.

Really?

The purpose of a rating system is to estimate probabilities of default as precisely as possible, based on currently applicable regulatory requirements, no matter who uses it.

The core of the rating model is already standardised with a harmonised definition of default and similar specifications.

In terms of IT, institutions need to be able to connect their own infrastructure to the rating system, which is ensured by standardised interfaces.

The most important requirement is user friendliness. Since correct and consistent input is paramount to the service provider (otherwise the data entered can't be relied on for development), there is a strong incentive to communicate with all clients on a regular basis to improve the system continuously and make it easier to use. Does that hold for your proprietary software as well?

There is also an important standard setter to consider: supervisory authorities, whose stated aim is to create a level playing field. They do not really value individual requirements and restrict them accordingly.

In short: Individualism is nice – and costly. How much of it are you willing to afford?

Reason 11/12: Clients cannot influence model development because all decisions are made by the service provider.

Not true.

The institutions remain responsible for ensuring that the models they use meet their requirements. Therefore, user feedback is essential in the (continuous) development of pool models. The aim is to improve the quality, applicability and user friendliness of the system for all clients. On the other hand, it is vital to meet all regulatory requirements, which have been further harmonised at European level in recent years and are now the same for all institutions regulated by the ECB. While there may be differences at national level, the service provider will comply with most rigorous standards applicable to its clients.

In short: Whoever joins the pool party may suggest improvements. But the lifeguard (EBA) always has the final say.

Reason 12/12: Supervisors won't accept pool models for the IRB Approach.

Yes, they will.

Pool models have been successfully used in Germany for almost 15 years. Because of the overcrowded German banking market, several banks have already joined forces in the run-up to Basel II to develop and operate rating systems based on a common data pool. As this approach differed from previous practice (each bank developed its own systems), supervisors needed to convince themselves that it made sense. Whatever concerns they may have had at the beginning were quickly resolved. Today, the EU supervisors are also familiar with pool models and recognise them as IRBA-compliant. The pool approach creates synergies both for institutions and supervisors (only one model audit).

In short: Supervisors have realised the advantages of pool models both for banks and themselves. Which is why they accept pool models for the IRB Approach.

Pool Provider: RSU Rating Service Unit

RSU Rating Service Unit GmbH is the leading provider of internal rating systems for wholesale banking in Germany. These systems are based on a unique and continuously growing data pool, which we use to develop and validate our rating models. We also work on other solutions for measuring and assessing credit risk. As a full service provider we handle the IT implementation and operation of our systems for banks, insurance companies, and other financial institutions in both the public and private sector. Currently more than 7,000 users in Germany and abroad work with our systems.

RSU originated from a joint project of eight German Landesbanken and DekaBank and has been operating as a separate company since December 2003.

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