Z-CONCEPTS

THE COMPOSITION OF ASSET/LIABILITY MANAGEMENT

Asset/Liability Management (ALM) has been around for a very long time, and has survived several evolutions. Back in the early days of ALM when computers were housed in big buildings and guarded better than Fort Knox, data was nearly impossible to come by. Being able to produce a full balance sheet gap report was fairly progressive in the early 1980s.

As computers evolved and storage cheapened, duration and gap reporting evolved into simulation. Over the years we have gained tremendous insight into the business of banking by continually digging more deeply and breaking down our positions in a thousand ways.

But interestingly, ALM has remained synonymous with Interest Rate Risk (IRR) over the years. The banking industry contains many types of risk, and while Interest Rate Risk analysis has improved greatly, certain other aspects of risk have not kept pace.

Before diving into this topic, let us step back and review the major categories of risk in banking:

- Market Risk – uncertainty about the future of the economy
- Credit Risk – concern over borrower's ability to repay
- Operational Risk – ensuring proper processes and controls to protect yourself from internal or external forces
- Reputational Risk – concern over bad publicity
- Legal Risk – potential for litigation against your institution
- Compliance Risk – not living up to regulatory standards
- Strategic Risk – strength and abilities of management team
- Others, such as environmental, political …

For this discussion, the focus will be mainly on the first two, market and credit risk.

MARKET RISK

Subcategories of market risk that are often isolated are:

- Interest Rate Risk – uncertainty of future market rates
- Liquidity Risk – keeping enough *cash* to cover your short-term expenses
- Exchange or Currency Risk – uncertainty of future exchange rates
- Concentration Risk – putting too many eggs in the same basket

These areas of market risk have created successful careers for many consultants and software developers. On a parallel path, a separate industry has grown up around credit risk.

CREDIT RISK

Having been an *ALM guy* most of my life I cannot speak as clearly to the evolution of credit risk management. My impression is that credit rating and scoring efforts have become very disciplined over time. Many years ago personal relationships were viewed as the cornerstone of creditworthiness. This is still a key ingredient, but advances in the field now allow the use of sophisticated scoring mechanisms with the ability to project potential issues well in advance of them happening.

At a micro level this can work well, but the macro-level pictures projected by ALM enthusiasts have been mostly missing in the world of credit risk. Dodd Frank Stress Testing (DFAST) and other requirements have brought this into the spotlight.

Credit modeling has matured quickly over the past few years and, while many financial institutions have been working to integrate this with their macro-level ALM, few would admit to complete success.

So why is this important? Let's create an example. Assume you book a 30 year fixed-rate mortgage loan. The balance would pay down over time and look something like Exhibit 1.

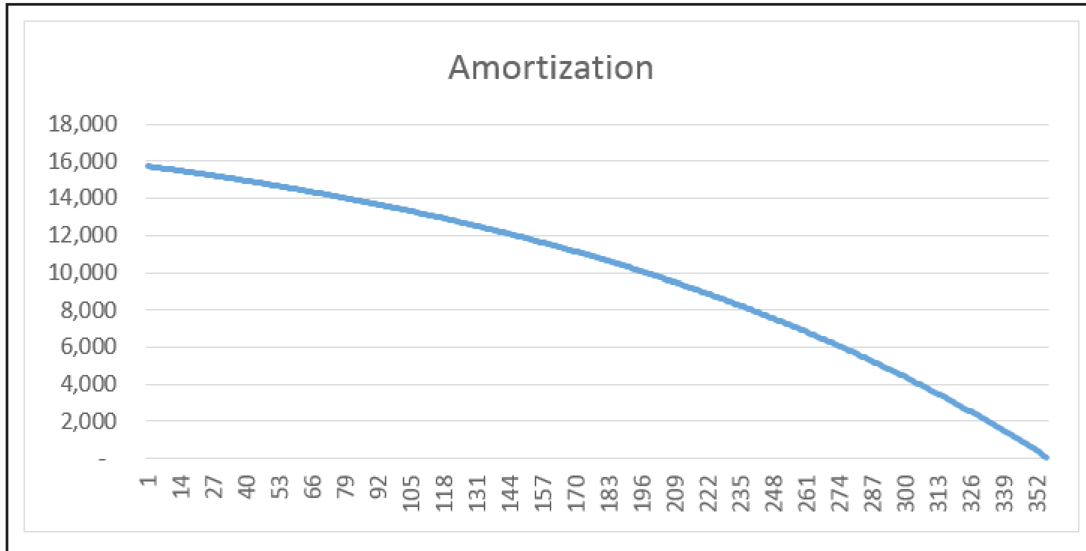

EXHIBIT 1

You are probably already saying "*But what about prepayments?*" Of course prepayments are so prevalent and important that we would never assume a mortgage is going to live a full life. So we modify the example to be more correct (see Exhibit 2.)

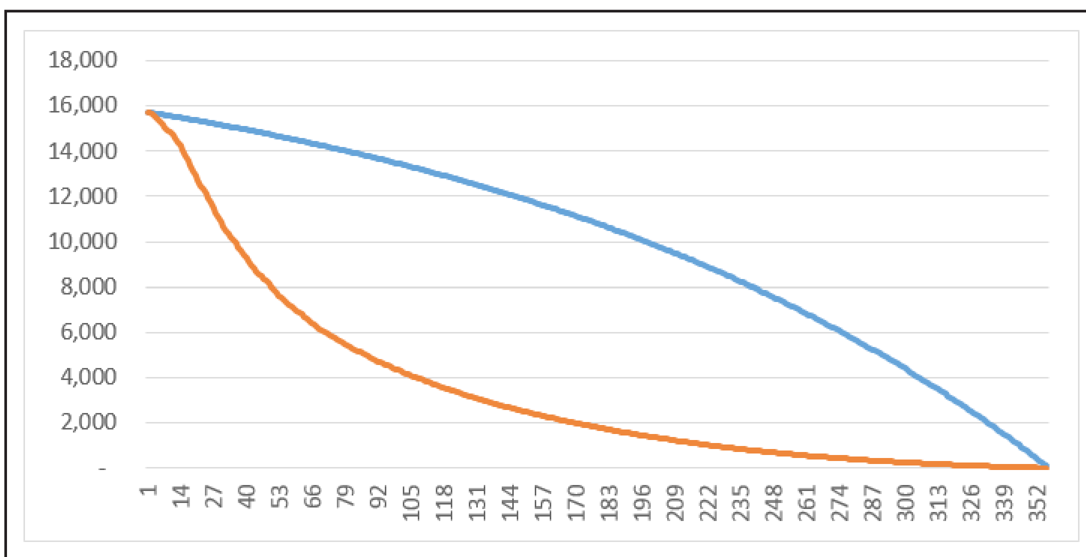

EXHIBIT 2

But there is another component that we are missing completely. What if the borrower runs into financial difficulty and is forced to foreclose on their mortgage? We don't like to think of this negative scenario, but the reality is that it happens, which is why we have provisions and charge-offs in our financial statements. Adding defaults and recoveries into our example we now see a more comprehensive picture in Exhibit 3.

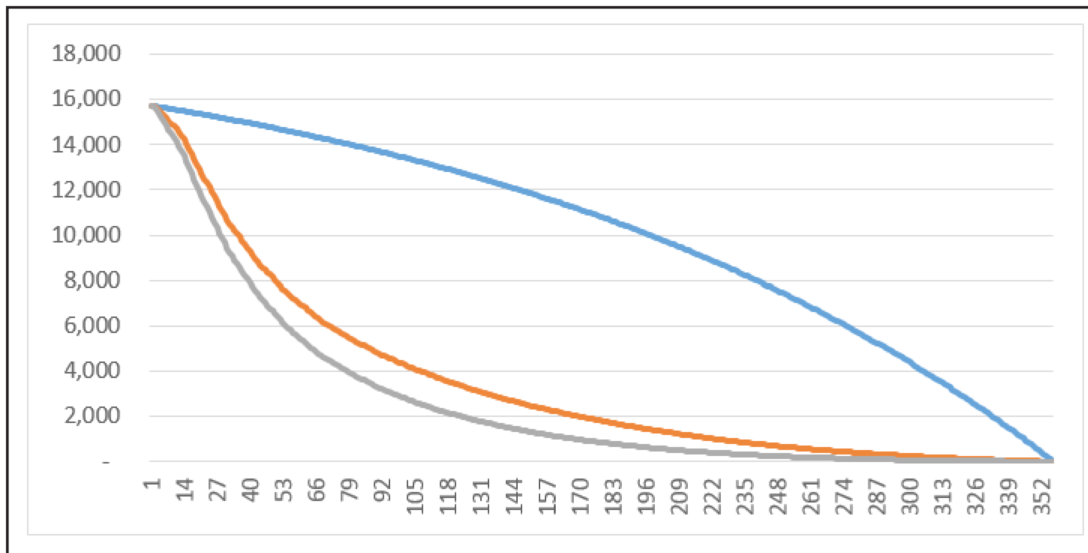

EXHIBIT 3

You may argue that it doesn't make sense to assume every loan will default, but that is not what we are doing. Rather (like prepayments) we are generalizing the assumption of defaults and recoveries and applying them broadly to all loans in a particular product category. For macro–level analysis this helps us to understand our risk as we review potential scenarios/ outcomes.

ALM is a broad term with many connotations. In addition to traditional measures of interest rate risk it is important that credit risk is also factored into your ALM process. Current Expected Credit Loss accounting (CECL) is on the horizon, which will further emphasize the need to project credit losses on an aggregate basis.

The goal of simulation modeling is to understand the future. We cannot predict the future implications of decisions on our earnings, capital, and risk profile if we are not including all of the variables.

About the Author

Jerry Clark is Vice President of Sales for ZM Financial Systems and has more than 30 years of experience in market risk, treasury, accounting, and finance.

About ZM Financial Systems

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