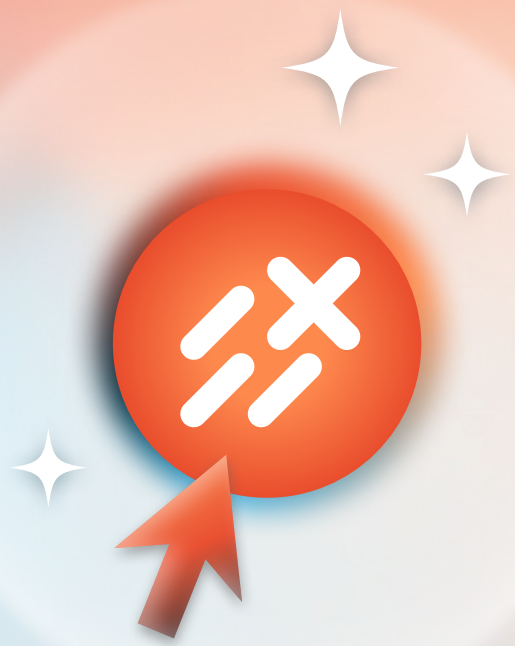
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How Copilots Will Transform Pricing and Credit Risk Decisioning in Banking and Lending Operations



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Introduction: The Rise of Gen AI

It's been over two years since OpenAI's ChatGPT was launched, and seemingly overnight brought Generative Artificial Intelligence (GenAI) to the forefront of our minds, both in our personal lives and in business.

GenAI is already impacting various industries, and the banking and lending sector is no exception. Generative AI, with its ability to create and generate content in formats such as text, code, voice, images, and videos, is becoming a powerful tool for enhancing efficiency and accuracy, while freeing workers up to focus less on mundane and repetitive tasks and on more strategic work.

As lenders face the retirement of older workers, the rise of new competition, and heightened consumer expectations for seamless experiences akin to shopping on Amazon or hailing an Uber, there will be continued pressure on workers to not only increase their output but also to achieve higher quality standards.

While there are numerous use cases for Generative AI and copilots – including everything from helping loan officers better detect fraudulent activity to providing better customer service – this eBook is specifically about **how natural language copilots can benefit pricing and credit risk decisioning processes in lending when they are natively embedded in the systems supporting these key functions.**

But before we get into specific applications, let's explore more broadly what copilots are and the impact they are having today.

Copilots: Enhancing Productivity and User Satisfaction

One of the exciting applications of Generative AI is in the form of **copilots** — AI-powered virtual assistants and agents that work alongside human experts to do things like answer questions, automate tasks, summarize documents, analyze data, provide insights and recommendations, and write code.

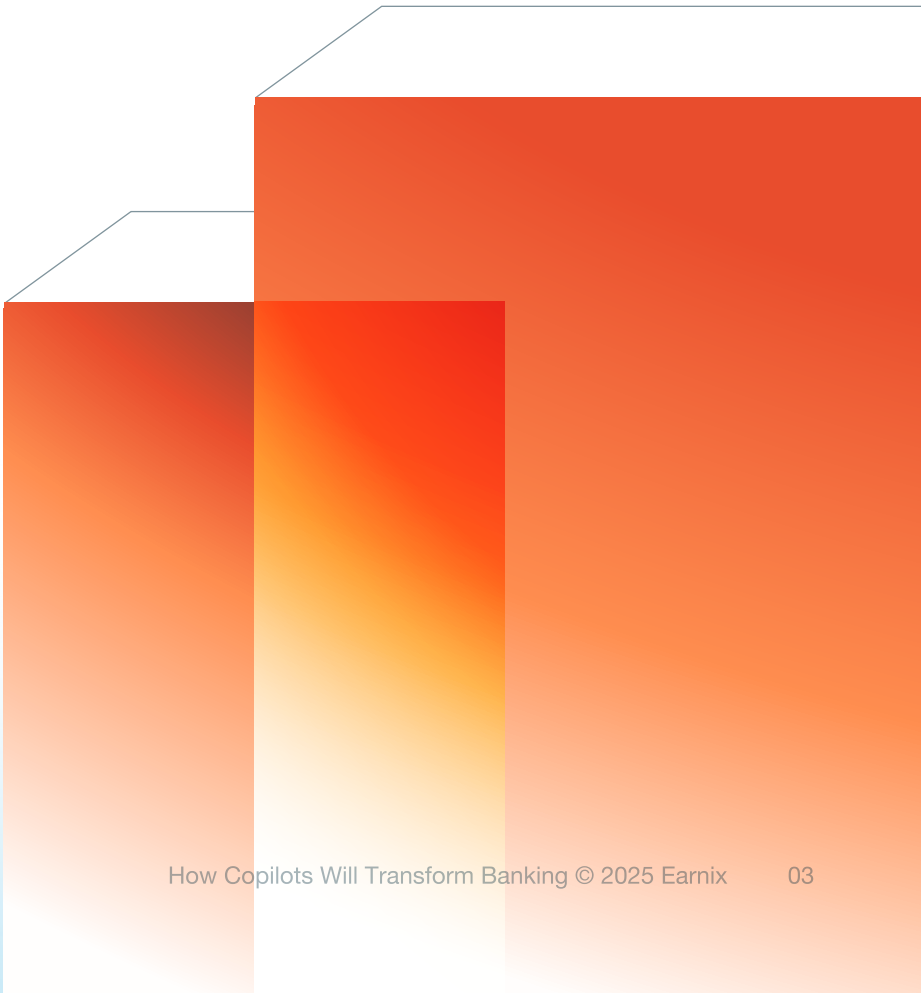
Much of the excitement around copilots arises from the productivity gains they promise. Even though copilots are a relatively immature category, they are already showing some impressive results.

For example, a recent Microsoft study of productivity gains indicates that for basic tasks such as searching, writing, and summarizing research, activities that are basic to just about all business endeavors, users were 29% faster when performing those tasks with the help of a copilot.

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Microsoft



In another study, over 4,800 developers at Microsoft, Accenture, and another Fortune 100 company were given access to the tool GitHub Copilot. In this study, with no sacrifice in code quality, developers overall were 26% more productive and code volume (as measured by weekly code commits) was up 13.5%.

In one interesting observation, the less experienced the developer, the more pronounced the impact, with new and mid-level developers increasing their productivity through use of the copilot by anywhere from 27 to 40 percent.

Finally, in another survey, between 60–75% of GitHub Copilot users reported feeling more fulfilled in their jobs and less frustrated when coding.

These productivity gains for less-experienced staff could make significant differences in onboarding and “skilling up” a new generation of workers. And in the case of the banking industry, enabling actuaries, data scientists, underwriters, loan officers and IT workers to not only contribute faster, but deliver more value in the longer term, and be more satisfied and likely to remain with their current organizations.

26%

Developers overall were 26% more productive with copilots

GitHub Copilot

27–40%

New and mid-level developers increased their productivity through copilots by 27 to 40 percent

GitHub Copilot

13.5%

Code volume increase

GitHub Copilot

60–75%

of GitHub Copilot users reported feeling more fulfilled in their jobs and less frustrated when coding

Github blog

Use Cases

In parallel with the rise of copilots, modern pricing and credit risk decisioning platforms are already delivering significant value in making lenders faster and more agile in how they run their operations.

They are allowing organizations to launch new offerings in weeks, and make changes to pricing and credit risk decisioning rules in minutes – if necessary. These systems, now equipped with copilots, can become even more valuable than ever before.

So with that, let's take a look at some specific use cases for how copilots, purpose-built for lenders, will significantly impact the productivity of the users of these decisioning systems.



Deploying a Comprehensive Knowledge Forum for Training Workers

A copilot can search the knowledge bases of a vendor's pricing and decisioning systems, and, in a flash, marry that information with external, web-based knowledge, providing information and best practices recommendations on how to do certain things in the software as quickly and as accurately as possible.

Returning to a previous point, U.S. banks lost over 45,500 jobs in 2023 (the most recent period for which full-year data is available), marking the first time the sector has lost workers since 2019. The banking industry clearly faces challenges in navigating talent retention and mitigating the ongoing effects of "the great resignation".

Training up users in core functional skills is critical, while training them on how to best utilize enterprise software is an added hurdle. This is where copilots can provide immense value by shrinking onboarding periods.

Additionally, even for seasoned employees and power users, there is an opportunity for them to get more value out of the software by exploring advanced capabilities they may not even be fully aware of.

Here are a few example prompts to which a user might leverage a copilot in these systems:

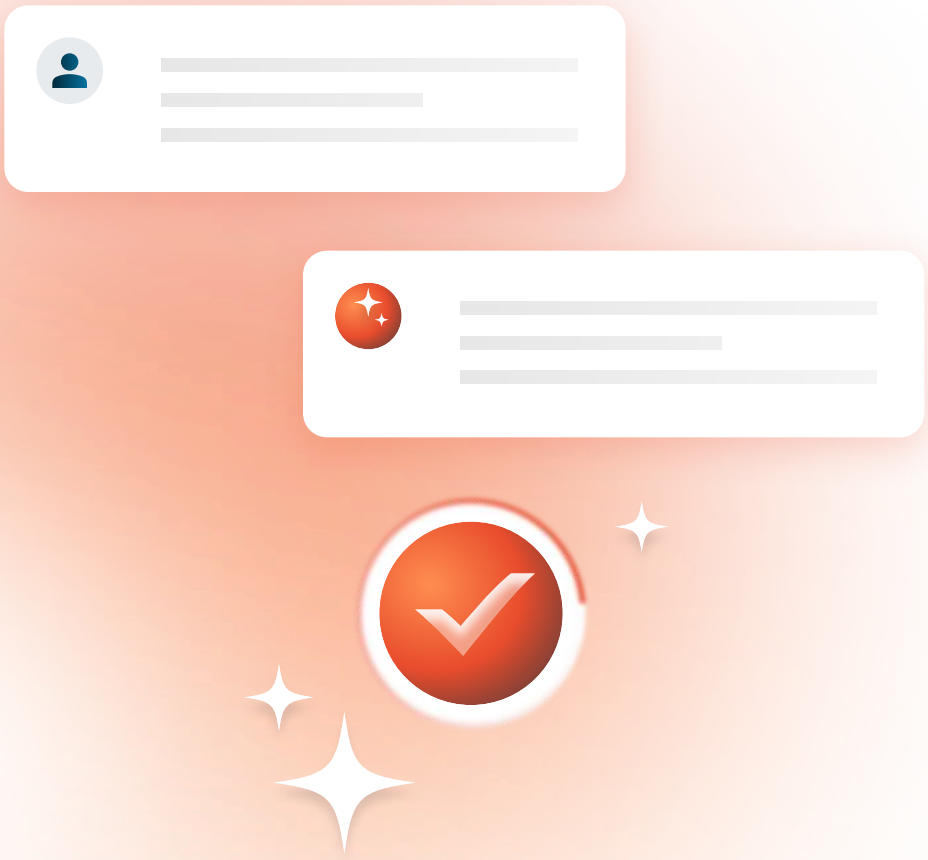


- How do I build a basic Generalized Linear Model (GLM) for loan pricing, while maintaining regulatory compliance?
- How do I run a pricing simulation?
- What are the possible data types for variables inside my system?
- How does the system handle seasonality in my lending models?
- How do I make a pricing change and deploy it into production?

In effect, instead of sifting through a knowledge base for answers (which may not necessarily answer their specific question), a user can receive a natural language answer back from the copilot in seconds.

Furthermore, unlike the general business use case in which an error might result in a poorly-worded email or a muddled report and not much else, the financial and reputational/brand exposure of doing something the wrong way in financial services can have severe consequences, such as fines and the need to issue customer refunds. While a copilot on its own isn't going to necessarily eliminate bad outcomes, it can improve the chances for the right outcomes by guiding and coaching users on best practices.

Thus, copilots will enable both new and seasoned analytical and other business practitioners of these systems to onboard faster and improve process efficiency and accuracy on an ongoing basis.



Employing a Coding Copilot to Automate Pricing & Credit Risk Decisioning Tasks

While today's modern systems provide low-code, drag and drop user interfaces and flexibility for building models, running what-if scenarios, and exporting filing documentation, many financial services organizations may wish to write Python code in the system to automate various tasks across the product development and pricing and risk decisioning lifecycle.

While the Knowledge Forum use case we discussed earlier might advise a user as to the steps and assist in researching into how to make something happen, it will stop short of actually helping a user accomplish aspects of the task itself.

A coding copilot will output Python code that can streamline these tasks. Here are some example prompts:

- Write a function to compare two different pricing scenarios and highlight significant changes
- Generate code to automate the creation and export of monthly loan pricing reports
- Generate code to create a GLM demand model using age, geographical location, vehicle model type and interest rate as predictors
- Generate code to import data into our models and schedule and batch other tasks on a recurring schedule
- Find the best interest rates to maximize volume and profitability



As a result, users can save time on coding by leveraging the generated output and making any necessary adjustments or modifications for their specific tasks.

Accelerating Legacy Systems Migration to Modern Systems

The prior use cases assume organizations are already utilizing a modern decisioning platform. But what if they are not there yet?

As we all know, the bane of the financial services industries is that many homegrown systems are still in place.

Copilots can be applied to significantly shrink the time and cost of moving from an antiquated system to a modern one – thus unshackling bankers from their homegrown systems and/or pre-conceived notions of vendor lock-in with their incumbent solution.

A copilot can accelerate manual work done in implementation projects by pulling the rules, algorithms, pricing tables, and credit risk decisioning scorecards out of the legacy system, processing them, and then reformatting everything so it works with the target modern system.

What we are talking about here is potentially saving hundreds of people-hours of work and further shrinking go-live timeframes to a matter of weeks.

While this is a “one and done” task, moving mission-critical, time-sensitive applications such as pricing and risk analysis off of legacy systems can have a profound and lasting effect over the long term, and pave the way for truly transforming these critical operations.

Copilots have already been applied to code generation tasks, and this translation and migration task is one that they are particularly well-suited to.

Thus, copilots stand to play a significant role in helping banks leave their legacy systems and technical debt behind, and more quickly realize the benefits of modern, cloud-based, pricing and risk decisioning systems.



Conclusion

In summary, some of the key immediate use cases for copilots include providing a knowledge assist for training users on how to do things more effectively in the vendor's software, writing code to automate various processes across the product development lifecycle, and transitioning banks from outdated systems to modern, AI-native SaaS platforms.

Copilots will augment workers in completing repetitive tasks, as well as taking on the "heavy lifting" for one-time digital transformation projects. And as they are adopted by more and more users and organizations, there will be a network effect, whereby the copilots will get better and better at feeding back quality output when prompted. As suggested by at least one study, developers will also be happier and more fulfilled in their work.

In the future, copilots stand to deliver even higher levels of intelligence to knowledge workers. This could start with allowing workers to receive guidance in high-touch pricing and risk decisions, and deeper insights and recommended changes into their loan portfolios and strategies to consider in the future.

Eventually, we can imagine a world in which copilots will be able to take on some operations autonomously, further freeing up lenders to focus on what matters most – increasing revenue and driving additional profitability.

For now though, we can anticipate that copilots will offer unparalleled assistance in enhancing productivity, improving accuracy, and fostering innovation, making them an indispensable tool for organizations looking to gain a "leg up" on the competition as they seek to reimagine banking and lending.

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Next Steps

Watch the replay of the Excelerate session on the Earnix Copilot

Watch now

About Earnix, Ltd.

Earnix is the premier provider of mission-critical, cloud-based intelligent solutions across pricing, rating, underwriting, and product personalization. These fully integrated solutions provide ultra-fast ROI and are designed to transform how global insurers and banks are run by unlocking value across all facets of the business. Earnix has been innovating for insurers and banks since 2001, with customers in over 35 countries across six continents and offices in the Americas, Europe, Asia Pacific, and Israel.