CELENT

RETAIL BANKING CORE BANKING SYSTEMS: NORTH AMERICAN COMMUNITY BANK EDITION

2024 xCelent Awards, Powered by VendorMatch

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EXECUTIVE SUMMARY

The core banking system technology market for community banks continues to modernize at a steady pace. Vendors continue to proactively and profitably update their systems and service their customers even though the total addressable market continues to decline. All vendors have improved integration via API management platforms and rewritten some core code as microservices. Four of 10 systems Celent evaluated increased their customer base even as the number of community banks declined. The core systems market remains an essential foundation for community banking sector technology.

Digital banking, open banking, and embedded finance offer vast potential for financial institutions. Community banks and the vendors that support them are taking a similar but distinct path to digital modernization relative to large banks. While large financial institutions drive digital transformation themselves with the assistance of IT consultancies and their technology partners, smaller financial institutions rely more heavily on their core banking system provider to create innovations for them.

The core vendors in this report are making a dramatic departure from past sales strategies, where closed-core systems and data access helped the vendor cross-sell more of its products but frustrated their banking customers. To compete today for bank customers—for both their core and ancillary banking solutions—vendors are:

- Opening access to other fintech services via integration services that rely on middleware platforms, APIs, and microservices.
- Providing a curated set of third party providers that compete with the core vendor in some cases to provide their customers with greater choice.
- Providing more access to customers to build their own integrations to third party technology providers.
- Enabling customers to more easily access their own data to improve analytics and reporting.

This has accelerated the evolution of the core platforms available on the market for community banks. To support financial institutions in understanding the core banking landscape and in selecting the best core partner, this report assesses the leading core platforms that are servicing Tier 5 ($1bn to $20bn assets) and Tier 6 banks (<$1bn assets) in the North American market, proving both evaluation and

in-depth profiles. Note that while some vendors and platforms are present across other Celent reports (such as Retail Banking Core Banking Systems: North American Mid-Large Bank Edition), vendor evaluation for this report is weighted specifically to presence in, requirements of, and client feedback from the North American community banking market. As such, it focuses on vendor solutions that are specifically designed for this market, requiring a minimum of 50 banks across these segments as one of the main inclusion criteria. This means that it does not include any of the next-gen core vendors (which will be covered in a separate Celent report).

High-Level Core Systems Market Findings

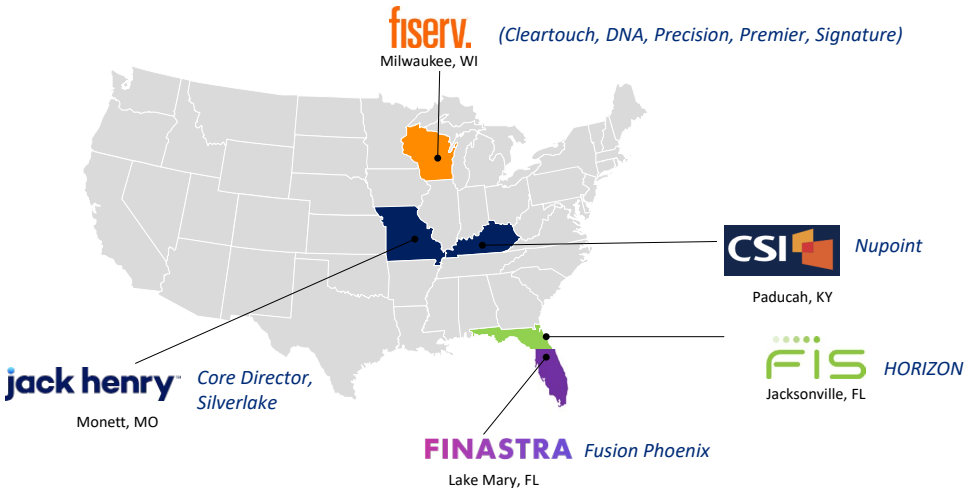
- The customer base declined for 6 of 10 solutions since Celent's previous report in 2019, mirroring shrinkage of the community banking sector. However, DNA, Horizon, and Silverlake added to their total client base.
- Most core solutions remain attractive to newcomers and added new clients during the past two years. Most (six) solutions have real time processing, which is an important selection factor.
- Community bank digital transformation has some distinct characteristics from mid-size/large financial institutions. There is less focus on buying cloud-native, next generation core systems that provide less complete functionality, provide less ready integration into community bank technologies, and that are not currently focused on this segment.
- Major community bank core system technology enhancements are centered around exposing more core system code as APIs and building API management platforms to add new functionality to these mature systems.
- Few of these solutions currently offer a public cloud option unless they have a large customer base (DNA and Premier) or the vendor has already made large public cloud investments (Phoenix). Many deployments are on premise or in the vendor's data system and would be relatively expensive to migrate to public cloud.
- Some of these vendors—most of whom sell multiple cores systems—continue to *actively support all of their core systems* but are *emphasizing the sale of one or more of their cores* while *de-emphasizing new sales of their remaining cores*.

> The Rosetta Stone for deciphering the legacy source code of community bank core systems is not replacing them with cloud-native cores; it is steadily rewriting that legacy code as microservices and providing better API integration into the system and the data within it.
>
> — Celent

Community Bank Core Systems/XCelent Award Winners

Figure 1 shows the core banking platform systems evaluated in this report. This includes all of the main US core vendors for community banks. Note that some vendors offer multiple community banking core platforms. Most of these systems were evaluated individually in this report. Some systems previously included in this report (FIS IBS and Jack Henry CIF 20/20) were excluded from this report. Other vendors (i.e., Nymbus and Temenos) was excluded at the vendor's request or did not respond to Celent outreach.

Figure 1: Community Bank Core Banking Platform Vendors and Systems



Source: Celent

Celent's ABC Vendor Assessment Methodology

Celent awarded vendor platforms in this report based on our proprietary ABC scoring methodology, which includes hundreds of individually scored elements and is summarized into *three scoring categories: (A)dvanced technology, (B)readth of functionality, and (C)lient base & service*. The ABC methodology provides a specific market assessment based on this report's focus on community-based financial institutions, our methodology, and our market knowledge. *Some scores are relatively close, and each platform in this analysis was deemed a competent offering.*

The top performers for each of the ABC dimensions received a corresponding XCelent Award, as shown in Figure 2. See the Methodology and ABC Analysis section for details.

Figure 2: XCELENT 2024 Winners for North American Community Bank Core Banking Systems

Source: Celent

In terms of Advanced Technology, all the platforms we evaluated are relatively mature, traditional core systems rather than next-gen platforms. However, FIS Horizon and Fiserv DNA have made strong steps in modernizing their platforms, particularly in terms of API-enablement and shift to cloud-native technology approaches offering a combination of scalability and performance, supported by positive client feedback validation.

Similarly, while all platforms received relatively strong Breadth of Functionality scores, the leading providers were Jack Henry with its SilverLake platform and CSI NuPoint that combined high functional scoring with robust client feedback on platform experience and ability to meet bank's needs.

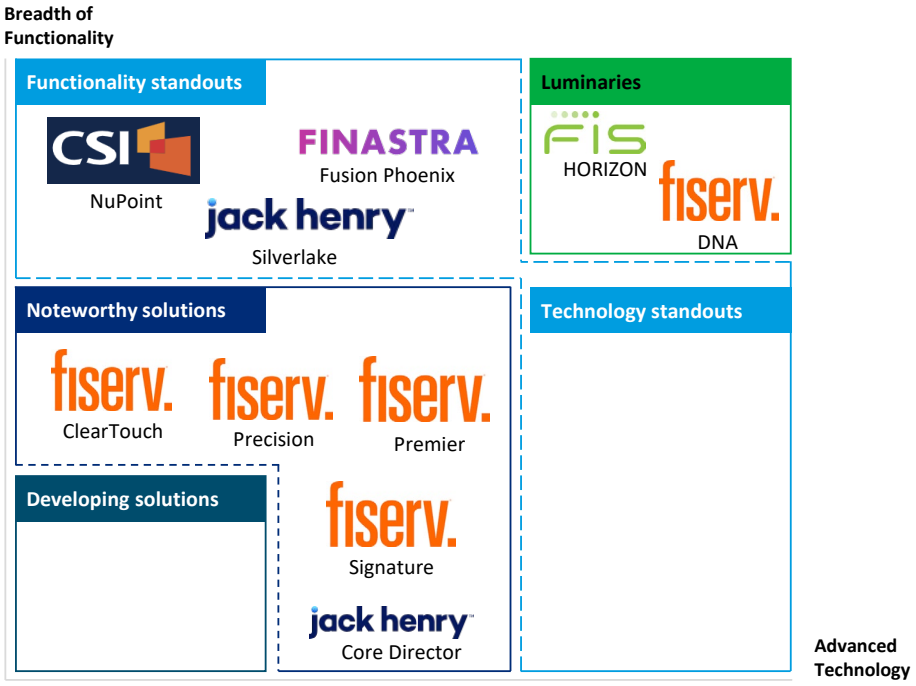
For Client Base and Service, Jack Henry SilverLake was awarded top place, combining a notable client base with strong client growth and support capabilities.

Celent's New Technical Capability Matrix

New to Celent's solution reports is the Technical Capability Matrix. *This matrix enhances how we evaluate each solution and bridges the gap between the ABC assessments and each solution profile.* We've placed each solution into one of five categories based on the sophistication and breadth of its technology and functionality (i.e., plotting the A and B dimensions). Solutions are not ranked within the assigned category; they are listed alphabetically.

The *five technology capability matrix categories* are: *luminary, technology standout, functionality standout, noteworthy solution, and developing solution*.

Figure 3: Celent Technical Capability Matrix: Community Bank Core Systems



Source: Celent

On this basis, the platforms deemed Luminaries are from the two largest vendors—FIS Horizon and Fiserv DNA—with platforms that combine relatively strong technology architecture with a high breadth of functionality (complemented by significant customer base and support capabilities).

Mirroring the xCelent awards, for Breadth of Functionality, Jack Henry SilverLake and CSI NuPoint were unsurprisingly awarded a Functionality Standout position, however Finastra Phoenix also scored highly here. While CSI and Finastra are challenger providers to the "Big Three," they both offer platforms that meet the needs of North American community banks.

Given that overall technology evaluation scores were largely good rather than outstanding, it was decided to not award any Technology Standout positions for this peer group. While many platforms have been modernized (particularly in terms of use of APIs and ability to work on a best-of-breed rather than single-vendor basis), most are still relatively nascent in cloud-native architecture practices (e.g., microservices).

That said, the remaining vendors that met inclusion criteria for this report all have Noteworthy Solutions. The variation in baseline scores for most platforms was relatively low, and each platform offers a variety of benefits and capabilities that means they excel for specific types of institutions or certain needs/ preference. Each is worthy of consideration, with all providing solutions tailored to the needs of the North American community bank market.

THE COMMUNITY BANK CORE SYSTEMS MARKET

The community banking core system market continues to be dominated by the same five core banking systems vendors (CSI, Finastra, FIS, Fiserv, and Jack Henry) and systems. Technology innovation is largely driven by those vendors and by better integrating those systems with digital channels and other banking subsystems. The number of community banks continues to shrink, which has led multicore vendors to focus more heavily on selling some of their core systems more than others. Still, vendors continue to enhance all of their systems as some banks continue to switch vendors and/or systems.

Digital Transformation, Community Bank Style

Digital banking, open banking, and embedded finance offer vast potential for financial institutions. Community banks and the vendors that support them are taking a similar but distinct path to digital modernization relative to large banks. While large financial institutions drive digital transformation themselves with the assistance of IT consultancies and their technology partners, smaller financial institutions rely more heavily on their core banking system provider to create innovations for them.

The core vendors in this report are making a dramatic departure from past sales strategies, where closed-core systems and data access helped the vendor cross-sell more of its products but frustrated their banking customers. To compete today for bank customers—for both their core and ancillary banking solutions—vendors are:

- Opening access to other fintech services via integration services that rely on middleware platforms, APIs, and microservices.
- Providing a curated set of third party providers that compete with the core vendor in some cases to provide their customers with greater choice.
- Providing more access to customers to build their own integrations to third party technology providers.
- Enabling customers to more easily access their own data to improve analytics and reporting.

This strategy was chosen because community banks are unable or unwilling to move on to a completely new core due to the conversion costs, labor resource limitations, and risks. Therefore, core banking system vendors took the middle path: choosing to open up and progressively renovate their systems, and in some

cases translate old technology software languages into something more modern, even if it is not as modern as a cloud-native, next generation system.

Will Community Banks Ever Run on Next-Gen Systems?

The cloud, componentization, and API-first integration are the next generation building blocks for cloud-native core banking systems. The challenge for many community bank core systems is that they reside on mainframe platforms and are written in yesterday's programming languages based on COBOL, RPG, Progress, or Synergy. Community banks lack the resources or permission to modify the core software, and core vendors have yet to show the willingness to rewrite the source language program logic embedded in it. But vendors are increasingly providing integration access to it.

Legacy source languages raise the issue of the appropriateness of cloud-native, next generation systems for the community banking market. While core conversions are theoretically easier for small banks because the IT footprints are smaller and less complex, are next generation core vendors targeting this segment? The short answer is: not so much.

- New, cloud-native core companies have either not targeted this segment (**10X and Thought Machine**) or have yet to have any success in it (**Mambu**).
- **FIS** has targeted sale of its Modern Banking Platform (MBP) to larger financial institutions.
- **CSI** was taken private in 2022 and has invested in sales, marketing, and technology research and development but is not known to be building a new cloud-native core banking system.
- **Finastra** has a heavy public cloud focus and deploys Phoenix on the cloud but is not building a cloud-native core banking system.
- **Jack Henry** is building a cloud-native core banking system and has future potential to bring a next generation core system to the masses of community banks.
- **Fiserv** (FinXact core) is the only cloud-native core banking system in production with some focus on the community bank market. Finxact currently focuses on multiple banking segments and has the best near-term potential to transform the community banking core systems market.

> Translating the ancient languages of COBOL, RPG, Progress, and Synergy will never be complete, but integrating them with cloud-native functionality and subsystems is the path to core banking system enlightenment.
>
> — Celent

For information on the next-gen vendors, please see the Celent report, Continuous Digital Transformation in the Cloud: Next Generation Core Platforms that Will Future-Proof Banking.

Other Possibilities

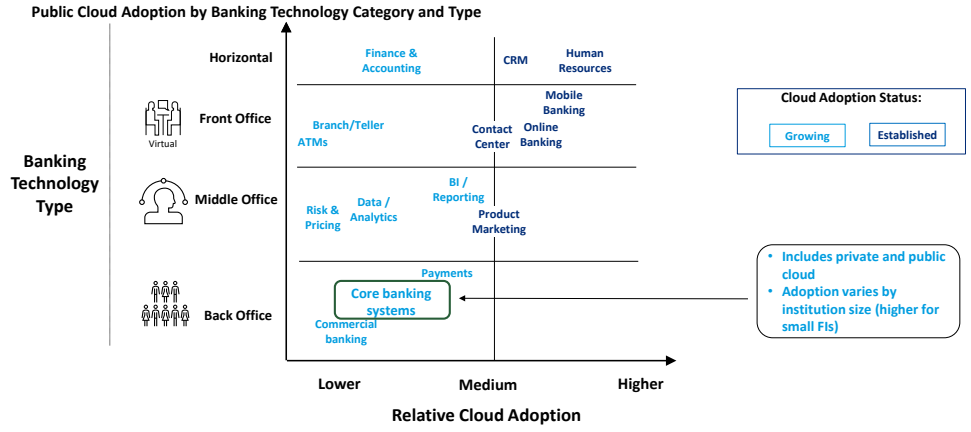
Most other cloud-native core banking system providers are based in Europe (such as Tuum or SaaScada) They are not targeting the North America community banking segment, nor does Celent expect them to. Cloud-native core banking system vendors that started by focusing on credit unions could cross over into community banking. For example, Nymbus currently sells to both credit unions and banks, although primarily as a Banking-as-a-Service offering. On the other hand, Corelation remains focused exclusively on credit unions.

Celent sees the most predominant outcome for community bank core banking systems during the next three to five years is integrating cloud-native banking components and subsystems into legacy systems, not rapid adoption of cloud-native core banking systems.

When Will Core Systems Move to the Public Cloud?

Figure 4 highlights the Celent Banking Team's assessment of the pace of transition to the cloud by type of software, based on our survey data, client engagements, and internal judgement. It segments 15 different banking technology categories by technology type (front, middle, or back office banking technology), horizontal technology, and relative cloud adoption compared with the other banking technology types.

Figure 4: Public Cloud Adoption by Banking Technology Category and Type



Source: Celent (September 2024)

The legend describes Celent's qualitative assessment of the public cloud adoption rate into established and growing categories. The light blue indicates lower cloud adoption rate technologies that are growing, including core systems.

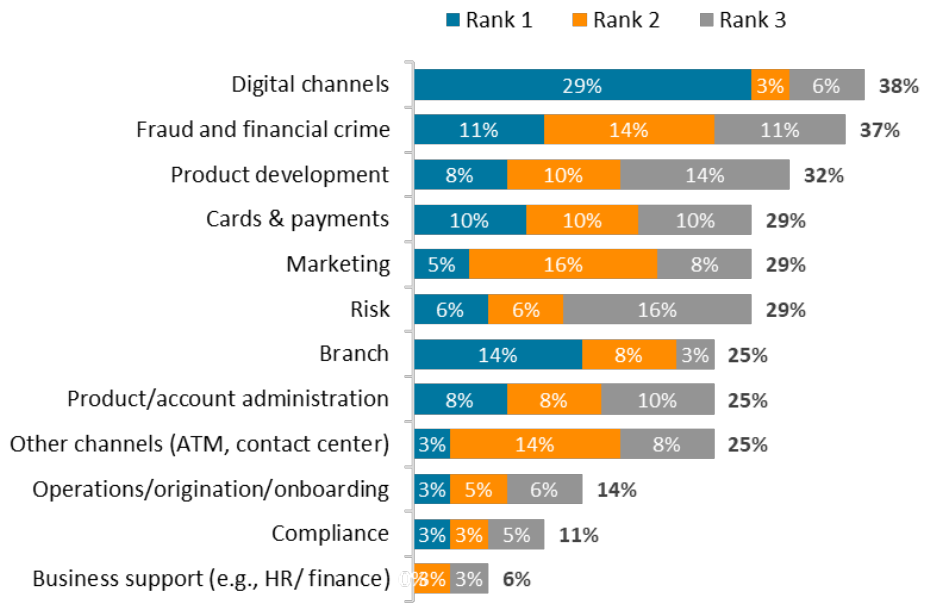
Celent believes that with higher adoption of the digital channel technologies especially, the next big areas for public cloud adoption are for access to customer

information, products, and data in the middle/back office to improve front office customer engagement, sales, and service.

Community bank core banking platforms are within the scope of future public cloud growth. However, use of cloud technology in various forms (private, hybrid, public, SaaS) is now a major consideration for banks, even for community banks. Some of the vendors in this report are dipping their toes into it, while others are waiting for demand to increase and the cost/benefit analysis to improve.

Figure 5 supports Celent's qualitative assessment of cloud adoption by banking technology. Financial institutions see digital channels having the greatest shift to public cloud technologies in the coming 18 months.

Figure 5: Public Cloud Adoption by Banking Technology Category



Question: Which of the following areas will see the greatest shift to SaaS or public cloud technologies at your institution in the coming 18 months? N=63.
Source: Celent Dimensions Survey 2024

The product and account administration category includes core banking systems. Core banking systems has the fourth largest number of Rank 1 plans among the categories listed.

THE NORTH AMERICAN BANKING MARKET

The unique structure of the US banking sector has created a two-tiered core banking systems market (community banks and mid-size/large banks), with more new entrants for large banks and no new entrants for community banks.

This report focuses on community banks, which Celent defines as banks in Tiers 5 and 6 based on their institution's asset size (see Figure 6), effectively including banks below $20 billion in assets.

Figure 6: Celent's Tiering Structure for US Banks

Celent Tier	Assets	Description	Illustrative examples
Tier-1 "Global's"	>$500B	• Large scale banks with nearly national geographic coverage and complete balance sheet and product capabilities • Seven (7) in the United States (12/31/22); national (digital), regional, state, and local presence in many markets • IT budgets $5 - $15 billion;	JPMorgan Chase & Co. Bank of America
Tier-2 "Super Regionals"	>$100-$500B	• The largest regional banks (aspiring to be national) with excellent regional coverage and strong market share in select markets • About 12 in the United States; state and local presence in 10-20 state markets; Tend to dominate in their region • IT budgets in the hundreds of millions to low billions	KeyBank Fifth Third Bank
Tier-3 "Large Regionals"	<$50-99B	• Regional or local universal banks with strong market positions in the markets they operate • Former systemically important FI threshold; regulator, risk management, security and capital requirements increase • IT budgets in the tens to low hundreds of millions	Webster Bank Comerica Bank
Tier-4 "Regionals"	$20-49B	• Need to grow organically and/or through acquisition to achieve financial and operational economies of scale • Begin shifting from line of business technology applications to enterprise-level applications • IT budgets in the low to mid-tens of millions	BOK Financial Umpqua Bank
Tier-5 "Super-Community Bank"	$1-20B	• Second largest tier segment based on number of institutions • Also includes 270+ "large" credit unions • Heavier reliance on large core banking system providers • Regulatory, risk, capital, and IT requirements increase at $10 billion in total assets	ThirdFederal Bremer Bank First Midwest Bank
Tier-6 "Community Banks" and Credit Unions	<$1B	• Local financial institutions (banks, credit unions and savings institutions with nearly all customers located within the branch geographic footprint • Buy (not build) virtually all technology • Some technology vendors segment Tier-6 further at $100M-$1B and under $100MM	Bank Midwest First Commerce Bank
Specialty institutions		• Consumer lenders (2,866) • Agricultural (1,346) • Independent Mortgage Banks (401) • Other specialized (226) (including captive auto finance) • Credit card banks (12) • International (5)	PENNYMAC Ford

Source: Celent

Community banks tend to operate within a state or small group of states in a single region and tend to focus on retail and small business markets (although the banks may also provide commercial banking capability).

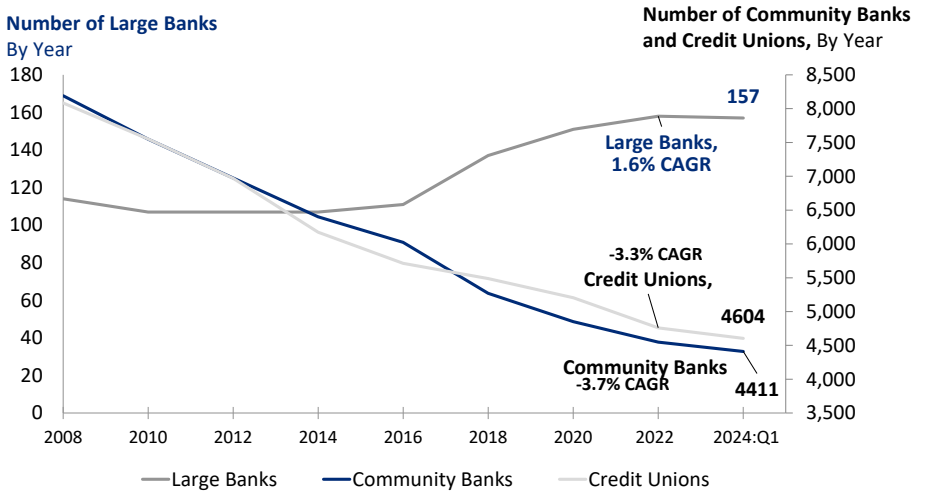
In contrast, larger banks in Tiers 1–4 operate across one or more geographic regions and are the largest providers of corporate, commercial, and business banking.

The Community Banking Market Continues to Shrink

Figure 7 shows that the number of financial institutions has decreased significantly over the last two decades, with a negative compound annual average growth rate of 3.5% from 2007 to the first quarter of 2024. This negative trend has been ongoing since the 1980s.

The number of community banks continues to drop at a compound annual growth rate (CAGR) of (3.7%) during the past 17 years. This decline is faster than the decline for credit unions. While there are new bank charters issued every year, this number is far less than banks that disappear through mergers, acquisitions, and failures.

Figure 7: Number of US Financial Institutions, 2007–2024 Q1



Sources: FDIC, CUNA, CUNA Mutual Group, Celent analysis (March 31, 2024)

The primary drivers of the decline in community banks is new banking regulation and the relative operating and financial inefficiency of smaller financial institutions.

Implications for the Core Banking Systems Market

Competition for a shrinking pie of customers and prospects means that core banking system vendors need to fight harder to retain clients and grow revenues. The primary method is to sell more of their ancillary systems to increase total revenues from each remaining client. It also means that vendors need to think strategically every year about core systems enhancements to attract retail clients. Community banks are the largest market in terms of number of customers and customer wallet share, and are arguably the core vendors' most important foundational customer segment.

Core systems consolidation, maintaining fewer cores, and migrating clients to surviving cores is another path to net revenue growth and cost reduction.

However, vendors are hesitant to do this in part because it increases the possibility that their clients will shop for a new core from a competing vendor. In addition, core systems conversions are difficult and many clients will not want to do it. Instead, where a core provider has multiple core systems, they may emphasize one system over another as their better solution for clients looking to upgrade. For these additional reasons, core system enhancements are a huge strategic imperative.

This report is therefore critical for core vendor business and technology strategy as well as the community banking market.

Qualities to Consider in a Community Bank Core System

For institutions considering core system replacement there are multiple factors to consider. These can be broadly divided into three main categories:

- *Business IT capabilities* – The ability of the platform to support current and future business requirements
- *Technology architecture IT capabilities* – The underlying IT architecture of the platform to deliver effective performance, covering resilience, scalability, integration, and change agility
- *Execution capabilities* – The ability of vendor and platform to enable successful project delivery (time, cost, and completeness) and ongoing support and innovation

Regarding functional capabilities, most community bank platforms have reached a high level of maturity, with leading vendor systems deployed across hundreds of community banks. Key considerations here include:

- While current functional fit is important, the ability to meet future requirements should be weighted highly. The ability of a platform to create and deploy innovation, quality of the vendor road map, and power to influence vendor development are critical to allow banks to evolve to meet future demands.
- Leading vendors should have best practice models based on wide market requirements. Bank should avoid temptation to customize (through programming versus configuration) wherever possible, particularly if this is to merely replicate existing processes. Systems should support extensive configuration and ensure that customization is outside the main platform.
- For the community banking market, most vendors will have ancillary offerings (such as in channels or payments) that support the broader bank as a complete entity. This will often be pre-integrated with the vendor's core platforms to provide a "bank-in-a-box" capability. While this may be desirable (particularly for Tier 6 institutions), the ability to also work with best-of-breed alternative platforms outside the vendor is important.
- Similarly, vendors are increasingly providing the ability to rapidly partner with fintechs offering innovative solutions through pre-integrated and vetted marketplaces that allow rapid onboarding.

- Institutions should ideally look for product- and regulation-specific experience when selecting a platform, given the US market's complex regulatory environment.
- Most platforms will have a high level of functional maturity for retail banking products. However, significant differences in functionality strength do occur across other lines of business (particularly commercial banking and payments).

Given the importance of a vendor's ability to adapt to future functionality requirements, one of the major shifts Celent has seen over the last decade in core selection prioritization has been a stronger focus on IT architecture capabilities over business IT functionality. The technical architecture and strength of the platform should be a top consideration in platform selection, as this will define the ability of the platform to support and adapt to future business needs. Figure 8 lists key IT architecture requirements for a community bank core system.

Figure 8: Key IT Architecture Requirements for a Community Bank Core System

1	**Resilience** 24x7x365 with automatic and fast recovery	6	**Extensive automation** End-to-end process orchestration with high levels of STP
2	**API-first / ecosystem-enabled** Openness to innovating with ecosystem at scale	7	**Continuous product innovation** High flexibility and configurability to enable product innovation and management
3	**Data-oriented** Ease of harnessing data to prove insight and improve outcomes	8	**DevOps pipeline** Ability to roll out and iterate innovations with speed
4	**Scalability** Ability to scale effortlessly to meet volume growth of digital and open banking / payments world	9	**Robust security** Security-first design supporting zero-trust principles
5	**Modular design** Ability to obtain and enhance capabilities specific to business requirements	10	**Cloud-enabled** Ability to harness elasticity, agility, and automated provisioning of cloud

Source: Celent

While execution success or failure for core migration and/or transformation is not solely the responsibility of the core vendor (most challenges in core migration lie in working with old platforms), a strong track record of successful deployments should be a key selection criterion. Other considerations include:

- **What is the availability of professional services workforce** trained and experienced with the core banking system platform (both directly with the vendor and in the broader professional services / systems integrator community)?
- **What is the vendor's experience in implementing migrations** of similar complexity to an institution's own requirements (institution size, line of business / product mix, age and complexity of existing cores)?

- **What project management, migration methodologies, value realization, and project accelerators** does the vendor provide?
- **Post-implementation support:** How does the vendor provide ongoing maintenance, support upgrades, training, and servicing?
- **What is the cultural fit of the institution with the vendor**? While a "soft" factor, cultural fit is one that is often undervalued in execution success. In particular, banks should decide whether they are looking for a platform/product or a partner.
- **Vendor and platform viability:** What is the vendor's ability to achieve and maintain use of leading technologies and technology architecture? What is the importance of, and commitment to, the platform for the vendor? What is the possibility that the vendor will be acquired in five to ten years?

Community Bank Core System Vendor Landscape

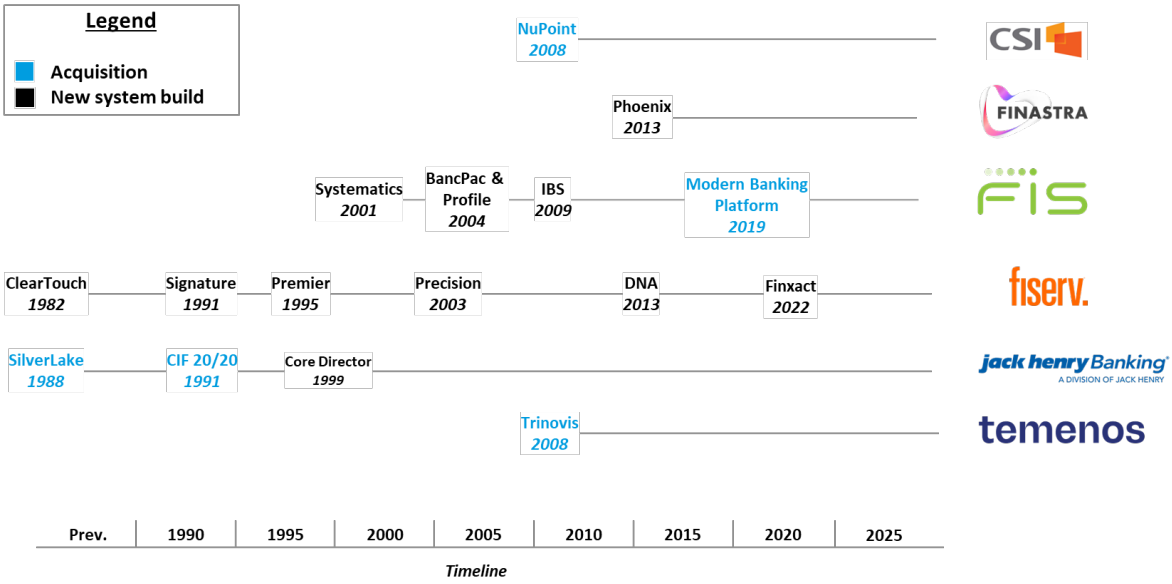
The community bank core systems market dynamics have similarities and differences from the mid-size/large bank core systems market. Main differences include:

- Much smaller revenue per customer
- Fewer bank resources and *relative* lack of technology expertise
- No new market entrants focusing on regulated financial institutions
- Few cloud-native core banking systems options

Cloud-native ("next generation") core banking systems vendors are less attracted to the community banking market due to small revenue per customer and the strength of the incumbent vendors. Celent believes that cloud-native core vendors will re-examine the community banking sector as their systems mature and "out-of-the-box" functionality improves. Next generation core vendors are evaluated in Celent's Continuous Digital Transformation in the Cloud: Next Generation Core Platforms that Will Future-Proof Banking.

Figure 9 is a timeline of core system introduction and acquisition in the community banking core systems market. These vendors have entered the market and grown primarily through acquisitions (Finastra, FIS, Fiserv, and Temenos) with some new system builds (Jack Henry). Their systems focus primarily on the lower Tier 5 and 6 asset-size tiers.

Figure 9: Leading Community Bank Core System Vendors



Source: Celent

CSI offers two primary core banking platforms in the North American market: NuPoint and Meridian.NET. NuPoint was acquired in 2008.

Finastra (created through the merger of Misys and D&H), while non-US headquartered, has a sufficient US client base that allowed it to be considered as a realistic alternative to users of incumbent US-provider core systems (particularly through its acquisition of Harland Financial Solutions as part of D&H).

Fiserv pioneered the growth-by-acquisition strategy in the 1980s and 1990s, acquiring more than 90 businesses (including multiple core banking system vendors), with DNA and more recently Finxact (a next-gen, cloud-native core provider) being their most technologically modern core systems.

Jack Henry & Associates also began during the 1980s–1990s and made one core system acquisition a decade later. Other acquisitions since then have largely been complementary (i.e., banking non-core systems) rather than adding new cores.

FIS is also a market consolidator that began life in the title insurance industry. They led the way in bank system acquisitions during the 2000s—starting in 2003 with its acquisition of Alltel Information Services (provider of a large bank core called Systematics) and capped in 2009 by the acquisition of Metavante (the provider of the leading community bank core system called IBS), which had also acquired Bankway from the Kirchmann Group. FIS' most recent offering (Modern Banking Platform - MBP), is a next generation core system developed internally.

Temenos is the only core banking system vendor based outside North America to enter the community banking market. Temenos acquired TriNovis in 2008 and sells its T24 core banking platform to community banks and mid-size/large banks in North America.

METHODOLOGY AND ABC ANALYSIS

For this report, Celent approached the leading community bank core banking system vendors in North America. Five vendors submitted the necessary information, client references, and met inclusion criteria for Celent's in-depth evaluation of core banking systems.

Inclusion Criteria and Methodology

This report includes the leading incumbent core banking vendors that provide platforms designed for community banks. For some vendors offering multiple platforms, evaluation has been made for their individual systems. For inclusion in this community bank report, Celent has restricted inclusion to platforms where vendors have a minimum of 50 live banking clients that are Tier 5 or Tier 6 (under $20 billion in total assets). Vendors have clients in both asset-size tiers, and a few have some credit union clients.

It should be noted that the scalability capabilities of some of the platforms in this report mean that some vendors can and do support Tier 3 and 4 institutions. In most cases, however, these larger banks are long-time clients and the solution is not adding new clients in these higher asset-size tiers.

Inclusion in this report required full participation in the study. This included detailed responses to an in-depth RFI covering components and various subcomponents summarized in Table 1, as well as briefings, demonstrations, and validation and feedback with several client references (covering technology, integration, implementation, and post-implementation aspects).

Table 1: Components of Celent's Methodology

Criteria	Subcriteria
Advanced Technology	System architecture
	Responsiveness
	Deployment options
	Standards/emerging business models
	Data management
	Integration methods
	Scalability
Breadth of Functionality	Functional availability
	User interface

	Customization
	US regulations
	US products
	Product management
Customer Base/Depth of Service	Tier 5 clients
	Tier 6 clients
	New deals
	Total clients
	Reference comments
	# of professional services staff available
	Quality of training offered
	Implementation capabilities
	SLA feature availability
	Disaster recovery process

Source: Celent

Comparative analysis of systems is based on granular scoring across details provided from multiple information sources provided by the vendors. We begin by applying our pre-defined assessment frameworks to the facts. Then we conduct an independent appraisal of the systems. Finally, we apply vendor client (financial institution) feedback both to validate vendor-provided information and as a significant direct input into the final scores.

Overall scoring is based on Celent's weighting of the importance of each scoring criterion. Weighting is applied to functionality, IT architecture, client base, and service specific to North American community banks. Evaluation and positioning of vendors is similar to but has distinctions from systems covered in other ABC reports (such as Retail Banking Core Banking Systems: International Edition).

Additional Details about Our Methodology and Analysis

- Score differences have been accentuated in the ABC analysis chart, with scales normalized to aid differentiation. It should be noted that all solutions scored well, being at least Noteworthy Solutions, and should be considered strong platforms.
- Institutions reading this report should consider the specific needs of their institution and market/customer segments. Clients can utilize our advisory service or consulting services for deeper analysis.
- The mix of vendors and platforms includes Celent subscribers and nonsubscribers. We make no distinction in how each are presented, nor does it affect our ratings.
- Due to the strict inclusion criteria for this report (particularly client references and full RFI response) the ABC analysis chart

does not provide a complete view of the vendor landscape. For example, nonparticipating core vendors may be appropriate for consideration by certain banks, and while Celent was not able to obtain in-depth information for the purposes of this report, clients can still utilize our advisory service for opinions on these vendors/platforms.

How Community Banks Should Use this Report

This analysis is based on Celent's own assessment criteria, which considers the wider needs of the North America market as a whole. Platforms included in this report all had strengths and weaknesses, and each platform could be a good fit for an institution depending on its specific requirements and firmographics.

Individual banks should use the profiles in the context of their own specific situation. Core systems positioned lower in Celent's ranking may be a good fit for some financial institutions for various reasons, such as price, business-specific functionality, existing technology environments and expertise, or customer segment focus. *The ABC analysis chart should be used in conjunction with the vendor-specific profiles* matched with your individual bank's needs.

This report is the result of an exhaustive review of widely available core platforms in the community banking market today. The methodology of this report involved making assessments and assigning ratings to many vendor section criteria across the spectrum of Celent's ABC methodology.

Celent finds that every platform in this report excelled in certain areas. On one hand, this result is not a surprise, as the decline in the number of community banks and intensified competition between vendors—predicated on their interest in cross-selling a new client bank a wide range of ancillary products and solutions—has led to a maturing of the systems.

On the other hand, it would be easy—but wrong—to conclude that a well-performing system in this review would automatically perform well at a specific financial institution. Multiple factors—*growth strategy, enterprise IT architecture, and ancillary technology the core vendor provides—are all important to a community bank CIO* when evaluating, selecting, and implementing a new core banking system platform.

The correct question for a bank to ask is, "What is the best core system platform for my institution for now and in the future?" This broader question (how the strengths and weaknesses of a particular core banking system platform measure up to a bank's preferences and priorities) speaks to the overarching role of solution fit in guiding a bank toward one platform or another.

Banks also need to ask themselves, "What has the incumbent core vendor done to modernize the system, how large are their research and development expenses, and are they doing more or less than other vendors?" If your core system vendor is doing less than others, consider a different core provider and issue an RFI. Then decide if you should issue a RFP and go through a vendor selection process.

Utilizing Celent in Core Vendor Selection Projects

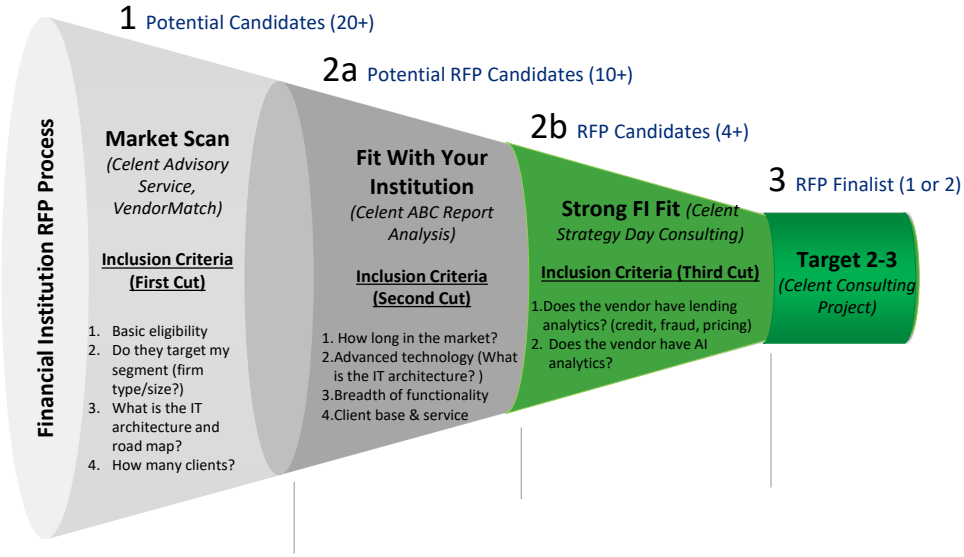
Celent core banking ABC vendor assessments provide an overview of key trends impacting the core banking system market, detailed comparisons of the vendors, and in-depth analyses of the main core platform vendors in the community banking market. Within each profile, Celent provides insight into functionality and features that are strong or present opportunities for improvement relative to the market.

Celent clients also use Celent's broader array of services (research, advisory, and consulting work) in the following ways:

- Financial institutions monitor current and potentially future vendors on an ongoing basis. They as utilize Celent for strategy consulting projects and vendor evaluation (RFI, RFP, selection, and implementation).
- Technology providers and IT services firms use Celent for product benchmarking, system enhancement recommendations, and IT road map prioritization.

Figure 10 shows how Celent financial institution clients use our research, advisory, and consulting services for a more in-depth exploration of their individual bank's specific strategic, technological, and operational needs. Support includes advisory calls, strategy days, and consulting projects.

Figure 10: How Celent Clients Use Our Research, Advisory, and Consulting



Source: Celent

Solution Provider/Vendor Clients: Use these analyses to compare and benchmark their solutions with competitors. They also use them to identify gaps in strategy and functionality, educate internal staff, update their IT road maps, and market their products.

ABC Vendor View and XCELENT Awards

Evaluation was conducted on the following vendors and platforms (Figure 11). This covered five vendors, across ten different platforms.

Figure 11: North American Core Banking System Vendors in this Report

Company	HQ	Platform	Community Bank Clients
CSI	Paducah, KY	NuPoint	418
Finastra	Lake Mary, FL	Fusion Phoenix	106
FIS	Jacksonville, FL	HORIZON	358
Fiserv	Milwaukee, WI	Cleartouch	180
Fiserv	Milwaukee, WI	DNA	557
Fiserv	Milwaukee, WI	Precision	430
Fiserv	Milwaukee, WI	Premier	935
Fiserv	Milwaukee, WI	Signature	53
Jack Henry Associates	San Diego, CA	Core Director	176
Jack Henry Associates	San Diego, CA	Silverlake	490

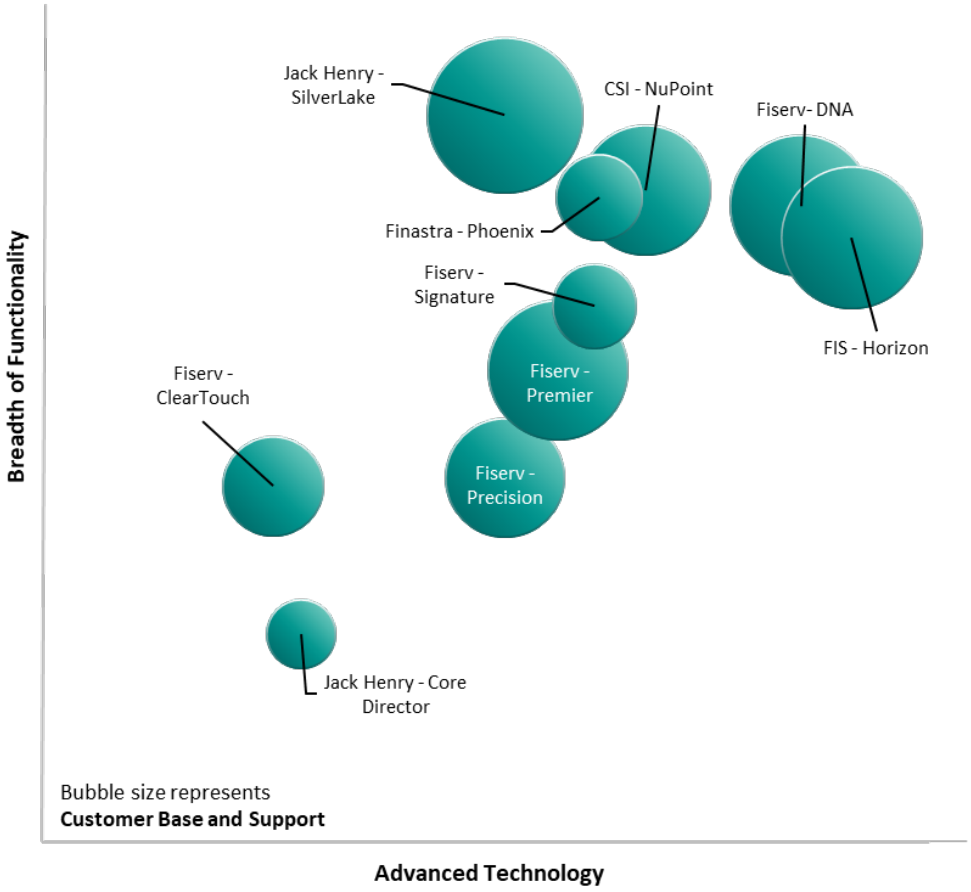
Source: Vendor RFIs, Celent analysis

This evaluation resulted in a score for each vendor across the three main criteria (advanced technology, breadth of functionality, and client base and service) described in Table 1. Figure 12 summarizes the final results of our evaluation.

It should be noted that score variations have been normalized for the chart to accentuate differentiation in positioning. This heightens variations between respective scores, and in many cases variation in base scores between vendors for each axis was fairly low.

Interestingly, and reflecting the evolution of the core banking marketplace described in previous chapter, there is no one clear overall platform based on aggregate performance across all three axes. Based on total evaluation across the metrics, all of FIS Horizon, Fiserv DNA, and Jack Henry SilverLake could be considered leading platforms, with CSI NuPoint also strongly positioned based on overall scores totals across the three dimensions.

Figure 12: ABC Analysis – North American Community Bank Core Systems



Source: Celent

- From an advanced technology perspective, the leading scorers were FIS Horizon and Fiserv DNA. Here Fiserv DNA has slightly stronger underlying technology characteristics based on Celent's evaluation, with FIS Horizon receiving very strong client feedback on its technology performance and capabilities.
- That said, it is worth noting that the highest base score for technology across the peer group was 3.9 out of 5, with all platforms based on older technologies in comparison to the latest next generation platforms.
- From a breadth of functionality perspective, Jack Henry SilverLake was strongest here, with CSI NuPoint also scoring highly, although it should be noted that variation in functionality scores was relatively low (base scores distribution was between 3.3 and 4.1 out of 5). Given the target market, most vendors have platforms (either with the core directly or through integrated ancillary applications) that can meet the business functional needs of the North American market.
- From a customer base and support perspective, Jack Henry SilverLake was again the highest scorer. All vendors have strong support capabilities for the North American market, with the SilverLake platform having a

combination of customers based across different types of community banks combined with strong growth in the market.

- Note that from an overall client base perspective, Fiserv as a company is the dominant provider; however, analysis is evaluated for each individual core. In practice, Fiserv would be able to achieve support and R&D synergies across clients.

Based on the evaluation, Figure 13 shows the core banking systems receiving awards for our three categories.

Figure 13: XCELENT 2024 Winners for Community Bank Core Systems

Source: Celent

Celent Technical Capability Matrix

The Technical Capability Matrix is relatively new to Celent's solution reports. We've placed each solution into one of five categories based on the sophistication and breadth of its technology and functionality (i.e., plotting the A and B dimensions). Solutions are not ranked within the assigned category; they are listed alphabetically.

The five categories are:

I. **Luminary:** Excels on both Advanced Technology and Breadth of Functionality.

II. **Technology Standout:** Excels in Advanced Technology but doesn't yet have as many features as leading competitors (low on Breadth of Functionality). Often newer, these solutions typically have chosen a focused set of functionalities to begin their journey.

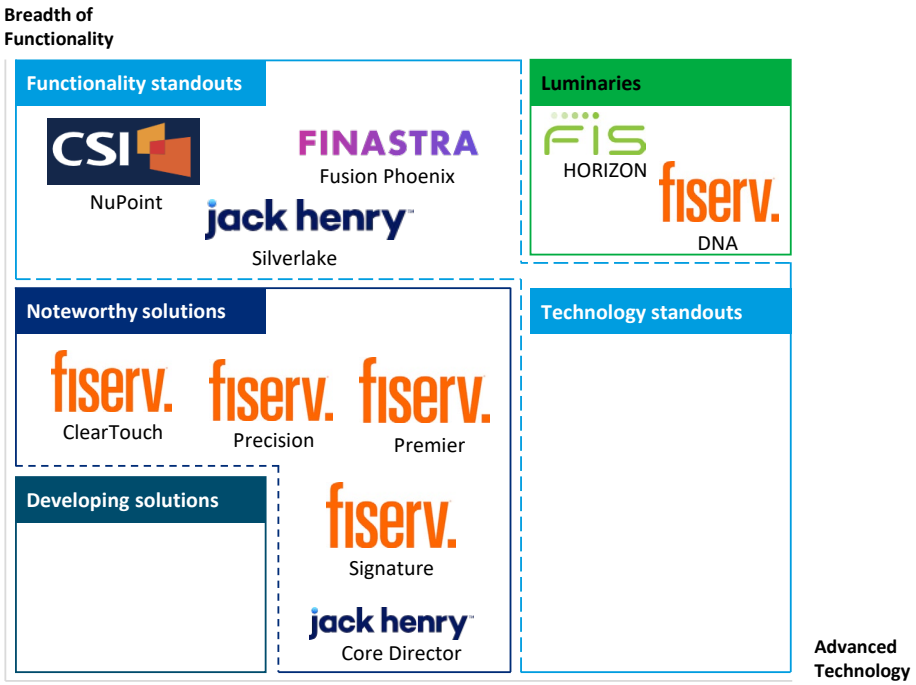
III. **Functionality Standout:** Excels in Breadth of Functionality, but the technology isn't as advanced as leading competitors. Often more established, these solutions have built out a robust set of features with technology that may not be cutting-edge.

IV. **Noteworthy Solution:** Relatively lower on both dimensions, yet still worthy of consideration by some financial institutions.

V. **Developing Solution:** Typically, new to the market and low on either Advanced Technology or Breadth of Functionality. Has the potential to mature into a more robust offering over time.

Figure 14 shows the core banking systems placed in these five categories.

Figure 14: Celent Technical Capability Matrix: Community Bank Core Systems



Source: Celent

Luminaries

On this basis, the platforms deemed luminaries are from the two largest vendors with platforms that combine relatively strong technology architecture with a high breadth of functionality (complemented by significant customer base and support capabilities).

Functionality Standouts

Given the xCelent award for Breadth of Functionality, Jack Henry SilverLake was unsurprisingly awarded a Functionality Standout position. However, both CSI NuPoint and Finastra Phoenix scored highly here, and despite being challenger providers to the "Big Three" they offer platforms that meet the needs of North American community banks.

Technology Standouts

Given that overall technology evaluation scores were largely good rather than outstanding, it was decided to not award any Technology Standout scores for this peer group. While many platforms have been modernized (particularly in terms of use of APIs and ability to work on a best-of-breed rather than single-vendor basis), most are still relatively nascent in cloud-native architecture practices (e.g., microservices).

Noteworthy Solutions

That said, the remaining vendors that met inclusion criteria for this report all have Noteworthy Solutions. As mentioned, the variation in baseline scores for most platforms was relatively low, and each platform offers a variety of benefits and capabilities which means they excel for specific types of institutions or certain needs/preferences. Each is worthy of consideration, with all providing solutions tailored to the needs of the North American community bank market.

Developing Solutions

Given that all solutions are well-established and mature platforms, there are no developing solutions included in this evaluation.

Considerations

This analysis is based on Celent's own assessment criteria, which considers the wider needs of the North American market, specifically in relation to needs of Tier 5 and Tier 6 banks, although with consideration that some Tier 5 banks may have ambitions to grow to Tier 4 (or higher) banks. Platforms included in this report all had strengths and weaknesses, and each platform could be a good fit for an institution depending on its specific requirements and firmographics.

Individual banks should use the profiles in the context of their own specific situation. Core banking systems positioned lower in Celent's ranking may be an excellent fit for a large number of institutions for various reasons, such as price, business-specific functionality, existing technology environments, geographic footprint and expertise, or customer segment focus. The ABC analysis chart should be used in conjunction with the vendor-specific profiles.

Additional considerations:

- As mentioned, score differences have been accentuated in the ABC analysis chart, with scales zoomed in to aid differentiation. It should be noted that all solutions scored well, being at least Noteworthy Solutions, and should be considered strong platforms.
- Institutions reading this report should consider the specific needs of their institution and market/customer segments. Clients can utilize our advisory service or consulting services for deeper analysis.
  - Institutions seemingly in the middle or bottom of the pack may be excellent candidates based on a bank's needs.
  - Reweighting certain characteristics (hosted, on-premise only, cloud-enabled) could move laggards into a higher position.
- The mix of vendors and platforms includes Celent subscribers and nonsubscribers. We make no distinction in how each are presented, nor does it affect our ratings.
- Due to the strict inclusion criteria for this report (particularly client references, full RFI response, and 50 clients in the Tier 5 & 6 segments) the ABC analysis chart does not provide a complete

view of the vendor landscape. Excluded platforms may be appropriate for consideration by certain banks, and while Celent was not able to obtain in-depth information for the purposes of this report, clients can still utilize our advisory service for opinions on these vendors/platforms.

VENDOR PROFILES

This section provides greater detail on the vendors and their platform offerings. While this offers a deeper overview of each platform as well as Celent's opinion, readers should consult Celent's digital platform VendorMatch for even greater granularity.

Each profile gives an overview of a vendor and its core banking solution. Celent developed the list of vendors based on our knowledge of the market and from our interactions with banks and other vendors looking at core conversions and other markets. Analysts built each profile in two stages:

> **Phase 1**: During the information-gathering stage, we asked vendors to fill out a detailed survey document. Then we went through a company and product overview briefing and asked questions about the submitted material. Finally, we contacted reference clients to cross-check vendor claims as well as obtain a "boots on the ground" view of the product.
>
> **Phase 2**: We shared with vendors their draft profiles and asked them to check facts and approve the content. Celent only makes changes to factual errors during transcription. Subjective disputes are not considered.

Within each profile, Celent provides insight into functionality and features that are strong or present opportunities for improvement relative to the market. The report focuses on core banking systems for community banks operating in North America that provide full banking platforms and have a minimum number of 50 live clients in this region in the Tier 5 or lower banking segments (i.e., less than $20bn assets).

Vendor Comparison Tables

Comparative analysis of the vendors is included in the report Appendix and on Celent.com in PowerPoint format: Retail Banking Core Banking Systems: North American Community Bank Edition. These vendor comparative tables are of two types.

- The first type compares the company, product, target segments, customer base, and core banking system IT architectures
- The second type compares the detailed features and functionalities of each system for retail banking and lending, commercial banking and lending, cards and payments, channels, and shared services.

FIS: HORIZON

FIS is a public company headquartered in Jacksonville, Florida. It is a leader in technology, solutions, and services, with presence globally across more than 50 countries in North America, Latin America, Europe, and Asia Pacific regions. The company provides a broad array of capabilities across the banking, merchant, and capital markets sectors through an array of mission-critical platforms and processing solutions to meet industry-specific needs of different segments and client types. Within the banking sector, FIS offers multiple core banking systems, providing a range of platforms for different types and sizes of institution.

Company and Product Snapshot

Table 1: Company Snapshot

Year Founded	1968
Headquarters	Jacksonville, FL
Number of Employees	55,000
Revenues (USD)	$10 billion
Financial Structure	Public company NYSE: FIS
VendorMatch Link	https://www.celent.com/vendormatch/discovery/solutions/704196905 https://www.celent.com/vendormatch/discovery/vendors/fis

Source: Vendor RFI

Table 2: Product Snapshot

Name	HORIZON
Year Originally Released	1989
Current Release and Date of Release	2024.01/2024
Revenue Derived from the Product	FIS does not disclose revenue at the solution level.
Target Market	Commercial, retail, and savings banks in the domestic US and US territories. The majority of HORIZON clients have <$10B in assets, with a number of institutions in the $10B to $25B range.
R&D Expense	FIS typically reinvests 7% to 8% of global revenue in R&D.
FTEs Providing Professional Services for Product	N/A

Notable Clients	Amalgamated Bank, National Capital Bank, Newburyport Bank
User Conference	FIS Emerald

Source: Vendor RFI

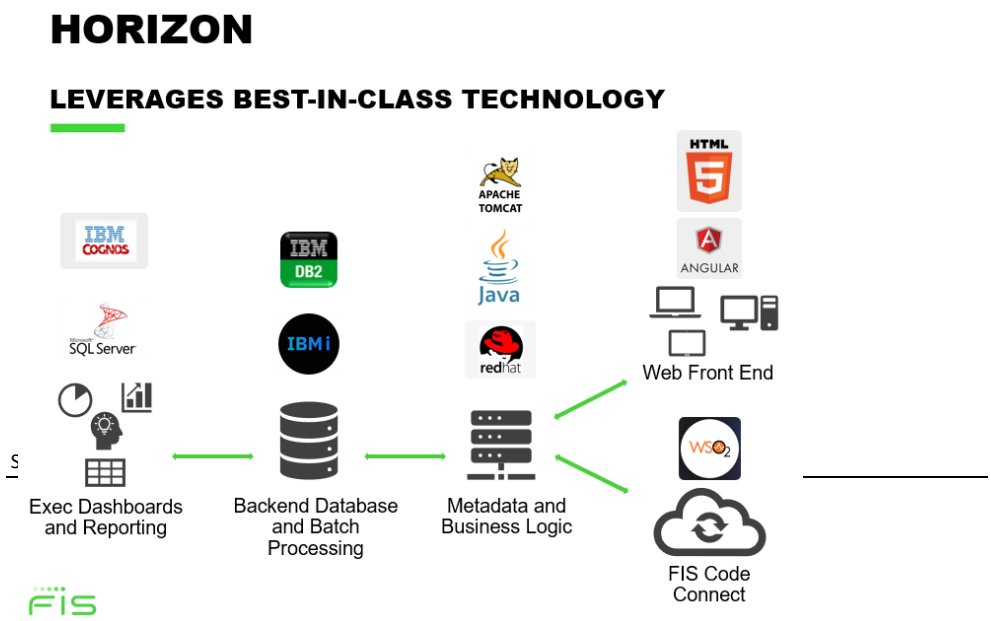
> HORIZON provides a robust set of base functionalities, augmented with many pre-integrated FIS applications, including commercial/treasury solutions, online and mobile banking for consumer and commercial customers, bill pay, debit and ATM processing, and many others. Bankers can also easily integrate a wide array of bank-chosen solutions using FIS' Code Connect APIs.
>
> – FIS

Platform Summary

HORIZON Financial Software Corporation is a company that was formed in 1987 through a management buyout of the financial software division of branch automation specialist Systematics Corporation. FIS's predecessor company Systematics acquired HORIZON in July of 1990, two months after Systematics itself had been acquired by Alltel Information Services.

HORIZON was developed utilizing the RPG-IV programming language and runs on IBM's Power Systems mid-range hardware. The IBM Power System is a time-tested hardware platform with more than 30 years of success supporting businesses around the world and has been modernized to support the latest security and virtualization capabilities needed to power large, mission-critical applications.

Figure 1: HORIZON IT Architecture



Integration tools include HORIZON APIs that are hosted on the FIS Code Connect Marketplace. The API catalog provides an easy-to-use portal that serves as the library for all FIS APIs and empowers application developers to begin coding in minutes. Using HORIZON APIs within the FIS Code Connect Marketplace, developers can browse through the catalog of existing HORIZON APIs, read documentation describing their use, and experiment using them in a "sandbox" environment. Developers can then subscribe to the APIs they want and use them in an actual integration. HORIZON API technology, with its open and more streamlined approach to integration, can address a series of business and technology challenges and enables speed-to-market integration opportunities. The API User Acceptance Testing (UAT) environment enables a banker to test new APIs or maintain integration before scheduling for production.

Within the HORIZON modern, fully browser-based user experiences are bank-defined product controls that empower the banker to build customized products and service definitions without assistance from FIs. Product Types hold both processing controls that govern all accounts within a product type and default controls that enable override permissions to the account level. To provide perspective, the HORIZON deposit applications can support more than 46,000 bank-defined product types. Product Types, as an example, contain bank-defined service charge and fee rules, maturity controls, interest controls, penalties, and statement/notice controls. Rollout and maintenance of a new product is controlled by the banker.

Key Features

HORIZON is a tightly integrated core banking solution that covers a wide range of account processing applications that range from deposits to mortgages to commercial loans.

The system also includes an integrated ACH module, a debit/ATM card application, commercial account analysis, a robust general ledger application, a collections application for both loans and overdrawn deposits, a construction project management application, a commitment application, a deposit origination set of services, and a deeply integrated teller application.

HORIZON is accessed through a modern browser user experience that goes from branch desktops to remote using laptops, iPads, and similar HTML-friendly tablet devices.

Table 3: Key Features

1	**Architecture Overview**	Hosted core banking system where all required infrastructure including redundant hardware is hosted on the FIS Private Cloud infrastructure.
2	**Support for Cloud**	HORIZON can be deployed on premise (at the customer, at a partner, or at FIS). The FIS Private Cloud infrastructure can host the user front-end of the core to leverage the resiliency and availability for client access to critical functions, to deploy virtual servers, and monitor service functionality and performance.

3	**APIs and Integration**	Supports microservices architecture for integrating new functionality into the core, although the core itself is not built on microservices architecture, is not stateless, and does not support container orchestration, service mech support (e.g., Istio), or cloud-native streaming and messaging.
4	**System Flexibility**	HORIZON APIs are designed to eliminate the need for costly custom interfaces. FIS Code Connect is an API platform that provides a central marketplace or access point to expose and manage all FIS solutions via APIs.
5	**Real Time Capability**	HORIZON is a hybrid solution with efficient nightly batch processing while supporting real time maintenance and real time, intra-day running ledger balance updates. In addition, it also supports several critical real time transaction capabilities, such as loan payments and general ledger updates, while allowing the bank to utilize commercial-focused batch posting capabilities, including transaction grouping and posting order based upon return rights.
6	**Data Models**	Supports DB2 and SQL databases. A significant amount of data is defined in DB2 tables and fields. FIS policy is to not enable modification of the HORIZON source code or database. Source code is secured to prevent modifications that may disrupt a client's processing. Customizations are available through FIS professional services.

Source: Vendor

IT Road Map Overview

HORIZON recently completed the Angular 12 version of the XE user interface, which marked a major milestone in the platform modernization efforts. Other recent improvements included account reconciliation expansion, alerts, fee waiver reason codes, and enhanced posted exception processing.

In 2024, FIS is continuing to enhance the client experience around the platform with additional payment ecosystem enhancements (e.g., support for FedNow integration), expanded data integration investments, and investments in emerging technology integrations (e.g., banking-as-a-service).

The current road map includes the 2024 tax reporting updates, strengthening the integration of FIS payments and digital solutions, and expanding the HORIZON API catalogue.

The HORIZON team has a structured process of gathering input for future enhancements through user groups, focus groups, executive forums, and the sales process which are monitored for expansion of existing features as well as indication of industry trends that drive core system modernization. Larger, longer-term strategic enhancements are driven through the internal FIS enterprise strategic input process and feedback from client executive forums.

ABC SUMMARY

Advanced Technology | **Breadth of Functionality** | **Customer Base**

Celent Opinion

HORIZON continues to be a proven, reliable, and sought-after core solution for community banks and specialty finance institutions looking for an on-premise or FIS-hosted option that covers the entirety of its functional requirements. HORIZON added more clients than any other core system since Celent's previous North American Community Banking core system report and added the second-most net new clients during the past two years. Celent anticipates that HORIZON will continue to add new customers despite consolidation in the community banking sector.

While less of the core is exposed as APIs or built as microservices compared to other core systems evaluated in this report, clients and prospects are still attracted to HORIZON's features and functionality, hosted deployment, and ability to integrate FIS Code Connect. Banks with under $20 billion in total assets will find HORIZON to be a good choice. Larger banks or those looking for cloud deployment on a more modern technology stack may look at other FIS or industry core systems.

Functionality

Table 4: Functionality

Category	Function	In Production	Supported But Not in Production	Not Supported
Deposits	Retail Deposits	●		
	Commercial Deposits	●		
Retail Lending	Credit Card Originations	●		
	Credit Card Servicing	●		
	Consumer Loan Origination	●		
	Consumer Loan Servicing	●		
	Home Equity Loan/Line Origination	●		
	Home Equity Loan/Line Servicing	●		
	Mortgage Loan Origination	●		
	Mortgage Loan Servicing	●		
Commercial Lending	Complex Loan Origination	●		
	Small Business Loan Origination	●		
	Small Business Loan Servicing	●		
	Commercial Loan Origination	●		
	Commercial Loan Servicing	●		
	Complex Loan Servicing	●		
Other	Treasury Management	●		
	Merchant Services	●		
	General Ledger	●		

● = Available out of the box
● = Additional module – different code base, preintegrated
● = Additional Partner Module
● = Additional Core Module
● = Additional Preintegrated Partner Module
● = Not available / Not applicable / Additional Module - Non Partner
● = Composable module from ecosystem partner
● = Additional Module - Different Code Base

Source: Vendor RFI

Additional Functionality

Table 5: Functionality

Category	Function	In Production	Supported But Not in Production	Not Supported
Channels	Branch/Teller	🟢		
	Digital Banking	🟡		
	Digital Onboarding	🟡		
	Call Center	🔴		
	ATM	🟡		
Commercial and Retail Function	Currency Management	🟡		
	CRM	🟢		
	Data Warehouse	🟡		
	eStatements	🟡		
	Imaging/ECM	🟡		
Cards & Payments	Bill Pay	🟡		
	Cards Issuing	🟢		
	Payments Engine	🟡		
	ACH Origination	🟢		
	International ACH Trans (IAT)	🟢		
	P2P	🟡		
	SEPA	🔴		
	Stop Payments	🟢		
Risk and Compliance	Asset Liability Management (ALM)	🟡		
	Anti Money Laundering (AML)	🟡		
	Compliance: Know Your Customer (KYC), OFAC, Patriot Act	🟢		
	Fraud Detection	🟡		
	Risk Analysis and Reporting	🟡		

🟢 = Available out of the box
🔵 = Additional Core Module
🔷 = Composable module from ecosystem partner
🩵 = Additional module – different code base, preintegrated
🟡 = Additional Preintegrated Partner Module
🟨 = Additional Module - Different Code Base
⚫ = Additional Partner Module
🔴 = Not available / Not applicable / Additional Module - Non Partner

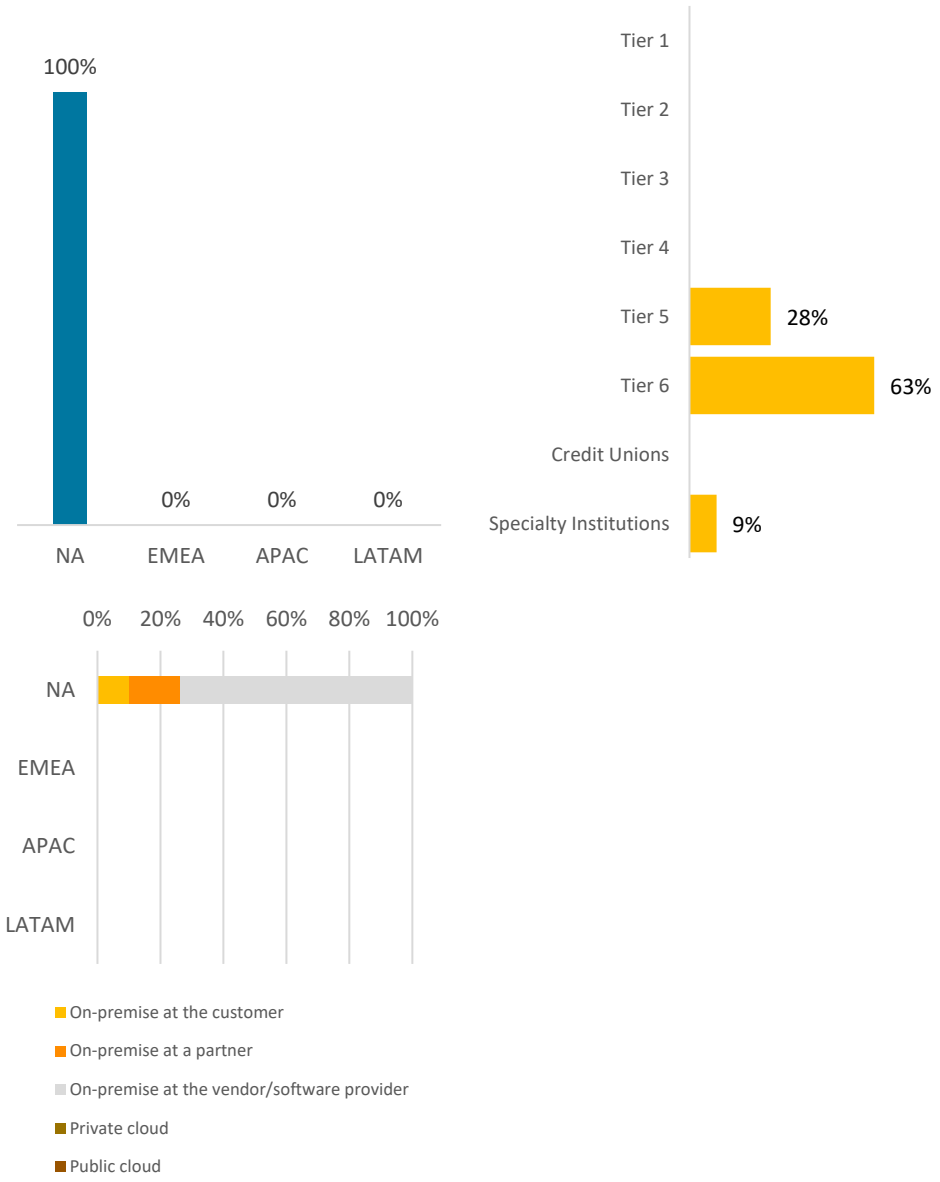
Source: Vendor RFI

Customer Base

FIS HORIZON has 370 total customers in the US, one in the Asia-Pacific region, and two in Latin America. Sixty-three percent have under $1 billion in total assets, 28% have between $1 billion and $20 billion in total assets, and the remaining customers are specialty institutions (not banks or credit unions). FIS acquired 54 new HORIZON clients during the past two years, and they acquired 74 new clients since Celent's previous assessment.

HORIZON's target market includes commercial, retail, and savings banks in the domestic US and US territories that want a core banking solution with tightly integrated ancillary surrounds for digital, payments, and electronic funds transfer.

Figure 2: FIS Client Base by Geography, Institution Type, and Deployment



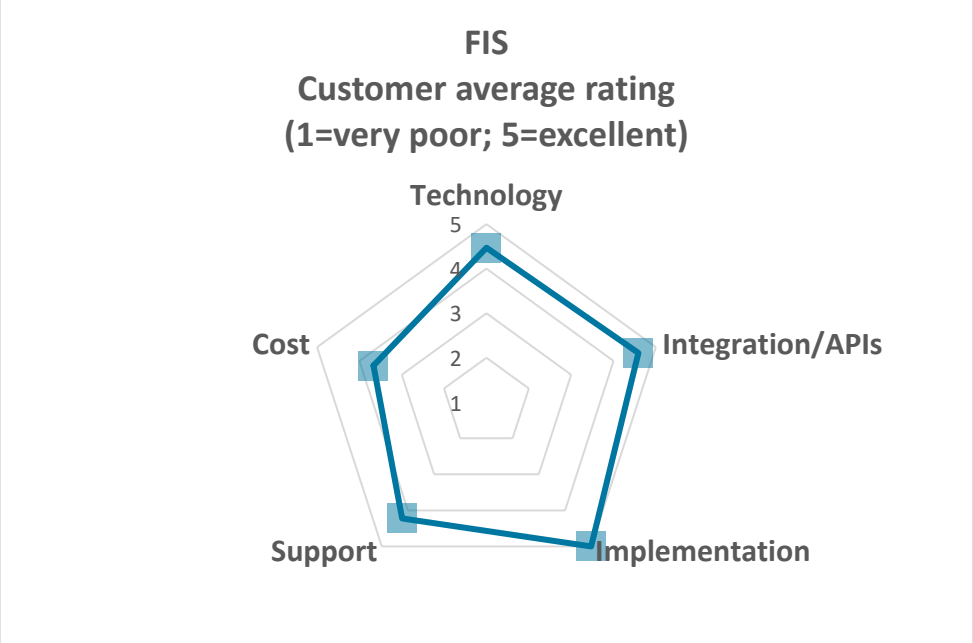
Source: Vendor RFI

Customers deploy the solution on premise, either at their own site (10%), a partner site (16%), or at FIS (74%). The FIS Datacenter manages updates on behalf of their clients. Release installs are managed with automated workflow tools embedded in the HORIZON core. Clients are provided advanced documentation that includes system impact as well as project overviews and operational procedures for adopting new functionality.

Customer Feedback

All clients surveyed have had HORIZON for two to five years. Clients rated FIS favorably overall. Within survey categories, technology was scored the highest and openness of the core and technology was seen as weaker.

Figure 3: Customer Feedback



Source: Vendor RFI

Clients felt the solution integrated most easily with their overall integration and integrated less well with channel applications. Clients have rated all aspects of implementation equally for the vendor. Ongoing system support and overall quality of professional services received the highest score, while customer feature requests heard and responded to was seen as an area of relative weakness.

When asked what they liked best, one client appreciated that the scope of what the system can do is tremendous. Another client appreciated greater flexibility than their previous core system, and another appreciated the user-friendly interface.

Technology

Table 6: Technology Options

Technology Options	Responses	
Code Base	C#: 0.25%; Java: 59.75%; Other: 40% (RPG/CL)	
Integration Methods	XML (not through web services); HTTP; RESTful HTTP style services; JSON format; Flat files	
API Details	✔	The API is documented
	✔	External systems can trigger an event in the system which can be responded to by a workflow or business rules system
	✕	API management supports local or global standards such as ACORD application creation and rendering
	✔	API sample codes are available to clients
	✔	API developer portal is available for support and descriptions
	✔	API testing portal and the ability to use scripts on website is available
	✔	The system allows API publishing in SOAP, REST, JSON, and XML style services as APIs
	✔	API version management is available
	✔	Access to the APIs is managed and use of APIs tracked by developers
	✔	Training in extending the system is offered

Legend: ✔ = Available; ☐ = Not available

Source: Vendor RFI

Table 7: SaaS Capabilities

Elements	Availability
Support a multi-tenant architecture	✔
Type of effort required to update the solution	Evergreen – all clients are on the same latest version
Cadence of upgrades for multi-tenant deployments	More frequent than every 3 months
Deployment approach support elasticity	Yes, within weeks
Current APIs-related strategy	Pre-connected cloud environment (fully

Elements	Availability
	connected and ready to use)
Ability of the deployment model to leverage a serverless approach	✕
Ability to enable independent services (microservices)	✕
Proportion of the system architected as microservices	Under 25%
Support automation of development and deployment processes (DevOps)	✔
Ability to run and deploy under containers to improve the application deployment	✕
Need for containerization to run in a cloud	✕
Ability of the system's functions and capabilities to be distributed among a private cloud and a public cloud	✔

Legend: ✔ = Yes ✕ = No

Source: Vendor RFI

HORIZON does not support public cloud deployment.

Table 8: Public Cloud Options

Providers	NA	EMEA	APAC	LATAM
Microsoft Azure	✕	✕	✕	✕
Amazon AWS	✕	✕	✕	✕
Google Cloud Platform (GCP)	✕	✕	✕	✕
Alibaba Cloud	✕	✕	✕	✕
IBM Cloud / Bluemix	✕	✕	✕	✕
Oracle Cloud	✕	✕	✕	✕
Salesforce Cloud, Force.com, AppExchange	✕	✕	✕	✕
Other	✕	✕	✕	✕

Legend: ✔ = In production; ☐ = Supported but not in production; ✕ = Not supported

Source: Vendor RFI

As mentioned, most processing is batch with memo post, but all non-monetary processing is performed in real time. For example, processing for loans, mortgages, and general ledger can be done in real time on batch-by-batch basis.

The HORIZON Core Banking Platform relies on the FIS Private Cloud infrastructure to host the user front end of the core to leverage the resiliency and availability for client access to critical functions. The FIS Private Cloud affords the platform the ability to deploy virtual servers quickly and effectively as well as monitor service functionality and performance through multiple tools and, in most cases, react in an automated manner transparent to end users. The FIS Private Cloud for hosted virtual machines is designed to eliminate any single-point-of-failure and across redundant servers, including failover to secondary strategic data centers.

Table 9: Cloud Support

Microservices Architecture	Yes
Stateless (apps can scale independently)	No
Container Orchestration (Kubernetes)	No
Service Mech Support (e.g., Istio)	No

Source: Vendor RFI

Data & Integration

Table 10: API Integration Details

Function	Approach
Approach to Integration	HORIZON APIs are designed to eliminate the need for costly custom interfaces. APIs reduce implementation time, standardize the process for interfacing applications, and enable the standard interface environment to communicate in real time to HORIZON while maintaining data integrity. The interactive nature of HORIZON APIs means that an external user/solution can request real time information from HORIZON and receive interactive edit and response messages to their requests as if the user were operating within the native HORIZON environment. HORIZON is in-process of developing kiosk/video teller integration with Diebold, Glory, and NCR kiosks using a combination of HORZON Teller and HORIZON Kiosk APIs. This use of APIs will be marketed as pre-integrated to the kiosk hardware providers, bringing speed for those banks who are entering this exciting market that expands branch services. HORIZON XChange is XML middleware that also provides real time, two-way communication via a secured Socket Port. HORIZON additionally uses batch extracts for large amounts of information that are better suited to a secure batch rather than real time retrieval of large amounts of data.

Function	Approach
% of Platform Exposed as APIs	35
API Management	FIS Code Connect is an API platform that provides a central marketplace or access point to expose and manage all FIS solutions via APIs. It is built on top of WSO2 API Management platform using industry-standard security frameworks such as OAUTH2.

Source: Vendor RFI

Configuration

Through the bank control records (BCRs) a bank can create new products and services without the need for programming or even services through the data center.

HORIZON provides the ability for banks to design customer-level relationship pricing that incent the customer with an interest bump to encourage customers to hold more balances and services with the bank. Related functionality enables the creation of promotional interest programs and behavior interest rewards and/or service charge concessions.

Table 11: Continuous Integration (CI) and Upgrading

Support for CI	Yes
Support for Continuous Delivery or Productization	Yes
CI Tools	HORIZON utilizes a combination of Azure DevOps along with custom written tools to implement continuous integration and delivery within its development environments. These tools encapsulate automated environment updates along with static-code quality and software security scans.

Source: Vendor RFI

Implementation, Support, and Pricing

Table 12: Implementation, Support, and Pricing

Typical Implementation Team Size	30 to 40
Location of Employees	FIS has employees located globally
Average Time to Implementation	Initial Implementation: 7 to 12 months 2nd and subsequent line of business: 1 to 3 months 2nd and subsequent states/jurisdictions: 1 to 3 months
Pricing Models	Term license, Enterprise license, Subscription-based license

Source: Vendor RFI

PATH FORWARD

The North America community bank core systems market is mature but innovating at a steady pace. Core systems vendors are investing in IT research and development to support large customer bases that acquire not only core systems but literally dozens of lending, payments, channel, and other banking technologies. Maintaining community bank relationships is critical to these core vendors' existence as well as the existence of the banks they serve.

Core Vendor Strategy and Competition

The leading vendors and solutions profiled in this report have a clear strategy for success even if most of their cores are not cloud-native, next generation solutions. They must:

- Balance expected shareholder returns with client expectations for R&D expenses to not only maintain but also enhance legacy systems that are the heart of their banking IT businesses.
- Split research and development capital expenses between systems maintenance and new systems development. Every core system vendor profiled in this report must have a next generation core system build/buy/partner strategy, or their community banking technology systems line of business will shrink to nothing.
- Continuously improve integration methods to improve data transfer while reducing its costs, so that community banks can utilize the same data that large banks are using to create and sell new business/ technology products and services.

Community bank core system vendors are under threat from each other—and from industry consolidation—far more than from de novo, cloud-native, next generation core system vendors. Although the North America credit union sector has had cloud-native core vendors target the Tier 6 (under $1 billion market), only FinXact's cloud-native core (now owned by Fiserv) has done so for community banks. Celent believes:

- The credit union core vendors could become a competitive threat if they seriously target community banks.
- Cloud-native core vendors are currently a small threat either because they focus on Tier 1 and Tier 2 banks (FIS, 10X, and Thought Machine); have cores not built for a regulated US community bank segment (Mambu); or currently operate in other geographical markets (Five Degrees, Leveris, Ohpen, Pismo, and Technisys).

- Large, established North America-focused core vendors (FIS, Infosys Finacle, Intellect Design Arena, Oracle, and TCS) have different strategies that are not currently focused on the community bank sector.
- Fiserv's strategy for FinXact is focused on migrating leading edge existing customers onto FinXact over a multiyear time period and opportunistically, such as One (Walmart digital).

Celent Technology Recommendations for Banks

Banks want to be the acquirer not the acquired in the consolidating community bank market. They need to make sure they have the core system and vendor to support growth and acquisition. They also need to examine the vendor's track record in managing mergers and acquisitions where another bank's records are onboarded onto their system from a different system.

The architectural improvements of these core systems to provide more open integration to better integrate ancillary banking technologies is helping banks advance. As financial institutions consider their path forward, Celent offers the following recommendations:

- **Push your vendor for improvements as usual**. Test drive other solutions and examine other types of banking technologies from the other core system vendors. See who has the best long-term strategy, research and development, and IT road map for you.
- **Determine the value of 24/7 real time processing** for all banking functions versus batch/memo post, which some feel adequately approximates real time data for the customer and bank. Three of the top five core vendors based on number of customers rely on batch/memo post. Some of the solutions in this report provide real time processing but did not score as high as some with batch memo posts.
- **Evaluate the quality and performance of each vendor's web services / API middleware integration layers**. Determine the ease of data access, the cost, and the number and quality of APIs supported. There should be a free test bed to create API integrations before buying.
- **Evaluate the technology in terms of its ability to support open banking**, specifically the Consumer Financial Protection Bureau's open banking rule based on Section 1033 of the Dodd-Frank Act. This requires data management, permission-based customer engagement systems, and workflow systems.
- **Monitor support for legacy programming languages** and data base management systems and programming languages. Find out how long the database and programming language vendors' time commitment is to support those products well into the future.
- **Make sure the customer base is increasing or at least stable**—and that banks similar to yours purchased the solution in recent years.
- **Evaluate whether your system has the configurability, flexibility, and ability to support ongoing product innovation.** Systems that support continuous innovation, allowing both business and IT to drive development by the bank, will have an advantage here.

LEVERAGING CELENT'S EXPERTISE

If you found this report valuable, you might consider engaging with Celent for custom analysis and research. Our collective experience and the knowledge we gained while working on this report can help you streamline the creation, refinement, or execution of your strategies.

Support for Financial Institutions

Typical projects we support include:

Vendor short listing and selection. We perform discovery specific to you and your business to better understand your unique needs. We then create and administer a custom RFI to selected vendors to assist you in making rapid and accurate vendor choices.

Business practice evaluations. We spend time evaluating your business processes and requirements. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

IT and business strategy creation. We collect perspectives from your executive team, your front line business and IT staff, and your customers. We then analyze your current position, institutional capabilities, and technology against your goals. If necessary, we help you reformulate your technology and business plans to address short-term and long-term needs.

Support for Vendors

We provide services that help you refine your product and service offerings. Examples include:

Product and service strategy evaluation. We help you assess your market position in terms of functionality, technology, and services. Our strategy workshops will help you target the right customers and map your offerings to their needs.

Market messaging and collateral review. Based on our extensive experience with your potential clients, we assess your marketing and sales materials—including your website and any collateral.

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