Under ongoing pressure to grow the bottom line, aggressive cost-reduction initiatives continue to be a key boardroom imperative for banks. To be successful in this endeavor banks must raise the cost efficiency bar—by gaining visibility into the dynamically complex factors that drive cost base and exposing more strategic and sustainable options for long-term cost management. If not understood and measured, the growing problem of what we call ‘Dynamic Complexity’ threatens the viability of current cost management practices by diminishing promised returns and introducing unacceptable levels of risk.

For bank CEOs, CFOs, CIOs and COOs in particular, this paper provides valuable insight into why more strategic cost efficiency programs—guided by forward-looking, fact-based decisions—are needed to meet the needs of the modern business era. It goes beyond the usage of spreadsheets and traditional project plans into a new generation of management analytics and control. Additionally, it presents new requirements for identifying the dynamic factors that increasingly threaten cost efficiencies, as well as, advanced approaches to predictive analytics which can be relied upon to predict the future behavior of banking systems that have now become too complex and dynamic to be understood using previous methods of statistical analysis. With better visibility into the dynamic factors that destabilize cost management programs, and the ability to anticipate new, never encountered before behaviors, banks are able to drive smarter, forward-looking cost management decisions and achieve sustainable financial results despite the growing complexity of today’s business environment.
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Executive Summary

As the recession gripped the economy, many banks (including retail, corporate/investment and exchanges) necessarily took immediate action to reduce costs and shore up balance sheets. But in reality, the majority of these cost-cutting actions focused on achieving short-term benefits without sufficient understanding of the long-term impacts. As a result, costs today are rising again due in part to the increased cost of regulation and amortization of technology costs—but also because of the unforeseen consequences of previous cost-cutting exercises.

Today most bank executives recognize future viability is dependent upon their ability to shift from tactical cost reduction actions to more strategic cost management—with greater focus on increasing the efficacy of cost reduction efforts (both operational costs and/or development/investment costs) while simultaneously investing in capabilities that will enable long-term growth and profitability. However, making this shift can be difficult given the dynamic nature of business and the complexity of most banks’ operating models which feature inherently inflexible, disjointed organizational structures and “siloed” sources of cost scattered throughout the company. Common cost management methods, which were once invaluable, have now become inadequate given the dynamic climate of finance today.

In the quest towards strategic cost management, banks can benefit from new breeds of predictive analytics that offer a unified view of the interdependencies across disjointed systems and operational structures, allow for the discovery of unknowns, and enable “what if” analysis. These capabilities help banks fully explore and identify opportunities for improved efficiency while providing understanding of the future ramifications of cost reduction recommendations before actions are taken.

To help banks meet Board-level business efficiency objectives in a world that is changing at a faster and faster rate, Accretive delivers a powerful combination of analysis, modeling and prediction capabilities. These technologies and methodologies have been purposefully built over the last decade and are proven to solve business dynamic complexity challenges, such as cost management, by accurately predicting future behaviors and providing critical insights into even the most complex banking systems. With a modern mathematical approach backed by a world-class team of experts who understand the practicalities of modern banking environments and a library containing over 7500 pre-built models and templates, Accretive customers typically realize demonstrable cost efficiency improvements within weeks or months by identifying the impacts of dynamic complexity and gaining the remediation recommendations they need to contain its effects.
Leaner is Better: The Crash Diet Approach

In the current slow growth economy, new regulations, service expansion goals and re-architecture requirements of aging IT systems continue to perpetuate a ‘Leaner is Better’ mindset throughout the banking industry.

But, despite all this focus on efficiency, unexpected costs are now stealing back into the business. Just like any crash diet plan, short-term reduction plans have failed to deliver long-term results.

Evidence of Cost Reduction Program Failures

93% of cost reductions made during the recession are not believed to be sustainable*

Costs are quickly creeping back into the business as companies refocus their attention on growth*

Most Executives believe that costs will return across the board, with significant increases expected in the cost of finance, salary inflation and rebuilding headcount*

No Cost Improvement Observable

<table>
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<tr>
<th></th>
<th>cost-to-income ratio</th>
<th>cost-to-assets</th>
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</thead>
<tbody>
<tr>
<td>2011</td>
<td>60</td>
<td>1.8</td>
</tr>
<tr>
<td>2010</td>
<td>58</td>
<td>1.9</td>
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* KPMG 2012 Cost Boomerang Report
^ Thompson Reuters, McKinsey 2011 Global Banking Pools
Why Cost Cutting Exercises Fail to Deliver Sustainable Results

To achieve cost benefits quickly, banks primarily pursued generalized cost cutting models promoted by most business consultancy firms—which typically focus on optimization of the obvious infrastructure or product ranges including headcount reductions, branch closures or product rationalization—or they take the approach of “sharing the pain equally across the organization” by cutting costs indiscriminately—10 percent across all departments, for example. But in the long run, they are unable to sustain those cost efficiencies, resulting in a competitive disadvantage.

Generalized cost reduction plans repeatedly fail to deliver long-term results because they don’t address the root cause of an increasing cost base and/or ignore important business interdependencies—such as company culture. To achieve sustainable cost reduction, banks must be able to identify strategic opportunities for improved efficiency and better understand the future implications of their cost cutting decisions with increasing accuracy and less risk of failure.

Without visibility into the factors that influence cost base across the entire business, it becomes difficult for executives to identify the right balance between short-term tactical cost decreases and longer-term strategic cost management initiatives that ultimately help the bank ‘do more for less’—such as streamlining processes or outsourcing noncore functions.
‘Dynamic Complexity’ Threatens Cost Efficiency Goals

Cost management is undoubtedly one of the most complex activities in corporate planning. Unfortunately, the complexity of the exercise is accelerating at an increasing rate due to the fast paced nature of business—which is fuelled by 24/7 global communications and rapid technology advances. For many reasons the objective of cost efficiency is clear, but the execution is burdened with many obstacles that hijack the exercise and give rise to a much lower outcome than originally was ambitioned.

Human and political factors are causes not to be neglected. But, commonly the blame for cost reduction project shortcomings is owed to dynamic complexity, which results from hidden, unknown factors—or more precisely, interactions between factors—that can become significant and unexpectedly predominant in the cost equation.

A simple example of hidden cost factors:

A cost reduction plan is contingent upon the consolidation of datacenters to quickly extract costs. If the bank later discovers that one critical application cannot be moved because of legal reasons (data confidentiality), the cost equation is negatively impacted. Now the bank incurs the cost of the new datacenter, maintains the cost of the old datacenter and can no longer offset costs with the sell-off of the datacenter as planned—in essence projected cost savings have vanished.

Before the global financial crisis, many banks (and particularly investment banks) were primarily focused on driving growth through product innovation. Less attention was paid to developing efficient operating models or achieving customer centricity.

As a result, complex systems and disjointed organizational structures have been erected that embed duplicative efforts and create, in some cases, “siloed” sources of cost scattered throughout the company. Especially true for retail banks, these isolated structures have now become inherently inflexible and disallow economies of scale across product portfolios or geographic regions. It is commonly assumed that the silos are isolated and insulated from each other—leading to a false sense of comparative simplicity, particularly within corporate/investments banks. In reality there are millions upon millions of interconnects between these disjointed structures, which give rise to the increasing complexity of many cost factors. Changes in one silo can often cause unanticipated and/or unknown changes in other silos.
The Multiplier Effect of Complexity

Making the necessary shift from tactical cost reduction actions to more strategic cost management is a challenge because the interdependencies between bank’s processes, services and infrastructure have become overly complex and exist in a constant state of change, known as dynamic complexity.

The impacts of dynamic complexity always result in lower quality, unanticipated changes to volumes, and/or increased costs. While exchanges typically experience the effects of dynamic complexity as unanticipated decreases in quality of service, when the latency of transactions, usually under peak loadings, increase. Retail and corporate/investments banks are frequently the unknowingly victims of dynamic complexity when their cost base begins to rise unexpectedly. Under these circumstances it may be clear that costs are rising, but it may be difficult, if not impossible, to identify the true cause of the increasing cost base.

Within the cost base of a business it is easy to identify and track big-ticket items as they change. The trouble begins when very small hidden costs dynamically interact to create a larger impact capable of destabilizing planned cost efficiencies. A simplified example of the multiplier effect:

A retail bank has a million accounts on which a daily interest is paid. The interest is calculated by rounding-up to the nearest cent. Assuming that, in the extreme, all one million accounts are rounded-up by an average of 0.5 cents per day—the bank now has an unexpected cost of 500,000 cents or $5,000 per day.

Obviously, if this was the only observed abnormality, the added costs could easily be budgeted and tracked. However, when a multitude of small hidden effects combine, unexpected patterns can occur that have potential to greatly disrupt cost efficiency goals.
Traditional Analytics Can’t Inform Smart Cost Management Decisions

Most banks use some form of business analytics to help guide cost reduction decisions—whether in the form of spreadsheets or performance management software. However, the effects of dynamic complexity cannot be understood, measured and controlled by these methods. The effects of dynamic complexity indirectly appear in a balance sheet over time—growing undetected until they become obvious, at which point it is often too late for effective remedial actions.

Analyzing and understanding past performance using historical data is a common banking practice. Retail banks track the behavior of millions of account holders, while corporate/investment banks analyze the behavior of markets and exchanges record the behavior of transactional volumes—then use statistical methods of analytics to infer what might happen in the future.

These methods can be useful for low stake decisions or when outcomes continuously follow previously encountered patterns whereby only the parameters—like volumes and product mixes—change. But making high stake cost management decisions in dynamic environments based on probability can be dangerous.

Today, unknown, unexplored and never-experienced conditions are appearing at an accelerating rate as the dynamics and complexity of businesses continue to evolve. Technology advancements are inducing rapid change and compressing the time available to react to that change.

Despite the inability of statistical forecasting methods to predict new patterns, many banks still rely on these forms of historical analytics to make critical future-oriented cost management decisions. This approach is deficient in two respects:

» It takes a point-in-time view of a business and its processes with respect to costs and cost variables. This ‘spreadsheet snapshot’ approach is static and does not capture the effects of increasing dynamic complexity.

» It is based solely on past and present patterns, but cannot accurately predict new patterns that have never been encountered before.

The result is a tunnel-visioned view that provides the decision maker with only partial knowledge of any situation. In this case, strategic opportunities for cost management that would boost the bank’s flexibility, responsiveness and efficiency remain hidden, along with risks that can threaten long-term growth and profitability.
The ability to drive persistent and sustainable cost efficiency gains is dependent on an organization’s ability to identify the hidden causes of dynamic complexity, understand the impacts, and identify ways to maximize opportunities while controlling risks through the elimination or reduction of any significant threats.

An example of dynamic complexity impacts:

A retail bank decides to reduce the number of agent seats in a call center by 10%. The expected cost savings seem obvious and simple to project, but as a result of the reduction, the queues for service build-up at peak times. The duration of time each customer waits for service increases. When service is given to a waiting customer, 25% of the customers complain about the queuing time. The average call time is lengthened as a result of this complaining.

The IT server that supports the center becomes overloaded because of the recording of the complaints and the handling of the queues. A vigilant operations department switches in an extra server to take the overload. The call center is now more complex because it has a new component. The constituents of the call center costs have changed. However this change was not accounted for in the cost reduction plan—only the 10% decrease in headcount was. The quality and cost of service have changed unexpectedly because of the effects of dynamic complexity.

The only way to discover the full cost effects is to use future-capable analytics to accurately project the amplitude (the apparent size of the change) and characteristics of the gradually increasing complexity generated through:

- **Aging effects**—processes get longer with more functions, e.g. because of pervasive Internet access, a retail bank may require increased security over time.
- **Unused capacity of infrastructure or people**—inefficiencies, e.g. an exchange might add new servers without fully understanding its peak traffic in volume or mix.
- **Technology change**—especially major changes like broadband, electric automobiles, or chip cards.
- **Badly placed infrastructure**—like processing plants located half way around the world from key markets.
- **Inadequate infrastructure**—using inflexible banking IT systems that contain multiple entries of the same data, which is common practice for retail bank customer data.
The Right Analytics Provide Full Transparency into Future Risks and Opportunities

Analytic platforms should allow decision makers to fully explore dynamic cost factors—most of which are systemic in nature—and validate planned changes systemically through predictive “what if’s” to identify opportunities for improved efficiency and understand the future ramifications of cost reduction recommendations before actions are taken.

Use Predictive “What Ifs”

Reveal Unknown Effects

Additionally, unknown effects may still exist, so it is necessary to employ analytic methods that provide decision makers with visibility into the external forces that contribute to dynamic complexity, including:

- **Business discriminant factors**—factors that influence the business or make it different, like oil price spikes, the advent of a new technology paradigm (i.e. the mobile phone), the entry of India into outsourcing, or the sudden use of a new currency in the foreign exchange markets (i.e. Chinese currency).

- **Environmental fundamental influencers**—factors that are social, like the green agenda, the opening-up of the China markets, the introduction of a new air route, or the proliferation of mobile phones in India.

The above list contains the hidden effects of people. Despite all the technology advances, the effects of people are still very difficult to identify, establish and input into an overall model. The herd instinct of people is obvious—everyone wants a mobile phone. But people can also be highly unpredictable.

An example of hidden people effects:

*Someone in a bar in London overhears someone say that the price of oil is about to rocket. The eavesdropper calls a colleague in New York, who frantically starts buying oil futures. The price of oil begins to increase, and more buyers join the stampeding herd. The price increases more. There was no base for the original statement only conjecture. The whole scenario can be modeled except for the part enacted in the London bar.*
A Better Approach to Predictive Analytics

Mathematical models have long been trusted in science and manufacturing to enable innovation and exploration into unknown and complex environments. Consider for example space exploration or even the design of a new car—guessing the probability of an outcome based on a known set of historical data using statistical models is undeniably risky when the objective is to achieve something new. Creating cost efficiency innovation or navigating the dynamic complexity of modern business is no different—statistics alone are insufficient, as they cannot provide insights into the unknowns.

When change is the only constant, new methods with advanced mathematical modeling capabilities are needed to control and deliver a strategic cost management program. This new method must take into account the following design considerations:

- Modern business is complex and changes at an ever-increasing rate. Banks and the environments that they operate in are not static—in fact they are constantly changing in both obvious and non-obvious ways.
- The changes come from both inside and outside the business.
- A wide range of change factors (both large and small)—and the effects of their interactions—must be considered.
- Dynamic complexity is hard to comprehend—advanced analytics and modeling are now needed.
- A mathematical analytical approach—capable of modeling systems at various future stages of transformation—can improve the benefits of change programs and reduce the risk of program failure. This approach allows the business to circumvent the subsequent negative impacts to business operations that the original change program aimed to improve.

### A comparison between predictive analytic approaches

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<tr>
<th>Modern Mathematical Approach</th>
<th>Legacy Statistical Approach</th>
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<tbody>
<tr>
<td>prediction</td>
<td>Predict a range of future possibilities of static systems based on known patterns—new patterns cannot be predicted.</td>
</tr>
<tr>
<td>analytics</td>
<td>Use statistical forecasting, regression and data mining to understand what has happened in the past and predict what might happen next if known patterns continue.</td>
</tr>
<tr>
<td>modeling</td>
<td>Guess future outcomes using Detection Theory to model the probability of an outcome given a set amount of input data.</td>
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- Predict future outcome of dynamic systems based on known and unknown future patterns—new patterns can be predicted.
- Use of algorithmic forecasting to understand future outcomes, system limits and expose previously unknown patterns.
- Determine future outcomes using dynamic analysis methods with awareness of sudden chaotic behavior. All future states can be determined once the initial state of the system can be solved.
How Accretive Supports Strategic Cost Management

Accretive’s patented X-Act™ Predictive Analytics Platform was developed to accurately predict the future impact of dynamic complexity, reveal hidden risks and optimize outcomes. Using advanced mathematics and modern modeling techniques to determine the progressive and continuously ascending inflated cost due to dynamic complexity, X-Act Predictive Analytics Platform precisely calculates the weight and contribution of dynamic complexity to help banking executives identify the right sequences of actions that will ultimately reduce and contain its effect throughout the lifecycle of the cost management program.

The use of X-Act Predictive Analytics Platform allows cost management projects to be scheduled and executed in time for the negative effects of dynamic complexity to be identified and subsequently reduced or eliminated.

Consider the following scenario:

The cost of services improves as volumes improve and fixed costs are diluted. But, eventually the effects of a few large factors or many small factors combine to negatively affect efficiency. Using X-Act Predictive Analytics these unknowns become known, or at least recognized as being significant. With better visibility into the effects of dynamic complexity, decision makers can use these new insights to guide future decisions and maintain optimal balance between quantity, cost and quality.

Identify the most strategic actions with visibility into future risks and opportunities
Using X-Act to Control the Cost Management Lifecycle

Global retail banks, corporate/investment banks and exchanges use Accretive X-Act Predictive Analytics Platform to inform both tactical cost reduction decisions as well as drive strategic cost management in their effort to continuously improve overall business efficiency.

With visibility into the factors that influence cost base across the entire business, it becomes easier for executives to identify opportunities to improve efficiency through short-term tactical cost decreases in balance with longer-term strategic cost management initiatives that ultimately help the bank ‘do more for less’—such as streamlining processes or outsourcing noncore functions.

With X-Act Predictive Analytics Platform, root cause of an increasing cost base and important business interdependencies are revealed so that users can overcome common cost efficiency obstacles and plan to achieve sustainable gains.

A Proactive Approach with Sustainable Results
Exposé Inefficiencies and Risks Across Silos

Accretive X-Act Predictive Analytics Platform quickly delivers a unified mathematical model that accurately emulates all aspects of a business—including lines of business, end-to-end services, business processes, underlying IT infrastructure, human resources and financial budgets—to provide enterprise-wide transparency into risks introduced by the millions upon millions of interconnects that result from dynamic complexity.

The use of X-Act Predictive Analytics Platform helps business and IT users understand how the current system (business, IT or both) is being limited with respect to efficiency, cost and throughput. Additionally, the platform can be used to expose risks and identify inefficiencies across organizational silos. With these insights, users can determine the true return on investment for any change program before actions are taken.

» Bridge the business-IT gap by linking end-to-end transactions and service processes to the business processes, business systems and corporate objectives.

» Identify root causes of an increasing cost base and/or decreases in quality of service.

» Uncover opportunities to optimize systems, improve economies of scale and boost agility.

Confidently Know What’s Coming Next

While executives have historically relied upon intuition and experience—in combination with often-conflicting business intelligence reports—to guide critical business decisions, X-Act Predictive Analytics Platform helps executives keep pace with modern business dynamics and avoid unwanted surprises.

Using proven prediction capabilities (accurate within 1-3% of reality), X-Act Predictive Analytics Platform reveals the future effects of both known patterns of behavior and new, never seen before, patterns of behavior that may be benign or dangerous in their consequences. With reliable foresight into the future ramifications of change program recommendations, executives are able use X-Act’s “what if” analysis capabilities to make smarter cost management decisions.

» Predict which systems and infrastructure will cause potential bottlenecks and constraints as services scale.

» Explore what effects future external or internal business events and/or conditions would have on system behaviors and performance (including location-based activities such as data center consolidation).

» Validate whether transformation projects (including consolidation and virtualization programs) will actually achieve the desired benefits before investments are made.
Strategically Plan to Improve Outcomes

X-Act Predictive Analytics Platform identifies losses in efficiency, cost and throughput caused by dynamic complexity and offers remediation recommendations to ensure that the redesign and subsequent re-engineering of the system will adequately address any offending design points, e.g. components with bottlenecks or limiting capacity.

When users can identify the effects of complexity and realize how it is hindering business efficiency, they can create a change program that will measurably improve overall business efficiency and achieve desired cost savings benefits, while working to meet long-term high performance objectives. X-Act Predictive Analytics Platform allows business and IT architects as well as decision makers to test ideas, validate plans and build operational models to perfect strategies before investments are made (in the same way that CAD/CAM is used in engineering and design).

» Determine the effect of aging on current systems and understand which remedial actions are required to improve the environment.

» Compare the relative benefits of changing architecture and design strategy and/or changing hardware and software components and associated service delivery models.

» Use benchmarking to identify opportunities for improvement.

» Prioritize which changes will yield the most significant improvements in terms of efficiency, cost and quality.

Continuously Adjust to Changing Dynamics

X-Act Predictive Analytics Platform helps customers foster a change management culture that is forward-looking and proactive versus historically oriented and reactionary. X-Act Predictive Analytics Platform proactively reports on any future patterns that may cause inefficiencies and possible crises in sufficient time for users to take corrective actions before losses are realized.

To be most effective, the analytical approach supported by X-Act Predictive Analytics Platform must be built into the operations of the bank, not just the change program. If it is not fully integrated into business operations, then the negative effects of dynamic complexity, and the resulting system loss in terms of quality, quantity and/or cost, will reappear and continually erode the benefits of the change program overtime. An enterprise-wide strategy—fueled by the right business goals, talent, tools and resources—is necessary to promote an analytics-driven culture. Accretive provides customers with the training, technology and resources they need to operationalize analytics and build an analytics culture.

» Measure the overall effectiveness of any service process or project in terms of throughput, quality, cost and risk.

» Use corporate dashboards to assess performance against key business metrics.

» Make analytic-based decisions a normal, everyday occurrence rather than something that happens only occasionally or in a reactive manner.
Strategic Cost Management Challenges and Solutions

- RETAIL BANKS: Millions of customers, Millions of accounts, Billions of input/output points
- INVESTMENT BANKS: Complex products/services, Global markets and influences
- EXCHANGES: Challenging workload peaks, High global financial visibility

ACHIEVE COMPETITIVE DIFFERENTIATION THROUGH INNOVATION

Investigate opportunities for innovation and model new optimized business, infrastructure processes and systems based upon better understood customer and market behavior patterns. Use multiple sources of data (including big data) to discover new patterns—particularly new external global patterns in advance of competitors.

INCREASE PROFITABILITY THROUGH REVENUE GROWTH

- Analyze and optimize key channel-to-market services. Make accurate forecast predictions.
- Analyze and model the benefits of new integrated products and services to make fact-based change management decisions. Understand the effects of internal and external changes. Make accurate forecast predictions.

INCREASE PROFITABILITY THROUGH COST REDUCTION

Predict and manage the stages of re-engineering programs to achieve close to 100% effectiveness of cost reduction change programs. Gain better visibility into the latter stage cost inhibitors to proactively take corrective actions and improve the long-term efficiencies of cost reduction programs.

IMPROVE OPERATIONAL SPEED AND ADAPTABILITY

- Analyze and model the effects of changes to mature legacy systems.
- Model and optimize complex processes to improve automation as well as feed and speed.
- Identify and understand infrastructure bottlenecks down to the microsecond level.

MANAGE THE EFFECTS OF DYNAMIC COMPLEXITY

- Use data (including big data) to model and analyze customer and account behavior on a multi-million scale.
- Model and analyze complex products and services to optimize their interactions.
- Proactively identify and avoid new destructive workload interactions.
Getting Started

For many banking executives, the move towards strategic cost management will—by necessity—begin with a careful analysis of the existing cost drivers of the organization in order to increase understanding of where value is created and profit is generated, a task that can be difficult for large, complex organizations, and can be especially difficult for two retail banks that are merging.

Identify a Single, High-Priority Issue to Solve

While there are many opportunities to set and achieve strategic cost management goals, it is most advisable to start by identifying a single, high-priority business problem to solve—the goal being to quickly demonstrate success and prove that gains can be realized through the applied use of X-Act Predictive Analytics Platform. Accretive delivers over 7500 pre-built models and assets that can be leveraged to shorten the start-up phase and enable rapid identification of cost reduction opportunities. Customers typically realize demonstrable cost efficiency improvements within 10 weeks or less.

Create a Cross-Functional Team

Assemble a small cross-functional team of business decision makers, operational users and business analysts that can work together effectively as a team. Previous analytics experience is not required—X-Act Predictive Analytics Platform is simple enough for business users while powerful enough for operational teams and business analysts.

Foster an Analytics Culture

To be successful, organizations must be prepared to look across divisions and business units, compare themselves through robust competitive benchmarks that not only look at numerical comparisons but also highlight alternative ways of working, and then make some tough decisions, which may challenge the accepted business models and transform their internal culture. Success will require senior management to develop and execute strategies and programs that support an analytics driven decision culture and maintain a clear cost focus.

Realize value from investments in 10 weeks or less
Use X-Act Predictive Analytics to Understand Dynamic Complexity and Avoid Its Effects

Common cost management goals

**Consolidation of Operations**
- Better utilization of resources, virtualization and outsourcing
- Simplification of process and standardization
- Sunset, removal of out-dated functional implementation, aging systems, data redundancy and duplication

**Benchmarking**
- Optimize architecture to meet business requirements at expected costs and avoid constraints
- Rationalize technology selection (less types/less complexity) to better fit process and reduce maintenance costs
- Reduce testing and proving costs and time

**Reduction of Processing Requirements**
- Remove bottlenecks and limits to increased head room with key services and “do more for less”
- Optimize the implementation of standard data models to reduce data complexity
- Tune systems to avoid complexity and optimize performance

**Validation of Cost and Service Metrics**
- Optimize the development and understanding the spend in development or technology
- Proactively make fact-based “go/no go decisions” to avoid unnecessary costs and wasted effort
Conclusion

A great opportunity exists for those banks that are able to significantly raise the cost efficiency bar—by gaining visibility into the dynamically complex factors that drive cost base and exposing more strategic and sustainable options for long-term cost management. But to truly achieve this, banking executives will need to gain better insight into the hidden and complex factors that drive cost efficiency. If not, the pervasive tunnel-visioned view will continue to restrict their ability to make real inroads into their cost base.

Without the use of advanced mathematical modeling and analytics, executives remain unaware of the strategic opportunities for cost management that have the potential to boost the bank’s flexibility, responsiveness and efficiency. Banks that have been forced through numerous rounds of cost efficiencies are reaching the laws of diminishing returns within their current cost reduction programs—or worse are beginning to see adverse effects on growth and profitability as a result of short-sighted cost cutting actions.

Through the evolution of technology and experience, the tools banks need to gain higher-level value and improve cost management methods are now available. With the ability to escape the shortcomings of spreadsheet analysis that only offer a reflective view on “What has happened in the past?” banks can now ask, “What is optimal?” and set out to achieve it.

Accretive’s X-Act Predictive Analytics Platform helps businesses define the path and actions necessary to achieve an optimal future state of cost efficiency. With the right combination of analysis, modeling and prediction capabilities banks can measure the effects of dynamic complexity and remodel the cost equation to support strategic, sustainable efficiency gains with acceptable levels of risk.

Stripping out cost is undoubtedly hard work, fraught with many challenges. And while those that lack transparency into the root causes of cost inefficiencies may well still achieve growth, it may be unprofitable growth. Banks that approach cost as a Board-level strategic concern will—with the right decision support tools—create space within which to grow their margins and secure a real competitive advantage.

To learn more about dynamic complexity, it’s hidden effects and new opportunities to use advanced methods of analytics to boost the flexibility, responsiveness and efficiency of business systems, visit Accretive’s Resource Center at acrtek.com/resources.html.
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Founder and CEO
Accretive Technologies

As Accretive’s founder and CEO, Dr. Abu el Ata has invested over 20 years in perfecting the science behind the company’s X-Act Platform with over 15 patents. He offers a breadth of analytical skills, risk management and business intelligence expertise, as well as IT and business process management knowledge. To say Dr. Abu el Ata has a passion for mathematics, science, and technology, and more specifically modeling of dynamic complexity for corporate systems would be understatement. Having published two books, 15 scientific papers, and over 300 technical and management reports, he has a proven ability to absorb, process and add insight on a wide variety of technological subjects. Dr. Abu el Ata’s accomplishments include doctorate (Ph.D. and D.Sc. from Paris-Sorbonne) and bachelor’s degrees in Mathematics and a master’s degree in Physical Sciences (Royal Observatory, Cambridge University).

He is a valued former Doctorate Fellow of the European Space Organization; former Data Processing Director and Advisor for the French Atomic Energy Authority; and former CTO of First Data. Dr. Abu el Ata is also an advisory board member of the European Strategic Program for Research in IT; a Steering Committee member for European Programs: Pyramid, Euroicon and Itaqu; a advisory board member of French Employment Organization, French Ministry of Finance, French Postal Services, one of France’s largest banks (Credit Agricole) and Auchan Retail; an External Professor for a number of universities in France, the UK, and the US; and Laureate of Computer World Honors 2008.

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Board Technology Adviser
Accretive Technologies

Dr. Perks joined IBM in 1968 as a Systems Engineer. Over the span of his 44-year career with IBM, Dr. Perks specialized in the design of IT systems for large organizations. He is a world authority on the development of IT systems in a range of industry sectors, and particularly the financial sector. Dr. Perks is noted for his methodological approach, which helps to understand and assess the complexity of systems, and his ability to apply that knowledge to design and modify complex systems. He is currently working to promote understanding of modern IT systems complexity, and is bringing new ways of combining the triangle of business knowledge, IT knowledge and mathematics to this challenge. He is constantly seeking new ways of avoiding the increasing complexity that IT systems are externalizing to business change. He is a great believer in the increased use of modeling and simulation to help tame the growing challenges that business and IT change pose. His ability to understand real-world business and IT system design was recognised by IBM in 2002, when Dr. Perks became the first IBM Fellow to be appointed from within the IBM Services Division.

As a Fellow of the British Computer Society, a Fellow of the Institute of Engineering and Technology and a Royal Academy of Engineering Visiting Professor of IT Integration at the University of York, Dr. Perks offers a wealth of knowledge and real world experience as Accretive’s Board of Director, Technology Advisor. The Aston University, UK has recognized his sustained work on complex system design and his assessment of emerging IT technologies by the award of a Doctor of Science degree.
About Accretive

Accretive Technologies Inc. offers highly accurate predictive and prescriptive business analytic capabilities to help organizations thrive in the face of increasing pressures to innovate, contain costs and grow.

By leveraging the power of Accretive’s smart analytics platform and advisory services, global leaders in financial, telecommunications, retail, entertainment, services and government markets gain the foresight they need to make smart transformation decisions and maximize the performance of organizations, processes and infrastructure.

Founded in 2002 with headquarters in New York, NY and offices in Omaha, NE and Paris, France, Accretive is a privately owned company with hundreds of customers worldwide.