

High Performance Business Computing in Financial Institutions

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EXECUTIVE SUMMARY

Financial services is the second-largest commercial High Performance Computing (HPC) vertical market, second only to manufacturing. It is also one of the fastest growing. As a result, it is a critical part of our High Performance Business Computing (HPBC or Business HPC) methodology. Within financial services, high-frequency trading is the most well-known application, but there are several other areas where HPC is in use. These qualify as HPC because they are compute-intensive, exhibit heavy communication requirements, or have large storage or memory needs.

Intersect360 Research tracks the following broad application areas as part of the financial services vertical:

- Trading – including both high-frequency trading and algorithmic trading.
- Risk management – at the enterprise, portfolio or customer level; or actuarial analysis for insurance.
- Pricing and valuation of individual securities, derivatives, and compound derivatives.
- Business and economic analytics – including modeling, simulation, and decision support.

Understanding these broad application areas is critical for vendors because financial services users do buy HPC technologies, but they do not necessarily think of themselves as HPC users. They respond to different drivers and have a different vocabulary than High Performance Technical Computing (HPTC or Technical HPC) users. Vendors should be mindful of this taxonomy in addressing HPC in the financial services vertical.

The regulatory environment in the financial services industry is becoming increasingly demanding and complex, and competition among surviving entities will only get fiercer. Currently there is a mandate to increase the accuracy, reliability and frequency of financial analytics, which we believe will drive financial institutions toward HPC. The old tools simply will not be able to handle the new requirements. This is a good time for an HPC product or service provider to be entering the market.

In order to effectively penetrate the financial services vertical it is important for vendors to:

- Acquire industry-level expertise in financial services.
- Open opportunities for solutions sales which include both services and systems components.
- Consider the breadth of vendor solutions and what is already installed when framing an approach.
- Start in the quantitative finance group and then move beyond it.

There is currently a need for many financial institutions to upgrade or replace legacy equipment that cannot be used for HPC. Their existing data is often fragmented and communications need to be improved. Because replacing an old system with current technology can be a daunting process to the financial services customer, vendors should highlight the benefits in terms of higher productivity and better-quality results with a demonstrable return on investment.