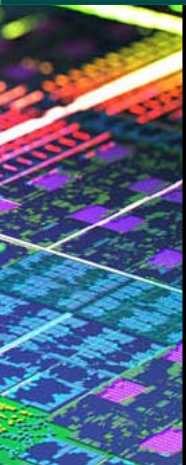


**EMERGING COMPANIES  
SUMMIT**

**Hanweck Associates, LLC  
High Performance Financial Analytics**

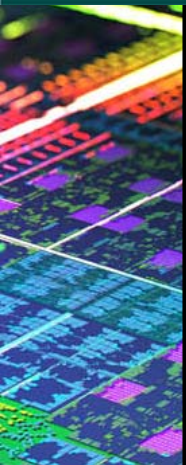
**Q: What is the biggest problem facing financial markets today?**

- **A: High-performance, real-time risk management.**
- Why is this a problem?
  - Markets and products are increasingly complex and interconnected
  - Greater regulatory requirements
  - High correlation risk and systemic risk (too big to fail, contagion)



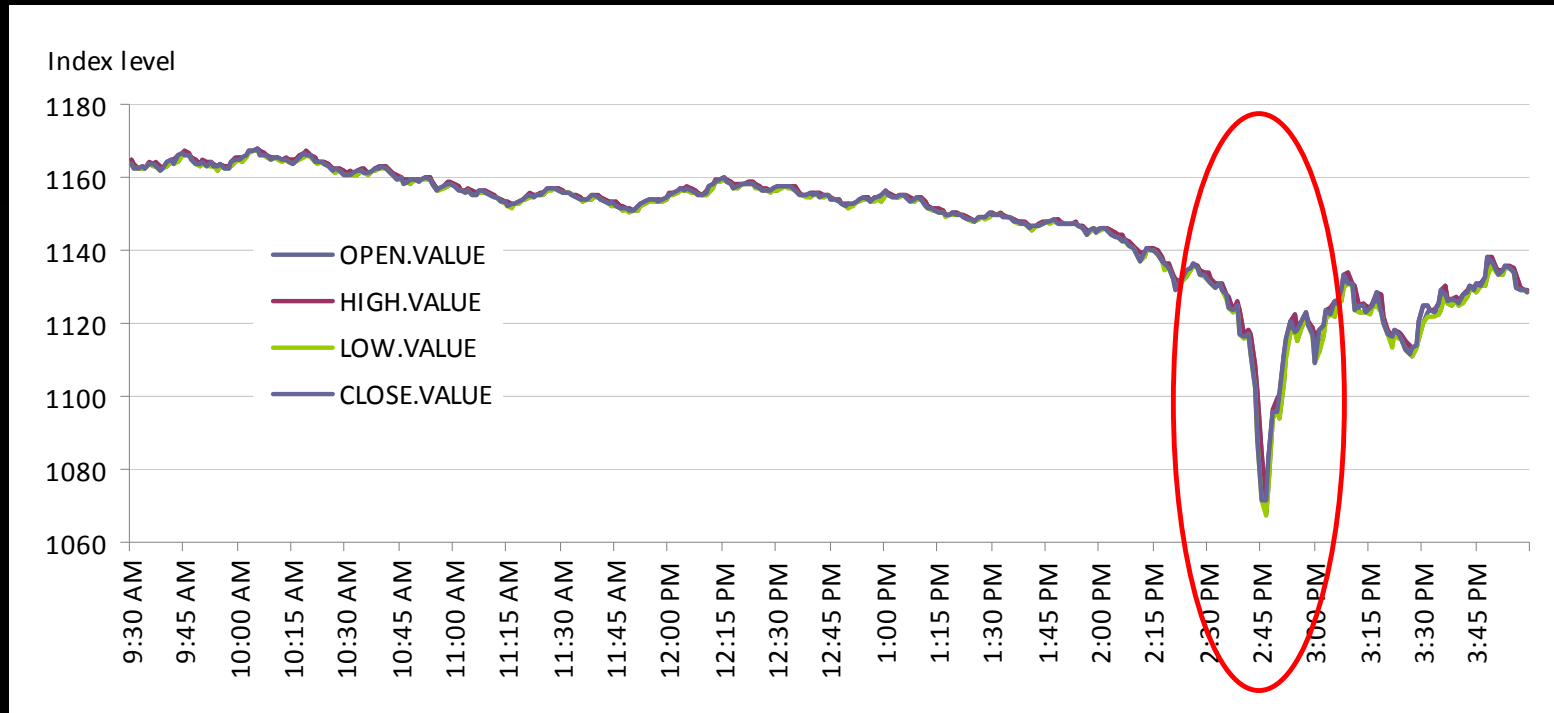
Q: What is the biggest problem facing financial markets today?

- A: High-performance, real-time risk management.
- Why is this a computational problem?
  - Quant finance models are computationally intensive and data hungry
  - Extremely short decision time frames
  - Grid-computing infrastructure is expensive!



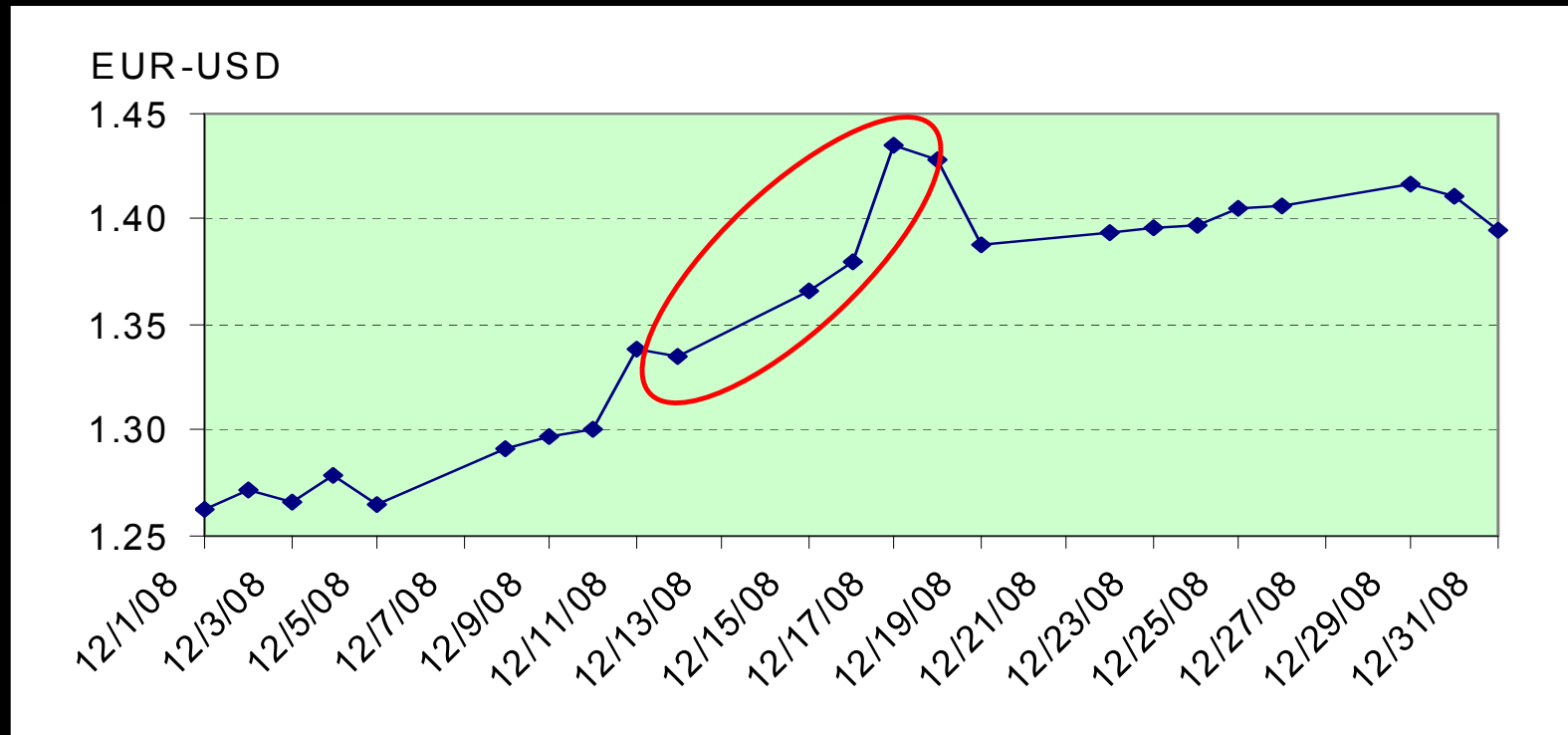
# The Flash Crash: May 6, 2010

- U.S. stock market plummeted 6.3% in 10 minutes!



## Financial Crisis: 2008

- Euro jumped 7.6% against the dollar in three days



## The Consequences

LEHMAN BROTHERS

BEAR



Countrywide

AIG



STEARNS

northern  
rock



Knight



- Still today, many major financial institutions lack effective real-time risk management

## Hanweck Associates: Background

- Founded in 2003 by Gerald A. Hanweck, Jr., PhD, former chief equity derivatives strategist at J.P. Morgan.
- Hanweck Associates is a leading provider of high performance, real-time risk analytics “as a service” to top financial institutions:

Investment Banks  
Hedge Funds  
Prop Trading

Asset Managers  
Insurance Companies  
Automated Market Making

Pension Plans  
Mortgage Servicers  
Risk Managers

- Hanweck Associates’ Volera™ GPU-accelerated analytics engine pioneered the use of GPUs in the financial industry.

## Hanweck Associates: GPU-Accelerated Risk Solutions

### **VOLERA FEED**™

Real-time, low-latency datafeed of options implied volatilities and greeks covering global markets, powered by Hanweck Associates' Volera™ GPU-accelerated engine.

VoleraFEED powers:

 **ISE Implied Volatility & Greeks Feed**™

 **NYSE Technologies. Options Analytics**™

### **VOLERA RISK**™

High-performance, real-time, large-portfolio pre/post-trade risk and portfolio margining, powered by Hanweck Associates' Volera™ GPU-accelerated engine.

### **Premium Hosted Database**™

Hosted historical and real-time "tick-level" database service of equity and options prices and analytics, with 300+ TB of data stored in an enterprise-scale cloud. "Data-and-Analytics-as-a-Service" paradigm.

*In partnership with* 

### **Options Volatility Service**™

Historical, end-of-day options analytics database covering more than 6,000 U.S. companies over the past 12 years.

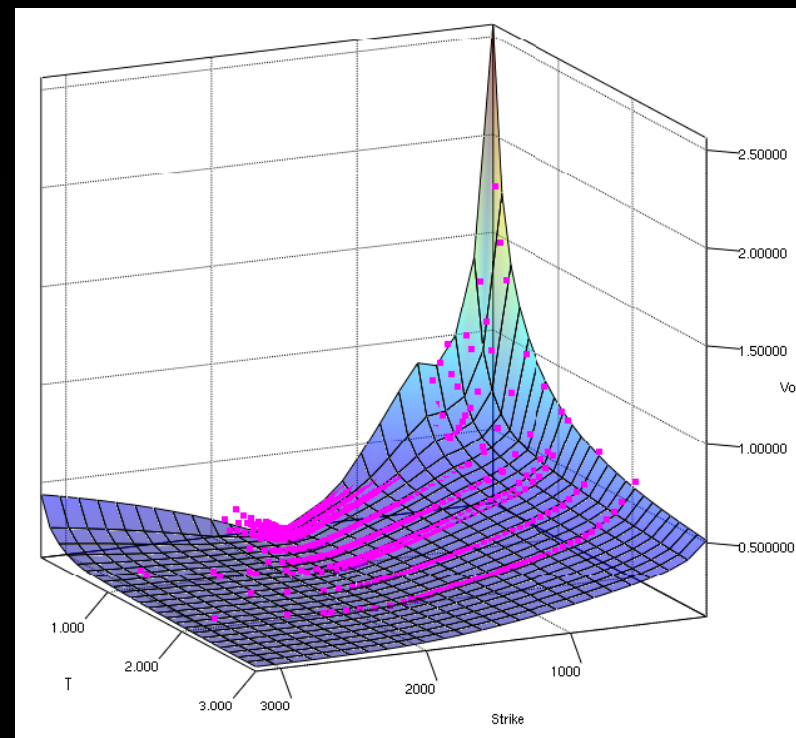
*In partnership with*  **Interactive Data**



## Hanweck Associates: GPU Accelerated Risk Solutions

Hanweck Associates' GPU-accelerated, high-performance risk solutions offer financial professionals powerful, real-time risk management functionality:

- **10x faster** dollar-for-dollar than conventional computing.
- **10x faster** means:
  - overnight → over lunch
  - over lunch → get a cup of coffee
  - get a cup of coffee → don't blink!
- **Faster risk measurement.**
- **Tighter risk controls.**
- **Reduced total cost of ownership.**



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