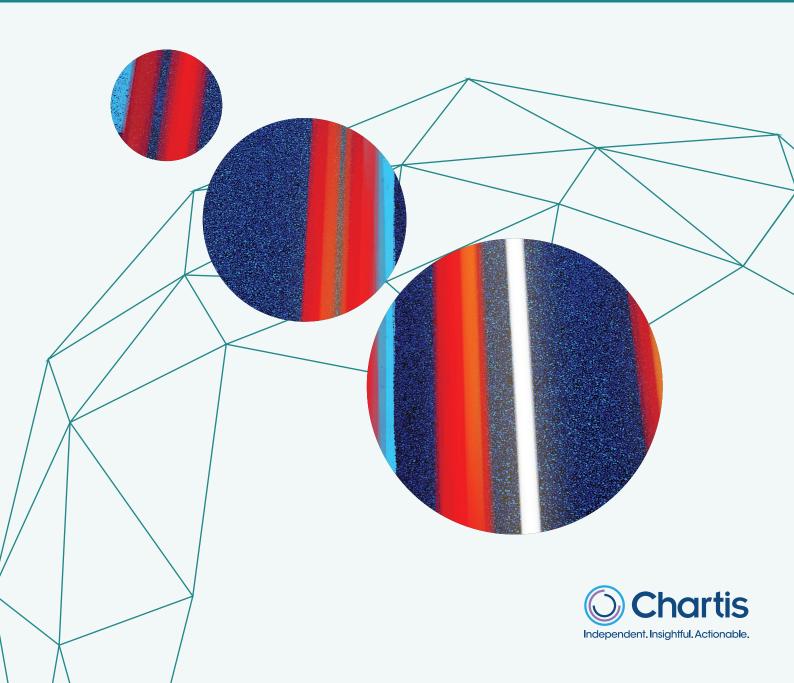


Chartis Research – Research Agenda Q1 2021 Update





Chartis Research is the leading provider of research and analysis on the global market for risk technology. It is part of Infopro Digital, which owns market-leading brands such as Risk and WatersTechnology. Chartis' goal is to support enterprises as they drive business performance through improved risk management, corporate governance and compliance, and to help clients make informed technology and business decisions by providing in-depth analysis and actionable advice on virtually all aspects of risk technology. Areas of expertise include:

- Credit risk.
- Operational risk and governance, risk and compliance (GRC).
- Market risk.
- Asset and liability management (ALM) and liquidity risk.
- Energy and commodity trading risk.
- Financial crime including trader surveillance, antifraud and anti-money laundering.
- Cyber risk management.
- Insurance risk.
- · Regulatory requirements.

Chartis focuses on risk and compliance technology, which gives it a significant advantage over generic market analysts.

The firm has brought together a leading team of analysts and advisors from the risk management and financial services industries. This team has hands-on experience of implementing and developing risk management systems and programs for Fortune 500 companies and leading consulting houses.

Visit **www.chartis-research.com** for more information.

Join our global online community at **www.risktech-forum.com**.

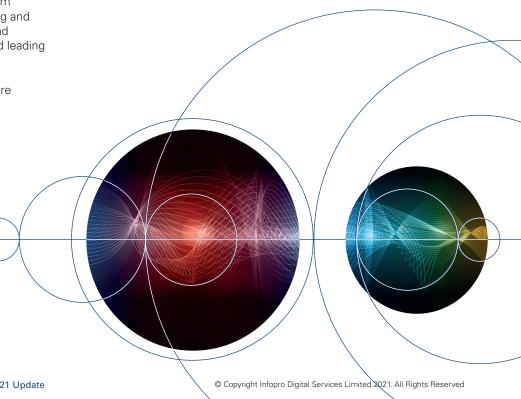
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1. Introduction

This short report is the first of our regular updates in which we review our research agenda for 2021. Our aim is to give our clients a rolling full-year view of our planned research so they can prepare accordingly.

Because of constantly shifting technical and structural boundaries, we continually assess our flexible agenda to adapt and respond appropriately.

As such, this update reflects the following changes to the pillar structure that underpins our research (see Figure 1):

• The Risk Data & Tech pillar has been removed, as the category runs across all the other pillars.

• Two new pillars - Asset Management and Wealth Management - have been added. This change reflects the expansion of Chartis' research coverage into key investment-market sectors (what we might loosely term the 'buyside').

The impact of COVID-19 continues to be a major driver in our industry, from a logistical and a credit and liquidity perspective. As in previous updates, we have reviewed our future agenda and made some changes to reflect market conditions, and to align with our clients' priorities.

Figure 1: Chartis Research - our research pillars



Source: Chartis Research



2. New Pillars, New Research, New People, New Goals: **Chartis Expands Its Research Organization**

Last year was a significant one for Chartis. In hiring three new members of our research team, we not only expanded our coverage into the areas of Asset Management and Wealth Management, we also enhanced our Market Structure pillar with a heightened focus on innovations and trends in trading structures and technologies.

New pillars, new research

Research in the Asset Management pillar analyzes technology systems and processes across the investment lifecycle, including portfolio management, regulatory reporting, operations and investment strategy.

Research in the Wealth Management pillar analyzes the operations, challenges, strategies and approaches in the welath management sector.

The **Market Structure** pillar will now consider the rapdily changing trading landscape, covering key areas including execution management systems (EMSs), algorithmic trading and FX risk and trading.

New people

Jay Wolstenholme: Research Director



Jay joined in July 2020, and his primary focus is to lead and build-out our offerings for the buy-side, our first area of expansion and one which is increasingly important for both our clients and the industry in

general. Jay has held senior positions at Finastra, Celent, HP, Gartner and UBS.

Denise Valentine: Research Director



In her role as Research Director with Chartis Research, Denise focuses on wealth and asset management, evaluating market trends, financialadvisor technology, and the front- and middle-office. For a decade she covered

these areas as a market intelligence analyst with research advisory firm Aite Group. Denise's asset management background includes VP-level positions in risk management and marketing services with multi-product firms serving wealth and institutional client markets. She has worked at a broker-affiliated asset management firm acquired by UBS, GE Capital Europe, and BlackRock.

Michael Mollemans: Research Principal



Michael also joined in July 2020 as part of our buy-side expansion, and will also be part of our growth in both the market structure and analytical spaces. Michael was a Senior Analyst at TABB

Group, with over 20 years of trading and research experience across five countries. Before joining TABB he was at Pavilion Global Markets and Credit Suisse Securities Japan. Prior to that he worked at Daiwa Capital Markets America in New York and at Credit Lyonnais Securities in Japan and New York.

New goals

Chartis continues its expansion and plans to widen its research agenda throughout 2021. Our goal is to strengthen our position as the go-to place for risk management research and advisory, bringing our unique Chartis view to all aspects of the landscape.

For more information, contact us on info@chartis-research.com or vists us at www.chartis-research.com



3. Q1 2021 Agenda Update

In the following sections we:

- Detail any refinements to our previously published subscription reports schedule.
- Provide a new schedule for 2021 (see Figure 2). The in-built flexibility of our agenda means that reports may move across pillars, and priorities may change, which can affect publication dates.

We also provide an indication of the topic areas we intend to cover in our sponsored work. If a research area in this proposed plan is of particular interest to you, please contact us for details about possible participation or collaboration.

As always, we welcome comments from clients and readers on these and other topics.

Core Subscription Reports: Q1 2021 Update

• Financial Risk. This pillar covers the core areas of market, credit and liquidity risk, asset and liability management (ALM) and related control activities.

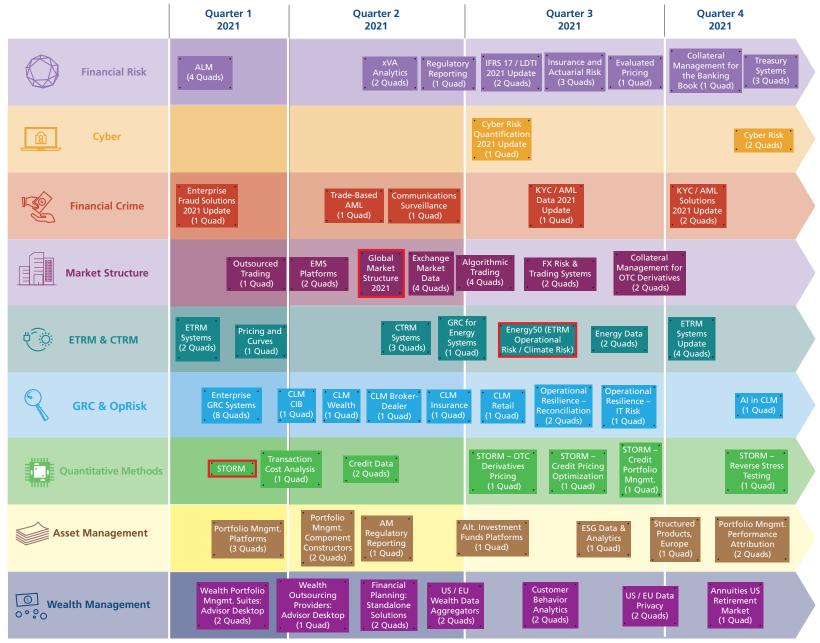
The following changes have been made to the 2021 schedule:

- The Portfolio Risk report has been subsumed into our new Asset Management research pillar.
- o A new report, Evaluated Pricing, is planned for
- Reflecting the impact of several market trends on insurance markets, we will publish an update to our 2020 IFRS 17 report, as well as a separate report focusing on actuarial risk in insurance.
- Cyber. Alongside an update to our 2020 Cyber Risk Quantification report, we also plan a Cyber Risk report in Q4.
- Financial Crime. Beyond our previously established agenda (excluding Insurance Fraud, which will be covered elsewhere), we plan to continue our regular updates to our KYC/AML Data and KYC/AML Solutions.research.

- Market Structure. Beyond our previously established agenda, we plan the following:
 - A Global Market Structure Core Thesis document.
 - Two new qudrant reports: Exchange Market Data and FX Risk and Trading Systems.
- Energy and Commodities Trading Risk Management. Reflecting important shifts in energy markets, our agenda has the following modifications:
 - ETRM Operational and Climate Risk will be included in the Energy50 rankings report.
 - Two new quadrant reports: GRC for Energy Systems and Energy Data, and an ETRM Systems Update, planned for Q4.
- GRC and OpRisk. Three new reports are planned for this pillar:
 - o Operational Resilience Reconciliation. Moved from the Market Structure pillar.
 - o Operational Resilience IT Risk.
 - o Al in CLM. Work on CLM is flourishing at Chartis, and we plan to add an Al-focused report to our series.
- Quantitative Methods. Alongside our scheduled research, the following changes have been made in this pillar:
 - A STORM Core Thesis document is planned
 - o A Credit Data report is planned for Q2.
 - STORM Performance Attribution has been subsumed into the Asset Management pillar.
- Asset Management. In this pillar, one of two to cover buy-side risk and technology, the following reports are planned:
 - o Portfolio Management Platforms. A review of institutional portfolio management platforms that provide a foundation for handling the investment lifecycle.



Figure 2: Chartis Research – updated research agenda, 2021



Red border indicates a core thesis/non-quadrant report Source: Chartis Research



- Portfolio Management Component Constructors. A look at the portfolio management vendors that are modularly constructing a full front-to-back reengineering of the asset management investment lifecycle.
- Asset Management Regulatory Reporting. An update of buy-side regulatory reporting requirements and operational pressures.
- Alternative Investment Fund Platforms. A review of institutional portfolio management platforms, focusing on alternative asset instruments.
- o ESG Data and Analytics. Issues around data validity, lineage and process coming from corporations, through aggregators, and into the ESG investment process.
- o Structured Products, Europe. The implications of structured product use in Europe.
- o Portfolio Management Performance Attribution. Focuses on P&L analysis and the growing importance of matching it with investment mandates and client transparency.
- Wealth Management. We plan the following reports in 2021:
 - o Wealth Portfolio Management Suites: Advisor Desktop. A look at the critical components facilitating a day in the life of a financial advisor.
 - Wealth Outsourcing Providers: Advisor Desktop. A look into the critical components of the advisor's desktop offer.
 - o Financial Planning Standalone Solutions. Have we arrived at holistic financial planning?
 - o US/EU Wealth Data Aggregators. Holistic financial wellness: making it a reality.
 - o Customer Behavior Analytics. Exploring the tools to answer the mystical question: 'what do my clients really want?'
 - o US/EU Data Privacy. The challenges and progress of the right to privacy.
 - o Annuities US Retirement Market. The SECURE Act has opened the annuity door for defined contribution plans - but what's on the table?

Planned Sponsored Reports: Q1 2021 Update

While our agenda for sponsored reports is more flexible, and likely to change during the year, our planned research areas are listed in Table 1 (subject to identifying and agreeing research-sponsor partners).

Rankings

Alongside RiskTech100® 2022 (Q4), we plan to udpate Energy50 in Q3/4. While the COVID-19 pandemic may impact the potential for live events, we are continuously assessing the situation. Irrespective of any impact on in-person awards ceremonies, rankings (and their associated awards) will proceed.

Contact us

As our research agenda will be updated quarterly, it may be subject to adjustment.

If you would like to discuss the agenda in more detail, or are interested in working with us on a sponsored report (either one on the current agenda or in a focus area important to you), please contact your account manager or email: info@ chartis-research.com.



Table 1: Chartis Research - sponsored research topics, 2021

Pillar	Topic area	Pillar	Topic area
Financial Risk	 Proxy Engines and the Acceleration of Middle-Office Analytics Reverse Stress Testing as a Universal and Scalable Model Validation Framework HPC on the Cloud Low Latency on the Cloud After Effects: Exploring the Post-Implementation Impacts of IFRS 9 CECL and the Credit Data Ecosystem 	GRC & OpRisk	 A New World of First-Line Controls Quantifying Operational Resilience Benchmarking Cyber Risk Building Portfolio Models of Operational Risk
Financial Crime	FinTech Internal Control	Cyber	Cyber Risk Architecture: Designing for DefenseCyber Risk and GRC
Market Structure	 The Future of CCPs Algorithmic Risk and Volatility Transition Management Solutions Off-Exchange Trading 	Quantitative Methods	ROI ModelingCredit Curve ConstructionIndexes and Benchmarking
ETRM & CTRM	 Exploring the Energy Data Ecosystem Cyber Risk in Energy Systems Analytics for the Next- Generation Grid Linking Climate Change Risk and Energy Markets Understanding Supply Chain Risk in the Energy Ecosystem 	Asset Management	 ESG Modeling in Portfolio Construction Outsourcing the AM Supply Chain – the Reality Portfolio Management Componentized Construction The Investment Book of Record (IBOR) – Modern Engineering
Wealth Management	Use of AI in WealthThe US Retirement Market		

Source: Chartis Research