Collateral Management in Turbulent Times

Why automation matters

CLOUDMARGIN

Guide

July 2024

Table of contents

Introduction

Global volatility is here to stay. A series of macroeconomic shocks caused by geopolitical events over the last four years has seen countries across the globe grappling with both inflation and the delicate balance of monetary policy. While the global outlook is brightening, the Organization for Economic Cooperation and Development (OECD) cautions “risks around the outlook are becoming better balanced, but substantial uncertainty remains” (OECD, 2024).

Regulators and corporate boards alike now expect firms to have a level of preparedness they can clearly demonstrate to mitigate for future periods of market stress. This heightened expectation reinforces why firms need **comprehensive automation and robust collateral processes**.

The industry is now automating workflows to future-proof operations and drive down costs. We’re pleased to present this Guide to help firms understand the importance of collateral management to navigatie all market conditions.

"Occurrences of significant market stress bring a marked increase in volume and size of margin and collateral calls, challenging buy-side and sell-side institutions to meet their soaring operational demands and funding requirements."

Stuart Connolly, CEO CloudMargin

A series of macroeconomic shocks and impacts

Geopolitical events over the last four years have driven a series of macroeconomic shocks across the globe, leaving countries grappling with both inflation and the delicate balance of monetary policy.

March 2020

The COVID-19 pandemic changed everything for everyone from early 2020, bringing significant market uncertainties and unprecedented challenges for institutions. Navigating supply chain disruptions, enabling employees to work from home, and meeting regulatory requirements and all operational tasks while ensuring business continuity certainly put firms through their paces.

Stock market indexes around the world plummeted, during February 20 to April 7, 2020, “resulting in panicked trading and steep declines of 10% or more: the very definition of a stock market crash... In total, the Dow Jones Industrial Average bottomed out with a loss of 37% of its value in 2020 while the S&P 500 lost 34%. Global indexes, such as the FTSE 100 in the UK, the DAX in Germany, and the Nikkei in Tokyo, all posted double-digit percentage declines” (Rodini, 2022).

Dramatic movements in equity-market prices “generated significant instability and high volatility in global capital markets” (KPMG, 2020), with the effects reverberating around the world for a sustained period. The International Monetary Fund (IMF) estimated a -3.5% global growth contraction during 2020 (IMF, 2021)

February 2022

The Russian invasion of Ukraine precipitated another significant macroeconomic shock from February 2022. As world leaders reacted, financial institutions had to ensure fast compliance with new sanctions imposed by relevant governments. Major commodities prices quickly surged in agricultural and energy markets: “The monthly average price of oil increased 18% from February to March, which was one of the more significant monthly increases on record... The surge in the price of wheat was perhaps even more historically significant. Wheat prices increased 29% in March, which was among the highest price increases over the past century.... Other price escalations of this magnitude had not occurred since the oil embargo and Russian grain deal of the 1970s or the Dust Bowl of the 1930s.” (Cowley et al., 2022).

While the extreme initial volatility outlined above has dissipated, the impacts of the conflict (and, indeed, the conflict itself) are still ongoing, with continued global disruption of commodities markets, driving high margin requirements broadly.

September 2022

The UK faced a crisis of its own in September 2022, with the Truss government’s ill-fated mini-budget. According to the Centre For Macroeconomics and London School of Economics and Political Science (Ilzetzki, 2022): “The UK government’s ‘mini-budget’ announcement on September 23, 2022 sent yields on UK government bonds soaring at a daily rate not seen since November 1988, brought the value of the pound to all-time lows, led some mortgage providers to suspend lending, and dropped the UK pension system [in]to a liquidity crisis.” Gilt prices plunged simultaneously, driving large margin calls and significant falls in the value of pledged collateral. The margin calls were large not just in size but in volume too, with many firms struggling to meet the sheer number of margin calls and substitutions required with their manual processes. Additionally, many organizations were unable to access their assets due to them being rehypothecated, inviting further market risk.

March 2023

Six months later, markets were shaken once again by a sudden banking liquidity crisis, worrying regulators that this could have a contagion effect and upend the US banking system and global markets. The IMF highlighted the March 2023 impacts of the US banking sector turmoil, which sent shockwaves throughout the global financial system: "Silicon Valley Bank (SVB), the 16th largest bank in the country, collapsed in a matter of days, followed by Signature Bank (SBNY) and First Republic Bank (FRB), marking the largest bank failures after Washington Mutual Bank in 2008. Triggered by sizable deposit outflows, this event raised concerns about the soundness of the rest of the US banking sector, in particular, other banks of similar or smaller size with large amounts of uninsured deposits, unrealized losses, and commercial real estate exposures." (Tobias, et al., 2024).

For margining and collateral teams, a period of heightened counterparty risk across banking counterparts required an emphasis on ensuring accurate and timely collateralization and understanding their true exposure to a given counterparty across all traded asset classes and holdings in real-time.

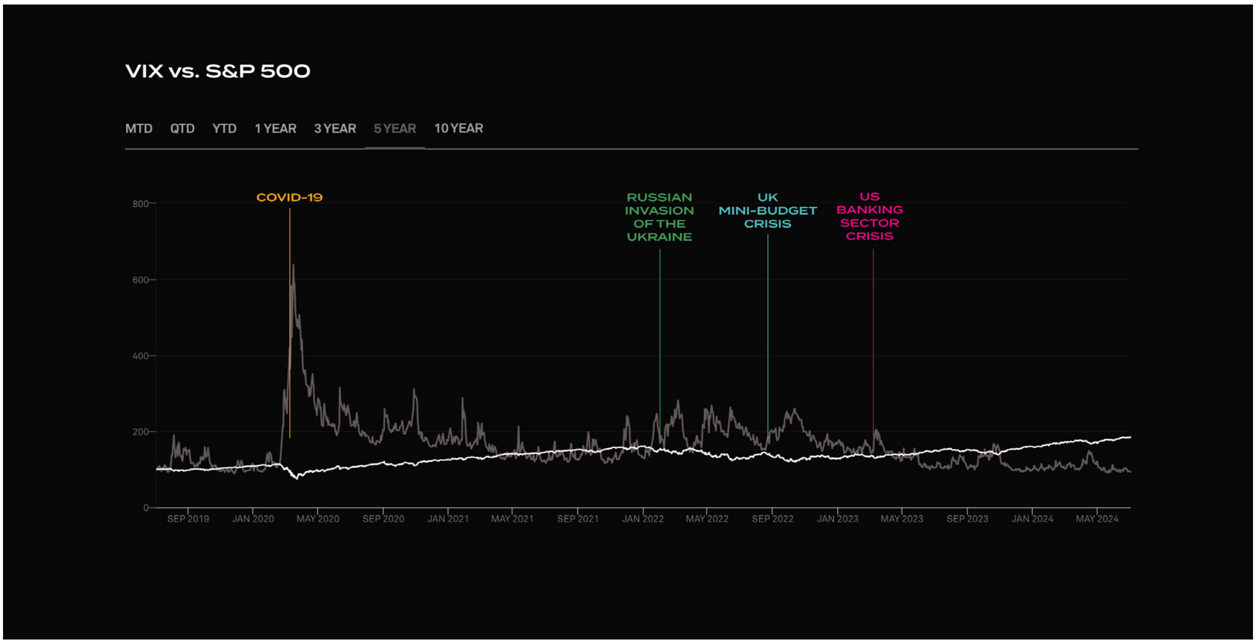
Market outlook

The recent macroeconomic shocks, continued international conflicts, including the Middle East Crisis, and consequent market volatility have clearly exposed gaps in firms' management processes. Unfortunately for the industry, sustained periods of higher rates and volatility are predicted to be here to stay.

European Central Bank (ECB) Executive Board Member Fabio Panetta summed up the road ahead in 2023, which still holds true to today: "A string of shocks has created uncertainty for economies around the world. While the effects of some of these shocks are starting to unwind, it may be some time yet before we see volatility in activity and prices subside, and a new equilibrium settle in." (Panetta, F. 2023).

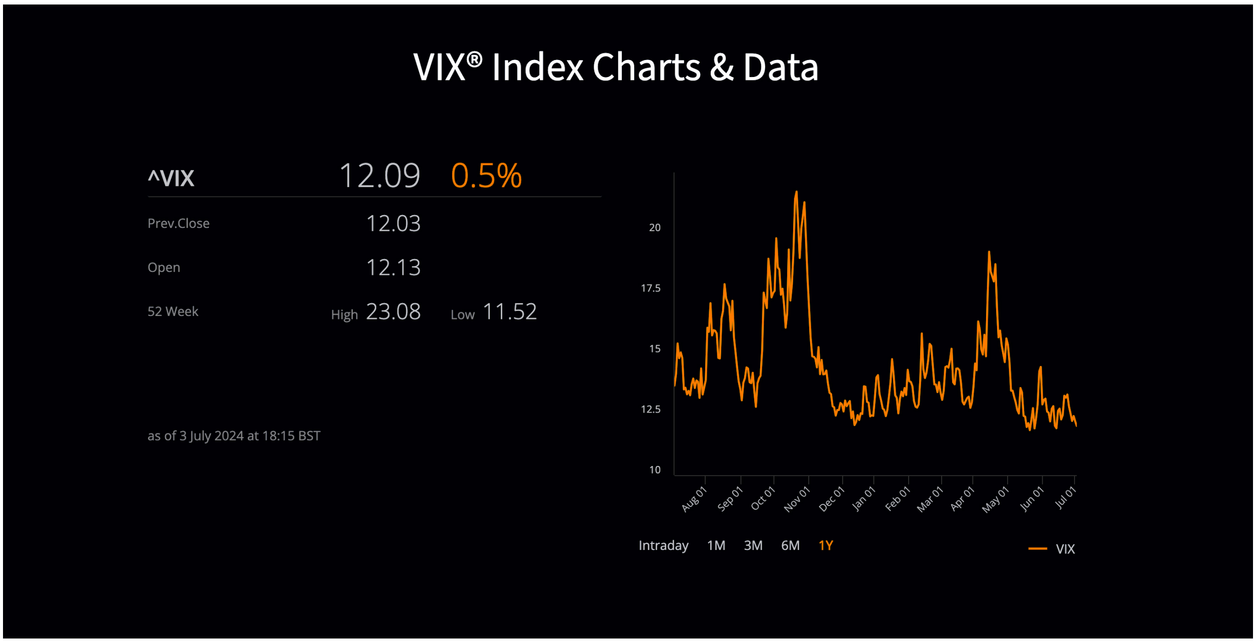
This continued unsettled environment is evident in the Cboe Volatility Index (VIX) industry benchmark, tracking the implied volatility of the S&P 500 Index over the next 30 days. While levels have calmed somewhat since the dramatic COVID spike, as seen in S&P's (July 2024) 5-year VIX vs S&P 500, volatility has remained stubbornly higher than pre-2019. A closer look at the last 12 months sees continued volatility (Cboe, 2024).

VIX vs S&P 500 Indices - 5 year trend



Source: S&P Dow Jones Indices (2024, July 3)

VIX Index – 1 year trend



Source: Cboe, (2024, July 3)

The IMF acknowledged in its April 2024 Global Financial Stability Report, The Last Mile: Financial Vulnerabilities and Risks, that while the "overall outlook for global macrofinancial stability risks has improved in the past year, alongside declines in global inflation… policymakers must remain vigilant and plan for action not just in the baseline but also in adverse scenarios… Only prudent policy and alert readiness will ensure that potential future scenarios can be tackled effectively" (IMF, 2024).

"A sustained period of higher volatility looks here to stay. The industry must learn from recent events and recognize this as an opportunity to drive efficiency through the adoption of modern technologies."

David White, Chief Commerical Officer CloudMargin

A regulatory reaction and a wake-up call for automation

Each of these macroeconomic events brought a significant increase in margin calls and pressure on institutions to manage the operational impacts. In the run-up to the first COVID-19 lockdowns in February 2020, CloudMargin saw margin call volumes escalate to 25 times the levels observed one year before.

Regulators are demanding firms have collateral resilience to prevent future disasters, stressing the importance of accurate collateralization to financial stability. Using history as a guide for the future, often regulatory advisory has been an early warning shot for subsequent regulatory requirements, and therefore, all signs point toward more mandates and guidelines for meeting industry best practices – including automation of collateral processes. **Firms need to anticipate this outcome and get ahead of it**.

FSB, April 2024

The Financial Stability Board (FSB) published a consultation report on liquidity preparedness for margin and collateral calls in April this year. The report sets out eight proposed policy recommendations to enhance the liquidity preparedness of non-bank market participants for margin and collateral calls in centrally and non-centrally cleared derivatives and securities markets to help mitigate the impact of these calls during times of market-wide stress. The report stated: "Market participants should consider the advantages of standardisation and automation of their collateral management processes to reduce frictions and the possibility of operational delays or failures in collateral use, especially during stress periods."

FCA, April 2023

The UK Financial Conduct Authority (FCA) in April 2023 published "Further guidance on enhancing resilience in Liability Driven Investment." In the UK, the plunge in bond prices in September 2022 created a crisis for pension funds that were using interest rate derivatives in liability driven investment strategies. The abrupt move in prices triggered large margin calls, which forced funds to liquidate positions to meet the calls. Increases in collateral demand, coupled with limited insight into inventory, forced firms to allocate available – as opposed to optimal – assets.

Getting ahead of the regulation

It's clear regulators are calling for improved governance, scalability and liquidity preparedness for responding to margin calls during times of market-wide stress. Now is the time for firms to replace legacy infrastructures and manual processes, focusing instead on productivity and risk reduction through automated, efficient workflows.

"Getting ahead of regulatory requirements with automated workflows ensures firms can focus on delivering client value rather than the inevitable complexity and stress caused by pivoting manual processes to align with new mandates."

Miriam Marascio, Head of Client Services CloudMargin

A guide to automation. The cornerstone of collateral resilience

Corporate boards across the world have seen the recent regulatory mandates as a wake-up call to make sure they're able to meet unexpected, sudden liquidity needs and demonstrate the ongoing soundness of their institutions. **The industry is automating workflows to future-proof their operations and drive down risk.** A strong trend in the industry is emerging – one to remove all manual processes from collateral operations – as these periods of high volatility drive significant risk for individual firms and the broader market.

What does a fully automated collateral management workflow look like? Overleaf we compare a typical collateral 'day-in-the-life', one where firms use manual processes and another where firms use fully automated collateral management workflows and BAU tasks are systematically undertaken by the collateral management solution. In the latter scenario, teams are freed up to proactively manage their collateral, dedicating more time to strategic projects and focusing on handling exceptions earlier in the day. Settlements are initiated by the collateral management solution with subsequent tracking of the status automated. Real-time reports are automatically generated and available throughout the day, removing time-intensive end-of-day tasks.

Typical collateral 'day-in-the-life' workflow comparison

8am
Trade valuations available

9am
Team commences collateral processing

10am
Margin calls agreed

12pm
Final margin call agreements completed

2pm

4pm
Typical collateral settlement market cut-off

Reporting/ end-of-day tasks

6pm

Manual

9am Issue margin calls, manually validate, create and issue calls.

10am Agree margin calls, each call takes up to 5 mins

- Check email inbox for counterparty margin calls
- Manually input counterparty call details
- Manually select collateral
- Manually email counterparts.

10am - 2pm Check emails for responses to issued margin calls and manually input.

10am - 2pm Manually authorize margin call bookings vs expectations through 4-eyes validation, then authorize transfers.

12pm - 2pm Instruct settlement – upon manual authorization, input payments into banking/custodian system, manual SSI selection.

Manually chase counterparties by email/telephone.

Continue updated data input and payments authorization.

Funding certainty.

3pm - 4pm Manually check settlement status in banking systems and custodian portals, update status in collateral system.

Focus on exceptions - action if time available, often too late to fix.

6pm Manually extract and manipulate date, dispatch by email.

Real-time view of activity unavailable. Manually integrate data from different systems. Things might have changed by the time the report is developed.

Fully automated

8am/or earlier System issues margin calls electronically upon data receipt - validation of valuations and other reference data is performed and risk tolerances are referenced.

8am/or earlier Agree margin calls, each automated STP call takes less than 5 seconds to process

- Compare and respond to counterparty margin calls upon electronic receipt
- Automatic collateral selection from available inventory, taking into account the 'cheapest to deliver' preferences
- Auto-submit responses to counterparty.

8am - 9am Counterparty responses to issue margin calls received instantly and incoming pledges automatically checked for correct validation, haircut and eligibility. If under tolerance, accepted automatically.

9am Team alerted to manage exceptions.

9:15am Instruct settlement – upon automatic authorization, payments transferred via SWIFT/agreed channel through automatically selected SSIs.

Funding certainty.

10am - 4pm Settlement status automatically checked in consolidated settlement dashboard, collateral system updated.

Focus on exceptions.

Consolidated view of exposures, holdings and inventory enabled through real-time dashboards.

4pm - 5pm Reporting automatically dispatched end-of-day.

Automated trend analysis and continuous improvement.

Benefits of fully automated versus manual workflows

At CloudMargin, we've been helping institutions across the globe navigate all market conditions for over 10 years with our fully automated, cost-saving collateral management workflow solution. Collateral management should be a simple, exception-based process which harnesses modern technology to drive collateral best practice, empowering firms to leverage real-time data and optimize their collateral strategy and ensuring flexibility to adapt to turbulent conditions. **Automation delivers significant benefits, outlined in the comparison with manual workflows below.**

Benefits	Manual	Fully automated
Automated processes, resourcing and controls	**Resourcing and risk** • Stretched resourcing - numerous manual tasks required with limited time to complete across multiple trades • Volatility/turbulence significantly increases volume of tasks and time pressures to understand funding requirements and action within short timeframes • Resource-intensive, inflexible processes • Time pressures to complete daily tasks within time frame, reducing opportunity for detailed analysis and improved decision making • Time-intensive manual report development and distribution, up to 30% of operational resource • Counterparty and liquidity risk is substantially increased. **Quality controls** • Set rules manually, repetitive processes • Manual, time-consuming follow up of counterparties by email across high trade volumes significantly increases credit risk • Settlement process window is significantly reduced, driving a higher rate of settlement failures.	**Resourcing and risk** • Low cost, scalable resourcing - most BAU tasks are completed automatically by the system, including times of volatility/turbulence, freeing up operations teams to focus on funding, exceptions and strategy • Resource cost savings • Flexible and configurable processes, dial up and down according to market characteristics on-the-fly • Daily tasks are completed early in the day, enabling earlier funding certainty, increased analysis and informed decision making. **Quality controls** • Set rules and tolerances for secure STP, freeing up teams to focus on risk/exceptions • Significantly reduced risk of manual processing errors, based on pre-approved controls • Auto margin call send and agreements, auto pledge and acceptance • Automated settlement with real-time status by SWIFT, DTTCC MTU and API.
Centralized holistic, real-time data	**Data** • Real-time data isn't available to drawn out collateral workflow • Disparate processes and data further slow processing and consolidated views are hard to obtain • Operational teams provide data manually to key stakeholders/decision makers with significant data lags. **Settlement and settlement updates** • Transfer of assets late in the day • Potential risk of settlement failure.	**Data** • Transparent, real-time view of assets and liabilities in one platform • All instruments and collateral data in one place provide a complete and accurate view of assets and risk • Proactive monitoring and decision making • Self-service data access for key stakeholders/decision makers. **Settlement and settlement updates** • Funding certainty allows for greater funding efficiency and lower funding risk • Reduced risk of settlement failure.
Optimized collateral selection, insights and reporting	**Collateral allocation** • Operations teams often check available inventory in separate systems or offline lists to see what they can deliver and then manually select assets accordingly • No intraday updates – separate systems and offline lists get out of sync with real-world availability quickly. Teams try and post assets that are no longer available resulting in settlement failures and manual rectification • Operations teams need to regularly check with their funding teams throughout the day on what assets are available. Funding teams need to manually keep track of what the operations teams are using. **Insights and reporting** • Static reports at set times of day promote dislocation and risk.	**Collateral allocation** • Flexible rule-based waterfalls and algorithmic optimization allocate collateral inventory according to preferences in real-time • Intraday inventory updates with restricted assets ensure no dislocation between funding desks and collateral teams • Collateral teams automated processes utilize assets and rules defined by funding teams on-the-fly in real-time. **Insights and reporting** • Fully customized inventory dashboards, real-time data view.
Connected systems	**Ecosystem** • Manually maintained and prone to fall over in extreme volatility.	**Ecosystem** • Hosted, auto-scaling platform with maintained to industry third party service providers and utilities ensures technical resilience, despite margin call volumes and market volatility.

Implementing automated collateral management workflows is straightforward when firms work with a specialist provider with a modern and adaptive technology stack. Firms benefit from resource cost savings and efficiencies, earlier settlements and the efficient use of collateral with **automated** straight-through processing (STP) task management, **centralized** real-time data, **optimized** collateral and reporting and **connected** ecosystems.

A look to the future and higher levels of resilience

Greater resilience to market shocks is already possible through automated collateral management workflows. Looking forward, even stronger resilience will be possible through continuous improvement in technology and solutions.

The industry is taking heed from past learnings and moving toward even greater automation, in the form of **automated substitutions**. Currently, substitutions – the activity of held or posted collateral being exchanged for other eligible collateral – is a manual and resource-intensive process.

Missed opportunities and inefficiencies

Real-time favorable lending rates to generate returns Swapping eligible collateral on a regular basis to take advantage of revenue opportunities, including assets 'going on special' and lending out assets is being missed due to the time-intensive nature of substitutions workflows.

Substitution in stress Exchanging assets in bulk, particularly in times of market stress, is very challenging to handle manually. This was demonstrated during the September 2022 UK mini-budget crisis, which negatively impacted UK government bonds. Exchanging the bonds in bulk for other eligible collateral required intensive, resource-heavy processes due to the lack of automation; market risk increased as prices plunged.

New capabilites

Over the next 12 months CloudMargin and leading broker dealers will build out connectivity enabling electronic and instantaneous collateral substitutions for the market, delivering a range of additional benefits:

Multiple substitutions Create and request multiple substitutions across the same agreement throughout the day, adapting to changing market conditions in times of volatility.

Bulk substitutions Issue substitutions in bulk, locate and recall a single ISIN or CUSIP across multiple agreements simultaneously. Urgent situations previously requiring significant manual processing are quickly addressed.

Substitute maturing/actionable assets in bulk Reduce the risk of delayed income receipt when debt assets are approaching their record date. Asset owners are automatically alerted and tasks performed through STP instead of recalling maturing debt assets for income management by the asset owner's custodian.

Integration with optimization services for asset selection Choose the best replacement assets based on defined optimization profiles, enabling even greater collateral efficiencies.

> **"In addition to the numerous efficiency and cost savings benefits, automated substitutions help future-proof firms and asset owners against macroeconomic shocks, deepening their resilience and enhancing their ability to react quickly in times of stress."**
>
> Helen Nicol, Head of Product CloudMargin

A calmer outlook starts now

With continued volatility on the horizon, firms are wise to automate their collateral management workflows now to future-proof their operations, drive down costs and get ahead of potential regulatory mandates. Even during calmer waters, firms and asset owners will benefit from significant cost savings and optimized collateral allocation through automated workflows. This is why collateral management automation matters. A calmer outlook can start now.

About us

CloudMargin transforms financial services firms' workflows with cutting-edge, software-as-a-service (SaaS) collateral management technology. Over 210 buy-side and sell-side institutions across the globe rely on CloudMargin to streamline their operations through automated, end-to-end collateral management processes. Always at the forefront of innovation, CloudMargin created the world's first cloud-based collateral management workflow tool. Combining market-leading process automation with flexible, real-time analytics, CloudMargin delivers unparalleled efficiencies and risk reduction through smart, simplified workflows and straight-through processing (STP), helping firms navigate all market conditions.

Resources

Cboe. (2024, July 3). VIX Index. https://www.cboe.com/tradable_products/vix/

Cowley, C., Rodziewicz, D., Cook, T. (2022, May 23). Turmoil in Commodity Markets Following Russia's Invasion of Ukraine. Federal Reserve Bank of Kansas City. https://www.kansascityfed.org/agriculture/turmoil-in-commodity-markets-following-russias-invasion-of-ukraine/

FCA. (2023, April 24). Further guidance on enhancing resilience in Liability Driven Investment. Financial Conduct Authority. https://www.fca.org.uk/publications/multi-firm-reviews/further-guidance-enhancing-resilience-liability-driven-investment

FSB. (2024, April 17). Liquidity Preparedness for Margin and Collateral Calls: Consultation Report. Financial Stability Board. https://www.fsb.org/2024/04/liquidity-preparedness-for-margin-and-collateral-calls-consultation-report/

Ilzetzki, E. (2022, October 27). UK Financial Crisis of 2022: Retrospective Diagnosis and Policy Recommendations. Centre For Macroeconomics and London School of Economics and Political Science. https://www.lse.ac.uk/CFM/assets/pdf/CFM-Discussion-Papers-2024/CFMDP2024-08-Paper.pdf

IMF. (2021, January). World Economic Outlook Update: Policy Support and Vaccines Expected to Lift Activity. International Monetary Fund. https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update

IMF. (2024, April). Global Financial Stability Report. The Last Mile: Financial Vulnerabilities and Risks. International Monetary Fund. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

KPMG. (2020, July). COVID-19: Impact on the banking sector. Global Banking M&A Outlook H2 2020. Standing firm on shifting sands. KPMG. https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2020/07/standing-firm-on-shifting-sands.pdf

OECD. (2024, May). OECD Economic Outlook, Volume 2024 Issue 1: An unfolding recovery. OECD Publishing, Paris. https://www.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2024/issue-1_69a0c310-en

Panetta, F. (2023, March 23). Everything everywhere all at once: responding to multiple global shocks. European Central Bank. https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230322_2-af38beedf3.en.html

Rodini, L. (2022, Nov 10). What was the COVID-19 Stock Market Crash of 2020? Causes and Effects. The Street. https://www.thestreet.com/dictionary/covid-19-stock-market-crash-of-2020

S&P. (2024, July 3). VIX vs. S&P 500. https://www.spglobal.com/spdji/en/vix-intro/

Tobias, A., Nassira, A., Silvia, R., Gonzalo, F. D. (2024, March 5). The US Banking Sector since the March 2023 Turmoil: Navigating the Aftermath. International Monetary Fund. https://www.imf.org/en/Publications/global-financial-stability-notes/Issues/2024/03/04/The-US-Banking-Sector-since-the-March-2023-Turmoil-Navigating-the-Aftermath-544809

Get in touch

BOOK A CALL

EMAIL US

CLOUDMARGIN

info@cloudmargin.com cloudmargin.com