System-Wide Stress Test Interim Report

June 2026

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TABLE

Executive Summary

Since the 2008 Global Financial Crisis, financial regulation (in particular microprudential regulation) has significantly strengthened, resulting in improved financial institutions' robustness and resilience. Yet, over the past few years, two trends have been at play:

- *The growing size of non-bank financial intermediation (NBFI) worldwide has contributed to making the interconnexions across various parts of the financial system more complex, possibly increasing the interdependencies. This feature is not observable in France though, where domestic NBFI has accounted for 30% of the French financial sector for the past 25 years.*
- *Recent episodes of market turmoil such as the March 2020 "dash for cash," tensions in the energy markets in the run up to and following the full-scale invasion of Ukraine by Russia (late 2021 to late 2022), or the September 2022 UK Gilt turmoil highlighted the destabilising nature of systemic liquidity stress.*

These trends call for a more integrated approach to financial stability surveillance. Microprudential robustness and sector resilience do not guarantee system-level stability, as individually sound institutions or categories of intermediaries can collectively generate or amplify destabilising dynamics.

The ACPR, the AMF and Banque de France are currently conducting a joint pilot system-wide stress-testing exercise (the System-Wide Stress Test, SWST) to understand how various financial institutions (banks, insurance companies, and asset managers) interact under severe market stress, and to identify the transmission channels and second-round effects that conventional sector-specific stress tests fail to capture. This pilot exercise aims at enabling supervisors and market participants to better understand individual and collective reactions in the event of acute market stress, identify the main contagion channels (focusing on the amplification of liquidity stress) and assess possible vulnerabilities in core markets.

The SWST is an exploratory multi-sectoral bottom-up exercise, based on a market scenario targeting a severity at least equivalent to a 1-in-500 occurrence over ten business days. Participants, including the main French banks, insurance companies and asset managers, report what their actual management reactions would be (which markets they rely on, when, at what volumes, and towards which counterparties). Compared to other stress-test approaches, it captures the diversity of real-world behaviours and reveals potential inconsistencies, such as multiple institutions planning to sell the same assets or draw simultaneously on the same liquidity source. The analysis is structured around three transmission channels: (1) crossholdings and cross-exposures; (2) asset concentration and fire-sale risk; and (3) liquidity needs, margin calls, and repo operations.

A top-down surveillance module complements the bottom-up submissions by modelling non-participants, performing independent revaluations, and estimating second-round price impacts. The exercise's iterative two-round design tests whether the system converges towards equilibrium under stress or enters into a self-reinforcing spiral - the type of question that single-round, single-sector exercises cannot address.

1. Context and objectives

Since the 2008 Global Financial Crisis (GFC), global financial regulation has strengthened across the board. While the banking prudential regulation (Basel 2.5 and Basel 3) has attracted a lot of attention, the international regulatory agenda has also contributed to addressing issues associated with systemically important financial institutions, fixing identified design flaws in several financial markets and improving the resilience of core financial market infrastructures (see FSB, 2009, and subsequent implementation reports). The regulation applicable to banks, non-banks (insurance companies, investment funds and asset managers), financial instruments, markets, infrastructure and participants was strengthened and improved with a view to addressing the series of flaws identified in the context of the GFC.

In addition, in Europe, the architecture of financial supervision and oversight has been overhauled, notably in the context of the Euro Area (EA) crisis. The European Union (EU) has set up three European Supervisory Authorities (ESAs) in 2011 to produce relevant level 2 regulation and promote consistent supervision.[1] Together with the three ESAs, the European Systemic Risk Board (ESRB) was established as an EU-wide cross-sector macroprudential body. Meanwhile, EU Member States have set up or clarified their macroprudential policy frameworks. In 2014, banking supervision has been further integrated at EA level through the Single Supervisory Mechanism (SSM) anchored in the European Central Bank (ECB).

All in all, both the regulation and the supervision of European banking, insurance and asset management sectors have significantly strengthened over the past 15 years, leading to an improvement of their solvency and liquidity positions and their overall robustness and resilience. The effectiveness of these changes has been repeatedly confirmed through the EU-wide regular stress tests undertaken under the responsibility of each of the ESAs in their respective sectors.

1.1 A changing financial landscape

Since 2020, the European economy and the global financial system have been hit by a series of crises, such as Covid-19 in 2020-2021, the full-scale invasion of Ukraine by Russia and its impacts on the macro-economy in 2022, US regional banks stress in 2023, and renewed geopolitical instability, in particular conflicts in the Middle East (Israel, Gaza, Lebanon, Iran) since 2023 and the trade wars globally. Against this backdrop, the resilience of the European financial sector attests to the effectiveness of the reforms and confirms the conclusion of the stress tests undertaken on a regular basis.

However, two developments stand out when reconsidering the past 15 years.

- The structure of the global (and European) financial system has evolved profoundly. Non-bank financial intermediation (NBFI) now plays a much larger role in credit intermediation, market-making, and liquidity provisioning. As documented by the FSB annual monitoring reports (see FSB, 2025), the NBFI sector has grown in both absolute size and relative importance. While the contribution of regulation to this development has been much discussed (e.g., Lee et al. (2024)[2], Arora and Kashiramka (2023)[3], Patalano and Roulet (2020)[4], Mishin (2023)[5], Irani et al. (2018)[6]), the role of the macrofinancial environment (esp. the "low for long", later "lower for longer" interest rate environment) is equally likely to have influenced the growth of the NBFI (e.g., Van Riet (2017)[7] or Brei et al. (2020)[8]). The growing size and importance of NBFI have contributed to strengthening the interconnections across various parts of

[1] The European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA) and the European Securities and Markets Authority (ESMA).

[2] Lee, Hyunju, Sunyoung Lee, Radoslaw Paluszynski (2024). Capital Regulation and Shadow Finance: A Quantitative Analysis, *The Review of Economic Studies*, Volume 91, Issue 5, October 2024

[3] Arora, Dhulika and Smita Kashiramka (2023). What drives the growth of shadow banks? Evidence from emerging markets, *Emerging Markets Review*, Volume 54, 2023.

[4] Patalano, R. and C. Roulet (2020). Structural developments in global financial intermediation: The rise of debt and non-bank credit intermediation", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 44, OECD Publishing, Paris.

[5] Mishin, Arsenii (2023). Dynamic bank capital regulation in the presence of shadow banks, *Review of Economic Dynamics*, Volume 51, 2023.

[6] Irani, Rustom M., Rajkamal Iyer, Ralf Meisenzahl, and Jose-Luis Peydro (2018). The Rise of Shadow Banking: Evidence from Capital Regulation *FEDS Working Paper* No. 2018-39, (June, 2018). Available at SSRN: https://ssrn.com/abstract=3201518

[7] Van Riet, Ad. (2017). The ECB's Fight against Low Inflation: On the Effects of Ultra-Low Interest Rates, *International Journal of Financial Studies* 5, no. 2: 12.

[8] Brei M., C. Borio, L. Gambacorta (2020). Bank intermediation activity in a low-interest-rate environment, *Economic Notes*, 2020.

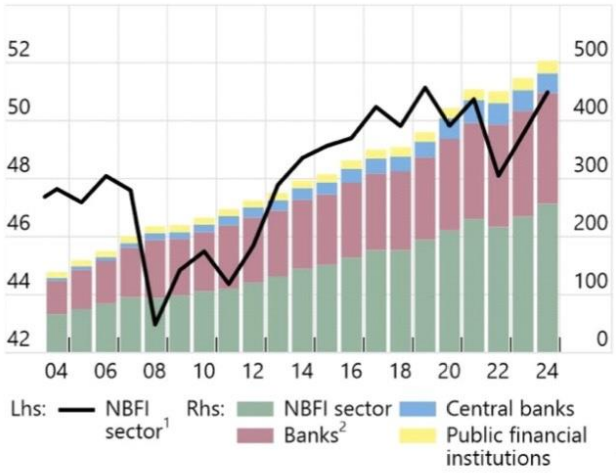
the financial system and making them more complex, possibly increasing the interdependencies across institutions – something that traditional microprudential stress tests, designed to assess the soundness of individual institutions and within a single sector, fail to capture. Note however that in the specific case of France, domestic NBFI has represented a constant share of 30% of the financial sector over the past 25 years.[9] The global trend of booming NBFI was therefore not observed in France.

- Recent episodes of financial stress such as the March 2020 "dash for cash", tensions in the energy markets in the run up to and following the full-scale invasion of Ukraine by Russia (late 2021 to late 2022), or the September 2022 UK Gilt turmoil (see box 1) suggest that liquidity developments should sometimes be considered for themselves and not only as the symptom of an underlying solvency issue. While the stress testing framework developed over the past 15 years mainly focuses on the impact of macroeconomic developments on the resilience of financial institutions (seeking to measure capital depletion and find reassurance about the resilience of the financial sector when confronted with an economic crisis materialising over a few quarters), it fails to properly assess the impact of a systemic liquidity stress and the potentially destabilising nature of the various reactions of the financial institutions seeking to protect themselves from the shock.

Eventually, while more resilient to adverse macro developments, we might be facing a more complex financial system still fragile when confronted with liquidity stress, something that traditional stress tests, designed to assess the soundness of individual institutions and within a single sector, fail to properly capture.

G1: Global financial assets by sector & NBFI as share of total global financial assets

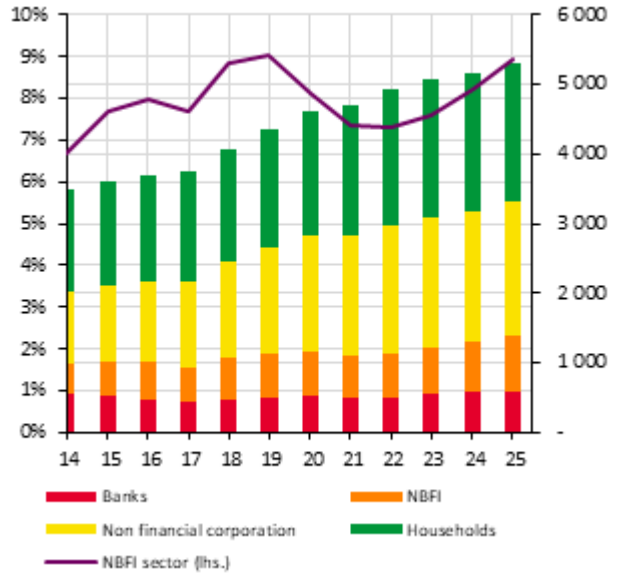
x: years / y: % (lhs) USD tn (rhs)



Source: FSB

G2: Exposure of French Banks financial assets towards NBFI vs other main counterparty sectors

x: years / y: EUR bn (lhs) EUR bn (rhs)

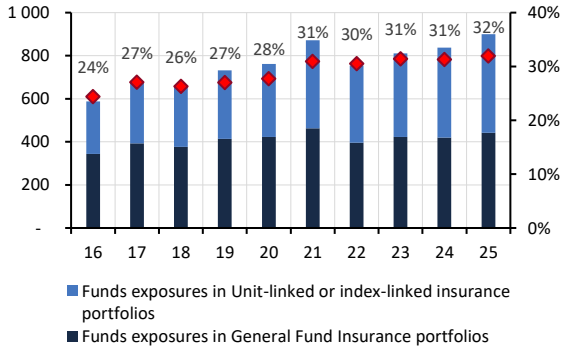


Note: Figures based on supervisory reporting includes loans and advances, debt securities and equity instruments at carrying value.
Source: ACPR.

[9] See in particular Mouakil et al. (2024). An overview of the French financial system: changes over time, mapping, and interconnections with the rest of the world (in Banque de France Financial Stability Report, dec. 2024)

G3: French insurance companies' exposure to funds

x: years / y: EUR bn (lhs) % (rhs)



Source: ACPR

Box 1: Recent episodes of financial turmoil

Several recent episodes of financial instability have underscored the systemic relevance of these interconnections and the associated amplification risks:

The "Dash for cash" (March 2020)

The onset of the COVID-19 pandemic triggered simultaneous liquidity demands across sectors, including non-financial corporates. Correlations between asset classes spiked, and even assets traditionally considered safe faced intense selling pressure. The episode demonstrated that when multiple sectors seek liquidity at the same time, the resulting market dynamics can amplify the initial stress well beyond what any sector-specific analysis would predict.

The Archegos Capital Management losses (March 2021)

Concentrated leveraged exposures built through total return swaps created cascade effects across several prime brokers. Information asymmetries between counterparties delayed coordinated responses, and losses materialized rapidly once positions began to unwind. The episode illustrated how counterparty linkages and exposure concentration can transmit stress through the system even in the absence of a broad market shock.

Energy crisis (2021-2022)

Surging gas and power prices, driven by post-pandemic demand and the Russia-Ukraine conflict, triggered massive margin calls on forward energy positions. Several utilities and traders—though solvent based on long-term cash flows—faced acute liquidity shortfalls as collateral demands outpaced available cash. The episode showed how margin mechanisms can transmit physical-market stress into financial strain, forcing solvent-but-illiquid firms to seek emergency funding or asset sales, thereby amplifying volatility across energy and financial systems.

The UK Gilt market turmoil (September 2022)

Margin calls on leveraged liability-driven investment (LDI) positions held by British pension funds –strategies that use derivatives and repo financing to hedge long-term pension liabilities against interest rate and inflation risk- triggered a liquidity spiral that affected banks, insurers, and sovereign bond markets simultaneously. Collateral-driven feedback loops, where falling gilt prices increased collateral requirements, forcing further gilt sales, as well as margin calls on long maturity interest rate swaps, nearly destabilized the market. Since many funds held illiquid gilts but faced immediate cash demands, they were forced to sell into a falling market, amplifying the downturn. This crisis provided a vivid illustration of how collateral chains and margin call mechanisms can act as accelerants of systemic stress.

1.2 Objectives of the exercise

In this context, the FSB has recommended developing stress tests that encompass the entire financial system[10]. The Bank of England (BoE) conducted a landmark *System-Wide Exploratory Scenario* (SWES) exercise in 2023-2024, involving more than 50 participants across banks, insurance companies, pension funds, and asset managers. The SWES demonstrated both the feasibility and the analytical value of cross-sector stress testing, providing an important precedent for other jurisdictions.

Convinced of the potential value of such an initiative and leveraging on the experience of the BoE, the Autorité de Contrôle Prudentiel et de Résolution (ACPR), the Autorité des Marchés Financiers (AMF) and the Banque de France (BdF), are conducting a joint pilot system-wide stress-testing exercise. It is devised as a mutual learning exercise both for the authorities and the participants. Its aim is to enhance the understanding of the interaction mechanisms between key financial actors (banking institutions, insurance companies, funds and asset managers) under severe market stress, and to identify the transmission channels and second-round effects that conventional sector-specific stress tests fail to capture.

This exercise is explicitly exploratory: its findings will not trigger any supervisory or regulatory consequences for participants. Instead, these findings will contribute to the collective reflection on data and projection capacity gaps, systemic risk analysis, macroprudential regulation, and crisis management frameworks.

The table T1 (below) summarises how the SWST compares to other stress test exercises:

T1: Positioning of the SWST within the stress testing landscape

	Traditional sector-wide stress test (EBA, EIOPA, ESMA)	Thematic or pilot/ exploratory stress test	System-wide stress test (SWST)
Primary objective	Assessing capital, solvency and/or liquidity adequacy	Exploring emerging risks	Understanding contagion & amplification mechanisms (including through the behavioural response to the shock)
Scope	one type of institutions' sector		Cross-sector perspective
Time horizon	Business cycle (3-5 years)	Variable	Very short term (10 business days)
Behavioural assumptions	Usually static balance sheet, possibly dynamic but with constraint behaviours		Static with detailed management actions
Output focus	Depletion of solvency ratio, capital requirements	Lessons learned	Aggregate dynamics, systemic insights
Supervisory consequences	Supervisory action (e.g., Pillar 2 Guidance)	Generally, none	None (purely exploratory)

Sources: ACPR, AMF, BdF

The SWST exercise is structured around three main transmission channels identified in the academic literature and confirmed by recent crisis episodes:

- Cross-holdings and cross-exposures between participants: Financial institutions are directly exposed to one another through the securities they hold and the bilateral relationships they maintain via, for instance, credit lines or deposits, fund-shares holdings, derivatives, repurchase transactions and other securities financing transactions. When one participant faces difficulties in a stressed environment, whether because of the deterioration of its creditworthiness or through the repricing of the securities it has issued, this distress may be transmitted to other participants via marked-to-market losses, counterparty credit risk adjustments, or, in extreme cases, default. These bilateral linkages are difficult to assess through conventional sector-specific exercises, which typically treat each institution's counterparties as exogenous.

[10] See in particular the recommendation 9 of FSB (2017), "Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities", website : Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities - Financial Stability Board

- Liquidity needs and chain reactions: Market stress generates a cascade of liquidity-consuming actions (deposit withdrawals, fund redemptions, repo market dry-up, drawings on credit lines, margin calls on derivatives and repo positions, etc.). Each of these actions directly affects counterparties and may amplify their own liquidity vulnerabilities. Furthermore, the decrease in market price of financial assets simultaneously reduces the collateral available for refinancing operations, constraining the overall liquidity supply in the system precisely when demand is increasing. Margin calls act as a particularly potent accelerant: volatility spikes trigger variation margin on existing transactions and may contribute to raising initial margin calls. Both phenomena are draining liquidity from intermediaries, while rising haircuts on non-cash collateral further tighten conditions.
- Concentration of similar asset holdings and fire-sale risk: Multiple institutions across different sectors may hold similar assets, which creates indirect (and generally unknown to the institutions themselves) interconnections. In periods of stress, simultaneous liquidity pressures may compel several institutions to sell the same assets to restore their liquidity buffers or to meet margin requirements. Simultaneous selling of similar assets can cause significant imbalances between supply and demand, amplifying the decline in price beyond the initial exogenous shock. Critically, assets perceived as liquid in normal times may exhibit endogenous illiquidity when many participants attempt to sell them simultaneously: market depth is not a fixed characteristic, and it depends on whether other market participants are trading at the same time in converging or different directions.

These channels have largely determined the analytical framework through which interactions between participants are captured and assessed (see Annex).

1.3 A bottom-up exercise benchmarked with a complementary top-down approach

The main goal of the exercise is to better understand the contagion and amplification mechanisms following the shock, including through the behavioural response of the various participants. This latter dimension cannot be explored without a bottom-up approach in which participants would reveal their (likely) behaviour in the context of the market stress. This makes the exercise fundamentally different from most other stress tests focusing on assessing the resilience of the participants (something that can be done even while imposing assumptions on the bidding behaviours of other participants) and gives pre-eminence to a bottom-up approach.

The SWST's bottom-up approach collects participants' actual responses to the stress scenario: what management actions they would take, in what order, at what volumes, and towards which counterparties. This approach captures the diversity of business models, risk appetites, and operational constraints that shape real-world behaviours under stress. The diversity of behaviours is an important aspect of the assessment as it is likely to be an important mitigant to the risk of endogenous amplification.

Collecting participants' response to the stress scenario further enables the identification of potential inconsistencies. Even though diversity might mitigate the endogenous amplification of stress, it remains possible that the sum of responses translates into a destabilising dynamic, jeopardising the outcome of the individual course of action. This is typically the case when multiple participants plan to sell similar assets or redeem similar funds to raise cash in order to meet their liquidity needs. Indications of such issues could already be documented in some stress testing exercises (see Box 2).

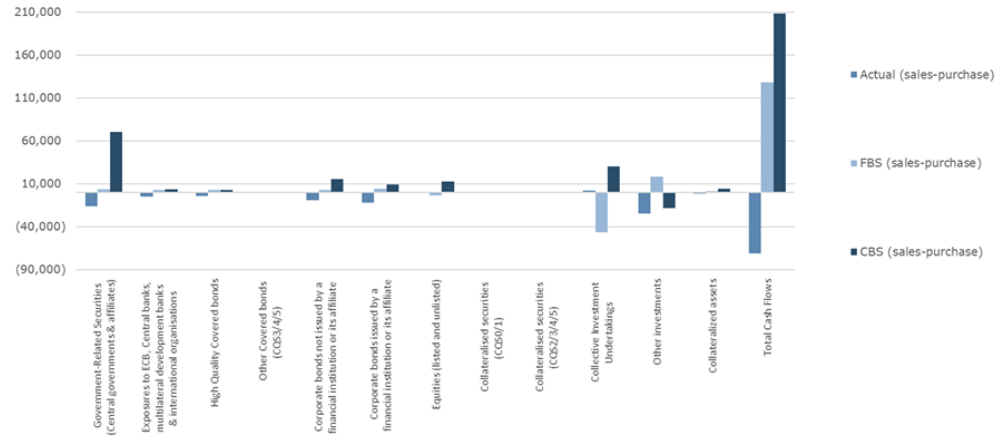
Box 2: When individual responses to stress don't add up

Every participant in EIOPA's 2024 liquidity assessment could meet its stress-scenario needs individually. On aggregate, their plans would have implied EUR 306 bn of net asset sales in a single quarter — roughly 4% of EEA bond trading volume, concentrated in government bonds and listed equities, where Collective Investment funds (CIU) are the second most redeemed category both in the Non-UL and UL segments. The same actions that would keep each insurer liquid would, when executed in parallel, depress the very prices of assets their balance sheets depend on.

The mechanism is straightforward. The mass lapse scenario[11] generates EUR 339 bn of surrender outflows in the traditional life business alone. To fund them, insurers flip from net buyers (EUR 93 bn in the baseline) to net sellers (EUR 306 bn under the Constrained Balance Sheet scenario, see Figure 34 extracted from EIOPA 2024 Stress Test report below which focus on Non-UL businesses) — and reactive management actions make the flip larger, not smaller. Each sale is reasonable on its own desk; the system-wide footprint is not.

This is a textbook game-theory and strategic interactions' setup (one's best option depends on the others' choices), and it exposes what one-step bottom-up stress testing structurally cannot see. The 2024 results don't reveal a weak sector — they reveal a gap in the methodology. Closing it requires second-round price feedback inside the exercise itself, not as a separate macroprudential afterthought.

Figure 34: Change in the investment strategy non-UL portfolios. Values in EUR mil.



The bottom-up approach is complemented by a top-down module for two reasons.

Relying on supervisory and statistical data and independent modelling, authorities are able to complement the bottom-up submissions. This is particularly important as the exercise only "observes" a limited number of participants: some external modelling is necessary to represent the impacts of the scenario on non-participating institutions and foreign counterparties (the "rest of the world") and to confront these impacts with the impacts and behaviours declared by the participants. External modelling is also useful to gauge the credibility of the scenario in light of these impacts and responses through estimating second-round price impacts based on aggregate selling pressure or benchmarking participants' reported revaluations.

The articulation between these two approaches (collecting bottom-up responses, identifying inconsistencies and amplification effects at the system level, and potentially feeding adjusted conditions back to participants in a second round) allows the exercise to move beyond static, single-institution analysis towards a genuinely systemic assessment.

[11] Mass-lapse where only focused on the traditional non-UL businesses (see the EIOPA 2024 insurance stress test report).

It should be noted however that suitable (theoretical) models are not always available and some existing strand of the literature which can serve as inspiration for actual (empirical) models are still being refined. In that respect, bottom-up approaches remain critically important, including to validate or identify gaps in existing models: the top-down elements of the exercise will be further developed progressively, informed by the results of bottom-up submissions.

2. Approach, overall design and governance

The objectives set forth in Section 1 require an approach that cuts across the traditional boundaries of sectoral supervision. This section describes the institutional arrangements underpinning the exercise, the collaborative process through which its methodology has been developed, and the guiding principles that frame the conduct of the exercise.

2.1 A joint exercise

Engaging into system-wide stress testing to capture both interaction within and between sectors at individual level requires the overarching umbrella of sectoral supervision and a fluid collaboration between relevant authorities. This underpins the joined-up nature of an exercise which is conducted by the ACPR and the AMF, and BdF. The conduct of the exercise was made possible by existing institutional arrangements that allow all three authorities to collaborate and share data. An explicit memorandum of understanding (MoU) was agreed including both a formal project governance and the operationalisation of the conduct of the exercise (esp. related analysis). ACPR and AMF led the bottom-up approach while the BdF was the lead on models and the development of relevant top-down modules.

The exercise involved participants from all supervised sectors (banks, insurance undertakings and funds/asset management companies). The ACPR and the AMF invited a range of institutions with a view to ensure both a satisfactory coverage ratio of each sector and adequate representativeness of the diversity of business profiles. Particular attention was paid to size (in terms of balance sheet or assets under management), degree of interconnectedness with other financial system participants, and sectoral representativeness. Participation in the exercise remained voluntary and practical arrangements have been found to facilitate the involvement of institutions indicating specific challenges. Eventually, all French GSIBs and a significant French subsidiary of a non-French GSIB took part in the exercise, ensuring that the observable part of the core of the EA/EU banking sector was involved. The main (life) insurance undertakings, representing 66% of the French life insurance market (and accordingly 18% of the EU market) were involved, as well as a selected sample of non-life entities, for a total participation of sixteen entities collectively belonging to nine insurance groups. Likewise, the larger French asset management groups as well as a representative sample of smaller asset managers took part in the exercise. The perimeter includes 40 solo companies under 10 French reporting AM conglomerates, encompassing 770 funds with more than €500 million worth of assets under management (AuM) each, and a cumulated net asset value (NAV) of €1.3 trillion. As the scope includes funds domiciled both in France and elsewhere in Europe (but managed by a participating French AM or its subsidiaries), these numbers are not directly comparable to the volume of French domiciled funds, and therefore a market share is not straightforwardly derivable. Yet, to provide an order of magnitude, one could say that this would represent around 48% of the cumulated NAV of French domiciled funds at that time. In addition, LCH SA was consulted as the reference central counterparty for the French market.

Some of the participating institutions are part of financial conglomerates. While the exercise is handled at sectoral level, special attention was given to relationships within conglomerates to be able to better understand how these institutions operate in stressed circumstances (see also below).

2.2 Exercise set-up and timeline

The bottom-up approach was largely built in close collaboration with participants, both in terms of the scenario and the templates. This co-construction has been essential to ensure the relevance of the exercise for the participants and its feasibility. Through a series of workshops and drawing on participants' first-hand knowledge of their own business models, market practices and internal capabilities, the scenario, the templates of the submissions and the methodological guidance have been discussed and agreed.

Generally, discussions have been conducted at sectoral level among homogeneous participants as it appeared that the different perspective across the sectors and difference in practical approaches and practices could hinder the quality of the discussions. Cross-sector consistency was achieved both through the continuous involvement of all authorities and the valuable contribution of representatives from some conglomerates that were able to meaningfully contribute in all sectoral discussions in which they also brought the perspective of other sectors.

T2: Participating sectors, associated templates, and analytical focus areas

	Templates	Key focus area
Banks	Exposures, Management Actions, Margins	Portfolio composition and market scenario impact, credit counterparty risk, margin calls and collateral, liquidity developments, strategy towards clients in stressed time
Insurance undertakings	Temporal, Margins	Surrenders, claims, asset reallocations, ALM considerations, margin calls and collateral funding
Asset management companies	Temporal, Margins	Fund redemptions, portfolio adjustments, liquidity management tools, margin calls and collateral funding

Sources: ACPR, AMF, BdF

The perimeter of each submission depends on the nature and headquarters location of the participating entity.

French-headquartered banking groups responded on the basis of their global banking activities, following the consolidation requirements set out in the Capital Requirements Regulation (CRR), and submitted a single consolidated template that includes foreign subsidiaries in the perimeter of the group. Banking groups also operating in insurance or asset management were expected to provide separate submissions for each major line of business: the banking templates cover the banking perimeter, while insurance and asset management subsidiaries submitted their own respective sectoral templates. This separation was essential to identify relevant developments at the appropriate level while also being able to identify intragroup interactions, which are flagged explicitly in the templates.

Non-French-headquartered banks responded on the basis of their French subsidiary only, consolidated at the level of their French-headed operations.

For insurers, the consolidation level (solo or group) was determined through bilateral discussion with the ACPR prior to submission based on both business logic and practical considerations.

Participating asset management companies had to report on all the funds that they manage directly or through a subsidiary, irrespective of where the fund is domiciled (i.e., in France or elsewhere in the EU). The submission template considered fund groupings according to their strategy (bond funds, equity funds, mixed funds, money market funds, real estate funds, hedge funds or other funds) and their domicile (French / non-French). A fund-level materiality threshold (€ 500 million of AuM) was established to exclude funds of unsignificant size.

When reporting counterparty exposures with other participating institutions, all participants consolidated their exposures at the entity level provided in the common list of participants, which uses Legal Entity Identifiers (LEIs) to ensure consistent cross-referencing across sectors.

Early informal discussions were held in Q1 2025 and co-construction workshops ran from March to May 2025. A system of Q&A was also set up to ensure that relevant methodological questions raised during the preparation of the submissions for the first round of the exercise would be made available to all participants. This means that, in practice, methodological work extended (albeit to a limited extent) until Q4 2025.

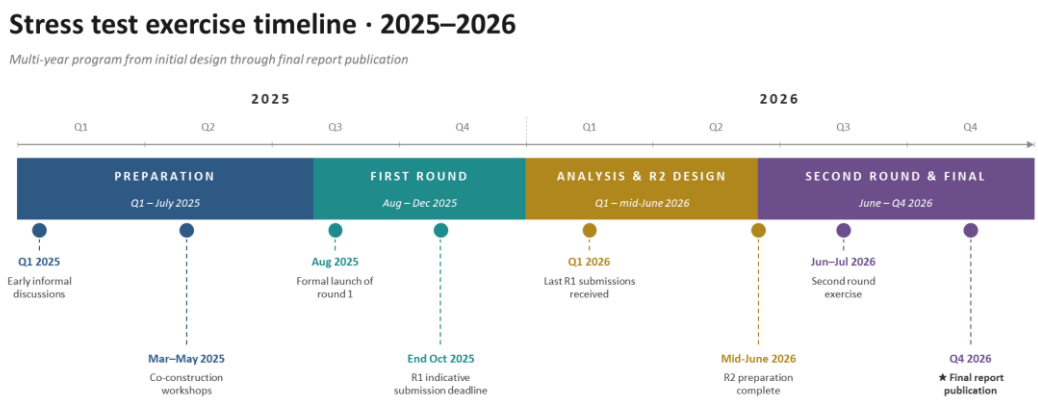
By late May 2025, the scenario as well as all relevant templates were crystallised, while guidance documents for each sector were drafted and harmonized in June/July. The exercise was formally launched in August. The

indicative deadline for first round submission was end October 2025 with extension agreed on a bilateral basis with participants that faced specific constraints. The latest submissions were received up until Q1 2026.

Upon receiving first round submissions, authorities engaged in an extensive data quality exercise to ensure that reported data was internally consistent, comparable within sectors and could be matched across sectors (and bilaterally between institutions). The aggregation of the information received from participants (complemented with external modelling) informed an initial analysis of the reaction to the stress and formed the basis for devising the second round of the exercise, the preparation of which is expected to take until mid-June 2026. The second round will take place in June and July 2026 followed by a concluding analysis by authorities and in-depth debriefing with participants (on a collective and bilateral basis). The final report is expected to be published in Q4 2026.

G4: Timeline of the SWST exploratory exercise

x: time



Source: ACPR

2.3 Guiding principles

The design and conduct of the exercise are governed by a set of guiding principles that reflect both its exploratory nature and the sensitivity of the data involved. These principles were shared, discussed and agreed with the participants at the outset of the co-construction process and frame the interpretation of results:

- Commitment to no individual implications: The exploratory nature of the exercise (and, accordingly, the absence of individual supervisory consequences for the participating institutions) was an overarching principle. The outcome of the exercise will not bear in any way on the individual regulatory or prudential assessment of the participants by the authorities. Policy conclusions (if any) drawn from the exercise are expected to be based on system level considerations.
- Confidentiality of the information received: While falling outside the supervisory scope from an outcome perspective, the exercise draws heavily on supervisory practices: the information provided by participants during the exercise is treated as confidential, has been shared only between authorities and will not be shared beyond the authorities.
- Anonymity of the information shared: Beyond the confidentiality of the submissions, a general anonymity principle has been agreed. While the individual outcome of stress test is routinely published, in the case of the SWST, only the aggregate results and main lessons learnt will be published in a report with no individual results. This commitment extends to certain data elements: part of the information collected relates to the assessment that each participant makes of other participants, and the decisions it might take regarding them (for instance, changes to counterparty limits or collateral terms). Dissemination of such data could impair commercial relationships between parties. Accordingly, any data shared by supervisors with participants (for instance, aggregated first-round results communicated

before the second round) will be sufficiently aggregated to ensure the protection of confidential information. Similarly, specific outcome from the first round having an impact on the design of the second round will be referred to in a general enough manner to avoid implicitly disclosing confidential information gathered in the first round.

- Extensive leverage on existing regulatory (and statistical) reporting: The data collection templates have been explicitly designed to minimize the reporting burden on participants by avoiding, where possible, the collection of information that is already available to the authorities through existing prudential reporting frameworks and by reusing definitions and category breakdown usually used in other reporting. The only additional information collected through dedicated templates was specific to the system-wide stress scenario and could not be fully inferred from standard supervisory data: notably, participants' intended management actions, their assumptions about counterparties' behaviour, and the day-by-day dynamics of their liquidity positions and margin flows under the prescribed stress.
- Methodological guidance (rather than model validation): The technical specifications and guidance documents issued to participants for each sector are intended solely to support consistency in the execution of the exercise across institutions. They do not constitute a tool for verifying or validating institutions' internal modelling capabilities against a predefined method. Participants are encouraged to use their own internal models and risk management frameworks, provided that the outputs are reported in the format prescribed by the templates. Where specific simplifications or approximations are necessary, -the technical specifications identify a few cases where this is expected- participants are asked to document them in the explanatory note that accompanies each submission.

Taken together, these guiding principles create a framework in which participants can engage candidly, disclosing their genuine strategic responses and bilateral sensitivities, knowing that the information will be treated with appropriate safeguards and used exclusively to advance the collective understanding of systemic risk dynamics. This framework is essential for the credibility and analytical value of the bottom-up approach that lies at the heart of the SWST.

3. Methodology

This section presents and discusses both the scenario of the SWST and the sectoral considerations that have driven important methodological choices.

3.1 Scenario

The exercise simulates the impact of a severe market shock over a horizon of ten business days, calibrated to represent a short-lived but intense liquidity crisis. This horizon reflects the exercise's focus on financial instruments portfolio, liquidity dynamics and transmission mechanisms, rather than on solvency projections over a macroeconomic cycle. It is consistent with the timeframes over which the most acute liquidity pressures materialized during the episodes described in Section 1.

3.1.1 Statistical calibration

Unlike stress tests anchored in specific (generally, macroeconomic) narratives, the SWST scenario was designed through a purely statistical approach with no macroeconomic background narrative accompanying the proposed market shocks. This design choice serves several analytical purposes. First, the exercise focuses on transmission mechanisms (how stress propagates through the financial system once it has started) rather than on the identification or plausibility of specific triggers. Second, a narrative-free shock tests general resilience: participants' responses reflect their structural exposure to market risk and their liquidity management frameworks, rather than scenario-specific contingency plans. Third, by removing the narrative dimension, the exercise avoids debates about the relative likelihood of any macroeconomic configurations, which can distract from the quantitative analysis of system-wide dynamics. Finally, the absence of a narrative reinforces the fog-of-war dimension of the exercise: participants face a shock whose origin and likely evolution are uncertain, mirroring the conditions of genuine market crises in which the debate about causes is typically delayed and contested.

The implications for participants are important. Without a macroeconomic narrative, there is no basis on which to form forward-looking expectations about the trajectory of the real economy or the likelihood and direction of policy intervention. Management actions must therefore be calibrated as mechanical responses to observed market moves and liquidity pressures in order to respect their risk appetite framework, rather than as strategic bets informed by a view on the underlying scenario.

The severity corresponds to the worst two-week period in twenty years (formally, a 0.2% quantile event, i.e., a 1-in-500 occurrence on a two-week basis, see Box 3). This calibration target was chosen to be severe enough to activate the transmission mechanisms under study (margin calls, fire sales, counterparty limit breaches) while remaining within the range of historical plausibility.

Box 3: Formal calibration of the SWST

The scenario was constructed using a multi-factor stochastic modelling framework. Equity indices, commodity prices, and exchange rates are modelled using geometric Brownian motion (GBM), capturing a log-normal dynamics. Interest rates and inflation swap rates follow an Ornstein-Uhlenbeck (OU) process, reflecting their mean-reverting properties and their ability to take negative values. Volatilities and credit spreads are modelled using a Cox-Ingersoll-Ross (CIR) process, which ensures positivity and mean reversion. In the specific case of corporate spreads, where a single category encompasses different levels, the CIR process was applied either to the lowest spread level or to the incremental difference between consecutive levels, to prevent crossings between credit quality tiers.

The dependence structure across risk factors is captured through a Student copula with six degrees of freedom, applied directly but to the Gaussian residuals underlying the stochastic processes (and not to the asset prices). The Student copula allows for a correlation matrix - accounting for the heterogeneous dependence patterns across asset classes – as well as tail dependence, reflecting the empirical observation that correlations tend to increase sharply during periods of market stress. The choice of six degrees of freedom was calibrated on the main risk factors and produces fatter tails than a Gaussian copula without introducing excessive sensitivity to extreme observations.

Calibration was performed using Bloomberg weekly data covering the period 2000-2024, representing approximately 1,300 observations, with limited exceptions for inflation swaps (available from June 2004) and corporate spreads (from October 2011). Government spread shocks were estimated on the basis of yield differentials relative to the swap rate, without further filtering or adjustment.

The modelling framework has acknowledged limitations, which were accepted for tractability but informed the final calibration. Gaussian marginal distributions tend to underestimate the frequency and severity of tail events. Calibration on a sample that includes extended calm periods may underestimate extreme quantiles. Correlation structures observed in normal market conditions may understate the degree of co-movement that arises during crises, a limitation partially addressed by the Student copula but not fully resolved. In recognition of these shortcomings, calibrations were benchmarked by the top-down model and expert adjustments were applied to certain model outputs: in particular, corporate credit spread and stock market shocks were significantly reinforced relative to the raw quantile output, reflecting the judgement that the calibration sample understated the potential for abrupt repricing in this market segment. The detailed modelling methodology is provided in the Scenario Technical Specifications document. Should they find it necessary to complement the scenario in some dimensions, participants were invited to provide detailed information and share their scenario expansion early on to ensure consistency.

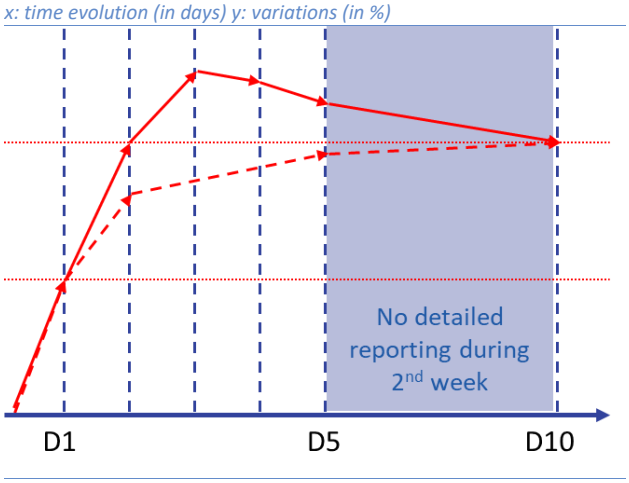
A distinctive feature of the scenario is the inclusion of an overreaction phase (see G5): market variables do not converge monotonically to their final shocked values but instead peak during the first week, before partially reverting. Specifically, variables reach 125% of their final shock magnitude at Day 3, the point of maximum

stress. The temporal profile, expressed as a percentage of the final (Day 10) shock, is as follows: 0% at T0, 50% at Day 1, 100% at Day 2, 125% at Day 3, 120% at Day 4, 110% at Day 5, and 100% at Day 10.

This design reflects a well-documented empirical pattern: in acute market episodes, prices typically overshoot before stabilizing at a new level, as initial panic, illiquidity, and forced selling drive valuations temporarily beyond their "fundamental" stressed level. The non-monotonicity contributes to generating margin calls for all players. Day 3 and its immediate aftermath are likely to correspond to the point of maximum liquidity pressure on participants (the point at which margin calls are largest, collateral values most depressed, and the incentive to sell most acute) and is therefore the preferred observation point for the cross-sector analysis of transmission dynamics.

G5: Time profile of the scenario shocks

x: time evolution (in days) y: variations (in %)



Source: ACPR

The dashed line denotes a gradual shock; the solid line represents the selected scenario, where shock intensity peaks at three days prior to a relaxation phase

3.1.2 Complementary considerations

The starting point of the scenario is set at of 31 March 2025 (close of business, aligned with the first-quarter prudential reporting cycle). The choice of this cut-off date allows the authorities to leverage on existing supervisory data, hence allowing the mobilisation of other available data and facilitating cross-validation and other quality assurance work.

The choice of an end-of-quarter date rather than an end-of-year date has been informed by discussion with participants highlighting that accounting or tax-driven (individual) investors' demands or considerations would be likely to make portfolio observed at an end-of-year cut-off date less representative of an average portfolio.

The realism of the exercise hinges critically on a certain discipline around participants' expectations. A central behavioural assumption of the exercise is that participants must respond to the stress scenario as if they were living through it in real time, without knowledge of the full 10-day shock trajectory in advance. This "fog of crisis" principle is designed to elicit realistic, strategy-driven responses rather than mathematically optimized reactions. Participants are asked to focus on *how* they would respond and *why*, rather than on a detailed quantitative optimisation possibly informed by their knowledge of the remainder of the scenario. Economic uncertainty is assumed to be high throughout the scenario period and beyond: participants should not assume a return to normal at the end of the two-week horizon.

In the same vein, participants must assume that no extraordinary public support is provided throughout the scenario horizon or afterwards. This means no emergency measures by the ECB or any other policymaker, no new monetary policy decisions (policy rates remain unchanged), no suspension of redemption rights decided by authorities, and no other form of regulatory relief. Standard standing facilities (including, where applicable,

emergency liquidity assistance, ELA) remain available, but no new facility is introduced, and existing rules remain unchanged. This constraint tests the system's unassisted resilience: its capacity to absorb severe market stress without recourse to policy intervention. It also prevents participants from "defaulting" to an assumption of central bank backstop that would render the exercise uninformative.

3.1.3 Behaviours

The exercise adopts a static balance sheet assumption: participants do not model new business origination, maturing rollovers, or strategic rebalancing beyond what is explicitly captured as a management action in response to the stress. Management actions are recorded separately from the initial shock impact, ensuring that the mechanical effect of the scenario and the behavioural response of each institution can be analysed independently. This design choice prioritises interpretability: it allows the authorities to disentangle the exogenous impact of the shock from the endogenous responses it triggers.

Participants report their positions, flows, and management actions on a daily basis for the first week (Day 1 through Day 5, corresponding to the period of peak stress), and on an aggregated basis for the second week (Days 6 through 10). This asymmetry reflects both the temporality of the shock which peaks by the mid-week and a pragmatic concern: daily reporting over the full horizon would impose a significant operational burden with limited additional analytical value. The preferred observation points for cross-sector analysis are Day 3 (peak stress) and Day 10 (final position). All reporting is denominated in euros. Participants are expected to use their existing modelling capabilities and are not required to develop new models for the purpose of the exercise.

3.1.4 Market shocks

Based on the statistical modelling (see Box 3) and further adjustments following discussions with participants (leading to increasing the severity of the stress in some dimensions), the market shocks parameters have been proposed (see Table 3) with Day 10 values representing the final stressed level; Day 3 values reflecting the peak overreaction (125% of Day 10). Full daily shock paths by risk factor and geography are provided in the Scenario Paths file accompanying this report.

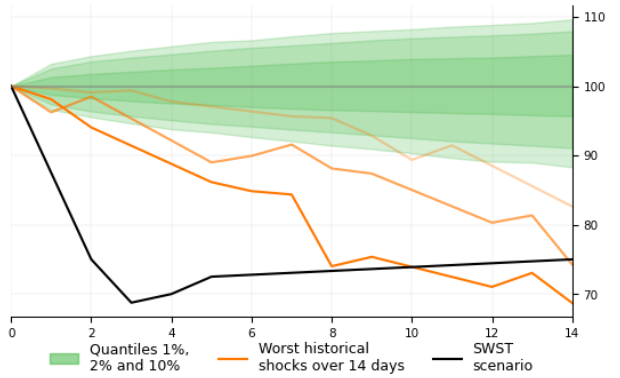
T3: Main assumptions of the SWST scenario

Risk factor	D3 (max including overreaction)	D10 (calibrated as 1-in-500 occ. on a 2-week basis)	Scope of application
EU equities	-31.25%	-25%	All European equities (EEA, CH, UK)
Non-EU equities	-25%	-20%	North America, Oceania, rest of world
Equity volatility	+37.5 pp	+30 pp	All equity markets
EU interest rates	+62.5 bp	+50 bp	Parallel shift, maturities ≥ 3 months
Govt spreads – high risk	+87.5 bp	+70 bp	GR, IT, ES vs. swap rate
Govt spreads – medium risk	+50 bp	+40 bp	HR, CY, FR, LT, MT, PT, SK
iTraxx IG	+87.5 bp	+70 bp	Non-financial corporates, AAA–BBB
iTraxx HY	+350 bp	+280 bp	Sub-investment grade
iTraxx Sub Financials	+237.5 bp	+190 bp	Subordinated financial debt
EUR/USD	-6.25%	-5%	Euro depreciation against US dollar

Source: ACPR, AMF, BdF

G6a: Stock Market fall: CAC 40

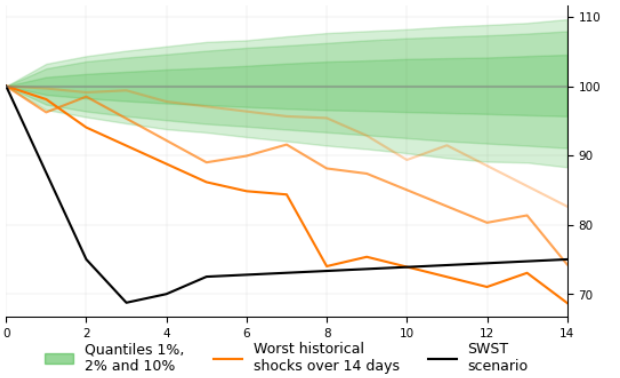
x: days / y: relative variations (in %)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "CAC40" and its historical quantiles extracted from the time series spanning from 1987-07-09 to 2025-03-18.

G6b: 10Y Euro Swaps evolution

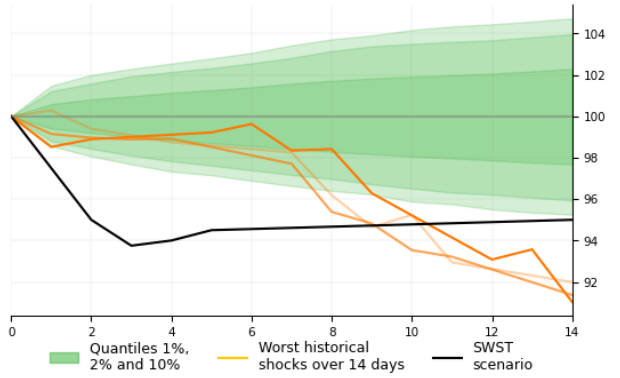
x: days / y: absolute variations (in bp)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "10Y Euro Swap" and its historical quantiles extracted from the time series spanning from 1999-01-01 to 2025-03-18

G6c: EUR/USD

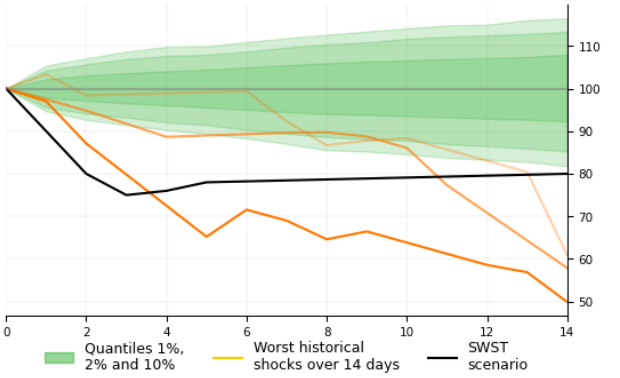
x: days / y: relative variations (in %)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "EURUSD" and its historical quantiles extracted from the time series spanning from 1999-01-01 to 2025-03-18.

G6d: Oil

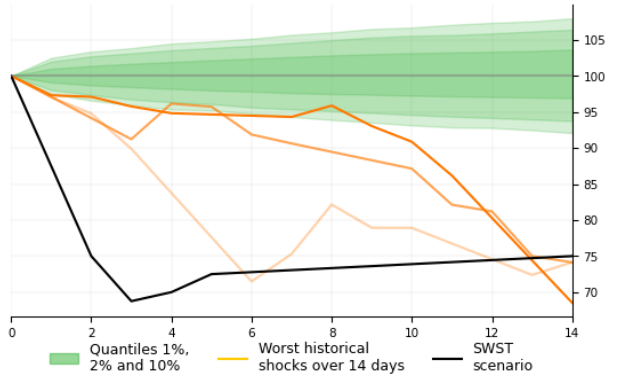
x: days / y: relative variations (in %)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "Oil" and its historical quantiles extracted from the time series spanning from 1975-01-06 to 2025-03-18.

G6e: S&P 500

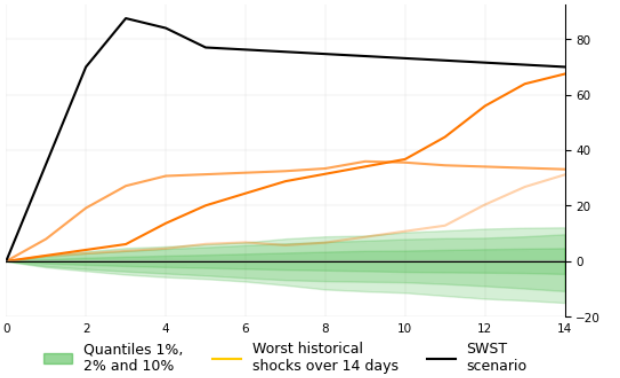
x: days / y: relative variations (in %)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "SP500" and its historical quantiles extracted from the time series spanning from 1975-12-03 to 2025-03-18.

G6f: Spread AA Corporate Obligations

x: days / y: absolute variations (in bp)



Source: ACPR, AMF, BdF based on Bloomberg
Variable "AA" and its historical quantiles extracted from the time series spanning from 2016-01-01 to 2025-02-11.

3.2 Sectoral approach

The bottom-up approach is organized around three sectors: banks, insurers, and asset managers.

3.2.1 Additional sector specific shocks

In addition to market shocks and in order to set initial conditions that would ensure that participants with a long-term perspective do not lean back but are forced to proactively consider management actions, the scenario includes a set of insurance-specific shocks designed to capture the liability-side dynamics that may interact with the asset-side pressures described above.

These shocks reflect the distinctive features of the insurance business model such as the potential for policyholder behaviour to generate liquidity demands precisely when asset values are falling and refinancing conditions are tightening.

For life insurance, additional shocks include both a surrender shock and a premium reduction:

- The scenario assumes that surrender payments over the two-week period amount to 1% of mathematical reserves at the reference date. This calibration was derived empirically from the weekly surrender data collected by the ACPR, with a prudent margin applied. The temporal distribution is concentrated in the first week: 80% of the total shock is assumed to materialize between Day 1 and Day 5, with the remaining 20% spread evenly across Days 6 to10. The shock applies to all non-mandatory life insurance contracts in the in-force portfolio, regardless of whether its application increases or decreases technical provisions. Pension schemes and collective contracts may be excluded where justified. Participants are encouraged, as a simplification, to apply the shock to their entire portfolio.
- The scenario includes a 60% relative decline in total cash-in premiums throughout the stress period. This shock applies to all non-mandatory in-force and new insurance contracts, encompassing both life and non-life business. Pension schemes are excluded. The rationale is straightforward: in a period of acute market stress, new business sharply slows and policyholders defer premium payments, reducing the insurer's cash inflows precisely when outflows (surrenders, margin calls, claims) are rising.

In addition, participating entities are required to consider their typical worst two-week claims experience. The applied shock must correspond to the worst fortnight during the preceding year, excluding any specific, foreseeable periods where structurally high claims would be expected due to the contractual nature of the business. Savings business (life insurance, see above) is excluded from this shock. The aim is to represent an adverse but plausible coincidence of elevated claims activity with market stress.

Finally, the scenario assumes a flat 30% haircut on non-intragroup reinsurance inflows: if an insurer expects to receive €100 of reinsurance recoveries during the period, only €70 will materialize. This shock reflects potential delays in the reinsurance inflows in the general stressed environment and its impact on the reliability of reinsurance protection as a liquidity source.

Unlike market shocks, the main liability-side shocks (claims, premiums, reinsurance) do not follow the overreaction temporal profile. They are applied as a constant shock over the two-week period, except for the surrender shock, which has its own specific dynamic as described above.

3.2.2 Sector-level data collection

For each of the three sectors, a dedicated set of templates designed to capture the transmission channels identified in Section 1.2 has been devised. While the templates differ in structure to reflect the specificities of each sector's business model, they are designed to collect data that can be aggregated and reconciled across sectors at the system level.

3.2.2.1 Banks

For banking groups, the exercise collects information through three templates.

The Exposures template captures the starting portfolio at the reference date, including the initial fair-value composition of the balance sheet, the revalued portfolio after application of the scenario shocks, and the

resulting counterparty exposures at Day 0, Day 3, and Day 10. It also records first-order delta sensitivities to key risk factors (equities, interest rates, credit spreads, foreign exchange, commodities), which serve both as a cross-check on reported revaluations and as an input for the authorities' independent top-down estimates. It provides the total portfolio of the bank as well as the detailed exposures towards SWST counterparties. A dedicated section on liquidity needs captures the sources and uses of liquidity generated by the shock, including deposit outflows, credit line drawings, and maturing positions.

The Management Actions template records the behavioural responses of each institution to the stress scenario. It is organized along several dimensions: the institution's overall response strategy and its rationale; asset sales and purchases undertaken for the institution's own account ("own-purpose actions"), broken down by asset class, geography, and timing; adjustments to haircuts and collateral eligibility applied to counterparties; and the institution's response to its clients and SWST counterparties, including changes to clearing conditions, credit line availability, and terms of engagement. This template is central to the exercise's analytical value: it captures the heterogeneity of management reactions and enables the identification of potential inconsistencies when responses are aggregated across participants.

The Margins template maps collateral flows for a single, instantaneous shock equivalent to the Day 3 market moves. Unlike the temporal templates, which track the progressive unfolding of the scenario, the Margins template captures the system-wide distribution of initial margin (IM) and variation margin (VM) calls at the point of maximum stress, differentiated by product type (centrally cleared versus bilateral) and by counterparty category (SWST participants versus all counterparties). This design enables the authorities to identify concentration risks in margin call flows and to assess whether the aggregate demand for liquid collateral exceeds the system's capacity to supply it.

3.2.2.2 Insurance companies

For insurance groups, the exercise relies on two templates.

The Temporal template captures the day-by-day evolution of the insurer's position over the scenario horizon, integrating both asset-side and liability-side dynamics. It records the impact of market shocks on asset valuations (applying the look-through principle for collective investment undertakings), insurance-specific flows (premiums, claims, surrenders, reinsurance), investment income and expenses, the insurer's management actions (including asset sales and purchases, adjustments to asset allocation, and mobilization of liquidity sources), and the resulting net liquidity position at each reporting date. The template distinguishes between the general fund and unit-linked / index-linked contracts and captures transfers between these compartments. Shocks are applied under the Solvency II framework, with all assets reported at market value to ensure comparability with prudential reporting.

The Margins template for insurers follows the same logic as its banking counterpart: it captures the distribution of margin calls and collateral flows for an instantaneous Day 3 shock, enabling the authorities to integrate insurance-sector margin dynamics into the system-wide picture. Reporting covers both SWST counterparties (on a bilateral basis) and all counterparties (on an aggregate basis).

3.2.2.3 Asset management companies

For asset managers, the exercise collects information through the Temporal and Margins templates whose structures mirror the insurance templates, while being adapted to reflect the specificities of fund management: the role of redemption pressures as a primary source of liquidity demand, the use of liquidity management tools (LMTs), and the interaction between portfolio rebalancing and market impact.

For each participating asset manager, all the funds managed directly or through a subsidiary (irrespective of its domicile) and whose individual AuM exceeds € 500 million are grouped along two dimensions: domicile (French / Non-French) and strategy (equity funds, bond funds, mixed funds, MMFs, real estate funds, hedge funds, other funds). One set of reporting templates is required for each of the groupings, meaning that an asset manager can submit up to 14 sets of templates.

Fund managers are asked to decompose their funds' liability side by investor type and estimate, for each type, the outflows they will face based on the redemption shock imposed to insurers and on the market price scenarios. The availability and activation of LMTs over the period is recorded in a dedicated table.

Asset sales, margin calls, collateral structures and counterparties are monitored with the same level of granularity as for insurers.

3.2.2.4 Cross-sector data alignment and reconciliation

A critical challenge in any multi-sectoral exercise is ensuring that data reported by participants in different sectors can be meaningfully compared and aggregated. The SWST addresses this through several alignment mechanisms.

All positions are reported at market value, regardless of the accounting framework applicable to each sector (IFRS for banks, Solvency II for insurers), with reconciliation checks where necessary. Counterparty identification relies on a common LEI-based participant list, with explicit flagging of intragroup relationships to avoid double-counting or misattribution of bilateral exposures. A harmonized glossary of over fifty key terms ensures consistent interpretation of concepts such as initial margin, variation margin, HQLA, securities financing transactions, and delta sensitivity across sectors. The glossary is provided as a separate reference document accompanying the exercise materials.

The principle of non-redundancy implies that the templates are designed to collect only information not already available to the authorities through existing prudential reporting.

A specific objective of the exercise is to understand how counterparty limits are defined by institutions and whether the shocks are severe enough to trigger breaches of those limits, activating responses that may themselves propagate stress through the system. Financial institutions manage their counterparty risk through a system of internal limits that govern the maximum exposure they are willing to accept to any single counterparty or group of connected counterparties. These limits are typically expressed in notional or market-value terms and are calibrated based on the counterparty's credit quality, the nature and maturity of the exposure, and the availability and quality of collateral. In normal market conditions, these limits are rarely binding. Under severe stress, however, several simultaneous dynamics may push exposures towards or beyond their limits: mark-to-market movements increase the value of certain exposures (particularly derivatives and securities financing transactions), collateral posted by counterparties loses value, and the creditworthiness of counterparties themselves may deteriorate.

When limits are breached or approached, the institution's response typically involves a combination of actions: requesting additional collateral (margin calls), tightening the terms of transactions (increasing haircuts, narrowing collateral eligibility), reducing the availability of credit lines, and - in extreme cases - closing out positions. Each of these responses directly impacts the counterparty and may amplify its own liquidity vulnerabilities, creating a feedback loop between the two institutions.

This dynamic is particularly developed in the banking sector templates. The "Response to participants" section of the Management Actions template captures how each bank adjusts its terms of engagement with SWST counterparties in response to the stress: changes to clearing conditions, evolution of haircuts by collateral type, modifications to collateral eligibility criteria, and adjustments to credit line availability. The Exposures template tracks bilateral exposures to each SWST counterparty at Day 0, Day 3, and Day 10, enabling the authorities to observe how counterparty exposures evolve under stress and to identify cases where reported limit breaches at one institution coincide with reported tightening of terms by the corresponding counterparty. This bilateral matching is one of the most analytically valuable aspects of the exercise, as it reveals the sequencing and direction of stress propagation through the counterparty network.

3.3 Management actions and market depth

The templates capture participants' reactive management decisions in response to the stress scenario: the timing of each action, its rationale, the volumes involved, and the asset classes or counterparties affected. This information is collected with a level of granularity that goes well beyond what is available in standard

prudential reporting: participants are asked not only what they would do but when and why, and in what order of priority.

The analytical challenge lies in the distinction between what is individually feasible and what is collectively sustainable. A management action that is perfectly rational from the perspective of a single institution, such as selling a large position in high-quality liquid assets to meet margin calls, may become unfeasible or counterproductive when many institutions attempt to perform the same action simultaneously. Market depth under stress is not a fixed quantity: it depends on the aggregate behaviour of all market participants, including those outside the exercise perimeter. A highly liquid asset in normal conditions may become illiquid when supply far outsizes demand.

The exercise addresses this tension in two ways. First, the system-wide aggregation of management actions from bottom-up submissions enables the authorities to assess aggregate feasibility: whether the total volume of intended asset sales in each market segment exceeds plausible estimates of market absorption capacity over the relevant time horizon. Where aggregate selling pressure appears to exceed market depth, this signals a potential strategic interaction failure, a situation in which the collective response of participants would itself amplify the shock, invalidating the assumptions on which individual management actions were predicated.

Second, the exercise's two-round structure provides a mechanism for feeding this information back to participants. In the second round, the authorities may introduce constraints on management actions, such as limits on the volume of sales in specific market segments, or assumptions about the price impact of aggregate selling, that reflect the findings of first-round aggregation. This does not require participants to perform detailed recalculations, but rather to assess orders of magnitude and to consider how their responses would change if the market conditions implied by aggregate first-round behaviours were considered. The sequencing of management actions - who moves first, and with what consequences for those who move later - is a key dimension of this analysis.

The table below maps each of the three transmission channels to the templates, tabs, and sectors through which it is captured. This mapping serves as a navigation tool for the analysis: for each channel, it identifies where, in the data collection framework, the relevant information can be found.

T4: Correspondence between transmission channels and data collection framework

Transmission channel	Relevant templates	Key tabs / analytical focus
Cross-holdings and cross-exposures	Exposures (banks) Temporal (insurers, funds)	Starting portfolio composition; scenario exposures at D0, D3, D10; bilateral counterparty mapping NB: scenario exposures at D1, D2, D4 and D5 are also available for insurers and funds
Asset concentration and fire-sale risk	Management Actions (banks) Temporal (insurers, funds)	Own-purpose actions (sales/purchases by asset class and geography); asset reallocation decisions; aggregate selling pressure assessment
Liquidity needs and margin call chains	Margins (banks, insurers, funds) Exposures - Liquidity Needs (banks) Temporal (insurers, funds)	IM/VM calls by counterparty (SWST and all); collateral posted/received by type; centrally cleared vs. bilateral; deposit outflows, credit line drawings, fund redemptions

Note: A detailed version of this table, including specific template coordinates and field-level references was provided to participants in the Stress Test package including templates.
Source: ACPR, AMF, BdF

3.4 Consistency checks and second-round integration

The SWST's analytical architecture combines bottom-up submissions collected from participants and top-down analyses conducted by the authorities. This section describes the consistency framework applied to first-round submissions and the mechanisms through which findings are integrated to inform the design of the second round.

3.4.1 Consistency framework

First-round submissions are assessed on three levels:

- Individual consistency. For each participant, the authorities verify the internal coherence of the submission and its consistency with the participant's regulatory reporting: do reported cash flows balance? Are delta sensitivities consistent with the reported revaluations? Are management actions plausible given the institution's operational capacity and risk management framework? Do margin flows in the Margins template align with liquidity needs reported in the Temporal or Exposures templates? These checks serve primarily as data quality assurance, identifying data errors, misinterpretations of template instructions, or unlikely modelling assumptions.
- Bilateral reconciliation. For each pair of SWST counterparties, the authorities compare the exposures and margin calls reported by both sides. If Bank A reports a €500 million exposure to Insurer B, does Insurer B report a comparable position towards Bank A? Do the collateral types reported as posted by one institution match the collateral types reported as received by the other? Discrepancies at this level are not necessarily errors; they may reflect legitimate differences in valuation methodologies, risk measurement frameworks, or contractual interpretations, but they are analytically valuable, as they reveal the information asymmetries and modelling divergences that characterize real counterparty relationships.
- System-wide aggregation. At the aggregate level, the authorities assess the collective feasibility and coherence of participants' reported responses. Key metrics include: the net selling pressure by asset class (do aggregate intended sales exceed plausible two-week market turnover?); the aggregate liquidity gap (does the system as a whole show a positive gap between liquidity needs and liquidity sources?); the collateral shortage (does the ratio of aggregate margin calls to eligible collateral exceed 1, signaling a system-wide shortage?); and the degree of behavioural coherence (do management actions exhibit excess correlation, indicating herding, or do they show sufficient heterogeneity to suggest that the aggregate is more stable than the parts?).

3.4.2 Preparation of the second round

Top-down modelling is used to complement bottom-up submissions by providing system-wide context that no individual participant can observe. It contributes to estimating the behaviour of non-participating domestic institutions and foreign counterparties (the "rest of the world"), whose responses are outside the scope of the bottom-up collection but may materially affect system dynamics. It is also useful for estimating second-round price impacts based on aggregate selling pressure identified in bottom-up submissions. It contributes to reconstructing exposure networks using supervisory data to support contagion simulations.

The top-down component is deliberately described at a high level at this stage of the exercise (the modelling framework will be documented separately). While the model used is based on an extended version of the ISA model, further developments will be considered based on the findings of the exercise.

The second round may take several forms, depending on the findings of the first round. A possible configuration involves a repeated exercise with an adjusted scenario (the methodology of the shock amplifications and price impact function specification being inspired by the Cont-Schaanning fire-sale framework[12], or any another suitable approach): participants would be asked to revise their management actions in the light of the aggregate behaviour revealed by the first round, potentially under additional constraints (such as reduced market depth, or haircut adjustments reflecting the system-wide collateral dynamics observed in the first round). Alternatively, or in addition, the authorities may conduct targeted bilateral sensitivity analyses on specific transmission channels or counterparty relationships identified as particularly significant in the first-round results.

[12] Cont, R. and E. Schaanning (2019) Monitoring indirect contagion, Journal of Banking & Finance, Volume 104,, pages 85-102.
Caccioli, F., Ferrara, G. and A. Ramadiah (2024): "Modelling fire sale contagion across banks and non-banks", Journal of Financial Stability, Volume 71.
Fukker, G., Kaijser, M., Mingarelli, L., and M. Sydow (2022): "Contagion from market price impact", ECB working paper n. 2692.

The SWST is built on an iterative approach. By collecting independent responses in the first round, identifying inconsistencies and amplification dynamics through system-wide aggregation, and feeding adjusted conditions back to participants in the second round, the exercise tests whether the financial system converges towards a stable equilibrium under stress or enters a destabilizing spiral in which each participant's defensive actions worsen conditions for others.

4. Methodological limitations

Any system-wide stress testing exercise involves deliberate methodological trade-offs. This section maps these trade-offs transparently, distinguishing between choices made by design and constraints inherent to the exercise. The objective is to provide the interpretive framework needed to draw robust conclusions from the results.

4.1 Deliberate simplifications

Several features of the SWST that may appear as limitations are in fact design choices. The non-narrative scenario ensures that responses are mechanically comparable and free from narrative-plausibility debates. The absence of policy intervention tests unassisted system resilience. The static balance sheet and the schematic, simultaneous shock dynamic favour interpretability. In all cases, the trade-offs were explicitly discussed during the co-construction workshops held with participants between March and May 2025.

4.2 Limitations associated with scenario design and calibration

The stochastic framework used to calibrate the scenario (see Section 3.1) involves statistical compromises. Gaussian marginal distributions underestimate tail events; calibration on predominantly calm periods compresses extreme quantiles; and the chosen copula, while generating moderate tail dependence, does not fully replicate the near-perfect correlations observed in actual crises. To compensate, final shocks were systematically reinforced through expert judgement based on top-down modelling tool, and benchmarked against comparable exercises (EBA 2025, EIOPA 2024, BoE SWES). The parallel interest rate shift across maturities is a further acknowledged simplification, accepted for tractability and commonly used for other exercises. From a general perspective, the limited time horizon (2 weeks) results in lower shock values than the ones designed in regular stress tests with longer time horizons.

The exercise perimeter covers the major French banking groups, insurance groups, and asset managers, but important segments of the financial system remain outside the bottom-up sample. Off-shore hedge funds, pension funds, non-French financial institutions operating in European markets, and foreign central counterparties are not participants. These actors can be significant sources of funding liquidity demand (e.g., margin calls on hedge fund positions), correlated selling pressure (foreign asset managers facing the same shocks), or critical infrastructure nodes (CCPs through which margin flows are concentrated). The top-down module partially compensates by modelling the "rest of the world", but cannot fully substitute for granular behavioural data that only bottom-up submissions provide. Participation is voluntary, which ensures institutional engagement but limits exhaustive coverage. Beyond the perimeter, two further constraints deserve attention. First, behavioural responses to the scenario are likely non-linear with respect to shock severity, complicating any attempt of extrapolation or sensitivity analysis across different stress magnitudes. Second, management actions reported by participants in Round 1 could prove infeasible once aggregated, if total selling pressure exceeds market absorption capacity. Round 2 is designed to address this issue, through the introduction of price-impact assessment and aggregate constraints.

4.3 Interpretative framework

The SWST is designed to reveal structural vulnerabilities and amplification mechanisms, not to produce point estimates of system-wide losses or to rank individual institutions. It is not a capital adequacy test, nor a crisis prediction tool. Results should be read as a mapping of contagion and of the plausibility of collective behavioural responses, and not as a forecast. Model heterogeneity across participants reflects information asymmetries and divergent risk management practices that characterize the financial system.

Annex – Detailed presentation of the transmission channels

This annex elaborates on each of the three transmission channels structuring the SWST exercise. It clarifies what each channel captures conceptually, how it materialises across the institutions in the perimeter, and how the templates and the design of the exercise render it observable. The three channels are not independent: they interact dynamically through time, and the framework of the exercise is calibrated to capture their joint operation rather than each in isolation.

Crossholdings and cross-exposures between participants

Financial institutions are tied together by a dense network of direct, contractually defined exposures. These linkages take several forms. On the asset side, banks, insurance undertakings and investment funds hold securities issued by one another — most prominently bank-issued debt instruments held by insurers and money market funds, and units of investment funds held by insurance undertakings. They also maintain institution-to-institution claims through deposits, credit and liquidity lines (revolving credit facilities, back-up facilities, intra-group funding arrangements), bilateral derivative positions (both centrally cleared and uncleared) and securities financing transactions (repurchase agreements, reverse repos, securities lending). The SWST templates have been designed to capture this granular structure: counterparties are identified at the legal-entity level (LEI), so that exposures and declared reactions can be reconciled across the participants of the exercise rather than treated in isolation.

When one participant comes under stress, this distress is transmitted to its counterparties through several mechanisms operating at different speeds. One of the most immediate is the revaluation of the securities it has issued: a widening of credit spreads or a deterioration in the perception of its creditworthiness translates instantly into mark-to-market losses for those holding its debt instruments, and into rising counterparty credit valuation adjustments on uncleared derivative positions. Drawdowns on committed credit and liquidity lines transmit funding pressure directly from the drawer to the provider, typically a bank, whose own liquidity position is mechanically affected. Bilateral margin calls — whether tied to derivative or to repo transactions — propagate the shock from the participant whose positions have moved against it to the participant on the other side of the trade. In extreme cases, the materialization of a counterparty default closes a chain of obligations and crystallizes losses well beyond the mark-to-market component.

A central feature of these bilateral linkages is that they are difficult to assess through conventional sector-specific exercises, which typically treat each institution's counterparties as exogenous and rely on uniform stress assumptions imposed externally on the sector. By contrast, the SWST exercise treats the network itself as endogenous: it asks each participant to characterize its own behavior and exposures and then confronts the declared positions and reactions across participants. This reconciliation is informative on its own— for instance, in revealing whether the cash that one institution expects to obtain from its banking counterparts is consistent with what those counterparts declare they would be willing or operationally able to provide.

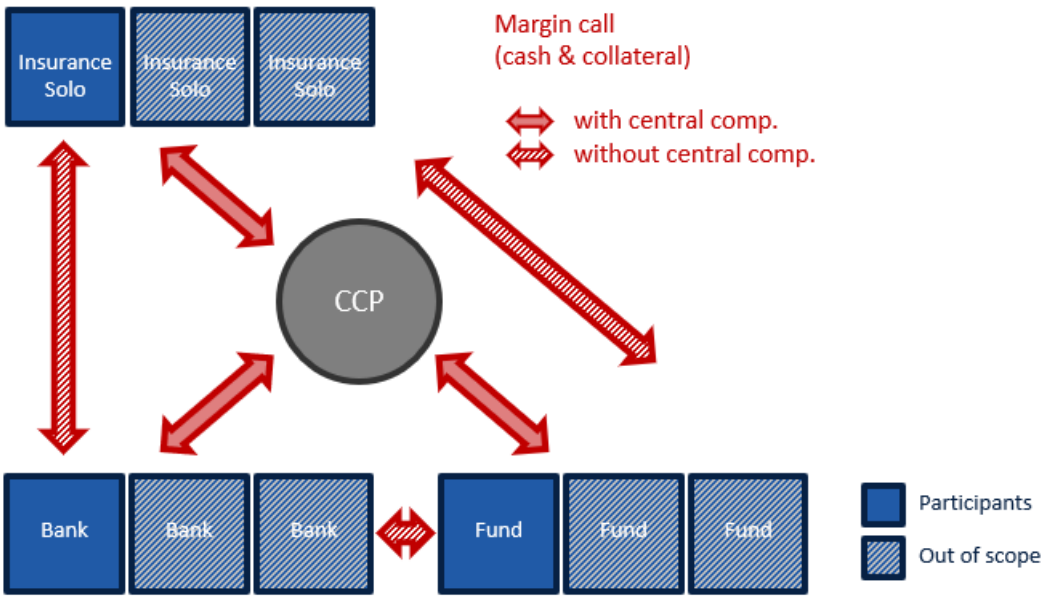


Figure A.1 — *Bilateral and centrally-cleared exposures between participants. Margin-call flows make the underlying network visible: centrally-cleared exposures route through the CCP, while non-centrally-cleared exposures remain bilateral and are observable only when participants are reconciled at counterparty level.*

Liquidity needs and chain reactions

Market stress generates a cascade of liquidity-consuming actions whose interaction is the defining feature of system-wide dynamics. The SWST framework distinguishes between exogenous liquidity needs — those imposed on participants from outside the perimeter, such as redemptions from end-investors on investment fund units or surrenders on insurance contracts — and endogenous liquidity needs, which arise from participants' own positions and from their interactions with one another. A working assumption of the exercise is that exogenous redemptions on insurance activities reach one per cent over the fortnight of the scenario, applied simultaneously to all participants; this corresponds to the worst individual week observed historically, extended to the horizon of the exercise, and compares to typical annual cumulative redemptions of four to five per cent. The endogenous component cumulates over time and across counterparties as the responses of each participant generate further liquidity needs for others.

Margin calls play a particularly potent role in this cascade. Volatility spikes mechanically trigger variation margin on existing derivative and repo positions; the magnitude of variation margin reflects the size of the price moves and concentrates pressure on the participants whose net positions have moved unfavorably. Initial margin requirements may also rise, both at central counterparties and on uncleared exposures, as risk models incorporate higher observed volatility. Both phenomena move liquidity across the system. In parallel, the decline in the market price of financial assets reduces the value of collateral available for refinancing operations, while haircuts on non-cash collateral typically widen in periods of elevated volatility, further tightening conditions precisely when demand for liquidity is rising. The exercise asks participants to declare the margin calls they expect to face, both on an aggregate basis and bilaterally with their main counterparties, distinguishing centrally-cleared from non-centrally-cleared exposures.

The response of participants to the cumulative pressure is multifaceted: sales of securities and of fund units, secured funding through repo transactions, drawings on committed credit and liquidity lines, and mobilization of bank deposits. The intra-group dimension is material: groups that have set up cash-pooling arrangements or that operate as financial conglomerates can reallocate liquidity internally before resorting to external markets, and this internal reallocation alters the pattern of external demand observed in aggregate.

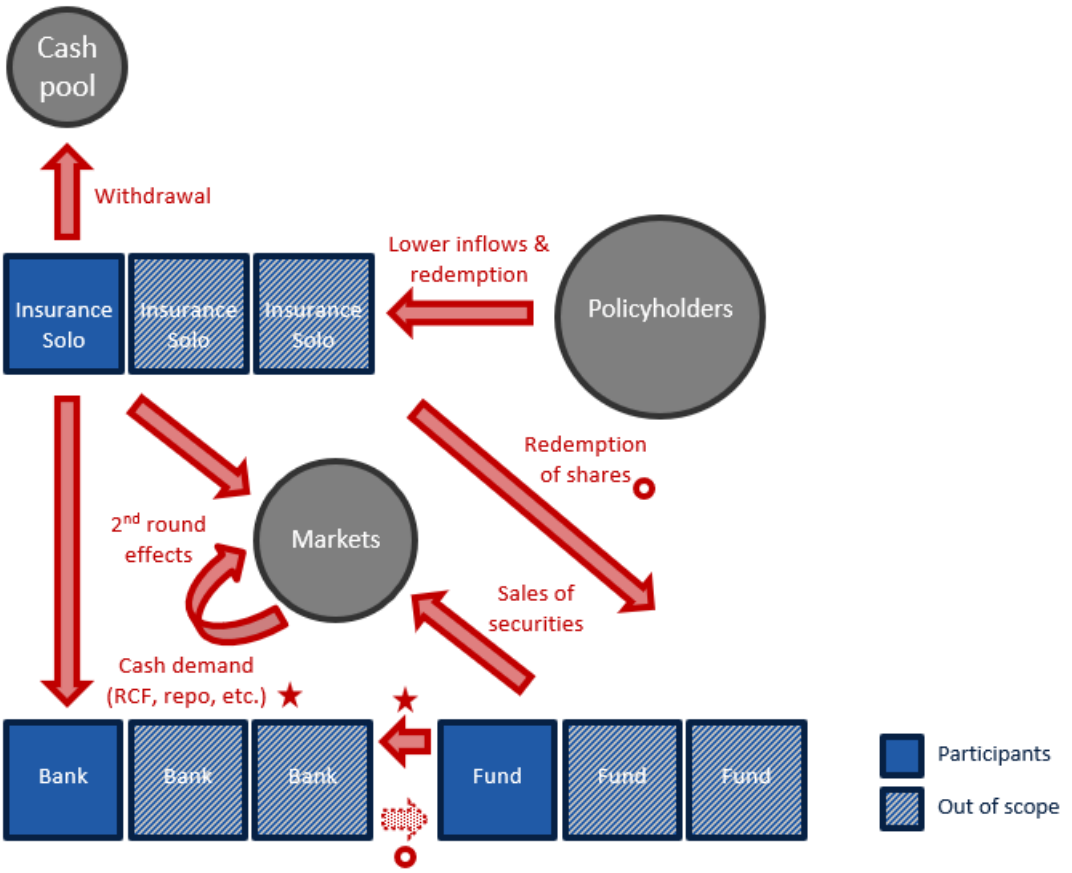


Figure A.2 — *Potential liquidity-management response and propagation. Exogenous shocks (redemptions, surrenders) and endogenous needs (margin calls, mark-to-market losses) combine, triggering asset sales, fund-share redemptions and cash demand vis-à-vis banks. Intra-group cash pools are mobilized before external markets; banks act as the final gatekeeper to the system's liquidity.*

Concentration of similar asset holdings and fire-sale risk

Beyond the explicit bilateral linkages captured by the first channel, multiple institutions across different sectors hold similar assets without necessarily being aware of the resulting indirect interconnections. Common asset holdings emerge naturally from regulatory eligibility rules (high-quality liquid assets, eligible collateral for central bank operations), from convergent investment mandates and benchmark constructions, from regulatory constraints on diversification and market footprint, and from the relative scarcity of certain instruments (sovereign benchmark bonds, large-cap equities, the most widely-traded money market funds). In periods of stress, the same liquidity pressures that drive the cascade described above lead several institutions to attempt to sell the same assets at the same time — either to rebuild liquidity buffers or to meet margin requirements — even though none of them has any contractual relationship with the others.

Simultaneous selling of similar assets can cause significant imbalances between supply and demand at high frequency, amplifying the decline in price beyond the initial exogenous shock and feeding back into the mark-to-market losses experienced by all holders, whether they have sold or not. Critically, assets perceived as liquid in normal times — including those routinely treated as cash-equivalent for the purposes of liquidity management — may exhibit endogenous illiquidity when many participants attempt to sell them simultaneously. Market depth is not a fixed characteristic of an instrument: it depends on whether other participants are trading in the same direction or in converging directions at the same point in time. An instrument that absorbs a disposal from a single seller without material price impact in normal times may move violently if comparable disposals are initiated simultaneously by many participants.

The exercise also captures the converse behavior, namely the possibility that some participants act tactically as buyers, providing a partial absorption capacity for the assets being sold, or that they adjust their hedging positions rather than re-positioning in the cash markets.

The bottom-up structure of the exercise is essential to capture this channel. By collecting from each participant the assets it intends to sell, in what quantity and over what horizon — and by reconciling these declarations across participants — the exercise reveals the extent to which common selling pressure is likely to materialize. The complementary top-down approach is then indispensable to assess the price impact of those collectively-declared sales: the second-round amplification, the feedback into mark-to-market losses, and the consequences for participants outside the bottom-up perimeter cannot be derived from the participants' own declarations and require an external modelling layer. The articulation between the bottom-up and the top-down approaches is therefore particularly natural for this channel, and one of the central motivations for combining the two in the design of the exercise.

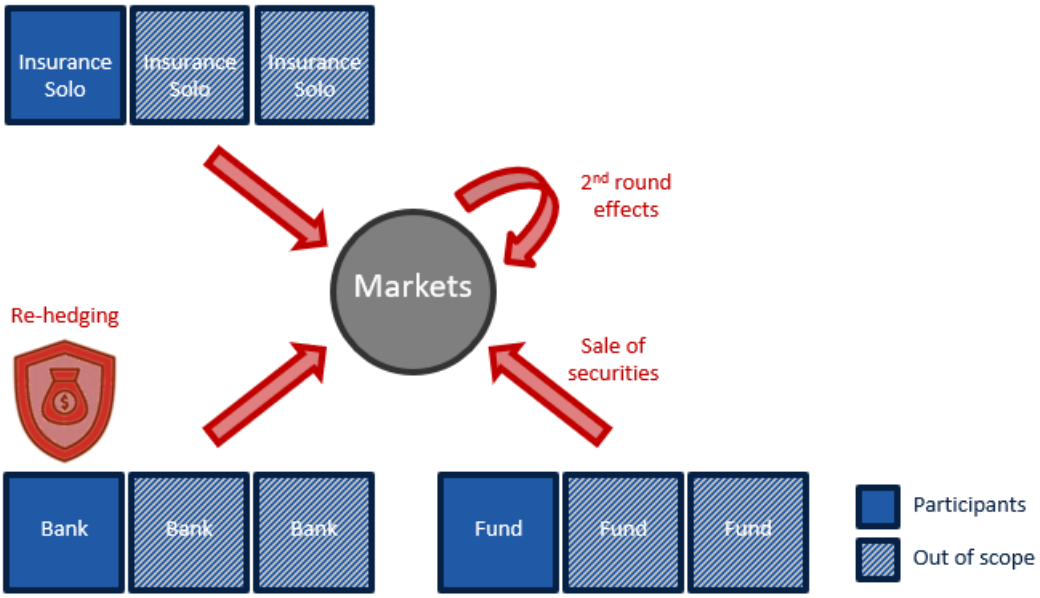


Figure A.3 — *Potential reactions to market movements and second-round dynamics. Participants channel their portfolio adjustments through the same markets: insurers and asset managers primarily through asset sales, banks predominantly through derivative re-hedging. The convergence of these flows feeds back endogenously into market prices, generating the fire-sale amplification that defines this channel.*

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