mercati, intermediari, istituzioni
FinRiskAlert

QFINLAB
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POLITECNICO MILANO 1863

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Il termometro dei mercati finanziari (7 luglio 2023)

a cura di E. Barucci e D. Marazzina

09/07/2023 20:00:27

L'iniziativa di Finriskalert.it "Il termometro dei mercati finanziari" vuole presentare un indicatore settimanale sul grado di turbolenza/tensione dei mercati finanziari, con particolare attenzione all'Italia.

Il termometro dei mercati finanziari						
07-Jul-23	Legenda					
Valutazione complessiva		Calma		↑	miglioramento	
				↔	stabile	
		Tensione		↓	peggioramento	
Mercati italiani	07-Jul		30-Jun	23-Jun	16-Jun	09-Jun
Rendimento borsa italiana	-1.60	↓	3.75	-2.34	2.58	0.35
Volatilità implicita borsa italiana	16.74	↓	14.55	16.22	15.04	15.09
CDS principali banche 10Ysub	366.00	↔	365.23	379.59	373.92	351.84
Tasso di interesse ITA 2Y	3.92	↔	3.92	3.77	3.68	3.52
Spread ITA 10Y/2Y	0.44	↓	0.15	0.23	0.36	0.60
Mercati europei	07-Jul		30-Jun	23-Jun	16-Jun	09-Jun
Rendimento borsa europea	-3.69	↓	2.98	-2.80	2.45	-0.78
Volatilità implicita borsa europea	15.20	↓	13.47	14.15	12.82	15.00
Rendimento borsa ITA/Europa	2.09	↑	0.77	0.46	0.13	1.13
Spread ITA/GER	1.72	↔	1.68	1.64	1.57	1.74
Spread EU/GER	0.87	↔	0.84	0.83	0.79	0.86
Politica monetaria, cambi e altro	07-Jul		30-Jun	23-Jun	16-Jun	09-Jun
Euro/Dollaro	1.09	↔	1.091	1.088	1.093	1.076
Spread US/GER 10Y	1.43	↔	1.42	1.38	1.30	1.37
Euribor 6M	3.905	↔	3.892	3.907	3.818	3.757
Prezzo Oro	1930	↔	1916	1924	1959	1963
Spread 10Y/2Y Euro Swap Curve	-0.60	↓	-0.79	-0.76	-0.67	-0.54

- Rendimento borsa italiana: rendimento settimanale dell'indice della borsa italiana FTSEMIB;
- Volatilità implicita borsa italiana: volatilità implicita calcolata considerando le opzioni at-the-money sul FTSEMIB a 3 mesi;
- Future borsa italiana: valore del future sul FTSEMIB;
- CDS principali banche 10Ysub: CDS medio delle obbligazioni subordinate a 10 anni delle principali banche italiane (Unicredit, Intesa San Paolo, MPS, Banco BPM);
- Tasso di interesse ITA 2Y: tasso di interesse costruito sulla curva dei BTP con scadenza a due anni;
- Spread ITA 10Y/2Y : differenza del tasso di interesse dei BTP a 10 anni e a 2 anni;
- Rendimento borsa europea: rendimento settimanale dell'indice delle borse europee Eurostoxx;
- Volatilità implicita borsa europea: volatilità implicita calcolata sulle opzioni at-the-money sull'indice Eurostoxx a scadenza 3 mesi;
- Rendimento borsa ITA/Europa: differenza tra il rendimento settimanale della borsa italiana e quello delle borse europee, calcolato sugli indici FTSEMIB e Eurostoxx;
- Spread ITA/GER: differenza tra i tassi di interesse italiani e tedeschi a 10 anni;
- Spread EU/GER: differenza media tra i tassi di interesse dei principali paesi europei (Francia, Belgio, Spagna, Italia, Olanda) e quelli tedeschi a 10 anni;
- Euro/dollaro: tasso di cambio euro/dollaro;
- Spread US/GER 10Y: spread tra i tassi di interesse degli Stati Uniti e quelli tedeschi con scadenza 10 anni;
- Prezzo Oro: quotazione dell'oro (in USD)
- Euribor 6M: tasso euribor a 6 mesi.
- Spread 10Y/2Y Euro Swap Curve: differenza del tasso della curva EURO ZONE IRS 3M a 10Y e 2Y;

I colori sono assegnati in un'ottica VaR: se il valore riportato è superiore (inferiore) al quantile al 15%, il colore utilizzato è l'arancione. Se il valore riportato è superiore (inferiore) al quantile al 5% il colore utilizzato è il rosso. La banda (verso l'alto o verso il basso) viene selezionata, a seconda dell'indicatore, nella direzione dell'instabilità del mercato. I quantili vengono ricostruiti prendendo la serie storica di un anno di osservazioni: ad esempio, un valore in una casella rossa significa che appartiene al 5% dei valori meno positivi riscontrati nell'ultimo anno. Per le prime tre voci della sezione "Politica Monetaria", le bande per definire il colore sono simmetriche (valori in positivo e in negativo). I dati riportati provengono dal database Thomson Reuters. Infine, la tendenza mostra la dinamica in atto e viene rappresentata dalle frecce: ↑, ↓, ↔ indicano rispettivamente miglioramento, peggioramento, stabilità rispetto alla rilevazione precedente.

At, Hft, Ai, market rigging: *machina delinquere non potest*? Of course

a cura di Emilio Girino [1]

09/07/2023 20:00:56

1. Market rigging among repentant demiurges and out-of-control artificial intelligence

Choral act of sorrow, negligeable real *mea culpa*, from swayed hosanna to doubtful crucifixion. It changes the target, not the style: social network scenarios replicated for artificial intelligence. Regretful demiurges grow up: from Bill Gates to Elon Musk to Jack Ma, at the end of May 2023 even from the brilliant contemporary creators Sam Altman (OpenAI and

ChatGpt), Geoffrey Hinton (formerly Google), Demis Hassabis (Deepmind) and others only a desperate s.o.s. arises against the overwhelming power that Ai could assume to the point of dissolving humanity: posthumous clairvoyance to procreative excitement (will this happen to cryptocurrencies as well? We'll talk about that at the first, real debacle). Those who created or sustained it, led by an almightiness feeling, now invoke rules. Mediatic hypocrisies aside, these are rules that the EU and – surprisingly – even the U.S. would very much like but in practice do not quite know how to actually write. What rules? Let us narrow an overly broad and "philosophical" spectrum to something smaller, tangible and dangerous: market rigging. Market rigging is, in a nutshell, rigged-card poker: trading after spreading false or misleading news, trading through artifice or deception, placing, taking out, re-placing, cancelling, reformulating orders to alter the course of the market, creating parallel and hypnotic trading, misleading investors, generating profits out of thin air. Now we add Ai, which could manipulate markets autonomously, perhaps replicating illicit patterns uncovered in neural networks but without perceiving their unlawfulness.

2. Regulatory background and new ruling frameworks

Algorithmic trading (At) has been around for more than two decades, its early heir high frequency trading that runs to the millisecond (Hft) for at least a decade. European regulation (Mifid2, Mad and Mar) has set certain precepts of continence: resilient systems capable of handling spikes in order volumes, ensuring orderly trading in critical market conditions and continuity of service, avoiding market abuse events. The assumption is that the machine is still instructed and governed by the human, which becomes responsible for any of its deviations or intemperance. Ai would seem to introduce a hiatus in this pedagogical process: the human can teach but the machine can learn on its own. Hence the distinction, evoked last May in a meticulous and valuable reconstruction (Consob - *Quaderno giuridico* n. 29/2023), between weak and strong Ai operating systems: the former instructed by the human who remains for that reason the sole responsible for the machine's misdeeds, the latter able to act autonomously by reaching outcomes not foreseen by their own creators or trainers, thus blameless for the misdeeds of their creatures.

Of the three solutions now being contemplated only one convinces, partially. The first (punishing the machine) presupposes a science-fictional legal subjectivity that is absolutely inconceivable (*machina delinquere non potest*, rephrasing the famous late 19th century German scholar Franz von Liszt), even considering that, devoid of genuine feeling, the robot would be completely insensitive to the afflictive effect of the sanction, nor, by exasperating the theory, the outlook of extreme agony (its destruction) would deter it. The second (collectivizing the damage), in addition to smelling of surrender, overlooks that the principle – applicable to bank on-line frauds, where the customer is not liable except for malice or gross negligence and the bank, though blameless, redistributes the risk indiscernibly and compensates for it with the increased profits derived from the spread of home banking services – would not produce a true and equitable reallocation of the damage, since a market rigging could unfairly affect even very small groups of investors just guilty of having stumbled among the claws of a felonious device. The third solution (placing the risk on the creators and instructors in objective terms, i.e., disregarding awareness of that same risk) seems, in part, the most reasonable but incomplete way forward and perhaps not even so much in need of a specific rule – which also would not hurt.

3. Educating the cyber-trader by taking away computing materials

The problem, not simple but also not as complicated as one would like to portray it, must move from an undeniable truth: creativity does not belong to the machine, even when its astonishing performance spreads the opposite illusion. The machine calculates, lightning-fast and with extreme precision, but it still calculates, and in order to calculate, material must be made available to it. So, the problem lies in what the machine is taught, even in the negative, in the sense of what the machine cannot do.

This is well known by those who have tested ChatGpt by asking, with a precise and credible justification, embarrassing questions with a racist, sexist, discriminatory or otherwise always and very politically incorrect or deemed so. The serious justificatory context in which the questions are asked does not make a micron's dent in the artificial brain's choice to reject every answer, citing the inappropriateness of the topic. Why? Because those who created it have placed limits on its processing faculties, taking computational material away from it. To avoid Ai-driven manipulation, it is enough to teach the latter that easy profit practices implemented by replicating illicit financial models are similarly forbidden. By now, the most popular market rigging techniques are known, and it is therefore sufficient, in the programming phase, to inhibit the replication of those illicit practices and, with an additional quantum leap beneficial to the market, to make the machine also detect new trades that lead to a manipulative effect. The same applies to the exceptions allowed by law, which the cyber-trader will equally have to assimilate and know how to adapt to different situations. It is not a matter of placing an objective risk on the programmers (and those who in turn command them), but of applying elementary principles of prudence, diligence, and expertise.

I see programmers ready to throw in the towel. Multimillion-dollar fines and years in jail certainly don't sit well with the expectations and salary of a computer scientist, assuming someone has explained to them what legality and compliance mean. Hence a chain of responsibilities, for which it is not so much necessary to discipline as to recognize that machines do not enjoy "techno-impunity".

Welcome harsher and more precise rules, but do not forget that, back in the 1980s, early computer gurus made it clear that the computer is a dumb machine: if we input garbage, garbage will come out, reworked but still garbage. Exactly…!

[1] Managing Partner, Studio Ghidini, Girino & Associati – Thomson Reuters Stand-out Lawyer 2023

The 6 shifts that can transform climate finance

09/07/2023 20:00:00

Every day, governments, financial institutions and corporations have a choice to make: invest in physical assets that emit greenhouse gases and harm nature or prioritize the development of green solutions that foster a stable, resilient and equitable economy. As communities face the harsh impacts of climate change, the choice to build a sustainable future is becoming

clearer. Estimates suggest around $5 trillion of capital will be needed every year by 2050 to meet climate and biodiversity goals...

https://www.weforum.org/agenda/2023/07/six-shifts-transform-climate-finance/

ECB: Survey on credit terms and conditions in euro-denominated securities financing and OTC derivatives markets

09/07/2023 20:00:00

SESFOD is a qualitative survey that was launched in 2013 and is conducted four times a year. It is part of an international initiative to collect information on trends in the credit terms offered by firms in the wholesale markets, and insights into the main drivers of these trends. The information collected is valuable for financial stability, market functioning and monetary policy objectives.

https://www.ecb.europa.eu/stats/ecb_surveys/sesfod/html/index.en.html

ECB: The inflation outlook and monetary policy in the euro area

09/07/2023 20:00:00

At the onset of the current inflation surge, the euro area economy was hit by a succession of extraordinary adverse supply shocks which pushed inflation far above the ECB's 2% medium-term target. The COVID-19 lockdowns in 2020 led to the enforced closure of large parts of the economy and a sharp drop in activity levels and inflation. As the consumer goods industry reopened and consumption patterns shifted from contact-intensive services to goods, supply and demand mismatches emerged...

https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230707~8f8f9debc6.en.html

ESMA upgrades rating data repository and publishes latest data on CRA performance

09/07/2023 20:00:00

The European Securities and Markets Authority (ESMA), the EU's financial markets regulator and supervisor, recently revamped its Central Repository of Ratings (CEREP) and made available the latest set of semi-annual statistical data on the performance of credit ratings, including transition matrices and default rates. The most recent dataset covers ratings data until December 2022. CEREP provides information on credit ratings issued by Credit Rating Agencies (CRAs) ...

https://www.esma.europa.eu/press-news/esma-news/esma-upgrades-rating-data-repository-and-publishes-latest-data-cra-performance

FSB: Addressing Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds – Revisions to the FSB's 2017 Policy Recommendations

09/07/2023 20:00:00

In 2017, the FSB published policy recommendations to address structural vulnerabilities in asset management activities. The recommendations relating to liquidity mismatch ("FSB Recommendations") aimed to: strengthen regulatory reporting and public disclosure to facilitate assessment of liquidity risk in OEFs; promote liquidity management both at the fund design phase and on an ongoing basis; widen the availability of LMTs and use of LMTs in stressed market conditions; and promote fund-level and system-wide stress testing...

https://www.fsb.org/2023/07/addressing-structural-vulnerabilities-from-liquidity-mismatch-in-open-ended-funds-revisions-to-the-fsbs-2017-policy-recommendations-consultation-report/

Direttore: Emilio Barucci.