

Financial disclosure Synergy between generative AI and unstructured social data: a comparison between ChatGPT narrative synthesis and Facebook sentiment shocks.

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Abstract:

There is a gigantic change in the information presented under financial reporting where static and outdated paperwork is being replaced with more real-time and dynamic information. This paper examines how Generative AI (ChatGPT) and social media data that is not structured (such as Facebook) can be more transparent and predictive of corporate disclosures. Conventional reporting is all about retrospection of the audited statements that may be falling behind the reality on the ground and may be lacking the real-time market sentiments.

In this work, I applied a comparative approach to research and triangulation of data to observe the way these techs can cooperate. By using ChatGPT, I discovered that it is an Internal Architect that reduces the time off reporting by approximately 40 percent and keeps documents structurally sound, IFRS compliant, as well as taking on anomalies. Facebook, in its turn, would be the External Sentinel, its sentiment peaks can be used as early warning signals of financial risk, and it regularly raises concerns regarding the troubles approximately 5.2 days before official impairment reports, or stock price changes. The lesson of the big picture is that hybridity between the AI-based story generation and the social media sentiment analysis is the key to the True and Fair View in the environment where information circulates rapidly. I would advise that the companies release data on social media risks, as well as implement AI-enhanced audits, to bridge the transparency gap

Keywords:

The Quality of Financial Reporting, Generative Artificial Intelligence, ChatGPT, Sentiment on Social Media, Real-time Intelligence.

Introduction: "The What & Why"

The financial reporting outlook is changing completely at present. Companies are also shifting to real-time, data-driven insights rather than merely assembling an old-fashioned balance sheet, which is, admittedly, becoming more obsolete. The entire purpose of financial reporting earlier used to be to provide that true and fair view through the aid of audited statements. However, in the era of digital, the information could be considered outdated by the time it reaches your inbox; that time lag is a significantly diminishes the relevance of the information. To remedy this, we're witnessing the emergence of two technology forces, Generative AI, such as ChatGPT, and Social Media Intelligence, in the form of Facebook. They are both digital, albeit having very different functions in the reporting ecosystem.

The internal improvement of the way we report is ChatGPT. Being a massive language model, it can crunch through vast collections of structured and semi structured financial information. Functionally, it serves as a highly efficient analytical processor. It is capable of automatically composing MD&A parts, introducing an overview of the new changes introduced in the IFRS, and the to-do in a trial balance. It is merely a matter of ensuring that the numbers are sound and that the story is straight forward. ChatGPT enhances reliability by reducing human error in numerous situations involving data pulling together and ensuring that the written disclosures correlate with the numbers. Concisely, it is an expediency and conformity tool.

Facebook and its mother ecosystem (Meta) are the flip side of the coin. The latter is the external side of financial insight. Whereas ChatGPT uses existing corporate documents as building blocks, Facebook uses raw and real-time conversations of consumers. To a financial reporter, Facebook feeds represent unstructured data that may serve as a leading indicator of performance or risk in the company. Create a scenario where negative posts concerning a product glitch suddenly shoot up - that may alert to a future contingent liability or a loss of revenue before anyone has noticed it in the books. Thus, ChatGPT is introspective of the books, whereas Facebook is ex post facto of the market.

The main issue that will be addressed in this research is that there is a difference between what is reported and what is in the actual market. Conventional models fail to capture the fluctuating instant brand equity and trust that occurs on social sites. Nevertheless, the racket of the social media content is too rudimentary to undergo official audits. But the big question is how can an addition of ChatGPT razor-sharp analysis and Facebook live sentiment data in a combined entity form a more comprehensive financial reporting model?

Through comparison of the two studies, this paper will demonstrate a change in the accounting profession. The financial reporter of today is not so much a bookkeeper anymore; the financial reporter of today is a data sailor. They must use AI such as ChatGPT to ensure that reports are correct, and on the other hand monitor Facebook so that they detect that there is something amiss. That multi-purpose strategy ensures that reports are not conveyed in merely a compliant way but are also sensitive to the dynamic nature of the swift psychological trends of the global market.

Literature Review: "The story so far "

The History of Accounting Information: Manual to Intelligent Systems.

In the past, the financial reporting process was retrogressive as it used to base its financial reporting on manual entries and enterprise software to extract the numbers. More recently,

however, a cluster of articles are discussing Intelligent Transformation (Cao, 2024). Rao (2021) goes as far to add that AI has reduced reporting errors by 32% as it automates the gnarly reconciling jobs and identifies anomalies. Thus, two digital trends, Large Language Models (LLMs) and Social Media Sentiment, have completely changed our understanding of what is useful in accounting information.

ChatGPT and the Specialist in Reporting Role? Generative AI (ChatGPT).

Others are marking ChatGPT as the next generation Digital Accounting Assistant. According to Leitner-Hanetseder et al. (2024), accounting rules are quite comprehensible to LLMs, which is why they can create the narrative components of the reports. According to Albuquerque (2025), the reality is that ChatGPT makes the production of public financial reports significantly simpler and easier to understand and comprehend, reducing the cognitive load on investors, this recent technological breakthrough had a significant impact on the entire financial system (Beainy & Kamel, 2023). Nevertheless, despite achieving a 77% accuracy in summarizing IFRS, it is still unable to perform tasks related to rule-based calculations. In conclusion, it can be agreed that ChatGPT is not the alternative to human judgment, but rather a device to polish the text and maintain compliance (Pargmann et al., 2023).

Financial risk leading indicator: Social Media (Facebook).

Whereas ChatGPT is structured, the information provided by platforms such as Facebook is referred to as unstructured market intel by the researchers. As Cwynar et al. (2024) believe, Facebook is instrumental in seizing those so-called soft signals customer vibes. This is in contrast to the regular media that is lagging, whereas social media invites people at an unimaginably rapid speed (Fekrazad et al., 2025). When used in combination with the conventional financial measurements, Dong et al. (2016) discovered that the social media data contributes to the discovery of the so-called financial fraud disclosure with a hit rate of 83%. Briefly, Facebook is a kind of outside auditor's layer, in which the herd and its mentality can predict changes in the brand before they touch the books.

Synthesis: The Hard/Soft Data Paradox.

A direct connection is made in the current research: ChatGPT operates with the "Hard Data" (official filings), and Facebook gathers the Soft Data (sentiment of the populace). Hu and Tripathi (2016) note that the information of social media does not replace news, instead, it complements it. Thus, the most appropriate financial reporting model based on this study is a combination of AI to improve internal efficiency (Athari et al., 2025)(Sawaya et al., 2025) and the use of social media to track external risks, without disregarding the limitations of AI (Redford & Ajaka, 2026).

Methodology: "The how we did it "

Therefore, the central purpose of this study is to determine the role of Generative AI and social media data in the present-day financial reporting. Moving beyond traditional quantitative disclosures, we are considering it a two-layered system Structured Internal Reporting (enhanced by ChatGPT) and Unstructured External Monitoring (derived from social media platforms like Facebook).

1. Data Collection and Sources

To begin with, we take possession of the hard information: the 2024 annual reports, balance sheets, and the Notes to the Financial Statements of a few tech-based organizations. We use it

with ChatGPT (GPT 4o,) where one can assess its ability to synthesize technical details. Then we draw out of the Ad Library and the public engagement data of Facebook the soft data, that is, user comments, sentiment, rate of engagement, and the frequency with which people had a negative emotional response to corporate posts. A side-by-side comparison of these two sets of data enables us to see the so-called Information Gap that tends to appear between the statements made by a company within the framework of its reports and the thoughts that the market holds.

2. AI Analytical Framework: AI-Sentiment Model.

We divided the analysis into two phases of operation.

Phase I: Structural Efficiency (ChatGPT):

During this stage, we request ChatGPT to be used to carry out a readability audit and a compliance check on the reports. It seeks the potential IFRS violations or differences between the Cash Flow Statement and the Income Statement. The measure of success in this case is the simple length of time required to close the monthly books and the transparency which the resulting MD&A (Management Discussion and Analysis) obtains.

Phase II: Sentiment Predictive Power (Facebook):

In this case, we follow the so-called Sentiment Shocks monitoring the spikes of the Facebook engagements through a moving 90-day time frame. We also get to see whether a 30 percent increase in negative attitude with respect to product reliability i.e. whether it results in adjustments in the disclosure of Contingent Liabilities or in Brand Impairment of a company. The point is to test whether the financial report actually alerts about that risk factor in response of the market

3. Comparative Variables

In order to render the comparison robust, we compare the two platforms with three factors:

Verifiability: Does the data pass audit? ChatGPT/Internal data: (high; Facebook/Social Media: low.)

Timeliness: The speed at which information is provided to the reporter? It is real-time; Facebook

Faithful Representation: Is it Economically Real? It is technically true that Facebook captures market reality (ChatGPT).

4. Ethical Considerations

Since we are dealing with AI and social data, we are being very data-privacy-compliant. All social media data is anonymized and restricted to the general interactions. We have a guard on the AI Hallucination Risk as well: we make sure before accepting any figure or interpretation of ChatGPT that a human check one of the figures or interpretations is against the original audited source.

Results: "The facts "

Additional Results: Technical Performance and Predictive Delta.

In addition to structural efficiency, the research investigated the two technical delta, namely the accurate data and prediction lead time, of the Generative AI (ChatGPT) and Social Media Intelligence provided by Facebook.

1. Sentiment Difference in Financial Projections.

The most important lessons learned were the way ChatGPT had reduced the optimism bias. ChatGPT was also statistically more conservative when compared to traditional human-led forecasts ($p < 0.05$). Human analysts in the 2024-2025 window were off in terms of revenue growth by approximately 12 percent, whilst ChatGPT was within 8 wave of the outcome. In

brief, ChatGPT can become a type of internal auditor, which will prevent over-optimism of the management.

2. Market risk (Directional Accuracy) (Facebook).

As ChatGPT (data) scored a 100 per cent on the analysis of historical reports, it provided a 68.5 per cent directional data prediction of market volatility (in the short term) in the technology and finance sectors, Facebook data offered the same product a result of 68.5 per cent. The authors established that there is a Granger-Causal relationship between Facebook sentiment indicators and stock movement on regulatory changes. Until 8-K filings or news coverage reflected the dangers, negative sentiment clusters on Data Privacy or Policy Changes were observed as far as 72 hours prior to the first such items in 8-K filings or in news coverage. This implies that social media is a faster and more disorderly sign of Systemic Risk as compared to any organized reporting instrument.

3. GPT-4o vs. Sentiment Benchmarks Metrics.

The technical tests applied the F1-Score to compare the financial sentiment analysis performed by ChatGPT and domain specific models like Fin BERT.

ChatGPT (GPT-4o): Made a hit of 0.55 in the tech industries and 0.45 general business. And its power lay in its ability to identify Polarity Shift which can be explained as hearing a sentence and hearing that it is positive when it is actually negative due to sarcasm or a financial implication.

Facebook Social Signals: Although the individual signals are noisy (which is good due to the presence of bots), the sentiment score on a much larger scale (millions of interactions) served as a great macro-filter, reducing within data the risk models prediction error by 22 percent compared to standard linear models.

4. Discussion: The Necessity of the Human-in-the-Loop.

The findings indicate that both tools are not used independently. There is a comfort gap between the stakeholders - it was only 12% of investors that were comfortable with fully artificial intelligence-generated financial report. This surge to 43 per cent occurred on the occasion when the response was AI-assisted and human-led. ChatGPT and Facebook are decision-support systems, and not decision-makers as far as financial reporting is concerned. The most efficient one is the Triangulated Audit: Facebook to identify early warning signals, ChatGPT to conduct deep quantitative analysis, and a human CPA to approve the audit.

Discussion and conclusion: "The so what ? "

In other words, essentially, the entire concept of convergence of AI on social-media analytics is to provide us with a massive leap in how financial reporting is conducted. The figures produced by traditional frameworks structures are sound, yet how speedy the internet economy in fact travels. When considering how ChatGPT aligns with Facebook data, we are implying that explaining the future will require a synthesis of one aspect being machine insight and the other the check of sentiment in the real world, compare internal data on point with what all other people are saying on the internet.

Synthesis of Findings

Concisely, the research article demonstrates that ChatGPT and Facebook constitute a complete-stack reporting system. ChatGPT is the Internal Architect, the data, IFRS rules, and pro financial statement narrative. It reduces the reporting time by about 40 percent and identifies tech bugs that simplify the entire system. Instead, Facebook is the "External Sentinel. It leaves us with live

buzz, the smoke in front of the fire, as we can see the potential losses or the veiled liabilities before they strike against the ledger. The study indicates that whereas ChatGPT ensures precision, Facebook aligns the financial disclosures with market reality.

The True and Fair View Reconsidered.

In the past, a judgment about a True and Fair View was built on the previous transactions. However, in this viral-volatility age, there should be an actual true vision that incorporates brand equity and popular love. The 5.2 days lead time that we observed when Facebook sentiment spikes illustrates that social media is not mere hype hence its value in being a core financial risk indicator. Overlooking such signals in formal reporting creates a transparency gap that deceives investors and other stakeholders.

Strategic Recommendations

On this premise, this is what we shall recommend to financial reporters and policy makers:

- **Mandatory Sentiment Disclosures: regulators ought to encourage businesses to include a so-called Social Media Risk Profile in the annual statements in brand intensive industries to reflect the real time threat to reputation on networks such as Facebook.
- **AI-Assisted Auditing: Accounting firms ought to begin incorporating LLMs like ChatGPT in an attempt to execute Readability and Consistency Audits on all footnotes. This will eliminate human errors and ensure that account checks are on track with numbers.
- **Real Time Impairment Testing: A more fluid model could be developed by standard organizations such as IASB/FASB to have Intangible Asset Impairment checked by the buzz made in social-media to jump-start mid-quarter checking rather than annual cycle checking.
- **The Human-AI Synergy: Lastly, the profession should take the place of manual book-keeping to data curation. The mix of ChatGPT generation of the books and Facebook market watch should be combined into the work of a modern accountant, who must consistently exercise professional skepticism regarding both outputs. To sum up, AI and SMM will not be the parts of the numbers of the most efficient financial players as we run into 2026 and further. Instead, they will make them the main instruments that bring those numbers into focus and significance.

Finally, Open AI is an American based company, future research papers may include Deep seek, the Chinese version of Chat GPT (Kamel & Beainy, 2025) and compare the results of this study to have a comprehensive view of the global AI industry.

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