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The Placebo Effect of Insider Dealing Regulation

Law Working Paper N° 841/2025
May 2025

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Abstract

Insiders can profit from material non-public information pertaining to their own firm by trading in the shares of their own company (traditional insider trading) or in the shares of other companies (shadow trading). We show that traditional insider trading and shadow trading have the same consequences for financial markets and corporate governance, but only the former is pursued aggressively by regulators in Europe, the UK and the United States. Drawing on a variety of evidence, including a survey of 200 retail investors, we suggest that, rather than protecting unsuspecting outside investors, such an arrangement enables insiders to profit at their expense. The ban on the more salient practice of traditional insider dealing regulation lulls outside investors into a false sense of security, thus effectively operating as a placebo, whilst insiders can still profit by engaging in shadow trading. We further argue that, ironically, this arrangement may nonetheless be efficient.

Keywords: insider dealing, insider trading, shadow trading, market efficiency, corporate governance, investor protection

JEL Classifications: G14, G34, G38, K22

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The Placebo Effect of Insider Dealing Regulation

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Abstract—Insiders can profit from material non-public information pertaining to their own firm by trading in the shares of their own company (traditional insider trading) or in the shares of other companies (shadow trading). We show that traditional insider trading and shadow trading have the same consequences for financial markets and corporate governance, but only the former is pursued aggressively by regulators in Europe, the UK and the United States. Drawing on a variety of evidence, including a survey of 200 retail investors, we suggest that, rather than protecting unsuspecting outside investors, such an arrangement enables insiders to profit at their expense. The ban on the more salient practice of traditional insider dealing regulation lulls outside investors into a false sense of security, thus effectively operating as a placebo, whilst insiders can still profit by engaging in shadow trading. We further argue that, ironically, this arrangement may nonetheless be efficient.

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1. *Introduction*

Public choice theory suggests that legal rules transfer wealth from diffuse and weakly organised interest groups to sophisticated and well-organised groups with a strong interest at stake.[1] In the domain of financial markets law, however, policy makers herald insider dealing regulation as a core pillar of investor protection: such rules are said to prevent sophisticated and better-informed insiders from taking advantage of uninformed and dispersed market participants.[2] Scratch beneath the surface, however, and one may find that even this paradigmatic case of public-interest legislation is less benign than it appears. In fact, we argue that, as currently designed and enforced, the laws governing insider dealing in Europe, the UK and the United States have so far failed to achieve their stated goal. Instead, in line with public choice theory's predictions, they may enable insiders to profit from unsuspecting non-professional investors.

To understand how this outcome is achieved, it should first be noted that when corporate insiders possess material non-public information pertaining to their firm, they can profit from trading on it in two ways. The best-known strategy, of course, is to trade in the shares of their own company (traditional insider trading). But when such information has a predictable effect on other companies, such as those that are economically connected to the insider's company, insiders may also trade in the shares of these other companies (shadow trading).

To illustrate, when Disney announced the launch of DisneyPlus, a streaming service that would rival Netflix's and be priced more cheaply, Netflix's shares dropped by 5%, losing 'as much as $8 billion in market capitalisation in a few minutes of trading'.[3] A Disney insider that was aware of the launch of DisneyPlus prior to the public announcement could have profited by purchasing Disney's shares (traditional insider trading) or by shorting Netflix (a shadow trade).

Following the language of the European Union Market Abuse Regulation,[4] we refer to traditional insider trading and shadow trading together as 'insider dealing'. Significantly, the two

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[1] George J Stigler, 'The Theory of Economic Regulation' (1971) 2 Bell Journal of Economics and Management Science 3.

[2] See eg Jaime Lizárraga, 'Strengthening Insider Trading Rules for Corporate Insiders' (SEC, 14 December 2022) <www.sec.gov/newsroom/speeches-statements/lizarraga-insider-trading-20221214> (claiming that without insider trading regulation 'ordinary investors' would see corporate executives manipulate the rules for their own benefit and misuse material, non-public information without consequences); Regulation (EU) 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC [2014] OJ L173/1, recital 23 ('the purpose of this Regulation … is to protect the integrity of the financial market and to enhance investor confidence, which is based, in turn, on the assurance that investors will be placed on an equal footing and protected from the misuse of inside information').

[3] John J Edwards III, 'Netflix's Market Value Dropped $8 Billion After the Disney Plus Announcement' *Time* (19 April 2019) <https://time.com/5569495/netflix-market-value-drop-disney-plus/>.

[4] See eg Market Abuse Regulation, recital 23.

forms of insider dealing have similar consequences for both corporate governance and capital markets. First, both types of trades can affect a company's governance by altering its insiders' incentives and risk preferences.[5] For instance, when insiders are allowed to engage in insider dealing, they are likely to become less risk-averse.[6] Secondly, in terms of the impact on financial markets, both types of trades present policy makers with an apparently inescapable trade-off.[7] On the one hand, these trades can promote price efficiency by ensuring that material non-public information about a stock is more promptly reflected in its price.[8] On the other hand, they also allow informed parties to gain from trading against uninformed investors, which in turn can erode investors' confidence in securities markets and, ultimately, increase firms' cost of capital.[9]

Curiously, despite having similar consequences, traditional insider trading and shadow trading have very different histories. Traditional insider trading has long been recognised as a key component of financial markets law and has attracted the attention of policy makers and academics. Shadow trading, by contrast, has only recently come under the spotlight, thanks to a series of studies showing that it is both pervasive and profitable,[10] and to *SEC v Panuwat*, a highly controversial case in which a jury found the defendant liable under a novel shadow trading theory.[11]

Policy makers in the EU, the UK and the United States treat the two forms of insider dealing differently. In all these jurisdictions, a mandatory prohibition that is routinely enforced governs traditional insider trading, whilst the treatment of shadow trading is more nuanced. In the UK and the EU, shadow trading is formally prohibited. To the best of our knowledge, however, this prohibition has *never* been enforced—suggesting implicit tolerance of shadow trading.[12] In the United States, laws governing shadow trading allow for private contracting, and hence corporations

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[5] See s 3B below.
[6] Lucian A Bebchuk and Chaim Fershtman, 'Insider Trading and the Managerial Choice among Risky Projects' (1994) 29 Journal of Financial and Quantitative Analysis 1.
[7] See s 3 below.
[8] Henry G Manne, 'Insider Trading and the Law Professors' (1970) 23 Vand L Rev 547, 572.
[9] Roy A Schotland, 'Unsafe at Any Price: A Reply to Manne, Insider Trading and the Stock Market' (1967) 53 Va L Rev 1425, 1440 ('The prime objection to … [insider trading] is the impact it would have on the public's confidence in the stock markets'). For empirical evidence supporting this view, see Diane Del Guercio, Elizabeth R Odders-White and Mark J Ready, 'The Deterrent Effect of the Securities and Exchange Commission's Enforcement Intensity on Illegal Insider Trading: Evidence from Run-up before News Events' (2017) 60 JLE 269, 273 (finding 'that the SEC's effort is associated with improved liquidity, as proxied by the quoted bid-ask spread, which suggests that greater enforcement has liquidity benefits, supportive of the crowding-out view'); Utpal Bhattacharya and Hazem Daouk, 'The World Price of Insider Trading' (2002) 57 Journal of Finance 75, 78.
[10] Mihir N Mehta, David M Reeb and Wanli Zhao, 'Shadow Trading' (2021) 96 The Accounting Review 367; Jengfang Chen and others, 'Information Transfers and Insider Trading in Stock Substitutes: Evidence from Economically Linked Firms in the Supply Chain' (2019) 4 Journal of Law Finance and Accounting 103; Prachi Deuskar, Aditi Khatri and Jayanthi Sunder, 'Insider Trading Restrictions and Informed Trading in Peer Stocks' (2025) 71 Management Science 2390.
[11] Complaint, *Securities and Exchange Commission v Matthew Panuwat* No 4:21-cv-06322 (ND Cal, 17 August 2021); see also *Securities and Exchange Commission v Matthew Panuwat* 2024 WL 4602708 (ND Cal, 9 September 2024).
[12] See s 2A(i) below.

and their insiders can negotiate whether insiders should be allowed to engage in shadow trading.[13] Thus, in all three jurisdictions considered, shadow trading is pursued much less aggressively than traditional insider trading. On what grounds can we explain such a disparate treatment of the two forms of insider dealing?[14]

In this article, we provide a novel, if somewhat cynical, efficiency-based explanation of the status quo. We build upon the intuition that outside investors generally perceive only traditional insider trading as harmful, not recognising that shadow trading should raise the same set of concerns and involve the same trade-offs. To support our intuition, we carried out a survey of 200 investors and found that, whilst traditional insider trading is highly salient, almost nobody identifies shadow trading as a viable strategy to profit from material information.[15]

Why should this matter? If outside investors recognise only traditional insider trades (but not shadow trades) as a profitable strategy, it follows that only the perception of widespread traditional insider trading (as opposed to shadow trading) would deter them from participating in securities markets. From this perspective, enforcement against traditional insider trading is important to ensure liquidity and, ultimately, reduce firms' cost of capital. Stated otherwise, whilst permitting traditional insider trading can be expected to ultimately increase companies' cost of capital, permitting shadow trading, even across the board, should not. Meanwhile, permitting shadow trades can promote price efficiency.

Hence, the current regulation of insider dealing overcomes the trade-off highlighted above.[16] On the one hand, the mandatory ban on the highly salient practice of traditional insider trading allows policy makers to maintain outside investors' trust (and participation rates) in financial markets. On the other hand, granting insiders the possibility of profiting from shadow trading ensures that material non-public information is promptly reflected in stock prices, with limited effect on outside investors' trust, given that the latter are largely oblivious to this trading strategy. Thus, ironically, the current regime may be more efficient than one prohibiting (or allowing) both forms of insider dealing.

Nevertheless, we refrain from endorsing this normative claim as our conclusion, if only because it would sound too cynical: in our account, insider dealing regulation lulls outside investors

[13] See s 2B(ii) below.
[14] One may be tempted to suggest that, whilst the consequences of traditional insider trading and shadow trading are similar in nature, their *magnitude* is greater for the former than for the latter. The empirical evidence does not support this view, though, as we show in s 4A.
[15] See s 4B below.
[16] See nn 7–9.

into a false sense of security, thus effectively operating as a placebo.[17] Outside investors feel that they are being cared for by the law, whilst sophisticated insiders can still profitably trade on the basis of material non-public information. In other words, a securities-fraud-related prohibition so designed proves, in fact, to be… a fraud on the market. Such a sinister regulatory framework cannot be easily rationalised. One way of doing so is to look at the insider dealing regime as a reflection of interest-group dynamics: such a regime may, in fact, serve the special interests of insiders and market professionals well.

2. *How Insider Dealing is Regulated in the EU, the UK and the United States*

In this section, we review the existing rules for insider dealing in the EU, the UK and the United States. In the EU and the UK, insider dealing laws aim to promote 'equal access' to information; by contrast, in the United States, they revolve around the idea of fiduciary duty, and the courts jettisoned the idea of equal access long ago. These regimes, however, are similar in two important respects. First, they are heralded by policy makers as a tool to protect outside investors from insiders who have access to material non-public information. Second, they provide for oft-enforced prohibitions against traditional insider trading, whilst targeting shadow trading less aggressively, if at all.

A. *Insider Trading and Shadow Trading in the EU and the UK*

Insider dealing has been the subject of EU harmonisation since the late 1980s, with the current legislation, namely the Market Abuse Regulation (EU MAR) and the related Market Abuse Directive, dating back to 2014.

(i) Substantive insider dealing law

Since its inception in 1989,[18] EU insider dealing law has had a strong market-egalitarianism inspiration.[19] That explains why EU law bans trading by any person who comes to possess material

[17] Among the definitions of the term 'placebo', the *Oxford English Dictionary* indicates that a placebo is 'A drug, medicine, therapy etc … with no specific therapeutic effect on a patient's condition, but believed by the patient to be therapeutic': *Oxford English Dictionary* (29 January 2025) 'placebo' (def 4). This is the meaning we attach to the word in this article.

[18] The European rules on insider trading were first harmonised by Council Directive 89/592/EEC of 13 November 1989 coordinating regulations on insider dealing [1989] OJ L334/30. On its market egalitarianism philosophy, see critically Barry AK Rider, 'The Control of Insider Trading—Smoke and Mirrors!' (2000) 7 Journal of Financial Crime 227, 238.

[19] See Market Abuse Regulation, recitals 23 ('The essential characteristic of insider dealing consists in an unfair advantage being obtained from inside information to the detriment of third parties who are unaware of such information and, consequently, the undermining of the integrity of financial markets and investor confidence. Consequently, the prohibition against insider dealing should apply where a person who is in possession of inside information takes unfair advantage of the benefit gained from that information by entering into market transactions in accordance with that information by acquiring or disposing of … financial instruments to which that information relates') and 24 ('The purpose of this Regulation … is to protect the integrity of the financial market and to *enhance investor confidence,*

non-public information. As a consequence, so long as information *x* (primarily) pertaining to Company A is also material for Company B's shares, those who possess it may trade neither Company A's nor Company B's shares. In other words, the EU MAR equally prohibits traditional insider trading and shadow trading,[20] allowing for no opt-out by contract from any of its prohibitions.

> More precisely, article 7(1)(a) of the EU MAR defines inside information as
>
> information of a precise nature, which has not been made public, relating, directly *or indirectly*, to one *or more* issuers or to one *or more* financial instruments, and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments [emphasis added].

In turn, article 8(1) of the EU MAR defines insider dealing as occurring 'where a person possesses inside information and uses that information by acquiring or disposing of … financial instruments to which that information relates'. There is no doubt that information relates to a given financial instrument so long as, if made public, it would be likely to have a significant effect on the price of that financial instrument.[21] Finally, article 14 of the EU MAR prohibits insider dealing.

Because the UK 'onshored' the EU rules on insider dealing after Brexit,[22] the EU MAR rules we have just described also apply in the UK.

Even though shadow trading has long been prohibited throughout the EU, to the best of our knowledge there is no enforcement record for this form of insider dealing in the EU or the UK. First, we conducted an informal survey of academics and practitioners from both the UK and 24 EU countries specialising in financial markets law, and none of them pointed us to a shadow trading case.[23] Secondly, with the help of a research assistant, we systematically searched for UK enforcement actions against shadow traders and found none up until August 2024. Finally, we also rely on the authority of a recent study focusing on shadow trading under EU law that, after

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which is based, in turn, on the assurance that investors will be placed on an equal footing and protected from the misuse of inside information') (emphasis added); see also Marco Ventoruzzo, 'Comparing Insider Trading in the United States and in the European Union: History and Recent Developments' (2014) 11 ECFR 554, 574–5; Ana Taleska, 'European Insider Trading Theory Revisited' (2020) 17 ECFR 558, 564–5.

[20] cf Dörte Poelzig and Paul Dittrich, 'Insider Dealing by Outsiders in the US and EU' (2023) 20 ECFR 692, esp 701–2.

[21] ibid 702.

[22] See the Market Abuse Regulation (UK) (Regulation (EU) No 596/2014), as retained in UK law.

[23] More specifically, we asked respondents two questions on this issue. First, we asked whether they were aware of any shadow trading cases. If they answered affirmatively, we then asked them to provide any information that could help us locate such a case. Of the 24 respondents, 23 stated that they were not aware of any shadow trading cases. One academic from Portugal answered the first question affirmatively but left the follow-up question blank, providing no information to help us locate such a case.

concluding that the EU MAR does prohibit shadow trading, reports no enforcement action across the EU prior to its publication.[24]

Of course, one may posit whether this may be because shadow trades simply do not occur in the EU or the UK. Whilst empirical evidence of shadow trading in the EU or UK is currently lacking, there is little reason to believe that such trading does not take place. Structural similarities between US and European markets—including high levels of institutional ownership, frequent sectoral interconnections and widespread access to sensitive information by corporate insiders—suggest that opportunities for shadow trading are present. Indeed, empirical research from the United States has documented that shadow trading occurs with measurable frequency.[25]

To conclude, whilst EU law (as well as the UK's) treats shadow trading exactly in the same way as traditional insider trading, the complete absence of enforcement regarding the former suggests that, at least so far, the law in action in Europe has tolerated it.[26]

(ii) Ancillary provisions against insider dealing

Whilst EU rules on insider dealing undoubtedly cover both traditional insider trading and shadow trading, the EU MAR provides that persons discharging managerial responsibilities within EU-listed companies and their associates must notify their company and the financial markets regulator 'of every transaction conducted on their own account relating to the shares or debt instruments of [their company] or to derivatives or other financial instruments linked thereto' within three business days.[27] The issuer or the financial markets regulator shall then inform the public about such trades within the next two business days.[28] Despite the reference to 'other financial instruments' linked to the issuer's shares or debt instruments, the relevant provision does not extend to any shares whose price may be affected by information relating to the issuer: rather, that wording covers trading in units of mutual funds and similar instruments that are heavily invested in the issuer's shares.[29]

The EU MAR also provides for 'closed periods' of 30 calendar days before the announcement of an issuer's interim or annual financial report, during which persons discharging

[24] Poelzig and Dittrich (n 20) 712.
[25] See s 4A below.
[26] While this conclusion does not rule out the possibility that *Panuwat* itself may sharpen European regulators' attention to shadow trading, it supports the intuition that market players have so far been less concerned with compliance with the shadow trading ban than with the traditional one.
[27] Market Abuse Regulation, art 19(1). A *de minimis* exemption applies: see arts 19(8) and (9).
[28] ibid art 19(3).
[29] cf ibid art 19(1a) (excluding that reporting obligations apply to a 'unit or share in a collective investment undertaking in which the exposure to the issuer's shares or debt instruments does not exceed 20% of the assets held by the collective investment undertaking' and similar instruments). cf also Poelzig and Dittrich (n 20) 712 (arguing that managers are not required to disclose shadow trades based on art 19).

managerial responsibilities are prohibited from conducting transactions on their own account or for a third party relating to the shares or debt instruments of the issuer or to derivatives or other financial instruments linked to them.[30] Again, the prohibition does not extend to shares of other companies on which the manager company's financial information may have a material impact.

B. *Insider Dealing Laws in the United States*

(i) Traditional insider trading

Modern insider dealing regulation in the United States is articulated in two theories: the classical theory and the misappropriation theory. The former states that insiders are not allowed to trade on the basis of material non-public information in breach of a duty of trust and confidence to the corporation and its shareholders.[31] This duty is also owed to the trading counterpart, who is either a shareholder or would become a shareholder through the transaction itself.[32] The latter theory holds that one may not trade on the basis of material non-public information in breach of a fiduciary duty owed to the source of the information.[33] Neither theory is consistent with the 'equal access to information' doctrine underpinning the EU and the UK insider dealing rules, which, in fact, the US Supreme Court has categorically rejected.[34]

US insider trading laws have been aptly framed as allocating property rights to information produced by a firm.[35] Traditional insider trading is illegal under US Securities and Exchange Commission (SEC) Rule 10b-5 because it first and foremost involves a breach of fiduciary duty owed to the corporation and its shareholders, and most legal scholars believe that corporations and shareholders cannot contract around this prohibition.[36] A mandatory rule thus provides that these transactions and property rights to information are allocated to the corporation.

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[30] Market Abuse Regulation, art 19(11).
[31] *Chiarella v United States* 445 US 222 (1980).
[32] See also ibid note 8 (acknowledging Judge Learned Hand's reasoning that 'the director or officer assumed a fiduciary in relation to the buyer by the very sale; for it would be a sorry distinction to allow him to use the advantage of his position to induce the buyer into the position of a beneficiary although he was forbidden to do so once the buyer had become one').
[33] *United States v O'Hagan* 521 US 642 (1997).
[34] *Chiarella v United States* (n 31).
[35] Stephen M Bainbridge, 'The Law and Economics of Insider Trading 2.0' in Gerrit De Geest (ed), *Encyclopedia of Law and Economics* (2nd edn, Edward Elgar Publishing 2023) ('The law of insider trading is one way society allocates the property rights to information produced by a firm').
[36] Although misappropriation theory can also apply to traditional insider trading, insiders can avoid liability under this theory by disclosing to the information source their intention to trade based on material, non-public information. *United States v O'Hagan* (n 33) 643 ('Because the deception essential to the theory involves feigning fidelity to the information's source, if the fiduciary discloses to the source that he plans to trade on the information, there is no "deceptive device" and thus no § 10(b) violation').

US policy makers have heralded the current insider dealing laws as aimed to achieve a host of objectives, including the protection of outside investors and the preservation of trust in the markets.[37]

(ii) Shadow trading

The classical theory does not cover shadow trades because they involve stocks of *other* companies. However, shadow trading can be illegal under the misappropriation theory. As noted by Ayres and Bankman,

> an employee is a fiduciary of her employer. If a company explicitly prohibits its employees from using non-public information to trade in another company's stock, an employee who violates that prohibition will violate Section 10(b). If, on the other hand, a company explicitly permits its employees to trade in another company's stock, an employee who trades will not violate the confidence of her employer and will not run afoul of Section 10(b).[38]

Insiders and their companies can thus decide whether shadow trading ought to be prohibited. This conclusion is reinforced by the recent decision reached in *SEC v Panuwat*.[39] In that case, the SEC pursued Mr Panuwat, a business development head at biopharmaceutical company Medivation, Inc. Soon after learning that Pfizer, Inc was about to acquire Medivation, Inc, Panuwat purchased shares in Incyte Corp, another biopharmaceutical company that was developing a similar drug. Eventually, Incyte's stock price increased sharply and Panuwat made a profit of over $100,000. Importantly, Medivation had an insider trading policy prohibiting employees from using confidential information concerning the company to trade in its own securities *or the securities of any other company*. Consequently, there was a clear argument that Panuwat violated his employer's policy and thus breached his duty. Panuwat was eventually found liable by a jury in a civil enforcement action.

The extent to which shadow trades are permitted when the employment contract is silent thereon is less firmly established. Writing in 2002, Ayres and Bankman found that all shadow trading cases brought by the SEC in which there was no specific contractual prohibition against such trades involved employees trading in the shares *of a target of the employer company*.[40]

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[37] Lizárraga (n 2) ('Insider trading is not a victimless crime. It erodes trust in our markets, undermines market integrity, distorts shareholder value, and harms investors … Why would investors devote considerable time to gathering information about a company, and investing in the stock market, if they're having to compete against insiders who have access to a cheat-sheet with the correct answers? That isn't fair competition. Closing some of the rule's loopholes, as we're doing today, will provide investors with the confidence that there's a level playing field').

[38] Ian Ayres and Joe Bankman, 'Substitutes for Insider Trading' (2001) 51 Stan L Rev 235, 239.

[39] See n 11 above.

[40] Ayres and Bankman (n 38) 256. Our follow-up Westlaw search of all insider trading cases since 2001 provided no further clarity on this issue. To be sure, a misappropriation case would arise if a director of a company, through their board position, were to learn information *pertaining to another company* (which is not a target company) and trade on

Intuitively, trading of this kind would tend to harm the employer firm because the employees' trades 'may drive the stock price [of the target firm] up, or tip off others of an impending acquisition'.[41]

Indeed, there is an argument for treating trades in the shares of a target by the employees of a prospective acquiror as a distinct subcategory of shadow trading. Although these trades may formally fall within our definition of 'shadow trades', not only do they tend to harm the employer firm, but it is also the case that, if they arise in the context of a tender offer, they would be strictly prohibited under Rule 14e-3. This provision prohibits 'any person' in possession of material non-public information (relating to a tender offer) from trading in the *target*'s securities, even absent any breach of fiduciary duty or a duty of confidentiality. Because of its expansive and categorical nature, Rule 14e-3 closes off many of the legal uncertainties that might otherwise attend target-related shadow trading. That is why, in the remainder of the article, we focus on shadow trades *other* than those involving the shares of a target company.

Limiting our attention to *Panuwat*'s fact pattern, one can likewise ask whether Panuwat, as an employee, would have been found liable even in the absence of Medivation's insider trading policy or confidentiality agreement. We have not found clear authority on this question. To the best of our knowledge, the only authority addressing this question is the district court's ruling on Panuwat's post-trial motion for a new trial and renewed motion for judgment as a matter of law, in which the court indicated *in dicta* that the default rule would prohibit employees from engaging in shadow trading.[42]

Meanwhile, it is also worth inquiring whether, and how often, firms tend to permit or prohibit shadow trades by their employees. Each firm is free to draft its own trading policy for employees. With respect to firms' policies on employees' shadow trades, the literature posits that practices vary widely. For example, having surveyed codes of conduct from 267 companies, Mehta, Reeb and Zhao reported that 'Approximately 53% of the[ir] sample prohibits employees from using private information to trade in their firms or stakeholders',[43] whilst 'The remaining 47% only expressly prevent employees from using private information to trade in their firms'.[44] In a more recent study, Min examined the insider trading policies of 51 S&P 500 companies, finding that 72% (37) of them prohibit trading of any other companies' stock (based on material non-public information), 22% (11) prohibit their employees from trading securities of their business partners

it. See eg SEC v Talbot 530 F.3d 1085 (9th Cir. 2008). But this was not a shadow trading case, because the relevant information is not related to the company on whose board the director sat.

[41] Ayres and Bankman (n 38) 239.

[42] *Securities and Exchange Commission v Matthew Panuwat* 2024 WL 4602708, *5 (ND Cal, 9 September 2024).

[43] Mehta, Reeb and Zhao (n 10) 393.

[44] ibid.

(eg customers or suppliers) and competitors, and only two prohibit trading exclusively in the employer's stock.[45] The differing numbers in the two studies may reflect not only the differences in their samples, but also a growing trend among corporations towards restricting shadow trading by their employees. Anecdotal evidence confirms this trend: for example, Cisco, Inc used to openly permit shadow trades by its employees in the early 2000s,[46] but now prohibits them.[47] Similarly, up until 2020, Meta, Inc (then Facebook) prohibited its employees only from trading in its own stock based on material non-public information,[48] whilst its latest code of conduct explicitly prohibits its employees from trading in *any* stock based on material non-public information about Meta, Inc.[49]

(iii) Ancillary provisions against insider

An important rule aimed at preventing insiders from profiting from insider dealing is section 16(b) of the Exchange Act, which requires 'statutory insiders'[50] to disgorge any profit realised from the purchase and sale, or sale and purchase, of the company's securities within a period of less than six months.[51] This provision, also known as the 'short-swing profit' rule, only covers traditional insider trading and does not apply to shadow trading.[52]

Moreover, insiders face a series of disclosure obligations aimed to facilitate the detection of prohibited insider dealing.[53] Most notably, under section 16(a) of the Securities Exchange Act,[54] statutory insiders must disclose the details of their trades in the shares of their own company by the end of the second business day following the transaction.[55] Thus, similarly to the short-swing profit rule, section 16(a) applies only to traditional insider trading.

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[45] Geeyoung Min, 'Strategic Compliance' (2023) 57 UC Davis L Rev 415, 496–8.
[46] Glenn R Simpson and Scott Thurm, 'Web of Interests: At Cisco, Executives Accumulate Stakes in Clients, Suppliers' *Wall Street Journal* (3 October 2000) <www.wsj.com/articles/SB970535968595732228>.
[47] Cisco, *FY22 Code of Business Conduct* (September 2022) 26 <www.cisco.com/c/dam/en_us/about/cobc/2021/fy22-code-of-business-conduct-english.pdf> (prohibiting shadow trades in the securities of 'Cisco customers, suppliers, vendors, subcontractors, acquisition targets, and other business partners, and at times, competitors').
[48] Facebook, *Code of Conduct* (10 September 2020, on file with authors) 8.
[49] Meta, *Keep Building Better: The Meta Code of Conduct* (June 2021) 44 <https://s21.q4cdn.com/399680738/files/doc_downloads/governance_documents/2022/06/FB_CoC_EXTERNAL_en_EN_Update_Final-6_2-FINAL-ua.pdf> ('Never trade stock in Meta or another public company while in possession of material non-public information concerning such stock').
[50] Statutory insiders include senior executives, directors and shareholders holding more than 10% of a publicly traded company's shares.
[51] Securities Exchange Act of 1934, § 16(b), 15 USC § 78p(b) (2000).
[52] Securities and Exchange Commission, 'Ownership Reports and Trading by Officers, Directors and Principal Security Holders' (2002) Release No 34-46313 <www.sec.gov/files/rules/other/34-46313.htm> (noting that s 16 applies to the 'insiders' of the issuer of the security).
[53] See eg Jesse M Fried, 'Insider Trading via the Corporation' (2014) 162 U Pa L Rev 801, 810.
[54] Securities Exchange Act of 1934, § 16(a), 15 USC § 78p(a); see also SEC Rule 16a-3, 17 CFR § 240.16a-3 (2024) (requiring statutory insiders to report trades in the issuer's equity securities on Form 4 by the end of the second business day following the transaction).
[55] Sarbanes-Oxley Act of 2002, § 403(a), 15 USC § 78p(a)(2)(C) (2012).

Overall, such ancillary provisions focus almost exclusively on traditional insider trading, thus reinforcing the conclusion that the United States treats the two forms of insider dealing very differently.

C. *Summary*

This brief overview highlights, first, that in all the jurisdictions we consider—the EU, the UK and the United States—traditional insider trading is flatly prohibited. Corporate insiders cannot make use of material non-public information from their own firm to trade in the shares of their own companies and parties cannot opt out of the regime. Effectively, there is a mandatory rule that assigns property rights to information *to the firm*, and parties cannot negotiate a different allocation. Moreover, the prohibition against traditional insider trading is routinely enforced.

Secondly, our overview has shown that the treatment of shadow trading is more nuanced. In the EU and the UK, shadow trading is *de jure* illegal, and therefore it, too, is governed by a mandatory rule that assigns property rights in information to the firm. Nevertheless, we have not been able to locate a single instance in which the prohibition against shadow trading has been enforced. In other words, shadow trading has been *de facto* tolerated—at least so far. What is more, companies cannot rely on policy makers to enforce shadow trading prohibition, even if they explicitly state in their code of conduct that insiders should not engage in it. Thus, an argument may be made that shadow trading is *de facto* governed by a rule that effectively assigns property rights to insiders.[56]

Finally, shadow trading is governed by a default rule in the United States: parties are allowed to contract on the allocation of the relevant property rights in information. And whilst it is not entirely clear whether, *de jure*, the default is a prohibition against shadow trading,[57] at least *de facto* property rights in information are assigned to the insider unless otherwise agreed. In fact, enforcement there has targeted only instances in which the parties had allocated property rights to the company.

3. *Should Insider Dealing Be Regulated?*

[56] We acknowledge that equating the absence of rule enforcement, even over multiple decades, with the non-existence of the unenforced rule lends itself to criticism. However, the equation resonates with the findings of an important empirical study on insider trading regulation: Bhattacharya and Daouk found that, while enforcement of insider trading is associated with a significant decrease in the cost of equity, the mere existence of such regulations has no measurable effect. See Bhattacharya and Daouk (n 9) 78.

[57] As previously discussed, *SEC v Panuwat* did not resolve this issue, as the company in that case specifically prohibited shadow trading, and the district court's later ruling addressed the issue only *in dicta*.

Scholars and policy makers have advanced many arguments both for and against regulating (traditional) insider trading and have vehemently disagreed on their relative weight. Empirical evidence has not settled this debate.[58]

In this section, we present the key arguments that have been advanced in favour of and against regulating traditional insider trading, namely those relating to its effects on capital markets on the one hand (section 3A) and on corporate governance on the other (section 3B), with the purpose of showing that these arguments extend to shadow trading. Next, we show that, in a world in which parties are allowed to bargain over whether to ban insider dealing, negotiating over shadow trading entails higher transaction costs than negotiating over traditional insider trading. Our transaction-cost-based analysis suggests that, other things being equal, a mandatory prohibition should be more, not less, justified for shadow trading than for traditional insider trading (section 3C).

A. *Capital Markets Effects*

In a world where traditional insider trading is permitted, such trades can affect capital markets in at least four ways. First, because insiders can trade on the basis of material non-public information, their trades would push the stock price in the 'right' direction, suggesting that traditional insider trading can enhance informational efficiency.[59] Second, the ability to trade on material information may induce insiders to postpone the disclosure of information to maximise their trading gains.[60] This delayed disclosure can, in turn, make stock prices less informative.[61] Third, when insiders are allowed to trade on material information, other agents, such as professionally informed traders, have weaker incentive to uncover information, because they are bound to systematically lose to insiders.[62] This can, in turn, reduce informational efficiency. Fourth, traditional insider trading may negatively affect liquidity, as market makers widen bid-ask spreads to manage the risk of, again, systematically losing to insiders.[63]

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[58] For an overview, cf Utpal Bhattacharya, 'Insider Trading Controversies: A Literature Review' (2014) 6 Annual Review of Financial Economics 385 (concluding that further empirical evidence is necessary to settle the debate on whether banning insider dealing is efficient).
[59] Manne (n 8) 572 (arguing that allowing insiders to trade 'would necessarily improve the efficiency with which the stock market assimilates new information into stock prices').
[60] Reinier Kraakman, 'The Legal Theory of Insider Trading Regulation in the United States' in Klaus J Hopt and Eddy Wymeersch (eds), *European Insider Dealing: Law and Practice* (Butterworths 1991) 52.
[61] This conclusion assumes that insiders are subject to liquidity constraints.
[62] Nuno Fernandes and Miguel A Ferreira, 'Insider Trading Laws and Stock Price Informativeness' (2008) 22 Review of Financial Studies 1845, 1847 (arguing that 'insider trading can in fact crowd out information collection and constrain informed trading by outside investors').
[63] See eg Mervyn King and Ailsa Roell, 'Insider Trading' (1988) 3 Economic Policy 163.

A related bone of contention is the impact of traditional insider trading on a firm's cost of capital. The standard view is that traditional insider trading raises firms' cost of capital because outsiders expect insiders to take advantage of them in trading and hence demand a higher premium to invest in the firm.[64]

Although the weight of these arguments has been extensively discussed in the literature,[65] empirical evidence does not provide a conclusive answer on their relative importance. Instead of attempting to settle this debate, we make a narrower point here—namely, that the arguments we just summarised apply equally to shadow trading.

To see why, let us go back to the DisneyPlus/Netflix example.[66] First, consider that a Disney insider who decided to short Netflix stock prior to the announcement of DisneyPlus would have traded in the 'right' direction and would have increased the accuracy of Netflix's stock price. Secondly, a Disney insider who can profit from shadow trading in Netflix stock has the same incentives to delay disclosure about DisneyPlus as Disney insiders engaging in traditional insider trading. Thirdly, professionally informed traders considering trading in Netflix stock are indifferent as to whether they are trading against better-informed insiders at Disney or at Netflix. Hence, they would have weaker incentives to invest in information acquisition, regardless of whether insiders trade in their own firm or in an economically connected firm. Similarly, with respect to the cost of capital argument, if investors anticipate that insiders of other firms will trade against them on the basis of non-public information, they will demand a higher premium to invest in the firm.

B. *Corporate Governance Effects*

A long-standing debate exists as to whether allowing insiders to trade on material information improves their incentives to create value for their employer or has the opposite effect.

Henry Manne suggested that allowing traditional insider trading could be an efficient way to compensate insiders who innovate.[67] In general, compensation contracts are seldom structured perfectly to reward managers who produce valuable innovation. Given that renegotiating after observing the value of the innovation is costly, so the argument goes, allowing insiders to trade on

[64] See eg Utpal Bhattacharya and Mark M Spiegel, 'Insiders, Outsiders, and Market Breakdowns' (1991) 46 Review of Financial Studies 999. See also Lawrence M Ausubel, 'Insider Trading in a Rational Expectations Economy' (1990) 80 American Economic Review 1022.
[65] Laura N Beny, 'Insider Trading Laws and Stock Markets Around the World: An Empirical Contribution to the Theoretical Law and Economics Debate' (2006) 32 J Corp L 237, 249.
[66] See n 3.
[67] Henry G Manne, *Insider Trading and the Stock Market* (The Free Press 1966) 138–41 ('insider trading meets all the conditions for appropriately compensating entrepreneurs. It readily allows corporate entrepreneurs to market their innovations').

material information may strengthen managers' incentives to innovate.[68] For instance, Disney insiders would have worked harder or accepted a lower compensation to develop DisneyPlus had they been allowed to trade on the material information generated by the project.

A counterargument to Manne's point is that there is no perfect correlation between the *materiality* of a given piece of information and the *value* it has for the firm. In particular, material information may reflect not only positive developments, but also adverse ones. For example, negative information—such as a product failure, a regulatory sanction or a missed earnings target—may allow insiders to reap significant profits by shorting their company's shares. In such cases, insiders may have perverse incentives to *destroy* value rather than create it. This concern is particularly salient when insiders can influence the timing or nature of the information itself, potentially leading to moral hazard or distorted decision making.[69]

A related argument is that insiders may become more inclined to choose risky strategies if they can profit from insider dealing.[70] Whilst the increased risk inclination may prompt insiders to adopt strategies more closely aligned with the risk-neutral preferences of diversified shareholders,[71] it may equally push them towards excessively risky strategies in an attempt to profit from the heightened volatility they engender.

The relative weight of these arguments has been extensively discussed in the literature and empirical evidence has failed to provide a conclusive answer so far.[72] However, what matters for our purposes is that, again, the arguments developed with traditional insider trading in mind equally apply to shadow trading. If Disney insiders can profit from shadow trading in Netflix stock, they will work harder and/or accept lower compensation. At the same time, they may have incentives to pursue higher-risk strategies to profit from increased volatility in economically connected companies,[73] or even to destroy value at Disney in order to profit from the negative spillovers affecting Disney's suppliers and customers.[74]

It may be tempting to argue that, because gains from shadow trading are much lower than those from traditional insider trading, insiders would not adjust their strategies based on the prospect of profiting from the former. But such an argument would be misplaced. Consider, for

[68] Dennis W Carlton and Daniel R Fischel, 'The Regulation of Insider Trading' (1983) 35 Stan L Rev 857.
[69] See eg Fried (n 53) 807 (arguing that allowing insider trading profits can 'provide insiders with incentives to take steps that may destroy economic value').
[70] Bebchuk and Fershtman (n 6).
[71] ibid.
[72] See eg Beny (n 65) 249.
[73] Yoon-Ho Alex Lee, Lawrence Liu and Alessandro Romano, 'Shadow Trading and Corporate Investments' (2023) 7 Journal of Law Finance and Accounting 191.
[74] Ayres and Bankman (n 38).

instance, the case of a large company operating across many different lines of business and a smaller supplier that provides inputs to only one of them, deriving most of its profits from that business relationship. If the company decides to scale down its operations in that line of business, it may suffer a relatively small hit, but the supplier might face catastrophic consequences. This is not a fictional example. When Apple reported lower revenue forecasts after a slowdown in sales in the Chinese market, its shares fell 10% but shares in AMS (a maker of light sensors for smartphones) dropped more than 20%.[75] Thus, an insider would have gained more than twice as much per dollar invested by engaging in shadow trading than by engaging in traditional insider trading. More generally, ample evidence suggests that shocks at one firm can magnify when they propagate to other firms.[76] Hence, in some instances, shadow trading can be more profitable than traditional insider trading.

C. *Transaction Costs and Property Rights*

A less frequently discussed, yet crucial, factor to consider when deciding whether to regulate insider dealing are transaction costs. If affected parties can bargain at no cost for the regime that maximises their joint utility, there is no need for the insider dealing ban to be mandatory. In theory at least, government intervention could take the form of merely supporting private arrangements through the supply of a public (and criminal) enforcement apparatus.[77] As in previous sections, the analysis here is meant to answer the question of whether a different treatment of traditional insider trading and shadow trading can be justified in light of the transaction costs of bargaining over the allocation of property rights in information.

To begin with, the transaction costs perspective gives no reason to distinguish between the two forms of insider dealing so long as the rationale for regulation relates to the negative capital markets effect of insider dealing. Private contracting cannot work for either traditional insider or shadow trading if the concern is for their negative effects on liquidity and informational efficiency. For instance, if allowing insiders to trade on material information significantly reduces professionally informed traders' incentives to uncover information, then default rules are bound to

[75] Stephen Grocer, 'Was Apple's Warning a Surprise? Not to Its Suppliers' *New York Times* (3 January 2019) <www.nytimes.com/2019/01/03/business/dealbook/apple-suppliers-stocks.html>.
[76] cf David Baqaee and Emmanuel Farhi, 'Nonlinear Production Networks with an Application to the COVID-19 Crisis' (National Bureau of Economic Research 2020) NBER Working Paper 27281; Daniel Aobdia, Judson Caskey and N Bugra Ozel, 'Inter-Industry Network Structure and the Cross-Predictability of Earnings and Stock Returns' (2014) 19 Review of Accounting Studies 1191; Vasco M Carvalho, 'From Micro to Macro via Production Networks' (2014) 28 Journal of Economic Perspectives 23; Xavier Gabaix, 'The Granular Origins of Aggregate Fluctuations' (2011) 102 Econometrica 1697.
[77] An optional insider dealing ban may coexist with a public enforcement apparatus relying on criminal and administrative sanctions, similar to how fraud is a crime in most jurisdictions. At least in theory, such a regime would be even more effective than one based on a mandatory ban, because public enforcers could efficiently focus on insider dealing at the companies that have chosen to be subject to the regime.

be inefficient, and an opt-in regime would be even less efficient. In fact, to induce firms to internalise the cost imposed on financial markets in terms of informational efficiency, the bargaining process should involve the firm, its insiders and all the traders who would reduce their efforts to uncover information if insider trading were allowed. Obviously, such bargaining is never going to take place, making mandatory rules necessary.

Secondly, a focus on the corporate governance effect would imply that a mandatory rule is more likely to be necessary for shadow trading than for traditional insider trading. In fact, from this perspective, there is a key difference between the two. The corporate governance consequences of traditional insider trading are mainly borne by the corporation that employs the insider, and hence the negotiation would involve only the insider and their employer. That is, in the case of traditional insider trading, Disney might allow insiders to trade against its own shareholders in exchange for paying them less. At the same time, however, this would increase its cost of capital.[78] Assuming that Disney is rational, it would therefore allow its insiders to engage in traditional insider trading if, and only if, the savings in compensation were larger than the associated increase in the cost of capital. By contrast, when a corporation allows its insiders to engage in shadow trading, it can externalise part of the cost of compensating those insiders onto the shareholders of economically connected companies.[79] Thus, efficient contracting on shadow trading would require negotiation among the insider, the corporation and all economically connected firms. The transaction costs involved in this bargaining process would be significantly higher than in the case of a negotiation over traditional insider trading, which involves only the insider and their employer.

These considerations suggest that policy makers concerned with the corporate governance consequences of insider dealing should be more deferential to private contracting in the case of traditional insider trading than in the case of shadow trading. But this is, in fact, the opposite of what we observe in the United States.[80]

Lastly, even if policy makers are concerned with protecting property rights in information, as is the case in the United States, the current arrangement cannot be easily explained. As noted in section 2B, with respect to traditional insider trading a mandatory rule assigns property rights in information to the corporation. Thus, policy makers must consider transaction costs sufficiently high to prevent efficient negotiation regarding the allocation of rights in information. Yet, because

[78] Ausubel (n 64).
[79] Lee, Liu and Romano (n 73).
[80] The US arrangement cannot be explained by assuming that policy makers are primarily concerned with the capital markets effect of insider dealing, because in that case they would not defer to private ordering for either form of insider dealing, given the high transaction costs involved in negotiating around such effects.

shadow trades are based on the same information as traditional insider trading, a property rights view of insider dealing cannot easily explain why a default rule regulates shadow trading whilst a mandatory rule governs traditional insider trading.

D. *Summary*

In sections 3A and 3B, we have shown that there is no structural reason for differentiating between insider trading and shadow trading in relation to the various rationales for and against regulation. In section 3C, we highlighted that there are rationales for which contracting implies prohibitively high transaction costs for both traditional insider trading and shadow trading, and rationales for which contracting around shadow trading implies much higher transaction costs than contracting around traditional insider trading. We can thus conclude that the inconsistency in the regulatory or enforcement treatment between traditional insider trading and shadow trading in the United States and Europe, respectively, is hard to justify from an economic perspective. Nor, incidentally, would it be easy to distinguish between the two based on fairness grounds. Whatever fairness means in this context, shadow trades are as unfair to counterparties as traditional insider trades are. In both cases, insiders exploit their position of informative advantage to the detriment of their counterparts.

Is it still possible to provide an efficiency-based explanation of the status quo? We tackle this question in the next section, building upon one of the tenets of policy makers' grounds for banning insider dealing: the idea that it undermines investor confidence in securities markets.[81]

4. *Insider Dealing Regulation as a Placebo*

We have highlighted that policy makers find themselves between a rock and a hard place when regulating insider dealing. On the one hand, insider dealing ensures that material non-public information about a stock is more promptly reflected in its price.[82] On the other hand, it allows insiders to gain at the expense of uninformed parties, which, in turn, can erode investors' confidence in securities markets and, ultimately, increase firms' cost of capital.[83]

Remarkably, combining a prohibition against traditional insider trading with a (*de jure* in the United States and *de facto* in Europe) permissive rule on shadow trading may offer a solution to this conundrum. If shadow trading is less salient than traditional insider trading, permitting it may erode trust in financial markets to a lesser extent, if at all, whilst also ensuring that price-sensitive information is more promptly reflected in stock prices. Thus, the current approach to insider trading

[81] See Market Abuse Regulation, recitals 2, 23, 24 and art 1 ('This Regulation establishes a common regulatory framework on insider dealing, the unlawful disclosure of inside information and market manipulation … to ensure the integrity of financial markets in the Union and to enhance investor protection and confidence in those markets').
[82] Manne (n 8) 572.
[83] Schotland (n 9); Del Guercio, Odders-White and Ready (n 9); Bhattacharya and Daouk (n 9).

and shadow trading may both increase the informational efficiency of the market and keep outside investors in the game.

This conclusion rests on two testable assumptions, namely that insiders routinely engage in shadow trading and that outsiders generally overlook the possibility that insiders will do so. We next show that there is plenty of evidence in support of the former assumption. Proving the latter is intuitively much harder. However, the results of a survey we conducted are consistent with that assumption, as we report below.

A. *Shadow Trading Is Widespread (and Profitable)*

Shocks affecting one firm are likely to have a material effect on the stock price of economically connected firms. This gives insiders the ability to profit by trading in economically connected companies based on material information pertaining to their own corporation.

Existing literature both predicts, and, with reference to the United States,[84] finds empirical evidence to confirm, that insiders routinely engage in shadow trading. To start with, Tookes identifies the conditions under which insiders may find it profitable to trade on the basis of material information in the stocks of competitors and also provides evidence to support her theory.[85] In addition, Mehta and co-authors conclude that shadow trading is a widespread and profitable phenomenon based on a detailed empirical investigation.[86] They estimate that 'the profitability from a single shadow [trade] ranges from $139,400 to $678,000'.[87] Chen and co-authors provide further evidence that insiders profit from shadow trading and show that insiders trade in the stocks of other firms in the supply chain around merger and acquisition deals.[88] Similarly, Deuskar and co-authors observe that shadow trading is an alternative way to profit from inside information when regulation on traditional insider trading becomes strict.[89] Taken together, these studies show that, at least in the United States, insiders are keenly aware that they can profit from shadow trading.

B. *Shadow Trading Is Non-salient to Outsiders*

Our second assumption is that outside investors generally overlook the possibility that insiders may profit from material information through shadow trading.

[84] To the best of our knowledge, no empirical study has focused on shadow trading in Europe.
[85] Heather E Tookes, 'Information, Trading, and Product Market Interactions: Cross-sectional Implications of Informed Trading' (2008) 63 Journal of Finance 379.
[86] Mehta, Reeb and Zhao (n 10).
[87] ibid 377.
[88] Chen and others (n 10).
[89] Deuskar, Khatri and Sunder (n 10).

To support this hypothesis, we recruited a sample of 200 US-based investors through Prolific.co. All participants were screened for prior investing experience to ensure that our sample consisted of respondents who actually belonged to the category of individual investors. Participants were paid $1 for taking part in the survey (equivalent to roughly $12 per hour). Moreover, we informed participants that those who provided the 'best' answer would win an additional $10. This bonus was intended to incentivise participants to think carefully about the questions and provide insightful responses.

At the beginning of the survey, participants were informed that they would be shown three hypothetical scenarios and asked to identify the trading strategies that could be used to profit from them. We stressed that participants should not be concerned with ethics or legality, as we were interested solely in identifying trading strategies that, in their view, could generate profits, regardless of ethical or legal considerations.

The participants were then given the three scenarios described in Table 1. In all three, they received material non-public information from a reliable source. The scenarios are based on real-world situations in which it would have been possible to profit through both traditional insider trading and shadow trading. For instance, Scenario II is modelled on the facts surrounding the *Panuwat* case. We then asked respondents, in an open-ended question, which strategies they thought could be used to profit by trading before the material non-public information they received was disclosed to the public.

{Insert Table 1 approximately here.}

Coding open-ended questions necessarily involves a degree of subjectivity. Consequently, we hired a student from a US law school to code the responses behind a veil of ignorance; in other words, we did not inform her of the study's purpose. This ensured that the coding was unbiased, or at least not influenced by our hypothesis.

We found that 124 participants (62%) described trading strategies that would qualify as traditional insider trading in all three scenarios, whilst only one participant (0.5%) suggested a shadow trading strategy for each of them.

{Insert Figure 1 approximately here.}

Looking at the individual scenarios, we observed that traditional insider trading is mentioned considerably more often as a strategy to profit from material non-public information (Figure 1). The most striking difference appears in Scenario 3, in which 172 out of 200 respondents mentioned traditional insider trading strategies, whereas only nine mentioned shadow trading ones.

These findings suggest that, whilst outside investors are aware that material information can be exploited through traditional insider trading, they very rarely perceive shadow trading as an equivalent strategy. This evidence is consistent with the intuition that shadow trading is unlikely to shake outside investors' confidence in the integrity of financial markets.

C. *Explaining the Status Quo*

In the previous sections, we have argued that the status quo is consistent with the following view: on the one hand, insider dealing may have positive effects on stock price accuracy; on the other hand, traditional insider trading, but not shadow trading, may have a negative effect on liquidity and informational efficiency by discouraging outsiders from participating in public markets.

Based on this view, the current law in action on insider dealing may be justified in terms of efficiency. At the same time, it has different distributional outcomes than previously thought, because value extraction by insiders from outsiders through profitable shadow trading appears, so far, to have been tolerated. A legitimate question is how such a system could have emerged in multiple jurisdictions. A thorough answer would require investigating the many jurisdiction-specific factors that shape the evolution and enforcement of insider trading rules. But one common factor likely played a significant role in both establishing and maintaining the current regulatory approach across jurisdictions: industry interests.

Public choice theory suggests that legal rules transfer wealth from scattered and weakly organised constituencies to cohesive, sophisticated and well-organised groups with a strong common interest at stake.[90] Inconsistent with this theory, policy makers herald insider dealing regulation as a means of protecting outside investors from sophisticated and better-informed insiders.[91]

In a seminal article, Haddock and Macey sought to reconcile insider trading regulation with public choice theory by framing it as a struggle between two well-organised groups: insiders and market professionals.[92] By banning insiders from trading on the basis of material non-public information, insider trading regulations benefit market professionals, the group most likely to have access to information after insiders.[93]

Our analysis takes this logic one step further: the current framework, by failing to mandate a shadow trading prohibition (in the United States) or by consistently neglecting to enforce such a ban

[90] David D Haddock and Jonathan R Macey, 'Regulation on Demand: A Private Interest Model, with an Application to Insider Trading Regulation' (1987) 30 JLE 311, 312.
[91] See n 2.
[92] Haddock and Macey (n 89) 314.
[93] ibid.

(in the EU and the UK) whilst simultaneously conveying to outside investors that traditional insider trading is unequivocally prohibited, may not significantly disadvantage either well-organised group.[94]

First, even if traditional insider trading is banned, insiders can still profit from non-public information by engaging in shadow trading. Similarly, active funds and hedge funds are likely to have access to non-public information before outside investors and therefore can profitably engage in shadow trading against them. Finally, passive funds are not interested in beating the market, and their revenues depend on the amount of capital that they can attract, the performance of their portfolio and share lending.[95] A ban on the salient practice of traditional insider trading ensures that outside investors do not drop out of the market, which allows passive fund asset managers to attract more capital. At the same time, shadow trading may improve informational efficiency, which, in turn, is the very premise of passive investment strategies.[96]

To be sure, we do not necessarily suggest that insiders and market professionals systematically profit from the status quo in every circumstance, or that policy makers were captured by sophisticated interest groups who actively pushed for it. Instead, we argue that sophisticated market players would have had limited incentives to oppose such an arrangement. All else being equal, an institutional arrangement that no sophisticated and well-organised group has strong incentives to oppose is more likely to emerge and persist.

Finally, we note that there are dynamic considerations at issue here. On the one hand, retail investors as a group may become more sophisticated and learn to perceive the potential externalities of shadow trades. Now that one prominent shadow trading case has been reported and widely discussed, including in Europe,[97] investors may become more aware of the possibility that they may be trading against insiders of other firms and begin discounting for that risk. On the other hand, as noted in section 2B(i), more and more US companies appear to be moving towards prohibiting shadow trades by their employees.

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[94] Admittedly, not every market professional may directly profit from the status quo, but there appears to be no market professional who stands to lose enough to actively oppose it.
[95] See eg David Easley and others, 'The Active World of Passive Investing' (2021) 25 Review of Finance 1433, 1439.
[96] See eg Sanford J Grossman, 'Dynamic Asset Allocation and the Informational Efficiency of Markets' (1995) 50 Journal of Finance, 773.
[97] See *SEC v Panuwat*; Poelzig and Dittrich (n 23) 694, 698–9. See also Matt Levine, 'Public Markets Are the New Private Markets' *Bloomberg* (8 April 2024) <www.bloomberg.com/opinion/articles/2024-04-08/public-markets-are-the-new-private-markets> accessed 30 January 2025; Stephen J Crimmins, '"Shadow Trading" Becomes Insider Trading' (*CLS Blue Sky Blog*, 28 March 2022) <https://clsbluesky.law.columbia.edu/2022/03/28/shadow-trading-becomes-insider-trading/> accessed 30 January 2025.

5. *Conclusion*

Traditional insider trading and shadow trading are two faces of the same coin, yet policy makers treat them differently. In the three jurisdictions considered, traditional insider trading is pursued much more aggressively than shadow trading. In this article, we have explained that whilst this arrangement might be incompatible with the stated goal of insider dealing regulation—protecting uninformed outsiders from informed insiders—it may nevertheless be efficient.

Insider dealing laws must navigate the trade-off between ensuring that material non-public information about a stock is more promptly reflected in its price—by allowing insiders to trade on the basis of such information—and preserving trust in the markets. The current arrangement may allow policy makers to achieve the first goal without sacrificing the second. On the one hand, the mandatory ban on the highly salient practice of traditional insider trading allows policy makers to maintain outside investors' trust (and participation rates) in financial markets. On the other hand, granting insiders the possibility of profiting from shadow trading ensures that material non-public information is promptly reflected in stock prices, with no effect on outside investors' trust, given that the latter appear to be largely oblivious to this trading strategy. In sum, what would seem to be, on its face, a regulatory inconsistency may in fact be a tacitly efficient arrangement, one that delivers informational gains whilst preserving the illusion of fairness.

Table 1. Description of the three trading scenarios presented to respondents

Scenario	Description
Scenario I	Back in 2019, the CEO of Disney tells you in secret that they will soon disclose to the market that DisneyPlus is ready and that independent marketing research shows extremely high demand for the product.[a]
Scenario II	You are an employee of WeCureYou, an oncology-focused biopharmaceutical company that works on exploratory innovation. You learn that a pharmaceutical company is attempting a hostile takeover of your company. One day later, WeCureYou launches its own sale process. Although the market is aware that WeCureYou is looking for a buyer, the negotiations and sale process themselves are confidential, as are the details about the sales price and the precise timing of the bid process. You are involved in the process and privy to these confidential details. One day, WeCureYou's CEO sends you and twelve other WeCureYou employees an email containing non-public information that the well-known large pharmaceutical company BigPharm wants to close a deal to acquire WeCureYou 'this weekend'. The email discloses both the name of the acquiring pharmaceutical company and the anticipated price at which WeCureYou would be acquired, which is 38% above the market price.
Scenario III	Apple's CEO tells you in secret that Apple revenues are much higher than expected. He tells you that in two days Apple will disclose this information to the market.[b]

[a]See n 3.

[b]See n 75.

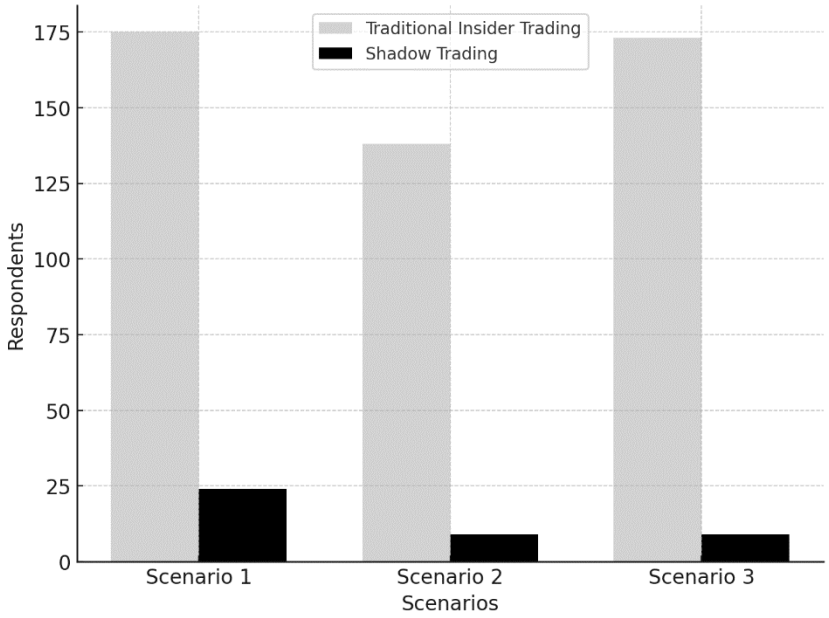


Figure 1. Number of respondents that mention traditional insider trading and shadow trading in the three scenarios.

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