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THE ROLE OF RULES-BASED COMPLIANCE SYSTEMS IN THE NEW EU REGUALTORY LANDSACPE: PERSPECTIVES OF INSTITUTIONAL CHANGE AND AGENCY

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Abstract

The financial crisis of 2007-2009 and the subsequent reaction of the G20 have created a new global regulatory landscape. Within the EU, change of regulatory institutions is ongoing. The research objective of this study is to understand how institutional changes to the EU regulatory landscape may affect corresponding institutionalized operational practices within financial organizations and to test Thelen and Mahoney's (2010) modes of institutional change. Consequently, the study researched implementations of an Investment Management System with a rules-based compliance module within financial organizations. The research consulted compliance and risk managers, as well as systems experts. The study suggests that prescriptive regulations are likely to create isomorphic configurations of rules-based compliance systems, which consequently will enable the institutionalization of associated compliance practices. The study reveals the limited ability of some agents within financial organizations to control the impact of regulatory institutions, not directly, but through the systems and processes they adopt to meet requirements and the markets they choose to enter. Furthermore, the research highlights the need for vendors and users to work together to ensure that systems gaps do not result in the adoption of manual processes and thereby increase the risk of compliance breeches.

Keywords: Institutional Theory, Institutional Change, Financial Crisis, Compliance, Accounting Information Systems, Regulatory Change,

1 Introduction

The financial services industry has changed greatly over the last decade. Factors which have contributed to restructuring the industry include the extensive adoption of technology, the associated impacts of offshoring and outsourcing, the blurring of traditional sectors through the integration of retail and investment banking operations and the consolidation of financial institutions at both the national and global level. All of which has enabled capital markets to become more accessible and integrated and so enabled financial organisations to issue increasingly complex and diverse financial products. However, these developments have come at a price, integration has fostered interdependence. The failure of one financial institution may now have dire economic and social consequences at a national and global level. As a response to the financial crisis of 2008, the G20 and European Union (EU) have acted to restructure the regulation of capital markets. Previous research has highlighted the role of compliance systems in acting as carriers for institutionalised practices associated with maintaining regulatory compliance and furthermore, that the application of institutionalism within this context is under-researched (Currie, Finnegan and Gozman 2011). Building on the view that such systems embed and enable institutionalised practices for compliance, the focus of this study is to understand how such systems can enable institutional change. The research objective of this study is to understand how institutional changes to the EU regulatory landscape may affect corresponding institutionalised operational practices within financial organizations. Consequently, this paper seeks to answer the following research question: What is the role of compliance systems in enabling institutional change? The study makes a contribution by applying the theoretical concept of institutional change to the contemporary topic of regulatory change within EU capital markets and so aims to use this analysis to provide insight into the impact of this new environment for practitioners. An additional contribution is made by empirically testing Mahoney and Thelen's (2010) modes of institutional change, namely Conversion, Drift, Layering and Displacement by considering the relevance of these modes of change to explaining real world phenomena. By applying relevant strands of institutionalism to this topic, we aim to further develop related theorem. In order to do so, we synthesise a review of the new EU regulatory landscape with empirical research into compliance with previous EU directives. This paper is structured as follows. Firstly, we discuss the new EU regulatory framework and its relevance and relationship with rules-based compliance systems, our case study. From this platform, we identify relevant theoretical constructs and develop a conceptual framework. It is from this framework that our research question was derived. We then outline our research method before discussing the key findings of the paper. Finally, some conclusions are formulated and areas for future research identified.

2 Rules-Based Compliance Systems and the EU Regulatory Landscape

In 2009, the G20 met in Pittsburgh and defined new measures aimed at preventing another financial crisis. At this meeting it was decided that the G20 would replace the Western-dominated G8 as the primary global economic forum. The Financial Stability Board (FSB) would coordinate and monitor tougher financial regulations and also provide insight into emerging risks. The G20 agreed that banks need to hold more capital as a buffer against loss. Furthermore, it was also agreed to change the way derivative transactions were conducted to ensure they were conducted on exchanges or electronic trading platforms and cleared through a centralized counterparty. A deadline for the end of 2012 was set for the implementation of these new standards (The Economist 2009). These requirements will require a high level of process automation only available through IS. Unsurprisingly, Chartis Research (2010) forecasts that the worldwide financial services governance, risk and compliance technology market will grow to $2 billion by 2013 at a compound annual growth rate of 6.5%. The European Union's response to defining post crisis regulations, to meeting the G20 requirements and to improving the stability of firms operating within capital markets, has been fragmented. In contrast, the US has opted to develop a single sweeping 2,319-page piece of legislation known as the Dodd-Frank

Wall Street Reform and Consumer Protection Act, passed in 2010. Table 1 highlights the various EU responses to the financial crises.

Regulation	Purpose
Alternative Investment Fund Managers Directive (AIFMD)	This directive focusses on regulating various forms of investment management, including hedge funds and private equity. Its purpose is to harmonize regulatory treatment of investment management across the EU. The Directive will increase the amount of disclosure required of funds to regulators and investors and will impose requirements on managers regarding organization, capital, depositaries and marketing of funds. (Europa 2009; HM Treasury 2011)
Capital Adequacy Directive IV (CAD IV)	This directive updates the requirements for organizations to hold capital consummate to the risks to which the organization exposes itself. The key assumption is that organizations entered the crisis with insufficient capital of the necessary quantity and quality to safeguard against losses. Specifically, the directive requires: enhanced quality of capital, strengthening of capital requirements for counterparty credit risk, the introduction of a leverage ratio; new capital buffers and better disclosure. (Europa 2011b; FSA 2011b).
European Market Infrastructure Regulation (EMIR)	The regulation aims to implement the G20 agreements on regulatory oversight of over-the-counter (OTC) derivatives. Specifically, EMIR aims to: increase transparency by requiring financial organization to report changes to any OTC derivative contracts, reduce counterparty risks and reduce operational risks through the use of electronic facilities for documenting and managing OTC trades. (FSA 2011a; Holman Fenwick Willan 2011)
Markets Abuse Directive II (MAD II)	The original Market Abuse Directive focused on insider dealing and market manipulation practices. The update aims to fill gaps in coverage and modernise the directive; strengthen enforcement and the cost-effectiveness of the regulations as well as improving transparency and coordination between regulators. (Europa 2011; Holman Fenwick Willan 2011)
Markets in Financial Instruments Directive II (MiFID II)	This directive updates the original MiFID requirements aimed at fostering competition and a level playing field between trading venues and to ensure appropriate levels of protection for investors. Changes are focused on: electronic trading, transparency and transaction reporting, investor protection, product intervention through setting position limits, transparency and increased organizational requirements relating to conflicts of interest and the structure of risk and compliance functions. The financial crisis has played a strong role in defining the directive, for example, the focus on enhancing pre and post trade transparency. (Linklaters 2010; Deloitte 2011)
Regulation on Short Selling and Credit Default Swaps	In the aftermath of the financial crisis, EU member states adopted different approaches to the regulation of short-selling and credit default swaps. This regulation aims to address this fragmentation by establishing a coherent framework across member states. Specifically, the regulations aims to: increase transparency on short positions held by investors, ensure member states have clear powers to intervene in exceptional situations, ensure co-ordination between regulatory bodies, reduce risks associated with Short Selling and Credit Default Swaps. (Europa 2011b)
Undertakings for Collective Investment in Transferable Securities Directives V (UCITS V)	The UCITS regulations aim to provide harmonized rules for mutual funds and other collective investments throughout the EU. UCITS V aims to alter the role of UCITS depositories and the remuneration of UCITS managers. The aim is to create better protection for investors and to align UCITS funds with AIFMD. The UCITS depositories must not only safeguard assets but also ensure that all transaction are in compliance with regulatory mandates and fund documentation. Under UCITS V, depositories will have increased oversight responsibilities, increased liabilities and will the burden of proof for negligence placed on them. UCITS V aims to more closely align the remuneration of financial services actors with the interests of investors. (PwC 2011).

Table 1. EU Responses to the 2008 Financial Crisis

Table 1. is illustrative of how post-crisis regulation focuses on transactions, assets and levels of capital adequacy and associated limits, concentrations and exposures which organizations must observe and which require systems to impose structured rules on the financial organization's activities to ensure compliance. The requirements will demand organizations set limits on specific types of transactions, calculate exposures to certain instruments, calculate risk values, perform pre and post-trade analysis, have the ability to perform audits, quickly report executed trades to the market and facilitate the clearing and settlement of transactions. Furthermore, these regulatory rules, to which

financial organizations must adhere, are applied on a transaction-by-transaction basis. That is, each transaction must be compliant with the relevant regulatory requirements. To ensure compliance, financial organizations must employ Investment Management Systems (IMS) which ensure the correct workflows and processes are adhered to and that associated data is readily available and auditable. This is achieved by the definition and application of rules that are applied to relevant transactions. The quantity of rules may be vast. One investment firm interviewed had upwards of twenty-five thousand rules. As a senior compliance professional noted, *"we're very much, sort of coders of quantitative restrictions for investment compliance"*.

The Special Interest Group for Accounting Information Systems (AIS) states that such systems, *"provide the mechanisms required to capture and store transactions, to ensure the accuracy, timelines, and validity of those transactions, to satisfy the organization's legal and regulatory requirements and to inform all the stakeholders of the economic status of the organization"* (2009 p.1). This definition corresponds well with the aims and structure of the Investment Management System, which provides the case for this study, and consequently positions this work within the AIS research arena.

3 Institutional Change in Capital Markets

Institutional theory provides the theoretical basis for this research study. This theoretical body of knowledge focuses on the causes of institutionalism, the process by which organizations affirm themselves and achieve approbation as a consequence of their alignment and compliance with the institutional contexts of their environment (Meyer and Rowan 1977; DiMaggio and Powell. 1983; Greenwood, Oliver et al. 2008). Jepperson (1991 p. 145 and 152) defines institutions as, *"a social order or pattern that has attained a certain state or property," while institutionalization, "denotes the process of such attainment"*. This study focuses on the process of institutionalization and specifically, on institutional change to operational practices, related to regulatory compliance, which occurs as a result of change in regulatory institutions. The assumption made by the study is that those practices associated with meeting regulatory mandates may, by extension, be considered institutionalized. Specifically, within this study those practices derived from the regulatory institutions which collectively make up the FSA handbook. The FSA handbook's role, among others, is to implement relevant EU Directives impacting the UK financial services industry and so it is within this handbook that the regulations listed Table 1 will be further defined and implemented. Isomorphism was the criterion adopted by our study for establishing whether practices which meet regulatory requirements can also be considered institutions. Isomorphism in this context refers to a consensus towards approaches and established practice which facilitates similar configurations of the compliance system and consequently, may create homogenous structural models. Where regulatory rules are highly prescriptive, associated compliance practices are likely to be similar in design. These practices are driven and, by necessity, are structured by the regulatory requirements which they aim to meet and so there can be little separation between the legal institution and the compliance practice which implements it. Examples of non-isomorphic regulatory practices include those which allow a greater level of interpretation and thereby allow a higher variance in approach. An example is the UK regulators requirement that, *"A… firm must when relying on a third party for the performance of operational functions which are critical for the performance of regulated activities… ensure that it takes reasonable steps to avoid undue additional operational risk* (FSA 2007 p.1). Consequently, there exists no common consensus across the studies participants on how to structure their response to this requirement. In addition, the study highlighted how systems gaps often create non-isomorphic practices as organizations use manual processes, often through spread sheets to bridge the gaps. When the IMS is updated to provide the functionality for dealing with this requirement these compliance practices are adopted across firms and so become isomorphic and correspondingly institutionalised. Mahoney and Thelen's (2010 p. 10) work on institutional changes highlights compliance as a key factor in institutional change. They advise, *"If, instead, we break with a view of institutions as self-reinforcing and put distributional issues front and centre, compliance emerges as a variable and a variable that is crucially important to the analysis of both stability and change"*. Correspondingly, the study focuses on the role of the IMS in distributing new operational institutions for ensuring regulatory compliance. Thus, we adopt Mahoney and Thelen's (2010) four model types of institutional change to guide our analysis. The first type is termed *Displacement* and focuses on the removal of existing rules and the introduction of new ones. *Layering* is the second type and denotes the introduction of new rules alongside, or on top of, existing ones. *Drift* refers to the changed impact of existing rules due to environmental shifts. Lastly, *Conversion* refers to changes in the way existing rules are enacted due to their strategic deployment. Themes relating to these modes of institutional change may also be found in the works of other scholars. Prior to Mahoney and Thelen (2010) many studies have focused on deinstitutionalization, assimilation and dilution, political struggles and changes in the enactment of institutions, as well as their outcomes (Oliver 1992; Czarniawska 1996; Seo and Creed 2002; Dacin and Dacin 2008). Consequently, we adopt Mahoney and Thelen's (2010) model as providing a comprehensive and contemporary view of institutional change. Figure 1. provides a diagrammatical representation of the phenomena to be explored. From this conceptual framework we derived the research questions outlined in the introduction and developed our research method and interview protocol.

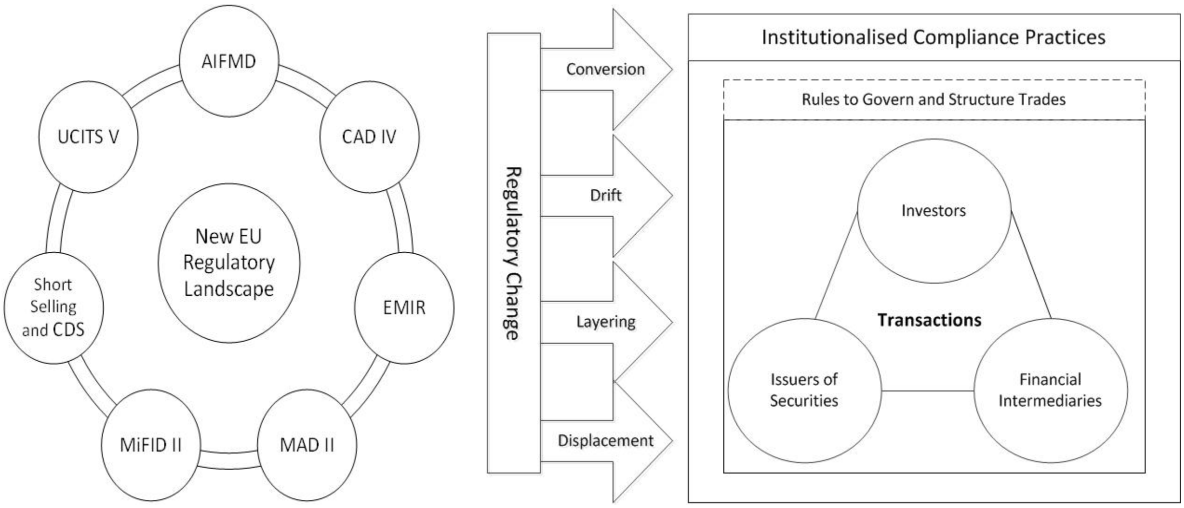

Figure 1. The role of compliance systems in regulatory change.

The *New EU Regulatory Landscape* will drive institutional change through, '*Displacement, Layering, Conversion and Drift'*. Consequently, '*Institutionalised Compliance Practices'* focused on meeting compliance requirements will also change. A significant part of this process will manifest itself through changes to the definitions and structure of *'Rules to Govern and Structure Trades'* which are applied to *'Transactions'* through compliance systems and processes which are part of the IMS. These *'Transactions'* are conducted by three categories of market participants. The first type of market participants are '*Investors'*. This category includes individuals who directly own securities as well as institutional investors who own securities for the firm's benefit or hold securities on behalf of others. The second category are '*Issuers of Securities'* and relates to those organizations issuing securities, including equities, corporate bonds, governments and local governments bonds, as well as Unit Trust and Mutual Funds. These firms' offerings are controlled through regulatory body's rules. The third type of market participant is classified as, *'Financial Intermediaries'*. This category includes organizations who act in one form or another as intermediaries between issuers and investors. They offer a variety of services and financial products. *Financial Intermediaries'* include financial organizations offering asset management and investment banking services and are highly regulated. Consequently, it is these organizations along with the IMS vendor which are the focus of our data collection.

4 Research Method

The study adopts a rules-based compliance system as its case and investigates different implementations of this system within eight financial organizations, predominantly focused on investment banking and asset management activities within capital markets. The research question is:

What is the role of compliance systems in enabling institutional change? The study is structured as follows. By considering eight long-term adopters of an IMS and specifically examining the changes in the rules utilised to comply with regulatory mandates using Mahoney and Thelen's (2010) four theoretical constructs (Drift, Layering, Displacement and Conversion) we have derived insights on how institutional change occurs. The system's vendor, which provided the data for the research, was a well-established compliance systems solutions provider, in business since the early 1980's. The vendor provides Investment Management Systems (IMS) which include a rules-based compliance system. The IMS was initially developed and marketed in the US for compliance with US mandates, but is now used to manage compliance in numerous geographical regions. The IMS functions at the front and middle office by providing automated decision support, portfolio management, order and execution management and post-trade processing. Specifically, the compliance module is predominantly rules driven, providing automated compliance rules across 35 regulatory bodies in 20 countries that are applied on a transaction by transaction basis. Consequently, this type of system will be intrinsic in managing limits, concentrations and exposures on transactions which will be required as a result of the mandates outlined in Table 1. Criteria for selection for each financial organization ensured that each firm was a large global entity which had adopted the same rules-based compliance system. Each financial organization was a long term adopter of the system and had utilized it for a minimum of ten years. Furthermore, all eight financial organizations provided congruous products and services and so have a similar level of regulatory exposure. The study benefits from utilizing qualitative methods and a case study approach. This approach is appropriate as the study has important regulatory related contextual conditions which are specifically pertinent to the phenomena of compliance related systems. Consequently, context and phenomena cannot easily be divorced from one another (Yin 2009). An intrinsic case study approach (Punch 2005) is appropriate where a single case, in this case a rules-based compliance system, is used to examine a specific issue or facets of theory, such as institutional change. Secondary data was collected from systems manuals, firm's annual reports, websites, emails and sales and marketing literature aimed at the vendor's clients or the system adopters' clients. External data analysed included the FSA and SEC websites and industry reports on regulatory practices. Typically, interviewees were re-contacted during transcription and analysis in order to provide clarification on key issues. Scope, depth and consistency were achieved by discussing key concepts, constructs and terminology with each of the informants and triangulating the findings across primary, secondary and external data sources (Seale 1999). Analysis of the EU's regulatory responses to the crisis was conducted by reviewing the directives themselves, as well as associated commentary by regulatory bodies, accountancy and law firms.

Data collection was achieved through semi-structured interviews at both vendor and client sites with question guides formulated from the theoretical constructs previously described. This approach allowed the flexibility to pursue new topics as the discussion evolved (Punch 2005). Such an approach has previously proved successful in providing the necessary depth to explore specific phenomena relating to complex and dynamic regulatory phenomena (Tsatsou, Elaluf-Calderwood et al. 2009). This method entails the researcher equipping themselves with an interview agenda containing questions and specific topical areas. Examples of the types of question used in our interview agenda include, *"In the case of new regulations which require that* [financial organization] *update existing compliance practices, have parts of the old method been adopted in the new?"* This question evoked responses which addressed the possibility of institutional change through Thelen and Mahoney's (2010) concept of Layering. Our sampling strategy for data collection involved interviewing a diverse range of stakeholders (Punch 2005). At the systems vendor site, senior systems consultants and client relationship managers were interviewed. This was especially insightful as collectively they had much experience of implementing compliance related systems. Within the financial organizations, compliance, risk and systems experts were interviewed. In total, twenty-six interviews were conducted with individuals from the system vendor, as well as the eight financial organizations. Primary and secondary data was closely reviewed to determine points of importance and interest, common themes were identified and categories assigned. Thus, the meaning of long interview statements was reduced to a few simple categories (Punch 2005). Categories of meaning were derived through the construction of a research key. The research key outlined categories and subcategories which relate to the research question. In this way, themes and experiences were highlighted and isolated. The key was expanded as more transcripts were considered. Lee and Baskerville (2003) suggest that the generalization of a theory to a new setting can be achieved by making a comparison of what the theory would describe and what is actually observed. To this end, our results were compared against Mahoney and Thelen's (2010) work to understand which modes of institutional change were present. Consequently, our top-level analysis was initially focused on four themes, specifically Diffusion, Layering, Drift and Conversion. These were then broken down by other emergent themes such as 'System's Gaps' or 'Manual Process'.

5 Displacement

The next section reviews the empirical findings of the research in relation to the theoretical constructs previously outlined. The main focus of the analysis is to understand how the IMS system, and in particular its compliance focused module, enables Thelen and Mahoney's (2010) modes of institutional change within capital markets regulation. Consequently, each mode will be considered in turn. Displacement occurs as a result of existing rules being replaced by new ones. The first MiFID introduced a new requirement for firms to provide the best possible execution of trades. One compliance manger remembered, *"when MiFID come out you had requirements, to have best execution in your trade. And then you'll see* [compliance system] *now incorporate say, a field that requires a trader to input that rationale for trading, while they're trading."* This rule acts to displace the previous institutionalised process of executing trades. This observation is illustrative of how systems must adapt to changes in regulatory institutions. The new EU Regulatory Landscape, outlined in Table 1, will clearly cause the displacement of previously institutionalised ways of conducting business which are being replaced by new regulatory institutions. An example is the AIFMD. Previously, Alternative Investment Fund Managers were regulated through national financial and company law regulations, general provisions of Community law and were sometimes supplemented by industry-developed standards. However, AIFMD displaces these fragmented institutions by harmonizing regulatory requirements across the EU (Europa 2009).

Two important factors exist when considering institutional change (Mahoney and Thelen 2010). Firstly, the political context and the associated possibility to veto changes and secondly, the degree to which there exists discretion in interpretation and enforcement, the political context. As a result of the financial crisis the research study revealed that many practitioners believe regulations are becoming more prescriptive, with less room for interpretation. Furthermore, the study revealed that financial institutions are often consulted by regulators as new requirements are drafted but have little veto power. A senior risk manager stated, *"There was a big push back from the industry against having mobile phones taped because… how do you do it? It's not the same as being on the system, when we already do it on the system, so having a rule that requires that is fine but, mobile phones very difficult please don't do it. And they exempted it, the* [UK Regulator], *but now they've just announced, a new rule removing that exemption. So ultimately I think there's… you know, if the regulator really wants something done…"* Mahoney and Thelen (2010) suggest that when there is a low possibility of a veto and where there exists a low level of discretion or enforcement, displacement is more likely to be the mode of institutional change, as actors may find it harder to defend the status quo. From an institutionalism perspective this is an interesting point. The more traditional strands of institutionalism view organizational behaviour as being primarily the result of macro social forces, in this case regulatory mandates for capital markets, as opposed to organizational agency (Heugens and Lander 2009; Lawrence, Suddaby and Leca 2009). Our study reveals that financial organizations do have a limited degree of discretion when choosing how to respond to institutional pressures with respect to the types of markets they deal in and their corresponding regulatory exposure, as well as the types of systems and processes adopted but that social forces emanating from regulatory bodies are determined to have a primary influence over these decisions. However, organizations may also find themselves subject to institutional pressures to operate in certain markets. It may be expected that organizations of a certain size and reputation are expected to be able to handle certain transactions. A global compliance manager noted, "[Turkey's] *forming some quite hard tricky rules that may mean that certain firms can't operate in there cause they don't have a large enough profit share of the market* [in certain instruments]*"*. Consequently, new institutional practices for meeting regulatory requirements are displacing existing product offerings and the markets in which organizations are willing to operate.

The study suggests that compliance systems must adapt as changes in regulatory institutions displaces compliance practices. A senior consultant for the compliance system's vendor noted "*if it's an important new requirement of our client base… then the Product Manager and Advisory Committee will try to take a stab at understanding that regulation and will try to write a template set of rules based on their understanding. And the Product Manager would want to look and try to find some clients that would be interested in this, an advance group which will you know work with them on that.*" Furthermore, our study revealed that the displacement of old regulations and the introduction of new ones may create issues where new data to support new practices is required.

The study also revealed that the displacement of old regulations through the introduction of new ones may cause gaps in compliance systems as vendors seek to develop functionality to bridge the gap. In the meantime, organizations may be forced to adopt riskier manual processes as these vendors lag behind developing new areas of functionality. One compliance systems manager commented, "*And then you use something like a dashboard that shows all your high risk rules that are manually monitored to go to* [systems vendor] *and say "Guys look how much stuff I am doing manually, I don't pay you guys all this money for doing these calculations manually, you need to incorporate this into the system." Usually, a year later, get an enhancement an upgrade patch"*. Furthermore, the availability of new technologies for managing compliance may also act to initially Displace operational practices, a compliance manager advised, "[systems] *have evolved…, new technology becomes available. You know someone develops a bit of software and then you say, "Oh we can actually do this now, which we couldn't do before." Let's run 'em side by side for year and see what happens"*.

6 Layering

This form of institutional change does not introduce new institutions or rules but instead addresses amendments, revisions or additions to existing ones. A review of Table 1 shows that many of the regulations are further iterations of existing regulations, specifically, MiFID II, UCITS V, MAD II and CAD IV. However, it is accepted that although these new institutions may focus on similar themes as their predecessors, they may also introduce new requirements around these areas. Consequently, it is accepted by our study that as well as causing Layering these new regulative iterations may also cause Displacement. Our study suggests that this type of institutional change is most common within the regulation of capital markets. A compliance manager advised, "*You rarely see a regulator come out with something that's completely new. It's always gonna be an embellishment of something that already exists.*" Furthermore, institutional change at the regulatory level may also cause Layering of institutionalised practices at the operational level, a compliance systems manager advised, "*Say we have a limit on the number of voting shares of an issuer that you're allowed to hold. And then there's a new requirement to monitor the number of non-voting shares of an issuer… So with the new* [amendments] *we'll be able to monitor the non-voting shares…You can actually monitor the whole lot together and you don't need to then differentiate between the two… So it almost gets rid of an issue, because you can do it together, and you know if a limit's 10 percent, that you can have off the voting or non-voting shares of an issuer, then you get to monitor all common stock to 10 percent"*. This example is illustrative of how new amendments have facilitated the merger and simplification of existing operational practices. Correspondingly, a compliance manger described how amendments in regulations may result in associated practices and systems becoming more complex as new parameters are added to existing processes, *"So there's different ways of…, you know monitoring these things. You know and* [compliance system] *is such a massive, diverse application. You know we still, even now, find new ways of doing things. And if we can, you know even now we get new parameters working, which previously we haven't had to use."* To summarize, amendments to regulations may result in related organizational practices also becoming amended and updated and often their complexity is altered.

A senior risk manager commenting on changes to risk management practices as a result of the UCITS IV regulation, he advised, *"Well, new regs come in when they are written they pay no attention to the capabilities of the systems, which are used to apply the regs. And therefore the systems have to try to adapt to them. In this present case we've got simple rules and complex rules* [for risk management calculations]. *Simple rules were the commitment method* [in UCITS III]. *The complex were the… were the VaR method. They have* [in UCITS IV] *now made the simple rules more complex than the VaR method, so there is a potential that there will be a wholesale switch to VaR, because it's simpler to apply. So in that particular case it's almost abandonment of an area of regs, because of the complexity of it, going off to another system".* This is illustrative of how actors, through systems configuration, may shape institutional change. The regulation provides for two methods of risk management. As one method is easier to implement, from a systems perspective, the more complex method is effectively displaced and the easier approach is chosen by those implementing the regulation. However, this form of institutional change driving this displacement, from the regulatory as opposed to an operational perspective, is Layering as UCITS IV amends previous regulations on this subject. This finding is illustrative of how the boundaries between modes of institutional change can become blurred.

7 Conversion

Conversion occurs when rules remain the same but are interpreted and enacted in different ways. This gap between rules and instantiation is not driven by neglect, as with Drift, but by actors who wish to exploit institutional ambiguities. When there is a low level of discretion in interpretation and a low possibility of vetoing regulatory change, as is the case with highly prescriptive regulatory rules, then displacement of operational institutions is likely (Mahoney and Thelen 2010). However, if there is a low possibility of vetoing the rule but a high level of discretion in interpretation, then Conversion may occur. Within the context of this study, this observation corresponds to regulatory rules remaining broadly the same but the institutionalised operational practices, used to implement them, changing. A senior compliance executive noted, "*If a regulation said you have to have something well it's cut and dried. If it's, well actually we would do… we would find it easier to comply with this rule or to evidence compliance with this rule by doing this or having this bit of data in there or working through in a particular way, then it's a question of getting some time on the systems rosta to get it done"* Where the possibility of vetoes is low but there exists some room for discretion, Thelen and Mahoney (2010 p.26) suggest that there exists the possibility for opportunist actors to, *"exploit whatever possibilities exist within the prevailing system to achieve their ends".* The UK regulator requires that firms, *"should segregate the duties of individuals and departments in such a way as to reduce opportunities for financial crime or contravention of requirements and standards under the regulatory system"* (FSA 2010). However, a senior implementation consultant noted that, *"In terms of monitoring, I think* [the business process] *changes* [as new regulatory requirements become apparent]… *clients have to change the workflow of the compliance person* [within the compliance system] *for it to be able to support the business people. I've seen a situation where the clients have wanted to give the Fund Managers the ability to override violations. Normally we wouldn't do that..."* This is illustrative of how opportunist actors may use institutional change, through new regulatory requirements, to change the enactment of existing rules regarding the appropriate segregation of duties, to suite their purposes and how compliance systems may act as an enabler for this process.

8 Drift

Drift may occur when regulatory rules remain the same but their impact changes as a result of environmental shifts. Thelen and Mahoney (2010 p.17) observe that when actors do not respond to, *"environmental changes their very inaction can cause change in the impact of the institution."* This study interprets this theoretical constraint in two ways. Firstly, by viewing the impact of static regulatory institutions as being diminished due to dynamic environments and secondly, by viewing the impact of static institutionalised compliance practices being diminished by dynamic regulatory environments. Regarding the first perspective, it could be argued that the new EU regulatory landscape exists as a result of Drift. If the purpose of regulating capital markets is to safeguard investors and economies, then changes in markets caused existing regulatory institutions to lose some of their overall effectiveness. This may of happened, as financial organizations changed their strategic direction and correspondingly, the markets in which they operated and associated product offerings. These changes will alter the relevance of regulatory institutions. A global compliance executive discussed the long term impact of static regulations on changing environments, *"so some of the* [Members of the European Parliament] *for example, they're coming around the trading floor looking, talking. And you say, right, okay, and you know, the asset managers who are doing this, here's an example, this is a regulation, collateralise these positions, 2% drag on the pensions economy, 4% growth, that means this in 20 years' time… and you see the blood drain from these politicians' faces…"* The second perspective suggests that if regulations change and evolve, as is the case after the financial crisis of 2008, but organizational practices do not, there is an increased likelihood of compliance breaches through gaps in reliability as well as functionality. The research revealed that manual compliance processes resulting from gaps in compliance systems are often facilitated through spread sheets. This approach involves considerable risk to financial organizations, a senior compliance executive advised, *"… I saw a million pound breach at my old firm… it cost a million pounds, because a spread sheet was being used to monitor for compliance and it had a wrong formula in a cell"*. Furthermore, a senior compliance executive commented on the gaps in the compliance system which occurred as a result of the new MiFID Best Execution requirements, *"So for example, if I wanna monitor for compliance with best execution, allocation rules, timely execution rules, there weren't any reports that came as standard with the system and we were working to put some in place, but they weren't brilliant, even after a lot of work from IT"*. These circumstances are illustrative of how Drift between changing regulatory requirements and operational systems may occur and how, in spite of various actors' best efforts, gaps between the two persisted.

9 Conclusions

The research suggests that the new EU regulatory landscape is likely to create mass institutional change within the regulation of capital markets. It is worth highlighting that these new rules apply to Asian and American firms operating within the EU and so have a large impact on global financial institutions. Our study sought to empirically test Thelen and Mahoney's (2010) modes of institutional change and found them all to be both relevant and useful within this context. However, Displacement and Layering were perhaps the most prevalent. This is unsurprising when considering the breadth and depth of change being considered and also that many of the new regulations are iterations of previous regulations. However, the study also identified some gaps in these theoretical constructs. The theory does not consider how each mode of change may develop or what the relationship and boundaries between them might be. It is possible that in the case of the financial crisis of 2008 we have seen Drift as the capital markets environment evolved leading to Conversion as regulations were loosely interpreted through a more principles, as opposed to prescriptive, focus on regulation (FSA 2007). Finally, we are seeing predominantly Displacement and Layering as the new EU regulatory landscape is implemented. The study highlights how the outcomes of Displacement and Drift may be similar in effect as both modes may cause compliance gaps. Similarly, the study revealed that Layering of regulatory institutions may cause the Displacement of operational institutions. Consequently, we identify the relationships between each mode, the boundaries between them and interfaces between regulatory institutions and the operational practices they create as future avenues of research. An important element of the research enquiry is to isolate best practices for compliance, and how they may be managed and diffused across the financial services sector. As the mandates outlined in Table 1 come into force, we expect to see all of the modes of institutional change come into play and so encourage systems vendors and users to consider the implications when designing and selecting systems. Vendors' abilities to manage institutional change caused by Drift, Displacement, Layering and Conversion and their ability to efficiently and quickly translate institutional variables into structured systems has the power to ease the pain and cost of compliance, as well as reducing the risk of breeches by reducing the need for interim manual systems. This in turn may affect how the success of these regulatory changes is perceived. The research highlights how changes in regulations may create gaps in systems and processes which, in the short term, need to be plugged by manual processes. This may create a higher number of regulatory breeches, with possible financial and reputational penalties. This is a potentially a major issue given the current landscape for increased regulatory change. Consequently, we advise practitioners to perform early analysis into where possible system's gaps may exist and work with systems vendors to create necessary changes. Furthermore, our study suggests that understanding the data required to support regulatory change is paramount and that firms should consider the data implications early on in the design of compliance rules.

The study found that as rules have become increasingly prescriptive, practitioners will have less scope for interpretation and that veto possibilities will be weak as ultimately, regulators hold the power. This is perhaps as expected given the context. The study revealed that even powerful individuals such as MEPs may still be unable to act to countermand the long term effects of Drift on the institutions which they are seeking to establish. Thus, the primacy of macro forces' ability to shape regulatory institutions is underlined by our study. However, the study highlights the ability of some agents within financial organizations to exercise limited control on the impact of regulatory institutions, not directly, but by managing their exposure to these institutions by altering the markets and product offerings in which they wish to engage. We find evidence of strategic responses to counteract inflexible prescriptive institutions. By changing operational activities, the markets they engage with as well as their product range organizations, can calibrate their regulatory exposure and maximise their operations. This may be particularly important for smaller players with large budgets for compliance activities. Limited room does exist for actors to influence the impact of regulatory institutions through the systems and processes they adopt to meet requirements and the corresponding operational institutions which are created. Finally, we suggest that compliance is viewed as an important input when considering strategic pathways, and not a mere box ticking exercise by senior management.

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