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# THE ROLE AND IMPACT OF INFORMATION SYSTEMS ON FINANCIAL INNOVATION: THE CASE OF MASTER TRUSTS FOR MORTGAGE SECURITIZATION

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## **Abstract**

*The paper explores the role and impact of information systems and infrastructures on financial innovation. More specifically it discusses the case of mortgage securitization as it is performed in the context of Master Trusts, a ready-made legal and financial innovation that enables originators to issue securities and sell them to investors. Empirical evidence from a case study on a large European securitizer shows that the information systems of the organisation that sponsors the Master Trust play a decisive role, not by simply performing calculations and risk assessment, but also by constantly re-affirming the Trust's authority as a transparent infrastructure for mortgage securitization issuance. Future research directions are drawn towards further exploring the relation between techno-organizational and legal innovations in financial markets.*

**Keywords:** Master Trust, Mortgage Securitization, Information Systems, Transparency, Authoritative Technology, Innovation

## **1.0 Introduction**

In this paper I present new empirical evidence and theoretical insights on the role and impact of information systems on financial innovation. More specifically I look at the case of mortgage securitisation as it is performed in the context of Master Trusts.

Master Trusts are part of a specific type of financial innovations that are used to originate new securitisation transactions. They are a form of Special Purpose Vehicles (SPVs) that were first introduced by the Bank of Scotland in May 2000, to issue residential mortgage-backed securities (RMBS) (Evans, 2000). In practice, banks that (plan to) originate mortgage securitization transactions, transfer assets (i.e. individual mortgage loans) into Master Trusts which then issue securities that would become available to a wide range of potential investors (Gorton & Souleles, 2007).

From an operations point of view, Master Trusts constitute revolving structures that offer the sponsoring organisation a high degree of “infrastructural transparency”. This means that they do not need to be re-invented each time or assembled for each task involved in a new transaction (Star &

Ruhleder, 1996). This transparency, however, is applicable only in reference to the legal framework of financial innovation. Indeed, as an innovative mechanism for repeated mortgage securitisation issuances, Master Trusts might be considered ready-made transparent infrastructure in the legal sense, but in the informational sense they create challenges having to do with the quality and integrity of the mortgage assets and how this may change over time.

Although Master Trusts are known as a legal and financial innovation that enables originators to issue securities and sell them to investors, very little is known about the important role that the originator's information systems and infrastructures have on their operation. In this paper I present empirical evidence from research conducted in the securitization unit of a large European bank. This evidence suggests that Master Trusts, although they constitute separate legal entities, they rely on the sponsoring organisation's information systems to continuously re-affirm and re-constitute their authority as transparent mortgage securitization infrastructures. This raises further questions on the inter-connections between the legal and technological developments of financial innovation.

The rest of the paper is structured as follows: In the following section I explain Master Trusts as legal and technological entities. Next, their operational benefits but also challenges are discussed. In the following section I discuss the case study and methodological issues, followed by a section where I present empirical findings. The paper finishes with the discussion of the findings, conclusions and also by exploring paths for future research.

## **2.0 Legal and Technological Existence of Master Trusts**

In the context of mortgage securitization, Master Trusts, previously used in credit cards (Sabarwal, 2006; Gorton & Metrick, 2012), was an excellent tool for banks to execute larger transactions and increase their funding sources by engaging capital markets and not just rely on retail deposits (Ho et al, 2005). Indeed, in Master Trusts, an originator (i.e. the bank examined here) transfers a pool of receivables to the Trust in return for which the Trust will issue, at the outset, at least one class of Trust certificates plus a residual interest in the Trust. The originator will sell the certificates to investors and retain the residual interest (Schwarcz, 2007).

What is peculiar about Master Trusts is that although they exist legally as a separate entity, technologically, organisationally and administratively they are extensions of the originating/sponsoring organisation. Indeed, although Master Trusts have the status of a firm, they have no employees, they have no physical location and they make no substantive economic decisions (Gorton & Souleles, 2007; Gorton & Metrick, 2012). Their "physical" existence depends on the information systems and infrastructures that the sponsoring organisation (i.e. bank discussed in the empirical case study below) develops to enable a process by which mortgage loans are transferred in an out of an entity that only exists in paper. In other words, as shown in the case study presented here, the information systems that are used to support Master Trust operations, in reality, they replicate transactions between two separate

companies (legal entities). The fact that Master Trusts constitute separate legal entities, the existence and operation of which is based on information systems that are controlled and governed by the originating organisation, brings certain operational benefits to this organisation but also challenges, from an information management point of view.

### **3.0 Operational Benefits and Challenges of Master Trusts**

The basic operational advantage of Master Trusts is that once the structure is in place, there is a ready-made legal and financial infrastructure that allows repeated further issuance (Schwarcz, 2007). Therefore, if the originator wishes in the future to raise additional financing, they can only notify the Trustee to issue additional classes of Trust certificates. This revolving structure gives the Master Trust an “infrastructural transparency” in the sense that it does not need to be re-invented each time or assembled for each task involved in a new transaction, but rather “invisibly” supports those tasks (Star & Ruhleder, 1996). Such an operational advantage is quite beneficial as it allows for flexible issuances, that is, Master Trusts allow more than one class of beneficial interests to be issued. Each class of certificates issued can have its own interest rate, events of default, covenants, maturities and other rights, obligations and remedies. This flexibility of fashioning different rights and obligations for diversified classes of certificates greatly expands the range of investors who may be interested in investing and thereby increases the aggregate amount of financing that can be raised from the receivables (Schwarcz, 2007). In other words, the main benefit of Master Trusts is that it is a transparent and flexible infrastructure that has the purpose to support the strategic fundraising efforts of the bank. Nevertheless, as it is argued in this paper, Master Trusts demonstrate the operational benefits of a transparent and flexible infrastructure, only in the legal sense. From an informational point of view this alleged transparency is constantly challenged.

More specifically, when talking about mortgage loans, a revolving structure like a Master Trust means that the quality of loans that are held by the Trust can change over time (CML, 2010). What was considered as a low risk mortgage loan 2 or 3 or 10 years ago, today under different circumstances could be considered as a highly toxic asset. Therefore, although Master Trusts constitute transparent and ready-made infrastructures in the legal sense, prescribed with the function to issue new securities whenever the originator decides so, with each new issuance their robustness and authority is put under question. As shown in our case study, it is this context where the information systems and infrastructures of the sponsoring organization find a purpose; and that is to continuously re-affirm the Master Trust’s authority.

### **4.0 Methodology**

For an empirical investigation of the role and impact of Information Systems in supporting Master Trusts, I conducted empirical research in one of Europe’s largest securitizers. More specifically, I was given access to conduct an organizational ethnography (Schwartzman, 1993; Ybema et al, 2009) in the bank’s securitization unit. Two visits in this unit for non-participant observation and another two in the

Treasury of the bank were complemented by 20 personal interviews with securitization-related people from different historical periods of the bank, plus another 15 from the broader industry environment. The multi-level layering of the data to reflect both macro-level changes and micro-level practices in the specific bank, within a changing industrial environment, provided incredible insights both on the historical development and innovation of the bank's information infrastructures (as discussed in Kaniadakis & Constantinides, 2014) and also on the day-to-day operational aspects of Master Trusts, the main focus of this paper.

## 5.0 Empirical Evidence

Evidence from the bank case shows that the information systems of the sponsoring organisation play a pivotal role in re-affirming the authority of the Master Trust, in other words, to ensure that the assets that are transferred and/or held into it, have not lost their properties. This way, information systems become part of an authoritative technology (Preda, 2006) for mortgage securitisation issuance.

In this case study, the sponsoring organisation has established a routine operation by which they constantly evaluate the quality of the assets that are held in a Master Trust. They apply certain criteria which are developed based on a combination of lending policies, the "rules" of each Trust (each Trust has its own capacity and limits in terms of the volume of assets they can hold and the type of the assets) and of the broader market (i.e. criteria approved by credit rating agencies, directives from the Central Bank and the regulatory authorities etc). If something changes in some of the assets held in the Master Trust, then these assets are removed from it and return to the sponsoring organisation in the form of buy-backs. An interviewee explains:

*"...this is where we remove cases and we add cases back to the vehicles. We use this system to do this on a daily basis. So, we start from 'run the model' to see what kinds of assets we take out or put back in...What we're looking for is for any criteria that might have changed in the existing securitized cases..The system gets automatically updated overnight and it's ready the next day..If an asset is removed from the Master Trust can go back in after three months pass, provided that they are performing well; so you get a case which is securitised in January, removed in February and re-securitised in May".*

Organisationally, the bank has developed a team of people who do this job and manage which assets go in and out of the Master Trusts. There are different data warehouses that are supporting different Master Trusts and also different people involved, depending on the data warehouse. The bank calls this "repurchasing-replenishment process" whereby cases that are removed from the Master Trust are added back to the bank's balance sheet in the form of "buy-backs". As one interviewee explains:

*"..you get an itemised report: account number, the customer's surname, the amount of balance, any arrears, etc. So, we know that we've reduced the Master Trust pool by 46 cases [loans] which is just*

*under 6 million pounds. So, the bank would have to pay the Trust..So, these cases are coming back in the form of buy-backs”.*

It is indicative even in the vocabulary used that the process of adding or removing “cases” from the Master trust, in the legal sense, is replicating transactions between two independent legal entities. This raises important questions on the mechanisms that allow the co-evolution of techno-organizational and legal innovation.

## **5.0 Discussion and Conclusions**

Master Trusts are well-known legal innovations in mortgage securitization that enable originators to issue securities to support their funding needs. They are financial innovations in the sense that they constitute separate legal entities on which the sponsoring organisation is transferring mortgage loans with the purpose of securitizing them when they think the time is more appropriate. Although they have the status of a separate firm, their governance, function and technical and organisational existence completely depends on the sponsoring organisations’ information systems and infrastructures. This suggests that the information systems of the sponsoring organisation play a decisive role in this particular financial innovation. It is this role that is being explored in this paper.

More specifically, I presented evidence from a case study that shows that the role and impact of information systems in financial innovations is not simply to perform certain calculations and support certain practices, such as, automated underwriting (Markus et al, 2006). As shown in the case of Master Trusts (separate legal entities but with not physical or administrative presence), information systems are also used to perform (Callon et al, 2007) the function of constantly re-affirming the authority of the Master Trust structure. Why do Master Trusts need to maintain this authority as credible and infrastructurally transparent mechanism in financial markets? This research shows that Master Trusts are central to the process of marketing a securitization deal. When the bank approaches potential investors to promote a deal, the Master Trust that issues the deal is a central marketing tool, the “packaging” of the financial product. Each of the Master Trusts has their own name by which they become known (e.g. Holmes, Granite, Permanent, Arran etc) in the market and their performance is monitored. Each Master Trusts builds its own reputation and authority in the market, so when a deal is about to be issued using one specific Master Trusts, the industry participants, more or less, have an idea about the type of the assets involved, their quality and so on. The quality and authority of the Master Trust, therefore, interests the potential investors. The repurchasing-replenishment process established in the securitization unit of the bank and performed by a separate team of people that were historically put together as a team that focuses on data quality and integrity, is a mechanism that can be reassuring to investors in regards to the quality of the specific Master Trust. Not all organizations that use Master Trusts maintain them in the same way. Each bank may have a different approach in how to maintain the authority of their securitization infrastructures. Multiple case studies in the future that show different ways in which securitizers implement Master Trusts organizationally and technologically

will produce evidence on alternative couplings between techno-organizational and legal innovation in financial markets.

New insights and motivation for future research on the relation between techno-organizational and legal innovation in financial markets are necessary. More specifically, financial innovation, like any innovation, can be understood at different levels: Firstly, as an *idea* (i.e. create separate legal entities in order to transfer assets off the balance sheet); and secondly, as a *techno-organizational and operational framework* (Wainwright, 2009). As shown in the case presented in this paper, in transforming the former into the latter, legal innovations became the platform for further technological and organizational changes towards serving a specific purpose. Indeed, a legally institutionalised operational regime (i.e. economic transactions between two legal entities) served as the basis for the development of *techno-organizational routines* (Feldman & Pentland, 2003; Becker, 2004), the specific purpose of which was to continuously re-affirm the authority of the Master Trust as a transparent infrastructure for mortgage securitization.

The purpose of the specific routines, as they are expressed by the repurchasing-replenishment process in the case study, and the role of information systems in fulfilling this purpose, could be understood in the context of the analytical distinction between the “ostensive” and the “performative” nature of organizational routines (Feldman & Pentland, 2003). Indeed, by ostensive we can understand routines as a static structure, while by performative we may understand “specific actions, by specific people, at specific times and places, that bring the routine to life” (ibid: 94). This dichotomy clearly illustrates the difference between the context of: a) two legal entities engaging in economic transactions and b) the context of operating a Master Trust for securitization purposes. The former represents the ostensive nature of the routines involved in Master Trusts, while the latter represents the performative, whereby these routines are performed within a more specific purpose and objective. The role of information systems and infrastructures is not simply to support these routines operationally but to ensure that these more specific purposes are achieved. Further exploration of how information technology-enabled organizational routines may be seen both as standardizing forces that enable the establishment of new practices and new markets, but also as an agent of change by being linked to goals that go beyond the scope of the routine.

## References

Becker, M.C. (2004), “Organizational routines: a review of the literature”, *Industrial and Corporate Change*, 13, 4, 643-677

- Callon, M. Millo, Y., Muniesa, F. (eds) (2007), *Market Devices*, Blackwell Publishing
- CML, (2010) “The outlook for mortgage funding markets in the UK in 2010 – 2015”  
Report by the Council of Mortgage Lenders)
- Evans, J. (2000), “Master trusts mark a new era for European ABS”, euromoney.com,  
December 1, 2000
- Feldman, M.S. & Pentland, B.T. (2003), “Reconceptualizing organizational routines  
as a source of flexibility and change”, *Administrative Science Quarterly*, 48,  
94-118
- Gorton, G.B. & Souleles, N.S. (2007), “Special Purpose Vehicles and Securitization”,  
in Carey & Stulz (Eds), *The risks of financial institutions*, National Bureau of  
Economic Research, University of Chicago Press.
- Ho et al, (2005), “Masters of the house: a review of UK RMBS master trusts”, Fitch  
Ratings, Special Report.
- Kaniadakis, A. & Constantinides P. (2014), “Innovating Financial Information  
Infrastructures: the transition of legacy assets to the securitization market”,  
*Journal of the Association of Information Systems*, Vol. 15, Issue 5, Article 3
- Markus, M. L., Steinfield, C. W., Wigand, R. T. & Minton, G. (2006). Industry-wide  
IS standardization as collective action: The case of the US residential  
mortgage industry. *MIS Quarterly*, 30(Special Issue), 439-465.
- Preda, A. (2006), “Sociotechnical agency in financial markets: The case of the stock  
ticker”, *Social Studies of Science*, 36(5), 753-782.
- Schwarcz, S.L. (2007), *Structured finance: a guide to the principles of asset  
securitization*, 3<sup>rd</sup> edition.
- Schwartzman, H.B. (1993), *Ethnography in organizations*, Sage.
- Star, S. L. & Ruhleder, K. (1996), “Steps Toward an Ecology of Infrastructure:  
Design and Access for Large Information Spaces”, *Information Systems  
Research*, 7 (1): 111-134
- Wainwright, T. (2009). Laying the foundations for a crisis: Mapping the historico-  
geographical construction of residential mortgage-backed securitization in the  
UK. *International Journal of Urban and Regional Research*, 33(2), 372-88.
- Ybema, S., Sharpe, E., Yanow, D., Wels, H. & Kamsteeg, F. (Eds) (2009),  
*Organizational ethnography: Studying the complexities of everyday life*, Sage:  
London.