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Explaining the Regulatory Use of Credit Ratings:

Varieties of Capitalism, Resource Dependencies and the Delegation of Regulatory Authority to Credit Rating Agencies

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Abstract:

In recent discussions about the power, reliability and accountability of credit rating agencies (CRAs), little attention has been paid to the fact that public regulators around the world have come to use CRAs' ratings as risk measures in financial regulation. The paper seeks to explain the reliance of national and international public actors, such as the US Securities and Exchange Commission (SEC), the Basel Committee on Banking Supervision (BCBS) and the EU legislators, on CRAs' credit assessment services. For that purpose, the interorganizational relationship between public regulators and CRAs in financial market governance is analyzed from a combined principal agent and resource dependence perspective. It is argued that public regulators lack essential analytical resources, i.e. capabilities to cope with financial market uncertainty in a risk-sensitive way. Therefore, they delegate governance tasks and (additional) regulatory authority to specialized risk-measuring agents, namely CRAs. Varying degrees of public regulators' dependence on CRAs' analytical resources and thus variations in the use of CRAs' ratings in financial market regulation are conceived as a function of different socioeconomic institutional settings, i.e. of different varieties of capitalism. The plausibility of the proposed theoretical framework is probed within a research design based on intertemporal and interregional analysis and process-tracing.

1 Introduction: Credit Rating Agencies and their Role in Financial Market Governance in the Focus of Public Attention¹

In the wake of the current global financial and economic crisis, the recognition that credit rating agencies (CRAs) play a critical role in guiding the allocation of capital in global markets has moved beyond academic circles to enter broader public debates about the state-of-affairs and the future shape of the global financial system. CRAs such as Moody's, Standard & Poor's (S&P's) or Fitch Ratings are private firms that estimate and rate the credit-worthiness of borrowers, e.g. firms, insurance companies, banks, municipalities, and sovereign states, as well as financial instruments, e.g. bonds, loans, and structured finance products such as collateralized debt obligations (Cantor/Packer 1994: 1; Nölke/Perry 2007: 129). CRAs collect dispersed information on the financial situation of borrowers and/or the default risk of certain financial products, and condense it into a single measure of relative credit risk – i.e. a credit rating that takes the form of letter grades ranging from Aaa (Moody's) or AAA (S&P's) to C (Moody's) or D (S&P's). CRAs publish their condensed credit risk assessments which are then widely used by numerous public and private actors for investment decisions in the market place (Kerwer 2001: 3). While CRAs' activities had received little public attention until quite recently, this has changed as CRAs have become one of the main targets in the blame-game for global financial market losses originating from the 2007 US mortgage crisis (cf. section 6; Lowenstein 2008; Taylor 2008).

However, notwithstanding the heightened public attention to CRAs' activities and the considerable body of scholarly literature on CRAs' role in the global political economy (cf. Kerwer 2001, 2004; Levich/Majnoni/Reinhart 2002; Nölke 2004; Nölke/Perry 2007; Sinclair 2005), an important feature of public-private financial market governance which has underpinned the influence of CRAs in financial markets still awaits in-depth conceptual and (causal-)theoretical analysis: National and international financial regulators² around the world – e.g. the US Securities and Exchange Commission (SEC) and other US regulatory bodies, the Basel Committee on Banking Supervision and EU legislators – have come to use CRAs' ratings as risk

¹ This paper draws on abridged and revised chapters of my M.A. thesis "Delegation of Regulatory Authority to Transnational Standard-Setters – Explaining the Use of Credit Ratings in Financial Market Regulation" (University of Tübingen, 2008). An earlier version of the paper was presented at the ISA Convention 2009, NYC. I would like to thank Hans K. Hansen, Dieter Kerwer, Julia Maier-Rigaud, Thomas Nielebock, Andreas Nölke, Volker Rittberger, Anne Romund and Timothy Sinclair for their helpful comments at different stages of this paper. Of course, all remaining errors of fact or interpretation are entirely my responsibility.

² Note that the term "public regulator" is used in a broad sense here that also includes the international standard-setter BCBS which does not issue immediately binding rules.

measures in various kinds of financial regulation. Credit ratings have been used by public regulatory bodies, inter alia, to increase the risk sensitivity of investment restrictions for certain financial institutions (e.g. banks, pension funds), to define differential disclosure requirements for issuers of rated bonds with reference to the rating obtained from CRAs, and to adjust capital reserve requirements for banks and institutional broker-dealers to their credit risk exposure (Kerwer 2004: 13f; Sinclair 2005: 42ff).

My paper sets out to describe and explain the particular mode of governance constituted by the public use of CRAs' ratings for regulatory purposes in more abstract conceptual and (causal-)theoretical terms. Thus, I seek to provide a theory-based answer to the question why public national and international financial regulators have come to use CRAs' ratings as risk measures in financial market regulation. I argue that the use of CRAs' ratings by national and international regulatory bodies ultimately constitutes a delegation of governance tasks and regulatory authority from public to private actors. This delegation of regulatory authority can be conceptually grasped and theoretically explained with a synthetic theoretical framework which systematically links principal-agent theory (PAT), resource dependence theory (RDT), environmental approaches in organization theory and the varieties of capitalism (VoC) approach. According to this synthetic theoretical framework, public regulators delegate governance tasks and regulatory authority to specialized risk-measuring agents, namely CRAs, because public regulators lack essential analytical resources, i.e. capabilities to cope with financial market uncertainty in a risk-sensitive way. Varying degrees of dependence on CRAs' analytical resources and thus variations in the use of CRAs' ratings in financial market regulation are conceived as a function of different socioeconomic institutional settings, i.e. of different varieties of capitalism. It should be noted that, while my analysis focuses mainly on the situation before the US mortgage crisis and the ensuing global financial crisis, the basic argument of this paper is compatible with some most recent policy developments.

The remainder of this paper is structured as follows: Section 2 provides an empirical overview of the use of credit ratings by national and international regulatory bodies as well as a conceptual heuristic model of ratings-dependent regulation. In section 3, a (causal-)theoretical framework for analysis combining PAT, RDT, environmental approaches in organization theory and the VoC approach is developed. In section 4, the results of an interregional and intertemporal covariation analysis, which support

the plausibility of the theoretical argument of the paper, are presented. Section 5 re-traces the decision to include provisions for ratings-dependent banking regulation into the Basel II Accord. The paper concludes with a tentative outlook onto the future use of credit ratings in financial regulation after the involvement of CRAs in the current global financial crisis has led public regulators around the world to initiate stricter regulation of CRAs and the SEC to propose rules amendments curbing the use of credit ratings in US securities regulation (section 6).

2 The Use of Credit Ratings in Regulation: An Empirical Overview and a Heuristic Model of Ratings-Dependent Regulation

In the past three decades, the interest in and the demand for credit rating services have significantly grown not only among banks, bondholders, pension fund managers and insurance companies, but also among public financial regulators. National and international regulatory bodies have made increasing use of “ratings-dependent regulation” (Gonzalez et al. 2004: 8). Ratings-dependent regulation is based on “risk-sensitive”, flexible rules which allow for a (quasi-) automatic adjustment of regulatory requirements to different degrees of risk. The importance of ratings-based regulations has traditionally been particularly salient in the United States. However, while ratings-based regulation is less common overall in Europe and other world regions, all developed states use credit ratings for regulatory purposes to some extent (Gonzalez et al. 2004: 9).

The Use of Ratings in the US Regulatory System

Credit ratings have been used by various US public authorities (e.g. the Office of the Comptroller of the Currency (OCC), the SEC, the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), the Office of Thrift Supervision (OTS), the Department of Labor, etc.) for a broad range of regulatory purposes. The public regulatory and supervisory bodies of nearly all US financial market actors have relied – in some way or another – on the credit risk assessments of CRAs in their regulations (Gras 2003: 14). This implies that ratings-based regulations in the US affect not only banks, but also insurers, pension funds, mutual funds, broker-dealers and other market actors (Gonzalez et al. 2004: 9). For a systematic overview of the use of ratings in the US regulatory system, four main types of ratings-dependent regulatory requirements can be distinguished. First, ratings have served public regulators to impose risk-sensitive *investment restrictions* on certain financial

institutions. In this case, a certain minimum credit rating (usually “investment grade”) serves as regulatory threshold for the investment in and/or the trading of securities; e.g. pension funds have been restricted to invest exclusively in bonds of low credit risk, i.e. bonds which were rated at least “investment grade”. Second, US regulators have defined *differential disclosure requirements* for issuers of rated bonds with reference to the rating obtained from CRAs. Credit ratings thus serve as criteria for disclosure requirements: the lower the rating, the stricter the requirements. This means that a financial institution with risky investments will have to disclose more information about its operation in its quarterly reports to the SEC than a firm with a lower risk profile. Third, credit ratings have been used in defining the *conditions for the issuance of certain financial titles* (e.g. mortgage backed securities). Credit ratings serve as criteria for the regulatory administrative requirements that have to be fulfilled before these titles can be issued; e.g. the Secondary Mortgage Market Enhancement Act of 1984 eased the regulatory administrative requirements for the issuance of highly-rated mortgage-backed securities. Finally, US regulators have used CRA’s ratings to adjust *capital reserve requirements* for banks and institutional broker-dealers to their credit risk exposure. Financial institutions get a discount on their capital reserve requirement if their transaction partners or securities they hold have a high credit rating. In 1994, the capital requirements on banks’ holdings of different tranches of asset-backed securities were made a function of their rating. In 1999, the ability of national banks to establish financial subsidiaries was restricted based on their rating (Estrella et al. 2000: 44; Kerwer 2001: 16f; Sinclair 2005: 42ff).

Thus, in the past 75 years, the use of ratings for regulatory purposes has manifested itself in a large number of US laws and rules issued by several regulatory authorities. In the year 2004, at least eight federal statutes and around 50 federal regulations, along with over 100 US state laws and regulations, referenced CRAs’ ratings as a benchmark in financial regulation (Rosenbaum 2004: 10). It should be noted though that in the wake of the global financial crisis the SEC has issued a set of interrelated rule proposals in July 2008 which aimed at limiting the influence of CRAs in US securities regulation. The proposed SEC rules, whose adoption as “final rules” is still pending, would significantly curb the publicly sanctioned use of ratings for regulatory purposes in the US by stripping references to NRSROs from more than 30 SEC rules (Ackerman 2008; SEC 2008). Similarly, US President Barack Obama’s broad plan for a general overhaul of the US financial system, which was

issued in June 2009, calls upon regulators to reduce the use of credit ratings in regulation.

The requirements public regulators imposed on CRAs to qualify as external credit assessment institutions whose ratings may be used in financial regulation have increased slowly but progressively over the decades (cf. Sinclair 2005: 42ff, 45 for a historical overview). The 2006 Credit Rating Agencies Reform Act finally introduced a formalized registration procedure instead of the previous rather informal “no-enforcement action letter” approach for the designation of “nationally recognized statistical rating organization” (NRSRO) status which had been in place since 1975. The 2006 CRA Reform Act provided that a codified process for the designation and monitoring of NRSRO status was introduced under the auspices of the SEC. CRAs now have to apply in a formal procedure for NRSRO status with the SEC. The SEC decides upon granting NRSRO status on the basis of a given set of criteria aiming at ensuring the factual and interpretive reliability of rating methods, the adequacy of personnel capacities, and the integrity of the rating process (including avoidance of conflicts of interest). So far, ten CRAs (including the Big Three Moody’s, S&P’s, Fitch Ratings) have been granted NRSRO status under the formalized procedure. A SEC rule passed (as a “final rule”) in February 2009 imposes additional disclosure, transparency and reporting requirements on NRSROs in order to address concerns about the integrity of credit rating procedures and methodologies that had arisen from CRAs’ role in the US mortgage crisis and the ensuing financial turmoil (SEC 2009).

The Use of Ratings in Other National Regulatory Systems

While the use of ratings in financial regulation has been most developed in the US, over the past twenty years ratings have increasingly become a key regulatory tool beyond the US (Nicholls 2005: 15f, 28ff; Sinclair 2005: 46ff). The use of credit ratings for regulatory purposes has expanded to other developed economies (i.e. most EU member states, Switzerland, Australia, Canada and New Zealand) and emerging markets, in particular in the Latin American and Asian area. At the turn of the century, credit ratings were incorporated into financial regulation in all but one of the (then) twelve BCBS-member states, with only Germany being an exception (Estrella et al. 2000: 41; Gonzalez et al. 2004: 9; King/Sinclair 2003: 348). This exceptional position of Germany ended when the new EU Capital Adequacy Directive (CAD) and the Banking Directive (BD) of 2006 were passed which put into

force within the EU the main Basel II provisions. However, within the European Union, the regulatory use of credit ratings already started with the (first) Capital Adequacy Directive of 1993. From 1993 to 2006, all the European BCBS members (apart from Germany which exercised an option to waive the ratings-based regulation part of the 1993 CAD) used credit ratings in their prudential supervision of banks in order to determine what was a qualifying debt security or other interest-rate-related instrument for the calculation of the capital requirement for specific interest rate risk. This was also referred to as the “market risk amendment” since it addressed banks’ capital reserve requirements for *market* risks as opposed to *credit* (default) risks. Some BCBS members have used CRAs’ ratings in their prudential regulation of banks for several purposes other than market risk even before the 2006 CAD was passed (Estrella 2000: 41; Nicholls 2005: 15f). But also a lot of non-BCBS member states have used credit ratings in various kinds of financial, mainly but not only banking, regulation (cf. Sinclair 2005: 47ff).

The criteria and the procedures used by financial supervisory authorities in the various countries to recognize CRAs as eligible for ratings-based regulation vary considerably. At least within the EU, criteria for the recognition of CRAs whose ratings may be used for regulatory purposes have become somewhat harmonized after the Committee of European Banking Supervisors (CEBS) has developed European-level guidelines for the recognition of “external credit assessment institutions” (i.e. CRAs) in the wake of Basel II and the 2006 CAD and BD (cf. CEBS 2006). Overall ongoing monitoring of the performance of CRAs has been limited in most regulatory systems; however, recent EU-level regulation suggests a notable tightening of monitoring and oversight of CRAs’ activities in the EU (cf. section 6).

The Use of Ratings in Regulation on the International Level: Basel II and its Implementation in the EU

On the international level, the revised Basel Capital Accord (Basel II), developed by the BCBS and adopted in 2004, provides for the use of credit ratings from approved “external credit assessment institutions” (ECAIs) in the calculation of banks’ net capital reserve requirements (BCBS 2006: paras. 50f; 90ff). At the EU level, the implementation of the non-binding Basel II standards as binding law occurred with the publication of the Banking Directive (2006/48/EC) and the Capital Adequacy Directive (2006/49/EC) in June 2006. The EU Directives then were transposed into national regulatory systems. E.g. in Germany, Basel II was transposed into national

law by means of changes to the Banking Act and by means of additional regulations, in particular the 2006 Solvency Regulation on the implementation of the first pillar of Basel II. Implementation of the Basel II Accord in the US was originally scheduled to begin in 2008, but was delayed until not earlier than 2009. Nonetheless, before the global financial crisis (2007-09), most observers predicted that Basel II would achieve near-universal applicability even faster than Basel I did³ (Speyer 2006: 113). Pillar 1 of the three-pillar framework of Basel II – comprising the pillars “minimum capital requirements”, “supervisory review process”, and “enhanced disclosure/market discipline” – contains a capital requirements framework that provides for quantitative minimum capital reserve requirements to be calculated in accordance with the banks’ exposure to credit risk, operational risk, and market risk (German Federal Bank 2009a; Macht 2007: 68-96). CRAs’ ratings are one option for the calculation of banks’ minimum capital requirements underlying credit risk. The underlying idea of the Basel II provisions for Pillar 1 clearly is to make capital reserve requirements contingent upon the quality of credits banks give; the quality of these credits must be measured either by internal or by external rating procedures recognized by public banking supervisors. The main objective was to make banking regulation and supervision more responsive to the risks of financial markets and thus keeping regulation in tune with markets (Kerwer 2006: 93). The use of ratings for the calculation of credit (default) risks is supposed to serve the purpose of flexible regulation.

Overall, the role of CRAs in the final Basel II Accord is less pronounced than originally proposed by some of the BCBS members, first of all the US regulatory authorities (cf. BCBS 2001: para. 69 in contrast to BCBS 2006: para. 50). Thus, the Basel II Accord – and, consequently, the legally binding EU CAD and BD – provide for external measurement of credit risk by recognized CRAs as *one* of two broad methodologies for banks’ credit risk assessment, termed the “Standardized Approach” (cf. Macht 2007: 71-75). Banks can use the credit assessments of external rating agencies when determining the credit risk weights that are used for the calculation of capital requirements in the Standardized Approach as long as the CRAs are recognised by the national banking supervisors. The national supervisory authorities assign the ratings of the recognized CRAs in a routinized procedure to the risk weight categories fixed in the Basel II provisions on the Standardized

³ Meanwhile, there have been calls for a reform of the Basel II Accord which would take into account lessons learnt in the current crisis about adequate capital reserve requirements and avoid the procyclical effects of the

Approach (“mapping process”) (German Federal Bank 2009b; BCBS 2006: paras. 91-108). Banks that would like to deviate from the Standardized Approach and use internal rating procedures within the alternative framework of the “Internal Ratings-based Approach” need to file an application with their national regulatory agency (Nölke/Perry 2007: 130).

According to the Basel II Accord, external credit assessment institutions (ECAIs) have to fulfil certain minimum requirements in terms of “objectivity”, “independence”, “international access/transparency”, “disclosure”, “resources” and “credibility” (BCBS 2006: paras. 91ff). The Basel recommendations for the recognition of eligible external rating agencies have been implemented in Art. 81ff of the EU Banking Directive. In addition, CEBS published Guidelines on the Recognition of External Credit Assessment Institutions (ECAIs) in order to achieve a maximum of consistency in the interpretation of the Banking Directive in this regard. Thus, while CRAs are granted recognition as ECAIs by the competent national supervisory authorities, there are European-level guidelines to ensure harmonized recognition criteria and procedures (BCBS 2006: para. 91; CEBS 2006).

CRAs’ Standard of Credit-Worthiness and its Public Enforcement through Ratings-Dependent Regulation

Having outlined the use of credit ratings in financial regulation on both national and international levels, I proceed with a conceptualization of this phenomenon in more abstract terms as a next step in systematically working towards an explanation of ratings-dependent regulation. Drawing on studies by Nölke (2004), Nölke/Perry (2007) and Kerwer (2001), I contend that CRAs set a private standard of credit-worthiness which is made binding by a public third party when credit ratings are used in financial regulation. Moreover, I argue that this public enforcement of CRAs’ standard of credit-worthiness attributes a quasi-regulatory function to CRAs and thus constitutes a delegation of (additional) authority from public regulators to CRAs which is best captured by a PA conceptual framework. The delegation of regulatory authority not only complements and reinforces genuinely private sources of CRAs’ authority (their expert reputation and ensuing legitimacy), it also changes the nature of CRAs’ standard of credit-worthiness in rendering it binding.

By defining and monitoring criteria of credit risk for private and public actors around the world, CRAs have managed to establish an important, widely recognized

current framework on banks’ lending patterns.

and nearly global private standard for credit-worthiness that *per se*, i.e. without public regulators' interference, is based on CRAs' reputation as experts and their ensuing legitimacy in the eyes of other financial market actors (Nölke 2004: 163f).⁴ Because of CRAs' presumed expert status, investors have relied extensively on CRAs' standard of credit-worthiness for screening non-transparent capital markets. CRAs publish, e.g. on their websites, the criteria that guide their assessment of credit risk in the rating process. "The standard [of credit-worthiness, A.K.] provides a set of criteria which defines, for a general audience, what credit quality is about and how it can be enhanced" (Kerwer 2001: 10). Financial market actors are aware of CRAs' criteria for credit-risk assessment and tend to adjust their behavior to them, since – by assigning and constantly reviewing credit ratings – CRAs do not only *define* a standard of credit-worthiness, but also *verify* compliance with the standard and promote the adoption of the standard (Gras 2003: 25f). CRAs' standard of credit-worthiness thus becomes a benchmark for other market actors. The letter grade assigned by CRAs marks a seal of approval or a certification for the credit-worthiness of a borrower and, consequently, for adopting and living up to the CRAs' standard of credit-worthiness. This seal of approval is vital for borrowers' financing conditions and their access to capital. CRAs' criteria for the assessment of credit-worthiness are in effect "access rules for financial markets" (Kerwer 2006: 91). From this perspective, CRAs should be conceived as representatives of the broader category of coordination service firms and as incumbents of private authority (Cutler/Haufler/Porter 1999; Nölke 2004). As far as rule-setting activities are concerned, *authority* can be defined as the ability of an actor or an institution to induce rule-addressees to take note of, and comply with, their rules (Rittberger et al. 2008: 2). In a broader sense, political authority refers to the capacity not only to make collectively binding decisions and to set rules of behavior, but also to implement such decisions with appropriate organizational means and to give these decisions normative justification (Genschel/Zangl 2008: 431f). According to Cutler/Haufler/Porter (1999: 19), it is a defining criterion of transnational private authority that those subject to the rules and decisions being made by private sector actors accept them "as legitimate, as the representations of experts and those 'in authority'" and thus show a high degree of compliance with the rules and decisions.

⁴ CRAs' reputation and legitimacy have suffered severely from CRAs' failure to adequately rate structured finance products which were at the core of the 2007 US mortgage crisis that in turn evolved into a global financial and economic crisis. However, it is striking that financial market actors still seem to rely on CRAs' expertise as they tend to keep aligning their behavior with CRAs' ratings (e.g. rating up- or downgrades).

In the light of these definitions, CRAs, which define a widely followed expert standard of credit-worthiness and verify compliance with it, can indeed be considered incumbents of private authority. Thus, even in the absence of public regulatory recognition, CRAs would dispose of sources of genuinely private authority; this sets them apart from regulatory agencies which are newly created (and funded) by public principals and therefore solely rely on delegated authority. Nonetheless, the role of CRAs as standardizers is considerably highlighted and publicly bolstered by ratings-dependent regulation (Gonzalez et al. 2004: 8). When ratings are used in financial regulation, CRAs emerge as states-sanctioned “judges of prudent economic and financial behavior” (Sinclair 2005: 46). It is not only that the regulatory use of credit ratings reinforces the expert authority of those issuing the standard which in turn should increase the perceived legitimacy of CRAs and thus the further dissemination of, and compliance with, CRAs’ standard of credit-worthiness. Instead, the nature of the standard of credit-worthiness changes: Once public regulators use CRA’s ratings for regulatory purposes, the standard is not only adopted by public regulatory authorities but also *enforced* by a public third party. It becomes mandatory for financial market actors to observe CRAs standard for credit-worthiness (Kerwer 2001: 16). Put in more general terms, the standard becomes coercive in practice because other actors than the potential adopter believe it to be reasonable to follow it and have the means to authoritatively enforce it (cf. Brunsson/Jacobsson 2002: 134). Therefore, while CRAs’ expert reputation and their ensuing legitimacy in the eyes of market participants should indeed be considered *one* source of (genuinely) private authority, this does not provide the complete picture of CRAs’ sources of authority. CRAs’ role as gate-keepers determining access to capital and costs of borrowing and as standardizers governing financial markets is to a significant extent supported by the fact that the private standard of credit-worthiness defined by the agencies is enforced by public regulation. When public regulators use and thus recognize CRAs’ standard of credit-worthiness for regulatory purposes, regulatory authority (beyond CRAs’ genuinely private sources of authority) is conferred upon CRAs. This does not happen incidentally; rather, public actors are well aware of the transfer of authority being implied in the use of credit ratings in regulation as the dictum of US Senator Joe Lieberman that CRAs’ power is “government-conferred power” (Lieberman 2002) betrays.

The Use of CRAs' Ratings by Public Regulators Conceived as Principal-Agent Relationship

Building on these insights, I contend in the following paragraphs that the use of CRAs' ratings in financial regulation should be conceived as constituting a principal-agent relationship between public regulators and CRAs which implies the delegation of governance tasks (risk measurement according to CRAs' standard of credit-worthiness for the purpose of flexible, risk-sensitive regulation) and regulatory authority.

The PA approach defines delegation as "a conditional grant of authority from a principal to an agent that empowers the latter to act on behalf of the former" (Hawkins et al. 2006: 7). This grant of authority is limited in time and/or scope and must be revocable by the principal. Typically, a principal decides upon a certain policy and delegates its implementation to an agent in the expectation that the agent will act in ways that produce outcomes desired by the principal (Tallberg 2002: 25). The relationship between a principal and an agent is governed by a contract. This is not necessarily a formal written document but can also be an implicit and/or informal agreement (Hawkins et al. 2006: 7). While the PA approach, in International Relations, has mainly been used with reference to the relationship between states and international, and in particular supranational, organizations, states might "also delegate authority to private firms, NGOs, or a third state rather than a formal international organization" (*ibid.*: 11).

The main conceptual features of PA relationships can be identified in the use of credit ratings by public regulators in financial market regulation. By rendering the CRAs' standards of credit-worthiness binding in financial market regulation, public third parties, such as the SEC, BCBS or other supranational and national legislators, confer (additional) regulatory authority on CRAs. CRAs have explicitly been empowered in their authority by governments and international regulatory bodies such as the BCBS in various laws, rules, and regulations that constrain the behavior of financial market actors (Nölke/Perry 2007: 124). From this perspective, CRAs' performance of risk measurement and certification of credit-worthiness is not merely some information provision service but a governance activity which in turn is an integral part of publicly designed risk-sensitive financial regulation. Making use of CRAs' ratings (i.e. the expression of their standardization and certification activities) makes it possible for public regulators to design and effectively implement flexible, risk-sensitive financial market regulation (Kerwer 2006: 95).

Rather than conducting risk assessments needed for risk-sensitive regulation *themselves*, public regulators have implicitly transferred this task to CRAs when providing for the use of credit ratings in regulation.

Neither the absence of an explicit instruction at CRAs to conduct credit risk assessment on behalf of public regulators nor the fact that public regulators do not create a new actor to perform this task but rather rely on preexisting actors and rating processes do in any way contradict the conception of the relationship between public regulators and CRAs as PA relationship. Once their ratings are used by a regulator in financial regulation, CRAs turn into agents of the principal “public regulator” and, through their credit-risk assessment activities, perform a governance task on behalf of public regulators. Public regulators grant CRAs regulatory authority through the use of ratings in regulation and expect them to act on their behalf *as if* they had explicitly ordered them to do so. In accordance with the PA approach, financial market regulators are in the formal position to withdraw the regulatory authority they have bestowed upon CRAs in the relevant regulatory document (e.g. national laws and regulations, supranational directives or the Basel II Accord) and thus to terminate the contractual relationship. This possibility has been raised after CRAs’ dismal performance in the US mortgage crisis by US and European politicians as well as the SEC (cf. section 6).

The focus of this paper is on the *causes* for public regulators’ use of CRAs’ ratings in financial regulation. Nonetheless, it is noteworthy that a lot of the assumptions of the PA approach regarding the asymmetrical distribution of information in PA relationships, different kinds of agency losses and (the need for as well as the difficulties of) various control mechanisms in PA relationships are applicable to the relationship between public regulators and CRAs (cf. Hawkins et al. 2006: 8ff, 26ff; Pollack 2003: 26). First of all, there seems to be an agency problem in the relationship between public regulators and CRAs. This is caused by informational asymmetries of both the *hidden action* and the *hidden information* type. It is very hard for public regulators to keep track of CRAs’ activities and to monitor CRAs’ activities in terms of the adequacy and integrity of their rating methodologies. However, the question whether these quite obvious informational asymmetries translate into actual agency slack in the form of “shirking” and/or “slipping” is less straightforward to answer. It is not evident *a priori* that CRAs should have any incentives for shirking – e.g. spending less-than-adequate efforts on credit-risk assessment – and/or slipping – e.g. giving better rating grades to a (large) corporate

borrower than justified in both single-business and systemic terms in order to keep it as a fee-paying client. In fact, the assumption on which public regulators' use of credit ratings has been based, was that CRAs' dependence on a reputation as reliable and credible experts would discipline CRAs' behavior (Schwarcz 2001: 303). Reputational concerns would preclude CRAs' agency slack because shirking and slippage would undermine the viability of their business. However, this reasoning has some serious flaws.

The main problem is the oligopolistic market structure of the rating industry. The impact of the disciplining forces of market competition is therefore limited (Gras 2003: 29). Concerns for reputation only partly constrain CRAs' (potential mis-)behavior because reputation is assessed *mainly* in relative terms, i.e. in relation to (a small number of) competitors. This has created incentives for CRAs to adjust their ratings to the ratings of the other big agencies and thus to undermine the control function of market competition. Therefore, mere reliance on reputational concerns and market discipline seem to be insufficient for adequate control of CRAs' activities. Given CRAs' significant impact and the regulatory function of CRAs, some kind of public administrative and oversight procedures would appear necessary. However, a lot of observers argue that the "light regulation" model which the US, the most important public regulator for CRAs, has pursued with the (until 2006 rather informal) NRSRO registration procedure, has done more harm than good in terms of holding CRAs accountable. It has created market access barriers, reinforced the oligopolistic market structure and thus reduced economic pressure to avoid misbehavior (cf. Cantor/Packer 1994: 2; Kerwer 2001: 9f, 23; Sinclair 2005: 42). The logical consequence seems to be to either renounce the use of credit ratings in financial regulation or to design and implement more rigorous public (administrative and oversight) control procedures.

In general terms, for a long time no adequate public accountability structure for CRAs' activities in general and for their contributions to financial regulation in particular existed (Kerwer 2006: 92). Public regulators relied on soft regulation such as the International Organization of Securities Commissions' (IOSCO) *Code of Conduct Fundamentals for CRAs* (2004, revised in 2008), which provides merely broad guidelines CRAs should integrate into their own codes of conduct and has no third-party monitoring or enforcement mechanism. However, there has been a trend in both the US and the EU toward (somewhat) stricter control mechanism for CRAs whose ratings are to be used in financial regulation. *Screening and selection*

procedures and *ex ante administrative procedures* have become more formal and rigorous. This applies to the US Credit Rating Agencies Reform Act 2006, to the Basel II provisions, to European level regulation and to the national recognition criteria and procedures for CRAs. While oversight of CRAs' activities had been mainly *ad hoc*, e.g. in the US through inquiries conducted by the SEC or by the appropriate Committees of Congress, the involvement of CRAs in the current financial crisis has led to regulatory moves towards increased oversight of CRAs in both the US and the EU (cf. section 6).

3 Development of a Theoretical Framework for Analysis

In the following, I develop a theoretical framework for analysis. First, I examine the different reasons for delegation that proponents of principal agent theory (PAT) have identified so far. Delegation to a "specialized agent" that is supposed to perform a certain governance task more effectively and more efficiently than a (seemingly over-matched and under-informed) principal appears as a fruitful candidate hypothesis for the case at hand. In particular, it implicitly echoes the resource dependence argument of resource dependence theory (RDT). In order to arrive at a more comprehensive and more clearly framed explanation than PAT alone could provide (cf. below), I seek to combine PAT and RDT. The following theoretical argument is advanced: Public regulators lack essential analytical resources for measuring credit risk and, thus, for implementing risk-sensitive regulation. Therefore, they delegate governance tasks and regulatory authority to specialized risk-measuring agents, i.e. CRAs. Both PAT and RDT are rationalist theories: Thus, public regulators delegate governance tasks and regulatory authority if the (perceived) benefits of making use of CRAs resources through delegation are greater than the (anticipated) agency losses. Finally, I argue that resource dependence in general and public regulators' dependence on CRAs' analytical resources in particular should not be analyzed as something that is exogenously given but rather as a phenomenon activated and magnified by the relevant socioeconomic macroinstitutional context. Drawing on environmental approaches in (intra- and inter-)organizational research and the studies by Nölke (2004) and Nölke/Perry (2007), I seek to embed the PAT/RDT argument on the establishment of public-private governance arrangements into a macroinstitutional socioeconomic context. Applied to the case of CRAs, this means that the essentiality and substitutability of CRAs' analytical resources are a function of, i.e. are conditioned

by, prevailing national or regional socioeconomic macroinstitutional settings, i.e. different varieties of capitalism (cf. Hall/Soskice 2001a).

Causes of Delegation Identified by Proponents of Principal-Agent Theory

Why do principals delegate? Delegation of authority by a principal to an agent is a special case of the more general problem of institutional choice. The basic approach of PAT to the question of institutional choice is functionalist, i.e. it explains institutional choices in terms of the functions a given institution is expected to perform and the effects on policy outcomes it is expected to produce. Principals expect to benefit from the delegation of competences, which is the reason why they delegate. Several functions agents perform and different rationales for delegation can be distinguished (cf. Hawkins et al. 2006: 13-23; Mutschler 2008; Pollack 2003: 20-24; Tallberg 2002: 26).

First, collective principals may delegate *agenda-setting competences* to an *agenda-setting agent* to “avoid endless cycling among alternative policy proposals” (Pollack 2003: 24) that might occur in a system where all principals would retain agenda-setting rights for themselves. *Second*, agents can help to solve problems of *incomplete contracting* among principals. In this case, “filling in” and interpreting incomplete international agreements dealing with very complex and/or disputed issues is delegated to agents. *Third*, principals that are in the power position to do so may delegate agenda-setting, (limited) decision-making and/or implementation competences to certain *policy-biased agents* in order to *lock in their preferences*. *Fourth*, principals can delegate *monitoring of compliance* with policy agreements and contractual obligations, in some cases even sanctioning of non-compliance to agents in order to reduce transaction costs under conditions of imperfect information and to help overcome collective action problems. A *fifth*, closely related rationale for delegation is that agents may *resolve credible commitment problems*, as agents allow principals to jointly tie their hands. *Independent, insulated agents*, such as regulatory bureaucracies, central banks, and international courts, are granted competences to adopt regulation or to adjudicate disputes in areas where the principals would obviously be biased. The “credible commitment” rationale for delegation has been picked up by Majone (2001) and Alter (2008) who have coined the term “fiduciary principal-trustee relationship” meant to designate a conceptually distinct type of delegation. Fiduciary delegation serves to increase the legitimacy and credibility of the principal and of political decision-making (Alter 2008: 38f;

Majone 2001: 110f). In fiduciary delegation to “trustees”, the main goal is to convince some third party that their interests are being protected. Principals deliberately grant substantial discretion to trustees, because they seek to ensure the credibility of their own policy commitments where problems of strong political incentives for non-compliance, time inconsistency or concentrated costs and diffuse benefits of keeping to commitments would otherwise undermine that credibility (Pollack 2003: 31; Majone 2001: 105ff). For the purpose of credibility-enhancing delegation, the best strategy is “to choose a delegate whose policy preferences differ systematically from the preferences of the delegating principal” (Majone 2001: 104), to make these agents highly independent, and to refrain from meddling because “an agent bound to follow the directions of the delegating politicians could not possibly enhance the credibility of their commitment” (Majone 2001: 110; Alter 2008: 38f). Credibility-enhancing “fiduciary” delegation follows a logic of delegation which is distinct from effectiveness- and efficiency-enhancing delegation to agents for the sake of reducing policy-making costs, capturing effectiveness and efficiency gains, and improving the quality of policy-making in terms of problem-solving (Majone 2001: 110f).

The logic of delegation for the purpose of reaping efficiency and effectiveness gains manifests itself most clearly in the *sixth* reason for delegation PA theorists have identified: Principals may not always have all the *policy-relevant information and expertise* at their disposal that are necessary to perform a certain governance task. Apart from expertise and adequate information, they may simply lack time to promulgate detailed (expert) regulation. In particular, when the task is very complex and/or technical in nature and keeps recurring, principals may delegate this task to an *agent that is specialized* in this field. In this case, the rationale for delegation is informational, i.e. a demand for policy-relevant information (Hawkins et al. 2006: 13ff; Pollack 2003: 23, 28f): Agents adopt expert regulation of specific economic activities in areas where principals are ill-informed.

When we examine these rationales for delegation in the light of the description of the explanandum of this paper (cf. section 2), the explanatory approach of *delegation to a specialized agent* emerges as the most promising avenue for an explanation of the regulatory use of credit ratings. Rationales one and four (*delegating agenda-setting, monitoring compliance of principals to overcome collective action problems*) are quite obviously not applicable, since CRAs do not obtain competences for agenda setting or monitoring compliance of their principals.

Similarly, approach two *solving problems of incomplete contracting* can be dismissed. It is clearly not the task of CRAs to close gaps in multilateral agreements which allow for different interpretations. Solving problems of incomplete contracting refers to resolving potential disputes arising from unclear or controversial (international) contracts among collective principals. This would certainly not apply in cases of delegation to CRAs in national regulatory systems. One might make a case for examining more closely rationale three *delegation to policy-biased agents* at least with respect to the Basel II negotiations. The argument would be that the US was interested, but eventually only partly successful, in fixing banking supervision standards which, through heavy reliance on CRAs, should favor both US banks and US corporate enterprises. However, this approach does not promise to offer any help in explaining delegation of regulatory authority to CRAs in national regulatory systems in and beyond the US. This leaves us with approaches five (*resolving credible commitment problems/ fiduciary delegation*) and six (*delegation to specialized agents due to information rationales*). While the apparent functional closeness of CRAs to central banks might invite a credible commitments (principal-trustee theory, PTT) explanation, the “information rationale” argument trumps the “credible commitments” argument. First of all, there is broad agreement that the objective of relying on credit ratings in regulation is enhancing regulatory *effectiveness* rather than credibility (Gras 2003: 34; Kerwer 2001: 19f, 2006: 94ff). In addition to that, CRAs’ broad discretion has been a consequence of public regulators’ long-held (dubious) belief that CRAs are adequately policed by the market (Kerwer 2006: 92f). It does not result from a conscious decision to delegate competences to a trustee that *must* enjoy considerable leeway to digress from the principals’ preferences in order to fulfill the very rationale of delegation (making a credible commitment) as PTT would make us believe.

Thus, among the potential explanatory approaches offered by PAT “delegation to specialized agents due to information rationales” appears as the most promising one: There is a plausible case to make that public regulators have delegated regulatory authority to CRAs conceived as specialized agents which due to their professional expertise and informational advantages over their overmatched and ill-informed principals would be expected to enhance the effectiveness and efficiency of financial regulation. PAT’s assumption that delegation for policy-relevant information rationales is particularly salient in very complex and technical policy issues also corresponds to the case at hand.

Explaining Delegation to Specialized Agents from a Resource Dependence Perspective

The notion of “delegation to a specialized agent” due to informational resource constraints implicitly echoes arguments of RDT. RDT postulates that organizations dependent on the (material or immaterial) resources of another organization will seek to establish interorganizational relationships with it. On the following pages, I argue that PAT and RDT can usefully be combined for an explanation of the delegation of regulatory authority from public regulators to transnational standard-setters. There are several points to make in favor of a combined PAT/RDT framework rather than an explanation that solely relies on PAT. First of all, PAT is rather a framework of related concepts and different explanatory approaches than a coherent theory: “As causal theory – that is, as an integrated body of concepts, operationalisable variables, and testable propositions – it [PAT] remains incomplete” (Thatcher/Stone Sweet 2002: 3; cf. Hawkins et al. 2006: 7ff).⁵ The bundle of reasons for delegation identified by proponents of PAT betrays that PAT (mostly implicitly) relies on a number of (causal) assumptions taken from other theories. Making use of RDT rather than solely relying on a PAT explanation would mean to explicate implicit theoretical assumptions underlying the PAT argument on delegation to specialized agents. This would in turn contribute to the formulation of more clearly framed hypotheses and help to advance the PA research programme by enhancing its theoretical saturation. Making use of RDT contributes to formulating testable and falsifiable *ex ante* predictions on delegation to specialized agents. Apart from that, combining PAT and RDT builds a bridge from PAT via RDT to environmental approaches in organizational research that postulate that the macroinstitutional environment of organizations structures their interactions to a considerable extent (cf. below; Blau 1987). This allows us to capture the structural conditions conducive to the delegation of governance tasks to a particular type of specialized agents, namely CRAs.

In fact, PAT and RDT complement each other. RDT, which remains very unspecific about *which institutional type* of interorganizational relationship an organization depending on the resources of another one will seek to establish, provides a robust

⁵ In a similar vein, Hawkins et al. (2006: 9f.) note that “the propositions about why principals delegate and how they control agents build on existing theories” and “the theoretical variation among those who study PA relationships is large” implying that “it would be a mistake to discuss ‘the’ theory of delegation.”

causal hypothesis explaining *why* and *under what conditions* public regulators will seek to establish interorganizational relationships with CRAs. PAT's reasoning on delegation to specialized agents is placed on a much stronger theoretical footing when framed in terms of RDT. The PA approach in turn allows us to conceptually grasp *the institutional form of delegation* which the interorganizational relationship between public regulators and CRAs takes.

RDT, which emerged as a major approach of interorganizational analysis in the late 1970s but was (re-)discovered by Political Scientists only recently (cf. Brühl 2003; Nölke 2004), is based on the view of organizations as (subjectively) rational, self-interested actors that are oriented toward the effective and efficient attainment of specific organizational goals (Pfeffer/Salancik 1978: 23; Scott 1981: 57, 261ff). The underlying rationale for establishing relationships with other organizations is an organization's need for access to specific resources which are crucial to achieve its particular objectives. Resources have traditionally been defined in interorganizational analysis as "generalized means, or facilities, that are potentially controllable by social organizations, and that are potentially usable – however indirectly – in relationships between the organization and its environment" (Yuchtman/Seashore 1967: 900). This includes material resources, e.g. funds, technical material, and personnel, as well as immaterial resources, e.g. information, expertise, and legitimacy. Organizations are usually not (completely) self-contained or self-sufficient, but rather depend to some varying degree on getting access to resources controlled by organizations in their task environment in order to successfully fulfill their organizational functions. This implies that organizations are typically oriented to the acquisition and defense of an adequate and secure supply of crucial resources from external parties (Oliver 1990: 241f, 249f; Pfeffer/Salancik 1978: 2; 43f). RDT posits that organizations which, for the accomplishment of their organizational goals, depend on scarce resources controlled by another organization will be prone to establish relationships with this external organization. Thus, resource dependence is the main driver for the development of interorganizational relationships (IORs). However, dependence on resources presumably controlled by an organization will only continue to shape actors' behavior, when these organizations show their ability to perform the provision of crucial resources to the organization. In the longer run, organizations which have an important and critical function but fail at it, will not make other organizations rely on them as potential resource providers (Pfeffer 1981: 98, 101).

In order to determine the resource dependence of an organization, it is first of all necessary to identify its objectives, since its objectives determine the resources required for goal attainment. Apart from that, RDT refers to two dimensions which have to be taken into account when determining an organization's dependence on resources of any other organization: *essentiality* and *substitutability* (Edele 2006: 48; Pfeffer/Salancik 1978: 46-51). *Essentiality* describes the extent to which an organization requires resources controlled by an external organization to attain its goals. It refers to how important the resources are to the organization. There are two indicators for the essentiality of a resource: the *relative magnitude of resource needs* and the *criticality* of the resource. The *relative magnitude of resource needs* is a quantitative indicator that is measurable by determining the total amount of a specific resource required by an organization to achieve its objectives, and by subsequently assessing how much is lacking within the organization. *Criticality* measures the ability of the organization to continue functioning in the absence of the resource. *Substitutability* denotes the extent to which resources provided by an external organization can be replaced from other sources. Both essentiality and substitutability of the resources determine the focal organization's dependence on any other organization. A high degree of resource dependence exists when the resources demanded by an organization are characterized by high essentiality and low substitutability. RDT predicts that organizations will seek to establish relationships with other organizations if, for the attainment of their goals, they are dependent on essential resources which those organizations control and which are hard to obtain elsewhere. The higher the essentiality of the resource and the lower its substitutability, the more likely it becomes that an organization will seek to establish relationships with other organizations. If the (focal) organization, due to formal-hierarchical or de facto power is in the position to establish resource-providing relationships with other organizations without their active consent, a high degree of resource dependence of the (focal) organization is not only a necessary, but also a sufficient condition for the actual establishment of the IOR.

National and international regulatory bodies as well as CRAs can be regarded as organized entities with the objective of achieving specific goals, namely ensuring the provision of the public goods of financial market stability and efficiency (cf. Griffith-Jones 2003). As private business enterprises, CRAs are first and foremost oriented toward making profits. However, the assumption of CRAs, other market participants and regulators is that CRAs' economic goals and incentives will make

them act in ways conducive to the achievement of the public goal of financial market stability (Gras 2003: 30). RDT has already been applied to analyze dependencies that exist both between CRAs and investors, and CRAs and the companies whose debts are rated: Investors depend on analytical resources of CRAs for their investment decisions; rated companies depend on the legitimacy of these agencies for their access to capital (Nölke/Perry 2007: 130; cf. Nölke 2004). CRAs' analytical resources are crucial in contemporary global finance. Their legitimacy is derived from the expert character of these analytical resources as perceived by market participants and regulators. The overwhelming quantity of information available to financial market actors creates a demand for the analytical output of CRAs (Nölke/Perry 2007: 129). If we now transfer these insights to the relationship between regulators and CRAs and apply a combined PAT and RDT perspective to the relationship between public regulators and CRAs in financial market governance, the following theoretical argument can be made: Public regulators are organizations which for the attainment of their main organizational goals, i.e. financial market stability and efficiency, are dependent on resources controlled by external organizations. As they lack essential analytical resources for measuring credit risks themselves, public regulators delegate governance tasks and regulatory authority to specialized risk-measuring agents, i.e. CRAs.

Causal Mechanism: Cost-Benefit Analysis

From the (subjectively) rationalist point of view of both PAT and RDT, delegation of governance tasks and authority to specialized agents, such as transnational standard-setters, is based on a cost-benefit analysis. Delegation involves both costs and benefits for the delegating party. The assumption of PAT is that in a world of rational actors, the relative attractiveness of alternative governance structures is determined by the balance between costs and benefits (Tallberg 2002: 25f). RDT also assumes that cost-benefit analysis is the causal link between resource dependence and the establishment of relationships with another organization (Edele 2006: 49). Organizations, conceived as rational actors, will only establish relationships with another one if the perceived benefits from receiving valued resources are equal or greater than the costs of giving up own discretion; i.e. organizations will seek to establish relationships with other organizations if they expect to reap a net benefit (Brühl 2003: 200f; Pfeffer/Salancik 1978: 183).

Delegation does not come for free for public regulators. Delegation may be costly, because financial regulators lose part of their control over the regulated entities (Kerwer 2004: 14).⁶ One should expect that some (costly) control mechanisms for the raters would be established. Indeed, over time public regulators have intensified selection and screening as well as administrative procedures and established some (until very recently quite modest) oversight mechanisms. When public regulators refrained from setting up extensive administrative and oversight procedures (as in fact most public regulators did until at least the turn of the century), this was because they relied on market forces' doing the control job for them. Thus, they spared costs arising from setting up and maintaining public control mechanisms but increased their vulnerability to agency losses from agency slack.⁷ When the use of credit ratings in financial regulation entails (agency) costs, rational public regulators must be assumed to be trading control for gains in terms of effectiveness and efficiency of regulation. Using credit ratings for regulatory purposes makes risk regulation more flexible. Given the dynamics of modern finance, adaptation to risk can only be achieved in a rather crude way within fixed regulatory categories (such as the distinction between OECD and non-OECD debtors in Basel I). A more appealing way to make risk regulation sensitive to financial market risk is to use credit ratings instead. They offer a more fine-grained risk estimate, and also an estimate that varies over time (Kerwer 2004: 14). Apart from that, using CRAs' rating in risk-sensitive regulation should be more cost-efficient for regulators than building up adequate risk-measuring capacities themselves.

To sum up, delegation of governance tasks and regulatory authority to CRAs will be based on a cost-benefit analysis: Public regulators will only delegate if the perceived benefits, in terms of organizational goal attainment, from making use of CRAs' analytical resources through the reliance on credit ratings in financial regulation are larger than expected (agency) losses.

⁶ The Basel II provisions may serve as an example illustrating how public regulators' reliance on CRAs involves a loss of control for regulators. Under Basel I, public regulators set a uniform 8% minimum capital requirement for claims on corporate firms which were not risk-weighted. This was a rather crude measure of credit risk; nonetheless *all* the parameters that finally determined the capital requirement were set by public regulators. Under the Basel II Standardized Approach, the asset base on the basis of which the 8% capital requirement is calculated is risk-weighted according to CRAs' ratings of the debtors. Thus, a crucial measure for credit risk, the risk weighted asset base of a bank, is no longer determined by public regulators but by CRAs through their ratings. Regulators have given up control over some regulatory parameters to a private agent.

⁷ Even granted that public regulators in earlier days (i.e. in the beginnings of the use of credit ratings in US regulation) might not have been aware of the potential for losses, at least later regulators (from the 1970s and 1980s onwards) can be assumed to have noticed the potential for undesired behavior on the part of CRAs – otherwise the introduction of the NRSRO concept in the US regulatory (1975) does not make sense. Despite this

Specifying the Structural Conditions for Resource Dependence: Resource Dependence as a Function of Macroinstitutional Socioeconomic Contexts

Public regulators' resource dependence should not be conceived as something exogenously given that appears out of the blue to exert causal effects. Rather, structural macroinstitutional⁸ contexts operate as condition variables (CV) shaping the dependence of public regulators on transnational standard-setters' analytical resources. In this context, it is fortunate that RDT, which takes an open systems perspective on organizations, can be situated in the broader category of environmental approaches in organization theory. Environmental approaches claim that in order to explain the behavior of an organization we must take into account the context of that behavior, i.e. "the ecology of the organization" (Pfeffer/Salancik 1978: 1). The ecology of an organization consists of both other organizations and structural environmental conditions. While RDT focuses on the microprocesses arising from organizations' resource dependencies, structural context-oriented approaches acknowledge the macroinstitutional context of microprocesses driven by resource dependencies (Blau 1987: 83f; Cook 1994: 364; Hamilton/Woolsey Biggart 1994: 150f). From that perspective, the best way to organize both internally and in relation to other organizations is contingent upon the nature of the macrostructural environment of the organization(s). Macroinstitutional contexts shape the means-end calculations of organizational actors and, consequently, their activities, their organizational forms and their relations among one another (Hamilton/Woolsey Biggart 1994: 157; Scott 1981: 114). The core of a macroinstitutionally embedded RDT argument would thus be that properties of the relationship between two or more organizations are explained with reference to the relevant organizations' dealing with resource dependencies which in turn are shaped by macroinstitutional context variables.

In now classical studies, proponents of environmental approaches in organization theory have singled out the uncertainty a macroinstitutional environment poses as crucial context variable. Lawrence/Lorsch (1967) argue that environments characterized by uncertainty and rapid rates of change (e.g. in market conditions or

apparent awareness of risks, the use of ratings in regulation continued to expand for a long time (in the US and in other regulatory systems).

⁸ (Macro-)Institutions are sets of (broader) rules and regularities, formal or informal, that actors generally follow no matter for what reasons. They are mechanisms which structure and stabilize behavioral expectations of social

technologies) present different demands on organizations than do placid and stable environments. Organizations tend to match or coalign with these environments. They will seek to establish stable resource flows which contribute to reducing the uncertainty of their environment. Similarly, in Galbraith's studies (1973, 1977), the organizational environment is characterized by the amount of uncertainty it poses for the organization. The organizational design challenge is to select an organizational arrangement appropriate for the environmentally conditioned information processing requirements of the tasks to be performed by the organization (Scott 1981: 114f).

Within the theoretical framework of this study, macroinstitutional socioeconomic conditions are assumed to set incentives for or against delegation of authority to transnational standard-setters in the regulation of (financial) economic affairs by shaping public regulators' dependence on private analytical resources. The (rather abstract) organization theory reasoning on the impact of structural environmental conditions on interorganizational relations can be complemented and specified by studies which pinpoint *more specific* macroinstitutional context conditions for the significance of CRAs in financial governance systems. Nölke/Perry (2007) argue that the significance of CRAs and accounting firms (both belonging to the broader category of transnational standard-setters) in economic governance varies in different varieties of capitalism (VoC). Drawing on these studies, the resource dependence argument on the delegation of regulatory authority to CRAs can be embedded into a macroinstitutional context that is both plausible and conceptualized specifically enough to allow for empirical observation and falsification. It can be hypothesized that the essentiality and substitutability of analytical resources controlled by CRAs are conditioned by prevailing national or regional macroinstitutional socioeconomic contexts, i.e. by different *varieties of capitalism* (cf. Hall/Soskice 2001a).

The VoC approach provides a framework for capturing institutional similarities and differences among economies and for studying how "behavior [of business and political actors] is affected by the institutions of the political economy" (Hall/Soskice 2001b: 4f; cf. Coates 2005; Dyson/Padgett 2005; Lütz 2004). Differences in the macroinstitutional framework of the political economy set incentives and constraints for the behavior of individual and corporate actors in a capitalist system and thus

actors through routines, regularities, norms, consistent patterns of organization and association, etc. (Macro-) Institutions embed and frame utilitarian action (i.e. actors' cost-benefit analysis).

generate systematic differences in business actors' and politicians' strategies across different varieties of capitalism. We can broadly distinguish conceptually between the "Rhenish" variety of capitalism, which has also been termed "coordinated market economy" (CME) and, in somewhat simplifying terms, is characterized by a long-term investment horizon, and the Anglo-Saxon variety of capitalism, which is sometimes referred to as "liberal market economy" (LME) and features a short-term investment horizon (Hall/Soskice 2001b: 8; Nölke/Perry 2007: 127).

CRAAs are a characteristic component of the Anglo-Saxon (LME) variety of capitalism. Due to the different intensities of financial disintermediation and the varying complexity and uncertainty of financial markets, the activities of CRAAs fit better with – and are more important in – LMEs than CMEs (Nölke/Perry 2007: 126f, 129). CRAAs are more important in LMEs since the number and diversity of actors in financial markets and the scope of financial products are larger than in a CME system of intermediated finance where long-term financing through banks is prevalent, the range of financial products is more limited and overall financial market volatility is less pronounced. CRAAs are empowered by deregulated, liberalized, and disintermediated financial markets, because they are more complex and pose higher uncertainty to both private investors *and* public regulators due to larger volatility and because borrowers depend more heavily on an external certification of their credit-worthiness in order to get to capital markets than in a system of intermediated financing.

While the argument of the greater importance of CRAAs in LMEs for investors (dependent on information on the credit-worthiness of borrowers) and borrowers (dependent on a seal of approval of their credit-worthiness for access to capital markets) is pretty straightforward, the linkage with greater dependence of public regulators on CRAAs' analytical resources is somewhat more subtle. Nonetheless, it can be assumed that in a macroinstitutional environment marked by a higher degree of market uncertainty due to a short-term investment horizon of many investors, greater volatility of the financial system, and a lack of control of credit-worthiness through long-term, close bank-borrower relationships public regulators will depend more heavily on the analytical resources of CRAAs. Making use of CRAAs' analytical resources contributes to containing systemic uncertainty, which tends to be higher in more complex and volatile LME financial markets, without much (direct) public interference with market processes. The context conditions of Anglo-Saxon LMEs would thus make CRAAs' analytical resources appear essential for public

regulators pursuing the goals of financial market stability and efficiency through risk-sensitive regulation.

Summary of the Theoretical Arguments and General Hypotheses

The main line of argument and the general hypotheses developed in this section can be summarized as follows: Public regulators, conceived as rational organizations aiming at producing the public goods of financial market stability and efficiency, lack essential analytical resources for the attainment of these organizational goals. External analytical resources are the more essential for the attainment of these goals, the higher the uncertainty and complexity of organizational task achievement which are in turn conditioned by different macroinstitutional socioeconomic contexts, namely different VoC. Public regulators seek to establish relationships with CRAs in order to make use of analytical resources, which are essential for their goal attainment and hard to obtain (i.e. difficult to substitute) from other sources. The relationship that public regulators establish pursuant to their formal-hierarchical authority can be conceived as a PA relationship with a specialized agent. Thus, public regulators delegate governance tasks and regulatory authority to CRAs in order to enhance regulatory effectiveness and efficiency by making use of essential analytical resources. Delegation of regulatory authority necessarily involves some agency costs – in the case at hand: mainly some loss of control over regulated entities and (still rather modest) costs for control mechanisms to avoid agency slack. Public regulators will delegate regulatory authority if the anticipated benefits, in terms of organizational goal attainment, from making use of CRAs' analytical resources are larger than expected (agency) costs.

In a nutshell, we can hypothesize that the higher the (*degree* of) public regulators' dependence on CRAs' analytical resources (independent variable, IV), the higher the (*degree* of) public regulators' use of CRAs' ratings in regulation (dependent variable, DV) will be. The dependence of public regulators on CRAs, i.e. the essentiality and the substitutability of CRAs' analytical resources will be conditioned by the prevailing macroinstitutional socioeconomic contexts (condition variable, CV), with an Anglo-Saxon variety of capitalism (LME) being linked to a considerably higher degree of dependence on CRAs' analytical resources than a "Rhenish" variety of capitalism (CME).

4 Empirical Findings: Interregional and Intertemporal Covariation Analysis⁹

An *interregional* covariation analysis demonstrates that the main variables identified in this study indeed covary systematically across regions. US regulators, under the macroinstitutional conditions of an Anglo-Saxon LME, display a high degree of dependence on CRAs' analytical resources. The use of credit ratings in US financial market regulation is extensive. Continental European regulators, under the macroinstitutional conditions of a CME, face a medium degree of dependence on CRAs' analytical resources. Correspondingly, the use of credit ratings in Continental European financial market regulation is modest.

While the US clearly belongs to the category of Anglo-Saxon LMEs, all Continental European states (still) share a great amount of the features of CMEs. E.g., a recent study by Botzem (2008) on different approaches to accounting standardization presents a categorization scheme for Anglo-Saxon and Continental European economies that confirms Hall/Soskice's original categorization of countries in CMEs and LMEs (Botzem 2008: 48; cf. Hall/Soskice 2001b). While in the sphere of financial relations significant changes in CMEs have taken place in the past decades moving them closer to the Anglo-Saxon model of finance, there are still differences in the corporate financing modes and the banking industry structures between the US and Continental Europe which are pronounced enough to warrant the categorization of Continental European countries as CMEs (Lütz 2004; Lütz/Eberle 2007).

As far as the *essentiality* of CRAs' analytical resources is concerned, the following findings can be summarized suggesting a higher degree of public regulators' dependence on CRAs' analytical resources in the US (cf. Dieter 2008: 14; Hishow 2007: 1ff; Gras 2003: 11ff; Rosenbaum 2004: 20). *Firstly*, the total number and the diversity (i.e. the qualitative scope) of borrowers that are covered by financial market regulatory requirements within the US regulatory system are larger than in Continental European regulatory systems. There is a much broader range of different types of institutional investors engaged in US financial markets, since the financial system is far more disintermediated; the SEC, the US securities market watchdog, thus faces a more complex range of regulated entities with broader

⁹ The following two sections report the main results of a more extensive empirical test of the proposed explanatory framework that was conducted by, and is available from, the author (Kruck 2008). For that test the variables of the theoretical framework had been operationalized (using, inter alia, a proxy variable for "dependence on analytical resources" taken from strategic contingencies theory) and specific test hypotheses had been formulated.

variation in their risk profiles than its European counterparts. The still considerable overall importance of bank lending limits the number and scope of financial market actors in Continental Europe. However, European banks are increasingly invested in risky capital market products themselves contributing to an increase in systemic uncertainty in Continental European regulatory systems as well. *Secondly*, the average complexity of the prevalent financial products in the US financial markets is considerably higher than in the Continental European markets. The US is not only the place where most of the recent financial innovations have been designed; trade in derivatives is larger in volume and more diverse in terms of different types of derivatives than in Continental Europe. The general rule is that the more complex and the less transparent the products, the more important CRAs' analytical resources become. *Thirdly*, the relative volatility of US financial markets is larger than the one of Continental European markets, i.e. prices and interest rates fluctuate more extensively in US markets (World Federation of Exchanges 2008). This increases systemic uncertainty and favors regulation that is risk-sensitive and adjusts to credit risk exposure over time. In sum, these indicators suggest that the essentiality of CRAs' analytical resources is high for US public regulators, whereas it is only medium for Continental European public regulators. While the dependence on CRAs' resources is lower for Continental European regulators, it is by no means negligible. This finding is nicely illustrated by a statement of Otto Bernhardt, finance policy spokesman for the parliamentary group of the German Christian Democrats (CDU), saying that "[a] world without rating agencies is no longer conceivable. Banks, private investors and even supervisory authorities depend on the views of the (rating) evaluators" (Bernhardt, in: Reuters 2007).

As to the *substitutability* of CRAs' uncertainty coping capabilities in the US and in Continental Europe, clear differences in substitutability can be identified. The number of alternative sources of credit risk information in Europe is limited, and some of these alternative sources such as central credit registers (CCRs) and central financial statements databases (CFSDs) are plagued with shortcomings; but the substitutability of CRA' uncertainty coping capabilities is clearly higher than in the US (cf. Estrella 2000: 55ff). Overall, the substitutability of CRAs' analytical resources for Continental European regulators is at a medium level. Renouncing the use credit ratings in regulation would put US regulators in an "awkward position of having to find a substitute", which would in fact be hard to do (Kerwer 2004: 20), and would basically lead to relying on institutional investors' and banks' internal risk

assessment procedures. A substantial proportion of American banks have been not keen at all on being “allowed” to conduct their own credit risk assessments (cf. Becker 2007: 85f, 90). On the contrary, they have advocated the use of credit ratings in regulation. Thus, the substitutability of CRA’s uncertainty coping capabilities for US regulators is low. In sum, the dependence of US public regulators on CRAs’ analytical resources is high, while it is at a medium level for Continental European public regulators.

Correspondingly, the use of credit ratings in regulation can be termed extensive in the US since 1) a large absolute number of US financial market regulations issued by a variety of public regulators reference NRSROs’ ratings; 2) the scope of the use of credit ratings for regulatory purposes is broad, comprising a large number of distinct regulatory purposes in banking regulation, securities regulation, insurance regulation, and further specific issue areas of financial regulation; 3) there are several US rules which strictly *mandate* credit ratings in a way that addressees can only fulfil the regulatory duties imposed by the regulation through a (good) rating. Reference to a (good) rating is compulsory in that addressees of rules can meet regulatory requirements *only* when obtaining a certain rating. In contrast to that, public regulators in Continental Europe make modest use of CRAs’ ratings in financial regulation. For sure, there *is* regulation referring to CRAs’ ratings: most importantly, the 2006 BD and CAD implementing the Basel II provisions, and even earlier the 1993 CAD on market risk assessment of banks; however, both the absolute number and the scope of regulations referencing credit ratings is limited. Banks may opt for an internal ratings-based procedure (which must be recognized by the competent national authority) or even renounce any rating. Under the standardized approach of Basel II, unrated credit claims receive a risk weight of 100%: Thus renouncing the use of any rating procedure will cost the banks capital reserve discounts that are possible in the case of good (external and internal) ratings; however, banks are still able to fulfil regulatory requirements imposed by European legislators and regulators without being compelled to make use of ratings. In combination, these indicators display a modest use of credit ratings for regulatory purposes in Continental Europe.

An *intertemporal* covariation analysis shows covariation of CV, IV, and DV of this study over time. The breakdown of the Bretton Woods system of fixed exchange rates (1973) and the ensuing deregulation and globalization of financial markets

have not only led to an exponential growth of the volume of transnational flows of capital and to a global integration of money, currency and capital markets which has made national financial markets more vulnerable to external shocks and contagion in the case of financial crises. Macroinstitutional arrangements in CMEs have also come under increasing pressure, to the extent that there has been a tendency in most developed (and some emerging) economies to move (at least) closer to the Anglo-Saxon finance model. Deep “infrastructural” changes could be observed in the financial systems of numerous CMEs: The relationship between banks and industry has changed profoundly under the conditions of globalization. Tendencies of securitization and disintermediation in the credit business have gained momentum also in CMEs (cf. Nölke/Perry 2007; Lütz 2000).

There is ample evidence that around the world, the degree of uncertainty posed by financial markets has increased tremendously in terms of a larger number and a broader scope of financial market actors, a growing average complexity of the prevalent financial products, and an increasing volatility of financial markets (Filc 2008: 5ff; Gras 2003: 11-14; Speyer 2006: 103). Since the 1970s, the *number of financial market actors* offering and seeking capital has risen significantly; in addition to that, the scope of financial market actors has become much broader, too, with large institutional investors (i.e. transnationally operating insurance companies, pension and investment funds, state-owned investment funds, hedge funds, etc.) becoming crucial capital market actors. In combination with the increasing number of market actors, the creation of *new complex financial instruments* due to financial innovation and modern communication technology which makes it possible to instantaneously manage large volumes of short-term financial products has led to a growing complexity and uncertainty in global financial markets. There has been a proliferation of new, ever more complex financial market instruments which account for both the growth of the financial sector in most countries and an increase in financial market uncertainty. This development was in no way limited to the US and the UK though it played out at a slower pace and with weaker intensity in Continental European economies. The EU Commission and the Council have propagated for years to open up the European financial sector for global competition (Hishow 2007). This has also affected the business of European banks which for a long time had been considered rather “conservative” in their investment strategies. Financial market deregulation has *enabled* and intensified global competition has “*forced*” banks to create and trade in

ever more complex financial products whose construction is hard to comprehend even for the originators of the products. The increase in transnational flows of capital and the rise of short-term investments by a variety of market actors have led to *higher average market volatility*. The shift to floating exchange rates and the deregulation of financial markets have entailed a loss of institutional precautions limiting the volatility of financial markets. The volatility of prices and interest rates on global financial markets has grown significantly. This has contributed to systemic uncertainty and favored the occurrence of financial crises (Filc 2008).

In sum, global changes in the macroinstitutional context conditions of financial markets which amounted to a move closer to the Anglo-Saxon model of finance have favored the rise of market actor constellations, financial products, and process features of financial markets that increase systemic uncertainty. Even in the absence of major crises, the complexity, the lack of transparency, and the degree of volatility of financial systems have become hard to handle for supervisory authorities around the world. Financial markets, not only in the US and the UK, but also in Continental Europe, have become highly uncertain territory for all those who depend on a stable environment and reliable expectations for the attainment of their goals. This suggests that CRA's uncertainty coping capabilities have become ever more significant for both investors and regulators around the world. This diagnosis is further corroborated by the findings of numerous scholars that public regulators are indeed increasingly overwhelmed by the sheer quantity of information on the credit risk of diverse financial market actors, by the complexity of the information to be processed, and by the speed of financial market changes. These developments make fixed bureaucratic rules neglecting (temporal) variation in credit risk appear inadequate while private actors' analytical resources have become crucial for (systemic) risk assessment (cf. Tsingou 2008).

As to the evolution of the *substitutability* of CRAs' analytical resources, there are indications that, while the essentiality of external private expertise for designing and implementing risk-sensitive financial market regulation has increased significantly over time, the number of accessible and functionally adequate private sources for analytical resources has in fact remained limited (cf. Estrella et al. 2000: 55ff; Kerwer 2004: 20). One option for public regulators is to rely on investors' or banks' publicly approved procedures of (self-) assessment of the risk implied in the investments they make or the credits they issue. However, this always implies strong incentives for underestimating risk and creates a potential for moral hazard.

In other words, entrusting private financial institutions involved in financial deals with assessing the risks of these very deals requires public regulators to set detailed and “intelligent” framework provisions on how the internal rating procedures must be designed to avoid moral hazard. It will necessarily require a considerable amount of trust on the part of public regulators into the reliability and integrity of financial institutions’ self-assessment of risk exposure. As these conditions will not always be met, relying on independent external risk assessment will in many cases be an attractive option for public regulators. While, in particular within the EU, there is a limited number of alternative sources of credit risk information apart from CRAs, the analytical resources these institutions offer tend to become less adequate for public regulators’ goal attainment the more the entities whose risk exposure they are to measure are operating transnationally. This is because at least some of these other credit risk assessment institutions do only operate within national jurisdictional boundaries (Estrella et al. 2000: 57). In brief, if public regulators do not want to rely on internal ratings-based procedures, the range of alternatives to CRAs is limited and the usefulness of these other sources decreases with the increasing transnationalization of financial markets. Thus, for the past two to three decades the substitutability of CRAs’ analytical resources has at the very least not increased. In fact, there are good reasons to argue that it has decreased. In combination with the earlier finding that the essentiality of CRAs’ analytical resources has increased considerably around the world, this means that dependence on CRAs’ analytical resources has increased in the past three decades – not only in the US but also in Continental Europe. We should thus expect to be able to observe an expansion and an increase in the use of ratings in regulation over time.

The actual intertemporal development of the use of CRAs’ ratings by national and international public regulators corresponds to this expectation. As outlined above, the use of ratings in financial regulation was initially limited to the US. However, since the late 1980s/early 1990s, the use of credit ratings for regulatory purposes has expanded beyond the US to other developed economies and emerging markets. Not only the geographical reach but also the number and scope of regulations that reference CRAs has increased significantly as evidenced e.g. by the boom of ratings-dependent regulation in the US in the 1980s and 1990s. In sum, the intertemporal covariation analysis reveals covariation of the condition variable, the independent variable and the dependent variable of this study over time.

5 Empirical Findings: Process Tracing the Road to Basel II

In this section, I examine in how far the national positions of the US and German negotiators in the Basel II process corresponded to the causal argument of the theoretical framework developed in this paper.

There was a consensus among negotiators on some major necessities and the general regulatory approach to be taken in banking supervision. Negotiators saw a need for closer alignment of the regulatory framework and market practice in order to promote market stability and efficiency. For that purpose, more flexibility and risk-sensitivity in regulation and thus more sophisticated rules were deemed necessary. The preference for flexible regulation that should be in tune with markets and make use of disciplining market forces was by no means a singular US position but was (in varying intensities) common to all BCBS members, including Germany. There was also agreement that non-state actors (i.e. banks and/or CRAs) should not only have a consultative role in the drafting of the accord, but would first of all be significantly involved in its application and enforcement (Speyer 2006: 111f; Tsingou 2008: 60). Among BCBS members, readiness for reliance on private-sector know-how and the recognition of market-based standards based on private expertise (involving a transfer of regulatory authority to private sources) had increased and a general inclination to make use of private actors' capacities in banking supervision in order to mitigate systemic risk was shared among the BCBS members (Tsingou 2008: 64). However, the degree to which German and US regulators were willing to rely on CRAs as a specific type of private actor taking on (quasi-)regulatory tasks clearly diverged.

The most critical issue that was contested between German and US negotiators referred to the *use of internal rating procedures* (done by banks themselves) or *external rating procedures* (done by approved CRAs) in the measurement of banks' exposure to credit risk (Becker 2007: 86f; Nölke/Perry 2007: 131; Sinclair 2005: 46). US regulatory agencies pushed for "considering greater use of external ratings for determining capital requirements for a *broad range* of exposure" (US Department of the Treasury 2005, quoted in Becker 2007: 86; my emphasis). German representatives were unfamiliar with the use of credit ratings in regulation and feared that accepting external ratings as the only major procedure for credit risk assessment would entail a competitive advantage for US banks and firms. They therefore pushed for the introduction of an alternative internal ratings-based approach. German negotiators made a strong case that at least sophisticated credit

institutions with extensive analytical capacities should be allowed “to assess all (...) risk parameters themselves. The risk evaluation system developed by the bank must be approved by the BaFin” (German Ministry of Finance, quoted in Becker 2007: 87).

Thus, it seems that one reason for insisting on the possibility of internal ratings-based procedures was the belief of German regulators in the adequacy of banks’ own analytical resources, i.e. banks’ capabilities of coping with financial market uncertainty. In contrast to that, US authorities justified the late implementation of the Basel II provisions with US banks’ inability to quickly install the new, more complex requirements and procedures of Basel II. Interestingly, some US banking associations themselves favored the use of external ratings rather than pleading for being allowed to use their own internal ratings in the calculation of capital requirements: “ICBA [Independent Community Bankers of America, AK] also agrees with the concept of using external credit ratings to enhance the risk sensitivity of the Basel risk-based capital rules” (ICBA, quoted in Becker 2007: 90). Thus, while the essentiality of private analytical resources seems to have been high for both US and German regulators, the substitutability of these resources varied. There was a stronger belief on the part of German regulators that, apart from CRAs, banks would be another reliable source of uncertainty coping capabilities needed for the attainment of financial market stability and efficiency. Thus, CRAs’ analytical resources were more easily substitutable for German regulators; only with less sophisticated smaller banks CRAs’ uncertainty coping capabilities should be difficult to substitute. Given a high essentiality of analytical resources and a medium substitutability for German regulators, we can designate German regulators’ overall dependence on CRAs’ analytical resources as “medium”. The medium value of the IV “dependence on CRAs’ analytical resources” thus corresponds to Germany’s position to include as an alternative to CRAs’ external ratings internal ratings-based procedures for sophisticated banks into the Basel II Accord. This is in line with the main argument of the theoretical framework of this study.

6 Conclusion

This study has sought a theory-based explanation for the use of credit ratings in financial market regulation. For that purpose, a macroinstitutionally embedded resource dependence perspective on the delegation of regulatory authority to CRAs has been proposed: Public regulators delegate (additional) regulatory authority to

CRAAs because they perceive themselves as dependent upon, and seek to make use of, CRAAs' analytical resources which are both essential for public actors' organizational goal attainment and hard to obtain from alternative sources. The dependence of public regulators on CRAAs' analytical resources is in turn conditioned by the prevailing macroinstitutional socioeconomic context, i.e. different varieties of capitalism. The results of an interregional and intertemporal covariation analysis and a process-tracing exercise briefly reported in sections 4 and 5 (cf. Kruck 2008 for a more detailed empirical analysis) underline the plausibility of the theoretical framework developed in this study. The core hypothesis that the higher the degree of public regulators' dependence on CRAAs' analytical resources, the higher the degree of public regulators' use of CRAAs' ratings in regulation will be, has been corroborated. There has also been empirical evidence that public regulators' dependence on CRAAs' analytical resources is contingent on macroinstitutional socioeconomic contexts. Dependence on CRAAs' analytical resources and thus the use of ratings in financial market regulation seem to be (systematically) higher in an Anglo-Saxon variety of capitalism (LME) than in a Rhenish one (CME).

Nonetheless, there remain open questions which call for further research. While the main theoretical arguments of this study are supported by a multi-method plausibility probe, further studies should more thoroughly assess the explanatory merit of the proposed theoretical framework relative to alternative approaches. In a competitive test design, hypotheses from other theoretical perspectives should be taken into consideration as well. E.g., an alternative hypothesis derived from an International Political Economy (IPE) perspective would argue that the interests of a politically influential and well-organized financial industry prevent direct public regulation and oversight and make public regulators rely on "market-friendly" oversight mechanisms. A research design which also tests alternative approaches would contribute to further specify the explanatory value of the proposed theoretical framework.

Moreover, further research should systematically compare the relationship between public regulators and CRAAs to other delegatory relationships. As pointed out earlier in this paper, CRAAs have their own sources of genuinely private authority. The social fact that CRAAs are private authorities – not (only) by the grace of the state but also in their own right – differentiates them from other subordinate regulatory agencies which are created and funded by a public principal and whose political authority is *solely* delegated authority. This difference raises conceptual, theoretical and policy-

related issues which would merit closer consideration beyond the scope of this paper. CRAs' status as private authorities might imply that their relationship to public regulators should be conceived as a particular variant of principal-agent relationships which is to be distinguished from more conventional PA models of delegation. The specific nature of the relationship between CRAs and public regulators might also help to explain the particular difficulties regulators seem to face when trying to hold CRAs accountable (cf. Kerwer 2004).

Finally, CRA's role in the recent global financial crisis calls for a theoretically informed outlook on the future use of credit ratings in financial regulation. In the search for the culprits for the financial market turmoil which started out as a US subprime mortgage crisis in 2007 and has evolved into a severe global financial and economic crisis, CRAs have become one of the main targets of criticism by both politicians and media. Indeed, CRAs have contributed to the market turmoil by greatly underestimating the credit risk of complex structured finance products. Mortgage-backed collateralized debt obligations (CDOs) had been rated AAA despite poor underlying credit quality. Investors around the world relied on the very good credit ratings for these packaged securities and bought the mortgage-backed CDOs without being aware of the credit risks implied in those complex structured finance products. CRAs have been blamed for downgrading mortgage-backed securities far too late and for failing to develop adequate risk models to identify risks and value those products properly (The Economist 2007). In fact, it is safe to argue that by failing to evaluate these structured finance products properly and putting their "stamp of approval" concerning adequate protection against default risks on them, CRAs have contributed to both the intensity and the geographical reach of the current financial crisis. A lot of the issues surrounding the global financial crisis and CRAs' role in it are still in flux. It is still difficult to make reliable statements on the crisis' consequences for both regulation *by* CRAs and regulation *of* CRAs. However, some recent regulatory developments in the US and the EU and their implications for the validity of the theoretical framework proposed in this study should be highlighted.

In July 2008, the SEC proposed a set of interrelated rules (cf. SEC 2008) which aimed at limiting the influence of CRAs in US financial market regulation, more precisely in securities regulation. The SEC is not the only US supervisory body using credit ratings for regulatory purposes and other bodies have not expressed any intent to change regulations relying on CRAs' credit ratings so far. Nonetheless,

the proposed SEC rules, whose adoption as “final rules” is still pending, would significantly curb the publicly sanctioned use of ratings for regulatory purposes in the US. The SEC proposes to strip references to NRSROs from more than 30 of its rules. Stripping references to NRSROs from SEC rules would end the SEC’s regulatory endorsement of CRAs’ ratings and shift responsibility for the assessment of the quality of investments back to investors. This would be a significant shift in terms of formal attribution of responsibility and an attempt to prod investors to conduct greater credit analysis on their own. Since financial market actors would no longer be *obliged* by SEC rules to rely on CRAs’ ratings, responsibility for the wrong assessment of investment quality could be attributed more clearly to investors – rather than CRAs, whose legal liability is limited, or even the SEC, which sanctioned the use of ratings but failed to clearly define responsibilities for (grave) failures in risk assessment.¹⁰ However, the SEC proposal has been kept in limbo rather than being passed as a final rule for a year now. In the same timeframe, a number of proposals aiming at better oversight and control of CRAs have been passed, which has led observers to speculate that the reduction of the regulatory use of credit ratings might not be pursued wholeheartedly (vgl. Wharton 2008). However, the issue has recently been picked up again in President Barack Obama’s June 2009 plan for a general overhaul of the US financial system, which included a brief appeal to regulators to “reduce” the regulatory use of ratings.

The option to stop using credit ratings for regulatory purposes was raised not only in the US. German financial policy-makers threatened as early as in summer 2007 that German supervisory authorities “would either stop using the assessments of rating agencies, or we’ll fold the rating agencies’ voluntary [IOSCO] code of conduct into a reform by law”, but also added that “[a] world without rating agencies is no longer conceivable. Banks, private investors and even supervisory authorities depend on the views of the (rating) evaluators” (Bernhardt, quoted in: Reuters 2007). Stopping the use of ratings in national regulatory systems within the EU would be politically costly since the regulatory use of credit ratings in Germany and other EU countries is based on the supranational Banking and Capital Adequacy Directives which in turn incorporate the main Basel II provisions into EU law. Thus,

¹⁰ However, US regulators are well aware that the proposed rule changes might not change much in terms of investors’ actual reliance on NRSROs’ ratings. In that vein, Erik Sirri, the SEC’s director of trading and markets, said that the release of the proposed SEC rules provided investment firms with two paths – they could either continue to rely heavily on NRSROs or they could craft their own mechanisms to analyze investment quality: “As a practical matter, I think the large number of broker-dealers (...) will continue to make use of NRSRO ratings. But they *need not*” (Sirri, quoted in Ackerman 2008; my emphasis).

a withdrawal from the use of credit ratings in one European country would require a number of difficult regulatory revisions on different political levels. In other words, the regulatory use of credit ratings seems to be institutionalized in a way that makes it hard, though certainly not impossible, to reverse the decision for the use of credit ratings.

At the same time, regulatory initiatives for stronger oversight and control of CRAs' activities have been taken in both the US and the EU. The SEC has devised additional disclosure, transparency and reporting requirements for NRSROs (SEC 2009) which go beyond the previous requirements of the Credit Agencies Reform Act 2006 and concretizing 2007 SEC rules. On the EU-level, even more stringent regulations have been devised after European policy-makers had come to the conclusion that the voluntary Code of Conduct for CRAs issued by IOSCO (2004, revised in 2008) had not had the desired effects of ensuring the reliability and integrity of the rating business. Thus, a European Commission regulatory initiative that was approved by the European Parliament in April 2009 puts in place a European registration and external oversight regime for CRAs whereby European regulators will supervise the policies and procedures followed by CRAs active in Europe. Besides procedural provisions on the new mandatory registration process coordinated by the Committee of European Securities Regulators (CESR), the Regulation also imposes further regulatory requirements on CRAs including measures to prevent conflicts of interests through in-house rotation, disclosure requirements concerning CRAs' risks models, rating methods and basic assumptions, a ban on rating consultancy services for companies that are to be rated, and the issuance of transparency reports that list large customers and outline the measures taken by the agency to ensure the quality of its ratings.

Thus, (more or less far-reaching) regulatory measures to ensure stricter public oversight and control of CRAs have been initiated and will be implemented in the foreseeable future. In the wake of the global financial crisis, public regulation of CRAs' activities has increased, in particular in the EU but to a more limited extent also in the US. As far as the future use of credit ratings in financial regulation is concerned, the picture is less clear. Nonetheless, the possibility of a reduction in the use of credit ratings in US securities regulation is real.

The establishment of stricter registration and control mechanisms for CRAs poses no problems to the theoretical framework. On the contrary, it corresponds to PAT's assumption that principals will design and implement control mechanisms to

prevent agency slack. It can also be situated into a trend to (modestly) tighten selection criteria and procedures for the recognition of CRAs for regulatory purposes which had started even before the 2007 US mortgage crisis (e.g. in the US CRA Reform Act 2006 and in the 2006 EU and German implementation of Basel II). As CRAs have obviously displayed behavior undesired by public regulators, regulators have corrected their wrong assumption that market discipline and CRAs' reputational concerns would render tight public oversight of CRAs' behavior unnecessary. From that perspective, introducing a control regime for CRAs is merely the correction of a previous failure to design administrative and oversight procedures that are adequate given the impact CRAs make (also) due to their status as holders of states-sanctioned regulatory authority.

Things are more complicated with US proposals to strip references to NRSROs from numerous securities regulations. This calls into question the validity of the RDT argument proposed in this paper. Given that both the essentiality and substitutability of CRAs' analytical resources for public regulators should not have changed significantly, a final decision to curb the use of credit ratings in US financial regulation would appear puzzling from the perspective of RDT. However, there are several lines of argument which might allow us to grasp and explain the (possible) reduction of the use of credit ratings in regulation with only minor modifications to the proposed theoretical framework.

Nölke (2004: 167) has argued that CRAs' analytical resources are less stable than material resources, "since they may be severely affected by perceived rating miscalls. Thus, the reputation as global experts for debt quality, which has been accumulated by rating agencies over decades, may be eroded quickly." By consequence, relationships based on dependence on CRAs' analytical resources should also be less stable and more vulnerable to interruption or even termination when the belief of public regulators in the quality of CRAs' expertise is eroded by CRAs' failure to adequately assess credit risk. In other words, public regulators conceived as rational organizations may decide to terminate their reliance on other, external organizations, i.e. CRAs, when the (analytical) resources which these external organizations control prove inadequate for organizational goal attainment, even though the kind of analytical resources these external organizations were presumed to offer are still important for public regulators and difficult to get elsewhere. This argument reflects assumptions of earlier organization theorists (cf. Hickson et al. 1994: 198): Only if an organization can *effectively* manage uncertainty

that confronts another organization and in doing so protect the other organization from disturbing effects in organizational task achievement, will the external organization's resources for coping with uncertainty become the basis of a continued dependence relation. One could thus make the case that once an IOR has been established *the ongoing performance* of an external organization in the provision of crucial and hardly substitutable (analytical) resources must be considered another determinant of resource dependence in general and of public regulators' use of CRAs' credit ratings in particular.

Another argument refers to public regulators' organizational goals. The *essentiality* (more precisely, the *criticality*) of immaterial resources such as analytical resources depends on the objectives of the organization at hand (Edele 2006: 62). In the case of public regulators, these goals were assumed to be both financial market stability and efficiency. Now, it is not self-evident that financial market stability and efficiency necessarily go hand in hand even though proponents of financial market liberalization would like to have it that way. After a major financial crisis such as the current one, public regulators might well focus on designing more rigorous rules (e.g. imposing higher *fixed* capital reserve requirements for banks) that seek to ensure, first and foremost, financial market stability even if that would entail some losses in terms of financial market efficiency because it would impose higher capital costs on financial market actors. While the use of credit ratings has been expected to serve the purpose of designing risk-sensitive, sophisticated and thus efficient regulation, public regulators might intentionally opt for a less flexible and less market-friendly, but more restrictive regulatory approach in regulation that deliberately foregoes some efficiency gains of flexible regulation in favor of more stability (i.e. protection against major crises). If this was the case, the essentiality of CRAs' analytical resources and thus the propensity to use credit ratings in financial regulation might be reduced.

Necessarily, these concluding thoughts are still somewhat speculative. It will certainly take more time until a clearer picture of the regulatory consequences of the current global financial crisis will have emerged. While stricter public oversight of CRAs seems certain, the future extent of the use of credit ratings in regulation is doubtful. Besides the growing salience of Asian Varieties of Capitalism, even a (partial) reversal of the global macroinstitutional trend towards an Anglo-Saxon model of finance seems possible right now, which, according to the argument of this paper, would imply a decrease in the use of credit ratings as regulatory tools.

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