UNIVERSIDADE DE LISBOA

Instituto Superior de Economia e Gestão

BANCA, CRÉDITO E ORGANIZAÇÃO SOCIAL

CONTRIBUTOS PARA A SOCIOLOGIA DOS MERCADOS FINANCEIROS

Daniel Alexandre da Silva Seabra Lopes

Tese especialmente elaborada para a obtenção do grau de Doutor em Sociologia Económica e das Organizações, apresentada nos termos do artigo 28º do Regulamento de Estudos de Pós-Graduação da ULisboa.

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INTRODUÇÃO GERAL

Nova Iorque, Domingo de 14 de Setembro de 2008: o banco de investimento Lehman Brothers anuncia publicamente a sua falência enquanto outro banco de investimento em dificuldades, o Merril Lynch, escapa a esse trágico desígnio ao conseguir negociar a sua compra pelo Bank of America. Estes factos repercutem-se de forma dramática na bolsa de valores, com o índice Dow Jones a sofrer uma queda acentuada na segunda-feira seguinte. A data de 15 de Setembro de 2008 marca o início simbólico de uma crise financeira cujas ondas de choque assumirão rapidamente proporções globais. Na origem desta crise, os chamados derivados de crédito: produtos conhecidos sobretudo através de siglas como ABS (*Asset-backed Securities*), CDO (*Collateralized Debt Obligations*) e CDS (*Credit Default Swaps*), consistindo no empacotamento maciço de títulos assentes em contratos de crédito a particulares ou empresas (ou nas respectivas permutas de incumprimento) e que, durante algum tempo, foram avidamente transaccionados em mercados de balcão. A desvalorização sofrida por estes produtos, aliada ao peso que os mesmos haviam adquirido no balanço de diversos bancos um pouco por todo o mundo, trará problemas que se reflectirão em praticamente todos os sectores da finança — não apenas na banca, nos mercados de valores mobiliários e nos seguros, mas igualmente na dívida soberana (dado que muitos bancos terão de ser resgatados com dinheiro público para não declararem falência) e até na própria moeda.

A importância do colapso bolsista de 15 de Setembro de 2008 pode aferir-se pelo alcance da sua propagação tanto no espaço como no tempo. O evento é noticiado com grande destaque em todos os países do primeiro mundo, enquanto outras praças financeiras importantes — Londres, Tóquio, Paris, Frankfurt — reproduzem a queda a pique de Nova Iorque. E, de modo quase instantâneo, os media relembram a Quinta-feira Negra de 24 de Outubro de 1929, antecipam os efeitos que em breve se farão sentir em muitos outros sectores da economia e invocam o New Deal para falar de reformas financeiras que deverão ser implementadas a curto prazo, num exercício comparativo que outorga aos acontecimentos em curso uma profundidade histórica pouco usual. O mesmo se passa na academia, com uma quantidade de eventos, projectos de investigação, redes científicas, artigos e livros dedicados à crise de 2008 (para darmos apenas um exemplo relativo à sociologia, veja-se Lounsbury e Hirsch, 2010), à mistura com uma revitalização de autores clássicos das ciências sociais como Marx, Polanyi ou Keynes...

Embora a última crise financeira global não seja o objecto prioritário da presente investigação, ela atravessa-a de modo claro, tanto a nível empírico como teórico. Em primeiro lugar, esta é uma investigação fundada num trabalho de campo etnográfico realizado em dois bancos portugueses entre Maio de 2008 e Abril de 2009 — ou seja, de certo modo acompanhando as primeiras convulsões no sector —, e que procura seguir a pista dos produtos de crédito desde a sua concepção nos departamentos de marketing à sua titularização nos departamentos financeiros, passando pela sua monitorização nos departamentos de risco. Em segundo lugar, e não obstante as suas limitações, esta investigação não pode deixar de se inserir no mesmo movimento de interrogação da finança a partir de um ponto de vista sociológico que a crise ajudou a tornar relevante.

O objectivo mais geral deste trabalho é o de compreender o funcionamento do crédito bancário a partir de dentro, ou seja, tendo em conta o modo como esse mesmo crédito é gerado e gerido no interior dos bancos. Não são muitos as investigações de sociologia qualitativa consagradas a este assunto e, se tivermos em conta a aplicação de uma abordagem etnográfica intensiva ao universo da banca de retalho, chega a ser possível contá-las pelos dedos de uma mão. Em Portugal, tais abordagens são praticamente inexistentes, o que poderá parecer estranho, tendo em conta a centralidade do crédito bancário na nossa economia e, sobretudo, a sua progressiva disseminação na sociedade sob a forma de empréstimos à habitação, crédito pessoal e cartões de crédito ao longo da última década do século passado. Pode mesmo falar-se, a este respeito, de um reforço do processo de bancarização a partir do estabelecimento de novas relações de dívida destinadas a complementar os rendimentos decorrentes das relações salariais ou a substituir os apoios estatais nas áreas da educação superior ou até da saúde — apoios que, entretanto, se foram tornando mais raros —, consolidando a posição intermediária dos bancos na criação, canalização e regularização de grandes fluxos de dinheiro.

Mas compreender o funcionamento do crédito implica conhecer também as articulações entre a banca de retalho de âmbito local ou regional (muitas vezes denominada também de 'baixa finança') e o mundo veloz e globalmente sincronizado dos mercados financeiros (ou 'alta finança'). Trata-se de duas dimensões que, durante várias décadas, se mantiveram legalmente separadas, mas cuja rearticulação foi negociada e posta em prática nos Estados Unidos, ainda durante a administração Clinton, sendo acompanhada por ajustamentos semelhantes em muitos outros países da Europa (incluindo Portugal) durante a segunda metade dos anos 1990 e no início dos anos 2000.

Evidentemente, uma das discussões trazidas pela crise de 2008 foi a da importância de reinstituir a separação entre estes dois lados da finança, mas a verdade é que, até hoje, não foi implementada nenhuma reforma comparável à da célebre Lei Glass-Steagall de 1933.

Ora, estudar duma forma sociológica e etnograficamente motivada o funcionamento do crédito e as articulações que, através do crédito, se estabelecem entre a baixa e a alta finança, implica entrar no mundo quotidiano dos gestores de produto, dos analistas de risco, dos *traders* e analistas financeiros para conhecer os seus conceitos, o seu trabalho, as suas práticas formais e informais, os seus ritmos, os seus modelos de cálculo, a sua disciplina organizacional, os instrumentos e dispositivos tecnológicos que usam, os regulamentos e leis a que têm de obedecer. Toda e qualquer investigação etnográfica depende do cultivo de relações de colaboração profícuas com pessoas que pertencem ao universo que queremos estudar, mesmo quando o objectivo prioritário é o de compreender acções, mecanismos e processos organizacionais (como é o caso dos processos financeiros em sentido lato, e do crédito como modo de articulação entre a baixa e a alta finança) e não tanto percursos profissionais ou biográficos. Será assim também no presente caso.

O conteúdo do presente trabalho é composto por cinco artigos publicados em língua inglesa entre 2011 e 2017. Apenas a introdução geral e as considerações finais são inéditas, tendo por função tornar mais claros os nexos entre o material publicado e apontar possíveis vias de reflexão futura a partir dos dados empíricos recolhidos. Esta introdução geral está dividida em quatro secções. A primeira secção faz um ponto de situação das análises sociológicas em torno da finança que serviram de pano de fundo a esta investigação. Trata-se, se quisermos, de um enquadramento teórico de base que será mobilizado, aprofundado e discutido em função de dados empíricos mais precisos nos artigos que dão corpo a este trabalho. A segunda secção da introdução geral opera uma focalização em torno da literatura sociológica dedicada ao universo bancário, começando por analisar o fenómeno da bancarização antes de proceder a uma revisão de alguns trabalhos focados na banca e nos produtos de crédito. A terceira secção consiste numa exposição metodológica, apresentando as instituições onde foi efectuado o trabalho de campo e descrevendo as técnicas de pesquisa usadas no terreno. A quarta e última secção da introdução geral resume o teor dos artigos incluídos nesta dissertação.

A FINANÇA COMO OBJECTO SOCIOLÓGICO

Dum ponto de vista teórico, esta pode ser considerada uma investigação em sociologia económica, tendo especialmente em conta as ligações desta área com os estudos sociais de finança, com os debates em torno da governamentalidade (Foucault) e, num sentido mais metodológico, com a etnografia organizacional. Trata-se, nestes três casos, de campos de investigação multidisciplinares — congregando sociólogos, antropólogos, geógrafos, historiadores, cientistas políticos e economistas —, mas para os quais é possível olhar a partir de um ponto de vista eminentemente sociológico e que encontra o seu fundamento em autores clássicos das ciências sociais como Marx, Durkheim, Weber ou Simmel. Se tivéssemos que caracterizar, duma maneira abreviada, as perspectivas sociológicas sobre os assuntos económicos e financeiros, diríamos serem perspectivas alternativas ao paradigma racionalista da economia neoclássica, o qual tende a encarar as acções dos agentes económicos como o resultado de decisões individuais obedecendo a interesses de cariz utilitário e contextualmente neutros, incluindo a procura de vantagens através da redução de custos ou da poupança de tempo. Neste sentido, a sociologia económica oferece uma visão tradicionalmente mais atenta às complexidades e particularidades de cada contexto.

Não será exagero afirmar que a sociologia se encontra, desde os seus primórdios, especialmente vocacionada para a discussão de assuntos de natureza económica, a começar pelos efeitos indesejados da reorganização produtiva decorrente da industrialização que afectaram a coesão de tantas comunidades locais inglesas durante a primeira metade do século XIX e tornaram inevitável a emergência de um pensamento sociológico propriamente dito. Nas palavras de Polanyi, discorrendo acerca das reflexões inaugurais em torno das repercussões da industrialização ([1944] 2001: 88): «Foi descoberto um mundo de cuja existência nem sequer se suspeitava — o das leis que governam uma sociedade complexa». A predilecção por temas como a constituição dos mercados, a formação do valor económico, a origem das desigualdades sociais e da pobreza, a função da moeda ou a divisão do trabalho é indesmentível nas obras de Marx, Durkheim ou Weber, sendo igualmente notória em autores como Tarde, Simmel e mesmo — entrando por legados que tanto dizem respeito à sociologia como à economia — Schumpeter ou Tönnies... Mas vamos resistir à tentação de reconstituir a história da sociologia económica desde os seus primórdios, tendo em conta que lidamos com um objecto empírico muito concreto e que ganhou uma importância acrescida após a crise de 2008. Reportemo-nos, para já, aos desenvolvimentos em torno do tema da finança, considerando quatro problemas que, cada um à sua maneira, também ajudam a circunscrever o domínio teórico da sociologia económica contemporânea: incrustação, performatividade, governamentalidade e crítica.

A Nova Sociologia Económica e o problema da incrustação

O ponto de partida é simples. Designa-se por «nova sociologia económica» um conjunto de estudos sociológicos que, com base em premissas avançadas por Karl Polanyi e consideravelmente revistas por Mark Granovetter (1985), tem sublinhado a «incrustação», o «encastramento» ou o «acoplamento» — conforme as diferentes opções de tradução para a expressão inglesa *embeddedness* — dos processos económicos, ou seja, a sua necessária inserção num complexo de relações sociais pontuadas por laços familiares, de classe, de género, de profissão, de amizade, de vizinhança, etc., tornando esses processos económicos consequentemente vulneráveis aos parâmetros da interacção e a outros factores de índole social, cultural ou política. Embora a consistência teórica e a própria viabilidade deste olhar sociológico sobre a economia tenham suscitado diversas interrogações (por exemplo, Graça, 2005), deixemo-nos, para já, guiar por Richard Swedberg ([1997] 2001: 166-167), que distingue três correntes dentro da nova sociologia económica: a teoria das redes, onde se destaca o mesmo Mark Granovetter; a sociologia cultural, onde sobressaem Viviana Zelizer (1988; 1989) e Paul DiMaggio (1990), autores que têm sublinhado a importância de um contexto cultural e político como suporte da incrustação em redes de relações sociais; e a teoria da organização, muito centrada na estrutura e no modo de funcionamento das instituições — e chamando a atenção para o carácter esparso das redes sociais, incapazes, por si só, de assegurar a concepção e reprodução de determinados sistemas organizacionais —, onde se destaca, por exemplo, um autor como Neil Fligstein (1996).

De um modo geral, e como nota Rafael Marques (2003: 12), o que está em causa na nova sociologia económica é a elaboração de uma «teoria complexa da acção, na qual os actores tomam decisões, se comportam estrategicamente e avaliam o contexto social no qual estão inseridos». É precisamente no âmbito desta preocupação que se têm destacado autores como Laurent Thévenot (2001) ou Jens Beckert (2003), com propostas de teorização da acção económica inspiradas no pragmatismo norte-americano. Thévenot, em particular, avança uma tipologia de modos de coordenação aplicável tanto a um nível micro como a um nível macrossociológico, e onde sobressaem três princípios organizadores: os princípios de índole mercantil, os princípios de índole industrial e os princípios de índole doméstica ou patrimonial. Qualquer um deles pode assumir-se como princípio dominante num determinado meio produtivo — seja uma empresa, uma rede de organizações, um Estado e até mesmo um conjunto de países — ou estabelecer compromissos com os outros dois.

O recurso ao método etnográfico tem sido relativamente frequente na nova sociologia económica, inclusivamente no que toca ao estudo dos mercados financeiros, como acontece nos trabalhos de Mitchel Abolafia (1996), Karin Knorr-Cetina e Urs Bruegger (2002a) ou Alexandru Preda (2002). Em ensaios que se tornaram clássicos, Knorr-Cetina e Bruegger (2002a, 2002b, 2002c) analisaram os efeitos da informatização nos mercados financeiros, mostrando como estes se constituíram como realidades agregadas, dotadas de uma autonomia e de uma consistência próprias a partir do momento em que passaram a ser apresentados no espaço simbólico dos ecrãs de computador, surgindo hoje de forma idêntica e absolutamente sincronizada em qualquer ponto do mundo que esteja conectado com eles. Por sua vez, Preda (2002: 234-235) chamou a atenção para o papel socialmente incrustador dos documentos produzidos pelos bancos (relatórios financeiros, análises de mercado, *newsletters*…), na medida em que esses documentos funcionam não só como instrumentos cognitivos destinados a criar um enquadramento relevante para a acção económica mas também como dispositivos construtores e organizadores de redes — conectando gente, ligando pessoas geograficamente separadas e assegurando a estabilidade temporal dessas conexões.

Naturalmente que as abordagens da nova sociologia económica se têm confrontado também com algumas limitações, inclusive no tocante ao próprio conceito de incrustação. Que se trata de um conceito suficientemente flexível para permitir diversas interpretações já foi notado, entre outros, por Richard Swedberg ([1997] 2001: 170-171), e daí a necessidade de alguma complexificação teórica. Mais curioso é o facto de a incrustação ter sido objecto de uma reinterpretação conceptual e política operada por agentes do capitalismo avançado, aliás à semelhança do que sucedeu com o conceito de «capital social» proposto por Bourdieu, no intuito de identificar certas dimensões das relações sociais que poderiam contribuir para tornar a acção económica mais eficiente e rentável (cf. Marques 2003: 25-26). Este reaproveitamento perverso é ilustrado de modo convincente pela antropóloga Susana Narotzky (2006) a propósito do impacto dos modelos de desenvolvimento baseados nas ideias de “região económica” ou “distrito industrial” numa área do Sudeste de Espanha, onde o encastramento de relações de trabalho e de capital produziu uma tensão crescente no seio das famílias e das comunidades locais. O que este exemplo nos revela é que certos projectos económicos podem perfeitamente apossar-se de um determinado ambiente social para os seus próprios fins e contribuir dessa forma para comprometer a viabilidade desse ambiente: embora não seja correcto dizer que tais projectos económicos estejam socialmente desincrustados (dado que qualquer acção económica é sempre, antes de mais, uma acção social), pode perfeitamente acontecer que determinadas configurações sociais sejam sujeitas a, e mesmo sacrificadas em prol de, imperativos político-económicos “formais” (para recuperarmos os termos de Polanyi) ou que tenham sido concebidos totalmente à revelia dessas configurações sociais.

Ao mesmo tempo, a importância do conceito de ‘rede’ para descrever a incrustação organizacional tem vindo a ser questionada, num debate que conheceu evoluções significativas desde as observações iniciais de Zelizer e Fligstein. É o caso das posições mais recentes de Karin Knorr-Cetina e Urs Bruegger, que ainda admitem a viabilidade do conceito de rede para descrever a realidade da empresa tradicional e mesmo o sistema bancário transnacional, considerando-o todavia inapropriado à realidade «microestrutural» (2002b) ou «pós-social» (2002c) dos mercados internacionais de divisas — os quais, como se disse, existem (isto é, apresentam-se ou, melhor ainda, *desenrolam-se*) exclusivamente no espaço simbólico dos ecrãs de computador, suscitando, através desses mesmos ecrãs, experiências intersubjectivas à escala global.

Os Estudos Sociais de Finança e o problema da performatividade

Se o interesse sociológico pelas questões financeiras se pode reportar aos primórdios da sociologia, com os trabalhos de Marx (1867, 1883, 1894), Weber ([1894] 2004) e Simmel ([1907] 2004), é seguramente possível acrescentar referências posteriores, entre as quais o ensaio de Robert K. Merton (1948) sobre as ‘profecias autorrealizáveis’ (de que são exemplo as famigeradas corridas aos depósitos perante a suspeição de que um determinado banco está a passar por problemas). Trata-se de um conceito que conquistou uma projecção assinalável, servindo aliás para complexificar o problema da incrustação com base numa nova ideia, a de performatividade, que está no cerne dos chamados "Estudos Sociais de Finança". Esta corrente data dos anos 2000 e resulta da intersecção da nova sociologia económica com as contribuições da sociologia da ciência, em particular os trabalhos de Bruno Latour e Michel Callon (para um balanço global, vide De Goede, 2005). Embora procurem situar-se, na sua maioria, numa linha de continuidade face à nova sociologia económica, os autores desta corrente vão buscar a sua inspiração, mais que ao artigo seminal de Granovetter, sobretudo a uma colectânea de artigos editada por Michel Callon em 1998, intitulada *The Laws of the Markets*, e que também conta com a participação de autores como Mark Granovetter ou Viviana Zelizer (para uma leitura dos estudos sociais de finança menos conciliadora à luz dos preceitos da Nova Sociologia Económica, vide Henriksen, 2009).

Para além da ideia de uma incrustação social da economia, o que aqui se pretende investigar é a inserção da economia — ou, nos termos de Callon, dos agenciamentos calculadores actuantes nos mercados — em dispositivos sócio-técnicos onde o papel das fórmulas, dos instrumentos e das tecnologias é considerado tão importante como o papel dos actores humanos, contribuindo para ampliar e diversificar o enquadramento subjacente aos processos de mercadorização. Neste âmbito, é sublinhada a importância das proposições da teoria económica na formatação das agências calculadoras (Callon, 1998a: 23), graças à mediação de áreas aplicadas (Callon chama-lhes «instrumentos»...) como a contabilidade (*Ibid*.: 25), o marketing (*Ibid*.: 26-27) ou o direito (*Ibid*.: 28-29). Daí a conclusão de que a economia, entendida como 'coisa' ou como 'prática', está incrustada na ciência económica (*Ibid*.: 30; vide também Callon, 1998b e 2007a; Latour, 1987).

Mesmo não sendo absolutamente original, a proposta de Callon tem méritos indiscutíveis. Em primeiro lugar, avança uma substituição da noção de interesse pela de cálculo, desviando a atenção de motivações estritamente humanas para a concentrar num «dispositivo» ou «arranjo técnico-social» — posição que inevitavelmente conduz a um alargamento do campo dos agentes económicos e a um reconhecimento da sua natureza híbrida e distribuída. De um modo geral, os dispositivos técnicos fazem muito mais do que simplesmente fornecer informação aos agentes humanos: eles constroem dados que, devido ao seu formato, produzem efeitos específicos de cognição e de acção (Callon e

Muniesa, 2005), legitimando assim que se fale preferencialmente de «agenciamentos», de «programas» ou de «mundos sócio-técnicos» resultantes de processos de co-produção ou co-evolução (Callon e Muniesa 2005; Callon 2007a) em detrimento dos actores «convencionalmente estudados pelas ciências sociais (actores individuais e colectivos enquadrados por instituições, valores, visões do mundo, interesses, etc.)» (Callon 2005: 13).

Em segundo lugar, Callon recusa qualquer divisão estanque, qualquer incomensurabilidade entre sistemas calculadores e sistemas não-calculadores — ainda que a dada altura fale em «dádivas puras» (1998a: 18) —, admitindo que as agências calculadoras são capazes de engendrar esferas que se subtraem ao próprio cálculo. Enfim, o convite para considerar o papel performativo da ciência económica também merece destaque, sobretudo num contexto de expressão portuguesa em que as convenções linguísticas não estabelecem qualquer distinção entre a 'economia' entendida como discurso científico (*economics*, em inglês) e a 'economia' entendida como o funcionamento dos mercados (*economy*).

Neste sentido, outros autores têm-se dedicado a explorar as vias de pesquisa esboçadas em *The Laws of the Markets*, nomeadamente a questão da qualificação / requalificação dos produtos mercantis, incidindo especialmente nas ligações crescentes entre a oferta e a procura e no papel dos consumidores (das suas rotinas e dos seus desprendimentos) na constituição de mercados especializados altamente reflexivos (Callon, Méadel e Rabeharisoa, 2002; Cochoy, 2007; Thrift, 2006).

Também a questão da performatividade da ciência económica, e da cognição distribuída ou multi-situada que ela implica, tem conhecido desenvolvimentos apreciáveis, nomeadamente da parte de Donald MacKenzie e seus pares, com investigações empíricas centradas em aspectos dos mercados financeiros habitualmente pouco estudados pelas ciências sociais, como os *hedge funds* (Hardie e MacKenzie 2007), a arbitragem (MacKenzie, 2004a; Beunza, Hardie e MacKenzie, 2006), a contabilidade (Hatherly, Leung e MacKenzie, 2005), as culturas de avaliação (Mackenzie, 2011b), o *high-frequency trading* (Mackenzie *et al*, 2012), as *dark pools* e outros aspectos ligados à gestão dos investimentos financeiros (Arjaliès *et al*, 2017). Relativamente à questão da performatividade, MacKenzie parece ter dado um importante passo em frente em relação a Callon, ao propor diferentes tipos de performatividade (nomeadamente o que ele chama de «performatividade barnesiana» e de «contra-performatividade»), mas também ao reconhecer que os exemplos de performatividade efectiva ou «austiniana» podem não ser tão frequentes como à primeira vista se poderia imaginar (MacKenzie, 2004b: 328; 2006a; 2006b).

Pese embora a manifesta actualidade desta corrente de estudos, a perspectiva que lhe subjaz apresenta algumas limitações. Trata-se de uma perspectiva assente numa série de conceitos decalcados da *actor-network theory* de Latour e Callon, e que não são fáceis de conciliar com outras abordagens sociológicas. Aspectos como o género, a classe social, as condições materiais de trabalho (por exemplo, os salários...) ou a concorrência, certamente influentes na constituição dos contextos e agenciamentos económicos, raramente são focados nestas pesquisas, quando não são deliberadamente desqualificados como artefactos de uma teoria social ultrapassada. Em consequência, as ideias de agenciamento sociotécnico ou cognição distribuída tendem a adquirir um cunho universalizante, como se fossem válidas em toda e qualquer situação social. As conclusões destas análises tornam-se assim algo previsíveis, dando a impressão de ser guiadas por uma espécie de postulado de heterogeneidade ontológica pouco sensível tanto à existência de forças uniformizadoras no campo económico como à pertinência de qualquer ponto de vista crítico sobre isso. Em tempos de hegemonia da economia capitalista — ou de um determinado «programa» capitalista com características historicamente determinadas e que tem conduzido a uma acentuação das desigualdades —, uma tal posição corre o risco de se afigurar ingénua.

Michel Foucault e o problema da 'governamentalidade'

Uma terceira linha teórica a considerar numa abordagem sociológica aos problemas da banca e da finança diz respeito aos estudos que, seguindo na esteira de Michel Foucault, procuram dar conta da formação e do desenvolvimento de uma cultura administrativa apoiada nos números e na quantificação. Antes de mais, o que interessava a Foucault era perceber a emergência de uma mentalidade de governo enquanto actividade destinada a reger a conduta das pessoas com base em determinadas formas de conhecimento — actividade essa que surge historicamente associada à formação do Estado e das suas instituições no final do século XVI e se expande sobretudo com o liberalismo a partir do final do século XVIII (Foucault [1978] 2001; [1979] 2001).

O termo 'governamentalidade' aponta precisamente para um modo historicamente novo de exercer o poder que incide num complexo constituído por pessoas e coisas e não tanto — como aconteceria em tratados como *O Príncipe*, de Maquiavel— num território soberano que importaria proteger de ameaças exteriores. As reflexões de Foucault em torno deste tema deixam transparecer todo um programa de investigação que não chegou a ser completamente posto em prática por ele, embora as linhas gerais desse programa pareçam relativamente claras. Assim, a governamentalidade significa três coisas (Foucault [1978] 2001: 655-656): i) o conjunto de instituições, procedimentos, análises e reflexões, cálculos e tácticas associados a uma configuração de poder direcionada para a população, assente no saber particular da 'economia política' (entendida no sentido inovador que a expressão adquiriu no século XVI e que designava a condução dos assuntos de Estado com base em princípios de gestão económica) e tendo nos dispositivos de segurança o seu instrumento técnico essencial; ii) a tendência para a predominância desta configuração de poder no Ocidente, com o que isso acarreta em termos da consolidação de uma série de dispositivos de governo e respectivos complexos de saberes; iii) o resultado do processo histórico que levou à passagem do Estado de justiça da Idade Média ao Estado administrativo dos séculos XV e XVI e, por fim, ao Liberalismo, cuja influência ainda se faria sentir nos nossos dias.

Alguns anos após a morte de Foucault, um conjunto de autores britânicos vai inspirar-se nestas ideias para tentar compreender o papel contemporâneo de formas de soberania política simultaneamente preocupadas com a gestão de populações consideradas na sua totalidade e de sujeitos considerados na sua individualidade (Gordon, 1991: 3). Esta dupla vocação do poder é conseguida graças ao desenvolvimento de áreas científicas como a medicina ou a biologia que, conjugadas com técnicas administrativas de recenseamento e registo, começam a investigar os efeitos de comportamentos individuais (por exemplo, a conduta sexual e reprodutiva) em conjuntos populacionais delimitados por um território nacional. Nascem assim os chamados "estudos de governamentalidade" (Gordon, 2015), os quais se repartem entre análises de índole histórica e análises centradas no funcionamento das democracias liberais avançadas.

Entre as primeiras destacam-se os contributos de Keith Hoskin (2004) e Richard Macve (Hoskin e Macve, 2000) para o estudo das origens dos modernos paradigmas de gestão — os quais terão surgido nos Estados Unidos, ao longo da primeira metade do século XIX, em empresas como a Springfield Armory, a Western Railroad ou a Pennsylvania Railroad. O que está em causa, segundo estes autores, é toda uma nova forma de produzir objectos, disponibilizar serviços e resolver problemas através da combinação de técnicas de escrita, escalas numéricas e práticas de exame. Nesta base, torna-se possível comprimir o espaço e o tempo através da detecção e consequente eliminação de tarefas desnecessárias ou de tempos mortos. As investigações de Hoskin e Macve entroncam numa tradição mais ampla de estudos sobre as origens e difusão do conhecimento quantificado e onde a influência de Foucault também se faz sentir (Hacking, 1990; Porter, 1995; Desrosières, 1993) — tradição essa, sublinhe-se, dotada de uma profundidade histórica pouco usual tanto nos estudos sobre incrustação como nos estudos sobre performatividade e que se afigura de grande relevância para a sociologia económica.

Entre os estudos de governamentalidade virados para a compreensão das sociedades contemporâneas, sobressaem os contributos de Nikolas Rose e Peter Miller. Num artigo seminal e influente (Miller e Rose, 1990), os autores pegam no conceito de Foucault e, conjugando-o com a perspectiva de Bruno Latour (1987), aplicam-no às sociedades ocidentais do segundo pós-guerra onde vários domínios da vida, tanto pessoais como colectivos — por exemplo, a economia, a educação, o trabalho, a alimentação ou a saúde —, passam a ser geridos de acordo com critérios especializados e, muitas vezes, quantificados. O contributo de Miller passa muito pela afirmação da importância das inscrições de contabilidade enquanto tecnologia de governo que permite gerir qualquer organização, estatal ou não-estatal, como se fosse uma empresa e, nessa base, constituir todo um conjunto de novas relações sociais: ao criar os custos e os benefícios, a contabilidade estabelece critérios uniformizados que definem os lucros e perdas aos quais as várias contrapartes num negócio reagem, estando também na base de recompensas e castigos (Miller, 2001: 392-393; a importância sociológica da contabilidade é regulamente analisada na prestigiada revista *Accounting, Organizations and Society*). Numa linha próxima inscrevem-se os trabalhos de Michael Power sobre as auditorias (1996) e a gestão do risco (2005) ou os trabalhos de Wendy Nelson Espeland e Michael Sauder sobre os *rankings* (2007; 2016).

A governamentalidade, enquanto conjunto de racionalidades e técnicas de inscrição, remete efectivamente para uma forma descentralizada de poder que se exerce através das escolhas dos indivíduos e das organizações — entendendo esta escolha como algo que resulta de uma avaliação de vantagens e desvantagens por parte de sujeitos racionais autónomos e, em larga medida, empreendedores (Rose, 1999: 141-142). Nikolas Rose (1996) admite mesmo que o enfoque da governamentalidade se pode ter deslocado de uma certa dimensão do social equiparável a uma população nacional socialmente coesa para um conjunto de condutas individuais específicas tendo como denominador comum a capacidade de escolha e empreendimento. No entanto, é indiscutível que estas condutas individuais, na medida em que são medidas através de inscrições quantificáveis e agregáveis, dão azo à constituição de novas populações de utilizadores, clientes, cidadãos ou eleitores.

Sem pretender negar o valor desta corrente de estudos, que é enorme, cabe reconhecer que algumas das suas análises se ficam pela apresentação de exemplos abrangentes (a contabilidade de Estado na França, a regulação económica no Reino Unido na década de 1960...), desembocando por vezes em conclusões óbvias: «Antes que alguém procure gerir um domínio como se fosse uma economia, é necessário conceptualizar uma conjunto de processos e relações como uma economia passível de ser gerida» (Miller e Rose, 1990: 6). Evidentemente, o pensamento e o discurso precedem a acção e não é possível aceder a nenhuma realidade senão através da linguagem, dos conceitos e dos instrumentos de observação e medição científicas que lhes estão associados. Trata-se, mais do que de um pressuposto latouriano, de um pressuposto hegeliano porventura mais difícil de reconhecer e assumir, mas do qual as ciências sociais retiram a sua própria fundamentação. Sucede que a prática introduz elementos novos que podem levar a uma reconsideração dos discursos, a uma reequacionação dos critérios usados, a uma mobilização de meios alternativos de registo e mesmo a uma manipulação de resultados quantitativos supostamente neutros — basta pensar no longo historial de fraudes que tem acompanhado a assiduidade de reportes financeiros ao longo dos últimos trinta anos. Este é, de resto, o ponto de vista do próprio Foucault ([1966] 1968) quando demonstra que os discursos científicos da modernidade — como a análise das riquezas ou as ciências humanas — não se formaram unicamente com base em discussões teóricas, tendo derivado igualmente da percepção de obstáculos, ameaças e possibilidades no campo das práticas.

Ora, as relações dialécticas entre prática e discurso, entre normas e hábitos, entre repetição e improvisação, tornam-se particularmente visíveis quando se recorre ao trabalho de campo e se observa de perto a acção em curso, o que não é muito comum nos estudos de governamentalidade — mesmo entre os autores mais sensíveis à etnografia, como Michael Power.

Caminhos da crítica: Marx e Mauss

Esta breve digressão teórica não poderia terminar sem uma menção a reflexões sobre aqueles contornos da economia contemporânea mais hegemónicos, deterministas e suscetíveis de conduzir a uma acentuação das desigualdades. A bem dizer, não têm faltado exemplos de discursos críticos que elegem como objecto o capitalismo neoliberal, desde os contrafogos de Pierre Bourdieu às utopias redentoras de Michael Hardt e Antonio Negri. De resto, estamos perante uma vocação muito antiga das ciências sociais (Cf. Boltanski, 1990: 40-41) que encontra eco em autores fundacionais como Marx, Weber ou o próprio Durkheim (o qual se envolveu num projecto anti-utilitarista juntamente com o seu sobrinho Marcel Mauss). Porém, trata-se de uma vocação que tem sido posta em causa por Latour (2004) e Callon (2005), que consideram que os cientistas sociais não têm acesso a nenhum ponto de vista privilegiado que lhes permita saber mais do que as pessoas que eles estudam acerca do que estas mesmas pessoas fazem, cabendo-lhes por isso sobretudo a missão de aprender com elas. Em certo sentido, o presente trabalho partilha da mesma propensão para a descrição e análise, mas não a ponto de rejeitar por completo a utilidade de uma perspectiva crítica, entendida necessariamente como uma perspectiva não-privilegiada — como aliás parece ser inevitável numa sociedade onde, como nota Boltanski (1990: 54), o próprio discurso crítico se disseminou e generalizou. Embora não seja esse o propósito central desta investigação, algumas reflexões aqui avançadas evidenciam aspectos da banca contemporânea que podem, merecidamente, ser objecto de uma apreciação crítica — como o pendor imitativo da concepção de produtos de crédito, as rotinas de processamento de informação quantitativa, a dependência directa ou indirecta de grandes actores do sistema financeiro mundial ou a arbitragem regulatória.

Mais uma vez, não cabe no âmbito desta discussão introdutória fazer um amplo levantamento da crítica sociológica que versa sobre a economia capitalista, mas sim apontar resumidamente algumas correntes que se aproximam do objecto examinado nesta investigação — o crédito enquanto dimensão acessível e amplamente generalizada da finança. Ora, neste âmbito, é novamente possível dividir os autores em dois grandes grupos, desta vez distinguindo os que se reclamam de Marx (1867, 1883, 1894) dos que se reclamam de Mauss (1923-24).

A centralidade do capital financeiro na economia contemporânea tem constituído um *leitmotiv* de diversas análises marxianas (Aglietta, 2002; Arrighi; 1994; 2009; Jameson, 1997), as quais, muito embora continuem a abraçar uma concepção teleológica do capitalismo, têm sublinhado o facto de a sua evolução ser descontínua e não linear, estando portanto sujeita às vicissitudes da história — o que aliás explicaria o enfraquecimento de certos fenómenos dialécticos, como, por exemplo, a luta de classes e o concomitante mito da revolução. No entanto, por trás destas convulsões da história, haveria uma lógica que impediria que o capital permanecesse eternamente agarrado às mesmas fontes de valor, forçando-o mesmo a desfazer-se delas e a encontrar novos territórios para os seus investimentos. Esta é uma propensão muito evidente das análises inspiradas em Marx, inclusive daquelas que se debruçam sobre o problema do dinheiro (Lapavitsas 2003 e 2007; Moseley 2005) e que, desta forma, procuram ultrapassar um dualismo concreto / abstracto que se afigura transversal à nova sociologia económica e aos estudos sociais sobre finança, estando mesmo, na óptica de alguns autores, associado ao seu fraco potencial crítico (vide Fine e Lapavitsas, 2000; Ankarloo e Palermo, 2004; Fine, 2005; numa óptica mais conciliadora, vide ainda Castree, 2002). Trata-se, todavia, de visões que, pese embora uma louvável pretensão teórica, podem estar a pressupor mais do que aquilo que realmente se observa. De resto, a harmonização de uma análise crítica de tipo categorial com os dados heteróclitos da etnografia está longe de se afigurar uma tarefa fácil.

Paralelamente, do lado de Mauss, têm despontado reflexões atraentes e desafiadoras protagonizadas por autores ligados ao denominado *Mouvement anti-utilitariste pour les sciences sociales* (vulgo M.A.U.S.S.), maioritariamente empenhadas numa revitalização do paradigma antropológico da dádiva e sua aplicação ao universo das sociedades contemporâneas, independentemente de qual seja o seu grau de desenvolvimento (Caillé 1994, 2000; Godbout 1992; 2000; Latouche 1998). Apesar de prioritariamente centrados em formas de troca alternativas que emergem, tantas vezes, das brechas deixadas pelos modelos de desenvolvimento dominantes, os autores desta corrente também têm consagrado alguma atenção ao universo do crédito e da alta finança, como o atesta o trabalho de Paul Jorion (2007; 2008) — um antigo académico que se tornou *trader* num banco de investimento, tendo sido dispensado após a crise de 2008 e regressado à academia como especialista de questões financeiras. Em larga medida, estas reflexões rejeitam a velha dicotomia entre dádiva e mercado para considerar, ao invés, as múltiplas relações que se estabelecem entre esses dois domínios. Porém, resta saber em que medida a dádiva pode apresentar-se como um paradigma efectivo e capaz de desafiar os mercados capitalistas. Apesar de alguns dados animadores, tudo indica que os territórios da dádiva permanecem bastante confinados, sendo responsáveis por melhorias apenas pontuais num sistema que se pretende reformar e não tanto ultrapassar.

FOCALIZAÇÃO: INDÚSTRIA BANCÁRIA E CRÉDITO

Tendo em conta este quadro teórico mais geral, vale a pena focar a atenção do leitor no universo empírico do presente estudo, ou seja, no universo bancário português dito «comercial», «de retalho» ou «de varejo». Nesta secção, procurar-se-á dar conta, em primeiro lugar, da evolução da banca ao longo das últimas décadas, posicionando o caso de Portugal por referência ao contexto mais geral da Europa, com o qual mantém claras afinidades, mas também levando em conta as principais inovações oriundas dos Estados Unidos e que acabaram por ser adaptadas à realidade portuguesa e de outros países europeus. Este breve apanhado histórico será depois complementado com uma revisão da literatura sociológica que, duma forma intermitente, se tem dedicado ao estudo da banca de retalho e dos serviços de crédito de consumo.

A bancarização da sociedade

Embora a história da banca remonte, pelo menos, à Alta Idade Média (LeGoff, 1956), o recurso generalizado a contas bancárias para fins de poupança é, como se calcula, um fenómeno bem mais recente. O antropólogo Gustav Peebles (2008) descreve como os cidadãos britânicos da primeira metade do século XIX foram encorajados a depositar o seu dinheiro em bancos em vez de o guardarem debaixo do colchão, numa passagem gradual de uma acumulação solipsística à constituição de poupanças por agregação (Ibid: 241) que culminou na emergência de uma moeda nacional dependente das reservas de liquidez do Banco de Inglaterra (vide também Bagehot, 1873). É exactamente este modelo pioneiro assente em níveis sucessivos de agregação que foi implementado noutros países europeus e nos Estados Unidos ainda durante o século XIX, embora o acesso à banca permanecesse um privilégio das classes mais abastadas pelo menos até meados do século XX.

Será preciso esperar pelo período de prosperidade que as economias ocidentais conheceram no segundo pós-guerra para se entrar numa nova fase da indústria bancária que contribuiu para a sua massificação nos países da Europa ocidental. O que normalmente se designa por 'bancarização' diz respeito, precisamente, a uma generalização do acesso às contas bancárias para fins de depósito e poupança, englobando a maior parte dos trabalhadores assalariados das classes média e média-baixa e já não apenas as classes mais altas ou as empresas. Em França, a bancarização inicia-se no final dos anos 1960, tendo o Estado desempenhado um papel fundamental nesse processo (Lazarus, 2012; Lacan e Lazarus, 2015: 8). O processo de bancarização português permanece pouco estudado, embora seja possível localizar o seu início na mesma década de 1960, devido à conjugação de três factores (cf. José Dias Lopes, comunicação pessoal, 2017): a adesão de Portugal à Associação Europeia de Livre Comércio (EFTA), que mobilizou diversas empresas e as levou a recorrer de modo regular ao sistema financeiro, tornando também mais fácil a abertura de contas bancárias por parte de clientes particulares; a emigração para os países europeus, que impulsionou os bancos a abrirem agências vocacionadas para a captação das remessas do estrangeiro (Valério et al, 2010: 200-201); e a migração interna, das zonas rurais para os centros urbanos, que ditou a criação de facilidades de crédito à habitação (em especial na variante de autoconstrução) direccionadas para as populações recém-chegadas à cidade — facilidades essas suportadas, em boa parte, pela liquidez resultante dos depósitos dos clientes emigrantes. A estes três factores podemos ainda acrescentar o pagamento dos salários dos funcionários do Estado por crédito em conta de depósito à ordem, que se tornou prática corrente a partir da década de 1970 (Ibid.: 169).

Embora seja exagerado falar de um acesso maciço aos bancos, é indiscutível que o escopo da clientela bancária se alargou consideravelmente neste período. Dos anos 1980 em diante a massificação consolida-se, a par de um conjunto de transformações decisivas que mudaram a face da banca na Europa: liberalização ao nível da circulação de capitais, intensificação das privatizações e das fusões e aquisições, desregulamentação dos mercados e dos sistemas de supervisão financeira (com a separação entre as esferas de autoridade dos bancos centrais e dos governos), reorganização tecnológica das actividades e serviços (principalmente ao nível da informatização) e importância crescente do marketing no âmbito de preocupações com a captação, rentabilização e tipologização da clientela (Almeida, 2001; Cusin, 2002; Lafitte, 2005).

Esta renovação da banca europeia foi acompanhada, nos anos 1990, por um aumento significativo da concessão de crédito para compra de bens imobiliários e de consumo, levando, ao fim de poucos anos, ao surgimento de operações maciças de securitização — ou seja, de selecção, agrupamento e empacotamento de empréstimos à habitação e outros contratos de crédito e sua transformação em 'obrigações hipotecárias' ou 'títulos' susceptíveis de serem transaccionados em mercados de balcão, usados como colateral em operações de financiamento junto de bancos centrais ou mesmo integrados em carteiras de investimento e mecanismos de poupança oferecidos a clientes particulares. Originalmente posta em prática nos Estados Unidos na década de 1970, a securitização tornou-se um fenómeno à escala global nos primeiros anos do século XXI, funcionando simultaneamente como uma fonte adicional de liquidez para os bancos comerciais e como mecanismo de angariação de novos mutuários. Como consequência, os tradicionais bancos de retalho deixaram progressivamente de ser meros fornecedores de crédito (*credit providers*) para se tornarem também entidades gestoras de crédito (*credit servicer*s), agindo como intermediários entre os seus clientes e o mundo internacional dos mercados financeiros e dos investidores.

Os bancos portugueses acompanharam de perto estas mudanças. Embora controlando uma parcela reduzida do mercado europeu e possuindo pouca capacidade de penetração internacional, o sector conheceu um franco crescimento desde o início dos anos 1990 e até 2008, com reflexos bem nítidos num aumento das concessões de crédito a particulares e empresas, na sua maioria relacionados com negócios ou aquisições de bens imobiliários (cf. Lagoa, Leão e Santos, 2004; Banco de Portugal, 2005). Registe-se, ainda durante a década de 1990, a implementação das primeiras salas de mercados totalmente informatizadas que permitiram o acesso, em tempo real, aos principais mercados financeiros. Tal como noutros países europeus, a expansão do negócio conduziu, na viragem do século, à exploração de modalidades de financiamento complementares dos tradicionais depósitos bancários, designadamente através do mercado monetário interbancário, da titularização de créditos e dos empréstimos junto do Banco Central Europeu (Lagoa, Leão e Santos 2004: 216) — uma tendência que foi significativamente reforçada com a adesão à moeda única (Cardão-Pito e Baptista, 2017). Apesar da sua reduzida dimensão, o sistema bancário português revelou-se merecedor de elogios por parte de instituições de regulação nacionais e internacionais, que o definiam como robusto em termos de rendibilidade, solvabilidade, provisionamento dos riscos e gestão de liquidez (Banco de Portugal, 2005; International Monetary Fund, 2006). Após

2008 — aliás como é apanágio dos descalabros financeiros (de la Vega [1688], 2009; Bagehot, 1873) —, o cenário mudou drasticamente: alguns bancos portugueses tiveram de declarar falência, outros sofreram recapitalizações, numa espiral que desembocou num pedido de ajuda externa ao Fundo Monetário Internacional, ao Banco Central Europeu e à Comissão Europeia em 2011.

Apesar do enorme contratempo representado pela crise de 2008 e das reviravoltas na reputação das instituições financeiras de todo o mundo que a mesma crise provocou, não é possível falar de uma inflexão de rumo da indústria bancária. O mundo de hoje permanece dominado por grandes conglomerados financeiros transsectoriais que dão mostras de estar acima das leis do mercado ou sabem ajustá-las à sua medida — são os bancos demasiado grandes para falir. Mas mesmo as instituições de média ou pequena dimensão, como os dois bancos etnografados neste estudo, continuam a jogar nos três tabuleiros da finança e a circular dinheiro a várias velocidades. Neste sentido, o paradigma da transsectorialidade mantém-se firme e tem levado, inclusivamente, à implementação de modelos de supervisão mais integrados e sensíveis às porosidades entre as fronteiras de mercado tradicionais.

A sociologia da banca e do crédito

O universo bancário e do crédito tem merecido a atenção dos sociólogos pelo menos desde os anos 1960, embora não se possa falar de uma tradição consolidada, mas, sobretudo, de um conjunto de estudos tão interessantes quanto intermitentes. Destaque-se, em primeiro lugar, um contributo seminal e inédito de Pierre Bourdieu, Luc Boltanski e Jean-Claude Chamboredon (1963) sobre a banca e os seus clientes, onde se procura descrever os dois pontos de vista em jogo e cartografar as moralidades associadas à poupança e ao crédito (Swedberg, 2011). Bourdieu voltaria ao tema do crédito uns anos mais tarde, ao analisar o campo do mercado da habitação e, em particular, os encontros entre potenciais compradores de casas e vendedores imobiliários que eram também fornecedores de crédito (Bourdieu, Bouhedja e Givry, 1990; vide também Bourdieu e Rosine, 1990). Mesmo tendo sido elaborado num período anterior à bancarização e ficado quase esquecido ao longo de várias décadas, o estudo de Bourdieu, Bolstanski e Chamboredon como que dá o mote — aliado, bem entendido, a outras referências mais centrais (Bourdieu, 1997; 2000) — do que viria, mais tarde, a constituir-se como uma corrente francesa de estudos sociológicos muito focada na relação entre os bancos e os seus clientes particulares. Dentro desta corrente sobressaem temas como a personalização do crédito — ou seja, a sua indexação a uma pessoa específica, com uma profissão, um salário e outras características próprias —, o papel do crédito na economia doméstica ou a educação financeira (Bourdieu, Bouhedja Givry, 1990; Ducourant, 2012; Lazarus, 2012; Lacan e Lazarus, 2015; Lemercier e Zalc, 2012).

O exemplo francês polarizado por Bourdieu é apenas comparável com as investigações sobre a constituição dos mercados de crédito que têm sido desenvolvidas nos Estados Unidos em torno de Bruce Carruthers (Carruthers e Stinchcombe, 1999; Carruthers e Cohen, 2007; Carruthers e Ariovich, 2010). Porém, ao contrário da maior parte dos autores franceses anteriormente citados, estas investigações só pontualmente envolvem a recolha de informação empírica em primeira mão, ainda que contenham princípios de análises muito válidos para qualquer pesquisa etnográfica. Numa altura em que poucos sociólogos estariam sintonizados com os problemas do mundo financeiro, Carruthers e Stinchcombe (1999) avançaram uma análise actualíssima sobre o processo de transformação de activos ilíquidos (ou seja, que demoram muito tempo a ser vendidos, como as casas) em activos líquidos (como os títulos de crédito ou as obrigações hipotecárias) — uma transformação que, segundo os autores, passa pela estandardização de conhecimento idiossincrático e heterogéneo, remetendo portanto para o problema da quantificação. Numa linha próxima, isto é, igualmente virada para os processos cognitivos associados à formação dos mercados de crédito, mas dando mais destaque ao modo como o risco é percebido e gerido pelos bancos, situam-se os trabalhos de Akos Rona-Tas e seus colaboradores (Guseva e Rona-Tas, 2001; Rona-Tas e Hiss, 2008).

Numa perspectiva mais organizacional e assente em trabalho de campo etnográfico, temos um conjunto disperso de contribuições que, de uma forma ou de outra, discutem o problema da incrustação. É o caso das investigações de André Wissler (1989), Brian Uzzi (1999; Uzzi e Gillespie, 2002), Herbert Kalthoff (2000a; 2000b; 2006) ou Michel Ferrary (2002), todas elas centradas no problema da concessão de créditos a particulares ou empresas, e dando especial atenção a questões como os modos de gestão do risco e a segmentação da clientela. O trabalho de Wissler (1989), inspirado por Luc Boltanski e Laurent Thévenot, mostra como os regimes de acção presentes na banca tendem a minimizar o papel das teorias económicas mais formais, em prol de estratégias de incrustação social à maneira de Granovetter — argumento interessante, mas que pede uma reconsideração à luz quer das evoluções mais recentes do sistema bancário quer do problema teórico da performatividade. Mais próximo da realidade contemporânea marcada pela financeirização da economia, Kalthoff (2000a; 2000b; 2006) debruça-se com bastante vagar sobre a adaptação dos bancos da Europa de Leste aos modelos de gestão e reporte ocidentais, numa análise cheia de pistas para a discussão dos processos de quantificação e estandardização e à qual teremos ocasião de voltar num dos capítulos desta dissertação.

Registe-se ainda um conjunto apreciável de estudos histórico-sociológicos sobre a indústria bancária e o crédito ao consumo, com especial destaque para os contextos norte-americano (Marron, 2009; Poon, 2009) — onde, a bem dizer, surgiram as principais inovações associadas à vertente retalhista deste negócio, das amortizações mensais aos derivados de crédito, passando pelos cartões de crédito ou pela securitização — e britânico (Deville, 2015; McFall, 2015).

Como se percebe, a maioria das investigações sociológicas sobre o universo bancário têm sido conduzidas sob o signo da sociologia económica e das organizações, ainda que só raramente tenham penetrado a fundo na discussão do funcionamento dos mercados como processos inseridos em redes ou dispositivos sócio-técnicos susceptíveis de serem etnografados. Por sua vez, os estudos sobre a finança têm mantido o enfoque nos domínios mais especializados dos mercados bolsistas e de derivados financeiros — dos quais possuímos já importantes quadros etnográficos (Abolafia, 1996; Godechot, 2001; Hardie, 2012; Ho, 2009; Lépinay, 2011; Muniesa, 2011; Simon, Millo, Kellard e Engel, 2016). Neste âmbito, a banca de retalho tem merecido menos consideração, não obstante o seu papel crucial na financeirização da economia. A crise de 2008 desviou, no entanto, a atenção de alguns investigadores para este sector, como Zsuzsanna Vargha (2011), Joe Deville (2015) — com um oportuno trabalho contendo alguns *aperçus* etnográficos sobre a indústria de recuperação de incumprimentos de crédito — ou José Ossándon (2014; veja-se ainda o número temático da revista *Cultural Studies* organizado por Deville e Seigworth, 2015).

No panorama sociológico português destaca-se o estudo de Paulo Pereira de Almeida (2001), uma obra de referência centrada nas condições de trabalho, profissão e carreira no sector bancário, cuja base empírica é essencialmente estatística ainda que sirva para estabelecer algumas coordenadas importantes para uma pesquisa de cunho etnográfico. Numa linha próxima, o trabalho conjunto de Marinús Pires de Lima, Ana Guerreiro, Marina Kolarova e Marta Lino (2008) sobre os quadros da banca e, num registo mais histórico que sociológico, a *História da Caixa Geral de Depósitos* de Pedro Lains (2011), que é essencialmente o resultado de uma pesquisa de arquivo, mas onde encontramos também, em anexo, uma preciosa série de entrevistas aos vários presidentes do banco público desde 1976. De um modo geral, estamos perante estudos particularmente atentos às mudanças verificadas na organização, funcionamento e estrutura dos bancos portugueses, mas que optam por não explorar em detalhe quer o modo como esses bancos contribuem para moldar o comportamento financeiro e de consumo da sociedade quer o modo como as próprias práticas bancárias são afectadas pela internacionalização e a globalização do sector. Tanto quanto sabemos, os esforços neste sentido têm vindo sobretudo da área da economia política — por exemplo, com os trabalhos desenvolvidos no Centro de Estudos Sociais sobre financeirização e literacia financeira (Rodrigues, Santos e Teles, 2016; Santos, 2017; Santos e Costa, 2013).

INSTITUIÇÕES, TERRENOS, MÉTODO

A presente dissertação implicou, como já foi referido, a recolha de informação empírica em primeira mão através de um trabalho de campo etnográfico em duas instituições bancárias portuguesas. A colaboração de ambas as instituições foi feita sob a condição da preservação do seu anonimato, pelo que não poderão ser adiantados elementos demasiado específicos que permitam a sua identificação. Em Portugal, existem três tipos de instituições bancárias autorizadas a captar depósitos e a conceder crédito a uma escala alargada: os bancos públicos (neste caso, apenas a Caixa Geral de Depósitos), os bancos privados e as associações mutualistas (incluindo nesta categoria as caixas de crédito e as caixas económicas, que não são instituições públicas nem se encontram constituídas como sociedades por acções). No início de 2008, foram enviadas cartas formais aos presidentes dos conselhos de administração de todos os bancos com sede em Portugal, apresentando o projecto de pesquisa e solicitando a sua colaboração. Receberam-se apenas quatro respostas: uma delas, curiosamente do banco do qual o autor desta tese era cliente, comunicava a indisponibilidade da instituição para se associar à pesquisa por motivos de sigilo profissional; as outras três respostas manifestavam, pelo contrário, abertura, tendo-se optado por implementar a investigação nos dois bancos que responderam em primeiro lugar.

Ambos os bancos operavam a uma escala nacional, possuindo centenas de balcões espalhados pelo país. Os dois sobreviveram à crise de 2008, mantendo-se hoje em actividade com a mesma designação. Um dos bancos — que designaremos por Banco B ou *B-Bank* — pode ser considerado um banco privado; o outro — que designaremos por Banco A ou *BankA* — pode ser considerado uma associação mutualista. Acrescente-se, porém, que esta diferença ao nível da tipologia institucional não se traduziu em diferenças assinaláveis em termos de organização interna e da qualidade do trabalho aí desempenhado.

Definidas, de forma casuística, as instituições que serviriam de base a esta pesquisa, importava negociar com elas as áreas merecedoras de observação, tendo em conta que em ambos os bancos havia diversos departamentos e nem todos poderiam ser devidamente acompanhados. Estando o projecto focado no crédito, a área de marketing foi uma escolha óbvia nos dois casos. Dentro dos departamentos de marketing, deu-se prioridade às equipas responsáveis pelo concepção e desenvolvimento dos produtos de crédito posteriormente comercializados nos balcões. Outra área coberta foi a da análise e gestão de risco, onde eram criados os modelos de selecção ou avaliação de clientes aplicados antes da subscrição de qualquer produto. Foi ainda possível realizar trabalho de campo no departamento financeiro do Banco A, onde eram preparadas as operações de securitização de créditos e realizado algum *trading* na sala de mercados. Assim, ao todo, a observação contemplou três departamentos no Banco A e dois departamentos no banco B. Os trabalhos de campo tiveram durações de quatro semanas (departamento de risco do Banco A), cinco semanas (departamento financeiro do Banco A) e seis semanas (restantes departamentos), o que perfaz um total de cerca de seis meses e meio de observação intensiva.

A prática do trabalho de campo obedeceu aos moldes da etnografia organizacional, entendendo por isto uma tradição de estudos que, partindo da chamada segunda escola de Chicago (Becker et al, 1961; Goffman, 1961, 1963, 1974; Strauss, 1971; Strauss et al, 1985; vide também Fine, 1995; Lopes et al, 2017: 25-29), recorrem preferencialmente à observação participante realizada em meio institucional, muitas vezes do próprio país ou cidade do investigador. Como diria Howard S. Becker (2017), um dos arautos desta modalidade de etnografia, trata-se de uma forma de aceder a todas as emoções do trabalho de campo em contextos exóticos sem se abdicar do conforto de poder dormir na sua própria cama e comer a comida a que se está habituado. Por outro lado, a proximidade linguística e cultural como que dispensa as longas viagens e as laboriosas intermediações que caracterizam o trabalho de campo antropológico e também explicam a maior duração deste último, permitindo ao invés entradas no terreno consideravelmente rápidas, acompanhadas de um ritmo intensivo de notas de campo. Talvez por isso encontramos na etnografia organizacional uma tradição mais rica de reflexão sobre o trabalho de campo enquanto método (Becker, 1998; Strauss, 1987; Strauss e Corbin, 1990), a qual é contrabalançada, do lado da antropologia, por uma atenção muito maior aos aspectos interpessoais (por exemplo, Pina-Cabral, 2013). Em conformidade com esta impressão, será conveniente acrescentar mais alguns dados acerca da rotina de observação e escrita que implicou este trabalho de campo nos bancos.

Foi um trabalho de campo marcado por uma rotina muito própria, que alternava sessões de observação com sessões de escrita. Durante as sessões de observação, o etnógrafo normalmente juntava-se a um colaborador de um dos departamentos e ia seguindo fosse o que fosse que este estivesse a fazer (este regime de tipo flutuante correspondeu a uma intenção do investigador no sentido de dispor de maior maleabilidade no terreno). Ao mesmo tempo que observava, o etnógrafo fazia perguntas e tomava notas manuscritas num pequeno caderno. Procurou-se que estas notas fossem tão pormenorizadas quanto possível e, uma vez que boa parte da acção em curso se desenrolava nos ecrãs de computador, isso implicava registar o *software* usado, o tipo de operações com ele realizadas e respectivos meios representacionais (tabelas, listas, diagramas, infografia, etc.). Ocasionalmente, foram recolhidos alguns documentos consultados ou preparados pelos colaboradores bancários durante o período de observação.

A duração destas sessões de observação era variável e dependia da disponibilidade dos colaboradores, mas era comum o etnógrafo ficar cerca de duas horas junto da mesma pessoa, após o que se retirava para o seu posto de trabalho para transformar as notas manuscritas numa entrada de diário de campo — em qualquer um dos cinco departamentos observados foi possível disponibilizar ao investigador um espaço de trabalho, na maior parte dos casos um lugar livre numa sala em *open space*, ocasionalmente um gabinete próprio. Os critérios de suspensão da observação eram variados, mas normalmente incluíam a conclusão da tarefa em curso ou a interrupção do tempo de trabalho à hora de almoço ou no final do dia, havendo igualmente situações em que o cansaço da pessoa observada ou do próprio etnógrafo aconselhavam a uma pausa. Na fase de escrita que se seguia, as anotações iniciais eram desenvolvidas e complementadas com dados adicionais que a memória fresca ainda permitia recuperar. Cada sessão de observação era assim seguida de uma sessão de escrita com uma duração aproximada da primeira, optando-se por iniciar nova observação junto de uma pessoa diferente apenas quando as notas da observação anterior se encontravam redigidas numa forma que se poderia considerar definitiva. Num dia típico de trabalho de campo, podia haver uma sessão de observação das 10:00 às 11:30, seguida de uma sessão de escrita das 11:30 às 13:00, seguida de nova sessão de observação das 14:00 às 16:00 e de uma segunda sessão de escrita das 16:00 às 18:00. Quando a importância ou a complexidade dos eventos em curso determinavam um prolongamento das sessões de observação, reservava-se a tarde ou a manhã do dia seguinte para redigir ao computador as respectivas notas etnográficas.

Entre 28 de Maio de 2008 (data da primeira visita ao departamento de marketing do Banco A) e 29 de Abril de 2009 (data do último dia de trabalho de campo no departamento de risco do Banco A) foram realizadas 256 sessões de observação, repartidas do seguinte modo:

Banco A: Marketing	Banco A: Direcção Financeira	Banco B: Marketing	Banco B: Risco	Banco A: Risco
58	47	60	50	41

Tabela 1 — Sessões de observação por departamento bancário.

Como já se deu a entender, a observação obedecia a um esquema rotativo, para não sobrecarregar as pessoas. Mas a maioria dos colaboradores bancários reagiu bem à pesquisa. Nalguns casos, foi possível conduzir longas sessões de observação junto de quem mostrava grande à vontade perante o investigador (em cada departamento, haveria duas a três pessoas com esta louvável propensão...). Outras pessoas pareciam ter mais dificuldade em aderir ao modo do trabalho de campo, sobretudo porque suspendiam as tarefas em curso para se disponibilizarem a responder a eventuais perguntas do etnógrafo. Era uma forma de mostrar que não estavam à vontade para prosseguir com o seu trabalho enquanto eram observadas — mas também um alerta para a necessidade de construir cuidadosamente uma relação de colaboração no terreno, a qual não pode depender somente de autorizações institucionais, requerendo também a conquista da confiança dos sujeitos observados a cada dia que passa. Assim que o investigador compreendeu que certas pessoas (entre uma a duas em cada departamento) se sentiam menos confortáveis com a observação ou pareciam sobretudo entendê-la como uma entrevista, a opção foi a de se concentrar naqueles e naquelas que davam mostras de aderir melhor aos moldes da pesquisa.

Para além da observação participante, foi realizada uma entrevista semidirectiva a uma directora de marketing do Banco A nos últimos dias do trabalho de campo neste departamento. Porém, no momento em que foi realizada, esta entrevista acabou por não trazer nada de novo, limitando-se a reproduzir pontos de vista gerais que já tinham sido registados num encontro preparatório com outro director e durante o próprio trabalho de campo. Por esta razão, optou-se por dar total prioridade à técnica da observação participante complementada com recolha documental durante o período subsequente da pesquisa empírica.

ARGUMENTOS

Os capítulos centrais deste trabalho assentam, diga-se uma vez mais, num conjunto de artigos publicados entre 2011 e 2017, na sua maior parte em revistas internacionais com sistema de revisão por pares e integrando a lista principal de periódicos da *Web of Science*.[1] A compilação destes artigos para propósitos dissertativos obrigou, naturalmente, a ligeiras adaptações: optou-se por conservar o texto original em inglês, embora se tenha procedido a uma edição do seu conteúdo no sentido de eliminar aspectos redundantes, em particular no que diz respeito aos resumos iniciais e palavras-chave (que foram excluídos), à exposição da metodologia usada (explicitada na secção anterior e referida apenas de passagem ao longo dos capítulos empíricos), aos agradecimentos (incluídos no fim desta introdução geral) e às referências bibliográficas (que foram agregadas e fecham este trabalho). Fora isso, os artigos aparecem praticamente como foram publicados, à excepção de algumas notas de rodapé que pretendem actualizar informação e de clarificações e acrescentos pontuais no corpo do texto.

[1]A apresentação de uma dissertação deste tipo segue os termos do artigo 28º do Regulamento de Estudos de Pós-Graduação da Universidade de Lisboa, estando igualmente prevista nos artigos 31º (ponto 2, alínea a) e 33º dos Decretos-lei 230/2009 e 115/2013.

O primeiro capítulo após esta introdução intitula-se ‘How credit institutions look at society: Economics, Sociology and the problem of social reflexivity reconsidered’. Foi publicado na revista *European Societies*, tendo Rafael Marques como segundo autor (Lopes e Marques, 2011). Sendo o único caso de coautoria nesta colectânea, convém precisar que a contribuição de Rafael Marques se centrou nalgumas importantes sugestões de natureza teórica, que foram aceites e trabalhadas pelo primeiro autor. Tomando como ponto de partida a visão de Anthony Giddens (1990) sobre uma modernidade eminentemente reflexiva e intrinsecamente sociológica, o capítulo propõe-se perceber que espécie de sociologia é afinal posta em prática nos bancos. O foco incide, portanto, em questões cognitivas, descrevendo as diversas configurações de algo susceptível de ser entendido como uma ‘sociedade’ (o universo dos clientes bancários, os consumidores portugueses, o mercado financeiro...) e o tipo de conhecimento que é gerado sobre essa realidade (uma amálgama de psicologia das multidões oitocentista, estatística social dos anos 1930 e *aperçus* mertonianos sobre profecias autorrealizáveis misturados com muita análise econométrica e cálculo probabilístico).

A atenção começa por se centrar nos departamentos de marketing, onde técnicas como a análise da concorrência (uma variante da análise de conteúdo...) ou o *mystery shopping* (uma modalidade de observação participante encapotada...) permitem produzir conhecimento sobre a oferta de crédito e alimentar o desenvolvimento de serviços com base na imitação. O olhar centra-se em seguida nos departamentos de risco, onde o universo dos clientes bancários é retratado com base em informação predominantemente quantitativa armazenada em bases de dados. Por fim, nas salas de mercados, deparamos com uma visão psicossociológica do mercado enquanto entidade impulsiva e caprichosa (é preciso ter em conta que a etnografia foi realizada em plena crise de 2008...), o que promove uma dinâmica narrativa receptiva a todo o tipo de interpretações — teorias da conspiração, reflexões sobre o declínio do capitalismo americano, etc. Como facilmente se percebe, o ponto de vista dos bancos sobre a sociedade não é uniforme.

A excursão que este capítulo efectua sobre os três tipos de departamento bancário cobertos pelo presente estudo tem o condão — pese embora a sofreguidão de algumas passagens — de introduzir o leitor no universo empírico em análise e identificar aspectos que serão aprofundados em capítulos subsequentes, como o pendor imitativo associado à concepção de produtos de crédito, o peso da informação quantitativa ou a ligação dos bancos nacionais com o sistema financeiro internacional operada a partir das salas de mercados. Evidentemente, apreciar o modo como as instituições de crédito olham para a sociedade implica que se considere também como essas mesmas instituições podem estar a contribuir para promover determinados modelos de organização social. Nesta linha, o capítulo fecha com uma análise comparativa dos conceitos de reflexividade e performatividade, concluindo, numa toada algo pessimista, que a importância da sociologia na formatação da economia e da sociedade é diminuta quando comparada com a enorme influência da ciência económica (para uma reflexão de sentido semelhante, vide Graça e Marques, 2012).

O segundo capítulo após esta introdução intitula-se 'Metamorphoses of credit: pastiche production and the ordering of mass payment behaviour'. Foi publicado sob a forma de artigo na revista *Economy and Society* (Lopes, 2013a). O texto discute os conceitos de inovação e imitação (cf. Tarde [1898] 1999) com base na ideia de que ambas as coisas não são assim tão fáceis de distinguir na prática como o são na teoria; mais concretamente, o que passa por inovação a uma escala local ou nacional pode ser entendido como repetição a uma escala mais global. Esta leitura do problema é acompanhada por uma apreciação do tipo de relação estabelecida entre os bancos e os seus clientes — uma relação comercial tendencialmente de longa duração — e do papel que as instituições bancárias desempenham na organização do tempo e do espaço, da vida e do trabalho, da economia e da política (ou seja, da organização social em sentido lato). Sob esta óptica, inovação e imitação parecem ser sobretudo consequências de práticas institucionais e procedimentos de governo destinados a ordenar pagamentos maciços e susceptíveis de gerar fluxos de caixa substanciais.

Em matéria de etnografia, o capítulo está sobretudo centrado na área do marketing e descreve um modo de fabrico de produtos de crédito assente em operações de copiar/colar e de actualização de informação. Este modo de fabrico é baptizado de 'produção de pastiches' e divide-se em seis estádios. O primeiro estádio é o da *concepção* (ou *prospecção*), que se concentra em explorar possíveis detalhes que poderão originar uma nova versão de um produto. O segundo estádio é o da *formatação*, onde são preparados documentos e dispositivos que tornam visível e dão materialidade ao produto de crédito (manuais de utilização, folhetos, simuladores de crédito...). O terceiro estádio é o da *promoção* e consiste numa apresentação do produto aos colaboradores do banco e aos potenciais clientes através de acções de formação, argumentários de venda ou campanhas de marketing direccionadas para determinados sectores da clientela. O quarto estádio é o da *adaptação*, correspondendo aos ajustes que o produto tem de sofrer para mantê-lo sincronizado com determinados indicadores económicos (por exemplo, o valor da taxa Euribor, que serve de indexante na maior parte dos contratos de crédito com taxa variável), mas também adaptado às especificidades de cada cliente ou aos ditames de novas leis ou regulamentos internos. O quinto estágio é o da *transmutação* (ou *securitização*), isto é, da criação de títulos e obrigações hipotecárias a partir de *pools* de empréstimos à habitação — tarefa que é repartida pelos três departamentos cobertos neste estudo. Por fim, o sexto estádio é o da *monitorização*, correspondendo ao acompanhamento da evolução do negócio e do comportamento bancário dos clientes que celebraram contratos de crédito.

O terceiro capítulo após esta introdução intitula-se 'Credit (re)connections: finite objects, affiliations and interactivity at two Portuguese retail banks' e foi publicado num número especial da revista *Cultural Studies* intitulado 'Credit and the Everyday', ao qual já foi feita referência, editado por Greg Seighworth e Joe Deville (Lopes, 2015a). É, mais uma vez, um capítulo centrado na área do marketing, mas que se propõe compreender os nexos sociais e comerciais originados pelos serviços bancários, contrariando o argumento que vê na expansão do crédito um movimento progressivo de abstracção, racionalização e centralização da informação. Como alternativa, é avançada a ideia de um 'nexo de crédito', aplicando-se esta ideia não apenas à associação dos serviços bancários de retalho a toda uma gama de produtos de consumo específicos (casas, carros, viagens, cirurgias plásticas...), mas igualmente à criação e manutenção de ligações entre o banco e certos parceiros de negócio, entre o banco e os seus clientes particulares, e entre os clientes particulares e os objectos por eles adquiridos com recurso ao crédito — neste último caso com reflexos aos nível da pessoalidade, do estatuto social e dos hábitos quotidianos.

O capítulo analisa, em primeiro lugar, os processos de objectificação que ligam os serviços de crédito a produtos específicos, tomando como exemplo o caso dos produtos ditos 'não financeiros' ou 'de prestígio' que são efectivamente comercializados através da rede de balcões (relógios, computadores, serviços de porcelana, moedas de colecção...). Em seguida, são analisadas as afiliações estabelecidas entre o banco, os seus clientes e uma gama de parceiros de negócio que tanto engloba as companhias multinacionais de cartões de crédito como as cadeias nacionais de supermercados como certas lojas de comércio local: neste âmbito, deparamos com um jogo de alianças e oposições que nos convida a pôr de parte as divisões tradicionais entre oferta e procura, entre empresas concorrentes ou entre produtores e consumidores para considerar arranjos mais maleáveis — sendo exactamente isso o que se pretende captar com o conceito de 'nexo de crédito'. Por fim, o capítulo aborda mais em detalhe uma dimensão deste nexo, relacionada com o potencial interactivo e até lúdico de objectos como o cartão de crédito (passível de ser tratado como um dispositivo) e os hábitos quotidianos dos clientes bancários. Em qualquer dos três casos, reencontramos o problema da incrustação, formulado em moldes que podem ajudar a compreender a resiliência das conexões sociais criadas pelos bancos.

O quarto capítulo a seguir a esta introdução tem por título 'Number interception: knowledge, action and culture within financial risk management'. Foi publicado na revista *Journal of Cultural Economy* (Lopes, 2015b). Depois de dois capítulos principalmente focados nos departamentos de marketing bancário, a atenção volta-se agora para a área do risco financeiro, procurando evidenciar alguns aspectos interaccionais daquilo que Karin Knorr-Cetina (1999) designa por culturas epistémicas, entendidas como um conjunto de práticas orientadas para a produção de conhecimento em contextos organizacionais. O capítulo discorre sobre a relação dos analistas de risco com a informação quantitativa relativa a determinados activos que integram a cadeia de valor impulsionada pelo crédito a retalho, como os títulos e obrigações hipotecárias ou os próprios imóveis hipotecados. Essencialmente, estamos perante um ensaio sobre a incrustação social de números que são calculados por computadores e vigiados pelos analistas.

O envolvimento com a realidade numérica é aqui analisado a partir de quatro modulações práticas que configuram um movimento do não-problemático (onde as categorias e normas são aceites e reproduzidas sem discussão) ao problemático (onde as categorias e normas são discutidas e redefinidas). A primeira modulação é a dos comportamentos de *verificação* largamente apoiados no senso comum dos analistas quanto àquilo que possam ser variações aceitáveis — e, portanto, dispensando explicações adicionais — entre os números de dois relatórios consecutivos. A segunda modulação tem a ver com a elaboração de *explicações* para resultados que se afiguram mais estranhos, num processo que implica a procura de informações e a junção de hipóteses, argumentos e histórias aos números. A terceira modulação é a da *discussão* dos valores numéricos, a qual normalmente envolve uma questionação da ontologia daquilo que é valorizado ou dos princípios que devem orientar a valorização. A quarta e última modulação diz respeito aos actos de *inferência* (executados pelos analistas) e *generalização* (executados pelos computadores) com os quais se corrigem anomalias da informação guardada em bases de dados. A evidência etnográfica apresentada neste capítulo revela ainda um envolvimento prioritário com as inscrições numéricas através de objectos de fronteira como os programas de software e sistemas de gestão de bases de dados; e uma estável divisão do trabalho entre humanos e máquinas, segundo a qual os computadores agem como calculadores de grande escala e os analistas como vigilantes de números.

O quinto capítulo após esta introdução intitula-se 'Libor and Euribor: from normal banking practice to manipulation to the potential for reform'. Foi publicado no *Routledge Companion to Banking Regulation and Reform*, volume organizado por Ismail Ertürk e Daniela Gabor (Lopes, 2017a). É, como o próprio nome indica, um ensaio sociológico sobre taxas de juro — neste caso, sobre as duas taxas de juro mais significativas do mundo, usadas como referência no mercado monetário interbancário e que também servem de indexante em contratos de crédito a retalho. Aqui se traça o percurso da Libor e da Euribor, desde o seu cálculo com base nas estimativas de um painel composto por grandes bancos internacionais até à sua divulgação e utilização em práticas bancárias de rotina nos mais diversos cantos do mundo. O rasto da Libor e da Euribor é relacionado com um complexo organizacional que combina infraestruturas materiais, arranjos legais, canais de comunicação, meios representacionais e rotinas de trabalho. E, ainda que este complexo internacional não seja descrito integralmente, são fornecidos alguns exemplos bastante concretos: dum ponto de vista etnográfico, voltamos à sala de mercados do Banco A para perceber como os valores da Euribor são recolhidos e posteriormente disseminados a nível interno com o objectivo de serem incorporados em produtos de crédito de retalho. O texto não fica, porém, confinado a este universo bancário nacional, convocando outros actores do sistema financeiro global e chamando a atenção para a diferença entre os processos de recombinação estratégica (ou *bricolage*) mobilizados pelos grandes bancos internacionais e os processos de imitação exponencial (ou *pastiche*) levados a cabo por outros actores do sistema financeiro.

Na Primavera de 2012, como é sabido, o reino da Libor e da Euribor (ou seja, o reino financeiro na sua quase completa totalidade...) foi abalado por suspeitas de manipulação de alguns bancos que contribuíam para o cálculo das taxas. Esta história é recuperada e entendida como provável desfecho de um percurso iniciado com a invenção de uma solução originalmente vista como prática e conveniente por um conjunto restrito de actores de mercado estrategicamente posicionados nos pontos de convergência da finança internacional. A solução representada pela Libor expandiu-se depois de forma contagiosa, de acordo com uma tendência muito marcada no mundo na finança — e evidenciada em capítulos anteriores — para fazer as coisas segundo moldes previamente estabelecidos ao mesmo tempo que se alargam nexos e afiliações. É neste sentido que se argumenta que tanto a Libor como a Euribor são taxas multirreferenciais e multifuncionais com uma notável capacidade agregadora, devendo a sua manipulação ser compreendida mais como regra do que como excepção. O capítulo descreve os diversos arranjos institucionais (envolvendo colaboração horizontal ou vertical, interna ou externa) necessários à prática da actos considerados manipulatórios, sublinhando o carácter altamente compósito e flexível dos grandes bancos internacionais, os quais parecem funcionar mais como *clusters* de redes operacionais independentes do que como organizações uniformes. As acções das autoridades de supervisão financeira com vista à resolução do problema da manipulação e à restituição da confiança nas duas taxas de juro são igualmente examinadas.

Diga-se, para terminar, que o nosso trabalho sobre a realidade bancária se reflectiu noutros artigos publicados internacionalmente, onde se complementam e aprofundam algumas das ideias avançadas nos capítulos desta dissertação (Lopes, 2011, 2013b, 2017b) e se desenvolvem reflexões sobre a etnografia em meio empresarial (Durão e Lopes, 2011; Lopes e Durão, 2011). Não nos pareceu, contudo, relevante a sua inclusão nesta colectânea de artigos. Assim, após o quinto capítulo, segue-se uma reflexão final onde são apresentadas, de modo sintético, as ideias centrais deste trabalho, que se repercutem pelos vários capítulos; reconhecem-se igualmente algumas das suas limitações e apontam-se pistas para desenvolvimentos futuros.

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OE/SADG/UI0428/2013), em qualquer dos casos envolvendo fundos nacionais. O autor beneficiou igualmente de uma bolsa para pesquisador visitante do Fundo de Amparo à Pesquisa do Estado de São Paulo (Processo nº 2014/04977-1), que cobriu uma estadia de um semestre na Universidade Estadual de Campinas (Agosto-Dezembro de 2014), período durante o qual foram trabalhados os dois últimos textos inseridos nesta colectânea.

Todos os artigos aqui compilados foram inicialmente apresentados em eventos científicos internacionais, tendo sido agraciados com uma quantidade de comentários e sugestões feitos por colegas sociólogos, antropólogos, economistas e de outras áreas científicas. O mesmo deve ser dito dos editores e *reviewers*, que contribuíram, de forma decisiva, para a versão final dos textos. Gostaria de destacar, neste âmbito, os contributos de Rafael Marques, com quem mantenho uma profícua e amigável relação de colaboração desde há dez anos em torno dos estudos sociais de finança e a quem devo algumas das ideias apresentadas nestes textos; e de José Dias Lopes, que me forneceu indicações importantes sobre o tema da bancarização. Não obstante estes importantes apoios, a responsabilidade pelas imperfeições do presente trabalho é, naturalmente, minha.

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HOW CREDIT INSTITUTIONS LOOK AT SOCIETY: ECONOMICS, SOCIOLOGY AND THE PROBLEM OF SOCIAL REFLEXIVITY RECONSIDERED

Introduction: different levels of perception, different modes of organization

Present times are challenging for sociology, history and anthropology, whose impacts outside academia appear restricted and confined to very particular matters, at least when compared to the magnitude of economics. Economics is, of course, also a social science, but one that has tended to distance itself from its neighbouring disciplines and, through the use of econometric and statistical models, to become apparently closer to the scientific paradigms of physics and mathematics. Not that classic sociological discourse has simply been dismissed as irrelevant by economic agents: the notions of 'social capital' or, more seldom, 'embeddedness' have undergone recent conceptual and political interpretations and used to better identify certain aspects of social relations that can be explored so as to maximize the profitability and efficiency of economic organizations (Marques 2003: 25-26; for an interesting case-study, see Narotzky 2006). The same could be said of Georges Friedmann's views on work as a process that should be, for the most part, controlled by the worker, which somehow prefigured the neoclassical economic orientation towards the idea of *homo economicus* as an autonomous agent (cf. Callon 2007b: 157). Notwithstanding Michel Callon's observation that the contribution of the social sciences in the shaping of *homo economicus* should not be neglected, the truth is, when adapted or translated into economic terms, many classic sociological concepts become a caricature of what their mentors and followers intended them to be and easily comply with the hegemonic principle of accumulation. On the other hand, the claims of some economists about the need for incorporating a stronger historicist and sociological persuasion into the discourse of economics — particularly through an attention to *longue durée* cycles or path dependence processes — have been generally disregarded even in the face of the generalised predictive incapacity (see Stoffaës [1987] 1991; David 1985 and 1997).

In this article, we discuss how patterns of behaviour, collective aspirations, regional economic trends and other matters of a certain sociological nature are used by credit institutions. We rely mainly on fieldwork done in the marketing, financial and risk departments of two Portuguese retail banks (henceforth *Bank A* and *Bank B*). Our aim is not to demonstrate the existence of some lay sociology or folk psychology, since it is most probable that this sort of narrative will be present wherever there is a group of people doing things together — that is, wherever there is a 'society' functioning. Rather, by focusing our attention on these local varieties of sociological discourse, we seek to reconsider the Giddens predictions about the growing permeability of society and institutions to sociological insights and narratives of the self in late modernity (see Giddens 1990), and to compare this general version of reflexivity with the stricter perspective on the performativity of economics (see Callon 1998, 2007a; MacKenzie 2006; MacKenzie, Muniesa & Siu 2007). By showing how the images of society put forward by financial institutions bear more resemblance with the world view of economists than with current sociological descriptions stemming from the academy, we are achieving more than a statement of the obvious. Indeed, we may be taking one step forwards in the comprehension of economics as the actual pan-discourse of advanced societies.

It is worth noting that we are here talking of different kinds of images of society. For the marketing and risk departments of retail banks — as well as for many operational areas —, 'society' may be considered as a 'population' or 'universe' of thousands of customers, be they effective or potential. Sometimes it is also a geopolitical entity equivalent to a state (in this case, the Portuguese nation state), traversed by global or regional socioeconomic trends. On other occasions, it is the ensemble of agents that compose 'the market' in its global, European or national dimension. Finally, 'society' may also be akin to an institutional entity corresponding to the bank itself, with its hundreds of members of staff allocated across departments and branches, all working in articulation with one another. These different conceptions of society are purportedly vague, intuitive, and more grounded in situated practice and local common sense than in academic sociological formulations. They also correspond to different levels of perception and action, thus testifying that credit institutions, like any other economic institution, are far from being homogeneous worlds operating on the basis of uniform principles of coordination as simplistic digressions on hierarchy and the maximization of profit would lead us to think. Indeed, they are interwoven with tensions deriving from different coexisting modes of perception and organization, as well as from internal power struggles.

In this paper, we concentrate mainly on the perspectives of retail bank marketing, risk and financial departments in Portugal. Largely controlled by the state in the 1980s, with two or three prominent players dictating the rules and distributing goals among smaller parties, the Portuguese banking system underwent important changes as from the beginning of the 1990s, marked essentially by growing privatization and the deregulation of financial markets, along with a massification of credit products (especially credit cards and home loans). Retail banks played an important role in this social process that entailed a profound transformation in collective attitudes towards money, from a general private savings orientation to high levels of depositing and indebtedness while the role of pawn shops and other fringe banks has remained almost residual. As a matter of fact, retail banks constitute the core of the Portuguese banking system, and, even if their dimension cannot be compared with the biggest players in Europe and the United States, there has been some equivalence in terms of performance indicators (at least until 2008). Notwithstanding these national particularities, the truth is that similar movements of privatization, deregulation and credit massification also occurred in many countries of Western Europe, following in the leading footsteps of the United States. Thus, most of what we seek to convey in this paper appeals to organizational processes and environments that have a strong transnational (if not global) character. When necessary, other specifications related to the Portuguese banking system will be set out but the general argument and empirical evidence clearly both point to a transnational reality.

Marketing: imitation and improvisation

The general function of banking institution marketing departments is the creation and management of products in order to explore market opportunities and to expand business activity, taking into consideration the perceived needs of consumers and customers. The first thing to note about these needs is that they are not neutral facts or client behavioural properties, but rather the object of a collective elaboration involving specialized agents (working in banks, firms, consumer rights organizations or supervisory institutions) as well as a heterogeneous multitude of consumers who — sometimes methodically, other times more randomly — contribute towards framing and reifying what are generally conceived of as ‘needs’ or ‘desires’ (cf. Knights, Sturdy and Morgan 1994; Sturdy and Knights 1996). Therefore, it is hardly surprising to find that our Bank A and B marketing professionals do not rely greatly on regular and extensive consumer behaviour surveys. Some quantitative research may take place along with some interpretation based on inputs received by commercial branches. Nevertheless, the creation and management of credit products is highly conditioned by the legislation in effect as well as by similar products provided by banking competitors — following the coercive, mimetic or normative premises of institutional isomorphism delineated by DiMaggio and Powell (1983; see also Meyer & Rowan 1977: 346). In other words, when developing credit cards, personal loans, car financing solutions, home mortgages and even non-financial products (with the bank actually retailing watches, computers or travel services…), retail bank activities are effectively encapsulated by circumstances that ultimately escape its own control — given they originate beyond its formal borders and represent that usually acknowledged as 'the market' as an organizational environment or a social entity, and not only the credit market but also the real estate market, the car market, etcetera.

Accordingly, the shaping of credit products has to follow trends generated on the supply side, sometimes rather irrespectively of consumer proclivities. For instance, during the summer of 2007, Bank A decided to raise interest rates applied to mortgages (or what in Portugal is known as the 'spread', i.e. a small percentage added to the Euribor rate, usually described as the bank profit margin) and to adopt a more careful posture regarding collateral valuations as the first signs of the subprime credit crisis began to emerge. This happened at a time when Portuguese consumers — reacting to some aggressive marketing campaigns promoting the idea of a 0 percent spread — were still eager for more credit products and, consequently, the decision had a slight, negative impact on Bank A's business.[2]

Therefore, what is known as 'analysis of competitor products' (that is, the methodical scrutinizing of what other banks offer in order to develop a still more appealing range) plays an important mediating role when it comes to purportedly adapting credit solutions to presupposed consumer needs. In fact, most of the tasks involved in the creation and management of credit products may be said to consist of bare imitation and conformity to the rules, leaving only a narrow margin for innovation. Furthermore, due to the absence of patents in this sector, credit services appear to be easy to imitate — a

[2] In this regard, we do not follow completely the Callon, Méadel and Rabeharisoa assumption that the interactions between supply and demand, involving reciprocal and complex influences, form the central nexus assisting in the qualification of goods (2002: 200-201). This may clearly be true in specific market sectors where an effective 'economy of qualities' is evolving. We doubt, however, that this dialogical principle exists at all in some other business sectors and we consider that any social scientist studying the marketplace should also be prepared to acknowledge the preponderance of supply interests over demand preferences (see Knights, Sturdy and Morgan 1994; Williams 2004 for concrete examples of this preponderance in the financial industry).

fact which, as Knights, Sturdy and Morgan suggest (1994: 45), may explain the absence of deep research work beyond regular financial monitoring. In other words, all retail banks provide the same general credit products (credit cards, personal loans, car financing, home mortgages) and, among these, almost all offer the same general solutions, for example, fixed or variable interest rates for home mortgages, interest-free payments for credit cards, spread reductions for all other products, associated insurance products, and so forth. As is otherwise common among all sorts of market products, which have to distinguish themselves against a background of sameness — see the reasoning of Callon, Méadel and Rabeharisoa (2002: 202-203), inspired by E. H. Chamberlin's theory of monopolistic competition —, the differences from bank to bank in standardized credit products are usually to be found in details like the minimum spread offered, the maximum loan-to-value ratio allowed for mortgages, or the cost of fees and commissions.

Competition analysis developed in the marketing departments of banks A and B involved a set of specific strategies. First of all, there is constant and ongoing monitoring of other bank Internet sites, outdoor campaigns and mass media advertising. When encountering any novelty, there followed an activity described by marketing members of staff as 'peeling the product' (*descascar o produto*), which consisted of deconstructing the credit service into its fundamental parts in order to understand how it really worked (the lowest spread allowed, eligibility conditions, the additional costs involved, etcetera). Evidently, consulting available information may be not enough to dissipate all doubts on the products of other banks so it is common practice to establish contact with employees at rival institutions to obtain more information. These contacts are often by telephone and target specific interlocutors in other banks based upon a tacit rule of reciprocal cooperation that began in the early nineties when Portuguese retail banks entered an expansion phase in their commercial activities. At the time of fieldwork (2008-2009), each marketing department held a list of contacts in other banks, a clear sign that these cooperative relationships were functioning on regular terms and viewed as perfectly natural. In certain cases, particularly when the interlocutors remain the same for a long time, this reciprocal collaboration mediated by phone may evolve into a more familiar relationship between peers even if at different institutions. At this point, a particular marketer will often take the initiative of freely informing third party and external interlocutors whenever a change in credit products eligible for publication occurs. Data gathered from other banks can also be compared to check whether there are any discrepancies.

However, some third party interlocutors may pretend to be very busy, lacking in the time to give out all the information requested, while others do so with great caution and reservation thereby stressing the limits imposed by commercial rivalries. Hence, in this sense, informal inter-bank networks assisting in analysis of the competition may serve to promote cooperation as well as competition, with each marketer having his / her own perception of 'warm' (i.e. friendly and understanding) and 'cold' (impersonal, formal) contacts. Furthermore, as banks endorse a periodical rotation of functions among employees, certain 'warm' channels suddenly get shutdown and replaced by more formal exchanges as while it is true that contact lists are handed on from one marketer to another the same cannot be said of the friendly tone, cooperative will and other situated qualities.[3]

The truth is that information provided by these contacts never breaks the rule of professional discretion. In practice, marketing staff are not authorized to pass on everything their colleagues in rival banks wish to know. Usually, confidential territory begins with what is referred to as the 'spread table' listing the profit margins of the bank discriminated by differing amounts and risk score categories. However, marketing analysts responsible for scrutinizing the products of other banks strive to obtain such information through the use of other strategies, not at all distinct from sociological inquiries, interviews and even fieldwork — thus confirming that sociological instruments and techniques are much more readily accepted by organizations at large than social theory itself. In this case, marketing analysts disguise themselves as normal customers interested in certain credit products and call up other banks in search of information or even visit branches where they can talk personally with local clerks and pose specific questions. This widespread technique, known as 'mystery shopping', may also help in detecting other important business characteristics, such as the 'quality' of the assistance provided to the potential customer.

These anonymity-based techniques of analysis are made more viable due to a perceived inclination of certain Portuguese customers to pose several questions about credit services, sometimes to the extent of comparing one bank's products with those of rival institutions and confronting her local bank with the latter's presupposed advantages.

[3] This periodical rotation of functions may also be considered a rule inspired by sociological concerns in the sense it is based upon the perception that workers tend to develop a specific kind of awareness when induced to adapt to new situations while becoming more passive and accommodating when remaining in the same environment. The rotation principle was more evident in Bank B than in Bank A, at least during the fieldwork period, and is also fostered by the intense churn in banking sector employees. The conditions and effects of such staff rotation on organizational practices have been questioned by some ethnomethodological approaches but this is a discussion that must be left for another occasion.

Correspondingly, competition analysis also has to deal with client decision making processes, setting out "arguments" to be used in operational areas that highlight the virtues of the bank's own products and reveal the weaknesses of all others. Regardless, all banking institutions aim to protect a certain degree of information, saving them right to the contractual moment when a customer is actually buying a specific credit service and thus imposing limits on mystery shopping and other similar means of inquiry.

Notwithstanding the importance of competitor product analysis within the overall framework of marketing activities, some attention must also be paid to customer behaviour, to the urges and needs of credit consumers as well as to the performance of the bank's commercial areas responsible for the allocation of credit products. The quantity of contracts that need to be sold by each branch in order to meet business goals and objectives is generally set by marketing professionals. Once again, banker sociological proclivities come to the fore but in some ways less methodically than perhaps expected and sometimes clearly improvised. There is, of course, regular research in order to perceive how well certain products fare. The evolution of older credit contracts as well as the amount of new contracts is subject to monthly analysis that is then integrated into the set of reflexive activities that measure the prevailing state of the business. On this basis it becomes possible to detect the regularity of certain tendencies, like peaks in applications and contractual negotiation during the month or year, or the growing preference for laptops instead of desktops (in both cases, taking the universe of customers as reference), or the regional commercial departments that sell more and those that sell less (taking the institutional universe of the bank as reference).

This kind of control is based exclusively on numerical and financial data (Credit contracts in effects? How much revenue is the bank due to receive in principal and in interest? How many contracts each regional department has to sign in order to meet its commercial objectives?). Once in a while, other types of studies are developed that aim at customer preferences, but which still draw on quantitative analysis. For instance, the bank may have an interest in knowing which personal loan types generate more success or why certain credit cards seem moribund. In any case, the data underpinning this internal research is generated at branches during the signing of credit contracts and subsequently stored in the bank's data warehouses to be finally processed and deployed by marketing professionals in terms of percentages and global amounts.

Indubitably, some enquiries appear to be clearly directed to more qualitative aspects of customer behaviour. Regarding home mortgages, for example, Bank B developed a study of bonus conditions designed to detect customers who were awarded a spread reduction but never regularized their situation (they had agreed to complete certain bureaucratic procedures but did not or could not act accordingly). The objective of this study was to understand and typify the reasons behind these irregular situations[4], so that, in the future, decisions concerning these cases could be automatic. Another study focused on specific modalities of home mortgages concerning building a dwelling, moving from one place to another or the carrying out of home improvements: each modality had a maximum duration of two to three years but members of the marketing department suspected this period might be too short and the study did show that this was in fact the case in certain contracts. In both examples, it proved possible to take note of concrete, specific, even atypical situations, mainly through collaboration between the marketing department and local branches: in the first study, a sample of customers with arrears was contacted via mail and invited to come to the nearest branch to regularize the situation.

Sometimes, however, banks may not have important data about their customers available. When responding to an inquiry by a Portuguese newspaper interested in overall home mortgage customer trends, one marketing professional at Bank A could not answer questions regarding the number of clients extending the terms of their loan or requesting deferment on the principal capital payment since the beginning of the year. The journalist was told that the bank was not in the habit of gathering such data and while it would be possible to calculate a number that would take an unaffordable amount of time and thus the question went unanswered.

The truth is that, besides the financial information made up of customer account movements, banks know little more about their clients. The general information gathered during contracts is not updated and sometimes not even standardized given it is dispersed across different computerized systems. For example, when guarantors were required for a credit contract — that is, people designated by the client to pay her instalments whenever she was unable to do so — the computerised application for car financing contracts in one of the banks included only two classification options (*parents* or *not applicable*) whereas the applications for other products considered a wider range of options (*not applicable*, *spouse*, *parents*, *children*, etc.). Furthermore, since the standardization of the computer systems gathering this information is rather expensive, the option is instead to create matching rules between pieces of information that do not

[4] Some of them quite independent of the customer’s own will, such as the possibility of having her salary deposited directly in the bank by the customer’s employer.

coincide in order to insert them into large scale calculation processes. It is exactly at this point that improvisation, experience, intuition, and tacit knowledge make their entrance in marketing activities, in large part as a consequence of a shortage of information and techniques.

Large scale calculations based on customer data are the competence of risk analysts and we shall return to them in the next section. For the meanwhile, and to conclude this excursion through marketing, let us consider other aspects of improvisation that sustain the approach to customer needs and behaviours. Marketing professionals gain hints about customer opinions on certain products through information provided by branches (or, indirectly, by regional commercial departments). The contact is normally established by branches when facing a concrete situation: one customer wants to contract a credit service under certain specific conditions, another wants to renegotiate her home mortgage claiming to have found a better offer with another bank, still another wishes to file a complaint, and so on. Since credit products have some degree of malleability, it becomes possible, in many situations, to create a specific solution for a specific case. It should be noted that marketers do not interact directly with clients but only with bank colleagues working in operational areas to whom they issue instructions by phone, concerning the functioning of credit products. Furthermore, these transversal contacts are not carried out on a structured basis, that is, they happen almost everyday but are still dependent on the hesitations of branch staff when faced by a particular customer's questions. In other words, marketing professionals are thus prompted by phone calls from their colleagues at the commercial branches who, in turn, are prompted by direct contact with peculiar clients — and no systematic record is made of these frequent and rather contingent situations. However, through this chain, a certain image of customer preferences and behaviours is forged in the mind of marketers that forms part of their situated knowledge and may later assist in the reconfiguration of credit products.

Risk analysis: segmentation and numerical realism

Switching from the marketing to the risk department results in significant changes occurring in the way 'society' is viewed. Risk analysts concentrate more on the universe of customers, leaving aside that happening in rival organizations or in other areas of the bank (except as regards what is termed 'operational risk', which tries to measure possible losses deriving from human resources, internal systems and processes). The purpose of risk analysts may be characterized as the design of large scale calculating models in order to classify clients (individuals or firms) on the grounds of a probabilistic conception of risk (cf. Marron 2007: 103).

The *probability of default* by a client — usually referred to by the acronym 'PD' — is the central issue at stake, or the dependent variable that must be explained. The data supporting this calculation is essentially quantitative and of very large scale, signalling the adoption, by economic institutions, of sample methods originally tested in social statistics — a process which began in the 1970s in the United States (see Desrosières 2001: 344) and has now spread worldwide. These data are usually collected by branches during credit applications. In the case of individual customers, socio-demographic information like marital status, employment status (precarious or stable), education level, home income, and so on, is never updated — except if the customer intends to renegotiate the contract. On the contrary, firms and enterprises frequently provide the bank with their latest balance sheets and other accountancy reports in order to prove their creditworthiness. The fact that credit products for businesses and firms have shorter durations, with the possibility of being renovated thereafter, facilitates this free exchange of information. In any event, the content recorded in bank databases is treated as 'reality', independently of how accurately it may represent real people and institutions. We term this perspective 'numerical realism' in order to stress what forms its core (that is, figures and binary variables), but we could as well follow Alain Desrosières (2001: 346) and term this a modality of 'proof realism' — where the reality that matters starts with the database, from which the analyst proceeds to obtain results that have to be plausible and consistent with the recorded information, irrespective of how this information was treated *before* it entered the database.

We have stated that bank customers are classified according to their probability of default. This means that the socio-demographic and financial data collected during each application is statistically processed through logistic regression calculation models so that, in the end, a specific score is obtained. Different scores are then organized by classes of risk. The number of these classes may vary according to the dimension and quality of the database: sometimes there are ten classes, other times only six or seven (the formation of these classes is an automatic procedure carried out by SPSS software). In general, customers belonging to the first class are those whose probability of default is considered to be null. Correspondingly, customers whose score puts them among the last two classes are tainted with the highest default probabilities and the bank should avoid negotiating any credit contract with them. If socio-demographic information of a new customer shares many features with previous customers belonging to the first class (who never default) then her score is likely to be high. Inversely, if she has too many factors in common with defaulting customers, the result will be a low score and possible rejection.

Logistic regression models establish this kind of relational correspondence by evaluating the explicative weight of a series of socio-demographic variables for the probability of default. There are several aspects at stake depending on the respective credit products. Considering credit cards, the variables most used are age, gender, marital status and personal property agreement, number of persons in the household, address code, degree of formal education, occupation and number of years in the profession, residence status (rented, owned, family home, etc.), payoff of the current credit card, possession of other credit cards, possession of long term or short term loans, ownership of a car (y/n), payment through bank account debit and time of her relationship with the bank. Each customer forms a particular combination of these aspects (variables and co-variables) and the explicative weighting of each aspect depends on the previous default records existing in the bank's database.

Supposing that married and graduate applicants receive the highest scores, it may well be inferred that this is a consequence of the fact that marriage usually implies a higher household (providing both spouses are employed...) income and graduation favours access to better paid employment and subsequent career improvement. However, these are mere suppositions that might be uttered in daily chatter, informal meetings, circumstantial comments and other casual situations that make up lay sociology in this context and without ever being set out in periodical reports. The sounder justifications for the scoring of clients are mathematical and statistical in nature. In fact, the explicative weighting of marriage status or degree of formal education is never fixed in advance: it may be more significant or more neutral depending on the cases registered in the database, itself always evolving and expanding.

One simple way of dismissing all of this is by simply ranking it as «bad social science» justified by widespread methodological problems such as computing errors, limited sampling and the utilisation of median values or artificial correspondence criteria to fill in gaps (for a critical review of this position, anchored in the prevalence of a reality prior to the database, see Leyshon and Thrift 1999: 448). In general, risk analysis models have been part of what Leyshon and Thrift call a «quantitative revolution» (Ibid.: 436) in the business of retail banking, supported by technological devices like computers, software and other information systems that ensure the creation and processing of massive databases.[5] As one might expect, more qualitative customer evaluation procedures such as interviews or personal acquaintance through long term interaction, traditionally a prerogative of local branches, have been almost completely abandoned and substituted by quantitative approaches — an inevitable but also somewhat radical change, since qualitative methods based on personal contact were deemed to be trustworthy by those deploying them.

Another controversial dimension to probabilistic models of risk analysis is that they seek to predict what will happen in the future — default or non-default — on the basis of what has happened in the past within the restricted universe of those bank customers recorded in its databases. Implicit is a linear and deterministic conception of time enhanced by the early stages of statistics and probability calculation (see Reith 2004: 389-390) and, once again, dependent on data registration systems. It is true that the same could be said of any attempt at long term social reproduction: having no way of knowing exactly what will happen, in many instances we assume it will be approximately like the immediate past and act accordingly. However, risk analysis models and conceptions seem to have pushed this general presupposition to extremes, introducing a false sense of security by giving forth the idea that the future was somehow predictable and all major risks covered (for a similar reasoning applied to Value-at-Risk calculations see De Goede 2004: 210; and Tett 2009: 39).

Of course, risk analysts ignore neither these nor other problematic issues including the difficulty of determining the statistical relevance of a specific variable, that is, the exact weighting this variable holds in the analysis so as to enable the construction of general rather than idiosyncratic assumptions. As a result, risk analysis models are indeed quite malleable. The process of data collection is permanent and cumulative: the data of new customers is continuously added to the mass of information already gathered. The payment behaviour of credit clients is also regularly monitored by looking at the evolution of the corresponding accounts thereby enabling a calibration of the probabilities of default calculated at the beginning of the contract by comparing them with what really has been

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[5]In the United Kingdom, this quantitative turn in the retail banking industry brought about a centralization of services and a decline in regional and local offices (something that did not at all happen in Portugal where the progressive centralization and quantification in the late 1990s and 2000s has been paralleled by an expansion in the branch network).

happening as recorded in the database. Every year or so the models are subject to an extended revision and certain variables may lose weight and be subsequently abandoned while others gain greater explicative power or are newly introduced. For example, opening and building up a savings account purpose dedicated to later purchasing a home was considered an important indicator of the creditworthiness of home loan applicants. However, when the Portuguese government decided to end the tax benefits formerly associated to this particular product, customers began to lose interest and started searching for other savings solutions. In Bank A, during fieldwork, this variable was being removed from home loan risk models to be replaced by a new input, corresponding to the holding of any savings account. Once a new set of variables is defined, the model is fine-tuned through a series of statistical tests.

However, an impression of sociological unrealism persists perhaps as a consequence of the handling of huge quantities of data that turns empirical validation beyond the database into a futile exercise. As one corporate risk analyst at Bank B told one of the authors, «the particular reasons firm A or firm B defaulted do not matter that much to us; what counts is the weight of certain variables, like loan-to-value…» (for a similar reasoning applied to American consumer credit, see Marron 2009: 163-164). It also seems clear that sociological approaches to risk analysis — which have developed enormously over the last thirty years, drawing on the charismatic influence of authors like Giddens, Beck or Luhmann (for a review of this perspective, see Reith 2004: 384, 391-393; Rothstein, Huber & Gaskell 2006: 93-99) — have reduced impact on the numerical realism that drives these risk calculations. Risk is treated here as an objective (in the sense of accurately measurable) property of bank clients that serves to assist internal decision-making processes more than depicting a social reality evolving beyond institutional borders.

On the other hand, quantification may be dominant but it is never absolute, even at the scale of each bank: risk analysts work mainly with samples, not with real quantities, since a lot of data is not correctly uploaded or is simply absent having been discarded at some stage. While the samples are very large in number, sometimes the lack of data may prove a significant obstacle preventing definite conclusions on certain subjects. In Bank B, for example, while developing a historical analysis of covered bonds, one analyst separated the home mortgages whose loan-to-value ratio (LTV) was inferior to 80 percent to observe their evolution in contrast with the evolution of the total number of loans included in the operation. He then detected some intriguing and unexpected discrepancies in the subgroup with the lowest LTVs that could perhaps be due either to variations in the effort rate[6] of customers or simply to a shortage of information. His director urged him to explore the issue further but, after a series of inconclusive tests, the analyst was forced to choose the latter, unsatisfactory ‘explanation’.

Curiously enough, qualitative approaches have not been totally expurgated from the work of risk analysts, especially concerning corporate credit agreements. As stated, information regarding firms is more regularly updated. Contracted corporate credits are usually of shorter durations but the amounts involved are significantly higher so businesses need to be supervised more closely. Operational areas dealing with corporate credit usually include specialists on different business sectors that evaluate a specific firm in terms of regional impact, potential growth and other aspects. Corporate risk analysts may participate in this team or work in a separate department but they specialize and are more sensitive to socioeconomic indexes. Furthermore, the Bank A director of corporate credit (who coordinated two teams of nearly twenty people each, one in Lisbon, the other in Oporto) used to visit firms regularly: the visits were short but he paid close attention to what might be indicators of clumsiness or disorganization in the manager’s office or even in their oral speech.

Other types of qualitative research undertaken by corporate risk analysts included the perception of hidden connections between clusters of firms that appear quite different and totally independent in order to prevent a possible domino effect in case the central firm went bankrupt. Nevertheless, the information available was scarce and relied mostly on enquiries by branch clerks during the application process, when firm managers were asked if their company possessed any affiliates or special business relations with other firms.

Finally, it is crucial to stress that risk analysis decisions are not unconditional and do not impose upon decisions in more operational areas. They are more like recommendations and, in many cases, are not actually observed by operational areas where members of staff continue to rely on more intuitive (from the risk analyst perspective) procedures. In this sense, the so-called quantitative revolution is not yet complete in Portugal — or perhaps it should be conjugated with more qualitative aspects. The interaction between risk and marketing departments is also potentially conflictual: as

[6]The effort rate (in Portuguese «taxa de esforço») is an indicator intended to measure the ability of a client to pay the instalment, taking household income as the main term of comparison. Ideally, the payment amount should be below 50 per cent of total household income.

a rule, marketing tries to present products that can easily be taken up by customers whereas risk seeks to moderate this expectation by suggesting more severe terms and conditions regarding the spread or client profile for specific marketing campaigns. This tension is canonical and depicted in many risk management books and manuals (see McNab and Winn 2000: 25) and illustrates perfectly something we earlier referred to: that the bank's point of view is far from uniform and its actions are the result of several internal compromises.

Financial departments: storytelling and interpreting

Besides the marketing and risk perspectives, other images of society worthy of mention appear in the retail banking business. There is a juridical view of the society in which the bank is integrated (in this case, a nationally confined society), based upon opinions regarding the compliance of product characteristics and contractual conditions or the right to use certain customer related information. There is also a humanitarian view connected to particular non-lucrative campaigns run by the bank where profits revert in favour of charity and social assistance institutions. In this case, market principles seem to have been largely but not totally suspended since this beneficent role usually exempts banks from a certain amount of taxation. And there is a still more complex view of the market as a social formation, a «life form» or «greater entity» (cf. Knorr-Cetina and Bruegger 2002c: 169), where it appears as global in scale and impulsive in its moves, animated by feelings such as expectancy, uncertainty, nervousness, fear, panic or exuberance. This psycho-sociological view evocative of 19^{th} century accounts on the hypnotic or mad character of crowds belongs to financial departments and, more particularly, to traders and financial directors responsible for controlling the bank's money and investing it in the various markets displayed across computer screens: foreign exchange currencies, equities, bonds, commodities, financial derivatives, and so on. We now take a closer look at this side of bank activities.

Trading rooms are relatively recent in Portuguese retail banks. They emerged in the mid-1990s in the biggest banks, encouraged by the growing importance of financial derivatives. In a certain sense, these rooms are windows open onto the world of financial markets and global economy. Their functioning depends on the constant flow of information provided by Bloomberg, Citigroup, Reuters or Danske electronic terminals.

This information comprises permanently updating graphs and numerical indicators and news statements arriving every second. The mass of data is effectively so huge that traders tend to filter it according to geographical criteria (for instance, the division between the USA, Eurozone and rest of the world), taking into consideration specific market sectors (bonds and interest rates, stocks and stock indexes, foreign exchange rates). In comparison, there is less attention to the bank's retail business and even to important aspects of the national economy. As one trader explained: «I really love my job but sometimes I get the feeling that I know nothing about what is going on in my own country…»

Trading rooms have been the object of recent ethnographic attention. Karin Knorr -Cetina and Urs Bruegger tell us of total trader immersion in the action in which they are taking part in with eyes glued to computer screens and their unfolding flows of market information (2002a: 396). In other articles, both authors speak of a new form of intersubjectivity marked by face-to-screen interactions in situations of co-presence and immediate response (2002b: 923-930), or of «post-social relationships» centred on the bonds between human beings and objects (2002c). The anthropologist Caitlin Zaloom follows this line of thinking by stressing the «intensity of focus» of traders and their «absorption in the moment-by-moment action» (2004: 378; 2006: 104-105), but she takes this a step further to mention the presence of «weak narratives» in the trading room, providing interpretations of the latest market movements and the development of «market-chatter» between colleagues (2003: 266-267; 2006: 155-157). Furthermore, having done fieldwork on more than one site, she contrasts the noisy environment of a London futures dealing firm with the quietness and discipline of a similar trading room in Chicago (2003: 267; 2006: 157). In turn, Daniel Beunza and David Stark (2004) treat the trading room not just as a 'setting' but also as a *locale*, with a specific organization that facilitates communication among traders and promotes the emergence of «interpretive communities». In the same vein, Vincent-Antonin Lépinay (2007a) tells us of the importance of articulated narratives for the construction of a stable market ontology favourable to the circulation of financial products.

In sum, existing ethnographic accounts give out the impression that the trading room environment can vary substantially according to several factors, specifically, its own physical dimension and organizational layout, the degree of involvement in financial markets (which tends to be greater in investment banks and funds than in commercial and retail banks), the extent of prevailing market liquidity and their own ontological stability and the *habitus* of employees, that may favour either informal conviviality and a broad exchange of information or stern discipline and concentration on one's own tasks. However — and this remark surely hangs on Knorr-Cetina and Bruegger central assumptions —, market movements also contribute towards influencing the particular social atmosphere in the trading room, by fostering discussion and co-interpretation (particularly in times of high volatility), or alternatively, individual absorption in the flow of data unfolding on computer screens.

Our own observations in this regard are dependent on fieldwork conducted in the very small trading room of Bank A (comprising only six employees directly involved in trading activities) during the effervescent months of August and September of 2008. This was a period marked by several alarming announcements concerning banks and firms deeply involved in the business of credit derivatives, which peaked on 15th September, when the famous investment bank Lehman Brothers went bankrupt. In such conditions, characterized by high volatility and uncertainty, the above designated 'psycho-sociological' view of the market gained particular strength. There was a deep sense of unpredictability: the reality of markets evolving basically according to news and rumour and, as some traders commented, sometimes quite independently of theoretical models used by macroeconomists or technical analysis indicators like the Relative Strength Index (RSI). In a nutshell, words prevailed — especially those pronounced by relevant international actors, like the president of the US Federal Reserve, the Governor of the European Central Bank or other important opinion makers. «Whenever Jim O'Neill speaks», one trader said, referring to former Goldman Sachs Asset Management chairman and UK minister, «something happens!» On another occasion, the director of the trading room alluded to a supposed emergency meeting of the Federal Reserve to discuss the situation of companies Fannie Mae and Freddie Mac, thus causing an immediate reaction from another colleague: «In that case, there may be news to come!»

The power of rumours grew considerably during that summer of 2008, prompting either impulsive reactions to buy and sell that generated abrupt movements in market indexes or inducing an anxious expectancy that translated into a decrease in activities roughly like the quietness preceding a terrible storm. Inside the Bank A trading room, the sharing of information was intense. Every morning, around 11am, the group used to suspend trading activities to engage in an informal meeting to collectively discuss the main issues on the global and national economic agendas. This local practice had been introduced by the new trading room director, who wanted to instil collective reflection, quite independently of market fluctuations. Nevertheless, over those tumultuous weeks, the discussion often extended to other colleagues and financial department directors, who were constantly visiting the trading room. Contact with other brokers through chat rooms and by telephone, aimed at better understanding unfolding events, was also constant and ongoing. These contacts included staff at important banking institutions like Citigroup, who sent in daily personal comments and even small articles depicting their view on the market situation. In this particular trading room (and possibly in many others around the world), the dynamic was thus one of storytelling and interpretation / articulation, entailing dialogue and discussion, plot weaving and thickening, and even philosophical arguing, rather than intense self-concentration combined with the use of technological instruments.

In such a context, the explanation most applicable to bankers is, of course, the theory of self-fulfilling prophecies popularized in Sociology by Robert K. Merton (1948). This theory is based on the assumption that, if economic actors become somehow convinced that a certain firm is at risk of insolvency and act accordingly (by massively selling their shares) then that firm is most likely to go bankrupt even were its financial situation in fact stable. In other words, the prophecy comes true only because people believe it *may* be true. From a sociological perspective, this argument is far from naïve as it seeks to capture what seems to be a path-dependent process of rising performativity of a "story" or "tale".[7] Traders and financial directors of Bank A complemented this canonical view with some of Fisher Black's insights about how rumours distorted market functioning (see Black 1986, another cherished reference for financial actors) or, more seldom, with recent achievements in 'behavioural finance', an approach that tries to figure out, among other aspects, how market crashes may be influenced by private investors deploying trading technologies in their own homes. This argument, not at all devoid of true sociological persuasion, holds that these 'solitary' investors are more vulnerable to the anxieties enacted by the market and consequently prone to thoughtless actions that intensify uncertainty, whereas institutional investors must ask, consult, and reflect before they act — in sum, the classic problem of embeddedness.

[7]Indeed, the recent formulation of an «economy of words», proposed by anthropologist Douglas Holmes (2009) to describe central bank communicative behaviours, hardly distinguishes itself from Merton's founding principles, which are explicitly mentioned in an email transcript by one of Holmes' interlocutors, a senior economist in the Reserve Bank of New Zealand (Ibid.: 407). The importance of storytelling as a way of framing and propelling economic events has also been explored in another classic paper by Hirsch (1986), a propos the advent and generalization of hostile takeovers among US companies.

Following Michel Callon (2007a), we could note that the psychological sociology stemming from trading rooms is still far too dependent on human motivations and beliefs, therefore seeming to disregard the importance of the materialities comprising socio-technical arrangements in the production of events that happen independently of what humans presuppose. For example, when the possibility of state intervention to rescue Fannie Mae and Freddie Mac was under discussion (in the immediate run up to Lehman Brother's insolvency), there suddenly appeared on computer screens an item of news stating the company United Airlines faced serious problems. Spread worldwide, this information immediately caused an abrupt fall in the company's stock price. A short time later, an official statement by United Airlines detailed how the story corresponded to an event that had happened six years earlier and had somehow been referenced as contemporary by Reuters and Bloomberg. Reflecting on this intriguing case, one Bank A financial director ventured that whoever picked out that old report from the archives and reedited it as spanking new was perfectly aware that the powerful Reuters and Bloomberg search engines would automatically detect it and distribute it globally, therefore causing a drop in the company's stock value and launching more panic into the market (and perhaps also generating considerable profits to any opportunistic investors behind the move).

The notion that there are technological devices in support of system functioning and executing automatic tasks is naturally present in this view but they here appear to be clearly subordinate to perverse intensions of agitating the market as a greater being that can only pertain to human agencies. In this, we find a good example of a trading room debated story-line or plot— inspired, in this case, on the *leitmotiv* of conspiracy. Other arguments took a more philosophical line such as vivid discussion over the decline of the American capitalist system right after US state intervention to rescue Fannie Mae and Freddy Mac and the rumour involving United Airlines, which took place in the informal morning meeting. In the words of the trading room director, «the state had to intervene in order to save the market, instead of letting the market evolve by itself» — which to him clearly meant the system was not working as it should. Naturally, this kind of talk is by no means confined to within the walls of trading rooms: the main verbal clues continue to emanate from the various information terminals — like the daily comment by one Citigroup broker entitled «Welcome to the U.S.S.R. (United States Socialist Republic)», which arrived the morning after the aforementioned discussion —, and so we may assume that the same kind of reasoning and plot-weaving takes place in other specialized financial contexts.

In sum, storytelling and interpretation were the rule in terms of local sociology, even if this perspective cannot be taken as absolute or totally representative of the complex agency of traders.

Conclusion: reflexivity and performativity

Let us once again return to the Giddens idea of an eminently sociological high modernity, whose institutions would be commentators and testers of sociological concepts generated in the academy, therefore extending social reflexivity beyond expert territory. Our brief excursion through Portuguese retail banking clearly reveals that banks are sites of knowledge production according to scientific terms and processes, though mostly based on situated research, method sampling and experimentation — and thus akin to what Donald MacKenzie (2003) calls *bricolage* — rather than on direct theoretical assimilation. A certain sociological inclination is also present, even if confined to an oral background realm within a context dominated by quantitative approaches derived from statistics, accounting and economics (and, concomitantly, gaining special prominence precisely when these predominant quantitative approaches appear insufficient). In this respect, it is important to mention that the Bank B marketing director did seem deeply interested in the potential of an ethnographic methodology for studying the home loan related decision making process. That was, we believe, an important rationale behind the bank's cooperation with our research project, bearing in mind that ethnography is now frequently deployed by many companies worldwide as a marketing research method (see Downey and Fisher, 2006: 18-19; and also Holmes and Marcus, 2006). Thus, even while numbers seem to prevail, the scope of organizational knowledge is sufficiently broad to still integrate new cognitive factors.

However, as hinted at above, the link between these, to a greater or lesser extent vague, sociological inclinations and discourses produced in the academy is perhaps more difficult to establish. Sociologist participation in Portuguese banking staff structures remains minimal and occurs mainly at the level of graduates without any further contact with university. Of course, this is not a sufficient explanation since most concepts, models and tools employed by these banking professionals are, in fact, imported from the United

States, a country where there is a tradition of exchange among sociologists, economists and political scientists of theories and modelling techniques that have been assimilated by the financial sector.[8] In any case, we feel tempted to state that the sociological perspective of retail banking more closely resembles a sociology "in the wild" (to recall an expression applied by Michel Callon to economics, and that shall be discussed below), representing an amalgam of 19th century crowd psychology, 1930s social statistics and 1950s Mertonian insights mixed in with accounting, econometric and probabilistic estimations. And we would suggest this is certainly not exactly the type of expert sociology Giddens had in mind when discussing the importance of reflexivity in late modernity.

This point deserves further elaboration. One aspect that could be said a propos the reflexivity of Giddens is that the conceptual formulation is perhaps overly simplistic, based upon the exchange of information between expert realms forming a cornerstone of high modernity and the lay realms of everyday life where people (including experts, naturally) engage in their lifestyles and carry out their own personal projects. Giddens does not say that this exchange has to be direct but the two poles seem to be important to his vision of a reflexive modernity. Specifically regarding economic matters, this problem has been reformulated as a problem of *performativity* — or the study of the conditions necessary for a theoretical discourse able to shape the world according to its own parameters (cf. Callon 1998, 2007a; MacKenzie 2006; MacKenzie, Muniesa & Siu 2007). In effect, this perspective entails more of a particular focusing rather than an abandonment of the concept of reflexivity which — as MacKenzie, Muniesa and Siu note (2007: 3; vide also Mackenzie 2001: 130) — still matters when it comes to accounting for the nature of modernity and the interactions between science and society. The kind of feedback loops usually investigated under the assumption of performativity mostly take place within expert territory while bearing in mind that the word 'expert' does not designate a reality circumscribed to the academic world but also encompasses a large variety of other sites where specific competences are put into practice and deployed for the purpose of applied knowledge production — as with the five different sites involved in the decoding of a particular financial product depicted by Vincent-Antonin Lépinay (2007a), to cite but one example. Hence, the idea of an economics "in the wild" or "at large", and its separation from a more confined economics and that assists the

[8]We would like to thank an anonymous peer reviewer of this text for having pointed out this fact to us.

performativity hypothesis (cf. Callon 2007a). An idea and a distinction that may be not entirely convincing, especially when it comes to distinguishing the performativity of economics from the performativity of, for example, sociology, demography, accounting or mathematics, given that what we find "in the wild" emerges as more like tangled bodies of knowledge that are elsewhere confined and kept apart from one another.

To sum up, whereas Giddens considers the fate of theory as it moves on from expert to lay on the basis of a convenient separation between sociology and society, Callon, MacKenzie and their colleagues consider the fate of theory as it passes from expert to expert on the basis of a no less convenient separation between confined economics and economics at large. In both cases, the usual distinction between theory and practice is blurred. However, the Giddens' perspective is mostly focused on questions of identity, gender and lifestyle, which are almost entirely absent in contemporary performativity approaches and appear to be clearly subject to economic imperatives in contemporary retail banking (in the sense that we see more of an economics in the wild acting through the work of banking professionals than an assimilation of theoretical sociology in the confined sense). This is fundamentally what may lead to a questioning of the scope of reflexivity as defined by Giddens through an acknowledgment that its rules do not apply to modern finance as effectively as they apply to identity issues permeated by gender, class, ethnicity or age. It is true that the performativity approach is more appropriate to the ethnographic context of banking and finance; however, as it only provides an incomplete answer to the original Giddens problem of expert-lay feedbacks, it seems we should be paying heed to the waning social science input into certain organizational fields and their compliance instead with the terms and conditions of an economics at large.

METAMORPHOSES OF CREDIT: PASTICHE PRODUCTION AND THE ORDERING OF MASS PAYMENT BEHAVIOUR

Introduction: innovation, imitation and the retail credit market

In recent years, the problem of the specificity of markets and economic relations has been accompanied by an almost unanimous acceptance both of the diversity and instability of products or regulatory norms, and of the hybrid nature of agencies and calculations. As structures for the production, circulation and alienation of property between counterparties legally defined as buyers and sellers (Slater 2002b: 238-239; Çalişkan and Callon 2010: 2-3), markets are generally perceived as frameworks for change that takes place in the form of permanent product readjustment, eventually leading to an alteration of market design. Hence the importance of studying the processes of product 'qualification / requalification' (Callon, Méadel and Rabeharisoa 2000: 215-218; 2002: 197-199), or market 'stabilization / destabilization' (Slater 2002a: 107-108; 2002b: 247) that form the core of modern economic dynamics. Inspired by Gabriel Tarde's *Psychologie Économique* (1902), other authors have taken this pendulous reasoning a step further by theorizing on the importance of economic 'invention' and 'imitation' (Thrift 2006; Barry & Thrift 2007) — or, alternatively, of 'vibration' and 'accumulation' (Lépinay 2007b) — viewed as complementary distinctions stemming from fundamental social relations.

The present article intends to contribute to this debate, not by adding more similar distinctions to an already full analytical repertoire, but rather by testing this same repertoire from the viewpoint of an ethnographic case-study of retail credit products. It accepts the general ideas of product qualification / requalification (or stabilization / destabilization) as a point of departure for a more detailed discussion of the concepts of invention (or innovation) and imitation. The main issue is that the two concepts, whilst perfectly distinct in theory, are not so easily applicable to the reality of retail finance, as what passes for innovation and product change at the level of one particular retail bank may also be considered, if viewed from a broader institutional perspective, as a form of imitation. The notion of 'pastiche production' is proposed to characterize a qualification scheme appropriate to intermediary players in advanced economies. Empirical attention to institutional constraints will lead us to reappraise the role of (financial) innovation and imitation as core principles of organization.

The main achievement of this article, however, is more likely to be empirical, as it presents the results of fieldwork conducted between 2008 and 2009 in two Portuguese retail banks. While considerable ethnographic attention has already been paid to the financial realm (Knorr-Cetina and Bruegger, 2002c; Muniesa, 2003; Beunza and Stark, 2004; Riles, 2006; Zaloom, 2006), the focus has been almost exclusively centred on dealing rooms, trading floors and similar settings, thus barely noticing how modern finance actually 'cuts across a broad swathe of political, economic and cultural life, and focuses upon distributive outcomes' (Leyshon and Thrift, 2007: 102). In this article I attempt to illuminate the interconnectedness between the world of traders, brokers, and investors, on the one hand, and the rest of the economy and society, on the other, through the ethnography of an intermediate actor par excellence — the retail bank and its mass credit services. An actor which otherwise seems an understudied subject from a deep empirical perspective: with the exception of the ethnographies of Kalthoff (2005; 2006) and Wissler (1989), I know of no other retail credit based fieldwork case studies.[9]

This relative scarcity is intriguing should we consider not only the deep involvement of retail credit markets in the latest world financial crisis but above all their distinctive character: devoted to the mass trading of the most general mediator of value, the so-called 'lifeblood of the economy' (Tett 2009: 28), retail banking constitutes a market in itself while also functioning as a guarantor of a vast majority of other monetized markets. Such a hyper-circulatory function must be stressed in the sense that it is not some mere definitional feature of banking but rather a recent historical outcome of the enhancement of both liquidity and mass consumerism after World War II (Marron 2009: 79-98; Westbrook 2010: 30-31) and the subsequent restructuring of the state after the crisis in Keynesianism (Engelen et al., 2010: 47), with the adoption of neo-liberal modes of governance largely based on financial and accounting techniques (Miller and Rose 1990; Miller 2001). This circumstance significantly affects what may be called the structural form of banking transactions. According to Slater (2002b: 239), all market exchanges could be defined as property alienation, thus implying that counterparties

[9] Historical accounts are not numerous, though the contributions of Gelpi and Julien-Labruyère (2000 [1994]), Calder (1999), Jeacle and Walsh (2002), Carruthers and Cohen (2007), Guseva (2008) and Marron (2009) already represent an important achievement, together with the comparative analysis of Guseva and Rona-Tas (2001) and Rona-Tas and Hiss (2008).

would 'be quits' at the end of transaction — even while it might be difficult to agree on when they would be quits (see Simmel [1907] 2004: 378-379 for a suggestive comparison between 'being quits' and being through with a sex worker after the sensual act is accomplished). However, when the good transacted is the most common symbol of economic value, this automatically implies a temporal delay between the delivery and the payment moment, which, in the case of credit services may extend for several decades (as in home loans) or even be of an indeterminate duration (as in credit cards or business factoring). The same applies to other retail banking services like deposits and savings, in which the positions of buyer and seller are inverted, or of regular payment transfers, all pointing to a sort of lifelong economic relationship in which counterparties never get to be 'quits'.[10] Thus, there seems to be something structural about this relationship between banks and their clients, which affects not only the functioning of markets but also the way time, space, institutions, work, politics and life are organized.

Therefore, in the case of credit markets, the problem of innovation and change must take into consideration these structural implications. It is not just a matter of conceiving products that can be acquired by clients, but of sustaining an institutional relationship and enacting a payment discipline both predictable and manageable through binary oppositions (such as payment / non-payment, regular / default). In the following sections, I shall attempt to characterize the credit product dynamic based on fieldwork in two Portuguese retail banks. These banks will henceforth be designated simply as Bank A and Bank B, with this anonymity being extended to their members of staff as well as to some important financial data. Both banks run operations mostly on a national scale, with hundreds of branches and many thousands of clients throughout all of Portugal. As is usual in the banking sector, the clientele is generally divided into two main categories: individual clients *and* firms (or businesses). The credit services provided were also very common and in accordance with the prevailing designations defining the standardization of goods in a specific market system of differences and similarities: credit cards, non-financial products, personal loans, car financing and home loans for individual clients; short term credit lines, cheque management services, commercial paper, leasing and factoring for firms.

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[10]Clients may change from one bank to another, of course, and they can transfer their credit contracts too. But this replacement does not affect the general terms of the banking relationship. Moreover, the difficulty in actually closing a bank account, even after all the bureaucratic steps have been taken, is one interesting sign of the permanent character of such a relationship.

Far from being exhaustive or representative of the totality of the credit business, my ethnographic excursion concentrates primarily on marketing departments (the main area responsible for the development of credit products), with some occasional incursions into risk analysis and financial departments. Even thus, I am unable to depict all the qualifications happening inside banks, not to mention those external qualifications whose effects are reflected in product development. Nevertheless, the examples provided are sufficient to identify six different stages to what emerges as the "life" of credit services, starting from conception to formatting, promotion, adaptation, transmutation and, finally, supervision. I draw on empirical examples pertaining to different retail credit products, instead of following one single product from its first to final stage. This seeks to portray both the sheer diversity of products belonging to this industry, along with their compliance to the outlined six stage circuit, even though I also accept this was partially a consequence of fieldwork contingencies (where I rotated around teams of eight to ten people, each specialising in a different field).

Conceiving the product

In both Bank A and Bank B, teams with around ten marketers (mostly women) were allocated the mission of generating and testing ideas to be applied to credit cards, personal loans, car financing, home loans and other credit services. This activity was usually classified as 'developing' or 'managing' the product. It is worth noting the adoption of verbs that point clearly to something in progress or evolving out of pre-existing models—i.e. former versions of the same product—rather than the creation or invention of something absolutely new. As a matter of fact, we refer here to procedures based on concepts and prototypes both highly standardized and worldwide in scope. Thus, at a general level, there is nothing left to be invented by Portuguese banks—they simply must go with the tide and offer services that have already in themselves become institutions, like credit cards, home loans or personal loans. The degree of standardization, however, is variable: whilst the scope of Visa or Mastercard credit cards is truly global, home loans must in fact comply with various legal stipulations that may vary considerably from one country to another. But even in this latter case we may discover international accountability rules and other less imposing regulatory patterns such as the European Code of Conduct on Home Loans, which functions as an influential guide for many banking institutions in the European Union; or even common, "unsponsored" credit sector standards (David & Greenstein 1990: 4, 5-11), such as the distinction between principal and interest, the repayment scheme based on monthly amortizations, the mortgage on the purchased home as a common safety procedure for protecting the bank's capital investment, the charging of fees and commissions, or the use of risk assessment measures like loan-to-value ratios or the scoring of clients according to a probabilistic conception of risk.

The shape of many credit products is also strongly determined by existing credit solutions made available by other players in the same market. Both Bank A and Bank B deployed people for 'competition analysis', a highly cognitive task centred on the products of other banks and implying the use of several methodologies, including content analysis, reciprocal exchange of information between banks under a rule of tacit cooperation, or mystery shopping (see Lopes and Marques, 2011). This comparative research contributes to the calibration of credit services supplied by each bank by adjusting their position vis-à-vis similar products in a determined market period, with certain presupposed advantages and disadvantages. In sum, 'conception' (or invention) is but applicable to certain momentary features of a product, mostly of a quantitative nature (for example, the minimum spread offered, the cost of fees and commissions or the maximum loan-to-value ratio allowed), in an overall stream of conformity and considerable uniformity reinforced by the absence of patent registration.

Occasionally, research activity conducive to possible product conception may be prompted by collaborating with external institutions or by the launching of special government programs in support of small- and medium-sized businesses. However, the bulk of regular research in marketing departments is not usually conditioned by imperatives other than those of competition analysis thus being mainly focused on outside data from other banks as registered on the Internet. In neither bank did marketers devote much time to prospecting actual consumer behaviour and, in any case, demand was not conceived of as being highly influential or even independent of supply (see Knights, Sturdy and Morgan 1994).[11]

Let me provide a detailed example of product conception. For some weeks, a Bank A marketer sought to work out just how to create a service thus far non existing: a personal loan for 'non-clients', a category made up of clients with the bank for less than twelve

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[11]2017 note: Banks do, however, contract market research firms to investigate demand and do so generally once a year.

months. She started with an Internet search, consulting the sites of international financial companies operating in Portugal and making experiments with their on-line simulators. After a while, she had already collected various details about revolving credit solutions from rival institutions that she copied from Internet pages and pasted in a series of Word files (one for each institution) — a clear testimony of how a pastiche stream that forms around credit products is enhanced by the use of Internet as well as of standardized software applications, with the copy / paste tool functioning as a transversal means for the organization of meaningful content. As will become clear over the following pages, the copy / paste operation is not a mere background instrument but perhaps the most important lever of pastiche creation.

A few days later, I saw the same marketer revising the files she had created, now comparing the different principal amounts, the level of the respective instalments and the annual interest rates, as well as the documentation requested of the applicant and the amortization costs. Her aim was to confirm if a more competitive offer could be made by Bank A. A few more days went by and I rejoined the same marketer who told me that, after having discussed the subject with her direct superior, the creation of a personal loan for non-clients had simply been discarded and she was told to concentrate on the reformulation of an already existing product (a personal loan with a fixed interest rate). Therefore, one marketing research path was suddenly abandoned in favour of a new one, which started in exactly the same way, looking through similar products available from other banking institutions… In fact, marketing research can also be ordered without any specific intention of conception or reformulation but only as a means of acknowledging the strength of a product vis-à-vis its direct competitors. These are comparative studies focused on quantitative aspects that may indeed reveal the need to make some alterations in the extant supply — a decision that must always await approval from above.

At the level of conception, the work is mainly concentrated on certain product details and anchored in research and analysis of similar products offered by the competition. Internet sites and, occasionally, internal client information databases are the main sources of relevant information. A considerable part of this information has numerical content (principal amounts, level of respective instalments, annual interest rates, etc.), with product conception consisting of the exploration of quantitative differences. The main focus is thus clearly on the supply side of the market with the universe of demand seldom approached by marketers, at least not in any systematic manner, although intuition and practical knowledge may also play an important role as reserves of information not usually stored in databases—like a grasp of client preferences obtained through phone conversations with branch clerks. Hierarchy is always present irrespective of the creativity associated with marketing work. Product proposals were submitted to section directors, who then submitted them to marketing department directors, who in turn submitted them to the bank's executive board. However, this course was not strictly unidirectional and the same proposal could go back and forth along the hierarchy, accompanied by some debate and reformulation suggestions. Horizontal cooperation between different areas of the bank was also crucial, with risk and compliance departments making important contributions towards product perfectibility.

Formatting the Product

After having already decided to develop a new product or campaign, or to reformulate an already existing solution, there comes the moment of proper preparation and formatting. Credit products are mostly intangible, but their existence is materialized in a series of internal and external documents, predominantly digital. There are basically two types of internal documentation: the manual type, where instructions regarding the functioning of the product can be consulted at any time by marketers or branch clerks; and the business evolution type, where levels of sales are discriminated (I shall return to this subsequently). As for external documents, they consist mainly of flyers, simulators and other Internet based information where the product is presented to a mass of clients. It is mainly this task of materialization through formal documents presenting a new version of the product that I refer to as formatting. In a certain sense, formatting is what truly makes the new product come into existence, hence, in this regard equal to material conception. However, conceiving distinguishes itself from formatting in that it involves a lot more of research and comparative analysis, taking place *before* any formal decision by the marketing department to engage in effective product development (in fact, such a decision may prove contrary to actual product formatting as seen in the previous section).

I once followed a Bank A marketer specialized in non-financial products while he was elaborating an internal presentation document on a new, and already approved, computer campaign. A good deal of his subsequent work consisted in updating the information regarding the products in the new campaign, using an older file of a similar campaign as his starting point and maintaining the overall document structure. While reviewing the content of the older file, the marketer noticed a decrease in the number of desktops sold, largely compensated by an increase in laptops, which he promptly assumed to be the sign of an oncoming consumer trend. He then concluded—and this point is crucial to any understanding of what 'formatting' involves—that it would be better to exclude desktops from the newest campaign. Along with the definition of the computer models to be sold (laptops only), formatting also implied the determination of the value of commissions (and subsequent final prices), and the decision to previously install Microsoft Office in all the models available: a very short list of alterations when compared with products involving a lot more of variables.

Let us return to that other Bank A marketer who was formerly engaged in the conception of a personal loan for non-clients and then was told to abandon that line of research and concentrate on the reformulation of a fixed interest rate personal loan. I encountered her later while working on the new proposal to be submitted to the Executive Board. In this case, product formatting implied the definition of credit limits, loan terms, interest rates and interest rate bonuses depending on the subscription to other products, the inclusion or otherwise of initial costs, requirement or otherwise of life insurance, the possible existence of a period of principal payment suspension (during which the client only pays interest), any residual value, the number of instalments per year (twelve or fourteen) and fees. Here we find the fundamental coordinates that frame the development of any personal loan service, most of them encompassing other credit solutions as well (namely, mortgages or car financing). Thus, in a sense, formatting represents a series of quantitative adjustments of variables whose qualitative nature remains almost unchanged, complemented by legal-bureaucratic procedures.[12]

Vertical and horizontal cooperation between different areas of the bank (or between the bank and collaborating companies) plays an important role in product preparation and in the final decisions on its implementation. The same could be said of information regarding the competition as formatting also means framing the product within the existent supply variety even while this process is no longer prospective Internet research but incisive consulting. We could feel tempted to talk of imitation a propos formatting, since the instrumental value of the copy / paste tool becomes even more pronounced during this phase: images and pieces of texts are constantly copied from

[12]Some internal classificatory systems may change with formatting, as happened in the example above with the way credit products were grouped in the price list: the fixed rate personal loan service induced the creation of a special category of "fixed interest rates" within the "personal loans" class.

internal or external documents to be pasted in new documents with exactly the same templates (i.e. a new product manual is written over the previous one, with the necessary alterations and changing of file names). But imitation, in this sense, is not equal to exact reproduction of a previous model: it is rather an adjustment of a previous model resulting in a new layer of work that is juxtaposed to older layers. It is imitation with minor differences — which means the imitation is not "pure", as Tarde indeed recognized (Barry & Thrift 2007: 517). I think the concept of 'pastiche' may be appropriate to characterize this type of work supported by the free use of clear-cut, "unsponsored" product models and the absence of patent registration: it appeals to a series of quantitative readjustments and document juxtapositions within the same general model or prototype which is, in fact, reproduced. Thus, pastiche distinguishes itself from a certain view of bricolage according to which the ready-mades resulting from previous layers of work are used by well positioned actors to generate a somewhat unexpected combination able to function as a new product model (see Engelen et al. 2010: 53-56). In both cases, the conditions under which something is recognized as 'novel' are institutionally bounded, though bricolage appeals to a changing of routines and to some conceptual refocusing. Pastiche is more the resource of the players that follow this lead, especially those mediating between global finance and national retail markets.

We can distinguish two streams of pastiche production that intersect at the moment of formatting: one circumscribed to the bank as an institution, regarding internal document types and other bureaucratic procedures, and the other external to it, regarding retail credit products as institutions or standards. Notwithstanding the existence of different organizational cultures in the banking business, the second stream of production is clearly stronger when it comes to formatting. In other words, Bank A personal loans tend to be more similar to the personal loans of the competition than to the remainder of Bank A credit products. This means that the institutional character of services like credit cards or home loans prevails over the institutional character of any Portuguese retail bank, with differences among competitor banks being carved mostly through branding. I shall return to this element of the credit market.

Promoting the product

After conception and formatting, a first process of stabilization / qualification closes and a new version of the product is ready to be commercialized. There follows an intermediary phase implying a series of promotional activities, through which the product is presented to its sellers and buyers. It could be said that promotion is merely an extension of conception and formatting, since the product is not properly transformed during this process. However, the existence of the product is expanded via another series of documents and document-related actions (such as training sessions based on PowerPoint presentations, for example) that assist other people in their perception and acknowledgement of a ‘new’ release. As with documents sustaining a product’s existence, we can roughly divide promotional activities into two types: internal (aimed at branch clerks and other professionals involved in the selling of the product) and external (aimed at clients, be they individuals or firms).

As said earlier, some manual type documents are produced during formatting which are designed to function as instruction guides for members of staff in more operational areas. Also published on Intranet pages were tables containing small sentences highlighting potential advantages of a product vis-a-vis its competitors that could be readily picked up by branch clerks during interactions with clients and used as valuable sales arguments. However, since the bank offers a lot of products and campaigns, it is difficult for branch clerks and operational managers to keep track of everything taking place. Usually, they are informed of new developments through the bank’s Intranet services, where they can learn of a new product’s release and follow the links to its manual, contract and form models. Nevertheless, there is a difference between reading the headlines announcing the availability of the new service and actually assimilating its properties in order to manage the selling process autonomously. In many cases, branch clerks only have real contact with new products when directly prompted by clients and, in such circumstances, without the time to consult the manual in detail. Hence, the best way out in case of difficulty is to call the marketing department and ask to speak with the persons responsible for the product’s development. Indeed, some marketers complained that the information produced was rarely processed in advance by branches and commercial departments, who would later call in with questions regarding basic procedures already detailed in the product manual. In practice, these phone conversations between branch clerks and marketers can also be perceived as a variety of promotional activities, within a context of incessant document production where information is best processed if mediated by personal contact and mutual collaboration (cf. Rawls 2008: 714). Though conceived to guide people in their work and give them autonomy, many documents remain poor substitutes of situated learning, at least if true oriented practice is lacking (cf. Orr 1996). In other words, manuals only become useful for those already initiated in their content.

In addition to Intranet publishing and improvised phone conversations, training sessions are another way of promoting products internally, here aiming at direct contact with operational peers. All marketers involved in the development of credit products were responsible for preparing and running these training sessions. Both Bank A and Bank B held regular training sessions both when there were new products about to be distributed or simply to keep employees informed on the existing range.

However, the bulk of promotional activities are directly focused on clients. The so-called marketing campaigns are perhaps the most common way of promoting products and boosting business, since each campaign usually translates into a sales increase. Some campaigns are centred on a specific product and targeted at specific sets of clients (filtered by risk departments in order to detect and exclude any defaulter). Other campaigns are more generic, covering the complete range of products for a determined segment (university students, seniors, etc.).

Promotional content is also included in the bank statements mailed monthly to clients, where recent account movements and the corresponding final extract are depicted (regular users of credit cards receive similar letters). Colourful flyers and other forms of public advertising were also regularly prepared to be sent to customers. And there were other, more weighty forms of promotion. Once I followed one marketer from Bank A involved in the preparation of a booklet presenting the existing supply of services for businesses. This was an interesting moment of fieldwork in that it permitted a perception of the large temporal scope involved in pastiche production. The marketer had collected several blocks of text copied from Intranet and Internet pages, containing synthetic descriptions both of the available services and of similar products offered by other banks, which she intended to use as the raw textual material to be further elaborated upon. During this task, she consulted older documents in print form, specifically a 1994 catalogue from a now disappeared Portuguese bank with exactly the same sort of content on credit solutions for firms. I was struck by this discovery because I would assume such information to have been completely outdated. However, the marketer explained to me that there had been few changes in the business segment over the past fifteen years and, since the aforementioned catalogue was rather good, it served well as a reliable source of information. Of course, quantitative data would have to be updated, but the definition of the quantifiable concepts (or coordinates) underlying this range of products was ready for re-use and appeared to be considerably enduring. In this sense, it seems reasonable to look at pastiche production as the outcome of relatively stabilized product qualifications.

Adapting the product

With commercialization begins a new phase in product definition as a result of the assimilation of the renewed credit service by consumers, competitors and regulators. 'Adaptation' is the key word, since the previously formatted product is now submitted to different kinds of adjustments. The general characteristics of the credit service have to meet the personal characteristics of a specific client. Particularization, in the sense of adaptation to customer particularities, is then a first strong tendency at the stage of adaptation. There is also what we could call regularization, in the sense of compliance with new legislation on credit products and contracts, as well as with new internal dispositions. Furthermore, being indexed to changing financial indexes like the Euribor and Euro Interest Swap Rates (to mention but the most obvious), retail credit services must have their constituent variables regularly revised and updated. Thus, synchronization with existent indexes emerges as a third feature of adaptation and adjustment.

Let us first consider the stream of adaptation coming from product particularization (or personalization). 'Each credit contract is a different case', one Bank B marketer used to say about home loans thus stressing the ease with which this service could be adjusted to different client characteristics. Particularization is more clear-cut in the case of home loans because of the multiple conditions involved (amount of the loan, value attributed to the home in function of its characteristics, professional status of the client, possible guarantor requirements, spread negotiations…). On the other hand, credit cards prove far more rigid: even while there are many different types of credit cards, each appealing to a specific set of clients, contract formalities are tiny and the margin left for negotiation is negligible.

However, personalization should not be reduced to client margins of negotiation during contract formalization. It implies any sort of reference to singular persons and to concrete situations—even unique situations—related to a particular contract. I collected many such examples, including – as mentioned before – research aiming at detection of contract irregularities whose responsibility was attributable either to special proclivities and favours stemming from client-branch clerk relationships, or even to external third parties (such as the possibility of having the salary directly transferred to the bank by the customer's employer, in order to benefit from an interest reduction). We could easily integrate this personalization tendency within a more general tendency to the particularization patent in market products, enhanced by the enlargement of storable and computable data provided by information technologies (see Leyshon and Thrift 1999) and by a growing participation of consumers in what Callon terms the 'co-construction of goods' (2007b: 148) and Nigel Thrift calls 'commodity projects' (2006: 287). In other words, massive quantification renders visible those peculiar situations once unregistered or subsumed within more general categories and thus favouring new forms of qualification.[13] In the case of credit products, however, we cannot consider personalization to be an end in itself. With the exception of contract negotiations—where it is valued as a sign of product malleability—personalization appears to be the inevitable but undesirable result of imperfect quantification and flawed general classification. Hence the development of research to detect irregular and atypical situations in order to better regularize and typify them, wherever possible according to automated procedures. Therefore, in this sense, periodical automatic management of large databases with populations of contracts is the ultimate goal, even when implying temporary product particularization.

Besides particularization, a good deal of product adaptation is directly imposed upon banks by regulatory norms. Recent years have been fertile in the enactment of new legislation concerning the sale of financial products in Portugal, with a fairly active role played by *Sefin,* a new association of financial service consumers (mostly composed of ex-bankers and members of the Portuguese Socialist Party)[14]. As a result, between 2007 and 2008, legislation was passed and subsequently adjusted during the application phase,

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[13]See Nunes (2003) and Callon and Rabeharisoa (2008) for similar examples in the field of medicine. Rose (1996) integrates this type of particularization procedures within a reconfiguration of governance that no longer sees 'the social' as a privileged field of intervention.

[14]2017 note: notwithstanding its promising debut, Sefin was extinguished in 2017.

thus inaugurating a period of permanent dialogue and mutual adaptation involving the banks, on the one hand, and the government and regulators on the other. Two decrees were promulgated that established new rules for the calculation of interest whilst another decree redefined the rules for renegotiating credit contracts, notably by forbidding cross-selling and the charging of any fees[15]. Simultaneously, the Bank of Portugal decided to promote new transparency of information norms, after a period of consultation where the banks were informed of the supervisor's intention and invited to submit comment on the norm proposed.

All legal alterations have obvious implications within banking institutions regarding product adjustment and impact evaluation. For instance, another 2007 Portuguese law limited the charging of fees for extraordinary amortizations of home loans to 0.5 percent for contracts with variable interest rate and 2% for contracts with fixed interest rates.[16] When conjugated with the 2008 decree prohibiting the charging of any fee in case of contract renegotiation, it produced some curious effects. In Bank B, clients with fixed interest rate home loans were taking the opportunity to renegotiate their contracts given they could change from a fixed to a variable interest rate for free and subsequently amortize their debt and pay a fee of only 0.5 percent. Though perfectly legal, this option was highly disadvantageous for banks and Bank B was seriously considering the substitution of its fixed interest rate service by a new modality of 'mixed' home loans (i.e. with fixed *and* variable interest rates). As is clear, at this point, the line dividing adaptation from conception becomes thinner, which means that from here we can easily step back to stage one in our circuit.

Naturally, credit products must also adapt to new internal regulations and norms, many of them influenced by the need to synchronize with the market, which is another permanent source of product adjustment. During my fieldwork in the Bank B marketing department, there came a decision to reduce the acceptable loan-to-value (LTV) ratio in all modalities of home loans. A few other Portuguese banks had already made a similar choice, including Bank A. Aware of this, Bank B wanted to follow the same precautionary path. Apart from LTV ratios, the spread—that is, a percentage additional to the Euribor interest rate usually considered as the bank's profit margin—is another very sensitive variable that needs permanent readjustment. Usually, each product has a corresponding spread table where this profit margin is discriminated both according to loan-to-value

[15]These decrees were, respectively, *Decreto-lei* 171/2007, *Decreto-lei* 88/2008 and *Decreto-lei* 171/2008.
[16]*Decreto-lei* 51/2007.

ratios and average loan amounts. Internal decisions on the alteration of spreads are relatively common, relying on the overall economic climate. More routinized tasks of synchronization with general economic indexes — not at all dependent on the promulgation of new internal decrees — manifested themselves through the updating of fixed interest rate values in all credit simulators (a weekly task) or of average three-month or six-month Euribor rates (a monthly task).

Transmuting the product

After commercialization, the credit service enters a new life-cycle conditioned by the contract term. This term extends for decades in the case of home loans, being shorter in the case of personal loans and car financing (ten years maximum) and indefinite in the case of credit cards (that can endure decades, with the successive settlement of different purchases). Now, this new life-cycle enables the creation of a different sort of product based on existing contracts. In both Bank A and Bank B, home loan contracts—and, more seldomly, credit contracts with businesses and public institutions—were selected, bundled, packaged and transformed into special investment products or collateral (called 'covered bonds', 'securities', or more commonly 'Asset Backed Securities') through a transmuting process now widely known as 'securitization' (cf. Carruthers and Stinchcombe 1999: 361-363; Rona-Tas and Hiss 2008; Poon 2009; MacKenzie 2009: 17-25; Engelen et al. 2010). This process ensures a dispersion of default risk, while simultaneously proving an extra source of liquidity and profit for banks through the issuing of securities backed by the cash flow of instalment payments. In fact, modern securitization schemes may be integrated, as Leyshon and Thrift (2007: 101) suggest, in a wider trend of 'hyper-capitalization processes' entailing the identification of particular geographies of previously dispersed and insignificant revenues—like rents, instalments, toll payments, etc.—which can now be integrated into the financial system by grossing up. Hyper-capitalization thus implies the transformation of regular flows of incomes and payments in the 'real economic' world into the main basis for speculation and lending in the financial world (Ibid: 98-99).

The first Portuguese securitization operations appeared in 1998, after a three-year period of substantive individual lending expansion. They were further enhanced at the end of 1999 with the promulgation of specific legislation.[17] The biggest Portuguese bank, owned by the state, acted as a sort of pioneer at the national level even though it was merely accompanying other players in the Eurozone in adopting this new type of financial instrument whose main coordinates—from the trenching of securities as a way of controlling default and pre-payment risks to the creation of credit default swaps, collateralized debt obligations on asset backed securities and other repacking techniques, to the insertion of bank conduits and special investment vehicles in the structure of such operations—had their origin in the world's leading economy (see MacKenzie 2009, Tett 2009). Other Portuguese banks soon followed this lead, including Bank A and Bank B. At a national level, they were competitors; at a global level, they acted mostly as receivers of standards and buyers of investment solutions from the big international banks. The boom in credit and real estate markets lasted until 2007-2008, at a time when securities were already giving way to covered bonds. After the US subprime crisis and the financial crash of 2008, interest in this kind of good diminished dramatically—buyers of Portuguese securities were more and more other national issuers and investors, with some securities also used as collateral for borrowing from the European Central Bank. Finally, with the sovereign debt crisis and successive rating downgrades, even the European supervisor ceased to accept Portuguese securities as collateral.

In both Bank A and Bank B, securitization was a task divided between the financial, risk analysis and marketing departments. The first area decided the global amount involved in the issuing operation; the selection of contracts that would form this pool was a task for risk analysts; and, finally, marketers would intervene in the promotion of new financial products, presenting them to ratings agencies and investors during road shows.

While doing fieldwork in the risk analysis department of Bank B in the months after the 2008 financial crash, I was able to follow the activities of one analyst responsible for selecting credit contracts for a new securitization operation. The task involved the designing of a SQL code program to scan the bank's database and search for home loan contracts with certain pre-established characteristics in terms of spread, interest rate, insurance, and so on. The programming process took the analyst considerable time: some query instructions had already been used in previous operations and, as in previous

[17]Cf. *Decreto-lei* nº 453/99, which establishes the legal contours of this kind of operations, stressing that they represent 'one financial instrument largely diffused and frequently used amongst the most developed economies' (my translation).

examples, the model is a computer file that needs readjustment or updating. However, since the bank's database was continuingly changing (with new contracts coming in and new problematic situations being detected), it was necessary to improve on many existing commands or even to compose new ones. Furthermore, once the program sequence had been completed, it was not simply a matter of running the database: a good deal of verification procedures to detect possible loading errors were required, as well as a set of subsequent validations to confirm that all exclusion criteria had been rightly applied. Thus, to reproduce the same general scheme, a lot of work was necessary, including many changes related to new data or previously undetected problems.

As stated above, the resulting products can be of two types: 'covered bonds' (when issued directly by the bank) or 'securities' (when issued by a Special Purpose Vehicle or a financial company specialized in securitization). In both cases, the pool of loans is sold to outside entities, who become the actual owners of the contracts, but the bank continues to process all related information, becoming a so-called 'servicer' entity. However, nothing changes from the client perspective as they are not even informed of their credit contracts being used in securitization schemes. As mentioned, covered bonds and securities can be sold as investment products that generate regular cash flows for investors; or they can be kept on the bank's own balance sheet to be used as collateral in other financing operations (such as borrowing from the European Central Bank). In both cases, the bank receives more cash, but only in the first case does risk happen to be actually distributed among investors.

Essential to this transmutation is the fact that Portuguese banks can operate simultaneously in the (national) retail *and* (international) financial markets—a condition shared by many other banks throughout the world, but which assumed greater importance since the privatization of banking in the 1980s and the mushrooming of financial derivatives trading in the second half of the 1990s. Naturally, still other transmutations are possible on the basis of credit contract securitization, for example, the creation of credit default swap contracts; or of synthetic collateralized debt obligations (CDOs) out of the above mentioned credit derivatives. This was in fact a very popular product until the 2008 credit crunch, in which it was deeply involved (MacKenzie 2009; see also Tett 2009). However, the issuing of collateralized debt obligations implies handling credit derivatives on a massive scale, which was too big a task for both Bank A and Bank B—as well as for any other Portuguese banks who could only enter this global game of credit derivatives in the role of investors.

Monitoring the product

In the previous two sections, I discussed retail credit products and their financial derivatives while deploying a word that clearly points to both formalization and relative stabilization and also to negotiation and personalization: *contract*. It could be said that retail credit products are one thing when presented as general services for a target set of clients and consumers, and another when turned into particular contracts. The contract moment is indeed a turning point in terms of qualification, with implications for the way the service is seen. What bankers consider as the life-cycle of the product is dependent on contracts in at least two ways: the number of new contracts celebrated at the end of each month (or what is usually called 'production') is viewed as an indicator of the state of the business, while at the same time each particular contract has a determined duration, from the moment of application until the moment the client totally pays off the respective debt. Accordingly, both product cycles are the object of at least two distinct monitoring activities: the first a task for marketers with the second for risk analysts.

Annual budgets put forward general quantitative objectives for each class of retail products, which will be rigorously discriminated afterwards, during the preparation of new campaigns and services. The accomplishment of sales goals is also monitored, this kind of information proving vital for the definition of new commercial objectives as these are not equally distributed across all commercial departments (due to the different number of active clients they serve, but also because of average sales performance). Through this regular statistical supervision, marketers are also able to oversee the product's life cycle and detect problems in its commercialization that may indicate a progressive decline of sales. If this hypothesis is confirmed, some special research is developed to understand what is taking place and to prepare some alternatives (which may incorporate product reformulation, thus returning to the initial stage of conception).

Apart from marketers, risk analysts engage in another type of supervision centred on the evolution not of products but of living contracts. This supervision starts at the moment of application, with a classification of client creditworthiness on the basis of a probabilistic conception of risk based on models, concepts and variables common to banking institutions throughout the world (cf. Marron 2007). As mentioned before, the *probability of default* by a client—usually referred to by the acronym 'PD'—is the central issue at stake and the dependent variable that must be explained. The data supporting this calculation is very large in scale and usually collected by branches during credit applications. The content recorded in bank databases is henceforth treated as ‘reality’, independently of how accurately it may represent real people and institutions (indeed, information regarding individual customers is rarely updated). This perspective has been termed ‘numerical realism’ in order to stress what forms its core (that is, the figures), but we might also follow Alain Desrosières (2001: 346) and term this a modality of ‘proof realism’— where the reality that matters starts with the database from which the analyst proceeds to obtain results that have to be plausible and consistent with the recorded information.

The classification of bank customers according to their probability of default means that the socio-demographic and financial data collected during each application is statistically weighted on the basis of logistic regression principles so that, in the end, a specific score is obtained, which is integrated into a more general class of risk. Acceptance or rejection is mostly based on this applicational scoring. However, there is much more to the supervisory work of risk analysts. Once the contract is celebrated, the core issue becomes the progress in instalment payment according to two general conditions: *regular* or *default*. This view is sometimes called ‘behavioural’, because it is focused on client conduct in terms of instalment payment, average account balance, quality of the relationship with the bank as regards the taking up of other services, etcetera. Thus, in this case, we are no longer dealing with projections or probabilities but with what is happening every month, under the premises of a lifelong commercial relationship in which the counterparties are never quits.

A substantial part of the work of risk analysts consists of designing or perfecting the SQL or SPSS processes that filter all the registered credit contracts to mark them as ‘regular’ or ‘default’. Once again, the task is far from linear. One Bank B analyst once showed me a PowerPoint document with 147 slides describing oddities in defaulted contracts and advancing some proposals as to the best way of defining the moment of default, the moment of recovery, and so forth. There were a lot of case-studies listed: contracts where the client had defaulted along with the guarantors, contracts where the counterparties had applied to other credit services, two different loans later merged into a single new loan, two renegotiated loans with the same counterparties but with different credit products, two regular situations corresponding to proposals with different terms of maturity… Again, we detect the principle of contract particularization alongside the need to typify uncommon situations in order to better process them automatically.

Along with default probability calculations and behavioural supervision, risk analysts were also engaged in at least three other important processes regarding retail credit products and their mutations: the projection of 'loss given default' values, the estimation of 'imparity provisions' and the supervision of home loan contracts integrated into securitization operations through a comparison between the evolution of defaults, pre-payments and recoveries with the corresponding originated amounts, in accordance with the terms of both the ratings agencies and the issuers involved. As is clear, risk projections are strictly related with possible losses, just as marketing projections aim directly at profits—both appearing as voluntary forms of self-regulation, or governance, while also subject to external audits made by the Bank of Portugal or the three ratings agencies, within a general context marked by growing concerns over 'accountability' and 'transparency' (see Miller and Rose 1990; Rose 1996; Garsten and Montoya 2008; Boström and Garsten 2008).

Conclusion: innovation and imitation as institutional effects

This article has depicted the production of retail credit services according to a six-stage process: conception, formatting, promotion, adaptation, transmutation and, lastly, monitoring. What credit products are is somewhat the result of the operations implied in each one of these stages. With the exception of transmutation—reserved, in the case of the two banks examined, to home loans and credit services for businesses—all credit products undergo these steps, and many of them do so time and time again as adaptation and monitoring induce new conceptions and formats. As in classic metamorphosing schemes, some degree of circularity is naturally welcome…

It is not quite fair to say that each one of these stages corresponds to a specific product stabilization / qualification. In reality, the first three stages concur to what might be called the 'retail good' qualification form, a development largely taking place in marketing departments. The fourth and the sixth stages are centred on another form of qualification (the 'credit contract'), which occurs in marketing and risk departments, as well as in commercial branches, where the contracts are actually negotiated and signed with bank clients; some of the adaptation and monitoring activities involved in these stages may also lead to product re-formatting through feed-back from regulators or competitors and are thus still related to retail good qualification. Finally, the fifth stage deals with a third qualification form (the 'investment good') and takes place in the marketing, risk and financial departments, as well as by investors and ratings agencies. Table 2 (below) summarizes the main empirical findings attached to these 'metamorphoses of credit products':

Stage	Qualification Form	Main Actors	Characteristics of Work	Sources of Information
Conception	Retail good	Marketers, bank partners	Competition analysis, comparative and imitative work	Other bank websites, Intranet sites, internal databases
Formatting			Internal document elaboration through 'copy and paste'	Computer folders with previously used documents, Intranet sites
Promotion	Retail good	Marketers, trainees, branch clerks	Internal document elaboration through 'copy and paste', training sessions, e-learning	
Adaptation	Credit contract, retail good	Branch clerks, bank clients, regulators, marketers,	Particularization of contracts (personalization), scoring of clients, regularization of products, legal interpretation, synchronization with economic indexes	Clients, law decrees and other legal documents, financial indicators, economic news channels, other bank websites, other bank interlocutors
Transmutation	Investment good	Risk analysts, financiers, marketers, ratings agencies, investors	Excel counting, SQL programming (query refining), document elaboration (PowerPoint presentations for road shows)	Internal bank databases,
Monitoring	Retail good, credit contract	Marketers, risk analysts	Document elaboration (business evolution and budgeting), elaboration of applicational and behavioural risk models, Calculations based on the *probability of default*	Sales reports provided by commercial departments, bank's internal databases,

Table 2 — Metamorphoses of credit products: a view from the retail banking industry.

The duration of the qualification forms is variable and dependent on the range of factors identified throughout this text. As regards the retail good qualification, new versions of credit cards and personal loans are issued annually whereas home loans tend to endure for longer. However, the need to comply with new regulatory norms, as well as with market indicators, induces annual adaptations even in the field of home loans. The maximum duration of the contract qualification is legally stipulated: ten years in the case of personal loans or up to fifty years in the case of home loans. Hence, versions of products that the bank may actually have already discontinued nevertheless continue to exist in the form of contracted loans. In fact, the considerable stability of credit contracts is the basis for the third type of qualification under consideration, the investment good — perhaps the most stable of all three forms analysed. Obviously, any retail bank has to cope with the possibility of early amortizations and renegotiations or transferrals, which imply a requalification of the contract form and, where the amortized, renegotiated or transferred contract has been converted into a securitization product, a due replacement in the respective loan pool. Observation has shown that such eventualities are common (happening every year) though minor when compared to the number of contracts remaining unaltered.

More importantly, this circular metamorphosing scheme applies to what I have termed pastiche production, or an institutionally bounded series of work arrangements based on copy/paste and updating procedures, and a variety of bricolage (cf. Engelen et al 2010: 46). From an ethnographic perspective, pastiche production of retail credit services entails the manipulation of digital contents through software programs and tools, sometimes involving some degree of particularization though ultimately subject to statistical forms of population management characterized by principles of centralization, generalization and automation.

As stated in the introduction, recent literature on market arrangements has promoted the idea of permanently changing commodities by way of successive processes of stabilization / qualification. Slater (2002: 247) talks of 'persistent' market destabilization, whereas Çalişkan and Callon (2009: 387) speak of the way 'modes of valuation are constantly being combined, tinkered with and reinvented'—though recognizing in a footnote that such a frame switch may be more common in art, wine, children and domestic services markets (Ibid: 394fn13)—or of a '(continuous) proliferation of differences in the field of agency' (2010: 10).[18] Apparently, it would seem that my ethnographic excursion concurs with these ideas, reinforcing them with a

[18]For a critique of this insistence upon 'instability, diversity emergence and specificity', see Barry and Slater (2002: 184).

description of the transformation stages of credit products. But what exactly is transformation here? In many cases, it consists of quantitative adjustments to spreads, LTV ratios, credit limits, loan terms, while leaving the underlying concepts untouched (one effect of quantification being precisely the production of successive countings and comparisons without affecting the qualitative underpinnings of the calculation). In other cases, product transformation consists of adaptation to particular circumstances or to new general conditions stemming from regulation, many of them also expressed in quantitative terms. This means our circular metamorphosing scheme might also be interpreted as a Tardian circle of imitation and opposition (Barry and Thrift 2007), or as a scheme of standard reproduction (David and Greenstein 1990; Bowker and Star 1999), or as a case of institutional isomorphism (DiMaggio and Powell 1983; see also Meyer and Rowan 1977) or as the maintenance of a determinate market configuration (Çalişkan and Callon 2010: 19-21).

The problem is that innovation and imitation seem to confound each other empirically, whereas theory tends to distinguish them clearly — even Engelen et al., who clearly approach the subject from a non-Tardian perspective, draw on the same type of opposition (2010: 51). According to Lépinay (2007b: 539), true innovation can only be apprehended *a posteriori*, when its effects have already been inserted into a chain of repetition. However, this is possibly so because innovation is not an elementary social fact and rather dependent on other aspects such as the advantage position and the power of the appointed innovators. Tarde uses the example of the general in the battlefield to demonstrate how innovation is ultimately a personal phenomenon related to the spark of genius (Tarde 1902: 224, cited in Lépinay 2007b: 530-531). But being a general also means having a global view of the battlefield (seeing the forest instead of the trees) and the necessary authority to command an army, and thus to perform the brilliant idea. Naturally, genius matters, as other generals may not be able to grasp the opportunity to win the battle. However, innovation—if indeed we consider it to be the capacity of seeing something before others—is not so much a founding moment of the social as a function of scales of perception and action, position within a hierarchical system and (as Lépinay rightly states) the passage of time.

To put it simply, the acknowledgement and consignation of something as 'new' is ultimately influenced by institutional constraints. This means that to study innovation from an empirical perspective is to investigate the concrete conditions under which something (i.e. a product) is constituted and appointed as 'new' by those implicated in its production — even when these same professionals easily assume that past records are a valuable resource for the creation of novelties and the competition ethos favours synchronization between suppliers. As Roy Wagner stated long ago (1975; see also Nafus & anderson 2009: 154), there is always something inventive in conventional acts and something conventional in inventive activities — what counts is how people become aware of innovation. That is precisely what the notion of pastiche production applied to the metamorphoses of credit tries to capture.

Throughout this article, I maintained a relativistic approach sensitive to the particularities of the context under consideration (now easily classifiable as the periphery of the Eurozone). There is, however, one good reason to think that pastiche production may be applicable — with the necessary adjustments — across different national contexts. At this point it is worth recalling the difficulty in applying Slater's idea of alienation to the realm of retail banking, as permanence seems to be the key factor sustaining the bank-client relationship. Many retail banking services in advanced economies imply periodical revolving or regular money transfers for as long as the client lives or even longer[19], thus pointing to the maintenance of a certain way of organizing things—institutions as well as the life of individuals—on the basis of regular mass payment behaviour and cash flow management (Miller and Rose 1990, Rose 1996, Marron 2009). Though credit products are designed to enhance individual freedom and product adaptation entails some degree of particularization, it is the mass of users, ordered on the basis of predictable binary responses, that lurks behind this surface of meaning.

[19] 2017 note: as in the case of Japanese intra-generational loans, for example, as suggested by an former bank employee during a Ph.D seminar

CREDIT (RE)CONNECTIONS: FINITE OBJECTS, AFFILIATIONS AND INTERACTIVITY AT TWO PORTUGUESE RETAIL BANKS

Introduction: on cosmetic surgery, everyday banking practice, and abstract credit

One day, in a Portuguese bank marketing department, a phone call arrived from one of the bank's local branches asking whether the bank offered any lines of credit for cosmetic surgery. The marketer who answered the call was not entirely familiar with the range of personal credit services available but replied in the negative while requesting his interlocutor wait a minute while he searched around for confirmation. As the colleague responsible for personal credit development was momentarily away, the marketer decided to ask his superior. He left his desk and went to his director's office, only to find that she was also unavailable. Upon returning to his seat, the marketer posed the same question to a nearby colleague, who specialized in business lending. This colleague concurred with his initial assumption, telling him she did not think it would be possible to obtain a personal loan for cosmetic surgery while simultaneously benefiting from the tax deductions associated with health care expenses. Although far from the conclusive answer the marketer was searching for, it was the best he could muster at that point. As such, he picked up the phone and told his interlocutor that, while unable to assure them with a hundred percent certainty, he strongly believed the bank could not offer credit lines for cosmetic surgery procedures. Later in the day, the problem resurfaced when the colleague responsible for personal credit returned. Her view on the subject was quite simple: of course it would be possible to use personal credit for a cosmetic surgery procedure, as long as the client indicated it as the purpose on the application form (the local branch in question was subsequently informed of this position).

This ethnographic vignette is meant to illustrate the difficulties of talking about credit in the abstract, i.e. without attaching it to very concrete objectives — be they houses, cars, cosmetic surgery operations or, as shall be seen throughout this article, even more mundane things. I learned through fieldwork that similar calls from local branches to central marketing departments were usually prompted by client questions to which bank clerks did not know the answer. Uncertainties about concrete credit services were deemed better handled by those marketers in charge of credit product development — despite sometimes resulting in contradiction as in the example above. The fact that professional bankers (in this case, both branch clerks and marketers) hesitate about the objectives of personal credit, alongside the bureaucratic need to have those objectives detailed on the client application form, indicates that the meanings and purposes of credit still depend on the very concrete things which the loan in question serves. However, this apparently trivial observation contradicts contemporary cultural-sociological analyses of retail credit that highlight a movement of growing abstraction, quantification and the centralization of information management, in which credit itself is progressively detached from particular products and services, thus potentially becoming applicable to any type of product and service (Ritzer 1995, Manning 2000, Jeacle and Walsh 2002, Carruthers and Cohen 2007, Marron 2009; see also Deville 2014).

The nexus between credit and a variety of everyday problems, desires, and needs is based on the same general assumption. The universal credit cards provided by MasterCard, Visa and American Express, for example, have been depicted as highly malleable means through which multiple interests and affinities are expressed, from social class to philanthropy to family bonds to materialist impulses (Ritzer 1995, p. 32; Manning 2000, pp. 7-10). In the same vein, Marron (2009, p. 80) speaks of a divorce between consumer credit and particular sites and forms of consumption prompted by the credit card, adding how the advantages offered by certain cards are deeply implicated in the construction of a particular sense of the self (Ibid, pp. 89-90). Whilst it is true that these accounts may be deemed valid, first and foremost, for credit cards in the North American context — whose pivotal role in the consolidation of a post-Protestant morality is undeniable —, this circumscription is certainly not exclusive. In fact, the argument presupposing the universal character of credit and its increasingly abstract management is easily extendable to the realm of general purpose personal credit provided by modern European retail banks or specialized companies (such as the French multinational Cetelem), as well as to several forms of business credit (Gelpi and Julien-Labruyère 2000).

As the ethnographic vignette above hopefully suggests, the present article intends to question such accounts. It does so by re-connecting the development of retail banking credit services to a range of specific consumption products and by showing how a relationship between credit and the everyday is established mostly on the basis of such connections and not on the general purpose character of credit. To a certain extent, this article follows the path taken by Ossandón (2014), who describes how in Chile consumer credit has developed in a close relationship with retail store chains. However, Ossandón not only seems to accept the idea that there has been a process of socio-technical abstraction in the United States but he also applies it, at least partially, to the case of credit management by Chilean retail stores. Though ethnographically focused on the banking supply of a small European country (Portugal), this paper does not wish to counter the idea of a movement towards progressive abstraction, rationalization and the centralization of mass credit services by resorting to a particular national economic tradition (however relevant that may be), but works rather to promote a more thorough discussion of some of the theoretical and empirical underpinnings to credit/debt.

For instance, one may wonder whether the idea of a growing abstraction of credit somehow derives from the conventional historical accounts of money that clearly move in this same direction. Evans and Schmalensee (2005, pp. 25-26) distinguish four main innovations in the history of economic transactions: the passage from barter to coin around 700 B.C., the introduction of paycheques (bills of exchange) by the Venetians in the 12th century, the advent of paper money in the 17th century, and payment cards in the 20th century (see also Ritzer 1995, p. 24). The problem with such accounts is that they remain vulnerable to periodical rediscoveries of the credit origins of money (see Mitchell-Innes 1913) that totally subvert any linear scheme of evolution with anthropologists currently hesitating as to whether to pay attention to cyclical movements in money history (Graeber 2011) or to other types of narratives being woven around the same subject (Maurer 2005, 2013). Of course, to invoke the mythical character of evolutionary accounts of money does not suffice to dismiss analyses concluding in favour of a progressive abstraction of credit services — in fact, these analyses pinpoint several technological and organizational developments that resonate in many other sociological studies (see Rose 1999). However, I would propose that this evolutionary parallelism authorizes a re-examination of the links between credit and its objects as well as between credit providers and other actors involved in the same business. After all, credit, unlike money in our wallets, is not something that we easily rid ourselves of, by settling the transaction and having done with our counterpart. Credit instead implies contractual ties between creditors, debtors and a range of business partners. Such formal relationships are often durable and therefore create a sort of institutional ballast that may bear strong implications for credit's supposedly infinite extensions.

The analysis presented here could thus be termed a *finitist* approach to retail credit. Developed in the 1980s by Edinburgh science sociologists as a theory of classification (see Barnes 1982, Barnes et al 1996) and recently transposed to social studies of finance by MacKenzie (2008, 2009), finitism is a theory of practice that rejects both the idea that classifications and rules are somehow fixed a priori and the concept that the road ahead is indefinitely open. Influenced by Wittgenstein's philosophy of language, finitism states that the application of terms to particulars is not predetermined by any previously fixed meaning: what counts in the use of a term is a finite set of past applications, which do constrain the range of possible future applications though never to the point of determining them in advance (Barnes et al 1996, pp. 57-58). Finitism thus presupposes some flexibility regarding classifications and rule following and ultimately viewing each particular case of term application as a process which involves decisions susceptible of being revised and contested (Barnes 1982, p. 30, MacKenzie 2009, pp. 26-27) — a perspective with clear ethnomethodological resonances. While originally being conceived in relation to the usage of terms and concepts, the reasoning of finitism also proves applicable to theories such as classical mechanics (Barnes 1982, p. 32) or to practices such as accounting (MacKenzie 2008). As stated, I apply it here to retail credit services with the aim of defying the idea of a globally applicable and infinitely extensible credit. One of the central tenets of this essay is that there is no such thing as universal or abstract credit: viewed from a banker's perspective, the application of credit to a range of products or services always depends on a (variable) set of locally arranged connections involving institutions, people and objects, which, in turn, take a specific set of past practices as their main reference.

Three modalities of such connections come in for consideration here: objectification processes tying up credit services to particular products; product-centered affiliations between banks, business partners, clients and other counterparts; and interactivity between credit devices such as credit cards and credit users (analysed in this order in the following three sections). The perspective under analysis mainly examines the supply of banking services, with a strong focus on the framing processes, negotiations, protocols and agreements woven around banking products. It thus follows Langley's (2014, p. 418) advice regarding the necessity of paying more attention to the effects of marketing practices on credit consumption. For the same reason, a good part of that described below brings obvious implications in terms of what Cochoy (2007, p. 204) calls *captation* — or how companies seek to seduce, attract, exert a hold over and retain a public made up of unstable, fluid, fleeting people (see also Massumi 2002, Callon et al 2002). Additionally, this empirical background enables a reconsideration of some curious imbalances in Callon's (1998a, 1998b) approach to markets, particularly as regards his potential downplaying both of the framing mechanisms associated with certain forms of inter-institutional articulation in favour of an attention to constant overflowings and of issues of imitation, asymmetry and exclusion in favour of hybridism and heterogeneity.

The empirical material underpinning this analysis stems from fieldwork conducted in 2008 in the marketing departments of two Portuguese retail banks with hundreds of local branches and many tens of thousands of customers apiece. As with other Portuguese commercial banks, these two banks collect deposits from their clients (one of their most important funding sources) while also offering a variety of credit solutions for both individuals and firms. Apart from some obvious differences in scale, the activities of these banks then largely coincide with those of other European banks with a strong retail arms such as Lloyds (UK), BNP Paribas (France), or Deutsche Bank (Germany). I based myself for six weeks in the marketing department of each bank, intensively following the teams of eight to ten people who were in charge of credit product development. Information derived from my field notes is occasionally complemented with more recent data gathered from banking websites. The two banks in question are named simply BankA and B-Bank, with any further information that might permit their identification omitted.

Credit objectification: the case of 'non-financial' banking products

Whether one considers the viewpoint of bankers or of banking clients, access to credit is frequently attached to clear objectives which render it meaningful and purposeful. A simple look at the range of credit products made available to individual clients by retail banks renders this absolutely clear. Banks do not simply offer 'credit', but home loans, car financing solutions, student loans, or specialized credit lines for home improvements or the acquisition of renewable energy equipment. Even general purpose 'personal' loans often require the identification of a specific credit objective as seen in the introductory ethnographic vignette. Borrowers then act upon these to a greater or lesser extent typified objectives to complete the association of credit to precise things. This correlative link between credit and its objects is precisely what I refer to as 'credit objectification'.

Though ultimately derived from Hegel and referring to the archetypal process through which subjects and objects are constituted as autonomous entities (cf. Miller 1987, pp. 28-32, 2005, pp. 8-10), the concept of objectification acquired a predominantly negative connotation with Marx, being frequently employed in association with the concepts of alienation, fetishism and reification (Miller 1987, p. 43). In anthropology, the term became popular through the idea of an objectification of culture as proposed by Richard Handler (1985). Handler claims that a fetishism of material culture animates governments, citizens and museum curators, making it difficult to talk about culture without focusing on something tangible and susceptible of being appropriated for purposes of identity construction (Ibid, pp. 194-195). According to this objectifying drive, groups and individuals come to be defined only by their collective or private possessions. The Marxist influence in Handler's work seems obvious and resonates in his smooth, critical tone. I think, also, that his insights prove useful for illuminating how credit generally becomes thinkable and indeed sellable only in relation to very concrete objects of purchase.

Of course, this objectifying drive is not absolute — credit cards and payday loans perhaps being the most prominent exceptions as they are not explicitly tied to specific objects – nevertheless, it doubtless represents an important part of the modern credit supply. In certain cases, banks even propose specific consumer products to their clients. That is what happens with Portuguese 'non-financial' banking products, also known as 'prestige' products (both are, so to speak, native expressions). These products include watches, porcelain services, and a variety of domestic technology ranging from computers to LCD screens to GPS radars to coffee machines. Travel packages and special collection items associated with philanthropic causes (e.g. coins) also fit into this category. As most of these products are available in stores, their acquisition through the bank implies signing on to an installment scheme (hence, despite the term, there is obviously finance involved...). It is important to add that none of these objects are physically displayed or stored inside the bank with clients usually becoming aware of them by picking up flyers made available at local branches. The possibility of being able to purchase prestige products through the bank is also temporary, being circumscribed to the duration of specific campaigns lasting from three to six months. These products result from partnerships negotiated between the bank and a series of reputed producers or national distributors: within these agreements, the bank is responsible for the launching of non-financial product campaigns among its own customers (juxtaposing its sale conditions to the infographic content prepared by the partner) and for managing customer requests, with actual product allocation (to local branches upon a customer request) and technical assistance (to customers) being performed by the producers / distributors. Thus

— following Appadurai (1986) — a re-commoditization process is at stake here given the bank assists specific firms in selling specific products and these firms assist the bank in selling more money.

While the financial schemes involved are similar to those of rent-to-own or hire-purchase solutions, the change of setting is important as banks are not inherently interested in re-commoditizing any specific type of object. Non-financial banking products are usually manufactured by well-known corporations with the brand serving as a sign of high quality and reliability in alignment with the bank's own intended reputation and that of its clients (BankA's offer at the time of fieldwork included Swiss watches and German electrical appliances). Another factor worthy of is that most non-financial products are intended to be used on a daily basis, though not exactly as consumables. They are, on the contrary, quite durable, with two privileged arenas of usage emerging: the home and the body. In this vein, a BankA flyer for a coffee machine campaign promised 'exceptional moments that you experience in your own home', while another flyer offered 'the unique opportunity to purchase a watch (...) that better reflects your way of being'. Everyday use clearly becomes detached here from vulgarity and instead is associated with a sense of self-improvement that comes from the product's exclusivity. This kind of nexus between credit and everyday experience has been rather exhaustively explored in current cultural-sociological accounts. What must be stressed, for the purposes of our argument, is the bank's active contribution to the movement of refinement and aestheticization of everyday life which permeates consumption in general (cf. Massumi 2002, Highmore 2004, Zelizer 2005) and increasingly integrates ethical and philanthropic appeals (Thompson 2012). Massumi (2002), in particular, notes the growing importance of product longevity for the maintenance of long term relationships between producers and consumers — a clear captation device (see Cochoy 2007).

It might be possible to discover affinities between Portuguese non-financial banking products and the supply of larger international players. Barclays' 'Premier Club', for instance, is a program available for a reputedly distinguished category of clients in Portugal, Spain, France and Italy involving invitations to special events, privileged service at certain restaurants, hotel discounts or tickets for football matches. BNP Paribas 'priority' clients also have access to identical advantages and highly selective private offers, while general clients of the same bank may have the opportunity to purchase specific car models.[20] As a rule, however, this kind of banking service is not immediately visible and, as it depends on local arrangements, it proves difficult to find among the generally available supply of megabanks.

Nevertheless, the 'non-financial' segment has remarkable implications in terms of product development. As another BankA marketer told me, referring to the work of the only colleague of hers in charge of non-financial products: 'It is like running a store!' In fact, whereas the manipulation of a limited set of variables ultimately related to the cardinal coordinates of value and time — loan terms, interest rate spreads, the distribution of principal and interest on monthly installments, associated fees and commissions, associated taxes, etcetera — remains crucial within this segment, a few additional matters arise. In terms of product definition, one has to choose not only the type of good but also the models to be supplied alongside any special offers included. Though this work substantially depends on the proposed content submitted by the bank's partners, some reformulation always takes place. For instance, during the preparation of a new computer campaign, BankA opted to exclude both desktops and cheaper laptop models from the original proposal as the appointed marketer perceived that clients were definitely leaning towards flagship laptop models costing about 150 Euros more (a difference becoming far less significant when divided through installments). It was also decided that all the laptops should have Microsoft Office software pre-installed, which meant more work for the distributor in charge of delivering the machines to customers (having to unpack each item one by one to undertake the installation) but in the end would avoid a series of problems for BankA clients.

All this presupposes concrete market knowledge beyond banking, both in terms of product development and competition analysis — an activity involving checking on not only the websites of other banks but also those of major technology retailers potentially offering the same brands at cheaper prices. Once a non-financial product campaign is approved, formalized and launched, issues related to product distribution, stock availability and post-sales service become paramount — again, to a point incomparable with other types of banking products, notwithstanding the reduced contact with the physical objects themselves. In BankA, major stock problems arose whenever clients requested products that were no longer available for distribution. Items returned

[20] 2017 note: the Internet links relative to these examples, accessed in August 2014, are no longer operational.

by unsatisfied clients and the replacement (instead of the repair) of damaged items were other common situations handled by the aforementioned marketer in his role as the active link between both the bank's local branches and the external producers / distributors with which the campaigns had been negotiated.

There was however the tendency to remain within the range of products offered during previous campaigns, in accordance with an imitative propensity that seems to pervade retail banking product development in a broader sense and which also carries clear finitist connotations. As a rule, BankA stuck to what had worked well in the past, with some adaptation, whilst any new proposal came in for careful consideration: upon receiving an e-mail from the Portuguese representative of a German firm suggesting a toolbox campaign, the same BankA marketer confessed this was something he had never thought about and subsequently explained to their interlocutors that the bank was no longer receiving proposals for the current year (he confided in me, however, that the idea might prove viable). This brings us to the second topic of our analysis, where the focus moves from credit objects to bank partnerships and other affiliations stemming from the commercialization of credit.

Credit affiliations: the product nexus

The relevance of this topic may be apprehended by going back to Ritzer's and Manning's influential accounts of credit cards. While advancing his argument on the credit card as a means of financializing virtually every aspect of contemporary society (Ritzer 1995, p. 32), Ritzer also notes how the credit card only arrived somewhat late in important sites of American consumer society such as fast-food restaurants, supermarkets and cinemas. This was largely due to the traditionally low average purchase amounts within these facilities (Ibid, p. 33). Manning (2000, pp. 293-294), in turn, describes how the banking industry managed to counter its negative reputation and present itself as a respectable corporate-citizen, and even as a benefactor, by associating its credit cards with diverse philanthropic associations, professional and political groups and cultural institutions. Both authors say that in order to adapt credit cards to a wide range of everyday needs and interests their providers had first to build and then to nurture a series of long lasting connections with specific retailers, distributors, market-makers and other agents comprising what might be called a product-centered nexus. However, the same authors tend to downplay the significance of this network of concrete affiliations in favour of the idea of credit's abstractness and universality. This may derive from their culturalist approach, drawing mostly on advertising material and rarely entering the banking business to witness actual practices of product development. The fact is that the nexus of affiliations around a product represents a precondition to contemporary credit supply in the finitist sense that former partnerships are not always easy to dispose of and may exert some constraints over the development of new solutions.

An extensive account of all affiliations connected to BankA and B-Bank's retail businesses would be impracticable here. Suffice to say that the product nexus certainly includes all the relationships between the bank and its heterogeneous customers, its business partners (like the producers / distributors of 'prestige' products), its competitors and a variable range of other counterparts, which may comprise of individual or collective guarantors, real estate evaluators, consumer associations, payment infrastructure managers, regulators and supervisors. The next section shows how the product nexus may also include objects.

Let us consider credit cards. In order to offer a product capable of being used worldwide, Portuguese banks have no other option but to engage in long lasting partnerships with major credit card corporations such as Visa, MasterCard and American Express, even if this implies negligible profit margins. Williams (2004, pp. 15, 33) suggests that credit cards became the main source of profit for American banks in the 1980s when they applied usurious interest rates to poorer 'revolver' clients while simultaneously benefiting from being 'monumentally *un*regulated' (Ibid, p. 23, emphasis in the original; see also Manning 2000, pp. 12-13; but see Maurer 2012, p. 475, for a complementary view highlighting the growing importance of banking fees, instead of interest rates, since the 1990s). In Portugal, as indeed in other European countries, and contrary to the trend in the United States, debit cards have always prevailed over credit cards (Evans and Schmalensee 2005, p. 8). At B-Bank, the credit card segment was deemed 'irrelevant' by one member of the credit card team as most clients were 'deadbeats' who made monthly payments in full (the scenario was identical at BankA). What the B-Bank valued, in this case, was mainly the possibility of nurturing a relationship with its clients and other counterparts. Credit cards were thus, to a great extent, both ancillary and complimentary credit products.

Apart from the major credit card conglomerates, the banking credit card nexus in Portugal also includes national partnerships with the company managing both the ATM and the automatic payment terminal systems as well as a constellation of stores, vendors, and producers providing special discounts and other advantages. Alongside individual credit cards, retail banks also offer an ample supply of co-branded credit cards, with a new wave of prepaid cards associated with specific services emerging in Portugal from 2000 onwards, when many firms began to approach banks with an offer that would see them create their own, privately labelled cards. Among B-Bank's active partners there were supermarket and telecommunications retailers, gas stations and hotel chains, as well as non profit associations such as the Red Cross. It is worth noting how these partnership constellations usually reflect evolutions in consumer trends and dispositions. As told by another B-Bank credit card marketer, the times when they had sought partnerships with small enterprises had passed, though some flyers still included a list of such counterparts (for example, a jewellery store in a provincial town), as they referred to deals negotiated years ago but whose conditions remained active. This may indicate the declining importance of local commerce in satisfying everyday needs and lifestyle aspirations in favour of the modern shopping mall / supermarket chains — similarly to what BankA perceived as happening with desktops in relation to laptops. Though sometimes giving the impression of being mere witnesses to such transformations in the consumer ethos, banks willingly play an active role in them. They do so, however, while having to cope with old contractual obligations and outdated partnerships as former ties may not be easy to break off. Their role is, therefore, somewhat ambiguous: as prime movers of neo-capitalist projects and reluctant supporters of retro-capitalist businesses — to recall an overlap noticed by Lefebvre (1981, p. 44) a propos of what he saw as an emergent consumption landscape in the early 1980s.

Business partnerships aside, retail banks also value the relationship with one of their most important funding sources: their clients. This is again clearly visible in the case of non-financial banking products. Although the sole BankA marketer responsible for this segment never made any direct contact with clients, he nevertheless had regular access to specific requests and complaints concerning the products and gave branch clerks very precise instructions about the procedures to be adopted in each particular case. There was indeed a strong concern with client satisfaction that favoured product adaptation to client preferences and the approval of client requests made after the respective campaigns had ended, or that resulted from complaints, even in cases where BankA could not be held responsible for material damages. The same marketer also strived to have all malfunctioning artifacts immediately replaced instead of being repaired by the producer

/ distributor so as to keep BankA's clients satisfied (as repairing would take longer). Again, one may conclude that the most important factor was the nurturing of a long term relationship rather than obtaining immediate profits. As such, the margin of negotiation attributed to clients was indeed considerable when compared to other credit products involving risk scoring, granting clients a limited dose of empowerment that slightly affected the definition of products and imposed at least certain ad hoc adaptation (cf. De Certeau 1984). During my fieldwork, I heard the story of a client who had acquired a television four years earlier but had kept it packed away in the meantime allegedly because he was about to move into a new home. When he finally unpacked the TV, he found it was broken and filed a complaint asking to be given a new machine. By then, the stipulated deadline for complaints had long since lapsed but, as the client kept insisting, BankA eventually agreed to compensate him upon confirming that he had a reasonable account balance and subscribed to other banking products.

The nexuses of affiliations around banking products thus enables the perception of a complex and, at the same time, sporadic game of alliances and oppositions between counterparts: the bank + clients vs. national distributors; the bank + clients + national distributors vs. multinational producers; as well as the bank + national distributors + multinational manufacturers vs. clients, etcetera. In a certain sense, we begin to move away from predictable distinctions between either supply and demand or producers and consumers, as well as from any simple antagonisms between competitors, which still curiously take on reasonable importance in the work of authors such as Callon (1998a, 1998b) or Cochoy (2007). There are, obviously, hierarchies of importance and different degrees of influence at stake in these contractual affiliations but the rules are not set once and for all, and, upon occasion, individual clients can have their say and counter product standardization. The agency of clients may be also facilitated by the reduced economic importance of the underlying product (non-financial banking products and credit cards). This is not to say that BankA and B-Bank suffered losses within these segments but profit margins were indeed negligible. What seemed of greatest value was the nurturing of a network of business relationships that could otherwise be profitable by drawing clients into a deeper involvement with other banking products (in a way, then, the two credit products appeared to play a part in terms of what is more formally presented as Customer Relationship Management).

Interactivity: credit card games

This section briefly considers what seems a rather peculiar aspect of the retail banking nexus: the interactivity effect specific to credit cards and the game potential surrounding their use. Of course, interactivity marks the relationship with many other objects acquired on credit, such as cars or computers. In these cases, however, everyday usage of the purchased object is completely detached from the underlying credit scheme, which evolves in a sort of parallel dimension. On the contrary, credit cards appear to the public as objects per se, with an appeal and functioning of their own. Ritzer (1995) and Manning (2000) describe the credit card as a magic wand capable of fulfilling a variety of wishes and thus leading to an inversion in the principles of thrift traditionally cherished by Protestant morals. In a slightly different vein, Deville (2015) explores the lure and temptation exerted by the first unsolicited credit cards on many thousands of families, who, upon receiving and 'shoving' them into some drawer or another, eventually decided to pull them out and see how that new consumer device worked. This section takes Deville's valuable insights a little further by suggesting that there is indeed something playful about credit cards — users may often treat them as a mystery waiting to be solved, a trump card waiting to be played, a device with mechanisms waiting to be revealed. This playful element may play a part in the dissemination of credit cards even while public adhesion and bank profit margins differ considerably from country to country.

B-Bank marketers in charge of product development and competition analysis used to refer to other bank's credit cards as something with a specific 'functionality' that they needed to understand so as to develop alternative solutions. This functionality was mainly related to the underlying credit schemes, which were not always deducible from conventional advertising content — hence, the idea of a device whose mechanism had to be properly deciphered. During my fieldwork, I witnessed how one member of the credit card team assumed the role of a fictional client and called a rival institution — the Portuguese branch of French multinational Cetelem — in order to find out further information (recourse to fake phone calls or mystery shopping techniques to obtain relevant information for the purposes of competition analysis was current practice in both BankA and B-Bank). In this case, the marketer was looking for the minimum cash value of the rival's credit card monthly payments, i.e. the smallest amount in Euros eligible as an installment. Pretending to be inclined towards the credit card in question ('No, I don't have the card, but I'm thinking of acquiring it…'), he first obtained a percentage value and then, after explaining to his interlocutor what he really meant, the exact value in Euros. True, to a certain extent, this type of conversation could be held a propos of any credit product type. Credit cards were and are, however, the most easily changeable and adaptable product within the entire scope of the retail credit supply as well as the most easily accessible, without any need for guarantors (as required for many home or car loans) or the fulfilment of additional legal requirements (e.g. underwriting property, again, for home or car loans); hence the importance of regularly deciphering the subtle mechanisms used by competing credit cards.

The example is also interesting in that it shows how bankers — as probably with many other producers — may easily assume the dispositions of consumers in order to understand the products supplied by competitors. In his theoretical sketch of captation, Cochoy (2007, p. 212) states that dispositions belong mainly to the side of demand while technical devices are mostly handled by supply — a condition that says much about the uneven distribution of theories and technologies of action. However, our example suggests that producers are mostly aware of *their own* technical devices, having to adopt the dispositions of consumers in order to grasp the techniques of other suppliers regarding identical products. We could thus say that while supply has only limited access to technical devices it can still easily reproduce demand dispositions — after all, as Cochoy himself recognizes, market professionals are competent sociologists (Ibid, p. 208). The problem lies, however, in the limitations of an ideal-typical distinction between supply and demand, which also resonates throughout much of Callon's work. The product centred nexus has, I consider, the advantage of bringing more counterparts to the core of marketing processes and of showing how different alliances and oppositions can effectively emerge around a specific product for concrete purposes.

The description above shows producers disguised as consumers and engaged in a deciphering game so as to better cope with rival producers. Let us now consider another example of credit card interactivity that more clearly involves consumer dispositions. As stated by Marron (2009, pp. 89-90), contemporary credit cards are produced so as to exert an identity appeal that goes well beyond social status. How this appeal becomes materialized differs from country to country according to a more or less limited palette of cards. An interesting European example may be found in cards tailored to soccer fans, often for specific teams or associated with specific competitions, drawing on a series of business partnerships and institutional affiliations. One of the cards provided by B-Bank was related to a famous inter-European competition – the UEFA Champions League –

sponsored by MasterCard and thus comprising what is usually known as a co-branded card (Ritzer 1995, pp. 39-40). During my fieldwork, the B-Bank credit card team was implementing a sort of gambling competition around the UEFA league in which card owners were granted the possibility of betting on particular outcomes and earning points accordingly. The idea behind this captation scheme was to closely link the co-branded card to the expectations and feelings of a football fan. The initial B-Bank project was to allow users to bet on the performance of actual (not fantasy) teams but this was promptly rejected by the sole entity authorized to run gambling on football results in Portugal — who, at this stage of the process, entered the product nexus to defend its monopoly against the established B-Bank/MasterCard-UEFA partnership.

The final B-Bank proposal entailed the possibility of users betting on the performance of particular Portuguese players whose teams participated in the same UEFA competition (foreign players were excluded on the grounds that their rights might fall under other jurisdictions). The captation device was thus framed in such a way as to prevent other competitors from interfering with the product nexus on the basis of their property rights. Another issue of particular concern that emerged during the preparation of this campaign was advertising the gambling scheme so as to attract as many co-branded card owners as possible to the interactive potential of their card. Among other things, it was decided that clients would be contacted via SMS and invited to place their bets about a week before the matches. These bets — let us be clear about this — were not part of any purchasing activity. They were more like part of a game experienced through the credit card and that could grant its owner some bonus points (depending, of course, on their billing history). The SMS detail is also relevant as it points to the perceived technical limitations of credit cards as lifestyle enhancers and highlights the need to reinforce their interactive agency through association with other everyday devices / body extensions already in the possession of consumers and which were thus welcomed into the product nexus and to the corresponding captation device designed to make the user play with their card.

Conclusion

The main purpose of this text was to discuss the idea of a history of credit comprising a progressive and organizationally pervasive movement towards abstraction, bureaucratization and centralization based on the widespread management of numerical information. Within this movement, credit is supposedly detached from both particular products and particular people to become a general service applicable to ends of all sorts. I hope, however, to have provided enough information to encourage a reconsideration of some of the underpinnings of this argument. While it is undeniable that there have been significant organizational evolutions in terms of governance and quantification with clear reflections on the banking business, this is only part of the story. The finitist perspective put forward over the preceding pages has highlighted processes of credit objectification, banking partnerships and interactivity that not only reveal the existence of very specific attachments to precise objects and institutions but also reflect the limited character of such attachments: these are neither infinite nor universal; moreover, they carry with them a series of enduring obligations which constrain the development of new connections. It is on this basis, and not on the supposedly abstract character of modern credit, that a series of relationships with personhood, social status and everyday habits is further reinforced by banks, sometimes simply by adapting previous advertising content and, on other occasions, by developing more personalized solutions. In any case, it is important to consider banks as being more than mere credit providers given they certainly play an influential role in the definition of consumer trends and dispositions.

A finitist ethnographic perspective has, I suggest, an additional advantage: it tries to moderate some of the imbalances which permeate the market devices approach epitomized by the important work of Michel Callon (1998a, 1998b). By insisting on the increasingly hybrid character of calculating agencies, this evolutionary perspective tends to promote the idea of markets being ‘hot’, in which many things tend to be controversial and overflowings permanently disturb framing processes (Callon 1998b, pp. 260-261). In such a context, stability becomes a highly precarious condition, with some framing mechanisms associated with legal forms of inter-institutional articulation — such as the contract (see Thompson 2011) — thus inevitably getting played down. Of course, Callon’s theory does contemplate such mechanisms (Callon 1998, pp. 28-29) — in fact, as noted by McFall (2009), this theory has been designed to encompass everything. There remains, then, a tendency to privilege heterogeneity instead of repetition, indeterminacy instead of exclusion and local tensions instead of structured power relations. This essay has focused its attention on developing credit products, contractual obligations with banking partners and product-client interactive possibilities. In a sense, all this sounds very conventional and ordinary (we are far from the materialities of hybrid calculation processes and socio-technical agencies involved in the development of credit services). However, should one seek to understand the finitist links between credit and the realm of the everyday, a certain degree of predictability is perhaps inevitable. The world changes every day while the everyday world has to remain — at least for a while...

NUMBER INTERCEPTION: KNOWLEDGE, ACTION AND CULTURE WITHIN FINANCIAL RISK MANAGEMENT

Introduction

This chapter presents an ethnography of the expectations, interpretations, inferences and discussions surrounding financial risk management inside retail banks, taking into consideration the role of everyday working practices in the reproduction of a specific organizational culture. At a more immediate level, the analysis herein developed refers to the experiential dimension of numbers and calculation (Lave 1988; Pentland 1993; Zaloom 2003; Kalthoff 2005, 2006) within highly quantified working environments (Hacking 1990; Desrosières 1993; Porter 1995; Rose 1999) characterized by the regular application of tables, graphs and lists as provided by common software and database management systems. The approach is also influenced by the notions of 'epistemic cultures' (Knorr-Cetina 1999) and, especially, 'evaluation cultures' (Mackenzie 2011a, pp. 1782-1786; 2011b). The first notion considers a set of established procedures regarding the production of knowledge within organizational contexts. In the case of banks, this knowledge is clearly focused on determining the economic value of financial instruments — hence the relevance of the second notion. The concept of 'evaluation cultures' — or 'clusters of evaluation practices' (Mackenzie 2011a, p. 1782) — accepts that economic value can be determined in multiple ways, according to definite worldviews and corresponding empirical approaches enhanced by specific tools and machines, formal and informal socialization processes, inter-institutional articulations, and path-dependent patterns of change (cf. Mackenzie 2011b, pp. 15-19). Such a view is consistent with current cultural economy approaches emphasizing assemblages of technologies, discourses and practices (cf. Pryke & Du Gay 2007; Langley 2008), though it may distinguish itself by exhibiting a clearer ethnographic orientation as a means of understanding both the pervasiveness and resilience of certain procedures within highly reflexive institutional settings. The empirical examples explored within this paper indeed suggest a gradual series of modulations in practices and some curious interactional disproportions relating the way actors treat numbers. The gradual scheme herein proposed bears some similarities with Rammert's (2008; 2011) multi-level model of agency in that it also involves different degrees of activity and an alternation between 'interaction' (i.e.

relations between people) and 'interactivity' (relations between people and objects), while simultaneously holding implications for the way culture is conceptualized a propos specific organizational contexts.

The practices observed correspond to risk management routines. Thus far, the focus on risk has been centred on what could be called its intellectual project, made up of probabilistic, future-oriented methods fostering the ranking and pricing of client creditworthiness and the measurement of possible losses, all executed under a considerable degree of standardization and technical expertise that contrasts with supposedly more arbitrary appraisals (De Goede 2004; Power 2005; Marron 2007; Langley 2008; Esposito 2011). In the following pages, however, we demonstrate how risk management practices do entail a lot of improvisation, subjectivity and interpretation *precisely because of standardization and technicality* — with analysts themselves perfectly aware of these proclivities. This circumstance derives from the existing links between expert knowledge production and a levelled set of action modulations, enabling one to understand how — notwithstanding the persistent critiques on its usefulness and accuracy after the 2008 financial crisis (see Langley 2013) — risk management still retains a role inside normal banking practices and actively contributes to periodical reflexive accounts and the maintenance of internal and external organizational articulations (resemblances between risk management routines and the activities deployed by other financial actors are also highlighted within the course of this article).

The empirical context is that of Portuguese retail banking, which may generally be characterized both as one of obedient compliance with European Union and Eurozone norms — there were no lurking alternative norms in conflict with the international risk standards — and as one of predominant financial imitation, in the sense that most retail and investment products are closely based upon models in effect at bigger institutional players (in this case, the major international banks). The data herein included was gathered during fieldwork conducted in the risk departments of two Portuguese retail banks (henceforth simply Bank A and Bank B). Both departments were set up in the mid-1990s, in keeping with the development of trading activities, and operate within a network of horizontal cooperation involving other fields, in particular marketing, financial and information systems directories.

The exchange of information between these different areas was frequent, taking place according to specific reporting terms (weekly, fortnightly and monthly periodicities were common, suggesting stable activity cycles). Contacts between departments might occasionally be established from worker to worker but they were generally mediated by the respective directors who, in turn, forwarded messages to whomever they deemed most appropriate (each risk department had one general officer plus four or five sub-directors, each in charge of a small team of around five people). Email was the privileged means of communication, sporadically complemented by telephone. As regards the production of reports, this task might be distributed among two or more analysts or simply attributed to a single member of staff (in the case of smaller reports). However, as we shall see, analysts often work alone, even when their tasks are integrated in a larger endeavour. Before being issued to internal or external recipients, every document had to be validated by at least the respective risk sub-director *and* the central director.

In the following pages, I depict particular tasks implicated in the control of market risks (related to fluctuations in the market value of bank owned securities), liquidity risks (related to the classification of saleable assets applicable for meeting immediate liabilities towards creditors) and credit risks (related to the probabilities of asset defaults, such as credit contracts). Within these practices, the periodical estimation of values — according to the 'mark-to-market' principle, which approximates asset value on the basis of market fluctuations (Esposito 2011, pp. 167-168); or to the famous 'value-at-risk', deemed to measure the proportion of possible financial asset losses (De Goede 2004, pp. 209-210; Power 2005, pp. 252-253) — assumes great importance. Banks do this in order to comply with several regulator stipulated obligations as well as to meet the demands of creditors and investors.

The next four sections are rather descriptive in nature. They present a sequence of ethnographic vignettes which configure a movement from the unproblematic to the problematic in terms of financial risk management, starting with verification procedures based on the analyst's common sense (section 2) though also involving some value explanation (section 3), moving on to an example of norm discussion (section 4), and ending with the design of rules for value estimation according to inference/generalization principles (section 5). The sixth section sums up the empirical findings and discusses their theoretical implications.

Ascertaining and verifying values: the 'common sense' of the analyst

During my fieldwork, I was able to follow the work of a Bank A analyst while he was revising a report on a series of securities managed by a parallel entity (a sort of investment fund closely related to the bank and overseen by one of its financial directors). The action took place inside a large room where different teams were working, each occupying a specific "island" of desks, separated from the other islands by transparent partitions about five foot tall. Each desk was equipped with a computer, a keyboard and a screen with all computers connected to each other via the Intranet, hence enabling broadly sharable digital work environments (Internet connections were also available). Verbal communication with co-workers at nearby islands was both possible and often frequent even though not relevant to most descriptions included in this article. The risk report under consideration was set out in the PowerPoint format and basically consisted of a series of tables displaying values on issues like market value, market value-at-risk, credit value-at-risk, average probability of default, average maturity in years (for bonds) and average duration. The computation of all these variables was largely automatic, based on the application of specific formulae incorporated in software programs. In Bank A, there were Excel macros designed to calculate value-at-risk. Similar results could be obtained via *Bloomberg* terminals, which contain search engines collecting market data daily on prices, quantities and ratings, as well as applications and interfaces able to obtain certain financial and risk variables.

Most tables included in this report opened up the scope for comparing the newest and the previous results — a relationship founded on the trained perception of acceptable degrees of variation between the values under consideration. In such cases, the columns with the newest values appeared first, the temporal sequence being inverted so as to facilitate a left to right reading movement. During this task, the analyst checked the numbers through screen eyeballing and confirming they made sense — now and then providing a short written comment (e.g. 'the portfolio's average maturity diminished from 5.00 to 4.50') to guide future readers.

While making the final revision of the PowerPoint tables, the analyst detected a slight increase in both the market and credit value-at-risk of the fund and admitted to the hypothesis of finding a justification for this assuming it might be due to a rise in volatility. I asked him how he could establish such a correlation. He told me that he would have to consult general market indicators such as the VIX volatility index or the evolution of long term interest rates (with this information easily accessed through *Bloomberg* terminals in both cases). Then I asked him whether it were possible to establish cause-effect links on the basis of such overly general market indicators taking into consideration that the options-based VIX depicts S&P 500 expected volatility, which would not at all coincide with the specific volatility of securities held by Bank A. He understood my point and replied that, in many cases, the appreciation of value-at-risk figures was based on what he called the 'eyemeter' [*olhómetro*] and 'chin index' [*índice de queixo*] (this latter serving to acknowledge the plausibility of certain correlations on the basis of the inclination of the analyst's chin). In other words, the appreciation was rooted in intuitive procedures deriving from proximity with certain classes of numbers, as well as in familiarity with the portfolio's global trends and fluctuations, and their possible correlations with perceived market fluctuations.

The analyst left his work island and went to a collective computer nearby where the *Bloomberg* terminal was operational. There, he confirmed what he had already anticipated: a sudden rise in bond market volatility in the month of April 2009. He concluded that this abrupt increase in volatility *could* effectively explain the growing credit value-at-risk numbers presented in the report. Thus, there was no cause for alarm. The numbers were acceptable. However, the analyst told me he would not insert any note about this increase in volatility into the report. He thought it better to retain this information personally and advance it only on the request of his superiors in case they needed it for processing the data provided.

As stated, the price and ratings of assets, as well as their value-at-risk, are automatically calculated, but the latest results have to be 'manually' compared with the previous and any slight discrepancy must be verified in order to detect any possible miscalculation. All remaining discrepancies must be properly contextualized. I remember one risk director having told me of how he appreciated the 'common sense' of his members of staff in contrast to subservience towards the outputs of algorithms embedded in machines. This common sense clearly refers to a skilled capacity of going beyond immediate data and being able to recognize affinities and disproportions between previous and contemporary results (cf. Mackenzie 2008).

While results are checked, the ontology of both securities and their markets, as well as the efficacy of the search instruments enabling the gathering of additional information, remains largely unquestioned. In the example above, the analyst was familiar with the computer file he was working with and the latest results provided by several tables did not raise any serious doubt. He could correspondingly anticipate an explanation for the slight value-at-risk increase and also knew how to gather additional information, thus accomplishing his task without undue trouble. Practical workplace acquired knowledge regarding how to detect and explain disproportions — or 'common sense', an expression I find useful in keeping with the above mentioned risk director — was thus the main resource deployed in this particular task. However, not all verification procedures are equally linear.

Finding an explanation for seemingly odd results

On another occasion, I was able to join another analyst from the same team minutes before she received an email message forwarded by her direct superior. The original sender was the Bank A's chief financial officer, who had detected a problem in the risk report on a series of assets pertaining to one portfolio. According to this director, the value-at-risk of a specific 'callable' bond had experienced a significant decrease over just a few days and he wanted this checked out by his risk colleagues. This message took the analyst in question by surprise and made her interrupt her current task to return to a subject she had already dispatched. She retrieved the corresponding Excel file where the value-at-risk values were compiled and tried to check out whether or not there had been any imputing error, by repeating the calculations in an Excel spreadsheet. With this hypothesis dismissed, the analyst accessed the Internet and made a *Google* search with the term 'callable bonds'. One of the excerpts in the *Google* results page contained the following definition of callable bonds: 'Bonds where the issuer may choose to pay the capital in debt *before* the end of the maximal term considered in the contract'. It thus became clear to me that the analyst did not exactly know what sort of investment product this was and was therefore searching for details about its functioning. This move was far from unusual given the variety and complexity of investment solutions and the impossibility of following every investment made by the bank.

Then the analyst moved onto Bank A's Intranet, where she opened a page with a table displaying interbank money market interest rates. On the right side of this table, there was a small calendar that she observed attentively. I noticed there was an interactive link between the calendar and the table: the analyst could choose one date and check the corresponding interest rate values in the table. After having compared the dates with the interest rate values for a while, the analyst entered her Inbox and started an email message to her superior, in which she also pasted the table with the interbank money market rates according to specific dates. The message read as follows:

> [*Name of director*]
> Regarding this issue of VaR variations in callable bonds, I think it relates to a decrease in interest rates that took place between March 31st and April 4th.
> It's in a context of decreasing interest rates that callable bonds are reimbursed (...)

This meant that the anticipated reimbursement of the callable bonds (probably motivated by a decrease in interest rates) had possibly caused the detected drop in their value-at-risk. And so the case was closed. As the same analyst would later tell me, whenever values looked odd or there was some strange discrepancy between two consecutive reports, one had to ascertain the concrete reason or, at least, one had to provide a plausible explanation. And an 'explanation' was precisely what the email message just cited contained, that is, a justification that enabled the attribution of meaning not to all but to certain, selected or intercepted values. The marks of subjectivity are clearly present in the above transcript ('I think it relates...'), but as long as the explanation provided is accepted by the actors involved and such personal traces are erased from the final report, discrepancies will be treated as plausible and unproblematic.

In this vein, verification work may be defined as the collective management of numerical discrepancies, based on the common sense of situated actors as to expectable value variations with seemingly odd results being intercepted (i.e. extracted from a table or list) for the purposes of inspection. I refer to this task as 'collective' because it is done in articulation with other areas where risk reports are scrutinized (such as the financial department in the last description) though it is clear that most interaction is e-mail mediated with only occasional conversations with nearby colleagues. As has been shown, value verification may imply the gathering of additional knowledge that proves useful in the detection of computation errors or in the attribution of a particular meaning to inspected numbers. External market projections such as the VIX volatility graph or the calendar of interbank rates are adopted not only to confirm analyst intuitions but also to warn them of possible internal mistakes in case of non-confirmation or 'dissonance' (cf. Beunza & Stark 2012). In any case, it is a matter of adding more data, explanations, and stories to certain values that, for a brief moment, are singularized and revealed as peculiar. This observation is somewhat similar to what Kalthoff states (2000, p. 76) a propos credit risk management in Poland and Bulgaria, though in both these cases numbers are treated as suspicious because of their intentional employment in self-representation games by firms applying for credit under conditions of poor balance sheet and cash flow statement standardization. In the examples described here, the intercepted numbers belonged to the bank itself, not to some external organization, and they were never explicitly associated with any dubious or manipulative intention. In fact, their production was largely anonymous, made according to standard methodologies intended to be as precise and objective as possible (I think this anonymity of numbers may also explain the individual character of the tasks, where exchange of impressions with colleagues is indeed reduced to a minimum, again in contrast to the examples provided by Kalthoff). What is revealing is that, even in such conditions, numerical accuracy derives from various resources other than just what Kalthoff calls 'mathematical rationality' (2000, p. 83).

Reporting liquidity: from explanation to inconclusive discussion

A core concern of banks is liquidity, that is, the amount of money a bank can make recourse to at any given moment to meet its liabilities and prevent any default on its assets (and, ultimately, the bank itself). In this respect, the analysis is normally divided into issues of solvability and liquidity. Solvability is a general indicator that measures the capacity of a bank to meet its own responsibilities by using its own capital while liquidity considers the ability of a bank to generate cash at a given moment in time — whether by converting some of its assets into cash or, alternatively, by borrowing from other banks. As Carruthers and Stinchcombe observe (1999, p. 356), liquid assets are usually deemed to be easily bought or sold, like securities in general in contrast to property. But this is so, primarily, insofar as they are sufficiently known to market actors, that is, as their ontological status has been stabilized and is no longer the object of detailed analysis and discussion — or what Lépinay (2007a) calls 'articulation'.

The liquidity of Portuguese banks is periodically validated by the Bank of Portugal, which establishes minimum capital requirements for banks along with standard risk assessment practices in harmony with the Basel Accords. Basically, the calculation of liquidity ratios implies going through lists of current assets owned by the bank and identifying those easily saleable and convertible into cash in order to deal with immediate liquidity requirements. In Bank A, these asset lists were set out, again, in Excel spreadsheets. In the case of securities, there was a first column for the International

Securities Identification Number (or ISIN), a second column for the name of the security and a third for its market value. As a norm, assets being used as collateral for borrowing from the European Central Bank (ECB) must be excluded from lists as well as all those assets the ECB rules have only reduced liquidity.

I joined a third analyst on the same team while he was comparing the more recent liquidity report with the results of the previous report. As in the preceding section, many of the verification procedures consist of comparisons between successive versions of the same document where analysts expect approximate results to be returned. At a certain point, the risk analyst (whom we may call Manuel) wanted to know what had been the impact of the latest home loan securitization operation on the bank's liquidity ratio. The problem was that this operation comprised a wide range of credit contracts, some of them sustaining top rated securities (therefore highly liquid and also eligible as collateral by the ECB) while others were backing riskier tranches (thus not eligible by the ECB but nevertheless still capable of inclusion into the liquidity calculations). There were at least two issues under discussion: whether assets that could at any moment be employed as collateral for borrowing from the ECB were to be included in liquidity calculations; and, in case they were, whether all securities integrating the same operation should be taken into account, or only those tranches ranked with the highest classification. One of Manuel's colleagues took the opinion that all securities should be considered while another informed him how he had been making his calculations differently in considering *only* those assets eligible by the ECB with another category of assets unclassifiable under the European Central Bank rules but which Bank A could attribute some liquidity to in accordance with internal norms. As a concluding remark, Manuel stated 'we have a grey zone here that needs clearing up'. Thus, indeterminacy prevailed.

While the descriptions in the previous sections reveal how the line separating potentially explainable values from those actually explained is very thin, the current example illustrates that the step from value explanation towards a classificatory stance is equally not that big. Here, actors were no longer discussing mere values but the very ontology of that which was under valuation: was 'this' deemed liquid enough to integrate into the lists of eligible assets or was it not? Should 'this' comprise all securities belonging to the same operation or only the top-rated ones? Questions such as these add one more note to the precariousness of the consensuses sustaining financial liquidity (cf. Lépinay 2007a; MacKenzie et al. 2012). In any case, though reclassification is definitely common, my own empirical findings lead me to think that its pace is slower than the more intense rhythms of value interception and explanation, whose descriptions comprise the bulk of my field notes.

Redefining real estate values: inference and generalization

Apart from the management of market and liquidity risks, analysts regularly develop calculation models for the variables stemming from the evaluation cultures of ratings agencies (cf. MacKenzie 2011a, pp. 1784, 1815fn45), namely probability of default, loss given default, exposure at default, expected loss and imparity provisions. These variables are usually applied to retail credit contracts, including those underlying investment products created through securitization techniques. Covered bonds are one such product, made up of selected, bundled and sliced home loan contracts that provide regular cash flows based on instalment payments by bank customers (they are similar to securities, though reputedly safer as issued directly by banks and not by some parallel 'vehicle'). The issuing of such products obliges the bank to carefully monitor the underlying credit contracts in terms of the evolution of instalment payments and produce backward looking analysis (also called 'historical analysis') at regular intervals to inform the raters and regulators of the position of assets underpinning the bonds: the extent of default risk, the amount recoverable in case of default, the value of collateral (mortgaged homes) and the current loan-to-value ratio. Let us consider the latter two aspects. At the moment of home loan contract stipulation, the value of the amount to be lent (the 'loan') is divided by the value of the home to be purchased ('value') and multiplied by one hundred. The resulting percentage holds influence over both the perception of risk and the determination of the interest rate applied: basically, the higher the percentage, the higher the risk and thus the greater the level of interest. For the purposes of historical analysis, the loan-to-value ratios of the credit contracts backing issued covered bonds must be periodically recalculated, taking into consideration the original value of homes, the subsequent and ongoing credit amortizations and average real estate prices within each geographical area.

I was able to follow one Bank B risk analyst as he sought to recover the original home values for home loans backing covered bonds. The setting is quite similar to the previous one: one large, open-space room where different teams occupy islands of desks, each desk being equipped with a computer, a keyboard and a screen. The first task was to detect irregular records in the databases and try to resolve them. The main research tool was a computer language known as *Structured Query Language* (or SQL), originally developed by IBM with the purpose of consulting large databases. The results of SQL processing are presented in tables that may contain but five or six columns and a dozen lines, or extend for dozens of columns and thousands of lines — depending, of course, on the database processing instructions forming the programmed syntaxes or 'queries'.

During one such tracking operation, an SQL query detected a home (identified by a particular property number) which had been associated with eight loans and four different home values, while there were also different dates for what was supposedly the original home evaluation: a classic example of the type of recording ambiguities that pullulate in databases and sooner or later require sorting out. The analyst reasoned that the existence of several loans *might* stem from a negotiation process producing alterations in the value attributed to the home undergoing a purchase process. This would also explain the different home evaluation dates. In order to check this out, he accessed another internal database where he could see the information gathered directly on the loan form by local branch clerks. Consulting the loan form of the home in question, he took notice of the date of the first instalment payment. The analyst then decided to consider that the value of the 'original evaluation' *would* be that with the date closest to that first payment. Whether this was the 'true' value was a secondary issue. As in many similar cases involving massive data processing, what counts as reality is the information recorded in the database, irrespective of how accurately it was handled and processed before being stored on computers (cf. Desrosières 2001, p. 346). However, the ontological status of this order of reality may require some fine-tuning, as in the present case, thus obliging the analyst to draw some inferences as to what may have happened beyond (and before) the registration process.

The next step would be to apply the same original value to all the other credit contracts associated with the same property number (supposedly indexing credit renegotiation processes). After the syntax for the case under scrutiny had been thus refined, the command would have to be generalized. In other words, the same classification principle (considering the evaluation value closest to the first instalment payment as being the 'true' original evaluation value) would have to be applied to *all* recorded home loan contracts in a similar situation (more than one original evaluation and with different contract numbers). No more inferences or assumptions were needed. This step proved rather easy with the analyst merely needing to detach the previous query from the particular case that had helped him diagnose the problem and find an appropriate solution. Right after the new query had run through the entire database, an on screen table presented a list of all contracts which had just been processed in the same way. The process thus extends from the analysis of one particular case to the invention and appliance of a general solution.

The example presented in this section may seem somewhat displaced from those earlier in that it is focused on a different product class (the home loans behind covered bonds). However, the practice modulations sustaining value verification still remain present: the analyst steadily questions the database through anticipating certain problems and, whenever a determinate result looks odd or disproportionate, this is subjected to inspection. Analysts then engage themselves more closely with the numbers, whose meaning they try to figure out through the adding (or invention) of stories. During this process, some classification rules come up for discussion and new rules are often forged. In cases involving consulting databases, evaluation procedures are also complicated by an apparent excess of numbers: several values or identification numbers for supposedly just one thing (one contract, one home), or several dates for supposedly one single point in time (the 'original' evaluation). Such an excess, with all its blurred referentiality, is clearly a result of the socio-technical arrangement in use (cf. Callon 2007a: 319), involving the interrelationship of different departments with proper working routines (specifically local branches, information systems and risk analysis), as well as adjustments to and between servers, different computer models, different types of software, database processors and internal registration forms. Moreover, this numerical excess appears as a side-effect of what certain authors call a 'quantitative revolution' drawing on network connectivity, mathematical science and computerization of work (cf. Beunza & Stark 2004 and 2012; Leyshon & Thrift 1999) — bearing in mind that the issue of quantification requires more than just acknowledging the presence of numbers and values (cf. Maurer 2008).

The ethnographic content included in this section also reveals that it is not the ontological status of homes, contracts and values that comes under discussion, but rather the referential status of the inscriptions that — at the level of the database — testify to their existence. This referential status is fixed by adopting an inductive stance, which is also enhanced by the technologies under use, since database management languages like SQL, Oracle, or even software like SPSS, are all designed firstly, to facilitate the sorting out of particular cases where an inferred irregularity is patent and, secondly, to test for solutions susceptible to being generalized to all similar cases. Both inference (performed by the analyst) and generalization (performed by the computer) compose one integrated response to the excess of numbers and one that reveals how a certain type of loading/computing errors are regularly processed without ever proving truly disruptive.

Discussion: knowledge, action and culture within financial risk management

The situations described are but a tiny fraction of all risk management procedures ongoing inside modern retail banks. As centralized units with organizational autonomy, risk departments encompass different perspectives belonging to particular classes of financial products. In a way, they may be perceived as evaluation melting pots, where mathematical and statistical modelling methods coexist with informal interviews and even participant observation (e.g. in the case of the corporate risk assessments that are not analysed here). In any case, the examples provided may help us gain a clearer picture of what is at stake — in terms of situated practice modulations — when values are being estimated for purposes of risk analysis.

The ethnography began with a linear situation of value confirmation in which the results obtained were easily checked by an experienced analyst on the basis of his tacit knowledge and intuition as to what would be acceptable variations from previous results, complemented by a search of current market information according to anticipated causal explanations. There followed a description of a similar practice, this time requiring less tacit knowledge on the part of the analyst and relying more on the search for additional information via the Internet and the Bank's Intranet to provide an explanation for the numerical disproportions detected. The third ethnographic example dealt with the issue of liquidity, viewed as a quality that could be attributed to certain assets more than to others — although the terms of this attribution were by no means consensual and had yet to be stabilized. Accordingly, the tone was more one of discussion, that is, of the interpretation of norms and the confrontation of opinions. Finally, a case of re-estimating real estate property values was considered, where inductive-generalizing procedures played a major part in sorting out the most appropriate price from a collection of registered amounts. Table 3 systematically presents these empirical findings:

PRACTICE MODULATIONS	CHARACTERISTICS OF WORK	SOURCES OF INFORMATION (in the examples described)	MAIN TOOLS (in the examples described)
Verification / confirmation	Surveillance of numerical discrepancies	Internal documents, Bloomberg terminal (or equivalent devices)	Excel and PowerPoint software, pen and paper
Explanation	Selective inspection of numerical discrepancies	Internal documents, Intranet, Email, Internet	Excel software, Google search engine, calendar
Discussion	Questioning the ontological status of securities	Internal documents	Excel software
Inference and generalization	Establishing norms for database processing and value calculation	Internal documents and databases	SQL language, pen and paper

Table 3 — Aspects of risk management in retail banking.

Confirmation, explanation, discussion, and inference-generalization: these four practice modulations should not be taken simply as examples of empirical diversity, but rather as (superimposing) parts of a continuum, or a movement that goes from the unproblematic to the problematic, starting with the reproduction of norms and categories and ending in their discussion and redefinition. Moreover, all these practice modulations are likely to appear as normal (even if not equally frequent, as noted) in contexts where numerical results are recurrently produced to schedule for verification and (digital) inclusion in documents. In this respect, it should be noted how many of the tools employed are common software programs and database management systems which are found in different work environments — for instance, among the merger arbitrageurs studied by Beunza and Stark (2012, pp. 393-394) —, thus appearing as 'boundary objects' capable of adapting to varied circumstances without losing their own distinctive features (Bowker & Star 1999, p. 297; but see Fox 2011 for a different interpretation). Excel software and SQL language are basically providers of electronic tables and lists, which, in turn, are important 'structuring resources' (Lave 1988, pp. 98-99) for calculative practices in the sense they both shape and stabilize the way computations are carried out, existing not merely to inform but to be continuously performed (cf. Law 2002, p. 28; and the reasoning of Kalthoff about the 'operative modes of writing', 2005, pp. 82-83). In other words, electronic tables and lists (and the underlying software) enabled workflows to evolve around complex calculation and extensive database processing complemented by selective (manual) number verification — all subjected to precise reporting deadlines.

Under such circumstances, knowledge and information are at least as important as action and performance — though financial sociologists seem to prioritize the former side of this equation. Thus, Kalthoff (2005, p. 70) states that risk management procedures are 'epistemic practices', i.e. practices that encourage the questioning of circumstances, events and artefacts, even though such questioning is itself framed by specific technical devices, procedures and actors. As has been shown here, the informational content of reports is often discussed while the functional-representational abilities of electronic tables and lists are mostly taken for granted. This seems to be a fair conclusion though something deserves adding regarding both the type of reflexive knowledge at stake and its limits.

First, I would point out that the role of human interaction seems to be secondary while interactivity with computers, screens and software is permanent within risk management. As described, analysts frequently act alone and their attention is primarily focused on numbers, which are far more one-dimensional than people. In truth, numbers can be felt as strange, ambiguous, or uncomfortable, thus requiring special handling in order to become acceptable, as seen in the course of this article and in consonance with what has been advanced by other ethnographers (cf. Pentland 1993; Zaloom 2003). However, financial numbers only appear strange, ambiguous or uncomfortable for a brief period of time, before being rendered univocal and reinserted in their respective lists. Moreover, I found no evidence in the field that the strangeness of certain numbers could be remotely compared with the ambivalences typically associated with human interaction (such as those between verbal and non-verbal information, discourse and practice, or seriousness and play). Usually, a determinate number can be either strange *or* normal, but never both at the same time. As such, and though some authors have convincingly argued in favour of a growing importance of collective processes of interpretation within highly computerized and inter-connected trading environments (Beunza and Stark 2004, p. 372), I would suggest the same does not necessarily apply to other financial specializations.

Secondly, in the examples provided, the analyst engagement with numbers was not properly arithmetic but rather intuitive and interrogative, based on impressions, approximations and inferences. During my fieldwork, I rarely saw people actually making counts, a task now largely transferred to computers and software. This is not to say that risk analysts are working without formulas, of course. Most of the analysts had degrees in mathematics, whilst some directors held PhDs. Furthermore, a good part of the work carried out in these areas is experimental, implying the rehearsal of new calculation methods, new variables within logistic regression models, even new models (cf. Moor & Lury 2011, p. 449). However, it must be added that the scope of this innovative activity barely affected the principles underlying the division of labour between humans and machines, with computers acting as mass calculators and analysts as skilled number surveyors.

In other words, there were some obvious constraints on both the type of knowledge being produced and the questions being raised by analysts. One of such constraints is temporal in nature since almost all reporting tasks surveyed contained strict deadlines, which were in fact observed. This organizational condition, along with the extension of the numerical results produced, confined verbal explanations and discussions to the realm of orality or informal email messages. As such, the emergence of strongly disruptive creativity implying a sort of ritual interruption and profound interrogation of ongoing practices is naturally absent. Financial risk evaluation takes place within institutional contexts where automatic computations and intense rhythms of reporting lead to the mass production of results, which cannot but be selectively verified. In this regard, the findings provided here have much in common with the auditing rituals studied by Pentland (1993), in which the extensive checking of the entire extent of the audited firm's systems, procedures and accounts is declared impossible with the auditors having to rely both on their own teamworking discipline and on the explanations of their clients, to render the numbers 'comfortable'.

These considerations have implications for the current and still highly experimental application of the concept of culture to modern finance. While discussing the usefulness of this concept for the analysis of evaluation practices, MacKenzie suggests four conditions should be observed (2011b, pp. 15-19): a distinct ontology regarding the nature of economic value; formal and informal socialization processes that introduce newcomers to that ontology and its practice; interaction mechanisms among participants; and a clear influence of past practices in the shaping of ongoing evaluation activities, thus presupposing path-dependent patterns of change. There is no doubt that the practical modulations outlined above fulfil these conditions: the ontology is one that admits significant asset price fluctuations according to sudden impulses in markets as testified to by financial benchmarks provided by the index industry; socialization processes range from training sessions (including automatic training sessions provided by software applications) to Google searches and verbal exchanges among colleagues; interaction mechanisms — an expression that already suggests technological mediation

— are mainly electronic, comprising e-mail, telephone, as well as specific templates and online forms for the preparation and sending of reports, which permanently interconnect not only internal departments but also those departments (or the bank as a whole) with more important financial actors such as regulators, auditors, rating agencies and investors; finally, past practices deeply influence the preparation of new evaluations and reports, which are preferably elaborated on a copy/paste basis.

Nevertheless, this formulation slightly overlooks the importance of interactional conditions — in particular, the distinction between interaction and interactivity (Rammert 2008) — for the maintenance of a determinate culture of evaluation. In this regard, the ethnographic evidence presented reveals primary engagement with numerical inscriptions via boundary objects such as software programs and database management languages (or what Rammert calls interactivity); and subsidiary human interaction. At the same time, the engagement with specific numbers is temporary while nearby colleagues appear as more stable resources of professional know-how whose help is requested whenever an analyst is unable to accomplish a certain task alone. This means that, at the level of local constitutive practices, the social embeddedness of values is always fragile: the stories analysts tell, sometimes only to themselves, about this or that intercepted figure are valid only for a brief period of time, until a new report comes in and new stories have to be forged about the latest results. Like passengers in an airport, specific numbers never stay around these working environments for long — they never 'dwell', to borrow the expression from Ingold (2001). This observation can be extended to analytical procedures, certain document templates, even document types — though software tools like the Excel spreadsheet remain structurally important. Throughout my fieldwork, I noticed that, whenever an analyst had to review procedures executed months before, they would spend a considerable time reconstituting the steps already taken (this was especially revealing when applied to the deciphering of old SQL queries). The disproportion between interaction and interactivity — which I consider a definitional aspect of risk management — is nevertheless compensated by the constant arrival of numerical inscriptions that need scrutinizing. Thus, in a sense, financial risk culture, as with other organizational cultures, rests on the successive renewal of information and reporting performance according to precise schedules and institutional interrelationships.

LIBOR AND EURIBOR:
FROM NORMAL BANKING PRACTICE TO MANIPULATION TO THE POTENTIAL FOR REFORM

Introduction: A Brief History of Reference Rates

Libor and Euribor are the reference interest rates that set the average cost of loans among a restricted group of banks. The major relevance of Libor and Euribor relies, however, on their being metonymically associated to international interbank money markets in which banks engage in a series of mutual over-the-counter lending operations. These markets are only half a century old. They started to develop in Europe in the late 1950s and throughout the 1960s, giving rise to a London-based transactional structure known as the Eurodollar market, whose activities went uncontrolled by either national central banks or the Bretton Woods fixed exchange rate system institutions (Arrighi, [1994] 2010, p. 310). The quick expansion of such an informal market — which soon became a fundamental source of funding for large banks and multinational corporations (BIS, 1983, pp. 11-12) — sometimes gets interpreted as a reopening of the international financial circuits that had otherwise stayed shut since 1929 (see Ridley and Jones, 2012; Engelen *et al.*, 2010, p. 47). The breakdown of the Bretton Woods Accord in 1971 symbolized a new era of fluctuating rates, with banks and corporations increasingly recurring to financial derivatives so as to actively manage risk: interest rate swaps, forward rate agreements as well as currency options and swaps became associated with Eurodollar lending operations as from the late 1970s onwards (Kirti, 2014). In 1981, the calculation of the Libor rate was for the first time based on a daily poll arranged by the Chicago Mercantile Exchange, officially launched as an index of the same Eurodollar market in 1985 under the supervision of the British Bankers Association. At the same time, similar rates appeared in Europe, such as Pibor, Fibor or Aibor, which would later merge into Euribor. This later rate was introduced in 1999 under the administration of the European Banking Federation and soon became the leading benchmark for interbank lending operations within the Eurozone.

This brief historical sketch serves to properly situate the emergence and centrality of reference rates such as Libor and Euribor. Though credit is usually presented as the lifeblood of the economy, enabling the regular circulation of money among producers, distributors and consumers, or among employers, employees and a host of different business counterparts (cf. Tett, 2009, p. 28), the systemic importance of international interbank loans is a relatively recent event stemming from coalescent economic, political, organizational, technological and even theoretical developments. One of such developments has to do with a long post-World War II process of both liquidity and mass consumerism enhancement (Westbrook, 2010, pp. 30-31; Marron, 2009, pp. 79-98), firstly supported by the state during the heyday of Keynesianism and progressively assumed by private actors (namely banks via retail credit) under a Neo-liberal deregulatory framework. This transition was paralleled and indeed further reinforced by the computerization and synchronization of financial markets (cf. Knorr-Cetina and Bruegger, 2002a), which deepened the internationalization of interbank borrowing supported by electronic transfer systems and enabled Eurodollar market access to smaller domestic banks. Finally, and though this may appear as a lateral process, conceptual developments in the area of finance — e.g. the famous Black-Scholes-Merton option pricing model (cf. MacKenzie, 2006) — liberated the expanding realm of derivatives from the negative connotations associated with gambling and speculation. Finance thus began to appear as a highly technical and measurable process, assisted by a host of theoretical constructs such as the efficient market hypothesis, random walk theory or the capital asset pricing model, giving a new breadth to the industry of indices and benchmarks.

This industry currently publishes over a million indices every day, whether exclusively concerning financial markets or markets with which finance closely interrelates, such as the energy, real estate and maritime transportation markets or even non-market realities such as global warming and longevity rates. Investment strategies, insurance and pension plans, savings accounts and retail loans are now commonly interlinked with the rise and fall in one or more of such indices. In this respect, the Libor story becomes quite illustrative. Throughout the 1970s, a reference interest rate with the same name began to get adopted by groups of banks to price Eurodollar adjustable rate lending operations known as syndicated loans: every three or six months, when the interest rates of these loans were about to be readjusted, the banks forming the syndicate communicated to each other their respective funding costs, whose averaged value would consist of the adjusted interest rate for the new period arising. The Libor rate in those days was, in many respects, a club instrument devised and employed by those most committed to using it (see Rauterberg and Verstein, 2013, p. 4), in a circular scheme that clearly suggests self-reference. This scheme was largely maintained when a centralized calculation of Libor based on a daily poll was put into practice by the Chicago Mercantile Exchange in 1981 (MacKenzie, 2009, p. 81) and, four years later, officially assumed by the British Bankers Association, with rate production continuing to derive from quotes provided by Libor's biggest users. By the mid 1980s, however, the relevance of Libor had already gone far beyond syndicated loans to encompass both the derivatives and the retail credit markets. The rate had become what Asthon and Christophers (2015, pp. 190-191) call a 'legal technology of arbitration', serving as an external referent enabling the creation of a multiplicity of new contractual relationships. In the words of Minos Zombanakis, an old Greek banker who took part in those pre-1981 Libor indexed syndicated loans (cited in Ridley and Jones, 2012): "We started something which was practical and convenient. We never had in mind that this rate would spread to mortgages and things like that…"

Astonishment is, of course, a frequent after-the-fact reaction to financial turmoil and scandal, and one that may divert attention from processes of strategic recombination and exponential imitation that actually make up the contemporary financial world. This chapter intends to follow the road that leads from convenient practicity to contagious expansion to manipulation and, finally, to a promise of reform. In this respect, three things deserve properly underlining. The first is how the Libor rate was nurtured by influential players strategically positioned at the convergence points of international finance and thus endowed with a capacity to set new rules and thereby extend a game they were already playing. The second stems from a tendency towards continuing to do things along previously stipulated lines, following what sociologist Niklas Luhmann ([1997] 2012, p. 41) describes as operationally closed organizational practices — and we will see that manipulation attempts fit this picture more as a rule than as an exception. The third factor embodies a cluster of nexuses or associations that expands while — indeed also because — old habits remain. Thus, when Euribor came to being in 1999 and replaced former interbank rates in francs, marks and other currencies, it soon became clear that it would no longer indicate a single, circumscribed reality — the average interest rate practised in lending operations among a restricted group of banks. As with Libor at that time, Euribor was supposed to signal a wider interbank money market and even the whole economy (to the extent this gets perceived in accordance with the conditions imposed on the international interbank lending funded retail credit supply). In this sense, both Libor and

Euribor may also be viewed as multi-referential and multi-functional rates with a notable aggregation capacity.

That, in a nutshell, constitutes the main argument of this chapter. The trail of both Libor and Euribor is here followed in relation to an organizational complex combining specific material infrastructures, legal arrangements, communication channels, representational devices and workplace routines (while impossible to describe in detail all the facets composing this complex and across various countries, some concrete examples are provided). The chapter proceeds as follows. The next section presents Libor and Euribor in their contemporary, multi-referential guise. The third section offers some ethnographic evidence of how these rates are employed in routine banking practices, highlighting their somewhat diverse usages and implications (i.e. their multi-functionality). The fourth section introduces the Libor / Euribor manipulation scandal, which became a public issue in the spring of 2012. The fifth section describes some of the efforts taken towards the reform of both rates. The sixth section puts forward the conclusions reached.

Libor and Euribor as multi-referential benchmarks

As stated, Libor (the London Interbank Offered Rate) and Euribor (the Euro Interbank Offered Rate) indicate the average interest rates practised in unsecured lending operations among a selected group of banks, termed ‘panel banks’. Libor refers to transactions occurring in the London interbank money market through different real-time gross settlement systems (RTGS). At present, this rate contemplates five different currencies: pound sterling, euro, yen, Swiss franc and, most notably, the US dollar — whose rates usually correspond to the meaning of the word ‘Libor’ in the absence of any further specification. Euribor refers to transactions in the Eurozone money market made through the Trans-European Automated Real-Time Gross Settlement Express Transfer System (TARGET2) controlled by the Eurosystem. Contrary to Libor, Euribor is focused exclusively on the euro currency. The calculation processes of the two rates bear many similarities being based not on actual interest values but rather on individual estimates regularly submitted by panel banks to an external calculation agent — Thomson Reuters / Intercontinental Exchange (ICE) for Libor and Global Rate Set Systems Ltd for Euribor. These calculation agents collect the information received and perform the computation on behalf of the entities currently responsible for administering each rate. On February 3rd 2014, the Libor administration was transferred from the British Bankers Association to ICE Benchmark Administration Ltd (a private network of exchanges and clearing houses), while Euribor is presently managed by the European Money Markets Institute, previously known as Euribor-EBF, a nonprofit international association founded in 1999 and under the auspices of the European Banking Federation.

The information available on Libor and Euribor computation processes does not yet contemplate these recent replacements at the calculation and administration levels even while the overall delegation structure remains the same. Basically, the calculation takes about an hour and a half to complete and combines both automated and manual input procedures (cf. EEMI, 2014; EBA and ESMA, 2013, pp. 10-11; MacKenzie, 2009: 81-82). Every business day at around 10:00 (Greenwich Meridian Time in the case of Libor, Central European Time in the case of Euribor), Thomson Reuters and Global Rate Set Systems clean all information regarding previous data and open up their systems so that each panel bank can electronically submit the newest estimates via private pages accessible only to the calculation agents and the bank in question — the submissions including lending offers of no stipulated amount for a group of maturities ranging from overnight (Libor only) to 12 months — see Table 4. The system remains open for about an hour before there follows a smaller period during which panel banks can revise and correct the information provided or be notified by the calculation agent in case of communication failure or any other such anomaly. Then the window closes and the rate calculation begins: for each maturity, a percentage of the highest and lowest quotes (25 percent in the case of Libor, 15 percent in the case of Euribor) is automatically eliminated, with the remaining rates averaged and rounded off to five (Libor) or three (Euribor) decimal places. Around 11:30, the calculation agent will publish the newest rate values, which become accessible to subscribers and can subsequently be further disseminated.

	LIBOR					EURIBOR
Market context	London Interbank Money Market					Eurozone Interbank Money Market
Administration	ICE Benchmark Administration Ltd					European Money Markets Institute
Currencies	USD	GBP	EUR	JPY	CHF	EUR
Number of panel banks	18	16	15	13	11	24
Tenures	Overnight, 1 week, 1-3 months, 6 months, 12 months					1-2 weeks, 1-3 months, 6 months, 9 months, 12 months
Calculation agent	Thomson Reuters / Intercontinental Exchange (ICE)					Global Rate Set Systems Ltd
Dissemination of results	Real time for subscribers and with a 24 hour delay for the public in general					

Table 4 — Generic information about Libor and Euribor (December 2015)

The further dissemination of the Libor and Euribor rate reflects both their relevance and the current structural significance of these two benchmarks. As mentioned in the introductory section, both Libor and Euribor are now widely employed as reference rates in multiple over-the-counter and exchange-traded derivatives contracts such as interest rate futures, options and swaps or forward rate agreements, while at the retail level the two rates also integrate into a variety of products, from corporate loans to mortgages to student loans to credit cards (Ojo, 2014; Kiff, 2012). In this vein, the US dollar Libor acquired the reputation of being the most important series of numbers in the whole world (Money Week, 2008), with Euribor taking on an equally prominent status though in a less ample market context. Hence do we here refer to both Libor and Euribor as multi-referential and aggregative rates. Though originating in an elite circuit of interbank lending, the two rates have clearly escaped that primary context to become involved in the calculative and legal arrangements of other financial markets. Indeed, the usage of such reference rates in retail credit contracts is now usually reinforced by national jurisdictions, sometimes with concrete specifications regarding employable tenures or averaging procedures as in Spain, Portugal or Italy (I return later to this point), while in countries such as Belgium, the use of Libor and Euribor as reference rates for retail credit is strictly forbidden — with all mortgages indexed to Belgian sovereign bonds instead (see Zachary, 2009).

Libor and Euribor in normal banking practice

The closest example to an ethnography of Libor calculation may be found in MacKenzie (2009, pp. 1-2). In this section, I propose to complement his impressions by putting forward a picture of how Euribor rate numbers are processed outside panel banks and at the level of normal banking practice. Until recently, public dissemination of both the Libor and Euribor values was made in real time and shortly after the calculation agent had published the newest rate values. In 2014, both administrators introduced a 24-hour delay. The following empirical description refers to a period before this alteration was implemented, though the cognitive, interactive and bureaucratic procedures remain valid today. The action takes place inside the financial department of one Portuguese retail bank (Bank A). In the dealings room of this financial department, there was a person in charge of the interbank money market operations. This same person was also responsible for informing the bank's marketing and commercial branches of the newest EURIBOR values. Thus, every day, around 11:30 CET (10:30 in Portugal), she accessed the calculation agent's page on one of her computer screens from which she copied the latest EURIBOR values and pasted them into a previously prepared Excel spreadsheet as below:

	LAST	**LAST 1**	**LAST 2**	**LAST 3**
SW	4,405	4,405	4,386	4,388
1M	4,484	4,484	4,485	4,484
2M	4,757	4,756	4,757	4,757
3M	4,964	4,963	4,964	4,963
(…)	(…)	(…)	(…)	(…)
1Y	5,321	5,306	5,314	5,301
	22-08-2008	21-08-2008	20-08-2008	19-08-2008

Table 5 — Excel spreadsheet used for internally informing of the Euribor rate values in Bank A (English in the original): reading from left to right, the first column indicates the maturities, with "SW" standing for Spot Week; the second column (titled "LAST") displays the newest EURIBOR values, with the following columns presenting the values of the three previous days, for the purposes of comparison (the corresponding dates appear below).
Source: Author's field notes.

The Excel file was then renamed and immediately sent to other banking departments. One can thus observe how, at a very immediate level, reference rates enter the realm of organizational practice also as expedients that maintain specific communication channels (both internal and external) open and active.

What gets communicated through these channels subsequently serves as the basis for further action. The fact that both Libor and Euribor are now incorporated into many retail credit products with adjustable interest rates means that the two indices have transcended the boundaries of what they supposedly indexed (the interbank money market) to begin performing new functions — in this case, employed as base rates in retail credit products — in other financial market segments. A link between wholesale and retail finance thus becomes established. For this purpose, the official rate values require some further adjustment. In terms of calculation, the Euribor rate used in Portuguese retail credits is subject to another new round of averaging. The values regularly provided by the calculation agent and internally released through documents such as Table 5 above, thus undergo compilation at the end of each month and then are divided by the corresponding number of days, the resulting simple mean consisting of the more mundane Euribor indexer — or base rate — used in retail credit and which would have to be incorporated into retail contracts coming into effect the month thereafter (note the lag effect that also accompanies the transition from wholesale to retail finance). The rules of this calculation have been declared mandatory by a specific Portuguese law (*Decreto-lei 240/2006*), which added that banks were only permitted to round up the rate's fourth decimal place. At this point, the Euribor rate ceases to be the trimmed average of projections regarding lending prices in the interbank money market to become an actual interest rate component, applied uniformly to retail credit contracts along with a spread depending on individual risk scores.

Because of this multifunctionality, both Euribor and Libor are now omnipresent in regular banking practice. Updated Libor / Euribor values must be regularly incorporated into online credit simulators, a procedure far from automatic — usually implying a series of trial and error operations and, in most cases, mobilizing human resources from different banking departments. Current Libor / Euribor values may also be present in calculations associated with product developments, especially regarding the choice of tenures in relation to specific credit modalities. Moreover, banks are frequently prompted by the media and consumer or industry associations to provide information regarding their supply with this usually involving similar comparisons between different rate maturities. In addition, Libor / Euribor play an important role in reports depicting business evolution or in budgetary activities (where future profits are anticipated according to a projection of future rate values). As such, documents and graphs describing the history of Libor or Euribor along with the tables displaying the newest values provided by their calculation agents emerge as relevant sources of information for marketers, risk analysts and other banking professionals working at the commercial branches (one fieldwork recollection regards a dossier titled “Home Loans / Interest Rates 2008” where one marketer could readily pick up Euribor values relative to any previous month).

Most of these cases incorporate a pragmatic view of Libor / Euribor, that is, a perspective in which the information provided by the calculation agent and subsequently recalculated for retail purposes is mostly taken for granted, with actors merely accounting for acute number reproduction from reliable sources — often a chart like Table 5, prepared for dissemination by entitled professionals within each bank — to new documents, files and calculation instruments. What counts as Libor or Euribor is the list of percentages reputedly stemming from such reliable sources, distributed along a network that starts in the calculation agent’s online page and may end in several retail credit simulators available on bank webpages and local branches — with one stop for reproduction in the bank’s financial department and another in the marketing department in the case of the two Portuguese banks where I did my fieldwork. Since there was only one desktop and screen per desk in the marketing areas of both banks, a common strategy was to print out the source of Euribor values so as to better verify that the same values had been correctly inserted into newer reports, tables and devices. During credit simulator rates updating, for example, marketers in charge of this task would make recourse to a printed table exhibiting the newest Euribor indexer values while testing the simulator prototype available on screen to ensure that no mistakes had been made. In such cases, Euribor percentages were compared to each other, either confirming that there was a perfect match or evaluating the rate's movements over a specific period, and with absolutely no concern for questions such as whether those percentages adequately reflected the current interbank lending conditions or whether there was any substantial difference between the Euribor rate published by Thomson Reuters and the nationally prescribed calculation of the Euribor indexer (I am here simply making an ethnographic statement, and not implying that retail banking actors *should* have this kind of concern around Euribor descriptions and representative capabilities).

It is thus possible to speak of a routine principle of reproduction in which bankers keep in line with past organizational practices. This principle both relates with operational imperatives and remains necessarily closed to marginal interrogations. Libor and Euribor, as taken-for-granted facts, are thus mandatorily copied from one station to another, from one document to another, with actors more concerned with accurate 'reproduction' than with the supposed 'accuracy' of that being reproduced.

There is, however, more to the story. Not only are both Libor and Euribor laterally involved in a multitude of financial instruments and investment strategies but they also act as trading targets. Betting on trends in Libor or Euribor now represents common practice even while the classification of such a move as an 'investment' has equally involved specific legal arrangements in the respective different jurisdictions (see MacKenzie, 2009, pp. 75-78). Such trading strategies are usually developed within global megabanks acting as brokers and subsequently handed down with a delay to smaller players under a contracted business relationship (see Table 6 for an example).

[*Name of broker*]: EURIBOR: cheap upside printing, possible protection against EBC aggressive rate policy shift – Paper bot 10K ER 95 25 / 95 50 1 x 2 cs@flat. with libor remaining at current levels (7 bps above repo fin rate), trade targets almost 50bps of easing by yr end…

Table 6 — Long call ladder option strategy sent from a then Euribor / Libor panel bank via a Bloomberg chat room to Bank A. The strategy bets on a Euribor rate cut of 50 basis points — note how the projection also takes the Libor values into consideration (English in the original).
Source: author's field notes.

Trader reactions to such "broker tips" are far from mechanical not only due to the cryptic jargon but also because additional information is usually required: special, subscribed website pages run by important news providers such as Bloomberg or Reuters may thus be accessed to view graphs with Libor / Euribor predictions plus information regarding the instrument or strategy under analysis, such as its profit and loss curve or the latest transaction prices. The capacities of smaller banks to invest must also be taken into consideration as many strategies will only pay off when the bank enters the market with a number of contracts larger than those internally affordable to its own trading portfolio. In these cases, banking actors are no longer merely copying information from one platform to another but rather prospecting information and gathering knowledge in order to reach an investment decision. The knowledge itself is, however, equally based on standardized market indices and devices, with traders seldom questioning the adequacy of the information coming from the news providers. Libor and Euribor thus remain unquestioned presuppositions under which new questions may be asked, regarding not the interbank money market itself but, for example, the options and futures markets, whose fluctuations are comparably faster.

In sum, whereas marketers oscillate between the reproduction of Libor / Euribor daily and monthly rates, traders ignore both to concentrate mainly on the real time evolution of Libor / Euribor derivatives markets as displayed on trading terminals, waiting for the right moment to step in or step out. In all cases, Libor and Euribor are taken as established *facts* — i.e. something largely taken-for-granted and thus serving as an unproblematic basis for further activities (see MacKenzie, 2009, pp. 9-10) —, with careful reproduction specifically intended to preserve their facticity.

Manipulation scenarios

The so-called Libor manipulation scandal erupted in June 2012 out of a sequence of investigations by the former UK Financial Services Authority. Controversy around Libor does, however, hold a longer history. MacKenzie (2009, p. 82) situates the emergence of this controversy in 2007-2008, in close association with the bailouts of UK banks Northern Rock and Bear Sterns. MacKenzie's account, though, still highlights Libor's facticity. The rate is thus presented as "an example of a measure that *has* usually been taken as an adequate representation of the underlying market" (Ibid, p. 79, emphasis in the original), and whose "fixing is designed to be *sociologically* robust, so to speak" (Ibid, p. 82, again, emphasis in the original). Suspicions around possibly deflated Libor values in the midst of the 2008 financial turmoil were communicated by the panel banks themselves to the British Bankers Association and the Bank of England (Mollenkamp, 2008). In 2009, the UK Financial Services Authority undertook a systematic investigation of the institutions involved in the Libor submission process, with cooperation from regulators and public authorities in other jurisdictions whose currencies then integrated the list of Libor rates — namely the United States, Japan, Switzerland, the European Union and Canada (which would later withdraw its currency from the Libor list) (cf. *The*

Wheatley Review of LIBOR: Final Report, 2012). This investigation found evidence of regular rate rigging inside certain panel banks from at least 2005 onwards thus confirming what previous accounts based on econometric screening models designed to detect signs of possible conspiracy and manipulation had hesitantly hinted at (cf. Abrantes-Metz *et al.*, 2008). However, some media sources have subsequently reported statements from traders dating obscure practices as of the late 1980s (The Economist, 2012) — thus encompassing almost all of Libor's official history.

Rate rigging means the submission of Libor values inflated or deflated according to the bank's investments in derivatives or loan portfolios. The extent of US bank and Euribor / Libor panel member Citigroup's swap operations in early 2009, for example, was susceptible to providing significant returns should the Libor value drop (Snyder and Youle, 2010). Profits deriving from bank retail credit portfolios might also prove substantial in case of deliberate rate increase as this would correspondingly increase the monthly instalments of millions of borrowers with Libor indexed loans — hence the lawsuits filed by US homeowners against a number of panel banks accused of strategically inflating Libor submissions at the beginning of each month just when most adjustable rate mortgages got reset (see Touryalai, 2012). This type of manipulation is usually described as "positional" (Rauterberg and Verstein, 2013, pp. 31-32) or "portfolio driven" (Snider and Youle, 2012) and requires some form of coalition between the employees submitting rate information, traders and even senior administrative staff all of whom are working for the same bank (see The Economist, 2012; Snider and Youle, 2012, pp. 8-9). Barclays Bank — that took centre stage during the scandal and was fined for manipulation attempts — also admitted the existence of tacit agreements among certain panel members to foster portfolio driven rate rigging. Collusion has indeed been at the heart of the whole Libor scandal, as testified to by another lawsuit lodged by the US Federal Deposit Insurance Corp against panel members (Raymond and Viswanatha, 2014).

A second type of rate manipulation has already been alluded to: the submission of rate values lower than those actually obtained so as to safeguard the bank's creditworthiness in times of lower liquidity levels. Such a strategy was intentionally deployed during the 2008 financial freefall and with every likelihood of having required the acknowledgement and approval of senior staff. There is, thus, some variety in the procedures to that which constitutes rate manipulation and the coalitions that need establishing in order to bring this about. Enough evidence has been provided of manipulation attempts involving horizontal *internal* collaboration between traders and staff members in charge of submitting rate values. No one seems to doubt that vertical internal collaboration, forming a triangle with the upper edge occupied by senior directors, also occurred. Finally, allegations of collusion point clearly towards both horizontal and vertical *external* collaborations, i.e. taking place across different panel banks. Of course, from a sociological point of view, horizontal/vertical and internal/external emerge as situational coordinates revealing the highly composite and flexible character of contemporary global banks. In fact, such global banks seem closer to being clusters of independent operational networks rather than uniform organizations — and it is perhaps important to stress that these same panel banks were among the first to report possible attempts at manipulation with the settlement of the whole Libor affair having largely benefited from the cooperation of bank employees acting against some of their colleagues and directors.

All this brings us back to the issue of self-reference. Let us recall that the official Libor rate was calculated on the basis of information submitted by Libor's most important users and on behalf of a bankers association. In a way, Libor never ceased to be the "club good" that the pre-1981 Eurodollar community tailored for its own practical purposes. Evidence gathered by authorities and journalists suggests that false reporting has all along featured as part of Libor's official history — to a greater or lesser extent similar to the investment activities described in the previous section — and not just as a consequence of market turbulence or liquidity problems at particular times. In this sense, we may approach Libor manipulation as an example of financial innovation performed by well positioned and well adapted elite intermediaries acting as *bricoleurs* (cf. Engelen *et al.*, 2010, pp. 53 and 56). Indeed, while Ashton and Christophers (2015, p. 197) view rate rigging as a variety of arbitrage, we take it here as an example of financial bricolage or innovation in its crudest sense, since — as the same authors acknowledge (Ibid, p. 198) — rate rigging meant the creation, and not just the discovery, of new price differentials through specific arrangements only accessible to certain panel bank employees.

On this basis, two things deserve highlighting. The first is that such an innovation soon became routine: apparently some traders needed but a Mars bar to persuade their cash desk colleagues to indulge in such a scheme, as told by a former UBS and Citigroup trader (see Marston, 2015). The second is that the same principle of strategic invention remains valid even when moving from the globally to the nationally circumscribed circuits of financial convergence. We have already described how Euribor rates were subjected to a second round of averaging before their application to mortgages in countries such as Portugal. In this respect, Portuguese banks have already also faced allegations from citizens and consumer associations of discretionarily averaging the Euribor mortgage indexer through both the rounding up of the fourth decimal case and the use of a 365-day basis for annual credit interest calculation while annual deposit interest was estimated solely on a 360-day basis (the idea, in this latter case, obviously incorporates that of increasing the amount of interest receivable to the detriment of that payable). These practices, which were subsequently regulated by a series of bills (see Lopes, 2013: 22, note 6), clearly reveal how Portuguese banks were also creatively deploying their capacity to play with basis points and incorporating this into their routine practices.

Reaction and reform

Rigging suspicions soon extended from Libor to Euribor and other interbank rates (cf. European Commission, 2012, p. 2), leading both to the inclusion of financial indices manipulation in the 2012 revision of EU Market Abuse Directive and to extensive reviews of financial and market benchmarks led by international political organizations such as the European Commission and the European Parliament, and international supervisory authorities such as the International Organization of Securities Commissions (IOSCO, founded in 1983), the European Banking Authority (EBA, established in 2011) and the European Securities and Markets Authority (ESMA, equally established in 2011) (see Table 7 for a list of the public consultations around this issue). The Board of Governors Economic Consultative Committee of the Bank for International Settlements contributed to the debate with a report entitled *Towards Better Reference Rate Practices: A Central Bank Perspective* (March 2013). All these regulatory work streams were paralleled by efforts towards establishing new benchmark principles and codes of conduct under the initiative of industry associations such as the Global Financial Markets Association, the Index Industry Association, ASSIOM Forex (the Financial Markets Association of Italy), or of private index providers acting in cooperation such as Argus, Platts and ICIS.

Consultation paper	Leading institution	Dates	Number of published responses	
			Institutional	Personal
Functioning and Oversight of Oil Price Reporting Agencies	IOSCO	2012-03-01 / 2012-03-30	15	3
The Wheatley Review of LIBOR: Initial Discussion Paper	Financial Services Authority (UK)	2012-08-10/ 2012-09-07	Over 60 (unpublished by the FSA)	
Consultation on Market Manipulation: Lessons and Reform post-LIBOR/EURIBOR	European Parliament Economic and Monetary Affairs Committee	2012-08-20/ 2012-09-17	43	2
Consultation on the Regulation of Indices	European Commission	2012-09-15 / 2012-11-29	75	—
The Regulation and Supervision of Benchmarks	Financial Services Authority (UK)	2012-12-05 / 2013-01-16 and 2013-02-13	24	—
Financial Benchmarks Consultation Report	IOSCO	2013-01-11 / 2013-02-11	55	2
Principles for Benchmarks-Setting Processes in the EU	EBA and ESMA	2013-01-11 / 2013-02-15	67	—
Principles for Financial Benchmarks Consultation Report	IOSCO	2013-04-16 / 2013-05-16	42	1

Table 7 — List of the main public consultations on financial benchmarks, in chronological order.

The participants in these discussions were mostly institutional: alongside industry associations there were national and international regulators, banks, brokers and asset management firms, stock exchanges and other index providers, and, to a lesser extent, consumer associations. Furthermore, a considerable number of these institutions participated in more than one public consultation (often recycling their responses to previous consultations given the juxtaposition of content). Such is the case of the main index providers and industry associations whose collaboration with the authorities also included attending private meetings. Notwithstanding the global scope of the subject under consultation and the leading institutions' receptivity to contributions from anywhere, the geography of respondents inevitably reflected global asymmetries, with the United States and the main European Union countries (the UK, Germany and France) massively represented, along with other rarer contributions from South Africa, Australia (both only in the IOSCO consultations) and Japan, with the total absence of Russia, China, India, South America and other African countries.

Within these debates, issues around facticity and representational accuracy were paramount to regulators. According to the European Commission consultation paper (2012, p. 2), benchmarks are thought to rigorously reflect the economic realities that they intend to measure — hence the allusion to transaction based evidence as the ultimate constituent of market reality. Or, as ESMA executive director Verena Ross stated during one public hearing held in Paris (February 13th, 2013), with Libor and Euribor in mind, "there must be some reality check between what the benchmarks say and what transactions say". Libor and Euribor represent, in this respect, an interesting case, in that the interbank market they were supposed to reflect largely ceased to exist in the wake of 2007-2008, at least for maturities of over one month as duly noted by many respondents to these consultations and acknowledged by the financial authorities themselves. This was attributed to a series of interrelated causes, ranging from the European sovereign debt crisis and rating downgrade to the growing influence of central bank lending facilities to Basel III new liquidity coverage ratio measures to — last but not least — the Libor scandal itself. In the words of former US Commodity Futures Trading Commission Chairman Gary Gensler, during an IOSCO public roundtable held in Washington also in February 2013 (YouTube, 2013), "this is a world in which banks are being asked to quote something that might not even exist". Indeed, with reference to the over thirty day Libor and Euribor rates, "if the benchmark isn't benchmarking something, then what is it that we have here?"

We have a fiction, perhaps a "convenient fiction", as one New York Times journalist once put it (Norris, 2012), echoing concerns firstly expressed by bankers (see Tett, 2007); but we clearly do not have a fact. Furthermore, as both regulators and actors, as well as sociologists of finance, maintain, trust in financial markets stems from facts and not from fictions. A reliable 'fact', in this case, means a number seen as adequately reflecting market reality, preferably anchored in actual, observable transactional data and susceptible to being incorporated into normal bureaucratic practices without any further concerns. One of the main conclusions of these rounds of public consultations regards the supremacy of prices as practised in authentic deals over price estimates as the basis for index production. Some participants — namely stock exchanges and related venues — even advanced rather Manichean distinctions between "objective" and "subjective" benchmarks or "neutral" and "panel based" index providers (EUREX, 2013; STOXX, 2012). From a sociological perspective, however, the production of facticity depends on a set of arbitrary conventions and discretionary judgements sustained by a community of fact users who also oversee fact production. The several original Libors applied to syndicated loans shared this characteristic. Commenting on a specific Scott Paper Company contract involving the production of a Libor rate by a small group of banks under the eye of a larger banking committee, Gary Gensler noted approvingly in the same IOSCO public roundtable that ”it's like living in a small town, or in a small village: it's less prone to misconduct because the community keeps you in line” (YouTube, 2013).

Even liquidity, so often regarded as the ultimate source of price objectivity, may be understood as a consequence rather than the cause of index creation, as indeed stressed by some respondents to these public consultations who explained that, by providing standardized, easily accessible information about a certain market sector or commodity, a new index may increase the visibility of such a sector or commodity, ending up stimulating further negotiation (see AFG, 2013, p. 3; ICE, 2013, p.4). This means that benchmarks, in addition to being multi-referential and multi-functional, also prove performative, and this both in the positive sense — when a market develops in their image — and in the negative sense — when the represented market ceases to exist (see MacKenzie, 2006, pp. 16-20, for a discussion of the different performativity modalities). However, such a tension between facticity and what may be called fictionality emerges only episodically in these various discussions around index production, with regulators insisting upon the relevance of actual transactions (or, alternatively, of quotes committed to actual transactions) and internal governance mechanisms to ensure accurate reporting.

In the end, some minor changes were introduced into the production of Libor and Euribor — although the reform process is not yet complete. Apart from the already mentioned replacements at the administration and calculation levels, the number of tenures was considerably reduced (from 16 to 7 in the case of Libor and 15 to 8 in the case of Euribor) and a 24-hour delay of rate public release was introduced. A significant exodus of Euribor panel members (from 44 to 24) also deserves mention, especially because it forced regulators to intervene by declaring Libor and Euribor panel membership mandatory — a move that may indicate the club days are now over. Finally, efforts towards the development of parallel interbank rates drawing more substantially on actual transaction data are currently underway: private company STOXX has launched two rival benchmarks in 2013 while both the Federal Reserve and the European Money Markets Institute are still working on viable substitutes to, respectively, Libor and Euribor. In this respect, the G20 requested the launching of an alternative to Libor by 2016 — which was not at all accomplished.

Conclusion

Notwithstanding the historical resilience of certain accounting standards and the irreversible character of computer technology, there is much about global finance and credit that appears precarious and fragile (cf. Carruthers and Ariovich, 2010, p. 3). The recent Libor / Euribor affair is but an episode of a turbulent saga of devaluations and miscalculations that intensified after the 2008 financial meltdown and brought forth the issue of financial reform as a more or less permanent necessity (see Lanchester, 2013 for a review of recent banking scandals). In such circumstances, it is obviously difficult to come up with straightforward answers and clear-cut solutions. In any case, the perspective outlined in this chapter suggests that other issues should be taken into consideration alongside facticity enhancement through recourse to transaction-based evidence and internal governance mechanisms. The history of Libor configures a movement from convenient practicality to contagious expansion that favoured innovative manipulation attempts and ended up in mandatory reproduction to avoid panel exodus and any immediate index discontinuation. Contrary to what some might think, such a movement is far from surprising, this chapter having proposed a few arguments that clearly help in illuminating why this is so.

First, the Libor rate was invented by elite international banks acting in a highly deregulated market (the London Eurodollar market) and committed to finding a solution for handling long-term interest rate risk. These actors were in very favourable position to setting the rules of the game: they gathered privileged data from among themselves and developed a new calculation. Thus, in a sense, they were innovators (or *bricoleurs*). However, what passes for innovation is quickly followed by imitation, and even more so in the case of finance. Most financial activity is indeed composed of repetitive goal-directed routines — to borrow an expression from sociologist Anselm Strauss (1993, p. 195). Even inside dealing rooms and other similar hot spots there are lots of things that still tend to be done according to previous lines of procedure — patterning and standardization enabling time economization and more efficient problem solving. As such, the same Libor rate began being used repeatedly for interbank borrowing, and later indexed to other products and starting to perform new functions. This aggregation capacity is mainly explained by the rate's multi-referential and multi-functional potential, which stems from a conjugation of factors: the extant connections between interbank lending and other financial markets, the absence of any patent registration restricting further Libor uses or the emergence of similar rates (such as the antecessors to the Euribor) and the fact that these rates consist of a list of numbers easily copiable from one station to another (as seen in section three a propos Euribor).

Libor's exponential success as a benchmark for the international interbank money market and beyond opened up new possibilities for the former club members then converted into panel banks. What is now recognized as manipulation is but a calculation prerogative of these players which shares many similarities with other forms of financial innovation. One may counter that Libor manipulation was not openly assumed by those practising it, and that these people surely knew that they were themselves cheating and could eventually be caught. The boundaries between right and wrong are, however, not as clear-cut as one might think. There are other financial innovations which appear wrapped up in a veneer of technical expertise before getting described as pure scam in many after-the-fact stories such as the Madoff case. Alternatively, to give a slightly different example, consider the subsequent rounds of calculation and averaging involved in Euribor adaptation to retail loans or deposits: in this case, the new calculations performed opened up the possibility of gaming with rounding off and year extension in a way that forced national regulators to intervene and legislate — though banks were merely capitalising on a legal void rather than actively manipulating the results. Innovation, just like manipulation, is mainly the result of an advantageous position that subsequently becomes amplified by repetition.

CONSIDERAÇÕES FINAIS

Os textos aqui coligidos possuem óbvias afinidades, estando unidos, desde logo, pela partilha de um mesmo objecto empírico: do primeiro ao último capítulo desta dissertação, são explorados cinco departamentos bancários pertencentes aos mesmos dois bancos de retalho, com uma maior incidência ora na área do marketing ora na área do risco ora na área financeira. Se a unidade do contexto contribui para dar consistência a esta dissertação, a sobreposição de conteúdos é, estamos em crer, meramente residual, tendo sido aliás conservada como forma de ajudar a cimentar certas ideias — atendendo a que estes serão assuntos ainda algo herméticos para um público de sociologia. Em todo o caso, será importante, para finalizar, reconstituir o fio vermelho desta dissertação e sistematizar os seus argumentos centrais. Cumpre esclarecer, mais precisamente, em que medida o presente trabalho contribui para uma análise sociológica do universo bancário, até porque os capítulos testemunham um percurso de quase dez anos onde nem tudo foi coerente. É notória a focalização em torno de certos problemas como a produção de conhecimento, a dinâmica da imitação/inovação ou as incrustações sociais e técnicas geradas pelo crédito, mas as reflexões tecidas sobre estes problemas contêm nuances que, por vezes, apontam em direcções diversas. E, por outro lado, há questões que parecem pairar sobre os textos e que nunca chegam a ser convenientemente esclarecidas — a começar pela questão implícita no título deste trabalho.

BANCA, CRÉDITO E ORGANIZAÇÃO SOCIAL: QUATRO CONCLUSÕES

A respeito do modo como os bancos organizam sociedade através dos seus serviços (em particular dos serviços de crédito), o presente estudo permite avançar quatro conclusões interligadas, que passamos a expor pela ordem que julgamos mais acertada e consonante com a sequência dos capítulos:

Primeira conclusão: os bancos são lugares de produção de conhecimento e as suas práticas cognitivas são diversas, abrangendo quase todo o espectro metodológico, da análise econométrica e estatística dos modelos de gestão de risco de crédito à observação no terreno proporcionada por técnicas de investigação de marketing como o *mystery shopping*. Contudo, ao nível dos documentos que testemunham a actividade cognitiva bancária, o registo é predominantemente quantitativo, ficando muitos pormenores qualitativos circunscritos ao domínio da oralidade. Por outro lado, esta produção de conhecimento envolve, como não podia deixar de ser, determinadas ideias sobre a 'economia' e a 'sociedade', entendidas num sentido necessariamente abrangente — ideias essas que acabam por ser reforçadas (isto é, performadas) no decurso da própria actividade cognitiva dos bancos. Do ponto de vista da comercialização de produtos de crédito de retalho, como se viu, a 'sociedade' é composta por toda uma população de consumidores ou clientes bancários que se manifesta por meio de subscrições de produtos aos balcões, de picos de vendas, de *scores* aplicacionais, de cumprimentos ou incumprimentos de crédito.

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Segunda conclusão: com base no conhecimento que produzem, os bancos vão tecendo ligações duradouras com todo um mundo à sua volta, feito de clientes (particulares e empresas), de parceiros de negócio, de bancos concorrentes, de autoridades de supervisão, de associações beneméritas. E, ao estabelecerem estas conexões, os bancos criam e governam comportamentos — é o caso dos hábitos de poupança de longo prazo, da domiciliação de vencimentos, das modalidades de pagamento através de cartões, das periodicidades de pagamento através de prestações mensais ou das compras estimuladas por campanhas de marketing sobre determinadas vantagens de crédito. Trata-se de comportamentos bastante estabilizados, muitas vezes executados quase sem se dar por isso e que trazem consigo sensações de conforto e despreocupação: a maior parte dos depositantes bancários portugueses considera vantajoso ter o seu dinheiro no banco, receber o ordenado por essa via ou efectuar pagamentos mensais por transferência automática; podemos ainda mencionar a naturalidade com que se equaciona a compra de uma casa com recurso ao crédito e todos os requisitos que uma tal decisão implica (aceitar que o imóvel seja hipotecado, auferir de uma fonte de rendimentos estável ou transferir para fiadores com rendimentos estáveis a responsabilidade de cobrir eventuais falhas no pagamento das prestações...). Neste sentido, pode dizer-se que os bancos constroem sociedade.

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Terceira conclusão: muito do que é feito no interior dos bancos assenta na imitação, mesmo aquilo que se apresenta como inovação pode ser considerado uma forma de imitação, e tanto a imitação como a inovação devem ser compreendidas como consequências de um modo de actuação institucional dependente de posicionamentos de mercado de âmbito transnacional. Os inovadores financeiros (ou *bricoleurs*) são quase sempre grandes bancos internacionais ou bancos que actuam nos centros nevrálgicos do mercado — e, em matéria de crédito para fins de consumo, os Estados Unidos têm actuado como farol. Por sua vez, os imitadores financeiros são bancos que ocupam posições mais periféricas e que procuram acompanhar as tendências internacionais: se, a nível nacional, estes bancos constroem sociedade, a verdade é que o fazem ao mesmo tempo que procuram harmonizar-se com preceitos de um sistema financeiro globalizado que eles não estão em posição de desafiar. Para além disto, e como o escândalo Libor deixa entrever, a linha que separa a inovação do desvio financeiro é ténue. Por vezes, a ultrapassagem desta linha envolve a percepção de uma distância entre os textos normativos e a prática (como aconteceu precisamente com a manipulação das taxas de juro). Noutros casos, porém, a inovação financeira evolui numa pretensa terra de ninguém regulatória, combinando novas infraestruturas tecnológicas e novos modelos teóricos para ultrapassar fronteiras previamente delimitadas ou simplesmente para desbravar territórios novos e ainda não legislados — como o dos mercados *over-the-counter* onde eram transaccionados os derivados de crédito antes de 2008.

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Quarta conclusão: as conexões criadas pelos bancos, assim como as redes que sustentam o sistema financeiro global, são alimentadas por informação consubstanciada em folhas de cálculo (e formatos similares) transmitidas electronicamente, contribuindo desta forma para a organização do trabalho e para a performação de articulações intra- e interinstitucionais. Este tipo de produção documental abarca a maior parte da actividade praticada nos bancos, sendo a disponibilização atempada de relatórios frequentemente tomada como um sinal de transparência e boa governança. Como se procurou demonstrar, a confiança numa pressuposta acuidade numérica é uma construção social assente em condições como o reporte periódico ou a reputação institucional, e ainda em protocolos de articulação e mecanismos de governo específicos. Daí que, embora o conhecimento produzido no interior dos bancos seja diverso, ele acabe por se reflectir em documentos cujo teor é maioritariamente quantitativo. A própria distinção entre qualitativo e quantitativo pode ser vista como um resultado da predominância da quantificação. E, nesta base, outras distinções críticas são operacionalizadas, como as que apreciam os activos em função da sua liquidez (sólido/líquido) ou do seu prazo (longo/curto).

PERSPECTIVAS FUTURAS

Ficaram de fora desta investigação outras áreas importantes, como a administração, a contabilidade, o *compliance* ou as agências locais. Se, nos dois primeiros casos, o acesso pode ser mais difícil, tanto o trabalho de *compliance* (que implica harmonizar os serviços bancários com a legislação e as normas vigentes) como o contacto com os clientes através das agências locais são fundamentais para se perceber o funcionamento dos bancos e o modo como estes se ligam com a restante sociedade. Os balcões são áreas operacionais, onde os gestores se relacionam presencialmente com o público e procuram acomodá-lo aos interesses do banco. Trata-se de um trabalho executado sob uma pressão para o cumprimento de determinados objectivos comerciais e que pode adquirir contornos eticamente sensíveis para os próprios gestores. Foi o que aconteceu recentemente a propósito da comercialização agressiva de depósitos complexos que passavam por ser meros depósitos a prazo mas que, em rigor, representavam investimentos com risco de perda de capital — mais um caso de inovação numa aparente terra de ninguém regulatória, entre o mercado bancário e o mercado de valores mobiliários. No período instável que se seguiu a 2008, muitos clientes — alguns deles vindos de outros bancos e procurando abrir novas contas de modo a ficarem abrangidos pelo Fundo de Garantia de Depósitos — terão efectivamente sido encaminhados para este tipo de produtos através de manobras de persuasão, no mínimo, questionáveis.

Porém, não será correcto olhar para os consumidores como uma massa amorfa e inerte, susceptível de ser moldada pelos bancos como estes bem entenderem. Algumas regras do jogo do crédito, por exemplo, foram rapidamente compreendidas pelos clientes e revertidas a seu favor — desde as respostas direccionadas para a obtenção de bons *scores* de crédito nos Estados Unidos aos empréstimos à habitação através dos quais alguns imigrantes em Espanha compraram uma casa que depois revenderam, tendo regressado ao seu país de origem com o dinheiro da revenda e deixado o empréstimo por pagar. Considerar o problema a partir das agências locais implica, portanto, considerá-lo também sob o ângulo dos clientes bancários, à maneira da sociologia da banca francesa — sendo este um objectivo que ficou de fora do presente estudo.

Outra área não coberta foi a da supervisão financeira — a qual pode ser igualmente difícil de abordar dum ponto de vista etnográfico (as tentativas que fizemos nesse sentido não renderam mais que um escasso conjunto de entrevistas). Trata-se, importa precisá-lo, de uma área relativamente recente e que se tornou significativa num mundo atravessado por fluxos de capitais liberalizados e globalizados como aquele em que vivemos. Desde meados da década de 1970 que a finança evolui num meio transnacional caracterizado por taxas de câmbio flutuantes e regimes monetários puramente fiduciários, e onde as tradicionais distinções entre a banca, os valores mobiliários e os seguros se têm vindo a dissolver. Escusado será dizê-lo, trata-se de um meio inerentemente instável, como o atesta uma longa série de derrocadas e bancarrotas com impactos variáveis na sociedade mais alargada. Paralelamente, o controlo sobre a finança foi saindo da alçada directa dos governos para passar a ser exercido sobretudo com base num conjunto de medidas não vinculativas que coexistem com diferentes enquadramentos legais nacionais, eles próprios convenientemente adaptados ao cenário internacional. Alguns académicos envolvidos na redefinição deste contexto (por exemplo, Masciandaro & Quintyn 2013: 4) admitem que um controlo financeiro efectivo é impossível nas circunstâncias actuais, sendo a melhor alternativa, precisamente, o tipo de acompanhamento distanciado epitomizado pela ideia de 'supervisão'. Daí a tendência para, no rescaldo de toda e qualquer crise financeira, identificar falhas e clamar por mudanças (Ibid.).

Não vamos, evidentemente, abrir agora este dossier. Digamos, para concluir, que estamos bem cientes das limitações da visão aqui proposta e que esperamos poder colmatá-la no futuro. Não é fácil desvendar o mundo da finança contemporânea. Quisemos evitar, por um lado, a crítica fácil e o ataque ao capitalismo financeiro, por serem discursos com pouco poder performativo e que parecem insuficientes para compreender porque é que, apesar de tantas crises, de um persistente agravamento das desigualdades e de tantas chamadas de atenção, o capitalismo financeiro resiste. Quisemos afastar-nos, igualmente, do juízo compreensivo que recicla velhos argumentos sobre a importância dos bancos na sociedade e na economia, assim como das análises fascinadas com a heterogeneidade e a diferença. Dez anos depois da crise de 2008, pouca coisa mudou realmente no reino da finança. Continuamos a viver num mundo dominado por uma mão-cheia de bancos hipertrofiados potencialmente causadores de 'riscos sistémicos' à escala planetária e cuja reforma — para não falar no desmantelamento — se afigura lenta e demorada. A espada de Dâmocles ainda paira sobre as nossas cabeças. O problema é, sem dúvida, político — mas cumpre reconhecer que a construção do sistema financeiro internacional esteve longe de atrair as principais agendas reivindicativas, não tendo sido criada nenhuma tradição de discussão aberta sobre estas matérias. De modo que, neste momento, é necessário algo mais do que um libelo acusatório para resolver a situação.

REFERÊNCIAS BIBLIOGRÁFICAS

ABOLAFIA, M. Y. 1996. *Making Markets: Opportunism and Restraint on Wall Street*. Cambridge (MA): Harvard University Press.

ABRANTES-METZ, R.., KRATEN, M., METZ, A. e SEOW, G. 2008. Libor manipulation? URL: http://ssrn.com/abstract=1201389 and http://dx.doi.org/10.2139/ssrn.1201389 (acedido em 13.12.2017).

AFG. 2013. AFG response to the ESMA & EBA consultation on "Principles for Benchmarks-Setting Processes in the EU". URL: https://www.esma.europa.eu/press-news/consultations/consultation-principles-benchmarks-setting-processes-in-eu (acedido em 13.12.2017).

AGLIETTA, M. 2002. Whence and whither money. In AAVV, *The Future of Money*, pp. 31-72. Paris: OECD.

ALMEIDA, P. P. 2001. *Banca e Bancários em Portugal: Diagnóstico e Mudanças nas Relações de Trabalho*. Oeiras: celta.

ANKARLOO, D. e PALERMO, G. 2004. Anti-Williamson: A Marxian critique of New Institutional Economics. *Cambridge Journal of Economics*, vol. 28 (3), pp. 413-29.

APPADURAI, A. 1986. Introduction: commodities and the politics of value. In APPADURAI, A. (Ed.), *The Social Life of Things: Commodities in Cultural Perspective*, pp. 3-63. Nova Iorque: Cambridge University Press.

ARJALIÈS, D. L., GRANT, P., HARDIE, I., MACKENZIE, D. e SVETLOVA, E. 2017. *Chains of Finance: How Investment Management is Shaped*. Oxford: Oxford University Press.

ARRIGHI, G. 1994. *The Long Twentieth Century: Money, Power, and the Origins of Our Time*. Londres: Verso.

ARRIGHI, G. 2009. Postscript to the second edition of *The Long Twentieth Century*. In ARRIGHI, G. *The Long Twentieth Century: Money, Power, and the Origins of Our Time*, pp 371-386. Nova Iorque: Verso.

ASHTON, P. e CHRISTOPHERS, B. 2015. On arbitration, arbitrage and arbitrariness in financial markets and their governance: unpacking LIBOR and the LIBOR scandal. *Economy and Society*, vol. 44 (2), pp. 188-217.

BAGEHOT, W. 1873. *Lombard Street: A Description of the Money Market.* Londres: Henry S. King & Co.

BANCO DE PORTUGAL. 2006. *Relatório de Estabilidade Financeira 2005*. Lisboa: Banco de Portugal.

BARNES, B. 1982. *T. S. Khun and Social Science*. Londres: MacMillan Press.

BARNES, B., BLOOR, D. e HENRY, J. 1996. *Scientific Knowledge: A Sociological Analysis*. Londres: Athlone Press.

BARRY, A. e SLATER, D. 2002. Introduction: the technological economy. *Economy and Society*, Vol. 31 (2), pp. 175-193.

BARRY, A. e THRIFT, N. 2007. Gabriel Tarde: imitation, invention and economy. *Economy and Society*, Vol. 36 (4), pp. 509-525.

BECKER, H. S. 1998. *Tricks of the Trade: How to Think about your Research while Doing It*. Chicago: University of Chicago Press.

BECKER, H. S. 2017. The book that made me: a sociologist. URL: http://www.publicbooks.org/book-made-sociologist/ (acedido em 08.12.2017).

BECKER, H. S., GEER, B., HUGHES, E. C. e STRAUSS, A. 1961. *Boys in White: Student Culture in Medical School*. Chicago: The University of Chicago Press.

BECKERT, J. 2003. Economic sociology and embeddedness: how shall we conceptualize economic action? *Journal of Economic Issues*, vol. XXXVII (3), pp. 769-783.

BEUNZA, D. e STARK, D. 2004. Tools of the trade: the socio-technology of arbitrage in a Wall Street trading room. *Industrial and Corporate Change*, vol. 13, no. 2, pp. 369-400.

BEUNZA, D. e STARK, D. 2012. From dissonance to resonance: cognitive interdependence in quantitative finance. *Economy and Society*, vol. 41, no. 3, pp. 383-417.

BEUNZA, D., HARDIE, I. e MACKENZIE, D. 2006. A price is a social thing: towards a material sociology of arbitrage. *Organization Studies*, vol. 27 (5), pp. 721-745.

BIS (Bank for International Settlements). 1983. *The International Interbank Market: A Descriptive Study*. Available at: http://www.bis.org/publ/econ8.pdf (Accessed: 13 December 2017)

BLACK, F. 1986. Noise. *Journal of Finance*, vol 41 (3), pp. 529-543.

BOLTANSKI, L. 1990. *L'amour et la justice comme compétences. Trois essais de sociologie de l'action*. Paris: Métaillié.

BOSTRÖM, M. e GARSTEN, C. 2008. Organizing for accountability. In BOSTRÖM, M. e C. GARSTEN (Eds.), *Organizing Transnational Accountability*, pp. 1-26. Cheltenham: Edward Elgar Publishing.

BOURDIEU, P. 1997. Le champ économique. *Actes de la recherche en Sciences Sociales*, vol. 99, pp. 48-66.

BOURDIEU, P. 2000. *Les structures sociales de l'économie*. Paris : Seuil.

BOURDIEU, P. e ROSINE, C. 1990. La construction du marché: le champ administratif et la production de la 'politique du logement'. *Actes de la recherche em Sciences Sociales*, vol. 81-82 (L'économie de la maison), pp. 65-85.

BOURDIEU, P., BOLTANSKI, L. e CHAMBOREDON, J. C. 1963. *La banque et sa clientéle: élements pour une sociologie du crédit*. Inédito. Paris: Centre de Sociologie Européene.

BOURDIEU, P., BOUHEDJA, S. e GIVRY, C. 1990. Um contrat sous contraente. *Actes de la recherche em Sciences Sociales*, nº. 81-82 (L'économie de la maison), pp. 34-51.

BOWKER, G. e STAR, S. L. 1999. *Sorting Things Out: Classification and Its Consequences*. Cambridge (MA): MIT Press.

BRUNET F., C. ROBERT e SIGANOS, F. 2004. L'exclusion bancaire et financière. *Recherche sociale*, n°169, pp.4-61.

CAILLÉ, A. 1994. *Don, intérêt et désintéressement*. Paris : La Découverte.

CAILLÉ, A. 2000. *Anthropologie du don*. Paris : Desclée de Brouwer.

CALDER, L. 1999. *Financing the American Dream: A Cultural History of Consumer Credit*. Princeton: Princeton University Press.

ÇALIŞKAN, K. e CALLON, M. 2009. Economization, part 1: shifting attention from the economy towards processes of economization. *Economy and Society*, Vol. 38 (3), pp. 369-398.

ÇALIŞKAN, K. e CALLON, M. 2010. Economization, part 2: a research programme for the study of markets. *Economy and Society*, Vol. 39 (1), pp. 1-32.

CALLON, M. 1998a. Introduction: the embeddedness of economic markets in economics. In CALLON, M. (Ed.), *The Laws of the Markets*, pp. 1-57. Oxford: Blackwell.

CALLON, M. 1998b. An essay on framing and overflowing: economic externalities revisited by sociology. In CALLON, M. (Ed.), *The Laws of the Markets*, pp. 244-269. Oxford: Blackwell.

CALLON, M. 2005. Why virtualism paves the way for political impotence: a reply to Daniel Miller's critique of *The Laws of the Markets*. *Economic Sociology: European Electronic Newsletter*, vol. 6 (2), pp. 3-20.

CALLON, M. 2007a. What does it mean to say that Economics is performative? In MACKENZIE, D., MUNIESA, F. e SIU, L. (Eds.), *Do Economists Make Markets? On the Performativity of Economics*, pp. 311-357. Princeton: Princeton University Press.

CALLON, M. 2007b. An essay on the growing contribution of economic markets to the proliferation of the social. *Theory, Culture & Society*, vol. 24 (7-8), pp. 139-163.

CALLON, M. e MUNIESA, F. 2005. Economic markets as calculative collective devices. *Organization Studies* 26 (8), pp. 1129-1250.

CALLON, M. e RABEHARISOA, V. 2008. The growing engagement of emergent concerned groups in political and economic life: lessons from the French Association of Neuromuscular Disease Patients. *Science, Technology & Human Values*, Vol. 33 (2), pp. 230-261

CALLON, M., MÉADEL, C. e RABEHARISOA, V. 2000. L'économie des qualités. *Politix*, Vol. 13 (52), pp. 211-239.

CALLON, M., MÉADEL, C. e RABEHARISOA, V. 2002. The economy of qualities. *Economy and Society*, vol. 31 (2), pp. 194-217.

CARDÃO-PITO, T. e BAPTISTA, D. 2017. *A Crise Bancária em Portugal*. Lisboa: Actual.

CARRUTHERS, B. e ARIOVICH. 2010. *Money and Credit: A Sociological Approach.* Cambridge: Polity Press.

CARRUTHERS, B. e COHEN, B. 2007. The mechanization of trust: credit rating in 19th century America. Working paper inédito. Northwestern University.

CARRUTHERS, B. e STINCHCOMBE, A. L. 1999. The social structure of liquidity: flexibility, markets, and states. *Theory and Society*, vol. 28 (3), pp. 353-382.

CASTREE, N. 2002. False Antitheses? Marxism, nature and actor-networks. *Antipode*, vol. 34 (1), pp. 111-146.

COCHOY, F., 2007. A brief theory of the 'captation' of publics: understanding the market with Little Red Riding Hood. *Theory, Culture & Society*, vol. 24 (7-8), 203-223.

CUSIN, F. 2002. Les figures du client bancaire moderne et ses relations paradoxales à la banque. Entre confiance, méfiance et défiance. *Sciences de la société*, n°56 (mai), pp. 115-131.

DAVID, P. 1985. Clio and the economics of QWERTY. *The American Economic Review*, vol. 75 (2): 332-337.

DAVID, P. 1997. Path dependence and the quest for historical Economics: one more chorus of the ballad of QWERTY, University of Oxford — Discussion Papers in Economic and Social History. URL: http://www.nuff.ox.ac.uk/economics/history/paper20/david3.pdf. (acedido em 19.12.2017).

DAVID, P. e GREENSTEIN, S. 1990. The economics of compatibility standards: an introduction to recent research. *Economics of Innovation and New Technology*, Vol. 1 (1-2), pp. 3-41.

DE CERTEAU, M. 1984. *The Practice of Everyday Life*. Berkeley: University of California Press.

DE GOEDE, M. 2004. Repoliticizing financial risk. *Economy and Society*, vol. 33 (2), pp. 197-217.

DE GOEDE, M. 2005. Resocialising and repoliticising financial markets. *Economic Sociology: European Electronic Newsletter*, vol. 6 (3), pp. 19-28.

DE LA VEGA, J. [1688] 2009. *Confusión de Confusiones. Dialogos Curiosos entre um Filósofo Agudo, um Mercador Discreto y um Accionista Erudito*. Barcelona: Profit Editorial.

DESROSIÈRES, A. 1993. *La politique des grands nombres: Histoire de la raison statistique*, Paris: La Découverte.

DESROSIÈRES, A. 2001. How real are statistics? Four possible attitudes. *Social Research*, vol. 68 (2), pp. 339-355.

DEVILLE, J. 2014. Paying with plastic: the enduring presence of the credit card. In HAWKINS, J. e MICHAEL, M. (Eds.), *Accumulation: The Material Politics of Plastic*, pp. 87-104. Londres: Routledge.

DEVILLE, J. 2015. *Lived Economies of Default: Consumer Credit, Debt Collection and the Capture of Affect*. Londres: Routledge.

DEVILLE, J. e SEIGWORTH, G. 2015. Everyday debt and credit. *Cultural Studies*, vol. 29 (5-6), pp. 615-629.

DIMAGGIO, P. 1990. Cultural aspects of economic action and organization. In FRIEDLAND, R. e ROBERTSON, A. F. (Eds.), *Beyond the Marketplace: Rethinking Economy and Society*, pp. 113-136. Nova Iorque: Aldine de Gruyter.

DIMAGGIO, P. J. e POWELL, W. W. 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, Vol. 48 (2), pp. 147-160.

DOWNEY, G. e FISHER, M. S. 2006. Introduction: the anthropology of capital and the frontiers of ethnography. In FISHER, M. S. e DOWNEY, G. (Eds.), *Frontiers of Capital: Ethnographic Reflections on the New Economy*, pp. 1-30. Londres: Duke University Press.

DUCOURANT, H. (2012). Comment? Vous n'avez pas de projet? Ethnographie du démarchage en matière de crédit à la consommation. *Sociologie du travail*, vol. 54 (3), pp. 375–390.

DURÃO, S. e LOPES, D. S. 2011. Introduction: Institutions are us? *Social Anthropology*, Vol. 19 (4), pp. 363-377

EMMI (European Money Market Institute). 2014. *Euribor® Code of Conduct*. URL: http://www.emmi-benchmarks.eu/assets/files/Euribor_code_conduct.pdf (acedido em 13.12.2017).

ENGELEN, E., ERTURK, I., FROUD, J., LEAVER, A. e WILLIAMS, K. 2010. Reconceptualizing financial innovation: frame, conjuncture and bricolage. *Economy and Society*, Vol. 39 (1), pp. 33-63.

ESPELAND, W. N. e SAUDER, M. 2007. Rankings and reactivity: how public measures recreate social worlds. American Journal of Sociology, vol. 113 (1), pp. 1-40.

ESPELAND, W. N. e SAUDER, M. 2016. *Engines of Anxiety: Academic Rankings, Reputation, and Accountability*. Nova Iorque: Russel Sage Foundation.

ESPOSITO, E. 2011. *The Future of Futures: The Time of Money in Financing and Society*. Edward Elgar: Cheltenham.

EUREX. 2013. Eurex response to ‘IOSCO consultation report on financial benchmarks. URL: http://www.iosco.org/library/pubdocs/399/pdf/Eurex,%20Frankfurt.pdf (acedido em 13.12.2017).

EUROPEAN COMMISSION. 2012. Consultation document on the regulation of indices. URL: http://ec.europa.eu/internal_market/consultations/docs/2012/benchmarks/consultation-document_en.pdf (acedido em 13.12.2017).

EVANS, D. S. e SCHMALENSEE, R. 2005. *Paying with Plastic: The Digital Revolution in Buying and Borrowing (Second Edition)*. Cambridge (MA): The MIT Press.

FERRARY, M. 2002. Mécanisme de régulation de la structure des qualifications et spécificité du capital humain. Une analyse du capital social des conseillers bancaires. S*ociologie du travail*, vol. 44 (1), pp. 119-130.

FINE, B. 2005. From actor-network theory to political economy. *Capitalism Nature Socialism*, vol. 16 (4), pp. 91-108.

FINE, B. e LAPAVITSAS, C. 2000. Markets and money in social theory. *Economy and Society*, vol. 29 (3), pp. 357-82.

FINE, G. A. (Ed.) 1995. *A Second Chicago School? The Development of a Postwar American Sociology*. Chicago: The University of Chicago Press.

FLIGSTEIN, N. 1996. Markets as politics: a political-cultural approach to market institutions. *American Sociological Review*, vol. 61 (4), pp. 656-673.

FOUCAULT, M. [1966] 1968. *As Palavras e as Coisas: Uma Arqueologia das Ciências Humanas*. Lisboa: Portugália.

FOUCAULT, M. [1978] 2001. La ‘gouvernementalité’. In FOUCAULT, M., *Dits et écrits II. 1976-1988*, pp. 635-657. Paris: Gallimard.

FOUCAULT, M. [1979] 2001. Naissance de la biopolitique. In Foucault, Michel, *Dits et écrits II. 1976-1988*, pp. 818-825. Paris: Gallimard.

FOX, N. J. 2011. Boundary objects, social meanings and the success of new technologies. *Sociology*, vol. 45 (1), pp. 70-85.

GARSTEN, C. e MONTOYA, M. L. 2008. Introduction: examining the politics of transparency. In GARSTEN, C. e MONTOYA, M. L. (Eds.), *Transparency in a New Global Order: Unveiling Organizational Visions*, pp. 1-22. Cheltenham: Edward Elgar Publishing.

GELPI, R. M. e JULIEN-LABRUYÈRE, F. [1994] 2000. *The History of Consumer Credit: Doctrines and Practices*. Basingstoke: Macmillan.

GIDDENS, A. 1990. *The Consequences of Modernity*. Cambridge: Cambridge University Press.

GODBOUT, J. T. 1992. *L'esprit du don*. Paris: La Découverte.

GODBOUT, J. T. 2000. *Le don, la dette e l'identité. Homo donator vs. homo oeconomicus*. Paris : La Découverte.

GODECHOT, O. 2001. *Les traders : essai de sociologie des marchés financiers.* Paris : La Découverte.

GOFFMAN, E. 1961. *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates.* Nova Iorque: Anchor Books.

GOFFMAN, E. 1963. *Behavior in Public Places: Notes on the Social Organization of Gatherings.* Nova Iorque: Free Press.

GOFFMAN, E. 1974. *Frame Analysis: An Essay on the Organization of Experience.* Nova Iorque: Harper & Row.

GORDON, C. 1991. Governmental rationality: an introduction. In BURCHELL, G., GORDON, C. e MILLER, P. (Eds.), *The Foucault Effect: Studies in Governmentality*, pp. 1-51. Chicago: The University of Chicago Press.

GORDON, C. 2015. Governmentality studies observed. Interview with Colin Gordon by Aldo Avellaneda and Guillermo Vega. URL: https://foucaultnews.files.wordpress.com/2015/12/colin-gordon-12-15.pdf (acedido em 02.12.2017).

GRAÇA, J. C. 2005. Afinal, o que é mesmo a Nova Sociologia Económica? *Revista Crítica de Ciências Sociais*, nº 73 (Dezembro), pp. 119-129.

GRAÇA, J. C. e MARQUES, R. 2012. Writing sociology at the beginning of the twenty-first century. *SOCIUS Working Papers Nº 4/2012*. URL: http://pascal.iseg.utl.pt/~socius/publicacoes/wp/WP_3_2012.pdf (acedido em 09.12.2017).

GRAEBER, D. 2011. *Debt—The First 5,000 Years*. Nova Iorque: Melville House.

GRANOVETTER, M. 1985. Economic action and social structure : the problem of embeddedness. *American Journal of Sociology*, vol. 91 (3), pp. 481-510.

GUSEVA, A. 2008. *Into the Red: The Birth of the Credit Card Market in Postcommunist Russia.* Stanford: Stanford University Press.

GUSEVA, A. e RONA-TAS, A. 2001. Uncertainty, risk, and trust: Russian and American credit card markets compared. *American Sociological Review*, vol. 66 (5), pp. 623-646.

HACKING, I. 1990. *The Taming of Chance*. Cambridge: Cambridge University Press.

HANDLER, R. 1985. On having a culture: nationalism and the preservation of Quebec's patrimoine. In STOCKING, G. W (Ed.), *Objects and Others: Essays on Museums and Material Culture*, pp. 192-217. Madison: University of Wisconsin Press.

HARDIE, I. 2012. *Financialization and Government Borrowing Capacity in Emerging Markets*. Londres: Palgrave Macmillan.

HARDIE, I. e MACKENZIE, D. 2007. Assembling an economic actor: the *agencement* of a hedge fund. The Sociological Review, vol. 55 (1), pp. 57-80.

HATHERLY, D., LEUNG, D. e MACKENZIE, D. 2005. The finitist accountant: classifications, rules and the construction of profits. URL: http://www.socsciscotland.ac.uk/__data/assets/pdf_file/0011/3422/The_Finitist_Accountant.pdf (acedido em 02.12.2017).

HENRIKSEN, L. F. 2009. Are financial markets embedded in economics rather than society? A critical review of the performativity thesis. *DIIS Working Paper 2009/10.* URL: https://www.diis.dk/files/media/publications/import/extra/wp2009-10_critical_review_performativity_thesis.pdf (acedido em 27.12.2017).

HIGHMORE, B. 2004. Homework: routine, social aesthetics and the ambiguity of everyday life. *Cultural Studies*, vol. 18 (2-3), 306-327.

HIRSCH, P. M. 1986. From ambushes to golden parachutes: corporate takeovers as an instance of cultural framing and institutional integration. *American Journal of Sociology*, Vol. 91 (4), pp. 800-837.

HO, K. Z. 2009. *Liquidated: An Ethnography of Wall Street*. Durham (NC): Duke University Press.

HOLMES, D. 2009. Economy of words. *Cultural Anthropology*, vol. 24 (3): 381-419.

HOLMES, D. e MARCUS, G. 2006. Fast capitalism: para-ethnography and the rise of the symbolic analyst. In FISHER, M. S. e DOWNEY, G. (Eds.), *Frontiers of Capital: Ethnographic Reflections on the New Economy*, pp. 33-57. Londres: Duke University Press.

HOSKIN, K. 2004. Spacing, timing and the invention of management. *Organization*, vol. 11 (6), pp. 743-757.

HOSKIN, K. e MACVE, R. 2000. Knowing more as knowing less? Alternative histories of cost and management accounting in the US and the UK. *Accounting Historians Journal*, vol. 27 (1), pp. 91-149.

ICE. 2013. Public Comment on Financial Benchmarks (CR01/13 IOSCO consultation report on Financial Benchmarks). URL: http://www.iosco.org/library/pubdocs/399/pdf/ICE%20Futures%20Europe%20-%20ICE%20Clear%20Europe%20Ltd.pdf (acedido em 13.12.2017).

INGOLD, T. 2001. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. Londres: Routledge.

INTERNATIONAL MONETARY FUND. 2006. *Portugal: Financial System Stability Assessment, including Reports on the Observance of Standards and Codes on the following topics: Banking Supervision, Securities Regulation, and Insurance Regulation*. Washington: IMF Country Report No. 06/378. URL: https://www.imf.org/external/pubs/ft/scr/2006/cr06378.pdf (acedido em 02.12.2017).

JAMESON, F. 1997. Culture and finance capital. *Critical Inquiry*, vol. 24 (1), pp. 246-265.

JEACLE, I. e WALSH, E. J. 2002. From moral evaluation to rationalization: accounting and the shifting technologies of credit. *Accounting, Organizations and Society*, vol. 27 (2), pp. 737-761.

JORION, P. 2007. *Vers la crise du capitalisme américain ?* Paris : La Découverte.

JORION, P. 2008. *La crise. Des subprimes au séisme financier planétaire*. Paris: Fayard.

KALTHOFF, H. 2000a. Die Herstellung von Evidenz: Firmenkredite und Risikoanalyse in Mitteleuropa. *Soziale Welt*, vol. 51 (4), pp. 417-442.

KALTHOFF, H. 2000b. The inventory of firms: how banks analyse risk in Central Europe. In KALTHOFF, H., ROTTENBERG, R. e WAGENER, H. J. (Eds.), *Jahrbuch Oekonomie und Gesellschaft*, vol. 16 (*Facts and Figures: Economic Representations and Practices*), pp. 59-85.

KALTHOFF, H. 2005. Practices of calculation: economic representations and risk management. *Theory, Culture & Society*, vol. 22 (2), pp. 69-97.

KALTHOFF, H. 2006. The launch of banking instruments nd the figuration of markets: the case oft he Polish car-trading industry. *Journal for the Theory of Social Behaviour*, vol. 36 (4), pp. 347-368.

KIFF, J. 2012. What is LIBOR? The London Interbank Rate is used widely as a benchmark but has come under fire. *Finance and Development*, vol. 49c(4), pp. 32-33.

KIRTI, D. 2014. What are reference rates for? URL: http://scholar.harvard.edu/dkirti/publications/what-are-reference-rates (acedido em 13.12.2017).

KNIGHTS, D., STURDY, A. e MORGAN, G. 1994. The consumer rules? An examination of the rhetoric and "reality" of marketing in financial services. *European Journal of Marketing*, Vol. 28 (3), pp. 42-54.

KNORR-CETINA, K. 1999. *Epistemic Cultures: How the Sciences Make Knowledge*, Cambridge (MA): Harvard University Press.

KNORR-CETINA, K. e BRUEGGER, U. 2002a. Inhabiting technology: the global lifeform of financial markets. *Current Sociology*, vol. 50 (3), pp. 389-405.

KNORR-CETINA, K. e BRUEGGER, U. 2002b. Global Microstructures: the virtual societies of financial markets. *American Journal of Sociology*, vol. 107 (4), pp. 905-950.

KNORR-CETINA, K. e BRUEGGER, U. 2002c. Traders' engagement with markets: a postsocial relationship. *Theory, Culture & Society*, vol. 19 (5/6), pp. 161-185.

LACAN, L. e LAZARUS, J. (2015). A relationship and a practice: on the French sociology of credit. MaxPo Discussion Paper Nº 15/1. URL: http://www.maxpo.eu/pub/maxpo_dp/maxpodp15-1.pdf (acedido em 19 de Novembro de 2017).

LAFITTE, M. 2005. *La valeur client et ses implications bancaires*. Paris: La Revue Banque.

LAGOA, S., LEÃO, E. e SANTOS, J. 2004. Sistema bancário: evolução recente e seu papel no ajustamento da economia portuguesa. *Perspectiva e Planeamento*, nº 10, pp. 175-230.

LAINS, P. 2011. *História da Caixa Geral de Depósitos 1974-2010. Política Nacional, Banca Pública e Integração Europeia*. Lisboa: Imprensa de Ciências Sociais.

LANCHESTER, J. 2013. Are we having fun yet? *London Review of Books*, vol. 35 (1), pp. 3-8.

LANGLEY, P. 2008 Sub-prime mortgage lending: a cultural economy. *Economy and Society*, vol. 37 (4), pp. 469-494.

LANGLEY, P. 2013. Anticipating uncertainty, reviving risk? On the stress testing of finance in crisis. *Economy and Society*, vol. 42 (1), pp. 51-73.

LANGLEY, P. 2014. Consuming credit. *Consumption Markets & Culture*, vol. 17 (5), pp. 417-428.

LAPAVITSAS, C. 2003. *Social Foundations of Markets, Money and Credit*. Londres: Routledge.

LAPAVITSAS, C. 2007. Information and trust as social aspects of credit. *Economy and Society*, vol. 36 (3): 416-436.

LATOUCHE, S. 1998. *L'autre Afrique. Entre don et marché*. Paris: Albin Michel.

LATOUR, B. 1987. *Science in Action : How to Follow Scientists and Engineers through Society*. Cambridge (MA): Harvard University Press.

LATOUR, B. 2004. Why has critque run out of steam? From matters of fact to matters of concern. *Critical Inquiry*, vol. 30 (2), pp. 225-248.

LAVE, J. 1988. *Cognition in Practice: Mind, Mathematics and Culture in Everyday Life*. Cambridge: Cambridge University Press.

LAW, J. 2002. Economics as interference. In GAY, P. e PRYKE, M. (Eds.), *Cultural Economy: Cultural Analysis and Commercial Life*, pp. 21-38. Londres: Sage.

LAZARUS, J. 2012. *L'épreuve de l'argent. Banques, banquiers, clients*. Paris : Calman-Lévy.

LE GOFF, J. 1956. *Marchands et banquiers du Moyen Âge*. Paris : Presses Universitaires de France.

LEFEBVRE, H. 1981. *Critique de la vie quotidienne III: De la modernité au modernisme (pour une métaphilosophie du quotidien)*. Paris: L'Arche.

LEMERCIER, C. e ZALC, C. (2012). Pour une nouvelle approche de la relation de crédit en histoire contemporaine. *Annales: Histoire, Sciences sociales*, vol. 67 (4), pp. 979–1009.

LÉPINAY, V. A. 2007a. Decoding finance: articulation and liquidity around a trading room. In MACKENZIE, D., MUNIESA, F. e SIU, L. (Eds.), *Do Economists Make*

Markets? On the Performativity of Economics, pp. 87-127. Princeton: Princeton University Press.

LÉPINAY, V. A. 2007b. Economy of the germ: capital, accumulation and vibration. *Economy and Society*, Vol. 36 (4), pp. 526-548.

LÉPINAY, V. A. 2011. *Codes of Finance: Engineering Derivatives in a Global Bank.* Princeton: Princeton University Press.

LEYSHON, A. e THRIFT, N. 1999. Lists come alive: electronic systems of knowledge and the rise of credit-scoring in retail banking. *Economy and Society*, vol. 28 (3), pp. 434-466.

LEYSHON, A. e THRIFT, N. 2007. The capitalization of almost everything: the future of finance and capitalism. *Theory, Culture & Society*, vol. 24 (7-8), pp. 97-115.

LIMA, M. P., GUERREIRO, A., KOLAROVA, M. e LINO, M. (2008). Os quadros na banca portuguesa: processos de inovação, contextos de trabalho e enquadramento sindical. In CABRAL, M. V., WALL, K., ABOIM; S. e SILVA, F. C. (Eds.), *Itinerários: A Investigação nos 25 Anos do ICS*, pp. 539-558. Lisboa: Imprensa de Ciências Sociais.

LOPES, D. S. 2011. Making oneself at home with numbers: Financial reporting from an ethnographic perspective. *Social Anthropology* vol. 19 (4), pp. 463-476.

LOPES, D. S. 2013a. Metamorphoses of credit: pastiche production and the ordering of mass payment behaviour. *Economy and Society*, vol. 42 (1), pp. 26-50.

LOPES, D. S. 2013b. Números em foco: sobre a gestão de risco no sector da banca de retalho. In FARTES, V., CARIA, T. e LOPES, A. (Eds.), *Saber e Formação no Trabalho Profissional Relacional*, pp. 99-116. Salvador: EDUFBA

LOPES, D. S. 2015a. Credit (Re)Connections: finite objects, affiliations and interactivity at two Portuguese retail banks. *Cultural Studies*, vol. 29 (5-6), pp. 827-844.

LOPES, D. S. 2015b. Number Interception: Knowledge, Action and Culture within Financial Risk Management. *Journal of Cultural Economy*, vol. 8 (2), pp. 202-217.

LOPES, D. S. 2017a. Libor and Euribor: From normal banking practice to manipulation to the potential for reform. In ERTURK, I. e GABOR, D. (Eds.), The Routledge Companion to Banking Regulation and Reform, pp. 225-239. Oxon: Routledge

LOPES, D. S. 2017b. "O mercado é nosso amigo, nós é que não sabemos compreendê-lo": o trading financeiro entre o otimismo quantitativo e a descrença. *Interseções: Revista de Estudos Interdisciplinares*, vol. 19 (1), pp. 209-232.

LOPES, D. S. e DURÃO, S. 2011. Ethnography beyond anthropology: potentials and problems. *Social Anthropology*, Vol. 19 (4), pp. 520-527.

LOPES, D. S. e MARQUES, R. 2011. How credit institutions look at society: Economics, sociology and the problem of social reflexivity reconsidered. *European Societies*, vol. 13 (4), pp. 509 - 534

LOPES, D. S., FROIS, C., MINEIRO, J. CARVALHEIRA, R., MOREIRA, R. G. e BENTO, S. 2017. *O Estado por Dentro: Uma Etnografia do Poder e da Administração Pública em Portugal*. Lisboa: Fundação Francisco Manuel dos Santos.

LOUNSBURY, M. e HIRSCH, P. M. (Eds.) 2010. *Markets on Trial: The Economic Sociology of the US Financial Crisis*. Bingley: Emerald.

LUHMANN, N. [1997] 2012. *Theory of Society, Vol. 1*. Stanford: Stanford University Press.

MACKENZIE, D. 2001. Physics and finance: S-terms and modern finance as a topic for science studies. *Science, Technology, and Human Values*, Vol. 26 (2), pp. 115-144.

MACKENZIE, D. 2003. An equation and its worlds: bricolage, exemplars, disunity and performativity in financial economics. *Social Studies of Science*, Vol. 33 (6), pp. 831-868.

MACKENZIE, D. 2004a. Models of markets: Finance theory and the historical sociology of arbitrage. *Revue d'histoire des sciences*, vol. 57 (2), pp. 407-431.

MACKENZIE, D. 2004b. The Big, Bad Wolf and the Rational Market: Portfolio Insurance, the 1987 Crash and the Performativity of Economics. *Economy and Society*, vol. 33 (3), pp. 303-334.

MACKENZIE, D. 2006a. Is economics performative? Option theory and the construction of derivatives markets. Journal of the History of Economic Thought, vol. 28 (1), pp. 29-55.

MACKENZIE, D. 2006b. *An Engine, Not a Camera: How Financial Models Shape Markets.* Cambridge (MA): MIT Press.

MACKENZIE, D. 2008. Producing Accounts: Finitism, Technology and Rule Following. In M. Mazzotti (Ed.), *Knowledge as Social Order: Rethinking the Sociology of Barry Barnes*, pp. 99-117. Aldershot: Ashgate.

MACKENZIE, D. 2011a. The credit crisis as a problem in the sociology of knowledge. *American Journal of Sociology*, vol. 116 (6), pp. 1778-1841.

MACKENZIE, D. 2011b. Evaluation cultures? On invoking 'culture' in the analysis of behaviour in financial markets. URL: http://www.sps.ed.ac.uk/__data/assets/pdf_file/0007/64564/EvalCults11.pdf (acedido em 02.12.2017).

MACKENZIE, D., BEUNZA, D., MILLO, Y. e PARDO-GUERRA, J. P. 2012. Drilling through the Allegheny mountains: liquidity, materiality and high frequency trading. *Journal of Cultural Economy*, vol. 5 (3), pp. 279-296.

MACKENZIE, D., MUNIESA, F. e SIU, L. 2007. Introduction. In MACKENZIE, D., MUNIESA, F. e SIU, L. (Eds.), *Do Economists Make Markets? On the Performativity of Economics*, pp. 1-19. Princeton: Princeton University Press.

MANNING, R. D. 2000. *Credit Card Nation: The Consequences of America's Addition to Credit*. Nova Iorque: Basic Books.

MARQUES, R. 2003. Introdução: os trilhos da Nova Sociologia Económica. In PEIXOTO, J. e R. MARQUES (Eds.), *A Nova Sociologia Económica*, pp. 1-67. Oeiras: Celta.

MARRON, D. 2007. 'Lending by numbers': credit scoring and the constitution of risk within American consumer credit. *Economy and Society*, vol. 36 (1), pp. 103-133.

MARRON, D. 2009. *Consumer Credit in the United States: A Sociological Perspective from the 19th Century to the Present*. Nova Iorque: Palgrave Macmillan.

MARSTON, R. 2015. Libor rates could be exchanged for a Mars bar, court hears. URL: http://www.bbc.com/news/business-33448210 (acedido em 19.12.2017).

MARX, K. 1867. *Das Kapital. Kritik der politischen Oekonomie. Erstes Buch: Der Produktionsprozess des Kapitals*. Hamburgo: Otto Meissner Verlag.

MARX, K. 1883. *Das Kapital. Kritik der politischen Oekonomie. Zweites Buch: Der Zirkulationsprozess des Kapitals*. Hamburgo: Otto Meissner Verlag.

MARX, K. 1894. *Das Kapital. Kritik der politischen Oekonomie. Drittes Buch: Der Gesamteprozess der kapitalistischen Produktion*. Hamburgo: Otto Meissner Verlag.

MASCIANDARO, D. e QUINTYN, M. 2013. Financial supervision as economic policy: importance, key facts and drivers. *Paolo Baffi Centre Research Paper Series*, 2013-139. URL: http://dx.doi.org/10.2139/ssrn.2319852 (acedido em 18.12.2017).

MASSUMI, B. 2002. *Navigating Moments*. URL: http://www.brianmassumi.com/interviews/NAVIGATING%20MOVEMENTS.pdf (acedido em 19.12.2017).

MAURER, B. 2005. *Mutual Life, Limited: Islamic Banking, Alternative Currencies, Lateral Reason*. Princeton: Princeton University Press.

MAURER, B. 2008 Resocializing finance? Or dressing it in mufti? Calculating alternatives for cultural economies. *Journal of Cultural Economy*, vol. 1 (1), pp. 65-78.

MAURER, B. 2012. Late to the party: debt and data. *Social Anthropology*, vol. 20 (4), pp. 474-481.

MAURER, B. 2013. David Graeber's Wunderkammer, Debt: The First 5000 Years. *Anthropological Forum*, vol. 23 (1), pp. 79-93.

MAUSS, M. 1923-24. Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques. *Année sociologique*, série 2, tome 1, pp. 34-186.

MCFALL, L. 2009. Devices and desires: how useful is the 'new' new economic sociology for understanding market attachments? *Sociology Compass*, vol. 3 (2), pp. 267-282.

MCFALL, L. 2015. *Devising Consumption : Cultural Economies of Insurance, Credit and Spending*. Routledge: Nova Iorque.

MCNAB, H. e WINN, A. 2000. *Principles and Practices of Consumer Credit Risk Management*. Canterbury (Kent): Financial World Publishing.

MERTON, R. 1948. The self-fulfilling prophecy. *The Antioch Review*, vol. 8 (2), pp. 193-210.

MEYER, J. W. e ROWAN, B. 1977. Institutionalized organizations: formal structure as myth and ceremony. *American Journal of Sociology*, Vol. 83 (2), pp. 340-367.

MILLER, D. 1987. *Material Culture and Mass Consumption*. Oxford: Basil Blackwell.

MILLER, D. 2005. Materiality: an introduction. In MILLER, D. (Ed.), *Materiality*, pp. 1-50. Durham: Duke University Press.

MILLER, P. 2001. Governing by numbers: why calculative practices matter. *Social Research*, vol. 68 (2), pp. 379-396.

MILLER, P. e ROSE, N. 1990. Governing economic life. *Economy and Society*, vol. 19 (1), pp. 1-31.

MITCHELL-INNES, A. 1913. What is money? *The Banking Law Journal* (May), 337-408.

MOLLENKAMP, C. 2008. Libor fog: bankers cast doubt on key rate amid crisis. *The Wall Street Journal*, 16 April. URL: http://www.wsj.com/articles/SB120831164167818299 (acedido em 13.12.2017).

MONEY WEEK. 2008. LIBOR: the world's most important number. URL: http://moneyweek.com/libor-the-worlds-most-important-number-13816/ (acedido em 13.12.2017).

MOOR, L. e LURY, C. 2011. Making and measuring value: comparison, singularity and agency in brand valuation practice. *Journal of Cultural Economy*, vol. 4 (4), pp. 439-454.

MOSELEY, F. (Ed.). 2005. *Marx's Theory of Money: Modern Appraisals*. Basingstoke: Palgrave Macmillan.

MUNIESA, F. 2003. *Des marchés comme algorithmes: sociologie de la cotation électronique à la Bourse de Paris*. Thèse de doctorat, Paris : École nationale supérieure des mines / Centre de sociologie de l'innovation.

MUNIESA, F. 2011. Is a stock exchange a computer solution? Explicitness, algorithms and the Arizona Stock Exchange. *International Journal of Actor-Network Theory and Technological Innovation*, vol. 3 (1), pp. 1-15.

NAFUS, D. e ANDERSON, K. 2009. Writing on walls : the materiality of social memory in corporate research'. In CEFKIN, M. (Ed.), *Ethnography and the Corporate Encounter: Reflections on Research in and of Corporations*, pp. 137-157. Nova Iorque: Berghahn.

NAROTZKY, S. 2006. Binding labour and capital: moral obligation and forms of regulation in a regional economy. *Etnográfica*, vol. X (2), pp. 337-354

NORRIS, F. 2012. The myth of fixing the Libor. *New York Times*, 28 September, B1. URL: http://www.nytimes.com/2012/09/28/business/the-myth-of-fixing-the-libor-high-low-finance.html?_r=2&ref=business& (acedido em 19.12.2017).

NUNES, J. A. 2003. The uncertain and the unruly: complexity and singularity in biomedicine and public health. *Oficina do CES* 184, Universidade de Coimbra (Working Paper. URL: http://www.ces.uc.pt/publicacoes/oficina/184/184.pdf (acedido em 19.12.2017).

OJO, M. 2014. LIBOR, EURIBOR, and the regulation of capital markets: a review of the Efficient Market Hypothesis. *Strategic Change: Briefings in Entrepreneurial Finance*, 23, pp. 119-124.

ORR, J. E. 1996. *Talking About Machines: An Ethnography of a Modern Job*. Ithaca (NY): Cornell University Press.

OSSANDÓN, J. 2014. Sowing Consumers in the Garden of Mass Retailing in Chile. *Consumption Markets & Culture*, vol. 17 (5), pp. 429 - 447.

PEEBLES, G. 2008. Inverting the panopticum: money and the nationalization of the future. *Public Culture*, vol. 20 (2), pp. 233-265.

PENTLAND, B. T. 1993. Getting comfortable with the numbers: Auditing and the micro-production of macro-order. *Accounting, Organizations and Society*, vol. 18 (7-8), pp. 605-620.

PINA-CABRAL, J. 2013. The two faces of mutuality: contemporary themes in anthropology. *Anthropological Quarterly*, 86 (1), pp. 257-275.

POLANYI, K. [1944] 2001. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press.

POON, M. 2009. From New Deal institutions to capital markets: commercial consumer risk scores and the making of subprime mortgage finance. *Accounting, Organizations and Society*, vol. 34 (5), pp. 654-674.

PORTER, T. 1995. *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*. Princeton: Princeton University Press.

POWER, M. 1996. Making things auditable. *Accounting, Organizations and Society*, vol. 21 (2-3), pp. 289-315.

POWER, M. 2005 Enterprise risk management and the organization of uncertainty in financial institutions. In, KNORR-CETINA, K. e PREDA, A. (Eds.), *The Sociology of Financial Markets*, pp. 250-268. Oxford: Oxford University Press.

POWER, M. 2005 Enterprise risk management and the organization of uncertainty in financial institutions. In CETINA, K. K. e PREDA, A. (Eds.), *The Sociology of Financial Markets*, pp. 250-268. Oxford: Oxford University Press.

PREDA, A. 2002. Financial knowledge, documents and the structures of financial activities. *Journal of Contemporary Ethnography* 31 (2), pp. 207-239.

PRYKE, M. e DU GAY, P. 2007. Take an issue: cultural economy and finance. *Economy and Society*, vol. 36, (3), pp. 339-354.

RAMMERT, W. 2008. Where the action is: Distributed agency between humans, machines, and programs. In SEIFERT, U., KIM, J. H. e MOORE, A. (Eds.), *Paradoxes of Interactivity: Perspectives for Media Theory, Human-computer Interaction, and Artistic Investigations*, pp. 62-91. Bielefeld: Transcript.

RAUTERBERG, G. e VERSTEIN, A. 2013. Index theory: the law, promise and failure of financial indices. *The Yale Journal on Regulation*, 30, pp. 1-61.

RAWLS, A. W. 2008. Harold Garfinkel, ethnomethodology and workplace studies. *Organization studies*, Vol. 29 (5), pp. 701-732.

RAYMOND, N. e VISWANATHA, A. 2014. US regulator sues 16 banks for rigging Libor rate. URLt: http://www.reuters.com/article/2014/03/14/us-fdic-libor-idUSBREA2D1KR20140314 (acedido em 13.12.2017).

REITH, G. 2004. Uncertain times: the notion of 'risk' and the development of modernity. *Time & Society*, Vol. 13 (2/3), pp. 383-402.

RIDLEY, K. e JONES, H. 2012. A Greek banker spills on the early days of the Libor and his first deal with the Shah of Iran. URL: http://www.businessinsider.com/history-of-the-libor-rate-2012-8 (acedido em 13.12.2017).

RILES, A. 2006. Real time: unwinding technocratic and anthropological knowledge. In FISHER, M. S. e DOWNEY, G. (Eds.), *Frontiers of Capital: Ethnographic Reflections on the New Economy*, pp. 86-107. Londres: Duke University press.

RITZER, G., 1995. *Expressing America: A Critique of the Global Credit Card Society*. Thousand Oaks: Pine Forge Press.

RODRIGUES, J.; SANTOS, A. C. e TELES, N. 2016. Semi-peripheral financialisation: the case of Portugal. *Review of International Political Economy*, vol. 23 (3), pp. 480-510.

RONA-TAS, A. e HISS, S. 2008. Consumer and corporate credit ratings and the subprime crisis in the U.S. with some lessons for Germany. Disponível em: http://pages.ucsd.edu/~aronatas/The%20Subprime%20Crisis%202008%2010%2004.pdf (Acesso 20 de Novembro de 2017).

ROSE, N. 1996. The death of the social? Refiguring the territory of government. *Economy and Society*, vol. 25 (3), pp. 327-356.

ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought*. Cambridge: Cambridge University Press.

ROTHSTEIN, H., HUBER, M. e GASKELL, G. 2006. A theory of risk colonization: the spiralling regulatory logics of societal and institutional risk. *Economy and Society*, Vol. 35 (1), pp. 91-112.

SANTOS, A. C. 2017. Cultivating the self-reliant and responsible individual: the material culture of financial literacy. *New Political Economy*, vol. 22 (4), pp. 410-422.

SANTOS, A. C. e COSTA, V. 2013. Regular o consumidor? Novas tendências de política no setor financeiro. *Análise Social*, vol. XLVIII (4), pp. 756-790.

SIMMEL, G. [1907] 2004. *The Philosophy of Money*. Third enlarged edition. Londres: Routledge.

SIMON, J. MILLO, Y., KELLARD, N. e ENGEL, O. 2017. Close communications: hedge funds, brokers and the emergence of herding. *British Journal of Management*, vol. 28 (1), pp. 84-101.

SLATER, D. (2002b). From calculation to alienation: disentangling economic abstractions. *Economy and Society* Vol. 31 (2), pp. 234–249.

SLATER, D. 2002a. Markets, materiality and the 'new economy'. In METCALFE, S. e WARDE, A. (Eds.), *Market Relations and the Competitive Process*, pp. 95-113. Manchester: Manchester University Press.

SNIDER, C. A. e YOULE, T. 2010. Does the LIBOR reflect bank's borrowing costs? URL: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1569603 (acedido em 13.12.2017).

SNIDER, C. A. e YOULE, T. 2012. The fix is in: detecting portfolio driven manipulation of the LIBOR. URL: http://www.dartmouth.edu/~tyoule/documents/main_paper_2%281%29.pdf (acedido em 13.12.2017).

STAR, S. L. 1999. The ethnography of infrastructure. *American Behavioral Scientist*, Vol. 43 (3), pp. 377-391.

STOFFAËS, C. [1987] 1991. *A Crise da Economia Mundial*. Lisboa: Dom Quixote.

STOXX. 2012. STOXX Ltd. response to public consultation by the European Commission on the regulation of indices. URL: http://ec.europa.eu/internal_market/consultations/2012/benchmarks/registered-organisations/stoxx_en.pdf (acedido em 13.12.2017).

STRAUSS, A. L. 1971. *Professions, Work, and Careers*. São Francisco: Sociology Press.

STRAUSS, A. L. 1987. *Qualitative Analysis for Social Scientists*. Nova Iorque: Cambridge University Press.

STRAUSS, A. L. 1993. *Continual Permutations of Action*. Nova Iorque: Aldine de Gruyter.

STRAUSS, A. L. e CORBIN, J. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage Publications.

STRAUSS, A. L., FAGERBAUGH, S., SUCZEK, B. e WIENER, C. 1985. *Social Organization of Medical Work*. Chicago e Londres: The University of Chicago Press.

STURDY, A. e KNIGHTS, D. 1996. The subjectivity of segmentation and the segmentation of subjectivity. In PALMER, G. e CLEGG, S. (Eds.), *Constituting Management: Markets, Meanings, and Identities*, pp. 73-96. Berlim: De Gruyter.

SWEDBERG, R. 1997. New economic sociology: what has been accomplished, what is ahead?. *Acta Sociologica*, vol. 40 (2), pp. 161-182.

SWEDBERG, R. 2011. The economic sociologies of Pierre Bourdieu. *Cultural Sociology*, vol. 5 (1), pp. 67-82.

TARDE, G. [1898] 1999. *Les lois sociales: esquisse d'une sociologie*. Le Plessis-Robinson: Synthélabo.

TARDE, G. 1902. *Psychologie économique*. Paris: Felix Alcan.

TETT, G. 2007. Libor's value is called into question. *Financial Times*, 25 September. URL: http://www.ft.com/cms/s/0/8c7dd45e-6b9c-11dc-863b-0000779fd2ac.html#axzz3QECI8aIw (acedido em 13.12.2015).

TETT, G. 2009. *Fool's Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe*. Londres: Little, Brown.

THE ECONOMIST. 2012 The LIBOR scandal: the rotten heart of finance. July 7th, URL: http://www.economist.com/node/21558281 (acedido em 13.12.2017).

THÉVENOT, L. 2001. Organized complexity: Conventions of coordination and the composition of economic arrangement. *European Journal of Social Theory*, vol. 4 (4), pp. 405-425.

THOMPSON, G. 2011. Sources of financial sociability: networks, ecological systems or diligent risk preparedness? *Journal of Cultural Economy*, vol. 4 (4), pp. 405-421.

THOMPSON, S. 2012. The micro-ethics of everyday life: ethics, ideology and anti-consumerism. *Cultural Studies*, vol. 26 (6), 895-921.

THRIFT, N. 2006. Re-inventing invention: new tendencies in capitalist commodification. *Economy and Society*, vol. 35 (2), pp. 279-306.

TOURYALAI, H. 2012 Banks rigged Libor to inflate adjustable-rate mortgages: lawsuit. URL: http://www.forbes.com/sites/halahtouryalai/2012/10/15/banks-rigged-libor-to-inflate-adjustable-rate-mortgages-lawsuit/ (acedido em 13.12.2017).

UZZI, B. 1999. Embeddedness in the making of financial capital: how social relations and networks benefit firms seeking financing. *American Sociological Review*, vol. 64 (4), pp. 481–505.

UZZI, B. e GILLESPIE, J. 2002. Knowledge spillover in corporate financing networks: embeddedness and the firm's debt performance. *Strategic Management Journal*, vol. 23 (7), pp. 595–618.

VALÉRIO, N., NUNES, A. B., BASTIEN, C., SOUSA, R. M. e COSTA, S. D. 2010. *História do Sistema Bancário Português*: *Da Assunção pelo Banco de Portugal das Funções de Banco Central à União Monetária Europeia, (1831-1998)*, vol. II. Lisboa: Banco de Portugal.

VARGHA, Z. 2011. From long-term savings to instant mortgages: financial demonstration and the role of interaction in markets. *Organization*, vol. 18 (2), pp. 215-235

WAGNER, R. 1975. *The Invention of Culture*. Englewood Cliffs, NJ: Prentice Hall.

WEBER, M. [1894] 2004. *A Bolsa*. Lisboa: Relógio d'Água.

WESTBROOK, D. 2010. *Out of Crisis: Rethinking Our Financial Markets*. Boulder: Paradigm.

WILLIAMS, B. 2004. *Debt for Sale: A Social History of the Credit Trap*. Filadélfia: University of Pennsylvania Press.

WISSLER, A. 1989. Les jugements dans l'octroi du crédit. In BOLTANSKI, L. e THÉVENOT, L. (Eds.), *Justesse et justice dans le travail*, pp. 67-119. CEE-PUF, Paris.

YOUTUBE. 2013. CFTC Public Roundtable to Discuss IOSCO Consultation Report on Financial Benchmarks. URL: https://www.youtube.com/watch?v=duUODyMdnsE (acedido em 13.12.2017).

ZACHARY, M. D. 2009. The Belgian mortgage market in a European Perspective. *Economic Review* (National Bank of Belgium), III, pp. 93-108. URL: https://www.nbb.be/doc/ts/publications/economicreview/2009/revecoiii2009e_h5.pdf (acedido em 13.12.2017).

ZALOOM, C. 2003. Ambiguous numbers: trading technologies and interpretation in financial markets. *American Ethnologist*, vol. 30 (2), pp. 258-272.

ZALOOM, C. 2004. The productive life of risk. *Cultural Anthropology*, vol. 19 (3), pp. 365-391.

ZALOOM, C. 2006. *Out of the Pits: Traders and Technology from Chicago to London*, Chicago: The University of Chicago Press.

ZELIZER, V. 1988. Beyond the polemics on the market: establishing a theoretical and empirical agenda. *Sociological Forum*, vol. 3 (4), pp. 614-634

ZELIZER, V. 1989. The social meaning of money: "special monies". *The American Journal of Sociology*, vol. 95 (2), pp. 342-377.

ZELIZER, V. 2005. *The Purchase of Intimacy*. Princeton: Princeton University Press.