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Charles H. J. REUTER*

> *"If one tries to transgress the borderlines of national cultures, one piece of intellectual luggage, that has to be left at home, is the division of labor among social sciences as it has been developed in Europe and North America in the past hundred years [...] Psychology, social psychology, sociology, anthropology, economics and political sciences, all study only facets of the same social reality. Academic inbreeding and atomization in the West have led to extensive production of irrelevant speculations. The system has become self destructive in that it punishes rather than encourages borrowing from related disciplines. Cross-cultural social sciences, therefore, can not be, but cross-disciplinary".*
>
> *Hofstede (1994: ix)*

* ESCP Europe (Finance), Université de Paris Ouest (CEROS), Correspondence: henri.reuter@gmail.com

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1. Introduction[1]

Despite the seemingly recent appeal of cultural concepts in financial research, it is gaining a large audience. The studies by Stulz and Williamson (2003)*** and by Grinblatt and Keloharju (2001)***, relating culture to investors' protection, and to stockholding, respectively, are now largely acknowledged by the financial community[2]. Citing classical works by Greif, Lal, Landes, North, and even Max Weber – Stulz and Williamson (2003: 314, references therein)*** emphasize their general belief that culture is highly important for the effective study of financial phenomena. Ramirez and Tadesse (2007: 8)*++ note the growing importance of references to "national culture indices", and Hofstede, in the financial and economic literatures. Some authors go even further. De Jong and Semenov (2002: 2)* suggest that a specific "cultural view" should be developed, in part to compete with the *law and finance* approach, which has blossomed since La Porta, *et al.* (1997, 1998). Breuer and Quinten (2009)* suggest the establishment of "Cultural Finance" as an autonomous discipline. Simultaneously, "cultural biases" have been posited by academics of Behavioral

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1. Methodological note. Our article rests on a research protocol based on the systematic analysis of the financial literature, and cross-referencing from adjacent disciplines. So we propose an indexation of all the relevant material. We are indebted to one of our reviewers for this advice, which simplifies reading. Details on the method relating to the *main screenings* (of financial research-literature *stricto sensu*), the *double review process* (extensive review of *dimensionalist* advances in finance), and the identification of relevant material, are provided in section 2.2.

*** Identified through our *main screenings* (eighteen articles).

* Identified through the *double review process* (24 additions). ++ is a marking for articles, where at least one of the co-authors has an established track record, in any of the journals screened as part of the main screenings (the J.C.R. list).

*++ It results that *++ stands for articles from the financial community *lato sensu.*

° Obtained through the initial screenings and analyzed separately due to the more limited relevance.

ΔΔΔ References to 'foundational' articles for *dimensionalism.*

ΔΔ References to seminal critiques for *dimensionalism.*

2. Google-scholar's citation index is at 408 citations for Stulz and Williamson and 381 for Grinblatt and Keloharju. The citation index on the EBSCO database stands respectively at 56 [102 on Science Direct] and 77 (2010, March 16th).

Finance as early as 1999 (Shiller, 1999: 1), and those ideas are currently being more closely considered (Statman, 2007, 2008). Yet, in finance, neither any review, nor any consistent cultural framework, has been proposed to date.

In this article, cultural research is surveyed within the field of finance, through a research-protocol based upon the screening of peer-reviewed journals in finance (section 2.2 for details and precedents). The survey utilizes the list of journals included in the *Journal of Citation Report* [J.C.R.], for the computation of "impact factors", now extensively used in the academic profession. The time frame is a long-term horizon. It is dependent upon the database used: ISI-Web-of Knowledge provides access to the list of the journals followed by the J.C.R. and goes back to 1945 for some journals. The primary purpose of the survey has been to answer the following two questions:

Q1. Can one or more accepted theoretical background(s) be characterized for cultural research in finance, in order to derive testable hypotheses for empirical research?

Q2. Can 'culture and finance' be delimitated as a research-area within finance?

Through this process, an important commonality among articles can be characterized: the articles mostly focus on cross-national comparisons. Investigating, collectively, a broad range of financial topics, the articles assign observed differences in financial phenomena to "national cultures". However, a strong polarization is exemplified in the articles obtained through the screening: a few approaches rely on "national-culture-indices" (*dimensionalism*, definitions and references in section 3.1 and appendices 1 & 2), while the other approaches do not, and, taken together, they provide indefinite and inconsistent views on "national cultures" and "culture" more generally.

Dimensionalist approaches can be traced back to Hofstede (1980)[ΔΔΔ]. They are based on value-statements collected from individuals, in a large-scale survey. These value-statements are averaged by country, and a factorial analysis provides four principal components, which characterize four quantitative, and time-invariant, *cultural characteristics*, for each country.

Other approaches, which are identified through the screening process, generally provide no definition of culture at all, but do only in a very few cases. These studies, that do, generally use the concept of "culture" in combination with a number of institutional characteristics, by country, to provide an explanation for the observed polarization of the financial data at national levels. In a few cases, these *non-dimensionalist* articles empirically, or conceptually, assimilate culture with other concepts, such as: *institutions*, *religions*, "societal trust" ("social capital"), *language* and "worldviews".

Overall, this polarization observed between the *dimensionalist* approach and other approaches, seem to reflect varying research paths in adjacent disciplines – in particular, in management or economics. It is shown below that the only framework, currently identifiable in finance, is *dimensionalist*. Yet, the emergence of the *dimensionalist framework* in finance is happening while, in adjacent disciplines, considerable debate is taking place about its prospects. Therefore, it is argued that the current mobilization of such a framework, in financial research, must be qualified.

So, the answers to the two questions, *i.e*. Q1 and Q2 presented above, appear negative: firstly, there is no ready-to-use research-framework for empirical cultural research in finance. Secondly, *culture and finance* cannot be considered as a research-area, yet. However, it is expected that cultural research will soon be constituted into a research-area in finance, for at least three reasons: interest within the discipline is identifiably strong; the number of financial topics concerned is very large; and the normative stakes are high.

A primary purpose of this article is to facilitate this emergence, by providing a preliminary *cultural map* to financial scholars. This map is established on the varying conceptualizations of culture that emerge directly from the *research-field*, which are traced and rooted into existing knowledge that is derived from adjacent disciplines.

Organization of the *Survey*

Although this section should start with a definition of culture, it does not. The reasons why, are explained in section 2, which presents the methodology, database obtained (sixty *hits*, eighteen articles for the *main screenings*) and some key facts that guide the *Survey*.

Sections 3 and 4 are dedicated to the review of the literature *per se*, as have been built up from the *main screenings*, as well as from *the* *double review process*. The review is split into two parts, to reflect the polarization in cultural approaches. Each part is structured by topics of interest, focusing on the results obtained by each article, and their relation to culture.

We deal first with the *dimensionalist* framework (section 3), and we begin by briefly introducing thirty years of management scholarship in and around that approach (section 3.1). To provide a synthetic, and comprehensive view, on the progress of *dimensionalism* in finance, we complete the *main screenings* by an extended review. This extension increases our database from five to twenty-four articles, and preserves the nature our key points, and further refines them (sections 3.2.)

Section 4 is concerned with non-*dimensionalist* articles. In a first sub-part, seven articles are reviewed, in which culture emerges as a indefinite and inconsistent concept, while much confusion is observed about the distinction between institutions and culture (section 4.1). Then, three research-articles with original approaches to culture are considered, including in particular approaches to: *trust*, *religion*, *world-views* and *ethnicity* (section 4.2). In section 4.3, we reflect on the initial sixty *hits* obtained in the survey, and we comment on three additional articles that either reflect some of the *hits*, or follow *cultural traditions* that are more common in other social sciences.

In section 5 we provide a synthesis, moving beyond the literature review obtained through the screening. We propose an interpretation of the facts emerging from this *grounded* investigation of the use of "culture" in financial research, and answer the two research questions, Q1 and Q2, proposed above.

In section 5.1 we shed light on debates, and/or controversies surrounding *dimensionalism* in management. Provided this background, we reflect on the current emergence and the potential positioning of *dimensionalism* for financial research (section 5.2). Next, we delve into the association, and/or the confusion, between cultural and institutional mechanisms. This sets some of stakes for cultural research in finance (section 5.3). In section 5.4, we pursue conceptions of culture not based on "national cultures", mentioning how they are central, and growing, in many disciplines. Incidentally, we delve into the rapidly expanding area of economic sociology, concerned with "financial culture(s)". Last we shed further light upon conceptions of culture as "cognitive layers", because they restore richness and variety in cultural definitions, as has emerged from the survey, and is further detailed in appendix 1.

In section 6 we conclude by advocating a pragmatic and syncretic approach for cultural research in finance. Our proposition is based on the idea of *backward definitions* and on a careful and considered cross-disciplinary scholarship (as with Hofstede's quote in exergue).

2. Background, stakes and methodology

2.1. Defining culture?

2.1.1. Culture-definitions: definitional tactics

Schematically four main categories of meaning can be retained for culture, only one of them being of interest here: the *sociological* meaning[3]. It broadly refers to values, norms or beliefs, shared by some human group, reflecting its specificity. Precise definitions abound, and it is customary to point to the seminal book by Kroeber and Kluckhohn (1952), listing 251 definitions and statements about culture. In appendix 1, an illustration is provided about the variety in definitions, as derived from definitions obtained from the authors cited in this *Survey*.

Reuter (2010) emphasizes how the understanding of "culture" is dependent upon a defined geographical or historical area. It is suggested that "*definitional tactics*" are an underlying issue when defining culture: the definitions of culture retained by specific actors, in specific communities, at specific times, reflect who actors are, how communities interface, and the epistemological, political or social posture of these actors, rather than providing definitional content, *per se*. As a preliminary illustration, the next sections focus on how the cultural definitions recently proposed in economics[4], are resting upon fundamental intellectual and epistemological postures.

3. The three "residual" categories are culture as in "agriculture" or "cell culture", "culture as general knowledge" or "education" and "culture as art'.

4. We choose economics – as a meaningful illustration about the variance in definitions – because of the close historical association between finance and economics (Brennan, 1995).

2.1.2. Recent definitions of culture in economics: illustrating epistemological stakes

Three recent contributions about "*culture and economics*", including two books, attest of the timeliness (Throsby, 2001; Guiso, *et al.*, 2007; De Jong, 2009$^{\Delta\Delta\Delta}$) of the interest for this concept in economics. The culture-conceptualizations retained by these scholars reflect the difficulty in agreeing on a definition and underlying intellectual orientations.

Guiso, *et al.*, focus on the idea of temporal stability to identify cultural elements (see their definition in appendix 1). Doing so, they echo a conception expressed earlier by Williamson (2000), who defines culture as one of the elements of the more general "institutions of embededdness", elements that are resulting in lasting constraints on the economy: they operate "on the order of centuries or millennia" (Williamson, 2000: p. 596[5]).

Relating to a second definition of "culture in economics", Throsby characterizes culture as a process, delineated by the specificity of some human group vis-à-vis other groups (appendix 1). So, he retains a conceptualization akin to those in the North-American Sociology (Cuche, 2004). With his conceptualization, he allows for fluidity and change, elements that are, by definition, excluded with Guiso, *et al.*, or Williamson. Process-wise, instead of focusing on *durability* to identify cultural elements, Throsby focuses on cross-sectional homogeneity. Behavior is important here, as well as meaning. Both can be observed, and their relative homogeneity (within a group) and heterogeneity (across groups) lead to the identification of a "culture".

Now, concerning the third definition, De Jong (2009)$^{\Delta\Delta\Delta}$ retains a motivational aspect, through the concept of "values". He follows the path chosen in cross-cultural psychology (as in the *dimensionalist*

5. Williamson suggests three references to explore further what these "*institutions of embededdness*" comprise: DiMaggio (1994, "*culture*"), Granovetter (2006, "*networks*") and Smelser and Swedberg (1994, "*embededdness*"). Interestingly relating to this latter concept, Smelser and Swedberg remark that "*the concept of embededdness remains in need of greater theoretical specification*" and they suggest that instead of providing an overall definition to start with, empirical investigation should focus on four "*specific and separate sources of embededdness*" directly: "*cognitive, cultural, structural and political sources*".

approach, see section 3.1)[6]. In this sense, cultures are enduring, as in the first definition.

Yet another important distinction emerges, between "constraining" and "enabling" views. DiMaggio (1994, 1997) reminds us how the cognitive aspects of culture provide ground for "*enabling*" views on culture: culture not only constrains, but structures and fosters behaviors, communication, decision-making, etc. DiMaggio emphasizes how this distinction is central in the epistemological structuring of scientific disciplines and in the choice of methodologies[7]. In fact, he concludes that economics itself can be seen as a "c*ultural system*" (1994: p. 46 and 47), a point that has been recently transposed to finance with considerable force (MacKenzie and Millo, 2003, published a seminal article, espousing what is becoming known as the *Social Studies of Finance*).

Larry Summers (1985: p. 1)° can be quoted to illustrate the point: "*the fields of economics and finance are allied. Indeed finance is sometimes defined as a subfield of economics [...] yet we are increasingly witnessing the development of* two cultures *[emphasis added]*". Larry Summers' statement may seem anecdotic, because it is not clear whether it assimilates finance into something that could be described as a "*cultural system*". Yet, it provides ground for more than just familiarity, or knowledge of the financial field and theory. The distinction with "*economic culture*" suggests some form of relative coherence that

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6. Still another classic distinction contrasts conscious (symbols, discourses) *vs*. unconscious aspects of culture. It is an important distinction in the social sciences literature, as the popular and pervasive "*iceberg conception*" of culture attests.

7. DiMaggio calls attention to the dichotomy between enabling and constraining views of culture. He notes a "*rough analytic distinction between forms of culture that are characteristically constitutive (categories, scripts, conceptions of agency, notions of techniques) and forms that are predominantly regulatory (norms, values, routines)*". Then he underlines that most economists are in the second category (emphasizing regulatory aspects), treating "*economic behavior as analytically distinct from culture, and stress[ing] the ways in which norms and conventions constrain the individual's [...] pursuit of self-interest*", while most anthropologists are in the first category (enabling views).

This distinction is emphasized in conclusion to the book's introductory chapter, on defining culture (De Jong, 2009[ΔΔΔ]: introduction).

We illustrate further this distinction enabling / constraining with an *ad-hoc* example with "cultural affinity hypothesis" in section 4.3.

distinguishes the two sub-fields in theory and in practice. This coherence excludes anecdotic views. In fact, this statement may seem anecdotic precisely because of epistemological postures. The idea of a coherent whole, guiding and structuring behaviors, is an "*enabling*" view of culture, so that the idea of a financial culture may seem straightforward to a sociologist, while it is less clear and apparently anecdotic for a "constraining" view of culture, as in economics. These issues are further explored in sections 4.2, 4.3 and 5.4.[8]

So, provided the complexity and stakes involved in a definition of "*culture*", the primary purpose of this article is to identify which views of culture are currently emerging in finance. So, rather than providing an upfront definition, it is hoped that it emerges from the field, and it is expected that this process will, in itself, be informative in many ways. So, a systematic and scientific process has been established to do so; and it is this process that is described next.

2.2. Screening and identification process

2.2.1. Choosing journals

As the purpose has been to favor a grounded emergence of cultural definitions from the discipline, the social boundaries have been identified and used, in turn, to identify the financial discipline: peer-reviewed journals of a certain prominence are rested upon, *i.e.* those followed by the *Journal of Citation Report* (JCR). The JCR is a Thomson-Reuter product, part of the ISI-Web of Science database, that produces and publicizes the "*impact factors*", now largely used in evaluating scholars and institutions. The database provides a category

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8. In their account of the reticence of the economic field, Guiso, *et al.*, emphasize "*in the last fifty years, most economists have been reluctant to rely on culture as a possible explanatory variable*" (introduction). They attend to this lack of past interest, putting some of the blame on the "*inevitable grittiness*" of cultural variables, hardly reconcilable with "*the parsimony of deductive models*", their "*formal elegance*", the priority for "*logical consistency over empirical relevance*" and the methodological needs for "*designing testable hypothesis*" characterizing the economic field. Similar commentaries can be found in De Jong[ΔΔΔ] (chapter 1 and 2). Together with DiMaggio's *Culture and the Economy*, they set the epistemological context to whether or not culture variables should be considered or not in finance.

labeled "*Finance and Accounting*" containing 52 journals, which need to be untangled.

Discriminating between the accounting and financial disciplines is essential. In accounting, the interest in cultural approaches is strong, with an established history. It is characterized by a plurality of accepted cultural frameworks, and debates and controversies among varying streams of research. Besides, the sheer volume of references that the screening would uncover in accounting-reviews forbids the mere possibility of reviewing the literature in this article. Last, provided the strong differentiation between the two disciplines, the suggested process aiming at letting definitions emerge from the *field* would become ambivalent.

To resolve this issue, the JCR's "Finance and Accounting" category is crosschecked against available national rankings, that then provide the required distinction. Those categories available for Germany (by VHB), France (by CNRS) and the U.K. (by ABS) are used pragmatically, because they all provide this distinction between accounting and finance[9]. Overall, 23 journals were identified for the financial research community *stricto sensu* (table 1). As a robustness check, and to account for potential "regional biases" (Charreaux and Schatt, 2006), at a later stage, the screening was extended to financial journals that are mentioned in all these three national rankings *simultaneously*, while they were not included in the J.C.R. list. This extension provided only one additional article, and attests to the robustness of the screening-process.

*2.2.2. Time-line and identification (*main screenings*)*

No specific timeline is set, because the survey mainly utilizes the EBSCO-database to manually screen selected journals; thus, the timeline depends on the number of years included in EBSCO, for each journal. The *Journal of Finance* is included since 1946, so 1946 is the *de facto* starting point for the screening of the *Journal of Finance*. This is incidentally the longest time-period for all financial journals in the list surveyed. Table 1 provides the number of articles screened for each journal (see, third column).

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9. Conveniently, Pr. Harzing provides a centralized source, including these three rankings just mentioned, as well as many others. See http://www.harzing.com/jql.htm.

Table 1. – List of journals and results of the screenings

Name	ISSN	Number of screened articles	Included in the JCR list?	Rankings [5]				Articles left out				Other layers: details					(A) Articles left out (total)	(B) Articles retained	(A+B) Total number of hits
				Impact factor 2008	Germany (Vhb08)	France (Cnrs07)	U.K. (ABS08)	Not an article [1]	Anecdotic use [2]	"Cultural affinity"	Other 'layers' (a+b+c+d+e)	a-technical, professional…	b-corporate	c-ethnic, societal[3]…	d-education [4]	e-arts & leisure			
Applied Mathematical Finance	1350-486X	259	no		C	4	2												
European Financial Management	1354-7798	492	yes	0.8							2	2					2		2
European Journal of Finance	1351-847X	436	no		C	4	3												
Finance and Stochastic	0949-2984	335	yes	1.2															
Financial Analysts Journal	0015-198X	4051	yes	0.8				2	4		4	1	1			2	10	1	11
Financial Management	0046-3892	902	yes	0.9														1	1
Financial Markets, Institutions & Instruments	0963-8008	152	no		C	3	3												
Financial Review	0732-8516	544	no		C	3	3												
Geneva Risk and Insurance Review [6]	1554-964X	42	yes	0.6															
International Journal of finance and Economics	1076-9307	384	yes	0.6					1								1		1
Journal of Banking and Finance	0378-4266	3213	yes	1.0				1	2								3	5	8
Journal of Business Finance and Accounting	0306-686X	2227	yes	0.7				1	1		1				1		3	1	4
Journal of Corporate Finance	0929-1199	349	yes	1.7															
Journal of Derivatives	1074-1240	324	no		B	3	2												
Journal of Empirical Finance	0927-5398	341	no		C	3	3											1	1
Journal of Finance	0022-1082	8253	yes	4.0				2	1		2	1	1				5	3	8
Journal of Financial and Quantitative Analysis	0022-1090	2160	yes	1.2															
Journal of Financial Economics	0304-405X	1910	yes	3.5														3	3
Journal of Financial Intermediation	1042-9573	274	yes	0.8															
Journal of Financial Markets	1386-4181	860	yes	0.6															
Journal of Financial Research	0270-2592	983	no		C	3	3												
Journal of Financial Services Research	0920-8550	660	no		C	3	2			2							2		2
Journal of Fixed Income	1059-8596	377	no		B	3	1												
Journal of Futures Markets	0270-7314	1466	yes	0.6							1	1					1		1
Journal of International Money and Finance	0261-5606	825	yes	0.9															
Journal of Money Credit and Banking	0022-2879	2858	yes	1.4				2									2		2
Journal of Portfolio Management	0095-4918	2059	yes	0.3					2		2			1		1	4	1	5
Journal of Real Estate Finance and Economics	0895-5638	805	yes	0.4					1	1	1					1	3		3
Journal of Risk and Insurance	0022-4367	3363	yes	0.9				3			1	1					4	1	5
Mathematical Finance	0960-1627	341	yes	1.2															
Quantitative Finance	1469-7688	625	yes	0.9															
Review of Derivatives Research	1380-6645	340	no		A	3	2												
Review of Finance [7]	1572-3097	149	no		A	2	3												
Review of Financial Studies	0893-9454	961	yes	2.6														1	1
Review of Quantitative Finance and Accounting	0924-865X	684	no		B	3	3		1		1			1			2		2
TOTAL								11	13	3	15	6	2	2	1	4	42	18	60

This includes the extended list of journals followed by the Journal of Citation Report plus those followed by the three national rankings simultaneously (in Germany, France and the U.K.- details in the fourth column). Rankings are provided accordingly, and if an impact factor is available, national rankings are omitted (JCR-list journals are generally followed in the three national rankings).

Classifications. Relating to the re-categorization of the JCR journals into accounting and finance separately, few journals were ambiguously classified (25%). The general criterion to classify a journal as "financial" is that at least 2 of the 3 national rankings use this label while the third one does NOT use the "accounting label". So potential ambiguity is to be derived from confusion with other disciplines than between finance and accounting: some rankings differentiate other sub-fields such as insurance, real estate or tax from either finance or accounting. All rankings differentiate finance from management, economics or psychology. The observed ambiguity in our re-classification involves either "macro-economy", or "insurance", or "general management". All journals mentioned here, in the national rankings, are followed simultaneously in the three rankings, and are classified as "financial" three times.

Notes. 1: discussion, book review, conference announcement. 2: criteria are: a very low occurrence combined with the fact that cultural variables are not used in the empirical analysis. 3: in these articles, the reference to societal culture is significant, but it is not related to the study of a financial subject. 4: this is pertaining to a prolonged debate (3à's, 40's...) on accountants' training and whether it should focus on cultural or technical contents. 5: the impact factor or the national rankings if the journal is not followed by the J.C.R.. 6: formerly Geneva Papers on Risk and Insurance Theory. 7: formerly European Finance

The process follows a procedure used elsewhere; for instance, in strategic management (Wiltbank, *et al.*, 2006 for a recent example), or in finance (Charreaux and Schatt, 2006). The process rests on the screening of abstracts, or titles, of articles, based on some key words. Words such as 'culture', 'cultures', 'cultural' (shortened "cultur*") have been searched for, specifically. This screening results in the iden-

Table 2. – General Database as resulting from the *main screenings*

Authors	Year	Journal	Classification	Section	Sub-topic	Definition	Occurrences of "cultur*"	Cross-national focus?	Dimensionalist reference?
Aggarwal & Goodell***	2009	JBF	Financial macro-structures	3.2.2	Bank *vs.* market systems	no	17	yes	yes
Alessandrini, Calgagnini & Zazzaro***	2008	JBF	International financial flows	4.1.2	M&As	no	15	rel.	no
Chui, Titman & Wei***	2010	JF	Stock market functioning	3.3.3	Momentum profits	yes	76	yes	yes
Conn & *alii****	2005	JBFA	International financial flows	3.1.1	M&As	yes	24	yes	yes
Focarelli & Pozzolo***	2008	JBF	International financial flows	4.1.1	M&As	no	6	yes	no
Gande & Parsley***	2003	JFE	International financial flows	4.1.1	Spillovers in the sovereign debt market	no	6	yes	no
Gleason, McNulty & Pennathur***	2005	JBF	International financial flows	4.1.1 4.1.2	M&As	no	10	rel.	no
Grinblatt & Keloharju***	2001	JF	Investment	4.2.2	Investing: stockholding	no	29	rel.	no
Grinold, Rudd & Stefek*** +	1989	JPM	Investment	4.2.2	Institutional investment in international context	no	1	yes	no
Hilary & Hui***	2009	JFE	Corporate finance policies	4.3.3	Corporate investment, growth, returns	no	17	no	no
Mian***	2006	JF	International financial flows	4.1.1	Corporate lending in foreign countries	no	27	rel.	no
O'Bar & Conley*** +	1992	FAJ	Investment	4.3.3	Institutional investment management	yes	14	no	no
Outreville***	2008	JRI	International financial flows	3.1.1	M&As	yes	27	yes	yes
Rosati & Secola***	2006	JBF	International financial flows	4.1.1	Interbank payment flows	no	6	yes	no
Sarkissian & Schill***	2004	RFS	International financial flows	4.1.1	Overseas listing	no	11	yes	no
Schmeling**	2009	JEF	Stock market functioning	3.3.3	Stock returns and sentiment	yes	17	yes	yes
Stonehill & *alii**** +	1975	FM	Corporate finance policies	4.2.2	Financial policy	no	3	yes	no
Stulz & Williamson***	2003	JFE	Financial macro-structures	4.1.1	Legal infrastructure	yes	75	yes	no

Marking. + these three articles have either a very low occurrence of "cultur*" (in two cases), or a very specific approach (in all three cases), and their inclusion in the database is subject to a special discussion (section 4.4). Stars indicate results from the *main screenings*, with three stars (***) indicating results from screenings of the JCR-journal-list, and two stars (**) indicating the additional result obtained from the screenings of national journals. The protocol followed for the *main screenings* is outlined in section 2.2.2 on the next page.

tification of a number of other related words that could be used for further screening, such as 'religion', 'trust' or 'language'.

However, we restrict ourselves to "cultur*" here for two reasons; first, because additional words should be subjected to preliminary discussions, and, second, because we precisely wish to let these connections emerge from the process[10].

This process results in the identification of sixty *hits*, of which 11 are not research-articles, 13 articles can be considered as having an anecdotic use of "cultur*", 3 articles refer to the "cultural affinity hypothesis" (section 4.3.1), and 15 articles use specific expressions that are not related to the core meaning of culture understood in this research, such as pop-culture, corporate culture, technical cultures, and in particular "*financial cultures*" (sections 4.3.– and 5.4). Table 1 provides details on this process. The result is eighteen articles (including the specific result from the *regional* screening), which are presented in table 2, with some details.

2.2.3. The double review process

As the *dimensionalist* framework emerges as the only consistent framework spanning several articles in the database, a "*double review process*" is undertaken, completing the systematic screening with an *ad hoc* survey of *dimensionalism* in finance, which is based on the systematic exploitation of cross-citations (received, made) within the 5 *dimensionalist* articles initially obtained, and in any article subsequently identified. Eventually, the base of *dimensionalist* articles is extended from 5 to 29 references[11]. They are detailed in table 3, and

10. An indicative subsequent screening was carried out on related words, as a robustness test. We note that there seem to be few additional informative hits. Note that screening on trust is impeded by ambiguity (investment trust, trust fund, etc.).

11. Overall we have here in the extended *dimensionalist* survey 29 articles, among those 5 were obtained from the initial screening***. Importantly, for each of the 4 financial areas mentioned above, but "*corporate finance policies*", we have one, or two articles obtained from initial systematic screening. This means that extending the review to all *dimensionalist* articles that we can find in finance deepens the scope without modifying the key messages. It can be noted that among the additional 22 articles*, 9 were published in related disciplines so that we have 13 working papers. Besides we conducted a screening on the background of the authors featured in these additions. They mostly belong to financial faculties. In 13 cases (in 22), at least one

presented with the review of *dimensionalism* in finance just before section 3.2.

With this "*double review process*", the intention is to propose a complete picture of the *dimensionalist* framework in finance – its coverage, its results and its relative successes. This should be helpful in two ways. For researchers specifically interested in *dimensionalism*, this provides a more comprehensive picture of the empirical coverage and strengths. For researchers who are more critical about the approach, this provides a contrast between articles that made their way into peer-reviewed journals in finance, and other articles, either published in related disciplines, or not (yet) published.

2.3. Classification, trends and first results

Below, a figure is provided, detailing the number of total *hits* and the number of articles retained through the screening process. This confirms the sharp increase in interest for cultural research among financial scholars. Yet, if specific and detailed investigation is recent, it is noted that anecdotic references to culture have been common for quite some time.

The base of eighteen articles is categorized in a number of ways.

Firstly, a check is made as to whether the article is empirical, descriptive, conceptual or theoretical. All articles eventually included, here, are empirical.

Secondly, a check is made as to whether the focus is cross-national. It is, in about 90% of the cases. In other cases, it is related to cross-national comparisons in three articles[12]. Only two articles are not related to this dominant "national approach" framework, and these two articles investigate "investment behaviors"; one article has a specifically local focus (on local U.S communities: *counties*), while the other investigates alternative "*cultural views*" (section 3.3).

co-author can be connected to some other publication in the JCR-financial journals list, so that we would consider the author as part of to the social community of financial researchers. Last we note that a screening, within the JCR journal list, based on "Hofstede" or any of his 4 main indices, did not yield further matches.

12. Including: a comparison of investors from Finnish vs. Swedish origin in Finland, a comparison of the nationality of foreign banks in Pakistan as understood as Asian vs. non-Asian, and a comparison of regional civic cultures in Italy.

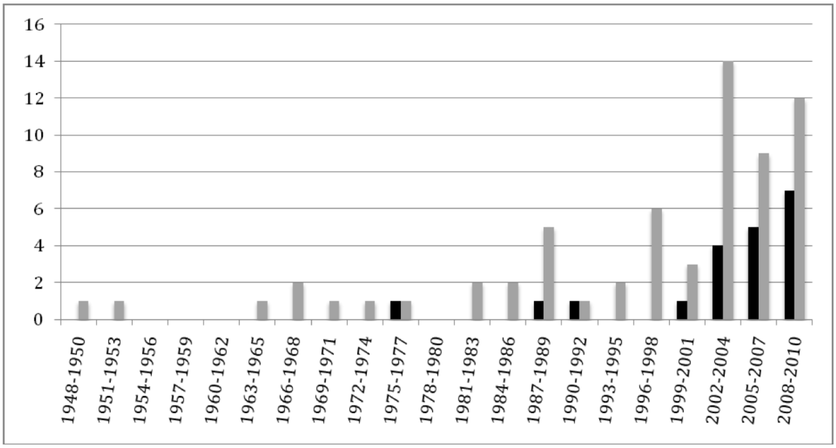

Figure 1. – Identified articles: trends

Peer-reviewed finance articles with a reference to "culture" in title or abstract (grey bars) and peer-reviewed articles with a non-anecdotic reference to culture (black bars). The scale represents the number of articles: respective 60 hits and 18 articles included in the database.

Thirdly, broad topic of interest for each article is identified, and they are classified into 4 categories[13]. The following labels are proposed: "*corporate finance policies*" (financing, investment, debt maturity...), "*financial flows across nations*" (debt, equity, mergers and acquisitions [M&As], foreign direct investments [FDIs], the "*home bias*"...), "*financial macro-structures*" (governance, stock market *vs.* banking infrastructures, legal or accounting infrastructure, development of pensions or life insurance...), "*stock market functioning*" (institutional investment, momentum on markets, stock-market volatility...). The range of topics covered here is extremely large, and it could be questioned, just how financial research could spare the concept of culture, provided that such a large scope of interests is emerging from this process.

Fourthly, a precise definition of culture is searched for, and the question is asked as to whether a definition is provided at all.

13. This classification aims at facilitating our review and some of the articles either span across two categories or could be analyzed from different angles so they can be considered as ambiguously classified.

Occurrences of "cultur*" are counted, references to the *dimensionalist* literature are identified, and the context in which "cultur*" appears and is used, and how it is operationalized (what proxies), are noted. A check is made as to whether it is part of typical expressions. Figure 2 provides an overview on the relation between cultural approaches (*dimensionalist* or not) and the provision of cultural definitions. It underlines a stark contrast and accounts for the structure of the review.

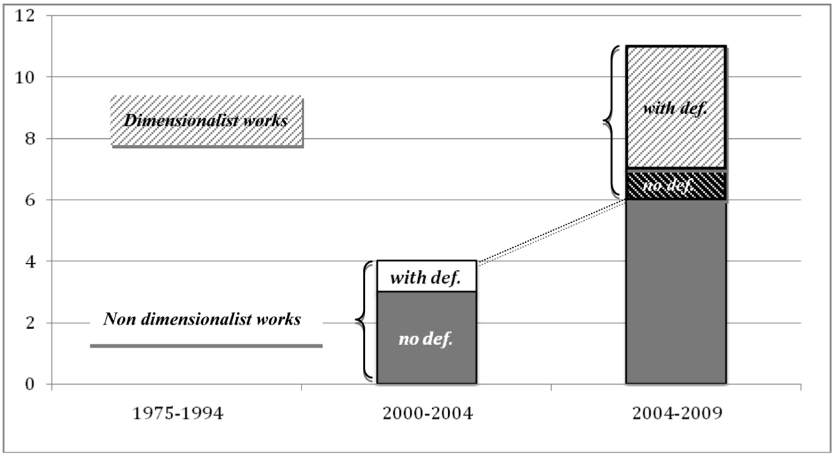

Figure 2. –

Identified articles: theoretical frameworks and culture definitions

Only one non-dimensionalist article has a definition- while only one dimensionalist article has no definition.
This database includes the 15 articles covered in the body of our reviews, in sections 3.2, 4.1, 4.2 and 4.3
The scale represents the absolute number of articles

3. *DIMENSIONALIST* APPROACHES AND *DIMENSIONALIST* SUCCESSES

This section starts with an outline of the *dimensionalist* approach, which will be as short as possible, provided the breadth of research to cover (section 3.1). Then, a review is made of the *dimensionalist* results (section 3.2), considering, in succession, the four broad areas of research mentioned earlier: "*financial flows across nations*" (7 articles), "*financial macro-structures*" (8), "*stock market functioning*" (7), "*corporate finance policies*" (7).

3.1. Some background on the *dimensionalist* approach

3.1.1. The label

The label *dimensionalism* is proposed in a book edited by Vinken, *et al.* (2004$^{\Delta\Delta\Delta}$: chapter 1). This book compiles contributions, at the occasion of a gathering of "well-known *dimensionalist* researchers", in Holland, in 2004 (including in particular: Hofstede, Inglehart, Schwartz, or still Triandis).

Dimensionalism is defined as aiming at "finding the ultimate, most frugal, and yet most meaningful basic set of axes, with which to explain the broad range of attitudes, beliefs, life styles and the diversity of practices among large populations and/or organizations across societies" (Vinken, *et al.*, 2004$^{\Delta\Delta\Delta}$: p.8).

The main focus is on cross-national comparisons and the main tool is the development of numerical scales, to distinguish nations' cultures, based on synthetic and abstract "dimensions", the *national cultural indices*.

3.1.2. Main sources and indices

The *dimensionalist* large-scale surveys that were mainly identified in the screening, are those of Hofstede (2001$^{\Delta\Delta\Delta}$: the revised edition includes references to meta-studies and critiques), and Schwartz (1994)$^{\Delta\Delta\Delta}$[14]: within our extended database of 29 *dimensionalist* articles, Hofstede's indices are used in 24 cases (twice in combination with Schwartz's); Schwartz's indices are used in 6 cases (three times in combination, twice with Hofstede and once with GLOBE); two articles use another reference (GLOBE, in combination, Smith, *et al.*).

The tentative measurement of national culture, with indices, can be traced back to Hofstede (1980)$^{\Delta\Delta\Delta}$. He used the results of a large-scale

14. Other sources that follow comparable objectives include the World-Value Survey (coordinated by Inglehart$^{\Delta\Delta\Delta}$. see http://www.worldvaluessurvey.org/. for sources and publications), Smith, *et al.* (1996) $^{\Delta\Delta(\Delta)}$, Smith, *et al.* (2002)$^{\Delta\Delta(\Delta)}$ the GLOBE project (coordinated by House, *et al.*, 1999). Relating to the latter, Globe project, there was a prolonged controversy between Hofstede and the main Globe proponents (section 5.1), so that, if GLOBE's epistemological posture, methods chosen, and results, show similarities with *dimensionalism*, the inclusion in *dimensionalism* is strongly debated. Two of these measures (Globe / Smith, *et al.*) are used, once each, in our database of 29 articles.

survey of IBM employees, in the 70's, to identify differences between countries. He collected a large number of statements on the value-orientation of IBM employees. He averaged them by country, conducting a factorial analysis on the aggregate scores, still by country. He identified 4 dimensions on which cross-national differences were clustered. He labeled them "individualism / collectivism" (strong *vs*. loose ties between individuals in a society), "power distance" (acceptance of inequality generated by differences in power), "uncertainty avoidance" (a normative assessment of uncertain situations), and "masculinity / feminity" (gender roles and relative importance of self-assertiveness and success *vs*. harmony in society). More precise definitions are provided in appendix 2.

Building on Hofstede, Schwartz proposed a complementary approach, theoretically-grounded[15] and oriented by three polarizations: "mastery-harmony", "egalitarianism-hierarchy" and "conservatism-autonomy" (appendix 2 for a definition).

A comparison of Schwartz's indices with those of Hofstede and Inglehart is available in Schwartz (2004)$^{\Delta\Delta\Delta}$, and an empirical assessment of pair wise correlations between Hofstede's and Schwartz's indices is available in Schwartz (1994$^{\Delta\Delta\Delta}$: p. 109). De Jong (2009$^{\Delta\Delta\Delta}$: appendix 1: p. 197-206) provides a more general overview of most national culture and/or *dimensionalist* indices, including those by Hofstede, Schwartz, the GLOBE consortium, Trompenaars and the World Value Survey.

3.1.3. Cultural distance

It is important to mention a specific operationalization, called "cultural distance". This approach aggregates the four original national

15. He proposed value-frameworks based on social theories rather than obtaining them from a factorial analysis *ad-hoc*. In particular, his frameworks were extensively tested *ex ante*, accounting for the role of languages and differentiating between value sets based on individual or collective behaviors (table 7.1 p. 89 in Schwartz, 1994)$^{\Delta\Delta\Delta}$: to illustrate: an individual can't be both prone toward humility and strong power differentiation, in the values he endorses, for his own personal choices and life. However, it is possible at the societal level. Due to role differentiation, a given society can foster both the pursuit of humility while encouraging strong power differentiation (it is in fact common in Asia). For details see Smith and Schwartz (1997)$^{\Delta\Delta\Delta}$ among other articles.

culture indices, from Hofstede, into one value. Specifically it sums up squared differences across all four cultural indices, which results in one score for each pair of countries[16]. The approach was initially proposed by Kogut and Singh (1988)$^{\Delta\Delta\Delta}$. This cultural distance measure has been extensively used in management, and Siegel, *et al.*, (2008) provide, for instance, a detailed review on the use of this measure in relation to the determinants of FDIs. More recent operationalizations sum up squared differences, using Schwartz's, or, still, other indices. The measure is implemented in five articles in this database; based four times on Hofstede, and once on Schwartz.

3.1.4. Antecedents and disciplinary path

Triandis (2004)$^{\Delta\Delta\Delta}$ provides an account on how Hofstede's intellectual heritage influenced psychologists at the turn of the 90's, and gave ground to the rise of a new discipline, known today as: "cross-cultural psychology".

Scholarly antecedents are ancient in human sciences. Hofstede (2001)$^{\Delta\Delta\Delta}$ provides an extensive outline of these, in his first chapter, tracing them back to post-war influences by Kluckhohn, *et al.*, or Rokeach (references therein). It is important to note that the key underlying mechanisms are *values*, through its motivational grip on individual and collective behaviors (Hofstede, 2001$^{\Delta\Delta\Delta}$: p. 11; Oyserman, 2002). De Jong, 2009$^{\Delta\Delta\Delta}$ re-emphasizes how other cultural dimensions, such as *rituals*, *heroes* and *symbols*, all rest essentially on the same core dimension: that of values. Hence the emphasis on measuring values as expressed by individuals, to aggregate them "within the boundaries of defined social groups", which has generally meant countries. Breuer and Quinten (2009: table 1, p.5)[*] provide an outline on the varying cultural models that preceded, and followed, that of Hofstede.

No further elaboration is made here, but multiple alternatives to *values* are available, in order to investigate cultures[17].

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16. Aggarwal, *et al.* (2009)[*] propose recently a different operationalization retaining the absolute value of the difference for *each* of Hofstede's 4 measures separately, plus the usual *cultural distance* measure.

17. See in particular Vinken, *et al.*, 2004$^{\Delta\Delta\Delta}$: chapter 1 on EMIC *vs.* ETIC approaches and on "particularist" and "post-modernist" views of culture; Earley and Singh, 1995$^{\Delta\Delta}$ or d'Iribarne, 1997$^{\Delta\Delta}$ on anthropological and hybrid approaches; Earley,

The relative success of Hofstede's research has been uneven across disciplines. Baskerville (2003)$^{\Delta\Delta}$ shows how it was much more successful in management related disciplines (particularly in general management, International Business, organization studies, marketing or communication) than in economics, sociology or anthropology. So the relative success must be tackled, discipline-by-discipline. Recently Kirkman, *et al.* (2006)$^{\Delta\Delta\Delta}$ provide a meta-study of all research incorporating Hofstede's dimensions in management. Ramirez and Tadesse (2007: appendix)$^{*++}$ provide a review and a table including cross-references to Hofstede in management, operational research and economics/finance; they confirm Baskerville$^{\Delta\Delta}$'s suggestions, above, and highlight that cross-referencing into economics/finance is very recent, if peaking at all.

3.2. Empirical successes for dimensionalism in finance

3.2.1. Financial flows across nations and international investment

In this section, we focus on financial flows across borders including debt (bonds, sovereign bonds) and equity (portfolio management, M&As, FDIs), and we include the study of the "*home bias*". Five articles, in seven, use Hofstede's indices, and five articles use the *cultural distance* approach, corresponding to all our articles using the cultural distance approach, but one.

The general reasoning is straightforward, cultural distance between two nations hinders financial flows between them. Two articles apply this reasoning to flows of debt and then to flows of equity: the higher the distance, the lower the flow (Aggarwal, *et al.*, 2009^{*++} using all Hofstede's indices separately and summed up; Siegel, *et al.*, 2006^{*++} using *egalitarian distance*, a measure derived from Schwartz). Relatedly, Beugelsdijk and Frijns (2009)$^{*++}$ note that the home bias is higher in foreign countries, with a higher cultural distance relative to the home country. The reasoning is applied to flows of M&As in two articles. Distance, as measured by *egalitarian distance*, has a negative

2006$^{\Delta\Delta}$ for a focus on meaning and behavior rather than values. This should be reminiscent about the debates ongoing in economics and the variance found in definitions as illustrated in section 2.1

Table 3. – Dimensionalist database resulting from the *main screenings* and then the *double review*

Authors	Details: Date	Details: Source	Dim. Approach: Hofstede	Dim. Approach: Schwartz	Dim. Approach: Cultural distance	Dim. Approach: Other approach	Hofstede's indices: Masculinity / F	Hofstede's indices: Individualism	Hofstede's indices: Unc. avoidance	Hofstede's indices: Power distance	Classification	Topics	Other cultural: Distance	Other cultural: Religion	Other cultural: Language	Other cultural: Other	Economic env.: Main indicators	Economic env.: Macro-econ. env.	Economic env.: Openness	Economic env.: Taxation	Law: Legal (general)	Law: Legal (financial)	Political env.: Corporate gov.	Political env.: Country risk	Political env.: Political env.	Political env.: Social stability & …
Aggarwal & Goodell*⁺⁺	2008	JMFM	x						x		Stock market functioning	Equity premium					x	x	x		x		x	x		
Aggarwal & Goodell***	2009	JBF	x						x		Financial macro-structures	National financial macro-structure					x	x	x	x	x	x			x	
Aggarwal, Kearney & Lucey*⁺⁺	2009	WP	x		x		x	x	x	x	Financial flows across nations	Flows of debt, equity in aggregate	x	x	x		x				x	x	x		x	
Anderson & alii*	2007	WP	x				x	x	x		Financial flows across nations	Stock-holding [home bias + diversification]	x		x		x		x	x			x			
Beugelsdijk & Frijns*⁺⁺	2009	WP	x		x						Financial flows across nations	Stock-holding [home bias]	x		x		x	x	x	x	x		x			
Breuer & Salzmann*⁺⁺	2008	WP		x							Financial macro-structures	Governance systems					x	x	x		x		x		x	
Desender, Castro & Escamilla*	2011	AJES	x	x			x	x			Corporate finance policies	Earnings Management [in agg.]					x				x	x	x			
Chang & Nourbakhsh*	2007	WP	x		x		x		x		Corporate finance policies	Cash Holding [in agg.]						x			x	x				
Chui & Kwok*⁺⁺	2008	JIBS	x				x	x	x	x	Financial macro-structures	Life-insurance holdings [in agg.]		x			x	x			x	x			x	
Chui, Lloyd & Kwok*⁺⁺	2002	JIBS		x							Corporate finance policies	Capital Structure [in agg.]														
Chui, Titman & Wei***	2010	JF	x					x			Stock market functioning	Momentum profits [in agg.]				x					x	x	x			
Clement, Rees & Swanson*	2003	JAAF	x					x			Stock market functioning	Market analysis									x					
Conn & alii ***	2005	JBFA	x		x						Financial flows across nations	M&As														
De Jong*	2002	WP	x				x		x	x	Financial macro-structures	Inflation and independence					x	x	x						x	
De Jong & Semenov*	2002	WP	x				x	x	x	x	Stock market functioning	Stock-Market Development				x						x				x
De Jong & Semenov*	2006	IJBGE	x				x	x	x	x	Financial macro-structures	Ownership patterns				x						x				
Fidrmuc & Jacob*⁺⁺	2008	WP	x					x	x	x	Corporate finance policies	Dividend policies [in agg.]									x	x				
Gleason, Mathur & Mathur*⁺⁺	2000	JBR	x			1					Corporate finance policies	Capital Structure														
Huang*	2009	JDE	x						x		Financial macro-structures	Growth in opaque industries		x										x		x
Kimbro*	2002	JAAF	x					x		x	Stock market functioning	Accounting standards & corruption					x				x		x	x	x	
Kwok & Tadesse*⁺⁺	2006	JIBS	x						x		Financial macro-structures	Financial architecture		x		x	x	x	x		x	x	x		x	
Licht, Goldsmidt & Schwartz*⁺⁺	2005	IRLE	x	x					x	x	Stock market functioning	Investors' protection		x		x	x				x					
Outreville***	2008	JRI				2					Financial flows across nations	FDIs					x							x	x	
Pirouz*	2004	WP	x					x		x	Stock market functioning	Stock market volatility							x							
Ramirez & Tadesse*⁺⁺	2007	WP	x						x		Corporate finance policies	Cash holdings					x	x			x			x	x	
Schmeling**	2009	JEF	x						x		Stock market functioning	Cross sectional stock returns & sentiment														
Shao, Kwok & Guedhami*⁺⁺	2008	WP		x		3					Corporate finance policies	Dividend policies [in agg.]								x		x	x			
Siegel, Licht & Schwartz*⁺⁺	2006	WP		x	x						Financial flows across nations	Flows of debt, equity, M&As					x				x	x				
Weber, Shenkar & Raveh*	1996	MS	x				x	x	x	x	Financial flows across nations	M&As														

Markings: *** for the 4 articles resulting from the *main screenings* and overlapping with the main database. ** for the regional article. * for the articles obtained through the *double review* process (dimensionalist articles). Details on both processes in section II.2.2. ⁺⁺ is a marking for articles, where at least one of the co-authors has an established track record, in any of the journals screened as part of the *main screenings* (the J.C.R. list). It results that *** and ** stands for articles from the financial community *stricto sensu*, while *⁺⁺ stands for articles from the financial community *lato sensu*. Eventually * stands either for aticles from financial researchers, with no track record in the J.C.R.-financial-journal-list (yet), or for established researchers in proximate fields (management mainly). Any unpublished article is notes "WP" for Working Paper in the column for the source. Other journals' names are abridged by their initials. Further notes: 1) clustering of countries based on Hofstede. 2) cultural distance based on Smith, Peterson & Schwartz. 3) Globe measures effect on volumes of cross-border M&As (Siegel, *et al.*, 2006*++, but the effect is not robust for some specifications). Distance has not only a negative effect on volumes for M&As, but on profitability as well: cumulative abnormal returns are lower for U.K. companies, which are acquiring other companies abroad, when the acquisition is made in countries with higher cultural distance (Conn, *et al.*, 2005*** using all Hofstede's indices aggregated). Lastly, it applies to flows of investment in Outreville (2008)***: insurance groups choose to locate in countries where the cultural distance is lower.

A marked difference between studies that overlap with economics is noted, and those that overlap with management, are noted as differentiated by specific subjects. On the one hand, following a tradition in *trade economics*, the introduction of cultural distance is very recent (Aggarwal, *et al.*, 2009*++). It is investigated in the section 4.1 of this article, because apart from Aggarwal, *et al.*, there is no relation to *dimensionalism*. Additionally, it is noted that this study is mainly dealing with working papers, the conclusion is made that, on the *economic side*, and the use of cultural distance has not yet made its way into the peer-reviewed literature in finance.

On the other hand, an overlap with management is identified when the focus is on either M&As or FDIs – two topics with a voluminous research track record in management journals (as identified through the J.C.R. list). There, the use of cultural distance is fairly ancient (Siegel, *et al.*, 2008, for a review). Furthermore, it has been controversial; so, for instance, Morosini, *et al.* (1998), more than a decade ago, question what was then a decade of consensual results, and show that cultural distance enhances, rather than reduces, cross-border acquisition performance. This thread, however, was not followed any further, provided by the use of *dimensionalism*, in connection to M&As or FDIs, outside finance journals, *stricto sensu*, because the sheer volume of literature forbade it.

However, an inclusion in the database has been made of Weber, *et al.* (1996)*[18]. They show that corporate culture interferes with national

18. This article is mentioned in Breuer and Quinten (2009), a key reference for *dimensionalism* in finance. Besides, it provides a useful illustration about some of the difficulties encountered by this line of research. Last, it provides evidence that the notion of "mingling culture *layers*" has precedence (see section 5, and in particular section 5.4).

culture, in its effects on cross-border acquisitions. They highlight that measures of cultural distance need further theorization, before anything can be concluded about the relation between cultural distance and cross-border M&As; so, for instance, cultural distance can foster rather than hinder cross-border acquisitions, because partners complement one-another through their differences (*i.e.* through their *cultural distance*).

Another aspect, worth emphasizing here, is the large number of institutional control-variables, in many articles, in the database. Table 3 provides a rough overview, and appendix 3 lists categories for these control variables, as identified in the extended *dimensionalist* database. A further analysis of these references, in relation to national cultures, and the varying aspects of the institutional context, was initiated by the author, and will be the object of a specific article. Appendix 3 conveys a sense of the extremely wide range of context dimensions, which were considered simultaneously with culture, in most of the *dimensionalist* research-papers.

Lastly, Anderson, *et al.* (2007)* provide an innovative approach to culture, in relation to the home bias. They also provide the only article in this section not related to cultural distance. Interpreting the definitions provided by Hofstede, Anderson, *et al.*, suggests that the relative magnitude of the home biases should be correlated with national cultural indices, namely the absolute value of the *uncertainty avoidance* and the *masculinity/feminity* indices. The reasoning is the following: investors from countries where *uncertainty avoidance* is higher (less acceptance of uncertainty) will diversify less, because diversification involves investing in more uncertain stocks. Further, investors from masculine countries will have higher potential overconfidence and self-attribution biases, which will drive higher exposures abroad, a lower home bias, *ceteris paribus*.

3.2.2. Financial macro-structures

This broad subject provides us with a variety of sub-fields, including the determinants of financial macro-structures (the relative importance of banks and markets: 2 articles), the development of stock markets (1), the determinants of corporate governance structures (governance indices; ownership concentration: 2), an article is concerned with growth in opaque industries (1), another with the consumption of life-insurance (1) and the last article investigates the connection between inflation, central bank independence and national cultures (1). All studies refer to Hofstede's indices, but one, which uses Schwartz's indices. Three articles, in eight, use only one of the Hofstede's indices, while five of them implement indices simultaneously (either Hofstede's or Schwartz's indices).

Hofstede's *uncertainty avoidance* index features prominently in this section, because it is associated, on a stand-alone basis, with three articles, and it is associated with other indices in three other articles. Moreover, it is used in the article that results from the *main screenings*: Aggarwal and Goodell (2009)***, extending a previous article by Kwok and Tadesse (2006)*++, establish that countries characterized by greater *uncertainty avoidance*, favor bank-based systems[19]. Importantly, their focus, unlike that of Kwok and Tadesse, is not specifically *dimensionalist*, and they show more generally that "national preferences for market financing increase with political stability, societal openness, economic inequality, equity market concentration, and they decrease with regulatory quality and ambiguity aversion [*i.e. uncertainty avoidance*]" (*ibid*: p. 1770). They provide specific definitions, neither of *culture*, nor of *national cultures*. This is important because it provides contextual evidence about the way the financial research community receives, and uses, *dimensionalist* frameworks: Kwok and Tadesse published their research in the *Journal of International Business Studies* (excluded from the J.C.R. list of finan-

19. The main difference between both articles relates to their respective theoretical underpinnings. Kwok and Tadesse*++ proceed from a general theoretical structure about national cultures, derived from Hofstede (Kwok and Tadesse: figure 2) while Aggarwal and Goodell*** propose an exploratory process where the chief focus is on characterizing elements, in the general institutional context, to explain observed differences in financial macro-structures. Kwok and Tadesse*++ intend to establish that "*national culture plays a significant role [in why] countries differ in the configuration of their financial systems*", while Aggarwal and Goodell*** investigate "*how national preferences for financial intermediation (markets versus institutions) are determined by cultural, legal, and other national characteristics*". Both articles include extensive references to additional institutional variables, considered either as complementary exogenous variables (*e.g.* in Aggarwal and Goodell), or as control variables (Kwok and Tadesse). Kwok and Tadesse include, in particular, complementary cultural variables: religion and an ethnic variable (fractionalization).

cial journals), while Aggarwal and Goodell published in the *Journal of Banking and Finance* (further commentaries in section 4.3).

So, *uncertainty avoidance* is negatively associated with stock market financing. Furthermore, it is negatively associated with growth in "opaque" industries (*i.e.* industries characterized by informational opacity: Huang, 2009)*. It is correlated with stock market development (negatively), with investor's protection (negatively), with ownership concentration (positively), with the tandem that associates central bank independence and limited inflation (positively), with the development of pension schemes (positively). However, Chui and Kwok (2008)*++ fail to identify a significant relation with life insurance consumption (potentially because it is mediated by the development of pension schemes).

In the three articles, with simultaneous implementation of three or four Hofstede' indices, results are mixed regarding the significance of the indices. Chui and Kwok (2008)*++ identify a negative relation between life insurance consumption and the three other indices, *collectivism*, *masculinity* and *power distance* (the higher the three indices, the lower the life insurance consumption). De Jong and Semenov (2002)* combine *uncertainty acceptance* and *masculinity* to abstractly define an "ability to accept competition"; they show that *acceptance of competition* is related to the development of stock markets (so stronger market development, with higher *uncertainty acceptance* and *masculinity*). De Jong and Semenov (2006)* use the same two dimensions to relate them to ownership dispersion. They show that ownership concentration increases with *masculinity* and *uncertainty avoidance* (so the reverse relationship, as compared with stock market development). Relating to central bank independence and inflation, it is *power distance*, which combines successfully with *uncertainty avoidance: power distance* is negatively related to both limited inflation and central bank independence (De Jong, 2002*).

In a fourth article, with simultaneous implementation of several indices, Breuer and Salzmann (2008)*++ show that Schwartz's indices systematically correlate with governance indicators, and with the underlying macro-financial structure. So, countries with a stronger emphasis on *autonomy*, *hierarchy*, or *mastery*, tend to have market based systems.

The large use of complementary legal, political and cultural variables is, again, very noticeable (table 3 and appendix 3). All articles, but one, use complementary political and legal variables. Three articles use complementary cultural variables (religion in three cases, ethnic fractionalization once). Overall, the need to complement the study of cultural determinants to financial macro-structures, by a wide range of institutional variables, is, once again, very strong.

3.2.3. Stock-market functioning

This domain of research belongs here, due to the recent *Journal of Finance* publication, relating momentum profits (on stock markets) to Hofstede's *individualism* index (Chui, *et al.*, 2010***). This section also includes an article obtained through the "*regional*" screening (Schmeling, 2009**), and related to the one by Chui, *et al.*

All articles use Hofstede's indices. Extending the findings from the preceding section, the use of indices is more parsimonious here[20]: three articles use only one of the four indices, while three of them use two indices in combination with one another. The study of financial macro-structures may be more dependent on the institutional context of nations than that of stock market functioning. It results that: the "country puzzle" is less prevalent, and that Williamson's "institutions of embededdness" are less relevant (further commentaries in sections 5.1 to 5.4 and Reuter, 2010). This results in approaches that have fewer comprehensive indices and more specificity. In fact, it is noted that the inclusion of institutional variables is much more limited here, as compared to the previous two sections (table 3, in relation to appendix 3).

Furthermore, it is noted that, in this section, most articles are published articles; in two cases in financial journals, and in four cases in journals at the intersection with law, economics and financial accounting. This relative success may be supported by the parsimony in approach, and second, by a more specific characterization of the relationship between national cultures and the financial subjects being investigated. This echoes the commentary in footnote 20, and these insights are built upon for the recommendations that are made in sections 4.2 and 4.3.

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20. This is in contrast to the overarching approach proposed by Hofstede (2001: p.12)ΔΔΔ relating "*ecological factors*", "*societal norms*" (including national culture) and general socio-economic outcomes.

Chui, *et al.* (2010***) note that momentum profit strategies are strong in US stock markets, and weak in many Asian countries. They hypothesize that the ability to derive momentum profits may be, partly, driven by the individual mechanisms of *over-confidence* and *self-attribution biases*, which in turn are both fostered by (and positively associated with) the degree of *individualism* in a given country. Schmeling (2009)**, extending this result, investigates the tendency of national stock markets to be more or less prone to "over-reaction and herd-like behaviors". He shows how these behaviors may be related not only to *individualism*, but to *collectivism* (its opposite) as well, and to *uncertainty avoidance*. While *individualism* triggers individual behaviors such as over-confidence and self-attribution, *collectivism* triggers a collective behavior: "herd-like behavior".

This distinction is particularly interesting, culture-wise, for two reasons. Firstly it provides specifics on the mechanics of *enabling views* of culture: here the polarity involves not only constraints, but generates specific behaviors (it is *enabling*, see section 2.1 and 5.4). Secondly, culture would be precisely what characterizes collective behaviors, as opposed to individual behaviors (and related to psychology). Overall, Schmeling shows that the relation between sentiment and stock market returns are magnified by *collectivism*, and *uncertainty avoidance*. At the same time, they are moderated by market integrity, a further measure derived from Chui, *et al.*, which is correlated with the two *dimensionalist* indices. So the relationships are complex, involving first and second-order effects, combined with contradictory influences.

Providing consistent results with the ones just mentioned, Clement, *et al.* (2003)* show that the individual experience of market analysts has more leverage on the forecast accuracy in individualistic countries than in collectivistic countries. Similarly, Pirouz (2004)* combines *individualism* with *power distance* to define what he labels a "relationship-orientation". He shows that there is a correlation between *relationship orientation* (high *relationship orientation* meaning high *collectivism* and *power distance*), stock market volatility and limited openness.

Kimbro (2002)* investigates the relation between corruption, on the one hand, accounting, and financial statement quality, on the other. He shows how the previously identified positive relationship, between corruption and two cultural variables, *collectivism* and *power distance*, turns negative when the level of economic development and accounting standards are controlled. So, more *individualism* drives better monitoring and information, which leads, in turn, to less corruption opportunities (primary and indirect effect). However, more *individualism* leads to a stronger willingness to take advantage of corruption opportunities, so that it drives more corruption (secondary but direct effect of a generally smaller magnitude). Kimbro concludes that the smaller, direct, effect of *individualism* was previously overseen, because it was covered by the collective externality provided by a higher quality in accounting and financial statements. This line of analysis is reminiscent of the one by Schmeling (2009)[**], because it shows that the general embededdness of institutional and cultural phenomena drives first and second order-phenomena, which easily lead to false assumptions on the basis of over-simplified analyses.

Overall, this section features a large diversity in subjects, provides a large number of articles featured in peer-reviewed financial journals, and distinguishes itself by a flexible *dimensionalist* approach. Further a number of syncretic concepts emerge, such as "*relationship orientation*", or "*herd-like behavior*". Last, fine-tuned propositions with second order causality mechanisms appear, such as Kimbro's analysis.

3.2.4. Dimensionalist *antecedents to financial laws*

One article is positioned at the intersection of the two previous sections (stock-market functioning, financial macro-structures). The article provides a comprehensive approach, culture-wise, with far-reaching consequences for the practical relevance of legal determinism in financial research. Licht, *et al.* (2005)[*++] study the antecedents of financial laws (investors' rights, procedural formalism), which they relate to a large range of cultural indices.

They show how legal variables are robustly correlated to the cultural constructs, from both Hofstede (*uncertainty avoidance* and *power distance*) and Schwartz (all of them), and are controlling for other cultural and legal variables (namely, the rule of law, religion), and economic development. In particular, they identify a robust correlation between *harmony*, both shareholders' and creditors' rights (negative), and procedural formalism (positive). Furthermore, formalism is also negatively correlated to *affective autonomy*. In addition, they identify a general significance of *uncertainty avoidance* with shareholders' rights (negative), and with formalism (positive), echoing other articles in section 3.2.2 (financial macrostructures). A wider range of Hofstede's indices are powerful in the formalism regressions: *uncertainty avoidance*, *collectivism* and *power distance*, all three indices correlate positively to formalism. In further regressions on shareholders' rights, where they exclude Asian and Australasian Common Law countries (Australia, India, Malaysia, Nepal, Singapore, Thailand), they find that the same three indices (*uncertainty avoidance*, *collectivism* and *power distance*) are negatively correlated to the importance of shareholders' rights. Their argument is that, in these countries, the letter of the law does not reflect the effective legal practice, so that countries have to be treated practically as "outliers".

Licht, *et al.*, conclude that their study casts doubt on the "alleged supremacy of statutes" and on the ability to change the letter of the law, to foster economic and/or financial development, with effective consequences on behaviors and institutions. Further reflections on these conclusions can be seen in sections 4.2.1 and 5.

3.2.5. Corporate finance policies

Provided that there was no result from the *main screenings*, for this topic, this section will be brief. Besides, five of the seven articles identified, here, through the *double review* process, are working papers. Three articles use Schwartz's indices, while five of them use Hofstede's measures (one article overlaps). Cultural indices are sometimes used on a stand-alone basis, and sometimes used in combination. Generally, few other institutional variables are used here, in stark difference to the previous sections; and apart from legal origin and investor's protection (they both feature prominently: four times each. This needs to be considered in the light of the studies relating culture to investors' rights, in sections 3.2.4 and 4.2.1). No other cultural variable is used.

The topics covered in this section include capital structure, dividend policies and cash holdings (twice each, generally one with Hofstede's and the other with Schwartz's indices). A seventh paper is related to earnings management (table 3).

4. Further culture-research in finance

Five articles from the database were carrying a *dimensionalist* label. This section is concerned with the other thirteen articles. Seven articles deal with financial flows across nations. They are included in section 4.1.1 and 4.1.2. They mostly use indefinite references for culture and, together, they leave us with some puzzlement concerning what culture is, how it relates to institutions, to geography or to exchange. A research-article, published in an economic journal by financial scholars, is considered in section 4.1.3, because it provides an opportunity for synthesizing international trade- and capital-flows. Section 4.2 is concerned with three financial articles, implementing each one of the specific cultural approaches. Section 4.3 deals with the remaining three articles, as well as with those "left behind" after the initial screening.

4.1. Gravity- and other models of trade, as applied to financial flows

4.1.1. "Familiarity breeds investment"[21]

Six articles are reviewed in this section and one is left for the next sub-section. These articles contribute to a research-stream in the adjacent field of trade-economics, which investigates the determinants of bilateral trade-flows, sometimes using "gravity models". These models traditionally investigate trade-flows patterns, and focus on the relative size of trading partners and on their geographical proximity (hence the 'gravity' label). They were recently expanded to include the idea of "psychological geography", among other determinants. Portes, *et al.* (2001) consider the importance of the volume of information, available on trading-partners, as a determinant for economic exchange. While distance is often prejudicial to both information-exchange and physical-trade, Portes, *et al.*, extend the idea of geographical proximity, conceptually, to the idea of "cultural affinity", because affinities reduce informational frictions and facilitate information exchange. While the exact nature of the relation between distance, information

21. This is the title of an article by Huberman (2001).

and "cultural affinity" remains unexplored in their article, their research triggered a wave of empirical testing of culture-related proxies in trade-economics.

Overall, in conclusion of this brief *excursus* on gravity models, it is noted that if the empirical investigation of culture-related proxies is recent, references to "cultural similarity" or "psychic distance" are fairly ancient, as they were proposed as early as the 1950s (Beckerman, 1956).

The six articles included in this section investigate a range of financial flows including foreign corporate lending by banks (1 article), spillovers on the sovereign debt market (1), international cross-listings (1), payments on the interbank market (1), and, cross-country flows of M&As (2).

While Rosati and Secola (2006)*** identify a strong proximity effect in a gravity model of inter-bank payment flows in the E.U., Gande and Parsley (2005)*** identify neither cultural, nor any institutional effect, on the "spillover" of a country's credit rating onto the credit rating of other countries. They note that credit-rating spillovers are highly influenced by a common correlation to financial flows to-and-from the U.S. Sarkissian and Schill (2004)***, studying the determinants of overseas-listing, conclude that "the same proximity constraints that are believed to lead to home bias ... also exert a profound influence on financing decision"[22]. Mian (2006)*** shows that cultural distance limits the efficiency of lending to corporations by foreign banks, in Pakistan. In his study, he dichotomizes cultural distance by a distinction between Asian- and non-Asian foreign banks, and he finds that Asian banks do better than non-Asian foreign banks. Focarelli and Pozzolo (2008)*** show that the amount of cross-border M&As depends on a range of proxies, which characterize proximity between two countries: they use a range of culture-related proxies, including, in particular, distance, language, and thirdly, the similarity in financial and economic macro-structures. Gleason, *et al.* (2005)*** have a related approach, and they show that cumulative abnormal returns for the acquisition of foreign privatized banks, by British banks, is influenced by cultural proximity.

22. The provision of international funds (related to the home bias) and the search for international funds (overseas listings) were arbitrarily included in these sections on international financial flows.

Those articles, here, focusing on the occurrence and treatment of culture-related concepts, have a low occurrence of "cultur*" even through the idea of national cultures, and the underlying idea of "psychic distance", is central to the argumentation. In general, "cultur*" is associated with specific expressions, such as "cultural distance", "geographic, economic, cultural, and industrial proximity", "cultural similarity", "cultural and, or institutional similarities", "geographical and cultural proximity", "cultural and institutional linkage", "cultural barriers", or "cultural integration". These expressions convey the idea that distance between countries has many complementary sources, culture being only *one* of them. Moreover, as no definition of culture is ever provided, the precise mechanism by which culture influences, and the interrelation between varying dimensions: cultural, institutional, etc., are left undefined.

As a result, the overall picture about the respective contribution, to international financial flows, of cultures, and institutions, is fuzzy, even confusing. Gande and Parsley (2005)***, or Rosati and Secola (2006)***, combine national cultures and institutions together, and analyze them in concert, through common proxies. Gleason, *et al.* (2005)*** define "cultural similarity" more narrowly, by geographical distance and a commonality in language. So they clearly distinguish culture from other "institutional" dimensions, and they incidentally define institutions with legal variables. Sarkissian and Schill (2004)*** explicitly emphasize that a distinction between cultural and institutional linkages *should* be made because "greater psychological tolerance" comes as a complement to information exchange, but they emphasize this important distinction, to be made, in conclusion, as a promising research direction. Eventually some authors treat proximity as purely generic across a wider range of sources: Focarelli and Pozzolo (2008)*** consider "geographical distance and economic and cultural integration" in combination, through combined proxies.

The research, reviewed in this section, aims at uncovering the quantitative impact of proximity on exchange. It largely foregoes to specify the mechanisms linking proximity and exchange; their inspiration is largely macro-economic (hence, the relation to gravity models).

Language is most consensual as a proxy for culture and/or institutional differentiation. A general framework, spanning most of this research, is that culture operates through information exchanges, so that it is mediated by the use of a common language. Yet, this link is usually implicit, and most authors believe, following Portes, *et al.*, or Sarkissian and Schill, that the two mechanisms, *i.e*. cultural affinity and information availability, are separate and complementary. Yet they depend, *inter alia*, upon a common language.

Other sources for cultural proximity are often considered in this literature. They include commonality in religion, in law or in colonial history, common borders, geographic distance, similarity in financial or socio-economic systems, etc. However there is no consistent use of these proxies, and a poor specification dominates this research-field, as to whether these variables are included as variables, *per se*, or as proxies; or whether these variables are included in combination, with, or in contrast, to one-an-other, and to cultural variables.

4.1.2. Corporate culture, "social capital" and merger flows

A seventh article, on inter-regional exchange flows, is by Alessandrini, *et al.* (2008)***. They develop a typology of M&As in the Italian banking industry, distinguishing what they call *cleaning strategies* from *portfolio strategies*. A *cleaning strategy* corresponds to the situation, where, in the situation of one bank acquiring another, the acquiring bank cleans the portfolio of the acquired bank of inefficient borrowers. A *portfolio strategy* corresponds to the situation, where the acquiring bank completely re-orients lending in the acquired bank, depending on its specific know-how, its organizational processes and its preferred clientele. Alessandrini, *et al.*, show that cleaning strategies dominate in what they call *in-market acquisitions*, while portfolio strategies dominate in *out-market acquisitions*.

It is through this distinction between in- and out-market, that the cultural variables enter into play. Alessandrini, *et al.*, characterize in- from out-market by "geographical and cultural distance". They implement cultural distance as the difference in relative "social capital" between varying Italian regions. They combine two definitions for defining "social capital": first, the number of blood-bags donated by citizens in any given Italian region, and, second, the average regional voter-turnover at a specific and important referendum. While providing no definition of the "cultural", they use it very specifically, with diverging meaning-categories. First, they use it in connection to a region-specific "culture of mutual trust", which they label "social capital", following a stream of literature in economics (see section 4.1.3). Second, they use it in another way, related to "corporate culture".

So, their article departs from those in the preceding section (4.1.1) in three significant ways. First it clearly distinguishes geographical from cultural distance: so a bank can be "culturally close" to the working environment found in a "distant province". Second, short of a specific definition, they provide an extent of references and definitions for their two categories of meaning.

Third, they implement two contrasting views of culture, simultaneously. The expression "corporate culture" (five occurrences) denotes a construct that is separate from regional "social capital", related in particular to the construct of "societal trust". So the two meaning categories are conceptually quite separate[23]. The "corporate culture" is in particular related to a specific know-how, which serves as basis for the portfolio strategy (*ibid*, p. 700 and 701). In this sense, the corporate culture of the bank is intimately related to its lending strategy, and it clearly evokes the expression "credit culture", that can be found in Gleason, *et al.* (2005)[***]. This conceptual category is, in fact, very common in the material initially collected through the screening (the initial sixty *hits*). *Credit cultures* describe this technical knowhow, from which banks derive superior performance, in itself, or from acquisitions, when they transfer it to acquired banks. In the initial screening, this use of culture was classified as technical and brushed it aside, as anecdotic. However, further analysis is required, and provided in sections 4.3.3, and 5.4.

Eventually, it should be noted that in this research article, a concrete example of two types, two kinds of cultures that inter-relate and overlap, exist. The first is akin to *national cultures*, here, in a regional sense, while the second is to be related to a mix of professional (technical) and organizational types, blended together into the specific

[23] Even though they are likely to be connected in practice. The authors mention "corporate culture" in relation to the condition of the workplace environment for the acquired banks. They suggest that this new environment consists of a new culture with two components, the *in-the-acquired-bank culture* and the *around-the-acquired-bank culture* (*cf.* p. 705, expressions are our own derived from their vocabulary). So there is variation in the local geographical "provincial" cultures, but the *in-the-acquired-bank culture* is likely to be reliable reflection of the local environment.

bank's culture. This is a practical illustration of what will be labeled as cultural *layers*, later, in section 5.4.

4.1.3. Culture, trust and financial flows

The previous paragraph accounts for the emergence of a specific understanding of culture as *civic culture*, or *societal trust*. This specific view, emerging from the screening, has depth and precedence in economics, and beyond. Given the extended survey of *dimensionalism* in finance (resulting in table 3), we wish to provide, here, a brief, and complementary, outline on *culture as trust*. Luigi Zingales provides, in particular, 10 research articles on his webpage[24], mostly co-authored by Guiso and Sapienza, all of them on the subjects of "culture and economics". These articles explore, further, this aspect of cultures, called, alternatively, *generalized trust*, *civic capital*, *social capital*, and *societal trust*. The research-stream identified here, through this connection with research by Guiso, Sapienza and Zingales, has antecedents in the political sciences (Banfield, 1958; Putnam, 1993) and in economics (Arrow, 1972: see Guiso, *et al.*, 2009 for details).

A recent article by these co-authors (Guiso, *et al.*, 2009) is of interest here, because it explores a topic extensively covered in this research: the antecedents of financial flows, trade-, portfolio-, investment-flows as well as M&As and FDIs. Besides, this topic is explored with respect to *dimensionalism* (section 3.2.1) and includes most of the other identified articles in the screening (the two preceding sections 4.1.1 and 4.1.2)[25]. This article is of particular interest for four reasons. Firstly, it intends to unpack the source of relatedness between nations,

24. http://faculty.chicagobooth.edu/luigi.zingales/research/topics/culture.html

25. This article was not obtained through our screening and the issue of whether it belongs to this review, or not, reflects the complexity of our task. This article was presented in prominent financial conferences. However, it was published in an economic journal, so that it falls, technically, outside of our scope, even though its authors are financial scholars with an established track record in the most prominent peer-reviewed financial journals (as identified by the J.C.R.-list). A further analysis of the 10 articles mentioned by Luigi Zingales, on his website, in connection to *culture and economics*, shows that only one of them has been published in a financial journal (J.C.R.-list). We suggest that this reflects the epistemological roots of financial research and the relative larger heterodoxy of some recent economic research in comparison to finance (Zingales, 2000; Brennan, 1995).

separating out rational, geographical, institutional and cultural sources. Secondly, it extends the range of topics tackled at once, investigating three endogenous variables simultaneously. Thirdly, it provides many details, as well as sophisticated definitions of the culture-related variable, trust. Fourthly, it brings forward some new methodological guidance for the treatment of culture-related concepts in economics and/or finance, in particular with respect to causality and the use of instrumental variables.

Guiso, *et al.* (2009), characterize culture, either as the stable aspect of individuals' priors, and preferences, or as the stable social constraints in which individuals make judgments and choices. They operationalize it through "interpersonal trust". They do not define this concept, rather, they split it into three categories: "personalized", "mutual", or "generalized" trust. They provide an extended discussion on how trust relates to the "culture" of individuals, as opposed to "rational expectations". They suggest a relation to Arrow's seminal works, because they view trust as either derived from repeated and successful interpersonal exchanges, so it is a "rational expectation", or as related to stable priors and preferences, hence it is "cultural". In this sense, an extended conceptual and empirical discussion about varying aspects, *components*, of trust, rational and cultural ones, overturns the need for a definition.

It is very interesting to compare this article by Guiso, *et al.*, to a *dimensionalist* article discussed earlier (section 3.2.1), by Siegel, *et al.* (2006)[*++]. Siegel, *et al.*, use *egalitarianism* to investigate a very similar range of international investment flows. The comparison of the two articles teaches us that, in their methodological proceedings, both articles instrumentalize their culture variable, *trust* for Guiso, *et al.*, *egalitarianism* for Siegel, *et al.*, with identical instruments: the number of years countries were at war across centuries, ethnic fractionalization within countries and commonality in dominant religion.

This illustrates a point brought forward by this survey: the *dimensionalist* approach and other culture-approaches, for instance, trust, need not be opposed. Here, the two articles pursue identical objectives (explaining three types of quasi-identical, or related, financial flows), they define culture in seemingly opposing ways (Guiso, *et al.*, refer to the *constraining* conceptualization, while Siegel, *et al.*, refer to the *enabling* one, as emphasized in the Introduction), but both articles instrumentalize it with the same set of instruments, and with comparable success. So taken together, it seems that *egalitarianism* and *mutual trust between European countries (pair by pair)* explain the same set of phenomena, while they are caused by the same underlying factors.

This opens up a number of questions about what Williamson labels the "institutions of embededdness". Are trust and *egalitarianism* spurious in this investigation? Is the one causing the other? Which one causes the other? Are they both driven by a third underlying variable[26]? This illustrates the kind of questions that will be raised in section 4.3.

Additionally, the fact that neither article has found its way into a peer-reviewed journal in finance is interesting. So Guiso, *et al.*, have published in an economic journal while Siegel, *et al.*, have cast their article in a new light, and are successfully positioning it in the management field. We suggest that this reflects disciplinary inbreeding, as discussed in the Introduction, the Synthesis and Conclusion. Culture is to be understood and accepted differently, by different academic fields. Relating to a financial angle, as considered through peer-reviewed journals, the discipline still seems reluctant to accept either type of approach; whether the *dimensionalist* one, or the one based on trust, as exemplified by Zingales' web-site, be positioned as an economic rather than a financial research-contribution.

4.2. Three specific and successful path for culture-research in finance

Our screening resulted in the identification of two well-known works on culture, in finance: the studies by Stulz and Williamson (2003)*** and by Grinblatt and Keloharju (2001)***. We review them in turn, before considering the article by Hilary and Hui (2009)***.

4.2.1. National cultures as antecedents of investors' rights

Investors' rights, along with legal origin, rule of law and enforcement, have been extensively used, in the *law and finance* approach, to investigate a number of financial issues, spanning from the quality of

26. This potential connection is the object of extended scholarship in other human sciences. For instance Todd, 1990, relates justice and ethics, on a regional or national basis, to factors such as mutual trust, egalitarianism and power structures.

corporate governance, to the development of financial markets, and beyond to economic and political freedom (La Porta, *et al.* 2004). This stream of research considers investor's rights as exogenous. It provides policy recommendations in consequence[27]. In this context, the article by Stulz and Williamson (2003)[***], along with the one by Licht, *et al.* (2005)[*++] considered earlier, show how financial laws can correlate with enduring and stable underlying socio-cultural characteristics, casting doubt on whether changes to the letter of the law can have effective consequences in practice.

Stulz and Williamson provide a detailed definition for culture (appendix 1) and they use two proxies: religion and language. They note that religion has to be considered as a cultural variable, *per se* (not as a proxy), and they provide extensive scholarly references drawn from the fields of economics, economic sociology, law, economic history and religious history.

In contrast, they note that the second variable, language, proxies for "world-views" or "world-systems" and they contrast an Anglo-American worldview ("Anglo-Saxon", operationalized as the English-speaking countries), with Hispanic and other worldviews.

Importantly, Stulz and Williamson (2003)[***] provide a discussion on how Protestantism relates to decentralization and individualism (conceptually, not in relation to Hofstede's *individualism* index), with a suggested relation to *societal trust* as well[28]. Further they exemplify

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[27] This includes for example and among other things, a positive correlation observed between English law and (specific references to be asked from survey-authors)

- The protection of corporate shareholders (La Porta, *et al.*, 1998, 2000)
- The valuation of firms (La Porta, *et al.*, 1999)
- The efficiency of financial institutions
- The regulation of economic activity, including the quality of corporate governance (La Porta, *et al.*, 2000) and the regulation of entry (firm creation, Djankov, *et al.*, 2002)
- Growth and macro-economic performance (La Porta, *et al.*, 1997, Glaeser, *et al.*, 2004, Botero, *et al.*, 2004).

[28] Note that, on a similar investigation of investors' rights, but considered from a *dimensionalist* angle, Licht, *et al.*, identified that *power distance* and *uncertainty avoidance* mattered across the board, with *individualism* being important for some of the specific rights considered. These synthetic national indices may correlate with the degree of centralization and *individualism* as identified by Stulz and Williamson. At least, they are all correlated to the same set of legal variables.

how the religious spirit and related social norms have interacted with national institutions, to foster cross-national differentiation across Europe. This is in fact one of the reasons why they retain the "dominant national religion", as the variable of choice, precisely because the *dominant* religion best reflects this process of path-dependant maturation processes within nations. Stulz and Williamson further provide references for the relation between religious faith, and lending, an/or investing activities.

4.2.2. Concluding on international flows and the antecedents of investors' rights

Overall, we wish to underline three key issues. First, the two articles considered here, like the two articles about international capital flows (section 4.1.3), the *dimensionalist* ones, and the ones on trust, religion, or worldviews, all provide evidence on the mechanisms that relate culture with financial outcomes. So these comparisons exemplify that culture must be examined in connection with a specific mechanism relating it to the outcomes considered.

Second, taken together, these articles, emphasize the strong underlying, and implicit, relations between varying cultural, and institutional dimensions. In the last two sections (4.1.3 and 4.2.1), a dimensionalist approach, and an alternative approach, achieve similar results, on similar issues, with competing cultural approaches. This illustrates both the disciplinary stakes that are at play, and the potential for a middle ground, not yet achieved.

Last, in many cases, and in particular in Stulz and Williamson (2003)[***]'s article, the authors emphasize potential transversal linkages between views of culture.

4.2.3. Culture vs. *language and distance in portfolio holdings*

Grinblatt and Keloharju (2001)[***] investigate the importance of investor's native cultures, understood here as ethnicity, as a determinant of investors' stockholding patterns. They do *not* provide a definition of culture, but rather "classify the culture of the firm based on the name and native language of the CEO (Finnish/Swedish)". Then they compare the ethnic origin of investors with that of the shares they are holding.

Here culture, unlike section 4.1 on financial flows, is conceptualized *and* operationalized separately from language and distance: the language of the company is that of the annual reports, and the culture of the company is the native ethnic culture of the CEO, either Swede or Finnish. So the authors provide a test of the relative importance of culture *as opposed* to language or distance, on the nature of portfolio-holdings. They show that culture matters.

Most importantly, they show that the culture-influence is moderated by distance and by education (or training): the culture-effect disappears for larger distances[29], and it disappears for savvy and institutional investors.

This underlines an important and specific aspect of "national cultures": not every citizen, in a given country, is subject to the same cultural influence, and a national culture's influence can be individually circumscribed through education, experience or other circumstances. This relation between a synthetic index of national culture (as in *dimensionalism*), and the individuals considered in any empirical investigation, is problematic. It is, indeed, one of the key issues in the debates surrounding *dimensionalism* in management; it is one of the pillars of the critiques (see sections 5.1 and 5.2 for further developments and references).

4.2.4. Corporate culture, religiosity and investment

The article by Hilary and Hui (2009)*** shows that, in effect, higher religiosity has an implication for the variance in equity returns (lower), ROA (lower), investment (lower), growth (lower) and break-even point for investment (higher).

This article stands out, in this survey, in many respects. First, its focus is on comparing behaviors across local communities within the U.S., not across nations: the comparison is conducted at the county level (read county, like borough).

Second, it investigates the influence of religiosity, rather than the effect of religious affiliation, *i.e.* its focus is procedural rather than substantial (we use this terminology, because it is standard in the sociology of culture, *e.g.* DiMaggio, 1994). Third, and consequently, it

29. For companies that are nationally renown, or that are registered on the capital city's stock-market

shows that the observed firms' outcomes are related to the relative intensity of religious practice (*i.e*. the *religiosity* of executives, a procedural aspect), rather than on any specific religious affiliation, *i.e*. any specific cultural norm (a substantial aspect). This focus on the intensity of a given cultural (religious) practice is unique in the dataset obtained from the screenings. However, it reflects a long-standing scientific proceeding in anthropology or sociology – as well as in insurance research[30].

Fourth, the reason this article has been included in the database is not related to a use of words based on "religion", even though it is often associated with culture-research as exemplified above. This article was distinguished in the screening, because of its use of "corporate culture". In fact the study aims at "examining the influence of community religion on corporate decisions". The implicit link is that the narrow geographical focus on counties accounts for a direct link between the "corporate culture", that of the CEO and that of the surrounding environment.

Thus, this article underlines the prominence of a number issues acknowledged earlier. If nations, and related national cultures, provide the strongest common link within the database, there are other cultural sources to be considered, in particular *corporate cultures*. Second, the focus on a specific norm, or a specific definition, does not need to be the most appropriate way to proceed. As can be seen, in the previous section (4.2.2), an emphasis on mechanisms can help to specify cultural definitions. Moving one step further, the mechanism itself can be the key dimension, independent of the content: the *procedural* supersedes the *substantial*. By extension, the *dimensionalist* literature focuses on values as the building block to operationalize "national cultures" (section 3.1). Hence, it rests on the motivational aspect of cultures. But what is the importance of the relative motivational intensities to these values, and their interactions?

30. In the field of insurance research, this focus is not recent; for instance Burnett and Palmer (1984) investigate a number of "behavioral biases" in life insurance holdings across nations; they note that "*traditional work ethic, fatalism, socialization preference, religion salience, and assertiveness*" are important international determinants. In all these cases, the focus is on the intensity of the identification with a norm rather than on the norm itself.

4.3. Anecdotic and less anecdotic references to culture, uncovered in the screenings

4.3.1. The "cultural affinity hypothesis"

A number of articles explore the "cultural affinity hypothesis" (Calomiris, *et al.*, 1994) in the U.S. They were excluded from the survey, because of their specificity. What is the hypothesis? "This hypothesis implies that white loan officers, because of a lack of familiarity with minority applicants, will rely more heavily on characteristics that can be observed at low cost (*e.g.* objective loan application measures) in evaluating the creditworthiness of minority applicants, relative to white applicants" (Hunter and Walke, 1996: p.57)°.

This exemplifies, how culture, familiarity and trust interrelate, echoing earlier remarks.

Further, this exemplifies the difficult, abstract, but central notion of culture as *enabling* rather than *constraining*: indeed, because of differing values, communication habits, social references, and so on – something lacks in the credit relationship between minority ("colored") borrowers and "white" loan officers. This missing dimension would alleviate the constraints of the lending process, of the lending relationship, to facilitate the lending. So while discrimination in lending is really about additional constraints, for "colored" borrowers, the "cultural affinity hypothesis" is really about an interpersonal relation that enables the lending, for "white" borrowers. Colored borrowers are not discriminated against. Rather some white borrowers are favored. The *cultural affinity hypothesis* is different from standard discrimination, precisely because it is not about *constraining* lending, but because it is about a failure to *facilitate*, and to *enable* it.

4.3.2. The "country puzzle", as an underlying theme, in many articles

A large number of articles, initially obtained, refer to culture as a key source for country differentiation. Yet, most articles do not pursue the analysis further: the frequency of use of "cultur*" is very low, often limited to a single occurrence in the abstract.

This is echoing the idea that cultural concerns societal, or "societal" (O. Williamson, 2000) analysis, but not economic analysis. These articles, considered in particular together with those included in section 4.1, provide us with an inconsistent, and confusing view on national cultures, national institutions, and on the way they interrelate. They reflect what Stulz (2005)[31] labeled the "country puzzle" in finance: countries have a significant empirical effect on many financial issues, yet no financial theory proposes any framework to date.

A few articles with a low occurrence of "cultur*" in the body of the text were included in the database, because the occurrence seemed connected to a central argument made in the article. This included in particular Stonehill, *et al.* (1975)***, Grinold, *et al.* (1989), and O'Bar and Conley (1992)***.

The two former articles exemplify the "country puzzle", each in its own way. So Grinold, *et al.* (1989: p.1)*** investigate the stakes involved with managing global portfolios. They emphasize the fact that "cultural differences among countries raise some important questions regarding investor preferences, market efficiency, and security analysis". They mention that the relative importance of countries, *vs.* industries, must guide investment-management, because countries' influence is more prevalent than that of industries. The focus of their effort, in this article, relates to an empirical split of both sources, national and industrial, in the global risk-return profile of the portfolio.

Stonehill, *et al.* (1975)*** present the results of a global survey on the practice of financial policies in five developed countries. Back in 1975, they conclude, that: "looking ahead, it seems unlikely that financial executives outside the U.S would adopt the stockholder wealth maximization model". Again, this article is somewhat secondary to the main purpose of this research thsis, and it has a strong historical connotation. Yet, it is important in helping to replace the financial discipline and financial practice upon specific trajectories. It emphasizes, further, the relative prevalence of national backgrounds, about four decades ago; while it exemplifies how something akin to a "financial culture" can be situated historically, and geographically.

31. "*We would expect countries, per se, to matter little in finance. However, this is not the case: countries [are] very important*". "*A firm's country of incorporation is a more important determinant of its financial policies than its industry [This generates] paradoxes that are explored in many papers. [We need] a new theory of international finance that recognizes that countries are relevant*", Stulz (2005: 1601 & 1596)

4.3.3. The "culture of investing"

The article by O'Bar and Conley (1992)*** must receive, like the one by Hilary and Hui (2009)***, a special place in this survey, because it is difficult to classify, specifically. It provides a financial ethnography, on the motives guiding investment decisions by managers, in institutional investment-funds, in the U.S. It concludes the ethnographic approach with the idea that corporate culture and corporate politics dominate more technical and rational "financial criteria" in managing investment-funds[32].

This article, unlike the two other just reviewed, offers a high frequency of occurrence for "cultur*", and it provides a specific definition (appendix 1), which accounts, in particular, for both "corporate-" and "national-cultures". Further, "cultur*" is used in combination with a number of other expressions, or *layers*, including "business culture", "culture of capital", "civil service culture" and "public fund culture". This extension in the way culture is conceived, and utilized, may seem puzzling. It reflects a reality that emerges from the screening undertaken, here. In fact, the question of how anecdotic these, and other uses, are should be considered seriously. It is arguable that they do not just reflect a way of speech, but a deeper reality, engrained in the notion of "culture". Besides they convey shades of meaning in line with ancient academic knowledge throughout a range of more qualitative disciplines (Cuche, 2004).

It must be noted that there is, in particular, a connection between the developments in section 4.1.2 about a "credit culture", and a number of expressions emerging from the screening, and substantiating the idea that financial techniques constitute a specific culture[33]. Further,

32. In managing funds, "fund executives appear to be motivated more by the kinds of cultural influences that drive less consequential decisions. These include the quirks of institutional history and corporate politics, the desire to displace responsibility, and the demands of maintaining smooth personal relationships", p. 21.

33. Database available from the author on demand. References include "cross cultural differences in risk perception", "Embracing the risk: the changing culture of risk and responsibility" (a book title), "the equity culture: the story of the global stock market" (book title), "developing a risk-aware culture that involves honest discussions between firms and clients about the nature of risks they are exposed to". A comment that "many studies are now recognizing the important institutional, developmental and cultural differences that exist between stock markets in industrialized and developing

they echo Larry Summers's (1985)° statement about the emerging specificity of a "financial culture", provided in section 2.1. Last, they mirror the expression "equity culture", used by Guiso, *et al.* (2001) to describe a increasing willingness, among the middle and upper classes in continental Europe, to invest their savings in stock markets.

Overall, this crossing path, does not come out as a simplification of the survey, but it reflects research in other fields, and, in particular, in sociology, anthropology, and more; and more frequently, in International Business. These remarks are central to providing justification for the developments in section 5.4, below.

5. *Emerging* culture-views in finance: synthesis

This review underlines the polarization of cultural research around *dimensionalism*, and illustrates how *dimensionalism* appears to be the only consistent framework, emerging in finance, through our process (notwithstanding efforts by Zingales, *et al.*, on trust, in *economics*). A number of issues must be formulated. First, *dimensionalism* has triggered much controversy in management, at large (International Business, Accounting, Marketing, etc.). Second, it is emerging in finance at a time, when it is questioned in proximate fields, for instance in International Business, with increasing force and consensus. Third, *dimensionalism* is only starting to emerge in finance, and it does so in a very specific manner.

5.1. *Dimensionalism* in management research, critiques and trajectories

5.1.1. Critiques

It is beyond the scope of our survey to provide a consistent and detailed review of the critiques of *dimensionalism*. They are strong, ancient, and voluminous.

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countries". Anecdotic references to "hot money cultures" (on stock markets and in funds), to the "cultural gap between... financial scholarly research" (and professional finance), or "wall street cultural hang-up" after the recent crisis.

On the one hand, inside *dimensionalism* alone, a number of debates are ongoing, in particular with regards to the Globe approach that is resting on comparable bases, but that is not mentioned as part of the stream by Vinken, *et al.* (2004[ΔΔΔ], see the Hofstede *vs*. Javidan-and-House's exchanges in the *Journal of International Business Studies*, and other sources). A number of researchers also emphasize that Schwartz's approach overcomes a number of important weaknesses in Hofstede's framework (Schwartz and Ros, 1995[ΔΔ(Δ)]; Kagitcibasi, 1997[ΔΔ]; Smith, *et al.*, 2002[ΔΔ(Δ)]). It is noted, here, that Hofstede's indices still largely predominate in empirical research, as exemplified in the financial database, presented.

On the other hand, a number of direct theoretical and conceptual attacks have been carried out on Hofstede's framework. References abound[34], they can be found in particular in Hofstede's exchanges with McSweeney (2002[ΔΔ] [101/450] and subsequent articles), or with Baskerville (2003[ΔΔ] [50/148] and subsequent articles). Further critiques, with important cite-frequencies, are found in Adler and Graham (1989[ΔΔ] [20/265]), d'Iribarne (1997[ΔΔ] [8/55]), Harrison and McKinnon (1999[ΔΔ] [-/115]), Chenhall (2003[ΔΔ] [130/483]).

Similarly, critiques relating to the cultural distance framework, as derived from Hofstede, abound: Shenkar (2001[ΔΔ]) provides a seminal critique, and Harzing (2004[ΔΔ]) provides both a review and a critique.

5.1.2. Recent trajectory in International Business

To provide the reader with a sense of the current trajectory of *dimensionalism*, a specific screening has been conducted, over one decade, centered on the main peer-reviewed journal for International Business: the *Journal of International Business Studies*.

Overall, it seems that there is a consensus emerging on the need to "re-balance" cultural research, by shifting the approach away from that of *mean-values* by country (focusing for instance on variance as well), to using sources other than Hofstede's, or still, to favoring approaches

34. We retain here only some of the most cited ones, so we provide the cite frequency in brackets for both EBSCO and Google scholar, search executed on March 27th. It will be noted that these critiques belong to a variety of disciplines, some of them relatively further apart from management research (sociology), and some other being more central (International Business, Marketing, Accounting...)

other than the dimensionalist one. In particular the emphasis is on contrasting varying cultural sources (community, gender, ethnicity, professions, organization, and so on), and on accounting for the need to better specify the effects of each cultural source on the phenomena considered.

More specifically, Tung (2008)[ΔΔ(Δ)] re-emphasizes the need to consider intra-country cultural variation (see earlier propositions by Au, 1999[ΔΔ]). She insists, as well, on the need to consider cultural change. Smith (2006)[ΔΔ], emphasizes, among other things, the need to verify that relations at the individual levels (as operationalized in surveys), do hold in aggregate (at the level of the national culture index). He stresses that a better analysis of the effect of economic development is needed, and that *wealth-related* effects must be disentangled from cultural effects, *stricto sensu*. Lenartowicz and Roth (1999)[ΔΔ] recall that the validity of a country grouping must be established beforehand, and that the use of a *national culture indices* must be made, depending what is being studied, and how it relates to culture (a focus on mechanisms). They propose several alternative methods. In a related enterprise, Sivakumar and Nakata (2001)[ΔΔ(Δ)] examine how countries can be grouped depending on Hofstede's indices. They show how the dimensions retained, and the weighting of these dimensions, can lead to a large volatility in the way countries are grouped together, compared and opposed.

Leung, *et al.* (2005)[ΔΔ] as well as Earley (2006)[ΔΔ] emphasize how *dimensionalist* approaches should be supplemented by other approaches in the future. In particular Leung, *et al.* (2005)[ΔΔ] re-emphasize the importance of varying cultural "*layers*" (Global, national, organizational, group-culture and then individual behaviors); they re-emphasize the processes of cultural change, the interaction between cultural layers and the varying ways in which values can influence behaviors (either causal links, mediating or moderating effects). They conclude: "much of previous research has adopted what we view as a simplistic view of culture, which tends to examine the static influence of a few cultural elements in isolation from other cultural elements and contextual variables...Hofstede dimensions fall into this category..." (p. 374). Earley underlines what approaches, other than those based on values, are seen to be promising. He recalls that "meaning" moderates the relation between values and behaviors. He concludes his review with the idea that "it may well be time that this form of large-scale, multi-country survey [*i.e*. Hofstede's or Globe's] be set aside" (p. 922).

5.2. *Dimensionalism* as an emerging framework for financial research?

The previous section emphasizes how *dimensionalism* is coming under increasing scrutiny in International Business research. Financial researchers, choosing to adopt a *dimensionalist* approach, should acknowledge these issues and critiques, as is now being done in International Business. Besides, *dimensionalism* is emerging in finance, at a time when it seems to be somewhat re-qualified, or even re-considered in proximate fields.

Consequently, it is unclear whether the cultural framework, which is emerging from several articles simultaneously in this screening, could be adopted, within financial research, as an overarching framework of reference. Evidence suggests that economists and sociologists have not been keen on adopting this framework in the past (Baskerville, 2003[ΔΔ]), while the *dimensionalist* wave seems to be currently abating in management, at least as a "grand design" (Leung, *et al.*, 2005[ΔΔ]; Earley, 2006[ΔΔ]).

Furthermore, only the "smoothest" *dimensionalist* studies were identified in the JCR-screening: the articles identified through the *main screenings*, ([***]) often propose streamlined approaches, with an emphasis on mechanism, rather than on national cultures *per se*, and a syncretic use of varying institutional indices. Two studies focus on the determinants of the success in firms' extension abroad: acquisitions in banking for Conn, *et al.* (2005[***]), and FDIs in insurance for Outreville (2008[***]). Both of them use a cultural distance index as an important and complementary addition to other institutional variables. Three other studies, all of them published most recently (fall 2009, February 2010) parsimoniously use the *dimensionalist* approaches: two studies use one of Hofstede's dimensions while the third study uses only two indices in combination. Aggarwal and Goodell (2009)[***] underline how they intend to investigate a variety of cultural and institutional factors simultaneously, to develop a clearer picture of the determinants of financial macrostructures[35]. They provide no specific definition of culture, but a rationale as to why that particular index, *uncertainty avoidance*, could be important in their context, along with other institutional, financial and economic determinants. Chui, *et al.* (2010***) propose a focus on *individualism* as a mediator for a number of specific, seemingly related, and well-identified behavioral biases. Schmeling (2009)** extends this latter study and tries to practically characterize the notion of "herd behavior" through a reference to two related *dimensionalist* indices.

Overall, a flexible and pragmatic approach using *ad-hoc dimensionalist* references, based on a precise delineating of the mechanisms at play, may be the more promising direction in finance. This is what can be learned from the analysis of the databases and from the emerging and comparative use of "cultur*" in the peer-reviewed literature in finance. Furthermore, this may explain why researchers such as De Jong, Breuer and Quinten, expect the development of *dimensionalism* to happen in relative autonomy from the financial discipline (see introduction for references).

5.3. National embededdness in finance

5.3.1. Opening the black box (opening up venues for culture in finance)...

The survey, presented here, outlines the importance of nations, and national cultures, for many research articles. Relating to the *dimensionalist* papers, it is noted that the articles do not come without extensive additional references to institutions (appendix 3). Conversely, in other approaches, much confusion between culture and institutions has been observed (sections 4.1, 4.2.1 and 4.3). Overall, it seems that the emergence of the culture theme in financial research corresponds to a renewed interest in trying to untangle the sources of national embededdness: cultural, political, institutional, structural (networks), etc. It is

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35. They investigate the national determinants of macro-financial structures and state their positioning in the following manner: "*why do countries ... differ in the composition of financial intermediation, some relying on banks more while others relying more on markets? It would seem that such differences among countries may be related to the legal, cultural, and other such national characteristics, but these national characteristics as have been largely ignored in the literature ...*".

noted, in passing, that this effort has started some time ago, in other disciplines. For instance Guillen and Suarez (2005) highlight the coexistence of five schools of thought, in relation to the exploration of the broader institutional context, in Organization Theory; *dimensionalism* being only one of them, and *law and finance* another. Further, the conclusions of the essays by Maseland (2009), or by De Jong (2009[ΔΔΔ]: chapter 2), on the recent re-emergence of culture in economics, applies very well to financial research, but with a potential time lag.

Stulz (2005)'s proposal of "the twin agency" model is an inspiring theoretical step to explore the "country puzzle". It opens up venues for exploring the *black box of national embededdness* (The expression is original to the author). It echoes Williamson's call to pay attention to the much-needed alignment between the "*institutions of embededdness*" and the varying levels of economic analysis (*levels of societal analysis 1, 2, 3 and 4 in his terminology*). It corresponds to the primary importance given by North (see appendix 1) to "informal institutions" and "culture", in economic research.

The contributions by Stulz and Williamson (2003)[***], and by Licht, *et al.* (2005)[*++] cast a new light on the successes of the *law and finance* research stream. The empirical regularities observed in *law and finance* research articles may be robust, but if the laws are related to enduring and stable cultural characteristics, country by country (understood as world-views, national religions, *egalitarianism* and *harmony*, and still other *dimensionalist* indices), then how can the results of *law and finance* be normatively interpreted? And how can recommendations be derived? There are many robust empirical regularities, which have been evidenced in *law and finance*, but short of clear conceptual mechanism, are there reliable predictions?

For these reasons, and provided the formal, and less formal attention, now given to cultures in financial research, it is arguable that culture and finance is set to become a full-blown research-area soon. This answers to the second research-question proposed in introduction.

5.3.2. Using all the tools?

Future research may pragmatically draw from existing frameworks, from adjacent disciplines, in management (in particular with emphasis on *dimensionalism*), in economics and development-economics (in particular with special emphasis on trust or religion), or in economic sociology (see below). It is suggested that this should not be done without detailed cross-references. In fact, a detailed analysis of the database shows that successful cultural research in finance generally comes with very specific references. For example Stulz and Williamson (2003)*** provide extensive scholarly references drawn from the fields of economics, economic sociology, law, economic and religious history. Guiso, *et al.* (web-site references provided earlier) provide a stream of articles on trust, including experimental investigation in trust-games, exploitation of survey questionnaires, comparison of varying methods from varying disciplines, and they derive conceptual mechanisms from ancient scholarship in political economy and economics (references provided above). Furthermore, a number of authors provide an extensive analysis of risk-taking behaviors by individuals, of their acceptance of uncertainty and of related concepts. They draw from a range of sources, from psychology to economics, to investigate the behaviors of market-participants and investors (see for instance Statman, 2007, 2008; Schmeling, 2009**; Chui, *et al.*, 2010***).

All of these approaches (trust, religion, risk-appetite) intend to unpack specific culture influences, through specific cultural lenses. They need not be opposed, and in fact, they present large overlaps, often in relation to national and institutional influences.

Stulz and Williamson provide a discussion on how Protestantism relates to decentralization and *individualism*, with a suggested relation to societal trust. Furthermore, they show how the religious spirit and the related norms interact with national institutions to foster the development of cross-national differentiation. In relation to the opposite connection, Guiso, *et al.*, remind us on how religious people have differential trust-levels (at the individual level, in a given country, for instance the U.S). In aggregate, and in particular at the level of regions or nations, they show that there are lasting differences, in the way individuals relate to their community, and they identify, and measure lasting differences in the way societal trust/ civic culture structures socio-economic and political interactions. Lastly, Statman relates social capital (societal trust), *individualism*, culture and religion, to, and contrasts them with various socio-economic categories (such as revenue, education, age, gender).

Therefore, is argued that: one, complementarities rather than divergences should be emphasized across these approaches, and, two, that there is room for a variety of references in financial research, provided appropriate cross-references are made from adjacent disciplines.

Furthermore, authors within the *dimensionalist* literature have extensively investigated the importance of serial correlations of their indices with many country-level measures, across a range of domains. There is evidence of serial correlation of national culture indices with varieties of capitalism (Schwartz, 2007[ΔΔΔ]), with the rule of law, corruption and democratic accountability (Licht, *et al.*, 2007[ΔΔΔ]), with economic, demographic and political structures (Schwartz, 2004[ΔΔΔ]), as well as with many other cultural variables, mentioned earlier. De Jong (2009[ΔΔΔ]: p. 49.) summarizes similar, but somewhat less extensive, results for Hofstede's and the Globe's indices.

Overall, the issue of national embededdness has been looming large in the social sciences, including economics, and many venues exist for financial scholars. For instance generic efforts to describe nations, going beyond the idea of national culture indices exist. So Hall and Soskice (2001) propose an index based on a dichotomy between contractual vs. relational economies. This distinction echoes historical evidence provided by Greif (2006) who studies the development of trade by Genovese and Maghribi traders comparatively, from the 10th to 13th centuries. He shows how reputation and family ties (among Maghribi traders) can be substituted for analytical accounting, contracting, and legal enforcement (with the Genovese).

The definitional issue of what culture is, remains, as does how financial scholars should tackle it. This is what is considered next. In particular, it is highlighted that over-simplified views of culture are likely to fail, while, in conclusion, it is suggested to backtrack definitions of culture in approach tentatively labeled *backward definition of cultures*.

5.4. Culture as *layers* and considering *financial cultures*

Firstly, we wish to stress the emphasis put on globalization, and on the existence of a spreading "global culture" by a number of sources, which were mentioned earlier (Inglehart, 1997[ΔΔΔ]; Leung, *et al.*, 2005[ΔΔ]; Shiller, 1999). Shiller insists that the countervailing influences of "national cultures" and a "global culture" should be considered, when studying the behavioral specificities of interest to financial scholars. Inglehart$^{\Delta\Delta\Delta}$ derived from the World Value Survey a theory called "post-modernism", where economic development provides ground for a "post-modern" culture, which is largely orthogonal to national cultures. In any case, this push for globalization in finance (Stulz, 2005), and beyond (Guillen, 2001), sets a number of issues that have to be considered, when relying on "national cultural indices".

Recent research in International Business outlined the importance of cultural layers, national culture being only one of them. This focus on culture as the combination of varying frames of reference, within the individual, their potential contradictions, shifts, re-combinations is much in line with traditional cultural research, specifically within the American social sciences (Cuche, 2004). Moreover, recent advances in cognitive research provide ground to believe that it is compatible with the functioning of the individual mind. DiMaggio (1997) underlines how recent advances in cognitive sciences, in psychology and in sociology, provide basis for the development of a relatively consensual research effort, structured around the idea of cultures as layers and toolkits.

A benefit of these approaches is that they restore some of the anecdotic breadth that our survey brought about, including aspects of culture related to organizations, techniques, professions, genders, ethnicity, and (specifically with regards to our screening) with financial cultures (sections 4.3).

At this juncture, we must mention the growing field, within economic sociology, that considers finance as a culture (MacKenzie and Millo, 2003, building on earlier and comparable analyses of economic phenomena). This research left outside the scope of this research until now, and as resulting from our field-based screening, is of interest in two ways. Firstly, it seems to have gained some fame, including among financial practitioners and scholars, particularly in the wave of the recent financial crisis. Secondly, it corresponds to an elusive but well engrained idea, illustrated in the previous paragraph, that the business of finance requires a *culture*, to lend successfully in banks, to trade and cover risks on markets etc. After all, if three significant sources for culture emerge, by now, as being a global culture, countries and organizations, it is surprising that professions should not feature prominently.

They are, and have always been, a central tenet in society (Durkheim, 1897/1967; Abott, 1988). Further, market finance with its "cognitive complexity and mature mathematical models" (MacKenzie and Millo: p. 136) has a powerful cognitive base to be globally shared across countries, ethnicities, social classes, etc., provided it is taught and learned. So, the presumption is that financial cultures should supersede national and socio-economic cultures, quite efficiently, in many circumstances, and in many ways. This would be particularly true for a financial culture, technical and deductive, as opposed to, say, a national culture, seemingly more value-driven.

MacKenzie and Millo (2003) follow the creation of the CBOE (Chicago Board Option Exchange) and its seeding across the U.S, and the globe, to provide a case for a vision of finance as a "performative culture". Other recent research delineates varying views on "financial cultures" (Fligstein, 2001[36]; Westbrook, 2009), views that do not entirely, nor necessarily overlap with the "performative" view.

These streams of research *about* finance, currently beyond the *social boundaries* of the financial discipline, contribute, at the very least, one key message. The emerging conception that the business of finance requires some specific professional cultures has theoretical precedence, and academic depth; it relates to the practice of finance in banks or on markets; it emerges, in a seemingly anecdotic way, from the screening undertaken, here, in this research.

It follows that the consideration of national cultures will need to account for this powerful – and in many ways global – source of norms and behaviors: financial cultures.

6. Conclusion: shouldn't financial research explore culture further?

This review should provide the reader with more perspectives than answers. The purpose has been, precisely, to underline the fact that culture-research is not trivial, and does not fit well into the traditional methodological toolkit used in finance. And culture-views, currently

36. He underlines the rise to prominence of two financial cultures over the last three decades, first a financial culture and then a shareholder culture

seen to be emerging in financial research, through the field-based screening process undertaken, can be characterized by an overall lack of consistency. This should not come as a surprise (Reuter, 2010), and this will explain why many financial (and economic) scholars view culture-research as outside the natural range of their investigations.

Hence, the first question is answered negatively: *can one or more accepted theoretical background(s) be characterized for cultural research in finance, in order to derive testable hypotheses for empirical research?* Culture is subject to what we have labeled *definitional tactics*, and it is a central concept in the social sciences; many speak about a "meta-concept". Culture-research is ancient, broad, political and rife with controversies. It is not foreseen that finance will witness the emergence of an overarching theoretical framework that would support the modeling and empirical investigation of culture. *Dimensionalism* is very promising, but it seems unlikely to be adopted as an overarching and integrative framework within financial research (see, section 4.2). Yet, we do not believe that this should discourage financial researchers interested in culture.

We have exemplified that culture has, at least implicitly, been around in financial research for a long time. It has crystallized many preoccupations centered on the empirical signification of countries. The ideas of "country proximity" and of "familiarity", that is present over the last half a century in the study of trade and financial flows, illustrate this point. In the field of investment management, the identification of countries as a primary source for diversification, beyond industries, has been a key preoccupation for a long time too. Stulz (2005: details in section 4.3.2) recently emphasized how a "country puzzle", involving nine areas of financial research, has become a central polarity for research.

So, *can 'culture and finance' be delimitated as a research-area within finance?*

It has been around for a long time. Stakes are high. In particular, we illustrated how the "country puzzle", "institutional embededdness" and/or cultural factors are limiting the normative assessments for a number approaches in finance, in particular in *law and finance*.

The interest is rising further, and some research is now being integrated: two significant *dimensionalist* papers just came out, one in the fall of last year (2010), and another this February (2011). Two articles with "alternative views" attest to the large audience the topic is now receiving over the last couples of years (Stulz and Williamson, Grinblatt and Keloharju, citation indices in footnote in introduction). At the fringe of financial research (economics, management), established financial scholars are calling for further investigation of culture-related variables (trust, religion, and so on), and *dimensionalist* researchers call for the independent establishment of "Cultural Finance". International Business Scholars interested in Finance have already pushed the agenda further. Overall, the time seems to have come to open the *black box* of the "institutions of embededdness". So, we expect that *culture and finance* will grow further, and become a research area in its own right.

Yet, our screening process has emphasized the ambiguity in the current uses of "culture". In particular, ambiguity occurs in relation to specific know-how in financial theories, financial conventions and financial practices. While this may appear anecdotic, it is not. The alignment of these occurrences has a long tradition in sociology, and other disciplines, which investigates "finance as a culture", and requires serious consideration. Practitioners commonly use this concept in relation to business practices (e.g. the specific "credit culture" of a bank). Furthermore, this profound ambiguity in use may have some depth, and it is aligned with recent advances in the cognitive sciences, sociology, psychology and international business (culture as *layers*). It raises serious questions as to the mingling of national cultures with the business of finance and its professional cultures.

As a result, trying to shy away from controversies about what culture is (or should be), and in the belief that culture references are bound to continue to grow in finance, we suggest that finance researchers should pragmatically implement an approach we tentatively label *backward definitions*.

Researchers could define culture from the financial phenomena being studied, and they should relate it to collective behaviors observed and grounded in some *specific* culture. The culture will then have to be defined *ad-hoc*, with appropriate references, and with a focus on the mechanism at play, backtracking the definition (hence a *backward definition*). Once a mechanism is delineated, a group's behavior is linked to some financial outcome; then the specificity of this group is identified through its distinctive *collective behavior*, and a specific culture with specific content will emerge naturally. Stated differently, and roughly, the "*whos*" and the "*hows*" will clarify the "*what*" of cultural content. In fact, we note that the "successful" *dimensionalist* papers, which are referenced here, provide this focus and specificity with an emphasis on precise mechanisms. They mostly concentrate on one or two *dimensionalist* measures, which are known to relate to the object of their study, in proximate disciplines (such as, but not limited to, economics, law, politics, psychology, and sociology).

Advocating a pragmatic approach based on these *backward definitions*, we believe that financial research should restore the diversity in meanings to "culture", with a primary, but not exclusive, emphasis on national cultures. And we see no reason why it should, *a priori*, include or exclude *dimensionalist* approaches. Some of the *dimensionalist* indices are grounded in extended psychological research, and provide a very strong background for financial research (this includes in particular, and for example, decades of investigation on the relevance of *individualism / collectivism*). Further analysis of the variety in cultural approaches (*layers*), and of the way they relate to the variety of financial subjects, is a promising proposition for future research.

It will not be easy to encompass culture-research into finance, and it will require changes in methods, including more conceptual and qualitative approaches, *converging bodies* of evidence, and in particular, extensive as well as patient and considered cross-disciplinary borrowings (Hofstede's quote in exergue). However, simplified approaches will be prejudicial to the understanding of culture in finance, as well as to the progress of financial research along this axis.

So to prosper into a research-area '*culture and finance*' should avoid controversies, it should progress pragmatically around the notion of *backward definitions*, with emphasis on mechanisms and *collectives*, and it should borrow from the wealth of culture-knowledge accumulated in adjacent disciplines.

7. Appendix 1. Intuitive breadth of culture definitions

Intuitive breadth of culture definitions, as collected from cited authors, and organized by discipline. When the concept defined is not 'culture', it is provided in parenthesis: Author, date (concept).

Disciplinary classification is indicative. Authors are by alphabetical order.

7.1. Synthesis

Drawing inference from the sample of definitions provided here, culture is associated with the following list of concepts: aesthetics, assumptions, beliefs, belief systems, categorizations, codes of conducts, cognition, concepts, convention, customs, discourse, doctrine, ethos, expressive symbols, facts, identities, ideologies, institutions, knowledge, language, material culture, meanings, models, motivational goals (values), norms, patterns of sampling information from the environment, practices, prejudices, priors, recipes, representations, rituals, role definitions, rules, schemata, self-definitions, shared attitudes, signs, suppositions, standard operating procedures, social institutions, strategies, style , symbols, tools, traditions, unstated assumptions, values, shared values.

Only *values*, *norms* or *beliefs* seem to carry generality through their frequency of occurrence.

7.2. Definitions in economics

Aoki, 2001: "the basic nature of social capital in the social exchange domain may remain relatively robust over time, which roughly corresponds to what is normally referred to as a cultural pattern..."

Aoki, 2001 (institutions): "self-sustaining system of shared beliefs... In order for beliefs to be shared by the agents in a self-sustaining manner and regarded by them as relevant to the consequences of their choices, they must have substantive bases"

De Jong, 2009$^{\Delta\Delta\Delta}$: he reviews different sets of definitions and distinguishes between broad and narrow definitions of culture. The broad definitions "have in common that they refer to the entire social system; the complex 'whole' and the 'totality'. By stressing the entirety, these definitions lack focus and become open-ended.... In my view, a problematic feature of these definitions is that they contain both the possible sources of behaviors (*e.g*. beliefs), the behaviors itself, and its results". The more narrow and more useful definitions, all "have some common features: i) values are essential, ii) they refer to a group, iii) they refer to a trend or a pattern, and iv) the cultural elements are humanely devised aspects that are transmitted from generation to generation. All definitions refer explicitly or implicitly to values"

Greif, 1994 (institutions and culture): "institutions – the non-technological constraints on human interactions – are composed of two interrelated elements: cultural beliefs (how individuals expect other to act in various contingencies) and organizations (the endogenous human constructs that alter the rules of the game)"

Guiso, Sapienza and Zingales, 2006, providing a "narrow definition of culture": "those customary beliefs, values, and social constraints that ethnic, religious and social groups transmit fairly unchanged from generation to generation" [with reference to the Webster dictionary]"

North, 1990 (institutions): institutions have three dimensions: they consist of informal constraints, of formal constraints and of the enforcement of these constraints.

North, 1990: Culture is defined as the antecedent of informal constraints: "Where do informal constraints come from? They come from socially transmitted information and are part of the heritage that we call culture". Culture provides "customs, traditions and codes of conducts". Culture is of major importance for economic phenomena "the formal rules make up a small (although very important) part of the sum of constraints that shape choices; a moment's reflection should suggest to us the pervasiveness of informal constraints".

Williamson, 2000 (embededdness): there are "four levels of social analysis [...] the top level is the social embededdness level. This is where the norms, customs, mores, traditions, etc. are located. Religion plays a large role at this level. Although Level 1 analysis is undertaken by some economic historians and other social scientists... level 1 is taken as given by most institutional economists... The concept of embededdness, both at the level of society and in the context of ongoing network relations, has been advanced to help explicate these issues (Granovetter, 1985). The vast literature on culture (Paul DiMaggio, 1994) is also pertinent. Neil Smelser and Richard Swedberg discuss these and related issues in their introduction to the Handbook of Economic Sociology, where they observe that different kind of embededdness – cognitive, cultural, structural and political – should be distinguished, and conclude that the concept of embededdness remains in need of greater theoretical specification"

7.3. Definitions in finance

Breuer and Quinten, 2009* (culture as values):** "culture may be understood as a complex entity of cognitions, shared by the members of a social group. The focal point of the cognitions is (core) values, which are assumed to steer individual behavior"

Desender, Castro and Escamilla de Leon, 2007°: "culture refers to the complex of meanings, symbols, and assumptions about what is good or bad, legitimate or illegitimate that underlie the prevailing practices and norms in a society (Bourdieu, 1977). Value emphases are the essence of culture seen this way. They are the implicitly or explicitly shared, abstract ideas about what is good, right, and desirable in a society (Williams, 1970). They justify and guide the ways that social institutions (*e.g.*, the family, education, economic, political, religious systems) function, their goals and modes of operation. Social actors (*e.g.*, organizational leaders, policy-makers, firm managers) draw on these cultural value emphases to select actions, evaluate people and events, and explain or justify their actions and evaluations"

O'Bar and Conley, 1992*:** "the set of shared beliefs and practices that define a society's (or an organization's) way of life. Culture provides the mental map that guides individual members of the society through their daily live"

Schiller, 1997: "the concept of culture central to sociology and cultural anthropology ever since the work of Taylor (1871), Durkheim (1893) and Weber (1947) is related to the selective attention that the human mind exhibits. There is a social cognition, reinforced by conversation ritual and symbols that is unique to each interconnected group of people; to each nation, tribe, or social group. The array of facts, suppositions, symbols, categories of thought that represent a culture have subtle and far-reaching affect on human behavior"

Sekely and Collins, 1988*:** "while there is a great deal of discussion and debate over exactly what constitutes culture, most definitions include the following elements: social institutions, belief systems, aesthetics, language, and material culture. It is this last element, which includes a society's economic structure and technological capabilities that probably is most closely related to the capital structure tendencies of a society. Specific areas most likely to influence capital structure include the different legal and tax systems, which give rise to differences in property rights across cultures. However, the potential impact on capital structure is not limited to the material portion of culture. There are a number of other' aspects of a society's culture which also could impact on the financial structure of a firm"

Stulz and Williamson, 2001*:** "for our purpose, a suitable definition of culture is the one that North (1990) cites from the work of Boyd and Richerson (1985): culture is defined as 'transmission from one generation to the next, via teaching and imitation, of knowledge, values, and other factors that influence behavior'"

Throsby, 2001: "a set of values, beliefs, traditions, customs, etc. which serve to identify and bind a group together".

7.4. Definitions in cross-cultural psychology

Licht, Goldschmidt and Schwartz, 2007: "definitions of culture abound, but the common denominator of all the definitions is that culture represents shared values and beliefs "

Schwartz, 1999°°° (cultural *vs*. individual values): "the explicit and implicit value emphases that characterize a culture are imparted to societal members through everyday exposure to customs, laws, norms, scripts and cultural values (Bourdieu, 1972; Markus and Kitayama, 1994)"

Schwartz, 2004°°° (culture as values, at the collective level): "the rich complex of meanings, beliefs, practices, symbols, norms, and values prevalent among people in a society. The prevailing value emphases in a society may be the most central feature of culture... These value emphases express shared conceptions of what is good and desirable in the culture, the culture ideals"

Schwartz, 2004°°° (culture as values *vs*. other sources): “note that I refer only to value dimensions. In the introduction I argued that these are particularly significant dimensions for comparing cultures because they affect so many different aspects of life. But other dimensions of cultural difference, such as the tightness or looseness of normative systems, holistic *vs*. analytic styles of thought, degree of emotional expressiveness, and time perspective, are also important”

Triandis, 1996 (cultural syndromes)°°°: “the patterns of shared attitudes, categorizations, self-definitions, norms, role definitions, and values...”

7.5. Definitions in international management

Earley, 2006: “culture is not a value or a set of values; culture is the meaning we attach to aspects of the world around us... Many shortcomings of current research on cross-cultural issues can be connected to the obsession we have values as culture rather than meaning as culture. Even the traditional scholars dealing with values (Parsons and Shils, Kluckhohn and Strodtbeck, Mead, Rokeach) did not fall into this trap that values are culture... Second meaning systems are imperfectly shared across individuals and/or segments (sub-populations) within the same society”

Hofstede, 1980°°°: “collective programming of the mind [...] distinguishing the members of one human group from another”

Hofstede, 2001°°°: “a social mind”

Hofstede, 2004°°°: “Culture is to society what memory is to individuals. It includes what has worked in the history of the society – tools concepts, ideologies, norms, values, prejudices, standard operating procedures, unstated assumptions, pattern of sampling information from the environment – that most members of the society teach to the next generation. This teaching is done by example or explicitly...”

House and Javidan, 2004: “we define culture as shared motives, values, beliefs, identities and interpretations or meanings of significant events that result from common experiences of members of collectives and are transmitted across age and generation”

House, Quigley and de Luque, 2010: ... following their preceding 2004 definition... "we emphasized the 'sharedness' of the cultural indicators among members of a given collective and noted that the specific criteria used to distinguish among cultures (*i.e*. dimensions of culture) were likely to depend on the preferences and/or discipline of the investigator and the issues under investigation"

Siegel, Licht and Schwartz, 2006: "social players interact with partners assumed to share the same priors (beliefs) and to be guided by similar sets of motivational goals (values)"

7.6. Definitions in political sciences

Inglehart, 1997°°°: "a culture is a system of attitudes, values, and knowledge that is widely shared within a society and is transmitted from generation to generation. While human nature is biologically innate and universal, culture is learned and varies from one society to another. [...] By culture, we refer to the subjective aspect of a society's institutions: the beliefs, values, knowledge, and skills that have been internalized by the people of a given society, complementing their external systems of coercion and exchange. This is a narrower definition of culture than is generally used in anthropology, because our purpose here is empirical analysis"

Inglehart, 1997°°° (culture stability): "the more central and early learned aspects of culture are resistant to change, both because it requires a massive effort to change central elements of an adult's cognitive organization, and because abandoning one's most central beliefs produces uncertainty and anxiety. In the face of enduring shifts in socioeconomic conditions, even central parts of culture may be transformed, but they are more likely to change through intergenerational population replacement than by the conversion of already socialized adults"

7.7. Definitions in sociology

Cuche, 2004: "the concept of culture is inherent to thinking in the social sciences. In a way, it is a necessary concept to fathom singularity, within the diversity of the human race, in a non-biological way (la notion de culture est inhérente à la réflexion des sciences sociales. Elle leur est nécessaire en quelque sorte pour penser l'unité de l'humanité dans la diversité autrement qu'en termes biologiques)"

DiMaggio, 1994 (culture processes): "shared cognition, values, norms and expressive symbols"

DiMaggio, 1994 (culture processes): "representations of culture as a toolkit or repertoire [...rather than] the latent-variable view of culture as coherent, integrated, and ambiguous"

Jepperson and Swindler, 1994 (culture's dimensions): culture's dimensions ordered from the least conscious to the more expressive [identical paragraphs in original]:
"Codes, rules, schemata, models
Identities, practices, recipes, strategies, norms, values
Convention, custom, tradition
Symbols, signs, rituals
Knowledge, discourse, representations, doctrine, ideology
Ethos, style"

Jepperson and Swindler, 1994 (institutionalization of culture): "some cultural elements are more institutionalized than others, *i.e.*. more linked to other cultural elements, more embodied in standardized routines and formal organizations, more taken for granted as fixtures of the environment [...these forms of culture that are] congealed in forms that require less by way of maintenance, ritual reinforcement and symbolic interaction than the softer realms we usually think of as culture"

Scott, 95 (institutional carriers): "Scott distinguishes among three main institutional carriers, namely cultures, social structures and routines" (in Guillen, 2004)

8. Appendix 2. Definitions for national culture indices

De Jong (2009: appendix 1, p. 197, 206) provides a complete overview of the varying *dimensionalist* indices.

8.1. Hofstede's five dimensions

The following citations are obtained from Hofstede (2001: p. xix & xx)

"**Power-distance** is the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally. The basic problem involved is the degree of human inequality that underlies the functioning of each particular society".

"**Uncertainty avoidance** is the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are novel, unknown, surprising, different from usual. The basic problem involved is the degree to which a society tries to control the uncontrollable".

"**Individualism** on the one side *versus* its opposite **collectivism** is the degree to which individuals are supposed to look after themselves or remain integrated into groups, usually around the family. Positioning itself between these poles is a very basic problem all societies face".

"**Masculinity** *versus* its opposite **femininity** refers to the distribution of emotional roles between the genders, which is another fundamental problem for any society to which a range of solutions are found; it opposes 'tough' masculine to 'tender' feminine societies".

"**Long-term** *versus* **short term** orientation refers to the extent to which a culture programs its members to accept delayed gratification of their material social and emotional needs"

8.2. Schwartz's four dimensions

The following short definitions are obtained from Chui, Lloyd and Kwok (2002*++: p. 101-102) Extended definitions can be found in Schwartz (1994: p. 102-105 for group-level value types; the individual-level value types are different and a definition is provided in table 7.1, p. 89)

Conservatism/ autonomy

Conservatism includes values that are important in close-knit harmonious relationships, in which the interests of the individual are not viewed as distinct from those of the group. These values are primarily concerned with security, conformity, and tradition.

Intellectual and Affective Autonomy are values likely to be important in a society that views the individual as an autonomous entity entitled to pursue his or her own interests.

Intellectual autonomy places an emphasis on self-direction and **affective autonomy** emphasizes stimulation and hedonism.

Mastery/Harmony

Mastery accentuates active mastery of the social environment through self-assertion. Such values promote the active efforts of people to change their surroundings and get ahead of others.

Harmony lays emphasis on harmony with nature.

Egalitarianism/ hierarchy

Egalitarian Commitment emphasizes the transcendence of selfish interests. This group of values concerns voluntary commitment to help improve the welfare of other people.

Hierarchy stresses the legitimacy of hierarchical roles and resource allocation.

9. Appendix 3. Institutional control variables in the *dimensionalist* literature presented in our database

We provide, below, a categorization of varying "*institutional*" variables used in any of the 29 articles contained in the *dimensionalist* database. The categorization is our own and contains 85 items. A Excel table with further details is available form the author, upon request.

The scope of this survey has not included a consideration of what institutions encompass. The concept may seem more appealing because it is less 'fuzzy'. Yet, potential discrepancies within disciplines may be counterbalanced by a larger variance in meaning across disciplines than is the case for culture. As an illustration, let us note that, in finance, institutions may describe the "institutional investors", or the bodies that contribute to the functioning of the markets (rating agencies, regulators...) in a narrow sense. Whereas, in a broader sense, it is often associated with the legal infrastructure in which financial markets and firms operate. In a broader sense still, it also includes elements of the political or social environment.

Below, we reproduce a list of contextual elements that have been considered as part of the institutional environment by at least one researcher in the database. It does not provide a list of 'institutions'. Illustrative definitions on institutions and on the relation between institutions and culture are provided in appendix 1. Defining and characterizing 'institutions' for financial research should be the object of further research.

We provide more details on our website. In fact, an excel spreadsheet is available that lists a total of about 120 "*institutional*" indicators, along with original labels, initial sources (one specific source per indicator) and corresponding *dimensionalist* papers implementing the variable.

Corporate governance environment

Accounting

- A composite index of overall disclosure quality and intensity
- Accounting quality
- Accounting transparency
- Transparency and timeliness of financial information

Boards. Board efficiency

Market efficiency

- Average transaction cost for investment management
- Protection of minority shareholders (index)
- Take-over market: existence of hostile takeovers

Ownership concentration

- Fraction of insider ownership
- Fraction of ownership by minorities
- Median ownership by top three shareholders
- Fraction of firms with no controlling shareholder

Legal environment

Legal (financial)

- Existence of legal reserve to prevent dissolution of company
- Anti director rights index & shareholder protection & aggregate 'investor protection' index
- Creditor rights
- Securities law disclosure quality
- Securities law private litigation importance
- Outside Investor Protection
- Anti Self-Dealing index

Legal (general)

- Case Law dummy
- Legal Origin dummy
- Contract enforcement index
- Legal Enforcement index
- Legal formalism & legal flexibility
- Rule of law
- Efficiency of the judiciary

Culture & geography

Culture

- Dominant religion
- Existing religions (% or dummies)
- Common language
- Major languages in countries
- Common colonial tie
- Ethnic fractionalization
- Ethnic, language & religious fractionalization, separate and aggregate indices

Distance

- Distance from the equator
- Distance between capital cities for country pairs

Wars. Number of times a country was at war

Economic environment

The macro-economic environment

- Quality of the banking system
- Antitrust: perceived effectiveness of antitrust Policy

- Antitrust enforcement expenditure
- Inflation
- Dependency ratio (proportion of pop. pensioned)
- Natural resource abundance
- Existence of national deposit insurance scheme
- Existence of an exchange rate system
- Degree of concentration of countrywide firms
- Infrastructure quality: facility of transportation
- Existence of capital controls

Main indicators

- GDP per capita
- Development: growth in GDP per cap growth
- Gross domestic product (GDP)
- National economic inequality

Openness

- Degree of overall globalization
- Social and economic openness
- Trade effectiveness / trade barriers
- Trade openness (Trade over GDP)

Taxation

- Tax on investment by non residents
- Corporate tax rate
- Dividend tax systems

Political environment

Country governance

- Government quality or government effectiveness
- Political legitimacy of government
- Measure of political constraint on governmental action
- Civil liberties
- Corruption, corruption perception
- Economic freedom
- Quality of checks and balances in the legislative function
- Risk of expropriation, property rights
- Principal component: voice and accountability, political stability and absence of violence, government effectiveness, regulatory burden, rule of law, freedom from graft

- Aggregate index for institutional quality (rule of law, self-dealing, public efficiency, public enforcement, expropriation)
- Property Rights: degree of protection of private property and property rights

Political risk
- Country risk index & varying political risk indices

Political system
- Federalism
- Lest/right; coloration of governments
- Political stability
- Former socialist state dummy

Elements of social stability and protection
- Newspaper circulation
- Principal component of revolution, assassination and corruption; or same indices separately
- Rigidity of Labor Laws
- Labor relation quality: implicit contracts = employee's tenure
- Social benefits: sickness and health benefits / unemployment benefits / social security laws
- Tenure: average employee tenure with one employer
- Union power: legally mandated worker participation on boards
- Union density

Socio-political environment

Human capital
- Human Capital index
- Life expectancy
- Literacy rate
- Secondary school enrollment

10. Bibliography

We are indebted to one of our reviewers for this marking advice, simplifying reading. Details are available in footnote number 1 and in section 2.2. A number of bibliographic changes took place during the revision process of this survey. The author and editors did their best to track them down. It is for instance noteworthy that Siegel, Licht and Schwartz (2008) is now forthcoming in the Journal of Financial

Economics (2011). All remaining errors are the author's responsibility... Furthermore we owe an apology for any additional dimensionalist research-papers that will have escaped our attention. Incidentally, the INFINITI (International Finance) consortium is proposing in its 2011 Annual Conference a research-track labeled "*Culture, law and finance*". All these ongoing changes are yet another testimony of the strong and raising interest for cultural approaches among financial scholars.

*** Identified through the *main screenings* (eighteen articles).

* Identified through the *double review process* (24 additions).

++ A marking for articles, where at least one of the co-authors has an established track record in any of the journals screened as part of the main screening (the J.C.R. list).

*++ It results that *++ stands for articles from the financial community, *lato sensu*.

° Obtained through the initial screenings and analyzed separately due to the more limited relevance.

ΔΔΔ References to 'foundational' articles for *dimensionalism*.

ΔΔ References to seminal critiques of *dimensionalism*. It should be noted that there is "extension", so that there is overlap between the key sources and critiques ΔΔ(Δ).

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