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Efficient monitoring and control in intangibles-driven economies: is full independence always required?

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Abstract

The current crisis puts at issue the self-regulated market system of monitoring and control. Claims for restoring the proper functioning of market economies in general, and financial markets in particular, call for either establishing new sets of rules or creating new supervising authorities. Both claims rely on the received mantra of full independence that applies whenever control is concerned. However, our analysis pays attention to a neglected aspect of monitoring and control, which requires the capability to discovering and understanding flaws in and dangers from the inner congeries of the business affair under examination. Arguably, this business-specific expertise and independence trade off. To overcome this problem, an optimal share of non-independent controllers may be chosen from or appointed by stakeholding constituencies of the business affair. They can provide proficient monitoring and control without colluding, in principle, with executive managers of the activity to be controlled.

JEL Classification: G30, M41, D80

Efficient monitoring and control in an intangible-driven economy: is full independence always required?

1. Introduction

According to the Group of Thirthy's report (2009: 4), "the key issue posed by the present crisis is crystal clear: "How can we restore strong, competitive, innovative financial markets to support global economic growth without once again risking a breakdown in market functioning so severe as to put the world economies at risk?". "Policymakers, central bankers, and financial regulators will necessarily remain focused on dealing with immediate threats to the effective functioning of markets. However, in taking what are in effect emergency measures, a consensus on the desirable and lasting elements of a reformed system can be useful, and even necessary, to speed restoration of confidence in sturdy, competitive, and efficient financial arrangements serving both national and international markets."

Generally speaking, two main directions of reform are suggested. On one side, some claim for bettering the rules of the market game among private actors; these rules should be especially concerned with watchdogs of the market playing field such as rating agencies, external auditors, boards of directors, and so on. On the other side, others argue for establishing a new supervising authority outside the market because they do not longer believe in the virtue of the "invisible hand" of markets that are increasingly fast-moving, changing and globalised. Both proposals share a common objective: they aim restoring the proper functioning of market economies through the independence of their monitoring and control, obtained either by a large reform of the monitoring rules in the first case, or by the creation of a supervising authority whose independence is securitised "by definition" through governmental intervention. As a matter of fact, independence has been the "conventional wisdom" (Bhagat and Black, 1999) and the received answer since the 1970s, both by academic literature and regulators (at least in the US and in the UK), whenever monitoring and control are concerned.

However, these received analyses of control magnify independence, arguably to the detriment of expertise and knowledge. Whatever accomplished by private actors or public authorities, the efficiency of control certainly relates to the distinctive characteristics of the underlying business affair under examination. Even though independence is surely of

value for the resulting performance of controlling bodies, the latter also need gathering relevant and reliable information in order to properly apply their vested authority in shaping the business they have in charge to control. Confronted with business activities that are increasingly driven by intangible resources (information and communication technologies; research and development; network and empowerment enhancement; workforce training and labour organisation improvements) an independent controller - who does not have any specific knowledge of the business - either provides a rather deceptive monitoring performance or needs to hire more and more external expert consultants and advisors. Accordingly, the claim for full independence surely takes advantages by increased independence, but pays the opportunity cost of lacking business-specific expertise and knowledge by appointed watchdogs. This may eventually lead to adverse consequences and inefficient results when the importance of intangible resources and activities increase. The board of directors of listed companies vividly illustrates our argument, with the common requirement of so-called ‘supermajority board’ (that is, a board with more than 80% of independent members). We therefore focus on this particular monitoring agency, even if our argument extends to other bodies.

Therefore, the acknowledged importance of intangible drivers of performance in developed economies requires a reconsideration of the mantra of independence for controlling bodies. Our analysis identifies the trade-off between independence and business-specific expertise. The existence of this trade-off recommends paying attention to the specific level of intangibles in business activities to be controlled in order to identify the correct mix between independence and specific expertise which securitises the optimal performance of control. This suggestion can be integrated by supporters of enhanced private watchdogs under reformed rules of the market game, and by supporters of new supervising authorities provided by the “visible hand” of governments as well.

The rest of the paper is organised as follows. The second section summarises two alternative solutions claimed for to overcome the current crisis. The third section identifies a common belief of both solutions: the mantra of required independence of control. The fourth section disentangles the needs of efficient control activity, which depend on the underlying characteristics of the business, especially the relative significance of intangible resources and activities. This approach questions that full independence is always the most efficient solution for every business affair,

since intangible drivers of performance may require business-specific expertise that arguable trades-off with independence. The fifth section analyses how this trade-off works in determining the overall efficiency of monitoring and control. The sixth section draws two main implications of this analysis, namely for the composition of boards of control and for the related informational devices they deal with. The seventh section concludes.

2. The market crisis as the failure of "market watchdogs"

This section briefly summarises the two alternative positions on the suitable institutional reforms currently required by market economies in general and by financial markets in particular. Both proposals, we claim, rely on the critical notion of independence of boards of control.

The recent crisis points to a general deficiency of self-regulated markets in general, and of financial markets in particular. A broad consensus is emerging among academics, practitioners and policymakers about the proved inefficiency of the received set of rules and supervising agencies that were expected to prevent and counter-act market failures and shortcomings. Why institutional watchdogs such as rating agencies, supervising authorities, boards of directors individually and collectively fail to alert and rescue the financial and economic systems? Why the "invisible hand" of the market did not play the right game and spontaneously override the systemic crisis? Given the present conditions of complexity and globalisation of business affairs, is still the market efficiently regulated by the timely and effective reaction of its self-regulatory devices?

Generally speaking, two main answers to these critical issues are claimed for. On one side, some stress the fraudulent misconduct of individuals appointed as controllers and supervisors, driven by their unbounded avidity and clever manipulations in absence of a unique set of rules for the market game in the global field. On the other side, others claim for the incapacity of the market to cope with new economic and financial conditions that go beyond the realm of the old-fashioned "invisible hand". Let summarise both answers in some details.

First answer: Bettering the rules of monitoring and control, especially by establishing a unique system worldwide based on the "independence" of private controllers within the market field.

High profile scandals and frauds prove that the deceptive performance of controllers can be associated with fraudulent conducts, clearly facilitated by their non independence, that is, their eventual collusion with entrenched management. Enron, WorldCom, Maxwell, Bank of Credit and Commerce International (BCCI), Versailles Group, Parmalat, Madoff and Satyam are clear examples in which the frauds were an insider affair. Concerning the latter, the Guardian reports: "*It complied with the latest accounting standards and boasted audit committees, independent directors and a global accounting firm as its auditor […] India has embraced western ideas on corporate accountability, possibly to comfort foreign investors. All the conditions associated with failed audits in the western world are present. Auditors were selected by directors and paid by Satyam. They also acted as consultants to the company. Their fee dependency on corporate clients makes them susceptible to pressures to go along with directors*"[1]. A number of watchdogs' fraudulent misconducts may be listed: KPMG was hammered for its audit of Xerox; *Deloitte, Touche and Tohmatsu* was fined $50m for audit failures at Adelphia; *Ernst & Young* was prosecuted by the Securities & Exchange Commission (SEC) for persistent violations of auditor independence rules; and so on. All these cases show collusion of interests among business insiders. They formally played different roles in the business affair, but actually shared a joint fraudulent behaviour that irresponsibly ignored the broader consequences of respective actions. As an answer, a unique set of monitoring rules worldwide is then claimed for restabilising the independence of those watchdogs and reboot the proper functioning of the market that was seriously damaged by these frauds.

However, contrary to those cases of frauds, audit committees and boards of directors having in change the control of Lehman Brothers and Enron formally complied with all the formal rules of independence. Nevertheless, they factually did not provide timely and effective alerts and counter-actions against disruptive practices that eventually led to destroy the businesses under their control. This suggests that independence does not prevent control failures, or may even favour such failures. The argument is developed in section 4.

The market failures and shortcomings, others argue, may then require the intervention of governments to cope with them. This is the second answer to the crisis of control.

Second answer: The self-regulation of the market is out of date, and unreliable. The solution is to create an independent supervising authority that governments should have in charge.

This answer puts at issue the coexistence of private actors managing the business with private actors having in charge to control them. If controllers are privately connected to the activity under examination, some claim, then they will be framed by the same fragility and inadequacy that the market has currently experienced. Therefore, the urgent provisions taken by policymakers to "fixing" global finance in the last months should become structural. One of the most claimed solutions is to establish supervising authority that watches the watchdogs, according to the Gordon Brown's idea of a "college of supervisors" expected to oversee the biggest financial firms.[2]

However, "*governments broadly welcome the benefits of global finance, yet they are not prepared to set up either a global financial regulator, which would interfere deep inside their markets, or a global lender of last resort. Instead, regulated financial firms are overseen by disparate national supervisors*"[3]. This uncomfortable situation casts doubts on the super-authority proposal, because supervising authorities may always meddle with dispraising a leading global player such a national important bank or a flag-carrying airline. If private actors can be over-optimistic in judging companies, "*imagine how much more so governments would be about their national treasures*"[4]. American regulatory authorities such as the FED and the SEC are increasingly criticised for having accommodated innovative but over-risky practices that eventually proved to be disruptive for the financial system worldwide.[5] During the Hearings of the Committee on Oversight and Government Reform, Alain Greenspan quite clearly admitted flaws and shortcomings in the regulatory actions the FED has made before the crisis.[6]

3. Two solutions, one preconception: independence

Let us resume the two advocated solutions. The first proposal is to amend and reinforce the set of rules that frames the functioning of the market through independent controllers of private businesses. Under this new set of monitoring rules, the market may properly function, some claim. On the

contrary, the second proposal consists in reinforcing the normal functioning of the market, which proved not to be able to survive alone, by establishing independent supervising authorities having in charge the monitoring and control of market operations.
Both the proposals acknowledge the need to restore confidence and reboot the proper functioning of market economies in general and of financial markets in particular. In parallel, they increasingly recognise that market economies and the financial markets have been transformed with respect to the past. They have been reshaped by innovative products and activities fostered by intricate economic organisation of transnational enterprise affairs. Consequently, it results harder and harder to understand the actual and potential value of each business activity. The traditional modes of monitoring and control appear to be inadequate. This is the very motivation behind either the quest of new rules for traditional watchdogs in the first case, and the creation of new supervising authorities in the second case.

In our opinion, rightly address the overwhelming problem of monitoring and control of business affairs requires to clearly disentangling what the controlling activity implies. In the broadest sense, control means the gathering of information in order to exercise vested authority so as to shape the activity of the controlled entity, including by informing its constituencies or stakeholders. As such, independence makes sure that, once aware of flaws and dangers, the controller will "do the right thing to do" by counter-acting the crisis and keeping informed the related parties. This is why rating agencies are required to be "independent" from companies that must be ranked by them, and directors of a company are required to be "independent" from the management of that company. In both cases, independence aims to cut the ties that link controllers to the controlled activity, putting them at a distance from the ongoing functioning of that activity.

The board of directors represents one of the most conspicuous illustrations of this idea of independence. As noted by Cunningham (2008), it is by now usual to answer to corporate crisis by looking to independent directors, where independence is defined or proxied through a set of well-defined, objective criteria (*de jure* independence). Generally speaking, independence is compromised if the director of a company is (or has been) a corporate executive of that company or of its affiliates, is (or has been) employed by that company or by its affiliates, is employed as an executive of another company where any of that company's executives sit on the board, is a

dominant shareholder of that company, has a significant business relationship with that company or its affiliates (including advisory or consulting services), is a close family member of an executive[7] . The Sarbanes Oxley Act, passed in 2002, is no exception, requiring that audit committee be comprised solely of independent members. The objective is clear: *de jure* independence should help to limit conflict of interests, thus increasing the expected performance of directors in their monitoring activity. In the case of auditing, independence should guarantee that the decision not to certify biased information is made without collusion or delay.

4 Is independence the most appropriate solution in every case?

In a sense, this approach based on independence alone neglects or subordinates expertise. Yet some recent evolutions claim for a more balanced diagnose in the case of directors: expertise is increasingly recognized as an important attribute for board members, especially for the audit committee (Cunningham, 2008). Contrary to the rules regarding independence, which followed the usual trail, the Sarbanes Oxley Act (2002) introduced a path-breaking provision by requiring that all audit committee members have financial literacy and that at least one person be a financial expert (sec. 407)[8]. The idea is intuitive: *generic* expertise in accounting and finance, acquired through education or professional activity, may increase the effectiveness and reliability of auditing and then improve the overall quality of monitoring and control. In addition, we argue that, for some drivers of performance and some business models, efficient control may require *business-specific*, rather than generic, expertise. This business-specific proficiency by controllers will be required especially when intangible resources are an important driver of performance and stakes of the business affair to be controlled.

Intangibles have been the object of growing interest among scholars for the last two decades. Macroeconomists increasingly recognise that growth relies

as much on the contribution of intangible resources as on that of tangible ones[9]. In microeconomics[10], it is now widely recognized that successful business models primarily involve investments in intangible, knowledge-based, resources (Foray, 2004). Generally speaking, the following expenditures are considered to nurture the development and maintenance of such intangibles: (i) spending on information and communication technologies (hardware, telecommunication infrastructure and software); (ii) spending on Research and Development (R&D, scientific and non scientific) and patents; (iii) spending on development and maintenance of brands and trademarks (e.g. advertising); (iv) spending on workforce training in firm-specific capabilities and improvements in labour organization (total quality management, job rotation, just-in-time, team working, and so on). The various definitions of intangibles that have been proposed share at least one common point. They insist that intangibles are non-physical (they lack any material support), non-financial (they do not provide any legally-enclosed revenue) and provide relevant future benefits (Kim, 2007). This eventually implies that efficient market pricing scarcely applies or exists for intangibles, and other firm-specific modes of information and control result to be required for them.

5 The trade-off between independence and firm-specific expertise

The focus on independence alone misses an important part of the control activity, since efficient control also entails the ability to gather proper information, which allows to timely and effectively understand the specifics of a (more or less) complex and innovative business. This is especially true when intangibles are involved. The issue is then that this form of specific expertise is arguably negatively correlated to independence as it is commonly defined and appreciated[11]. As a consequence, focus on independence alone may have had and still have adverse consequences, by reducing the ability of the controlling board to collectively discover and properly react to flaws and dangers encountered by every innovative and changing business affair driven by intangibles.
To some extent, our analysis may bring some light to a long-standing and puzzling empirical evidence: independence has a negligible or negative effect on firm performance (see e.g. Klein, 1998; Dalton, Daily, Ellstrand and Johnson, 1998; Bhagat and Black, 1999; Klein, Shapiro and Young, 2005). We argue that the requirement of full independence is to the detriment of specific expertise and knowledge. Whatever accomplished by

private actors or public authorities, the efficiency of control relates to the distinctive characteristics of the underlying business under examination. Even though independence is surely of value for the resulting performance of control, controlling bodies also need to gather relevant and reliable information in order to properly shape the business affair they have in charge to control. Confronted with business activities that are increasingly driven by intangibles resources (information and communication technologies; research and development; network and empowerment enhancement; workforce training and labour organisation improvements) an independent controller - who does not have any specific knowledge of the business - either provides a rather deceptive monitoring performance or needs to hire more and more external expert consultants and advisors. Accordingly, the claim for full independence surely takes advantages by increased independence, but pays the opportunity cost of a significant lack of business-specific expertise and knowledge by appointed watchdogs. This may eventually lead to adverse consequences and inefficient results when the importance of intangibles resources and activities increases.
In sum, business-specific expertise and knowledge is expected to trade-off with *de jure* independence. In particular, our analysis suggests that the optimal level of independence for intangible-intensive business firms is lower, other things being equal, than for mature and stable ones. Put differently, we argue that there is a negative correlation between the level of intangibles and the optimal share of (*de jure*) independent members in controlling bodies such as the board of directors.

To understand better how this trade-off between independency and specific expertise runs, let assume that the firm to be controlled is a "traditional" firm. In this case, the level of intangible resources is relatively low. Therefore, the most efficient control is assured by independent directors. Let now assume that the same firm starts to invest in new business activities that require expenditures in intangible resources. Those independent directors strive then to ensure the same level of monitoring. To do it, they need to hire some consultants and advisors which can help them to understand and explain all the intricacies of the changing business that independent supervisors – being extraneous to the firm – are unable to appreciate. Hiring advisors surely surrogates specific knowledge but also involves new monetary costs which increase with the level of intangible resources and activities driving the business. More "innovative" the firm is, higher are these costs. If we attribute a monetary benefit to the degree of independence by the supervisors – value that is, by definition, at its maximum amount for

a traditional firm-, then the increasing level of intangible resources implies a decreasing of the monetary value of the independence, because of the rising cost of hiring consultants and advisors. This fall in the net value provided by independence is a clear-cut representation of what we mean for trading-off independence and specific expertise. For some level of intangibles involved in the business, the recourse to another advisory report eventually results too costly and it becomes then more convenient - for whichever stakeholder being a claimant on the net value of the joint affair, including shareholders - to directly appoint a trustworthy expert to the Board of control. Therefore, when the level of intangible resources increases, a mixed board of supervisors becomes preferable, that is, a board that comprises independent and non-independent, proficient supervisors. The optimal share of non-independent experts increases with the level of intangibles involved in the joint affair.

6. Summing-up and further implications for controlling board composition and accounting systems

Our analysis concerns the system of monitoring and control that is expected to discover and counter-act flaws and dangers involved by ongoing business operations. This system of "watchdog-ing" appears to be suitable from the viewpoint of private actors and for the public interest as well. Recent crisis and shortcomings put at issue the received system. Many claim that these market failures relates to the ties between supervisors and the object under their supervision. In parallel, they recognise the supervisors' inability to properly discover and understand incoming troubles from business affairs that are increasingly innovative, complex and changing.

One claimed solution suggests to bettering the monitoring rules in order to provide the market watchdogs with new and more adequate instruments to protect market against fraudulent behaviours and abuses. Another claimed solutions suggests to introducing a new kind of supervising authority, external to the market, under the responsibility of governments, and thus able to regulate the proper functioning of the market economy. Both solutions have the same common objective: restore the proper functioning of the market operations. Both solutions share the same fundamental preconception: the independence of control. Independence is provided by the new set of monitoring rules according to the first solution, and by the

supervising authority that is supposed to be "independent by definition" according to the second solution.

Our analysis relates the efficiency of control to the underlying characteristics of the business affair to be controlled. A clear example is here the increasing role of the so-called 'intangible' resources in driving business performance and stakes. In the case of the most innovative firms, a significant part of overall strategic policies, involving investments in technologies, innovation, networks and training, may be understood and appreciated only by experts having a direct connection with the specifics of that business in situation through time. Arguably, this firm-specific expertise (fundamental to a practical knowledge of those firms where intangible resources are significant) trades-off with *de jure* independence (usually advocated as securitization for fair monitoring and control).

Because many markets, including financial markets, are nowadays increasingly driven by intangibles resources and activities, boards of control increasingly need to discover and appreciate the performance potential of these "intangible" resources. Unfortunately, efficient market pricing often lack for those resources that belong to the inner congeries of business affairs. Accordingly, policymakers and investors may benefit from a board design more shaped by firm-specific expertise to the detriment of de jure independence. Finally, we argue that efficient monitoring and control may require independence, generic expertise in accounting and finance, but also firm-specific expertise. Given the fact that *de jure* independence and firm-specific expertise trade-off, and the contextual presence of significant intangible drivers of performance (and stakes), there should exist an optimal share of independent controllers, relative to the core characteristics of each business model or industry.

Our analysis implies that any claim for full independence of control eventually results to be reductive, for it neglects an essential part of the control activity. Control issues necessarily imply to penetrate the "black box" of each business, by recognising stakeholders and their dynamic degree of involvement to the joint affair through time, as well as the evolving relationships existing between these different constituencies. Therefore, efficient not-independent controllers - having distinctive specific knowledge - may come from or be appointed by the respective constituencies: this choice may couple variety of interests (relative to

executive management and other insiders) with required capabilities in understanding the specifics of ongoing business processes to be controlled.

The case of the board of directors of a company may illustrate this claim. On the one hand, 'super-majority' boards appear to be attractive devices in very limited cases – contrary to what is usually called for[12]. On the other hand, "grey" or "affiliate" directors (that is directors that do not meet the standard criteria of independence while not being member of the firm's upper management) may enhance the overall quality of control, including auditing and disclosure. This latter category includes agents performing expert services to the company. But it also includes worker representatives, as they are provided for public companies by virtue of (corporate or labour) law in more than 10 EU member States[13].

A further implication concerns the informational flow that the board of control deals with, and the regulation of the informational devices involved in this flow. The working of a mixed board (comprising independent and non-independent, proficient members) may be facilitated by adjusting these informational devices accordingly. These committees are expected to supervise business affairs that are factually driven by (tangible) resources that are priced by active markets, and (intangible) resources that factually are not. The relevant information set is then composed by market-driven and firm-specific information. This muddles every tentative to rely only on market-driven information to gather a proper representation of the business affair. The current failure of marked-to-market accounting (or fair value accounting) is then the failure of an accounting system that purported to neglect the firm-specific side of monitoring and control (Bignon, Biondi, and Ragot 2004),[14] as full independence did. According to OECD (2006, p.7): "*traditional accounting has necessarily remained focused on tangible assets. Traditionally, the only intangible assets recognized in financial statements have been intellectual property, such as patents and trademarks where a market value has been established by a transaction, and acquired items such as goodwill. Although accounting standards can probably be developed further to take into account a wider range of intangibles, clear limits are set by the difficulty of establishing monetary values (valuation) that are at the same time consistent across firms, verifiable and that cannot be easily manipulated. As a result, a significant portion of corporate assets go under-reported in the financial accounts. The relative lack of accounting recognition of intangibles coupled with their growing importance in the value creation process means that the financial statements have lost some of*

their value for shareholders. If other information does not fill the void, there could be misallocation of resources in capital markets."
A market focus is then inappropriate for accounting systems that are increasingly confronted with intangible resources that are fundamental drivers of performance and stakes. Alternative accounting systems should look for a proper representation of the specifics of the inner congeries of ongoing business firms. From this perspective, improvements on historical cost accounting systems may be promising, for historical costs have the main cognitive advantage of being fixed – usually, at least – by actual transactions that can be tracked through time and are easier to be monitored and audited (ref. to Biondi and Rebérioux 2008 for further details). A mixed board is expected to be able to provide trustworthy certification for this historical disclosure of generated performance and entrepreneurial stakes.

7 Conclusions

In conclusion, the suggested approach to identify the optimal composition of boards of control is significant for at least three different reasons:

(1) If we impose de jure independence without taking in account the very object of monitoring, we treat all firms as "traditional" ones. In this way, the more innovative firms will be submitted to a deceptive mode of control (accomplished by independent but ignorant controllers) with inefficiently high costs of monitoring (involved by excessive hiring of consultants and advisors). The same inefficiency is expected to emerge if full independence is applied to the supervising authority established by governments. More is the distance (in knowledge's terms) between the supervisor and the object to be supervised, less is its capacity to timely and effectively appreciate innovative activities and related stakes.

(2) A similar problem derives from the impossibility of an independent supervisor to keep the cognitive contact with the dynamic evolution of business strategies that imply expenditures in intangibles under increased levels of innovation. Again, a mixed board of control - jointly composed by independent and non-independent, proficient members - is expected to increase the overall performance of the system of monitoring and control.

(3) By recognising the relationship between the level of intangibles and the optimal composition of the board of control, we can also bettering the

trustworthiness of the disclosure of information from the viewpoint of the final "users" of this disclosure. A de jure independent board of control will focus its attention only on the traditional value of a firm. It will adopt a static appreciation of the firm that cannot integrate but the instantaneous (and partial) contribution from tangible resources. This approach results in appreciating the value potential of business policies only on their short-term. It would be optimal only if the final user of the disclosure is a trading investor interested in temporarily placements or a regulatory body that is only interested in day-by-day market-clearing stability. On the contrary, if the final user of the disclosure is interested in longer-term entrepreneurial strategies related to the development of the business through historical time - these strategies being generally correlated to increasing expenditures in intangibles resources and activities - a significant quota of the board having in charge the auditing and disclosure of trustworthy information should be composed by non independent, proficient members. Such users may be business investors looking for business partnerships and mergers, long-run venture capitalists, and regulatory bodies committed to the innovation potential of businesses for local economies and the eventual resilience of market economies through time.

Finally, every business affair that is object of monitoring corresponds with an optimal mix of specific expertise and de jure independence, from the perspective of efficient control. Such optimal combination is not only influenced by the current state of intangible resources (static analysis) but also by their evolution and change (dynamic analysis). This eventually calls for an appropriate share of non-independent controllers coming from or being appointed by the constituencies of the business affair to be controlled, coupled with an accounting system focusing on the inner congeries of the enterprise entity through historical time.

References

Baghat S. and Black B. (1999), "The uncertain relationship between board composition and firm performance", Business Lawyer, 54, p. 921-63.

Black Sandra E., Lynch Lisa M. (2001), "How to Compete: the Impact of Workplace Practices and Information Technology on Productivity", Review of Economics and Statistics, 83 (3), p. 434-445.

Bignon, Vincent, Biondi, Yuri and Ragot, Xavier (2004), "An Economic Analysis of Fair Value: The Evolution of Accounting Principles in European Legislation", with a comment by Barker, R.G. (Cambridge University & IASB Scientific Committee) and a rejoinder by the Authors, Cournot Centre for Economic Studies (formerly Saint-Gobain Centre), Prisme No. 4, March. Available at SSRN: <http://ssrn.com/abstract=879273>.

Biondi, Yuri and Reberioux, Antoine,The Governance of Intangibles: Rethinking Financial Reporting and the Board of Directors. EconomiX Working Paper 2008-36. Available at SSRN: http://ssrn.com/abstract=1288707

Caroli E., and Van Reenen J. (2001), "Skill Biased Organizational Change? Evidence from a Panel of British and French Establishments", Quarterly Journal of Economics, 116 (4), p. 1449-1492.

Clarke D. (2007), "Three Concepts of the Independent Director", Delaware Journal of Corporate Law, 32 (1), pp.73-111.

Corrado, C., Hulten, C. et Sichel, D. (2006), "Intangible Capital and Economic Growth", NBER working paper, n°11948.

Cunningham, Lawrence A. (2008),Rediscovering Board Expertise: Legal Implications of the Empirical Literature(October 23, 2007). GWU Law School Public Law Research Paper No. 363; GWU Legal Studies Research Paper No. 363. Available at SSRN: http://ssrn.com/abstract=1024261

Dalton D., Daily C., Ellstrand A. and Johnson J. (1998), "Meta-analytic reviews of board composition, leadership structure and financial performance", Strategic Management Journal, vol.19, pp.269-290.

Griliches, Zvi (1994), "Productivity, R&D, and the data constraint", American Economic Review, 84 (1), March, p. 1-23.

Group of Thirty (2009), "Financial Reform. A Framework for Stability", Washington, D.C. Available at <http://www.group30.org/pubs/pub_1460.htm>.

Jorgenson, D. et Stiroh, K. (2000), " U.S. Economic Growth in the New Millenium", Brookings Papers on Economic Activity, vol. 1, pp. 125-211.

Kim YoungGak (2007), "A Survey on Intangible Capital", CEI Working Paper Series, No. 2007-10, Institute of Economic Research, Hitotsubashi University, December.

Klein A. (1998), "Firm Performance and Board Committee Structure", The Journal of Law and
Economics, 16, pp.275-303.

Nakamura, L.(2003), "The Rise in Gross Private Investment in Intangible Assets since 1978", Federal Reserve Bank of Philadelphia, mimeo.

OECD (2006), Intellectual assets and value creation: Implications for corporate reporting, Corporate Affairs Division, Directorate for Financial and Enterprise Affairs, 10 December, Paris. <http://www.oecd.org/daf/corporate-affairs/>.

Oliner, S. et Sichel, D. (2000), "The Resurgence of Growth in the Late 1990s: Is Information Technology the Story", Journal of Economic Perspectives, vol. 14, pp. 3-22.

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[1] "Sleeping watchdogs", by Prem Sikka, *The Guardian*, Jan 14th 2009, From guardian.co.uk.
[2] "We must not resort to protectionism, warns Brown", by Ashley Seager, *The Guardian*, 30 January 2009, <http://www.guardian.co.uk/politics/2009/jan/30/gordonbrown-davos>.
[3] See note 1.
[4] "Negative outlook - Europe misfires in its attack on the rating agencies", Nov 13th 2008, From The Economist print edition.
[5] More generally, the construction of mechanisms of institutional control of the rating agencies or directly, super-supervisors, will imply several problems. First, we are not sure that this college of supervisors or will be automatically independent from its creator and neutral. Second, this supervisor of supervisors may have too much power and influence by accessing to information that ordinary investors and analysts do not have. Finally, because its ratings will be integral to the regulation of financial firms such as banks, insurers and pension funds, this "preserver of supervisor's morality" will be risky in some circumstances because may create, thanks his institutional and "super-partes" role, a false sense of security and spreads moral hazard: investors tend to rely on the ratings rather than making credit judgments of their own.
[6] Cf. <http://oversight.house.gov/story.asp?ID=2256> and the Hearings transcription at <http://oversight.house.gov/documents/20081024163819.pdf>.
[7] For more details, see Clarke (2007).
[8] Before the accounting scandals of the early 2000's, the Blue Ribbon Committee (1999), launched by the SEC Chairman Arthur Levitt, made a similar recommendation (see recommendation 3, p.12) to the New York Stock Exchange and the National Association of Security Dealers, promptly adopted by the NYSE and NASDAQ. In the U.K., the Combined Code (2003) also contains financial expertise recommendation: "*The board should satisfy itself that at least one member of the audit committee has recent and relevant financial experience*" (p.16, provision C.3.1.).
[9] At the *macro* level, measurements on US data lead to the conclusion that, at the end of the 1990s and the beginning of the 2000s, private investment in intangibles roughly equaled investment in tangibles, representing around 10% of domestic output (Nakamura, 2003; Corrado, Hulten and Sichel, 2006). Corrado *et al* (2006) also estimate that investments aimed at enhancing human resources (training, labor organization including strategic planning) accounted for one third of that total investment. Further evidence is brought by growth accounting, that allocates the growth rate of labor productivity to the weighted rates of productivity of inputs (tangibles and intangibles) plus a residual called "multifactor productivity" (that is usually understood as a measure of technological progress). Corrado *et al* (2006, table 5) find that, for the period 1995-2003, intangibles accounted for 27% of the annual growth, a percentage equal to tangibles for the same period. Once again, the

contribution of training and organizational structure and innovation are decisive (around one third of this 27%). In addition, intangibles may contribute to technological progress (that is the growth of multifactor productivity), strengthening the thesis of a 'new economy' where growth is primarily driven by intangibles, especially knowledge-intensive ones (Oliner and Sichel, 2000; Jorgenson and Stiroh, 2000).

[10] At the *micro* level, countless studies have examined the role played by R&D (Griliches, 1994), new technologies (Black and Lynch, 2001) or innovative organizational practices (Black and Lynch, 2001; Caroli and Van Reenen, 2001) on firm performance. By and large, these studies point out the positive impact of the expenditures for intangible resources that contribute to building up specific "competencies" that allow firms to develop and maintain both core capabilities and competitive advantages over main competitors. Once again, the evidence strongly suggests that intangible resources are a crucial component of long-term business sustainability.

[11] This point does not hold for generic expertise, which can easily be combined with *de jure* independence.

[12] A conspicuous example is offered by the rating provided, since 2002, by the private firm *Institutional Shareholder Services*. Corporate governance of 7500 listed companies (including 2500 in the USA) is assessed on the basis of 60 different criteria. This assessment is subsumed by an index called *Corporate Governance Quotient* (CGQ). In 2005, the adoption of a "super-majority board" (defined here as a board with at least 90% independent members) was considered as the 4th most important criteria out of 60, with a corresponding weight in the final rating. See Institutional Shareholder Services, 2005, "Explaining the CGQ methodology change process", http://www.issproxy.com/pdf/CGQevolvingmethodologyWP.pdf

[13] Namely in Austria, Czech Republic, Denmark, Finland, Germany, Hungary, Luxembourg, the Netherlands, Romania, Slovak Republic, Slovenia and Sweden.

[14] In an address on December 10 2008 before the "Association of European Journalists", Charlie McCreevy, the EU Commissioner for Internal Market and Services, identified ten critical lessons from the current global economic crisis. One of them, Mr McCreevy says, is that "the relatively new International Accounting Standards – especially in terms of the rules on provisioning for bad debts and the valuation of assets – are commercially and prudentially flawed. They have had unintended and damaging consequences for banks operating in illiquid markets and for the markets themselves.", cf. <http://www.iasplus.com/europe/0812mccreevy.pdf> (accessed January 20th, 2009).