**Code Book – RES-061-25-0518 – Law & Agency – PI: Dr. Gerhard Schnyder**

Project overview and goals:

This ‘Code Book’ contains the definitions of different variables that have been collected in relation with the Law & Agency project (RES061250518), which will be used to create a new Shareholder-Orientation Index (SOI) capturing firm-level corporate governance practices. The project aimed to collect data for a sample of large listed companies for four countries (The Netherlands, Sweden, Switzerland and the United Kingdom) for the time period 1990-2010. The project initially aimed to collect data for a sample of 40 companies per country and year. During the course of the project, it was decided to increase sample size to approximately 100 where available sources allowed it. However, the complete absence of archival data for certain firms led to the elimination of companies, which explains why sample size varies from country to country and from year to year. Our sample contains 9704 company/year observations over the period 1990-2010. There are 1038 unique firms in the sample.

The project team has collected information on 95 variables, including financial control variables, which are defined in this code book. For a basic description of the variables, see also the Excel spread sheet that contains the data (SOI\_Data.xlsx[Data Description]).

We distinguish 8 different categories of variables, which correspond with different dimensions of corporate governance: First transparency and communicational aspects; Second, structural and legal control devices including the nature and composition of the board, but also anti-takeover devices, such as voting right distortions; Third, ‘economic components’, which include ownership structures and finance practices; fourthly, incentive structures, which compromises the pay-for-performance schemes;   
Fifth, ‘outcome variables’.  
Here, we distinguish analytically ‘outcome variables’ from ‘choice variables’. ‘Outcome variables’ are defined following Höpner (2003) as variables that are not entirely determined by managerial decisions and do hence not directly measure organisational behaviour. This comprises for instance share price, which can certainly be influence (even manipulated) to a certain extent by the company. Yet, a plethora of exogenous factors influence this variable too. Therefore, such variables cannot be used as direct indicator of a given organisation’s shareholder orientation in the sense of a conscious strategy. This is different from variables such as ‘capital structure’, which is almost a pure choice variable, i.e. the company chooses to adopt a certain capital structure. It should be noted that certain variables *not classified as ‘outcome variables’* here, could arguably be placed in this category. E.g. the ownership structure of a firm is certainly not 100% under management’s control, once a company is publicly listed. Yet, the fundamental decision to go public and to have a significant amount of listed equity is (Höpner 2003).  
Also, some of the variables that we define as ‘choice variables’, i.e. variables that measure organisational characteristics that are the result of strategic choices within the firm, may actually be legally imposed on a company. The choice is then reduced to one between compliance or non-compliance with laws and regulations. Nevertheless we consider it useful to analytically distinguish variables that are closer to choice from variables that are closer to outcome. Sixth, ‘regulatory commitment’ contains variables that measure to what extent a given firm complies with legal or regulatory rules. This dimension essentially measure whether a company commits to higher CG regulatory standards than it would be required by law by opting into stricter regulatory regimes by cross-listing in New York or London. The seventh category contains information about the main company officers (CEO and Chairman). Eight, we also collected some additional variables as control variables.

**Methodology**

Sample:

As stated in the initial project proposal, the aim of the project was initially to follow Höpner (2003) in the sampling approach, i.e. to constitute a repeated cross-sectional sample of the 40 largest listed companies by market capitalisation every year. However, in order to be able to use sophisticated longitudinal econometric techniques and, because of uncertainties around the availability of archival data for each one of the firms in the sample, the sample size was increased substantially.

We first constituted a list of the largest 150 companies by market capitalisation at year end based on Thomsone One Banker. We then compared this list of companies to the lists of listed companies available in various stock exchange yearbooks for each country (see list of stock exchange yearbooks in SOI\_sources.xlsx). We added companies that fell within the initial list by size where they had been omitted. This allowed us to avoid the survivor bias that electronic sources alone would have introduced as they often only contain active companies, or at least the information for defunct companies is incomplete.

A small number of companies, which were in the sample in all but 1 or 2 years, but dropped out of the top150, were carried over from one year to another to increase the number of firms that constitute a ‘balanced sample’.

The ultimate sample size varies greatly from one country to the other and from one year to the other. This is due to the fact that the archival resources used would not contain information for all companies included in the first steps. Most notably, while the list of UK companies contained a large number of companies incorporated overseas, the stock exchange yearbooks generally did not contain information for these companies. It was therefore decided that foreign subsidiaries had to be dropped from the sample (see ‘nationality criteria’ below for further details). This lead to somewhat smaller sample size for the UK in the earlier years, because the UK sample contained a large number of foreign subsidiaries.

The final sample constitutes an unbalanced panel of 1038 unique firms; with 9704 company/year observations over the period 1990-2010 in total.

Nationality criteria:

The approach adopted in this project was one of ‘nationality’ not listing alone. That is to say we only included companies that were both listed and incorporated in the country of interest, eliminating thus foreign subsidiaries. This choice was made partly due to the research question at hand, partly also, because data availability for foreign subsidiaries was very poor. Two criteria determine hence the nationality of a company: The stock exchange listing (a company had to be listed in the country in question) and country of incorporation. We thus eliminated any companies listed in our countries of interest, but incorporated elsewhere.

A small number of exceptions to this rule exist: companies that were taken over or merged with a foreign company, but were from the country of interest at the time of the data point in question were kept in the sample. This was for instance the case of CGE A.B. in Sweden which was acquired by Alcatel-Lucent. Similarly, companies that moved their country of incorporation without being taken over, were kept as well if they remained listed on the stock exchange (e.g. Synthes Inc. in Switzerland).

Data Collection:

Based on the final sample, we first downloaded all variables available from widely-used commercial data providers. These were Thomson Reuters’s ‘Thomsone One Banker’, Thomson Eikon, Datastream, the Osiris and Amadeus databases from Bureau van Dijk, and BoardEx. These are widely used sources in management research, which were chosen based on availability and the quality of the data.

The second step was to collect data from various stock exchange yearbooks and similar publications (see SOI\_Sources.xlsx for a list of sources used and a list of variables). This was a main goal of the project and necessary in order to obtain historical data that was not readily available from the commercial online-databases. These publications were accessed in various libraries and archives in London (London School of Economics library, Guildhall Library), Tillburg (Tillburg University library) and Rotterdam, NL (Erasmus University library), Basel, CH (Economic Archive University of Basel), Lund, SE (Lund University Library, and Economic Library) and Uppsala, SE (Uppsala University library).

The relevant pages from these publications were photographed. Data entry was undertaken by research assistants at King’s College London and Rotterdam Business School.

Given this data collection procedure, for most variables we had to use more than one source (see SOI\_Sources.xlsx), as no single source would cover the whole period of interest or all companies in our sample.  
Partly, the sources overlapped. Where this was the case we cross-checked for consistency and used a third source for spot checks to resolve inconsistencies.

For cases with overlaps and inconsistencies we applied the following procedure. For variables from category 1 (transparency dimension), category 2 (board and capital structure variables), category 3.1 (ownership structure), category 6 (foreign listing), and category 7 (officer information), we would privilege the manually collected data from the stock exchange yearbooks. Where no data was available from the archival sources, we would use the other sources, starting with the one that seemed most reliable in terms of the quality of data (consistency in spot checks of company documents, fewest implausible values, and fewest missing values).

For variables from the other categories, which were mostly accounting variables, differences in accounting standards may affect comparability. We therefore first used the commercial database with the broadest coverage in order to assure comparability of the data across cases and over time. Where no data was available from a single source, we completed with data from other commercial- and archival sources. We made every effort to insure comparability of the financial figures by using only relatively simple and standardised accounting figures. We also consulted specialists in accounting to make our choices regarding which accounting figures to use. Nevertheless, the use of local accounting standards may imply that some figures are affected by local practices, e.g. due to different ways in which reserves can be created and whether they have to be disclosed.

Data clean-up

We manually cleaned up the data checking for outliers and implausible values. Where a value was deemed extreme or implausible, we would as a first step compare it with related accounting items for the same year and with values for the same item and the same firm the previous year and the year after (if available). In a second step we would double check our raw data files and the archival sources. Finally, we would consult online annual reports to double check the plausibility of extreme values. This led us in several cases to change the data, where for example it became clear that a data entry error had occurred (e.g. omitted decimal separator), or an error related to the transformation of the data (e.g. from one currency to another or from millions to thousands).

Where a given source contained too many implausible values, we would not use it for the variable in question. The data clean-up was done manually in Excel and with R.

Missing values:

The dataset contains a large number of missing values, which are coded as NA. This is due to the comparative and historical nature of the sample and the reliance on archival data. Indeed, for some countries information on certain variables was not reported in the stock exchange yearbooks, which implies that for certain countries and years certain variables are completely ‘empty’. These variables were still maintained in the dataset, as analysis of a cross-section or of the remaining countries may still be possible based on the available data.

Another reason for the large number of missing values has to do with the explicit aim of the project to develop a measure of corporate governance practices that is sensitive to ‘functional equivalent’ corporate governance mechanisms across countries. As an example, the four countries vary very considerably concerning the main mechanism of voting-right distortions. Thus, while Switzerland and Sweden extensively use dual class shares, this instrument is formally prohibited in the Netherlands. However, that does not mean that Dutch companies do not ‘distort’ voting rights: Dutch companies use a form of ‘priority shares’ instead, which have *de facto* the same effect, but are legally a different type of securities. Similarly, multiple voting shares, while not legally prohibited, are used very sporadically in the Netherlands and are hence not reported in the archival documents that we used for the data collection. We coded such cases in the following way: while legally prohibited instruments are ‘structural zeros’ and where hence coded as such (value of 0), legally allowed, but very uncommon instruments that are not reported were coded as NA, although they can be assumed to be 0 in actual fact. We opted for coding ‘structural zeros’ as such, because this project attempted to investigate the extent to which a firm adopts shareholder-orientated practices. The presence or absence of a given instrument is hence relevant information independently of whether the absence was legally imposed (structural 0), or not.

Finally, there are some variables, which are only applicable to one country (structure regime dummies for Dutch companies, separate EPS variables for various share categories in Switzerland).

Date and Currency:

Data from electronic sources are for the year end. Similarly, data from the archival sources are generally for year end, with some exceptions where the figures may be for the end of the financial year.

Unless otherwise stated, we have converted local currency figures into US dollars at current prices. The reporting currency of the archival resources are in the last column of the data file. We used annual mid-point averages from oanda.com to convert local currencies into US Dollars where required. The sheet ‘CurrencyFX’ contains the relevant exchange rates.

**NOTES:**

1. The code books contains the definitions of the variables. The sources for the different variables can be found in the Excel spread sheet ‘SOI\_Sources.xlsx’.
2. Data is contained in the Excel file called ‘SOI\_Data\_Law&Agency.xlsx’   
   Given the nature of the project and the reliance on archival sources, the completeness of the variables varies a great deal across countries and years. Even very incomplete variables are included in the data set, because they may be fairly complete for one of more of the countries and certain years.
3. The numeration of variables is not consecutive. This is because the project started with a long list of potentially interesting variables from the literature. We then eliminated many of these variables on grounds of data availability or quality. We maintained the original numeration to assure continuity with old versions of data files and documentation.

**0. Identifiers**

**Year**

Year of data point

**ISIN**

International Securities Identification Number.

**OwnID**

Alternative identifying number for companies where no ISIN could be found, or where the data were drawn from other databases using their own identifiers. These take the form OWNID plus a four digit number or ADJID plus a 1 to 4 digit number for Dutch companies.

**Sample**

Identifies the sample that the company is part of (CH = Switzerland, NL = Netherlands, SE = Sweden, UK = United Kingdom).

**Entity Name (OSIRIS)**

Name of the company as per Osiris.

**Entity Name (T1)**

Name of the company as per Thomson One Banker.

**Historic Name**

Electronic data bases tend to contain only current names of surviving companies. The ‘historic name’ column contains the actual name of the company at the time of the data point. This information was hand collected from company web pages, company histories, stock exchanges year books, and other sources.

**Country of incorporation (OSIRIS)**

Country where company is incorporated as per OSIRIS or Thomsone One Banker. International country abbreviations are used. Completed using archival and online sources.

**BvD ID number**

Bureau van Dijk company identiy number.

**SEDOL (OSIRIS)**

Stock Exchange Daily Official List security identifier as per OSIRIS.

**SEDOL (T1)**

Stock Exchange Daily Official List security identifier as per Thomson One Banker.

**GICS code**

Global industry classification standard code.

**Stock Exchanges**

List of stock exchanges where company is listed. Data are from Thomson One ‘Exchange’ variable and Datastream variable WC07021. Abbreviations have been standardised (cf. table). Note that the sources do not in all cases distinguish different exchanges in the same location. Therefore, official abbreviations of the stock exchanges were used only in cases where the sources specified the exchange.

|  |  |
| --- | --- |
| **Stock Exchange** | **Abbreviation** |
| Amsterdam | AMS |
| Antwerp | ANT |
| Basel | BAS |
| Berlin | BER |
| Bern | BRN |
| Bombay | BOM |
| Brussels | BRU |
| Copenhagen | CPH |
| Düsseldorf | DUE |
| Egyptian Stock Exchange | EGX |
| Eurex |  |
| Frankfurt | FRA |
| Geneva | GVA |
| Hong Kong | HKG |
| Irish Stock Exchange | ISE |
| Johannesburg | JOB |
| London | LON |
| Luxembourg | LUX |
| Milan | MIL |
| Munich | MUN |
| National Association of Securities Dealers Automated Quotations | Nasdaq |
| *Neuer Markt* (Frankfurt) | NEMAX |
| New York | NYSE |
| Oslo | OSL |
| Over the counter | OTC |
| Paris | PAR |
| Soffex (Zurich) | SOF |
| Stock Exchange Automated Quotation | Seaq |
| Stockholm | STO |
| Stuttgart | STU |
| Swiss Electronic Stock Exchange | EBS |
| Swiss Stock Exchange | SWX / SIX |
| Tokyo | TSE |
| Vienna | WIE |
| Virt-x |  |
| Xetra |  |
| Zurich | ZHR |

**SIC 2-digit**

Two digit standard industrial classification code.

**SIC 2-digit (description)**

Two digit standard industrial classification description.

**Primary SIC code (4-digits)**

Primary four-digit standard industrial classification.

**SIC 4-digit (description)**

Primary four-digit standard industrial classification description.

**Year of incorporation**

Year of incorporation.

**1. Transparency & communicational aspect**

1.1. Accounting rules

*1.1.1 Use of International Accounting Standards*

Variable name: IAS

Accounting standards that a company applies. This variable corresponds with OSIRIS variable “Accounting Standard” and indicates which set of accounting standards the company used.

Levels

* IFRS : International Financial Reporting Standards
* IFRS-NFC : not fully compliant IFRS
* US GAAP : Generally Accepted Accounting Principles in the United States
* Local GAAP : Generally Accepted Accounting Principles of a certain country

Data are from OSIRIS and hand collected from stock exchange yearbooks where available.

1.2. Communication with investors

*1.2.1 Investor relations department*

Variable name: IRDEPT

Categorical variable measuring the importance that the company gives to investor relations. It takes the following levels:

0 = No person responsible for investor relations

0.5 = Person responsible for investor relations is part of the public relations/ corporate communications department.

1 = Person responsible for IR is head of a investor relations department.

2 = Person responsible for IR is CEO or CFO.

*1.2.3 Position/Role of Investor Relations Representative*

Variable name: IRRepPosition

Job title of the Investor Relations Representive. Manually collected from various stock exchange yearbooks supplemented by Datastream and BoardEx.

*1.2.4Name of IR representative*

Variable name: IRRepName

Name of person responsible for IR. Correponds with datastream var WC18357, which is defined as “Represents the person who is responsible for the maintenance of relations between the company and the investment community”. Supplemented with hand-collected data from stock exchange yearbooks.

1.4. Transparency on pay

*1.4.1 Pay disclosure*

Variable name: PAYDISC

This variable takes the value 1 if the company provides information about the total individual compensation of all executives and board members and zero otherwise. Both detailed information on each individual director/executive, a global figure, or disclosure of the highest salary in the company were coded as 1. It corresponds with Datastream variable CGCPO01V and has been complemented with information from stock exchange yearbooks where available.

**2. Structural/legal control features**

2.1 BoD structure & composition

*2.1.1 Number of tiers*

Vare name: BoDStructure

Categorical variable equal 1 if one-tier board, equal to 2 if two-tier board (management board and supervisory board). This follows the DataStream definition for variable ‘CGBSDP019 Board Structure Type’.

For the Dutch companies in the sample additional information regarding the application of the so-called structure regime was collected. Three additional variables result from this, which only apply to Dutch companies.

*2.1.1.1 structure regime legally required (Dutch companies only)*

Indicator variable: 1 = companies has legally required structure regime, 0 otherwise.

*2.1.1.2 limited structure regime (Dutch companies only)*

Indicator variable: 1 = companies has limited structure regime, 0 otherwise.

*2.1.1.3 voluntary structure regime (Dutch companies only)*

Indicator variable: 1 = companies has voluntary structure regime, 0 otherwise.

2.1.2 Board size

Var name: BoD\_Size

Number of members of board of directors (supervisory board) at the end of the fiscal year. Corresponds with Datastream variable CGBSDP060. The data are from datastream and BoardEx and has been completed with hand collected data from stock exchange yearbooks.

*2.1.3 Number of Non-executive directors (NEDs)*

Variable name: No\_NEDs

Number of non-executive directors (NEDs) on the board. Non-executive directors are defined as board members who do not hold at the same time a managerial position within the company. These are not necessarily independent directors, as former managers or board members with other ties to the management of the company will be coded as NEDs.

Since the Dutch two-tire system strictly separates the executive and supervisory boards, for Dutch companies this variable is calculated as the number of members of the supervisory boards (Raad van Comissarisse)

*2.1.4 Percentage of NEDs*

Variable name: PR\_NEDs

Percentage of non-executive directors (NEDs) on the board of directors. Data are from Stock Exchange Yearbooks, BoardEX (1999 onwards), and Datastream (variable CGBSO06V). Note, this variable was not calculated from variables 2.1.2 and 2.1.3.

For Dutch firms % of NEDs is defined as size of supervisory boards divided by the size of management board plus supervisory board. This is because all members of the supervisory board are formally independent of management.

Similarly, for Swedish companies, by law the CEO can be the only executive on the board. Where the CEO is not on the board, the percentage of NEDs will be 100.

*2.1.7 CEO – chairman separation:*

Variable name: CEOCHA

Indicator variable equal to 1 if different individuals occupy the CEO and Chairman positions. Equal to 0 if CEO and Chairman are the same individual. Data are from Datastream (recoded version of variable CGBSO09V), BoardEx, and hand collected from stock exchange yearbooks.

2.1.8 CEO on Board

Var name: CEO\_BoDmem

Indicator variable equal to 1 if CEO is a board member. Corresponds with Datatsream variable CGBSDP061. Data are from Datastream, BoardEx, and hand collected from stock exchange yearbooks.

*2.1.27 Codetermination*

Variable name: CODET

Categorical variable equal to 0 if no board-level representation of employee or trade union representatives exists; equal to 1 if a co-determination system with employee-elected or trade union appointed board members exists.

Note: With one exception each, for UK and Swiss companies this variable is virtually a structural zero, as no UK or Swiss companies have board-level co-determination arrangements. The only exception in the UK case is First Group plc., where shareholders elect one employee representative to the board. <http://www.worker-participation.eu/National-Industrial-Relations/Countries/United-Kingdom/Board-level-Representation> . In Switzerland, Swisscom, which used to be a state agency, has two employee reps on the board.

*2.1.29 Number of employee/ TU representatives on board of directors/supervisory board*

Variable name: Pr\_CODET

Percentage of board members elected as employee or trade union representatives. We include not just directly elected labour representatives as in the case of Sweden, but also weaker forms of ‘codetermination’ such as the ‘social director’ on the supervisory board of Dutch firms following the ‘structure regime’.

2.2 Capital structure: Voting right distortions

*2.2.1 Dual-class shares*

Variable name: 2\_CLASS\_Stock

Indicator variable equal to one if the company has several classes of common stock, such as class A/B, registered/bearer shares, with different rights appending to them; equal to 0 otherwise. This corresponds with the Datastream definition of variable ‘CGSRDP022 Dual Class Stock’.

Note that for the Dutch companies, existence of special rights shares is coded under ‘priority shares’ (‘unusual preferences sahres’), as dual class of common stock is formally prohibited.

*2.2.2 Non-voting shares*

Variable name: NON\_VOT\_Stock

Indicator variable equal to one if the company has issued non-voting common stock (excluding preferred stock); equal to 0 otherwise. This corresponds with the Datastream definition of variable ‘CGSRDP023 Non-Voting Shares’.

2.2.3 Multiple voting rights

Variable name: MULT\_VOT\_Stock

Indicator variable equal to one if the company has issued common stock (excluding preferred stock) with multiple voting rights or lower nominal value than other classes of common stock. It corresponds with Datastream definition of variable ‘CGSRDP024 Multiple or Double Voting Rights Shares’.

*2.2.4 Priority and preference shares (usual)*

Variable name: PREF\_Stock

Indicator variable equal to one if the company has issued priority or preferred stock, zero otherwise.

Preference shares are considered to be of the ‘usual type’ if they give right to special/higher dividends but no or limited voting rights. Swiss ‘Genusscheine’ – securities without voting rights, but at times with special rights – are coded as preference stock.

2.2.4.1 Preference shares (unusual)

Varibale name: PREF\_Stock\_unusual

Indicator variable equal to one if the company has issued unusual priority or preferred stock, zero otherwise. Preferences shares are considered ‘unusual’ if they are different in at least one respect from 2.2.4 (e.g. carry special control rights, but no cashflow rights). Priority shares are coded as unusual preferences shares in the Dutch case.

*2.2.5 Voting caps*

Variable name: VOTCAP

Indicator variable equal to one if the company applies a voting cap (ceiling) or ownership ceilings limiting the maximum number of shares any individual shareholder can own or the maximum number of votes they can exercise.

NB: Datastream definition of variable ‘CGSRDP026 Voting Cap’ also includes ‘control share acquisition provision’ in this variable, i.e. provisions that require shareholders acquiring stakes of 10% or more of the voting rights to obtain BoD approval for the transaction. Such ‘control share acquisition provisions’ bare similarities with *Vinkulierung* clauses in Switzerland and *hembud* clauses in Sweden for instance. However we code such clauses under variable 2.2.8 ‘transfer restrictions’ (TRANS\_REST).

*2.2.6 % voting caps*

Variable name: PrVOTCAP

Numerical variable measuring the percentage of maximum voting rights or maximum ownership allowed.

*NB for Datastream data (CGSRDP027 Voting Cap Percentage) this also includes the percentage of shares for the sale of which BoD approval is required.*

*2.2.7 Minimum number of shares*

Variable name: MinShareNumber\_Dummy

Indicator variable equal to 1 if the company sets requirements for a minimum number of shares to vote. Corresponds with Datastream variable CGSRDP028. Hand collected based on stock exchange yearbooks where available.

*2.2.7.1 Minimum number of shares*

Variable name: MinShareNumber

Actual minimal number of shares required by company for a shareholder to be able to exercise voting rights. Note, values of 1 mean that the company does not impose any minimum number of shares to vote (one single share is enough).

*2.2.8 Restrictions to the transferability of shares*

Variable name: TRANS\_REST

Indicator variable equal to 1 if the company applies limitations to the transferability of shares and zero otherwise.

This variable includes different legal instruments that give insiders the right to either refuse the transfer of shares or grant them a ‘pre-emption right’. Thus, Switzerland knows a system called *Vinkulierung*, which allows the BoD or top management to limit the transfer of shares (since 1992 only the exercise of the voting right). Sweden has a series of instruments called ‘*hembud*’, which consist in a right of first-refusal / right of pre-emption on certain shares, which forces share owners of certain categories of shares to first offer their shares to the company when they want to sell out. The NL too knows a right of pre-emption (de Jong & Roell 2005).

Note also: if the company reserves the right to refuse registration in the stock ledger (implying that the shareholder cannot exercise their voting rights, this variable was coded 1 as well).

The Datastream definition of variable ‘CGSRDP025 Priority Shares or Transfer Limitations’ partly captures this information, but does not distinguish transfer limitation from other rights associated with ‘priority shares’. Where possible we used our own data, but the Datastream definition can be obtained by creating the union of our variables 2.2.5 and 2.2.8

*2.2.9 Golden Shares and Veto Power*

Variable name: GoldenShare

Indicator variable, equal to one if the biggest owner (by voting power) holds a veto power or owns ‘golden shares’ (Corresponds with Datastream variable CGSRDP048) or if a private or government (public) owner holds the veto or golden share (Corresponds with Datastream variable CGSRDP049). Equals 0 otherwise.

*2.2.10 Number of deviations from the ‘one share one vote’ principle*

Variable name: NoDev1S1V

Count variable defined as the sum of variables 2.2.1 through 2.2.9, excluding 2.2.6 and 2.2.7.1. It takes values between 0 and 9, with higher values indicating more restrictions on shareholder rights.

NB: the variables in category 2.2 also include some elements, which may not be directly related to voting right distortions. Thus ‘priority shares’ may capture aspects other than voting rights, but it is still included because it measures differences among shareholders regarding their legal rights depending on the type of shares they own. Similarly, ‘transfer of shares’ are not necessarily directly related to voting rights, but they are included in this category, because these restrictions are very close to voting-right distortions (VRDs) and in some countries are directly related (e.g. in the Swiss case the refusal of a transfer of shares practically means that a given shareholders shares are transformed into non-voting shares).

*2.2.11 Unitary share structure*

Variable name: Unit\_Share

Indicator variable equal to 1 if the company's common stocks is composed of a single share category; equal to 0 otherwise. Note: preference shares are not coded as deviation from the unitary share structure. Corresponds with Datastream variable CGSRO01V.

*2.2.12 1 Share – 1 Vote*

Variable name: 1S1V

Indicator variable equal to 1 if all shares of the company provide equal voting rights. Corresponds with Datastream variable CGSRO02V. This variable is largely equivalent to 2.2.11. However, it codes the existence of preferences shares as a deviation from the 1 share, 1 vote principal, while 2.2.11 focuses on common stock.

**3. Economic components**

3.1. Ownership structure

*3.1.1 Aggregate ownership % of largest owners*

Variable name: OWSTR

Cumulative blockholding. Numerical variable calculated as sum of ownership stakes in percentage of up to five largest shareholders.

*3.1.2.1 - 3.1.2.5 Blockholder identity*

Variable names: BlockIdent1-5

Name of the up to 5 largest shareholders. In most cases, the disclosure requirements are for blocks of 3% and above. However, the sources sometimes do contain smaller – but still substantial holdings, which we included as well.

Note: the names have been entered as reported in our sources without standardising them. Owners have not been identified and coded.

*3.1.2.1.1 - 3.1.2.5.1 Ownership % of 5 largest owners*

Variable names: BlockPR1-5

Numerical variable. Percentage of largest declared owners of common stock. Unit: decimal fractions.

Disclosure requirements vary over time. Since the mid-1990s a 5% disclosure threshold was common. This threshold has decreased in all countries to 3%. This implies that data availability will be affected by changes in disclosure requirements.

*3.1.3 Controlling Shareholder*

Variable name: CtrlShareh

Indicator variable equal to one when largest shareholder owns >50% of voting rights or has veto power through a ‘golden share’. This corresponds with Datastream variable ‘CGSRO05V.

3.2. Corporate finance practices

*3.2.1 Debt to equity ratio*

Variable name: DER

Numeric variable calculated following the ‘simple method’ outlined by Welch (2011)[[1]](#footnote-1) as

= ‘Total Liabilities and Debt’ / (‘Total Liabilities and Debt ‘+ Shareholders Funds).

2 sub-variables:

3.2.1.1 Total Liabilities & Debt

Sub-variable name: TOTLIABDEBT

Defined as per OSIRIS variable “Total Liabilities & Debt”.

OSIRIS Defintion of Total Liabilities & Debt: Includes total current liabilities, total long-term interest bearing debt, minority interest, deferred taxes, provisions and other long term liabilities.

3.2.1.2 Shareholder funds

Sub-variable name: TOTCOMEQ

Sub-variable TOTCOMEQ defined as OSIRIS variable “Shareholders Funds”, which represents the sum of share capital, shareholders' reserves, retained earnings, treasury stock and other equity.

*3.2.2 Leverage*

Variable name: LEVERAGE

Numeric variable defined following de Jong et al. (2005) as long term debt / book value of total assets.

Two sub-variables:

3.2.2.1 Total Liabilities & Debt

Sub-variable name: LTDEBT

Sub variable LTDEBT defined as OSIRIS variable “Long Term Debt”.

OSIRIS Definition of Long Term Debt: Includes Bank Loans, Debentures and Convertible Debt, Lease Liabilities, Other Long Term Interest Bearing Debt.

3.2.2.2 Total Assets

Sub-variable name:TOTASSETS

Sub variable TOTASSETS defined as OSIRIS variable “Total Assets”.

OSIRIS Definition of Total Assets: The sum of total current assets, long term receivables, investments in unconsolidated companies, other investments, net property, plant and equipment and other assets, including intangibles.

*3.2.3 New stock issues*

Variable name: ISSUE

Numerical variable. Dollar valueof proceeds from newly issued common and preferred stock during current year (from cash flow statement).

*3.2.6 Short term debt*

Variable name: ST\_Debt

Defined following T1 variable “STDebtAndCurPortLTDebt”.

T1 Definition: ST DEBT AND CUR PORT LT DEBT represents that portion of debt payable within one year including current portion of long term debt and sinking fund requirements of preferred stock or debentures.

It includes:

(1) Notes payable, arising from short-term borrowings

(2) Current maturities of participation and entertainment obligations

(3) Contracts payable for broadcast rights

(4) Current portion of advances and production payments

(5) Current portion of long term debt that must be paid back during the next twelve months and included in long term debt

(6) Bank Overdrafts

(7) Advances from subsidiaries/associated companies, if the term of the loan is not known it is assumed to be long term debt

(8) Current portion of preferred stock of a subsidiary

(9) Treasury tax and loan demand notes

(10) Short sales of U.S. government securities

(11) Eurodollar borrowings, if not reported separately and the amount cannot be separated

For Banks:

It includes:

(1) Federal Funds (liability) securities sold under repurchase agreements

It excludes:

(1) Securities loaned

*3.2.7 Issued Capital*

Variable Name: IssCap

Dollar value of issued equity capital.

3.2.7.1-3.2.7.4 Issued Capital in Foreign Currency

Variable names: IssCapForCur1 and IssCapForCur2 and IssCapForCur1C, IssCapForCur2C

Some UK companies report issued capital in different currencies. This information is captured in these columns. Columns 3.2.7.1 and 3.2.7.3 currency code; 3.2.7.2 and 3.2.7.4 issued capital in foreign currency.

3.2.7.5-3.2.7.7 Issued Capital Switzerland

Variable names: IssCapCH1-IssCapCH3

Swiss companies tended to report issued capital by share class/category. This information is captured in these columns.

3.2.7.8-3.2.7.10 Nominal Values Switzerland

Variable names: NomVALCH1-3

Nominal value of different share categories for Swiss companies.

3.2.8 Earnings Per Share (EPS)

Earnings per common share outstanding. Cacluated following <http://www.iasplus.com/en-gb/standards/ias/ias33>

Swiss companies used to report earnings per share category (Namenaktie, Inhaberaktie, Partizipationssechein’). These are variables 3.2.8.1-3.2.8.3. The two former are different classes of common stock. Where applicable EPS was calculated as the average EPS of these two classes.

3.3 Value-added (VA) distribution practices

In some instances, the distribution of VA can arguably be considered as ‘outcome variable’ over which the company has little control (see below). However, in many cases it is a ‘choice variable’, which can be influenced by company policies etc.

*3.3.1 Cash Dividend*

Variable name: CASHDIV

Defined as cash amount (USD) paid out to shareholders in the form of a dividend. This definition follows ThomsonOne Banker (henceforth “T1”) variable “CashDividendsCFStmt”.

T1 Definition: “This item represents the total amount of cash dividends paid for both common and preferred stock.

This item includes:

1. Arrearages from prior years paid in the current year 2.

2. Cash paid in lieu of fractional shares

3. Dividends paid by companies acquired using the pooling of interest method

4. Liquidating dividends or distributions

5. Partnership distributions

6. Patronage dividends that are not included in Cost of Goods Sold

7. Subchapter S distributions

This item excludes:

1. Cash value of stock dividends

2. Dividends in kind (other than cash)

3. Dividends on subsidiary common stock

4. Minority shareholders’ dividends

5. Patronage dividends included in Cost of Goods Sold

6. Preferred dividend requirement paid in common stock[[2]](#footnote-2)

*3.3.2 Dividend per share*

Variable name: DIVPERSHARE

Numerical variable defined as T1 variable “DividendPerShare”.

T1 Definition: DIVIDENDS PER SHARE represents the total dividends per share declared during the fiscal year for Non-U.S. corporations. It includes extra dividends declared during the year.

Swiss companies also report dividends per share category (variables 3.3.2.1-3.3.2.3).

*3.3.3 Dividend Yield*

Variable name: DIVYIELDCLOSE

Numerical variable defined following T1 variable “DividendYieldClose”:

T1 Definition: Dividends Per Share / Market Price-Year End \* 100

*3.3.4 Payout ratio*

Variable name: PAYOUT

Numerical variable defined as dividends as % of net profits (CASHDIV / NETINCOME)

One sub variable: NETINCOME

3.3.4.1 net income

Variable name: NETINCOME

Numerical variable following OSIRIS definition of variable “Net Income”.

OSIRIS Definition: Net income for the Year. Before deduction of Minority interests if any (Profit after taxation + Extraordinary and other profit).

3.3.4.2 Pre-tax profit

Pretax Profit (EBT, earnings before taxes).

For Switzerland the corresponding archival sources only provide ‘declared profit’ (‘Ausgewiesener Gewinn’). This item historically included any ‘hidden reserves’ that the company created or dissolved during the reporting period. It is hence not directly comparable with pre-tax profit according to US GAAP and IFRS rules. However, as more and more firms switched to international accounting standards and the accounting standards in Switzerland generally moved closer to international ones, the discrepancy between the different figures can be expected to have decreased substantially.

*3.3.5 Year on year dividend change*

Variable name: DIVCHA

Change in current year’s cash dividend compared to previous year’s cash dividend. Previous year’s dividend can be obtained by dividing current year’s dividend by value for this variable.

*3.3.7 Interest payments*

Variable name: INTERESTPAID

Numerical variable defined following T1 variable “InterestExpenseOnDebt”.

T1 Definition: INTEREST EXPENSE ON DEBT represents the service charge for the use of capital before the reduction for interest capitalized. If interest expense is reported net of interest income, and interest income cannot be found the net figure is shown.

It includes:

(1) Interest expense on short term debt

(2) Interest expense on long term debt and capitalized lease obligations

(3) Amortization expense associated with the issuance of debt

(4) Similar charges

*3.3.8 Wages*

Variable name: WAGES

Numerical variable defined following T1 variable “SalariesAndBenefitExpense”.

T1 Definition: SALARIES AND BENEFIT EXPENSE represents wages paid to employees and officers of the company.

It includes:

(1) All employee benefits such as health insurance and contributions to pension plans

This definition also corresponds with OSIRIS variable “Cost of Employees”

*3.3.9 Number of employees*

Variable name: NOEMP

Defined following OSIRIS variable “Number of Employees”.

OSIRIS Definition: Total number of employees included in the company's payroll at year end.

*3.3.10 Research & Development Expenses*

Variable name: RDEXP

Dollar amount spent on research and development activities (thousands USD).

*4.1.4 Long-term compensation*

Variable name: LT\_Compensation

Indicator variable equal to 1 if the management and board members remuneration is partly linked to objectives or targets, which are more than two years forward looking. Corresponds with Datastream variable CGCPO07V.

*4.1.5 Maximal compensation*

Variable name: Max\_Compensation

USD value of highest remuneration package within the company. Corresponds with Datastream variable CGCPO02V.

*4.1.6 NED compensation*

Variable name: NED\_Compensation

Total compensation of the non-executive board members in US dollars. Corresponds with Datastream variable CGCPO03V.

**5. Outcome variables**

5.1 Share price evolution

*5.1.1 5y Valuation*

Variable name: 5Y\_Price2Book

Numerical variable defined as 5-year average market price of stock divided by 5-year average book value per share. This definition follows the definition of T1 variable “PriceToBookRatioClose5YRAvg”

T1 Definition: = Market Price-5 Year Average / Arithmetic Average of the last five years of Book Value Per Share

*5.1.2 Closing price*

Variable name: PRICECLOSE

Numerical variable defined following T1 variable “PriceClose”:

T1 Definition: Price or value of the trading instrument at the end of the previous trading day. For OTC quotes, the closing bid is displayed instead of the last trade.

5.2 Accounting performance

*5.2.1 Return on Equity*

Variable name: ROE

Numerical variable (percentage) defined following OSIRIS variable “Return on Shareholders Funds”

OSIRIS Definition:= (Profit before tax/Shareholders funds)\*100

*5.2.2 Return on Capital Employed*

Variable name: ROCE

Numerical variable (percentage) own calculation of earnings before interest and taxes (EBIT) divided by (TOTASSETS + CURLIAB).

2 sub-variables.

5.2.2.1 Earnings

Variable name: EBIT

Sub-variable EBIT = earnings before interests and tax defined following OSIRIS variable “EBIT”.

OSIRIS Definition: Income before interest income, interest expense and income taxes, but after depreciation & amortization and after pre-tax unusual/exceptional items

5.2.2.2 Current Liabilities

Variable name: CURLIAB

Sub-variable CURLIAB = defined following OSIRIS variable “Current Liabilities”.

OSIRIS Definition: All short term liabilities, namely: accounts payable, short-term debt, current portion of long term debt, and other current liabilities.

*5.2.3 Economic Value Added*

Variable name: EVA

Numerical variable defined following Thomson One variable “EconomicValueAdded”. It is caluculated as operating income after depreciation and income taxes minues cost of capital

EVA = (OperatingIncomeAfterDepr-IncomeTaxes)-CostofCapital

*5.2.4 Return on Assets*

Variable name: ROA

Numerical variable (percentage) defined as return on total assets.

**6. Regulatory Commitment**

*6.2.1 Opting into a stricter regulatory regime*

Var Name: FORLIST

Equal 1 if a foreign company is listed in the USA (NASDAQ or NYSE) or – for non-UK companies - in London. For UK companies, only listing in the US was counted.

6.2.1.1 NYSE/NASDAQ Listing

Variable name: LISTING\_NY

Indicator variable equal to one if company is listed on the NYSE or NASDAQ, equal to zero otherwise.

6.2.1.2 LSE Listing

Var name: LISTING\_LON

Indicator variable equal to one if company is listed on the LSE, equal to zero otherwise.

**7. Officer Identity**

*7.1.1 CEO identity*

Variable name: CEOID

String variable containing name of CEO.

*7.1.2 Chairman identity*

Variable name: CHAID

String variable containing name of chairman of the board.

**8 . Other (control) variables**

*8.1 Market capitalization*

Variable name: MCAP

Market capitalisation at year end following definition of T1 variable “YrEndMarketCap”).

T1 Definition: = Market Price-Year End \* Common Shares Outstanding

If Common Shares Outstanding is not available for the current year or prior year, then Common Shares Outstanding-Current is used.

For companies with more than one type of common/ordinary share, market capitalization represents the total market value of the company.

*8.2 Shares outstanding at year end*

Variable name: SHARESOUTST (= T1 variable “CommonSharesOutstanding”)

T1 Definition: This item represents the net number of all common shares outstanding at year-end for the annual file, and as of the Balance Sheet date for the quarterly file excluding treasury shares.

Common treasury shares carried as either assets or liabilities on the Balance Sheet are netted against the number of common shares issued.

Common shares paid in stock dividends are included when the ex-dividend date falls within the year even though the payment date falls within the next year.

Common Shares Outstanding will not be the same as Common Shares Used to Calculate Earnings per Share (Basic) when the company reports earnings per share based on average shares, when there has been a change in the shares over the year, when more than one class of common stock is outstanding (as with some companies on the annual Canadian Files), or when the company reports earnings per share based on common stock equivalents.

Common shares will be excluded when a company nets shares held by a consolidated subsidiary against the capital account.

*8.4 Revenue*

Variable name: REVENUE

Numerical variable. Defined following OSIRIS variable “Operating Revenue/Turnover”)

OSIRIS Definition: Total operating revenues (Net sales + Other operating revenues+ Stock variations). The figures do not include VAT. Local differences may occur regarding excises taxes and similar obligatory payments for specific market of tobacco and alcoholic beverage industries.

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1. WELCH, I. 2011. Two Common Problems in Capital Structure Research: The Financial-Debt-To-Asset Ratio and Issuing Activity Versus Leverage Changes. *International Review of Finance,* 11, 1-17. [↑](#footnote-ref-1)
2. Additional info: This item contains a Combined Figure data code when the retained earnings schedule on the Balance Sheet presents an amount for cash dividends but no payments are represented on either the Statement of changes in financial Position or Statement of Cash Flows.

   This item is not available for property or casualty companies. [↑](#footnote-ref-2)